



# Mircom Fire Sales Reference



# Fire Alarm & Detection

# Network Fire Alarm Systems

## INTELLIGENT FIRE ALARM AND AUDIO NETWORK SYSTEM




BBX-FXMNSR

BBX-5014R

### Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions.

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities.

Designed for peer-to-peer network communications, the FleX-Net Series allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The audio control provides a multi-channel distributed audio system that allows for efficient emergency paging, evacuation signaling (compatible with 520Hz low frequency signal) and fire fighters' telephone communication. Each audio card cage supports a maximum of 4 QAA style amplifiers for a maximum of 180 watts per cabinet.

The network configuration allows the FleX-Net Series control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

### Features

#### Fire Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Supports both 80 character and 960 character back-lit LCD displays with user friendly menu
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 6000 Alarm History Log and a 6000 Event Log for all events
- Built-in BACnet support
- System can be configured without taking the panel offline
- Supports three configuration files (current, previous and next configuration) with "hot swap" support
- Real time 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- Supports Boolean logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- UL listed for Smoke Control (UUKL)

#### Audio Control

- Multi-channel operation
- Distributed audio
- Compatible with 520Hz low frequency signal by Mircom
- 5 hard wire fire fighter telephone channels that can be expanded with intelligent fire phone modules
- 25 or 70 volt system
- Multiple amplifier sizes
- Max. of 180 watts per Integrated Fire & Audio panel
- Expansion to three 360 watts expansion cabinets for a total of 1260 watts of audio power per node

#### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Fully integrated digital network audio and control over a single pair of copper wire or fiber optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Remote diagnostics via built in web server and standard Ethernet port in every node
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064



CATALOG NUMBER **5940**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## FleX-Net Integrated Fire and Audio Control Panels



### FX-2009-12NDS Large Network Main Control Unit

The FX-2009-12NDS Large Network Main Control Unit consists of a base fire alarm panel with one isolated intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC circuits, a 4 line by 20 character LCD display and a 12 Amp power supply. The FX-2009-12NDS has space to mount the FNC-2000 Fire Network Controller Module, ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and provision to mount up to 4 adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosure and supports Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator / Programmable modules.



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.

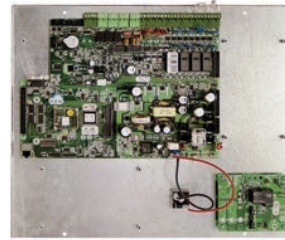


### BB-5008/BB-5014 Enclosures

The BB-5008 and BB-5014 enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D



### FX-2000MNS Main Network Board

The FX-2000MNS main network board includes one intelligent Signaling Line Circuit (SLC) and Four Style Z/Y (Class A/B) NAC circuits. The FX-2000MNS has provisions to mount up to 9 internal adder modules and mounts in the BBX-FXMNS enclosure.



### QMB-5000N Integrated Audio Network Chassis

The QMB-5000N includes the audio and telephone control which consists of an audio card cage designed for mounting the ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and up to four QAA style audio amplifiers. The QMB-5000N connects to the FX-2000MNS main board and mounts in the BBX-FXMNS enclosures. The QMB-5000N supports audio expansion with connection to up to three QBB-5001 Audio Cabinets. Each QBB-5001 can support a maximum 360 watts.

## Electrical Specifications

Fire Alarm Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries
Audio Primary Input Power (QPS-5000N)	120 VAC, 60Hz / 240 VAC, 50Hz 12 Amps

## Flex-Net Integrated Fire and Audio Control Panels



### DSPL-420 Main Display Module

The DSPL-420 Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-420 occupies one display position in the BBX-FXMNS enclosure.



### DSPL-420-16TZDS Main Display Module

The DSPL-420-16TZDS Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitoring with an additional 16 LED points of annunciation. The DSPL-420-16TZDS occupies one display position in the BBX-FXMNS enclosure.



### DSPL-2440 Graphical Main Display Module

The DSPL-2440 Graphical Main Display Module provides a 24 line x 40 character backlit LCD display, Common Controls buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-2440 occupies one display position in the BBX-FXMNS enclosure.



### BBX-FXMNS Enclosure

The BBX-FXMNS enclosure supports the FX-2000MNS Network main board, a DSPL-420, DSPL-420-16TZDS or DSPL-2440 Main LCD display, a QMB-5000N audio card cage, a QMP-5101NV Master Paging Microphone and a QMT-5302NV Master Telephone Handset. In addition the enclosure provides space for additional external modules and internal lobby control modules. The BBX-FXMNS holds up to 40 AH batteries and is available with a white (BBX-FXMNS) or red (BBX-FXMNSR) door.

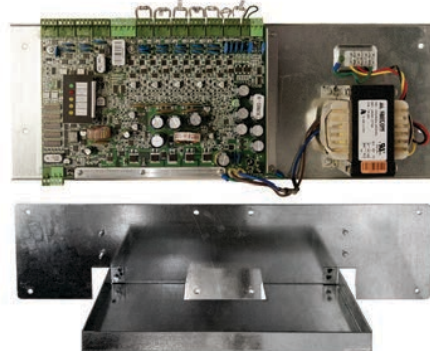
**BBX-FXMNS Dimensions:** 61.5"H x 20"W x 9"D



### QMP-5101NV Network Master Paging Control Module

The QMP-5101NV Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101NV allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

### Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

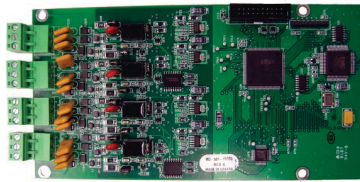
Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.



### QMT-5302NV Network Master Fire fighters' Telephone Control Module

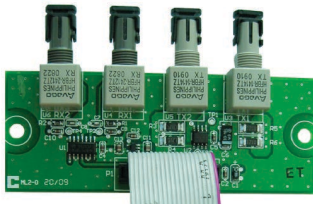
The QMT-5302NV includes the Master Telephone Handset and common control indicators. The QMT-5302NV supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

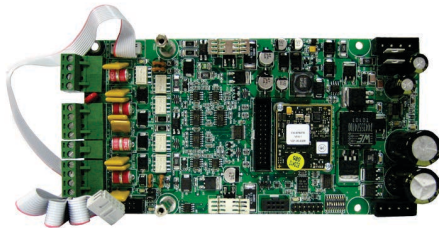
The FNC-2000 provides network capability to the FX-2009-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2009-12NDS.



### FOM-2000-SP Fiber Optic Network Adder Module

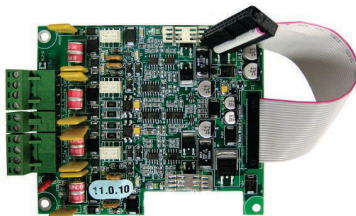
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2009-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

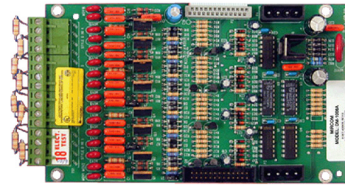
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the Flex-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

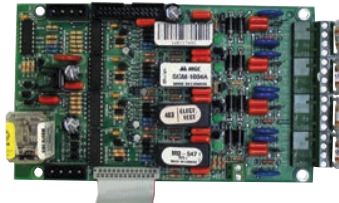
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Adder Hardware Modules



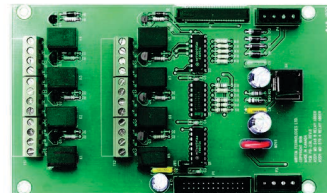
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

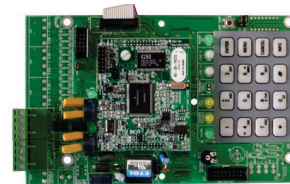
The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

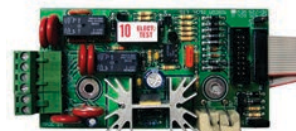
The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

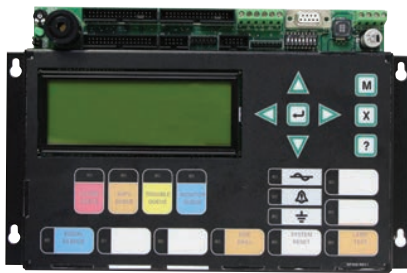
The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

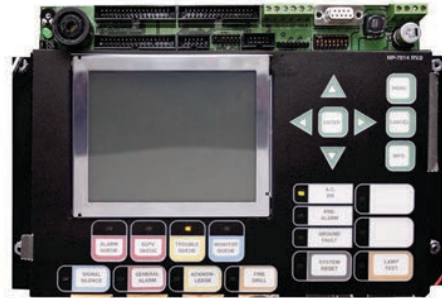
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

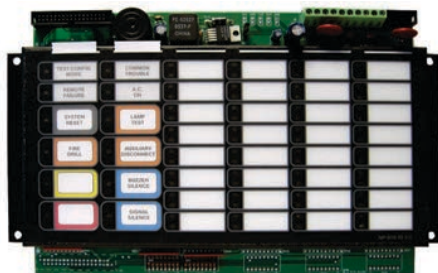
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main Flex-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

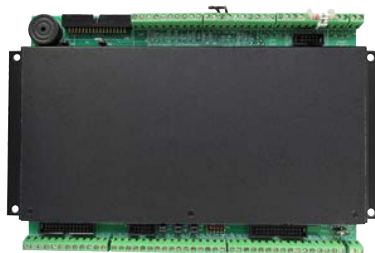
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

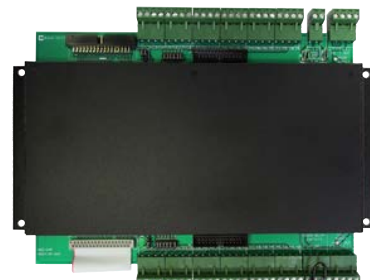
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.

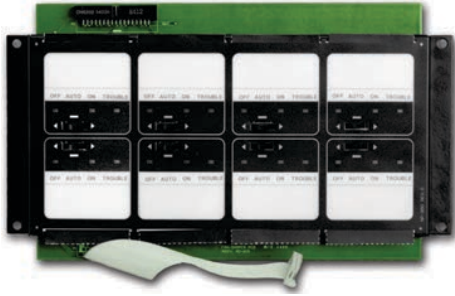


### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 Series enclosures.

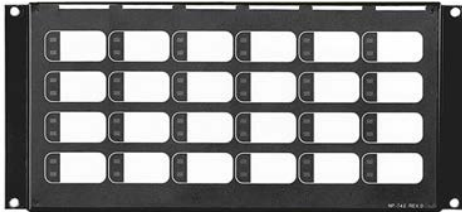


## Programmable Modules



### FDX-008 Fan Damper Control Module

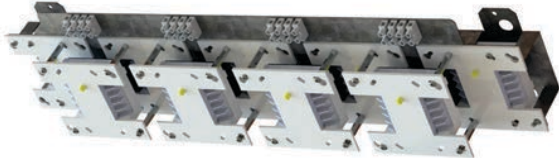
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Mounting Brackets



### M500-BK9 Module Mounting Bracket

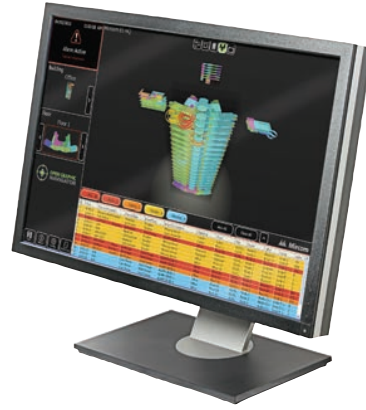
The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.



### M500-BK2 Module Mounting Bracket

The M500-BK2 Module Mounting Bracket mounts inside the BBX-FXMNS enclosure and provides space to mount up to two M500 style intelligent modules.

## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Dimensions for Annunciator Module Enclosures

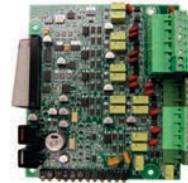
Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Flex-Net Audio and Telephone Network Controller Modules



### ANC-5000 Audio Network Controller Module

The ANC-5000 provides audio microphone control on the network system. The ANC-5000 mounts on a plate in the FX-2009-12NDS or QMB-5000N.



### TNC-5000 Telephone Network Controller Module

The TNC-5000 provides five hardwired telephone circuits for the local floor panel with the first circuit configurable for the master telephone handset. The TNC-5000 mounts in the FX-2009-12NDS or QMB-5000N.

## Paging & Telephone Control Modules



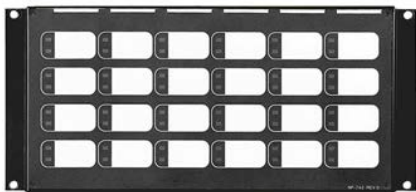
### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101N occupies one module space in the BB-5000 Series enclosures.



### QMT-5302N Network Master Firefighters' Telephone Control Module

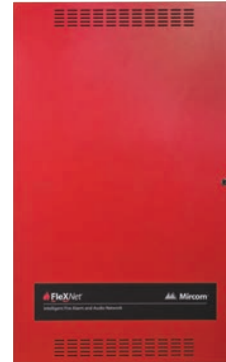
The QMT-5302N includes the Master Telephone Handset and common control indicators. The QMT-5302N supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302N occupies one module space in the BB-5000 Series enclosures.



### QAZT-5302DS Zoned Paging/Telephone Selector Module

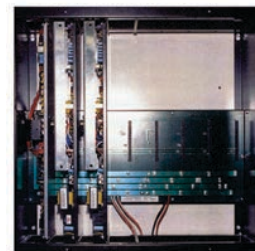
The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302 Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.

## Audio Expansion



### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000N Audio Power Supply, one QBC-5000N Audio Battery Charger and up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports 7 QAA style audio amplifiers. The QMB-5000B requires one QPS-5000N Audio Power Supply and one QBC-5000N Audio Battery Charger and mounts in the QBB-5001 backbox.



### QPS-5000N Audio Power Supply

The QPS-5000N supports up to 360 watts and mounts in the QBB-5001 Audio backbox.



### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Audio Backbox.

*Note: The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.*

## Audio Amplifiers



### QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in either the QMB-5000N or QMB-5000B card cage and occupy one amplifier slot.

### QAA-5230S-70/25 Dual 30 Watt Amplifier

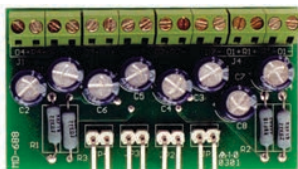
The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

### QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

### QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.



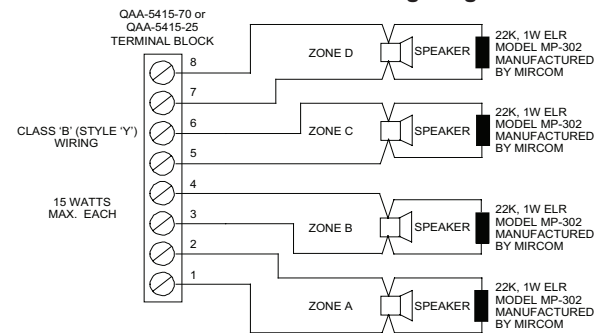
### QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

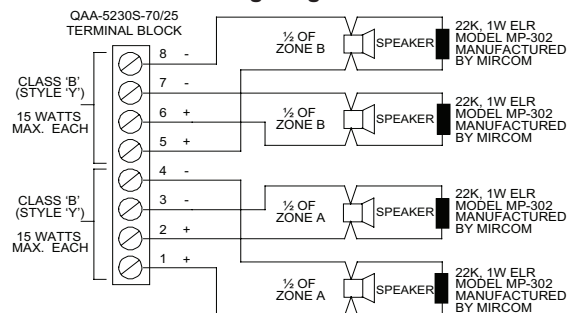
### QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLAS is required for each amplifier.

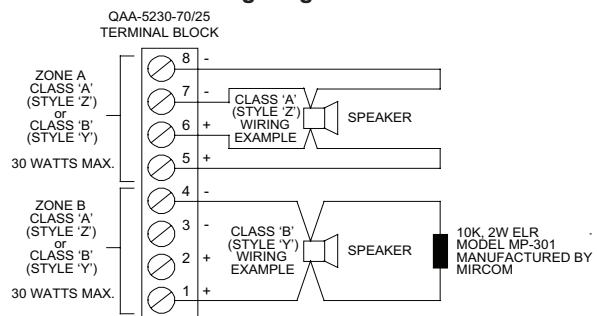
### QAA 5415-70 or QAA-5415-25 Wiring Diagram



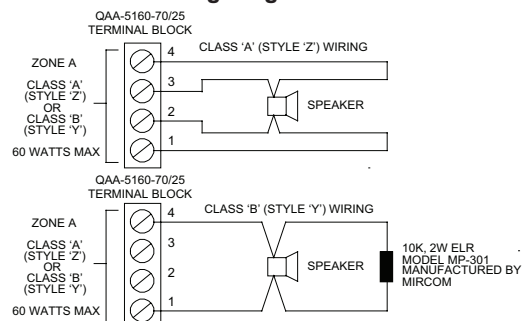
### QAA-5230S-70/25 Wiring Diagram



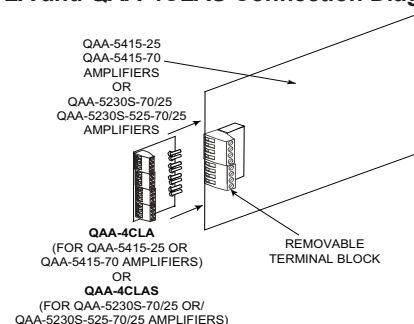
### QAA-5230-70/25 Wiring Diagram



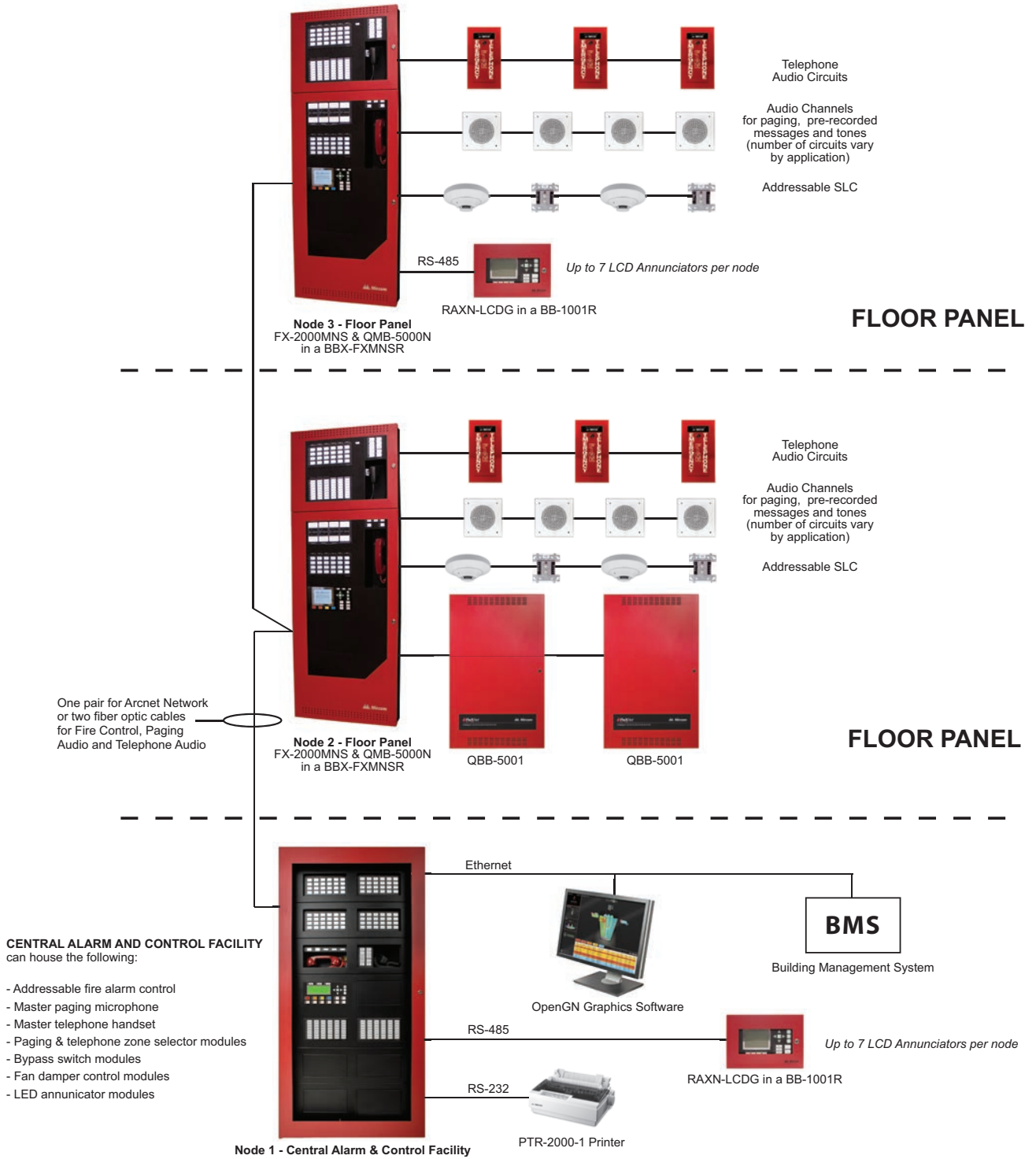
### QAA-5160-70/25 Wiring Diagram



### QAA-4CLA and QAA-4CLAS Connection Diagram



# Typical Flex-Net Networked System Configuration with Audio



## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
<b>Fire Alarm Components</b>			
FX-2000MNS	Main Network Control Unit on a Chassis (12 Amp)	0.310	0.733
FX-2003-12NDS	Compact Main Network Control Unit (12 Amp)	0.310	0.733
FX-2017-12NDS	Mid-Size Main Network Control Unit (12 Amp)	0.310	0.733
FX-2009-12NDS	Large Main Network Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Quad Loop Controller Module	0.130	0.145
ALCN-792M /w ALCN-792D	Quad Loop Controller Module with Daughter Module	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
DSPL-420	Narrow Display	0.024	0.025
DSPL-420-16TZDS	Narrow Display w/ additional 16 LED Zones	0.010	0.046
DSPL-2440	Graphic Display	0.029	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
FDS-008	Selection Control Panel for MNS	0.024	0.112
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015
<b>Audio Components</b>			
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
QAA-5160-70/25	1 Zone 60W Amplifier	0.055	0.350
QAA-5230-70/25	2 Zone 30W Amplifier	0.055	0.350
QAA-5230S-70/25	2 Zone 30W Amplifier (split)	0.055	0.350
QAA-5415-70	4 Zone 15W Amplifier, 70V	0.055	0.350
QAA-5415-25	4 Zone 15W Amplifier, 25V	0.055	0.350
QMP-5101N	Master Paging Module	0.004	0.012
QMP-5101NV	Vertical Master Paging Module	0.004	0.012
QMT-5302N	Master Telephone Module	0.003	0.013
QMT-5302NV	Vertical Master Telephone Module	0.003	0.013
QAZT-5302DS	Paging/Telephone Zone Module	0.010	0.015

## Ordering Information

Model	Description
<b>Flex-Net Network Lobby Control and Floor Panels - Integrated Fire and Audio Systems</b>	
FX-2009-12NDS	Large Network Main Control Unit. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12NDS. Mounts in the BB-5000 series enclosures.
FX-2000MNS	Main Network Board with one SLC loop. Mounts in the BBX-FXMNS enclosure.
DSPL-420	4 x 20 Main LCD Display for FX-2000MNS
DSPL-420-16TZDS	4 x 20 Main LCD Display for FX-2000MNS w/16 LEDs
DSPL-2440	Graphical Main Display for FX-2000MNS
QMB-5000N	Integrated Audio Network Control Chassis
PS-2040	Network Fire Alarm and Audio Power Supply
<b>Enclosures</b>	
BB-5008	Lobby Control Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
CCH-5008G	Custom Mounting Kit for BB-5008, Required when using RAXN-LCDG as Main Display
BB-5014	Lobby Control Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
BBX-FXMNS	Black backbox enclosure with white doors for FX-2000MNS. Add suffix 'R' for red doors.
<b>Adder Loop Controller Modules</b>	
ALC-792M	Network Quad Loop Controller Module
ALC-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
<b>Power Module</b>	
INX-10AC	Internal Booster Power Supply Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Adder Annunciator Chassis c/w 48 Bi-Colored LEDs
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
ANC-5000	Audio Network Controller Module
TNC-5000	Telephone Network Controller Module

## Ordering Information continued

Paging and Telephone Control Modules	
QMP-5101NV	Master Network Paging Control Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMT-5302NV	Master Network Telephone Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMP-5101N	Master Network Paging Control Module
QMT-5302N	Master Network Telephone Control Module
QAZT-5302DS	Paging and Telephone Selector Panel
Audio Amplifiers	
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
Enclosures for Remote Annunciators / Programmable Modules	
BB-1001	Remote Annunciator/Programmable Module Enclosure Houses one module. Add suffix "R" for red door.
BB-1002	Remote Annunciator/Programmable Module Enclosure Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Annunciator/Programmable Module Enclosure Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Annunciator/Programmable Module Enclosure Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Annunciator/Programmable Module Enclosure Houses twelve modules. Add suffix "R" for red door.
Audio Expansion Components	
QMB-5000B	Audio Motherboard and Card Cage
QPS-5000N	Audio Power Supply
QBC-5000N	Audio Battery Charger
QBB-5001	Audio Backbox
Graphics Software	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/objects
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
Accessories	
MGC NTKW SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5940  
Rev. 7



## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2003-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2003-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 9
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064



APPROVED

CATALOG NUMBER **5941**

NOT TO BE USED FOR INSTALLATION PURPOSES.

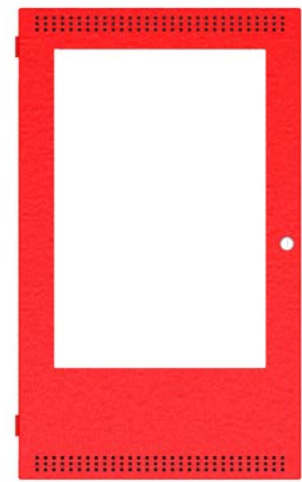
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.



## FleX-Net™ FX-2003-12NDS Network Series Fire Alarm Control Panels



UB-1024DS

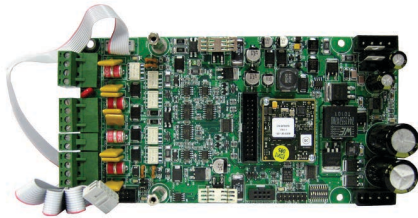


DOX-1024DSR

### FX-2003-12NDS Compact Network Main Control Unit

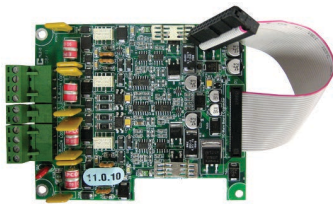
The FX-2003-12NDS Compact Network Main Control Unit complete with one Intelligent Signaling Line Circuit (Style 4, 6 or 7), Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each, a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply. The FX-2003-12NDS provides space for the FNC-2000 Network Controller Module, two internal adder modules and two programmable modules.

### Adder Loop Controller Modules



#### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



#### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

### UB-1024DS Universal Backbox

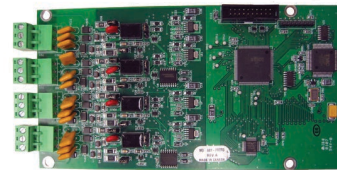
The UB-1024DS Universal backbox houses the FX-2003-12NDS and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately.

**Dimensions** (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

#### DOX-1024DS(R) Door

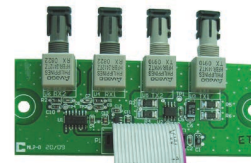
The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).

### Fire Network Controller Modules



#### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2003-12NDS panels. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2003-12NDS.



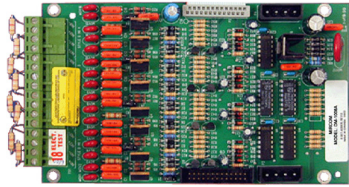
#### FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FleX-Net Series panels. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

### Electrical Specifications

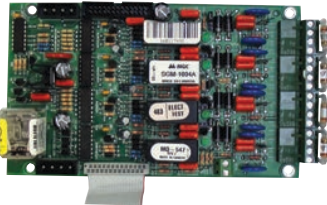
Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

## Adder Hardware Modules



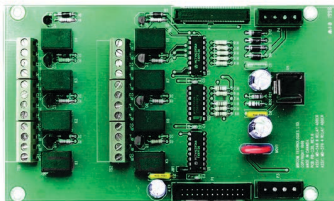
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12NDS.



### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12NDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12NDS.

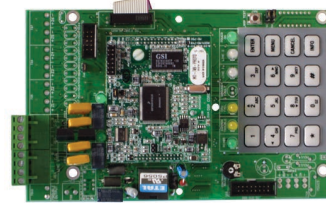
## Graphics Software



### Open Graphic Navigator (OpenGN)

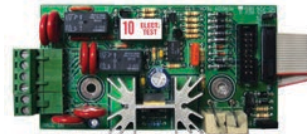
Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12NDS.



### PR-300 Polarity Reversal/City Tie Module

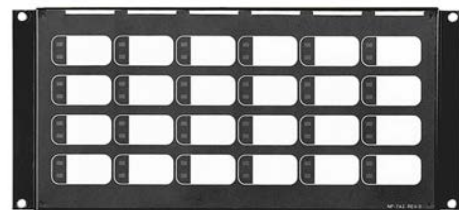
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2003-12NDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

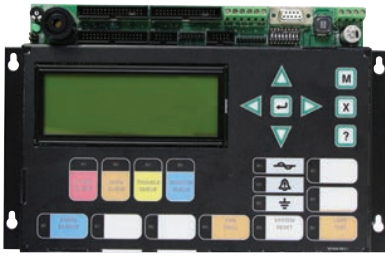
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

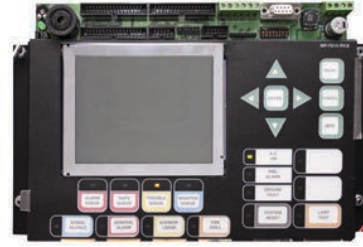
The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

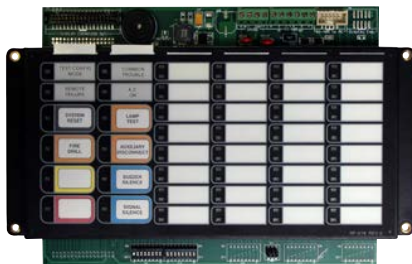
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit LCD display that provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

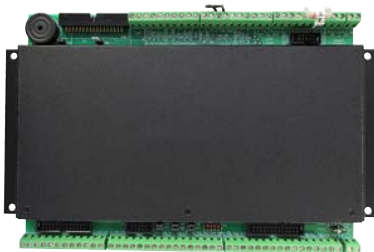
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



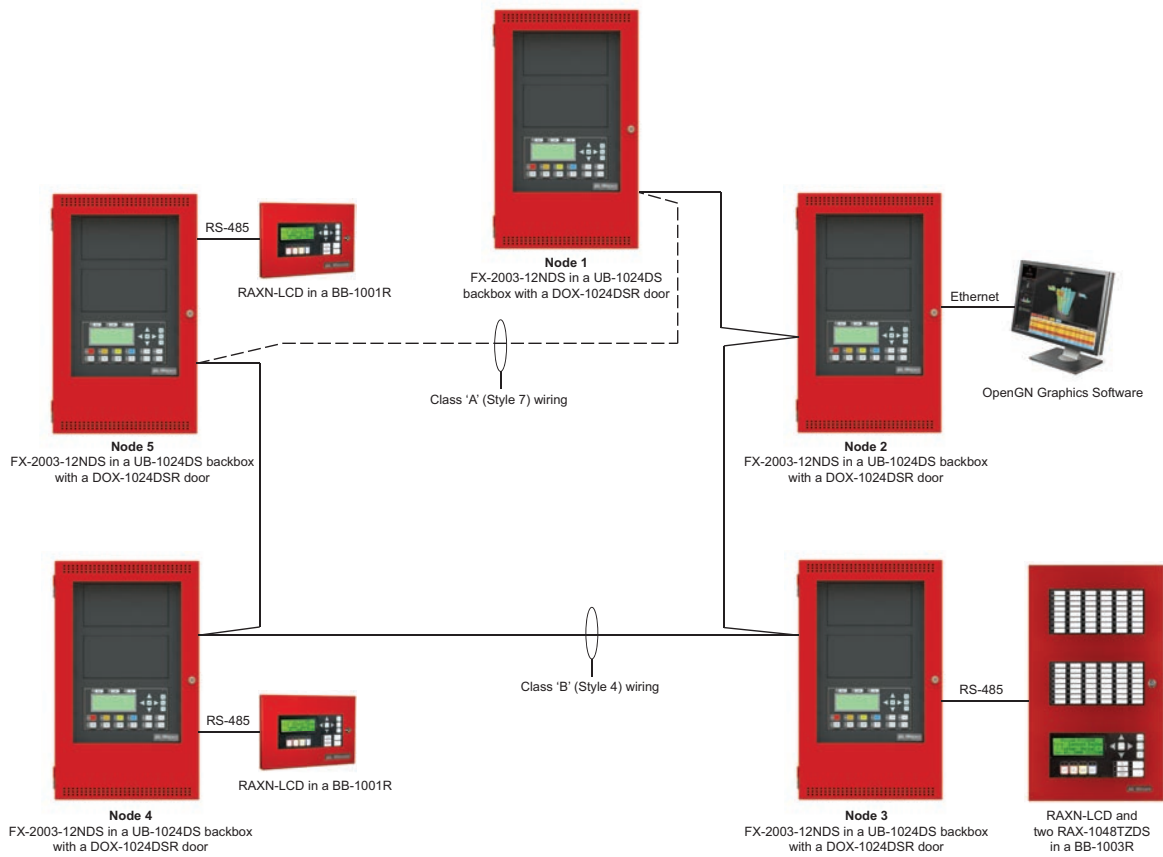
### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

# Typical Flex-Net™ FX-2003-12NDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2003-12NDS	Network Compact Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2003-12NDS	Network Compact Main Control Unit with 12 Amp power supply. Mounts in the UB-1024DS backbox.
UB-1024DS	Universal black backbox. Requires DOX-1024DS(R) door.
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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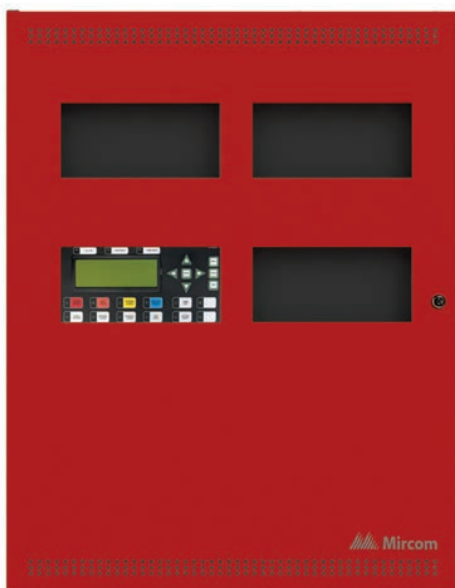
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CAT. 5941  
Rev.7



## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2017-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2017-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



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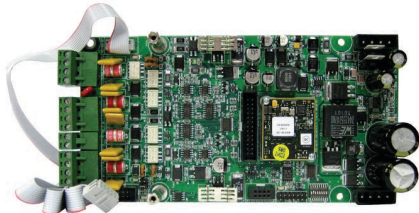
## FleX-Net™ FX-2017-12NDS Network Series Fire Alarm Control Panels



### FX-2017-12NDS Midsize Network Main Control Unit

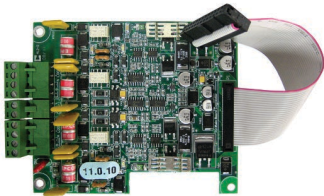
The FX-2017-12NDS Midsize Network Main Control Unit comes complete with one intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display, and a 12 Amp Power Supply. The FX-2017-12NDS provides space for the FNC-2000 Network Controller Module, up to 16 adder modules/loop controllers and 3 internal annunciator adder display modules. The FX-2017-12NDS mounts in the BBX-1072ADS enclosure.

### Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

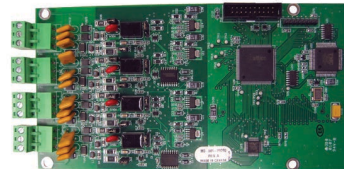


### BBX-1072ADS Enclosure

The BBX-1072ADS enclosure supports one FX-2017-12NDS and up to 40 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a beige or red exterior (BBX-1072ARDS).

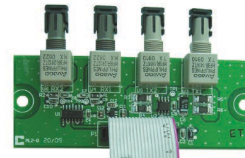
**Dimensions:** 32 1/2"H x 25"W x 6 1/2"D

### Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2017-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2017-12NDS.



### FOM-2000-SP Fiber Optic Network Adder Module

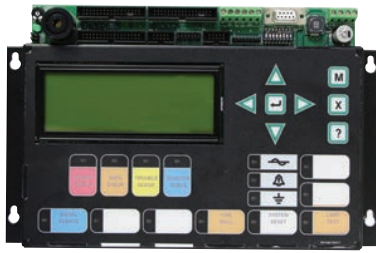
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2017-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

### Electrical Specifications

Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

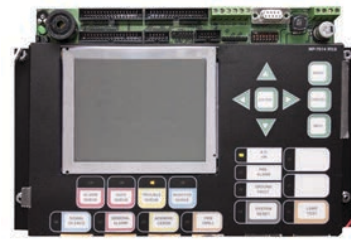


## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

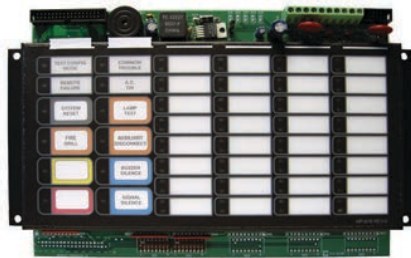
The RAXN-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

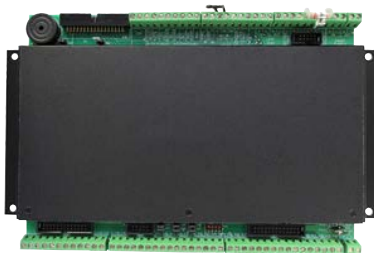
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

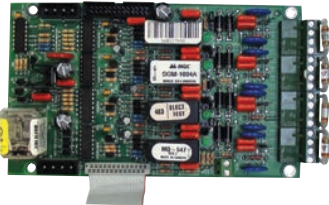
The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Adder Hardware Modules



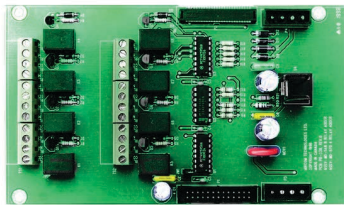
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2017-12NDS.



### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2017-12NDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2017-12NDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2017-12NDS.

## Graphics Software



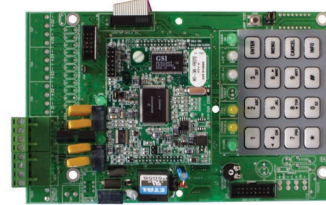
### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable..



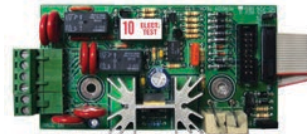
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## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2017-12NDS.



### PR-300 Polarity Reversal/City Tie Module

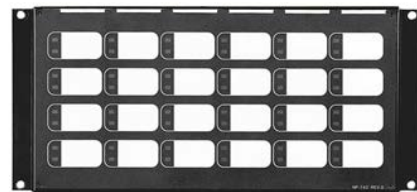
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2017-12NDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

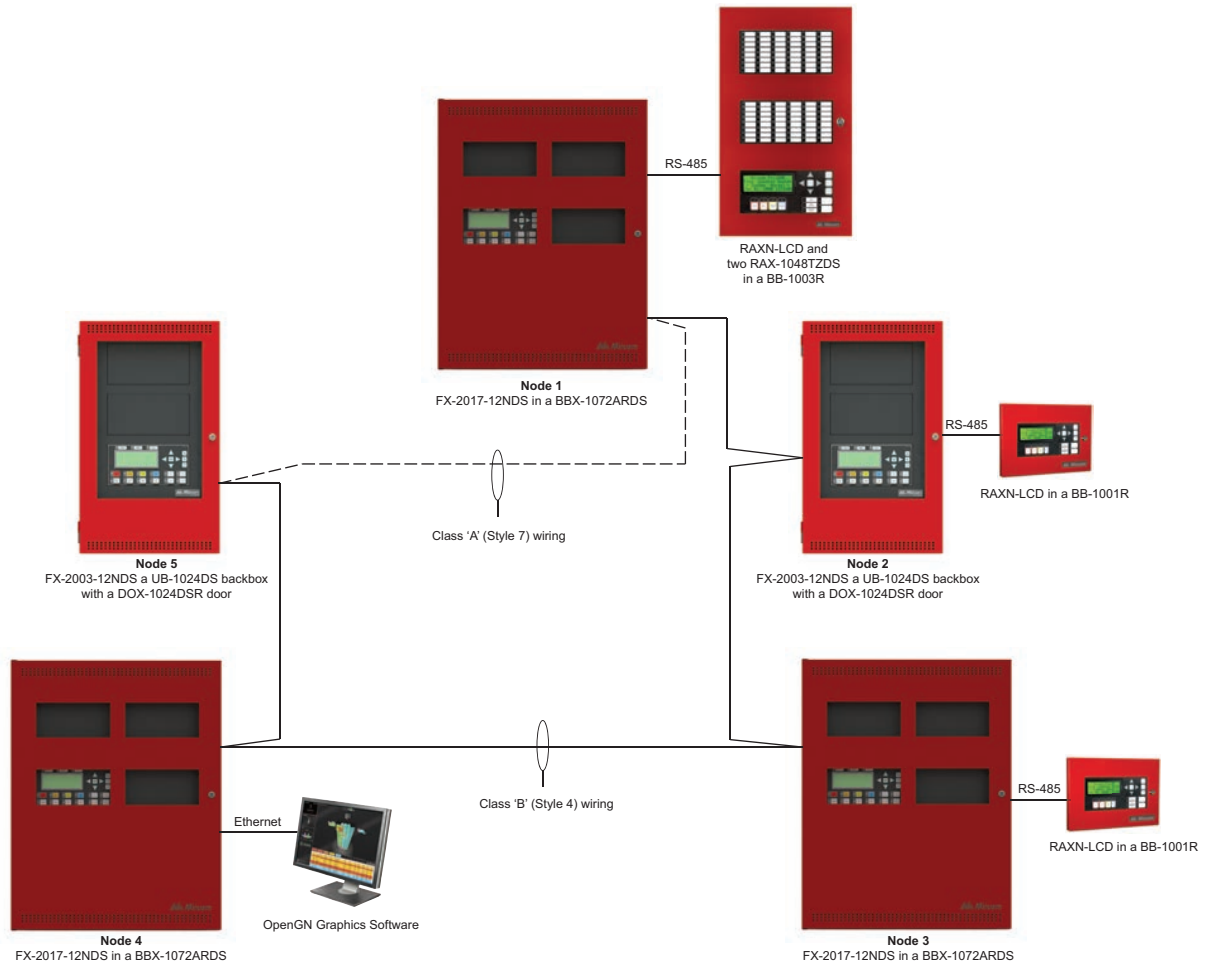
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

# Typical Flex-Net™ FX-2017-12NDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2017-12NDS	Network Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2017-12NDS	Network Main Control Unit with 12 Amp power supply. Mounts in the BBX-1072ADS/BBX-1072ARDS enclosure.
BBX-1072ADS	Black backbox enclosure for FX-2017-12NDS c/w beige door.
BBX-1072ARDS	Black backbox enclosure for FX-2017-12NDS c/w red door.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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CAT. 5942  
Rev.6



FX-2009-12NDS in a BB-5008R enclosure.

## Description

Mircom's Flex-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's Flex-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2009-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2009-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



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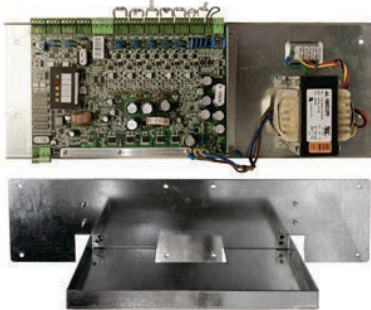
## FleX-Net™ FX-2009-12NDS Network Series Fire Alarm Control Panels



### FX-2009-12NDS Large Size Network Main Control Unit

The FX-2009-12NDS Large Size Network Main Control Unit comes complete with one Intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) Notification Appliances Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply. The FX-2009-12NDS provides space for the FNC-2000 Network Controller Module, up to 8 adder modules and 2 internal display adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosures.

### Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.

### Mounting Brackets



### M500-BK9 Module Mounting Bracket

The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.

### Electrical Specifications

Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal display modules. The ECX-0012 mounts in the BB-5000 series enclosures.



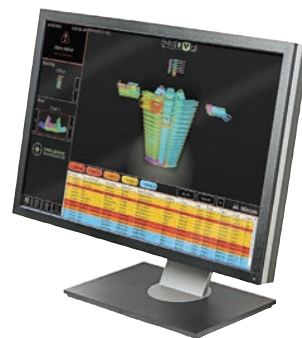
### BB-5008/BB-5014 Lobby Enclosures

The BB-5008 and BB-5014 lobby enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D

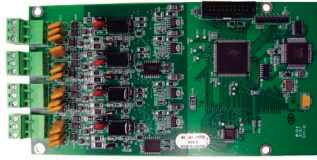
### Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

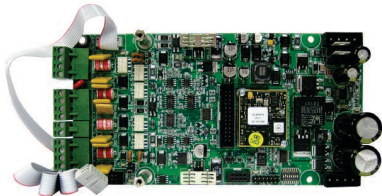
The FNC-2000 provides network capability to the FX-2009-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2009-12NDS.



### FOM-2000-SP Fiber Optic Network Adder Module

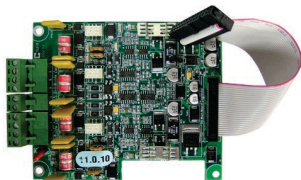
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2009-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the Flex-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



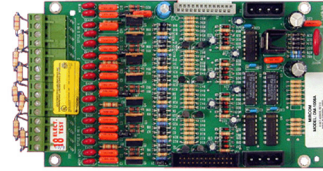
### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Adder Hardware Modules



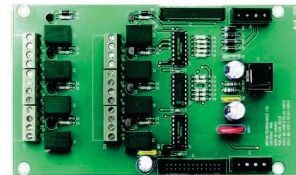
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2009-12NDS.



### SGM-1004A Four Notification Appliances Circuit Module

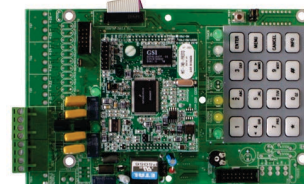
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs which are jumper selectable. The SGM-1004A occupies one module slot in the FX-2009-12NDS.



### RM-1008A Eight Relay Circuit Module

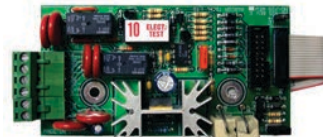
The RM-1008A provides the Flex-Net system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2009-12NDS.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the Flex-Net system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2009-12NDS.

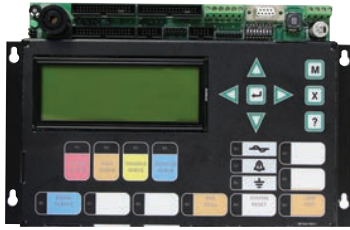


### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2009-12NDS.

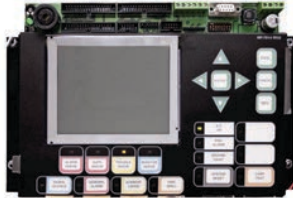


## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

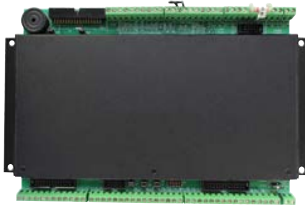
The RAXN-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

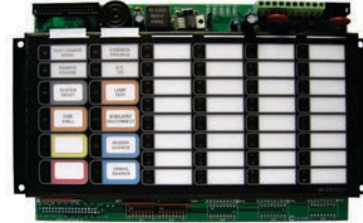
The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Remote LED Annunciators



### RAM-1032ZDS Main Remote LED Annunciator

The RAM-1032ZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032ZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032ZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

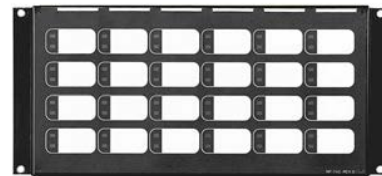
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032ZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

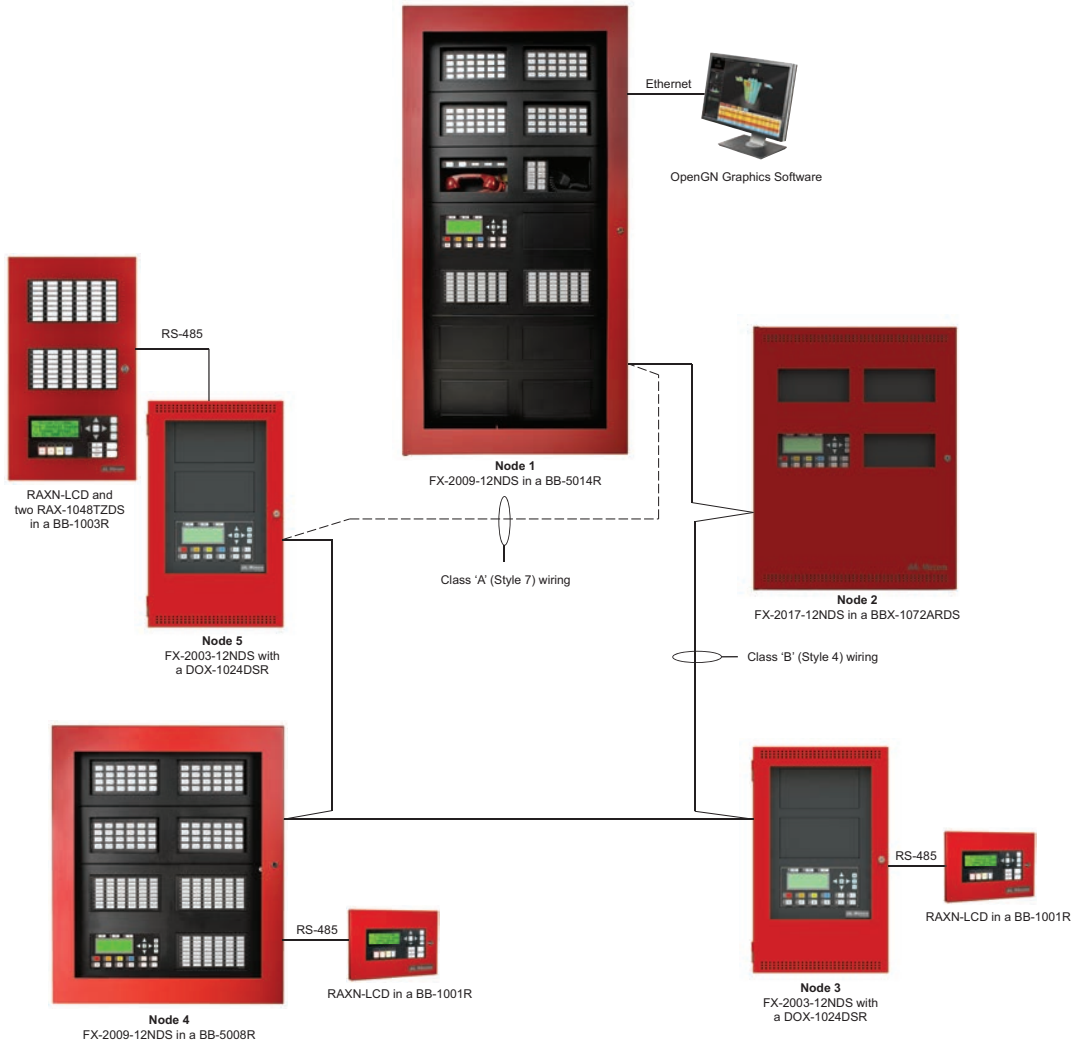
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

# Typical Flex-Net™ FX-2009-12NDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2009-12NDS	Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliances Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2009-12NDS	Large Size Network Main Control Unit. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12NDS. Mounts in the BB-5000 series enclosures.
<b>Enclosures</b>	
BB-5008	Lobby Control Centre Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
BB-5014	Lobby Control Centre Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliances Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Programmable Modules</b>	
INX-10AC	Internal Booster Power Supply Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTKW SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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CAT. 5943  
Rev. 6

## REMOTE NETWORK LCD ANNUNCIATORS



### Description

Mircom's FleX-Net Intelligent Fire Alarm and Audio Network System supports several network annunciators that provide the same functions as the main display on the fire alarm control panel. The FleX-Net network annunciators connect to any node and can annunciate the full network system or selected network nodes.

The FleX-Net network annunciators are available in an 80 character (2x40) and 960 (24x40) character display. Both models are equipped with an easy to use menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. The remote network annunciators have four status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The network annunciators also have common control switches and LEDs for Signal Silence, Fire Drill, System Reset, Lamp Test, General Alarm and Acknowledge.

In addition to being network annunciators, these units can be used as driver modules for LED annunciation, graphic annunciation, programmable switch modules and fan damper control modules.

The FleX-Net network annunciators also allow for the control switches to be disabled on a per function basis (via laptop configurator) for areas that do not require certain Common Control functions to be remotely located from the Fire Alarm Control Panel. Both models can be mounted in a BB-1000 or BB-5000 series enclosure.

### Features

- Provide the same functions as the main display on the FleX-Net fire alarm control panel
- Available in two models
  - Large 80 character (4x20) back-lit LCD display
  - 960 character (24x40) graphical back-lit LCD display
- Connect to any node to annunciate the full network system or selected network nodes
- Do not take up a node address
- Easy to use menu system complete with a directional keypad and switches
- Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor to sort events
- Support programmable modules and annunciator modules
- RAXN-LCDG displays nine events per page with each event displayed over 2 lines with 40 characters per line
- RAXN-LCDG meets Canadian ULC sequential display requirements
- Both models can be mounted in a BB-1000 Series enclosure
- The RAXN-LCD may replace the main panel display when extra headers are required to drive more display adders
- The RAXN-LCDG may also replace the main panel display for additional headers or when other language support is required such as Arabic or Hebrew. (specific deadfronts are available for each FleX-Net enclosure required for mounting the RAXN-LCDG)



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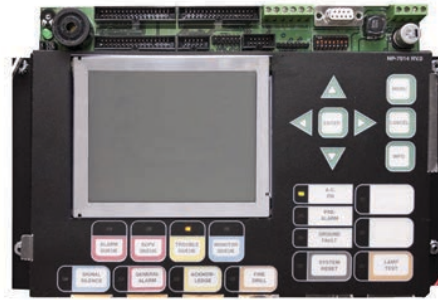
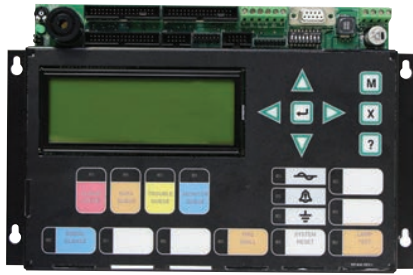
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### RAXN-LCD Remote Network LCD Annunciator

The RAXN-LCD Remote Network LCD Annunciator is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main FleX-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 series enclosures.

### RAXN-LCDG Remote Network Graphic LCD Annunciator

The RAXN-LCDG Remote Network Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in easy to read format. In addition the RAXN-LCDG meets Canadian ULC sequential display requirements. The RAXN-LCDG occupies one display position in the BBX-FXMNSG, BB-1000 or BB-5000 series enclosures.

### Dimensions for BB-1000 Series Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

### Current Consumption

Model Number	Description	Standby (Amps)	Lamp Test w/ All LEDs On (Amps)
RAXN-LCD	Remote Network LCD Annunciator	0.100	0.150
RAXN-LCDG	Remote Network Graphic LCD Annunciator	0.117	0.150

### Ordering Information

Model	Description
<b>Network Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 line x 20 character backlit LCD display
RAXN-LCDG	Remote Network Graphic LCD Annunciator c/w 24 line x 40 character backlit graphical LCD display
<b>Enclosures</b>	
BB-1001	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 1 module.
BB-1002	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 2 modules.
BB-1003	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 3 modules.
BB-1008	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 8 modules.
BB-1012	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 12 modules.

Add suffix 'R' for red door.

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CAT. 5944  
 Rev.2




## Description

Mircom's FleX-Net™ Mass Notification System (MNS) is designed to provide real-time information to all building occupants or personnel in the immediate vicinity of a building during emergency situations. The system allows for real-time information regarding the type of emergency as well as safely instructing people on where to go and what to do.

Mircom's FleX-Net MNS system offers building owners and facility managers with a simple solution to their safety requirements. The system is designed to automatically change as emergency situations change. In addition it is able to manage all mass notification functions, allow responding authorities the ability to override fire alarm notification, issue external voice announcements, and simultaneously distribute different emergency communications on any geographic scale required.

Designed with the industry's most advanced hardware and software, Mircom's FleX-Net MNS system provides reliable and clear audible and visual notification, live voice instruction and Internet based text messaging. In addition it can be easily integrated to other public safety systems for emergency communications to wide area networks.

Mircom's FleX-Net MNS is UL 2572 listed for Mass Notification and complies with NFPA 72-2010 and UFC/DOD standards for emergency communications systems. Based on the proven and reliable FleX-Net Intelligent Network Fire Alarm Control Panel and Audio System the FleX-Net MNS provides a rich feature set that delivers an extensive number of configurable options that allow for flexibility in any environment while reducing the installation and maintenance burden with an easy to install, modular setup.

## Features

### Mass Notification

- Storage and activation of pre-programmed intelligible voice messages
- Supervision of all Mass Notification (MNS) equipment
- Auxiliary inputs for general paging, background music, or other non-emergency functions
- Tamper resistant enclosures with password-protected features for enhanced access control
- One-Way and Two-Way EVACS capability
- Automatic response to MNS inputs
- Local and remote controls and indicators
- Synchronized evacuation zone signalling
- Voice message priority according to risk analysis and emergency response plan
- Visible notification and strobes support
- Local Operating Console (FX-LOC) that provides on-site monitoring/control of voice and notification appliances
- Large LCD displays
- Fire Alarm Control Panel Interface (FACI)
- Building Management System Interface (BMSI)
- Autonomous Control Unit providing real time status of all FX-LOC units
- UL 2572 Listed for Mass Notification

### Fire Alarm Control

- Base system is equipped with one Intelligent Signaling Line Circuit (SLC). Expandable up to 21 SLCs.
- Each SLC is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Built-in Ethernet port
- Remote diagnostics via a built-in web server

### Audio Control

- Multi-channel operation
- Distributed audio
- Compatible with 520Hz low frequency signal by Mircom
- 5 hard wire fire fighter telephone channels that can be expanded with intelligent fire phone modules
- 25 or 70 volt system
- Multiple amplifier sizes
- Max. of 180 watts per Integrated Fire & Audio panel
- Expansion to three 360 watts expansion cabinets for a total of 1260 watts of audio power per node

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Fully integrated digital network audio and control over a single pair of copper wire or fiber optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Remote diagnostics via built in web server and standard Ethernet port in every node
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol



S7010



S7010



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COA# 6064



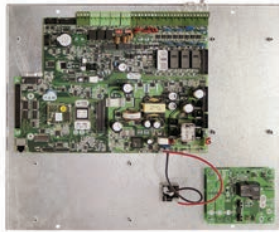
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## FX-MNS Mass Notification Control Modules



### FX-2000MNS Main Network Board

The FX-2000MNS main network board includes one intelligent Signaling Line Circuit (SLC) and Four Style Z/Y (Class A/B) NAC circuits. The FX-2000MNS has provisions to mount up to 9 internal adder modules and mounts in the BBX-FXMNS enclosure.



### QMB-5000N Integrated Audio Network Chassis

The QMB-5000N includes the audio and telephone control which consists of an audio card cage designed for mounting the ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and up to four QAA style audio amplifiers. The QMB-5000N connects to the FX-2000MNS Network fire alarm main board and mounts in the BBX-FXMNS enclosure.



### BBX-FXMNS Enclosure

The BBX-FXMNS enclosure supports the FX-2000MNS Network main board, DSPL-XXXX Main LCD display, QMB-5000N audio card cage, QMP-5101NV Master Paging Microphone and QMT-5302NV Master Telephone Handset. In addition the enclosure provides space for additional external modules and internal lobby control modules. The BBX-FXMNS holds up to 40 AH batteries and is available with white (BBX-FXMNS) or red (BBX-FXMNSR) doors.

**BBX-FXMNS Dimensions:** 61.5"H x 20"W x 9"D



### DSPL-420 Main Display Module

The DSPL-420 Main Display Module provides the FX-MNS with a 4 line by 20 character backlit LCD display, Common Controls buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-420 occupies one display position in the FX-MNS enclosure.



### DSPL-420-16TZDS Main Display Module

The DSPL-420-16TZDS Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitoring with an additional 16 LED points of annunciation. The DSPL-420-16TZDS occupies one display position in the BBX-FXMNS enclosure.



### DSPL-2440 Graphical Main Display Module

The DSPL-2440 Graphical Main Display Module provides the FX-MNS with a 24 line x 40 character backlit LCD display, common controls buttons and four status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-2440 occupies one display position in the FX-MNS enclosure.



### QMP-5101NV Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101NV allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101NV is vertical mount unit that mounts in the BBX-FXMNS enclosure.

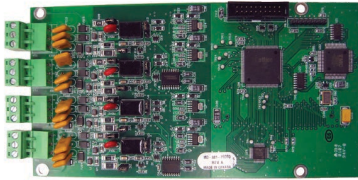


### QMT-5302NV Network Master Firefighters' Telephone Control Module

The QMT-5302NV includes the Master Telephone Handset and common control indicators. The QMT-5302NV supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

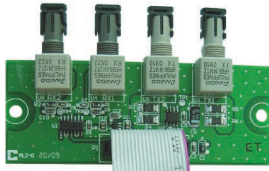


## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

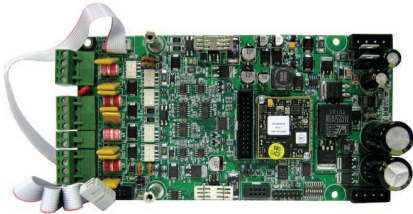
The FNC-2000 provides network capability to the system. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-MNS.



### FOM-2000-SP Fiber Optic Network Adder Module

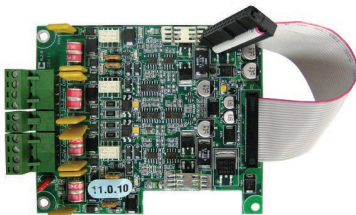
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the system. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

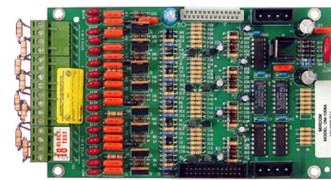
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

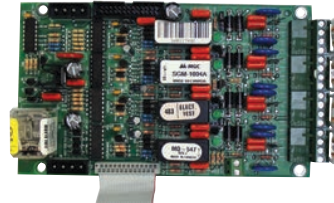
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Adder Hardware Modules



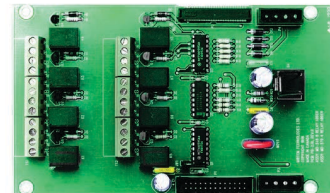
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

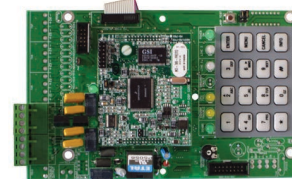
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

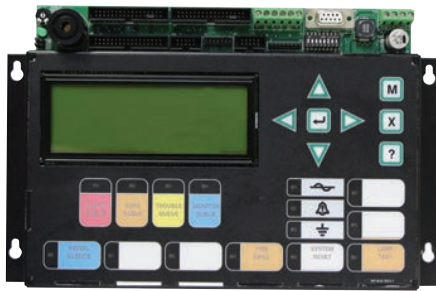
The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

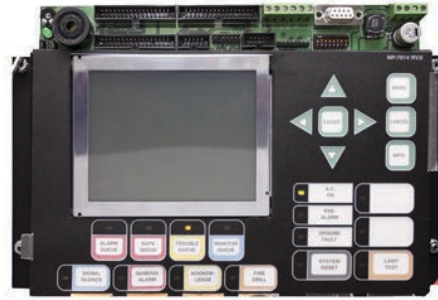
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

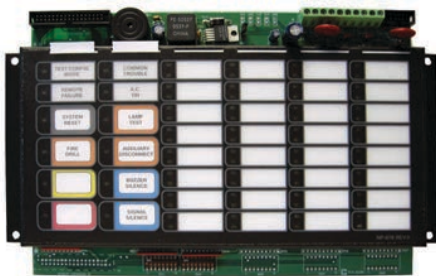
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main FleX-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in easy to read format. The RAXN-LCDG occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

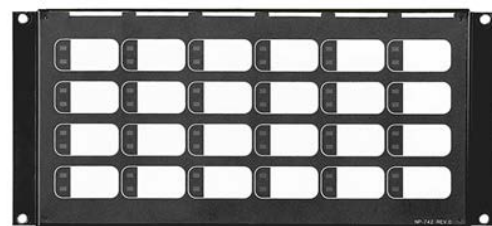
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

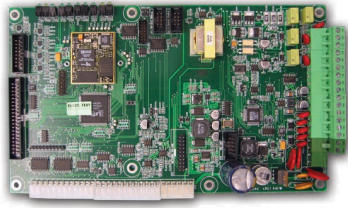
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

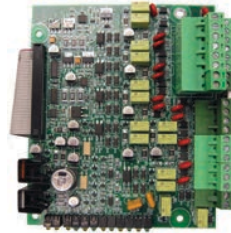
The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## FX-MNS Audio and Telephone Network Controller Modules



### ANC-5000 Audio Network Controller Module

The ANC-5000 provides audio microphone control on the network system. The ANC-5000 mounts on a plate in the QMB-5000N.



### TNC-5000 Telephone Network Controller Module

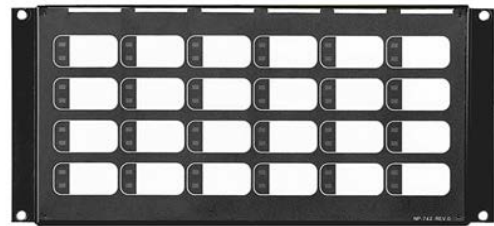
The TNC-5000 provides five hardwired telephone circuits for the local floor panel with the first circuit configurable for the master telephone handset. The TNC-5000 mounts in the QMB-5000N.

## Paging Control Modules for Remote Applications



### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101N occupies one module space in the BB-5000 Series enclosures.



### QAZT-5302DS Zoned Paging and Telephone Selector Module

The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302N Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.

## Firefighter Telephone Control Modules



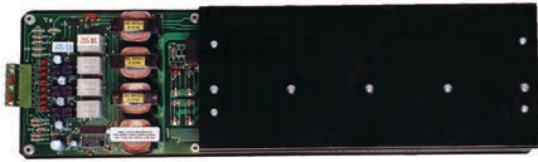
### QMT-5302N Network Master Firefighters' Telephone Control Module

The QMT-5302N includes the Master Telephone Handset and common control indicators. The QMT-5302N supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302N occupies one module space in the BB-5000 Series enclosures.

### Annunciator/Programmable Module Enclosures

- BB-1001: 9"H x 12.75"W x 1.2"D
- BB-1002: 18"H x 12.75"W x 1.2"D
- BB-1003: 26.4"H x 12.75"W x 1.2"D
- BB-1008: 33"H x 22.5"W x 1.25"D
- BB-1012: 45"H x 22.5"W x 1.25"D

# Audio Amplifiers



## QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in either the QMB-5000N or QMB-5000B card cage and occupy one amplifier slot.

## QAA-5230S-70/25 Dual 30 Watt Amplifier

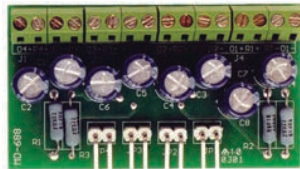
The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

## QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

## QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.



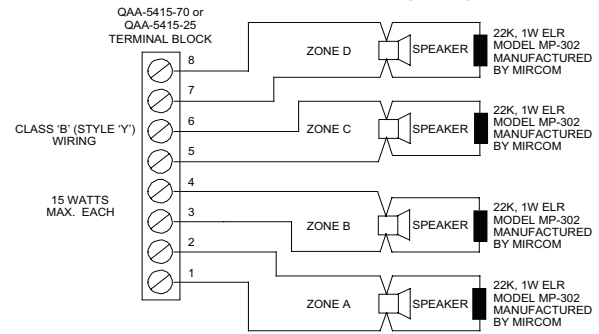
## QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

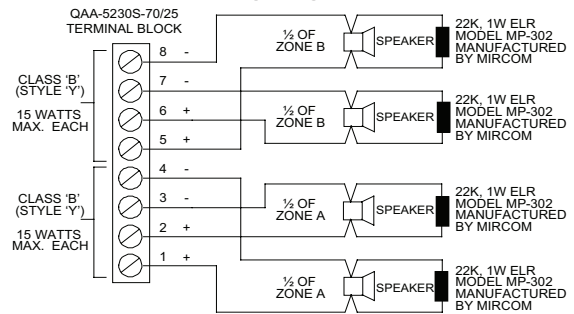
## QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLAS is required for each amplifier.

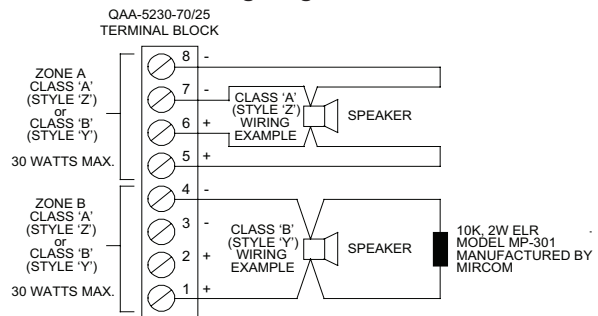
## QAA 5415-70 or QAA-5415-25 Wiring Diagram



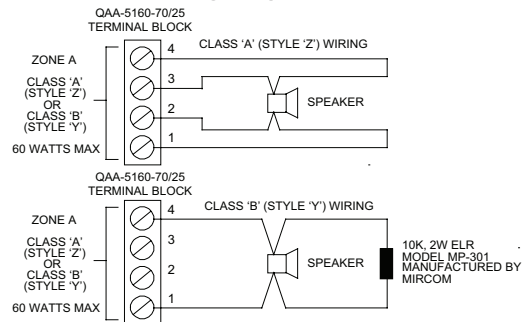
## QAA-5230S-70/25 Wiring Diagram



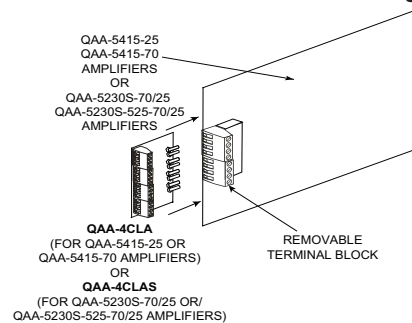
## QAA-5230-70/25 Wiring Diagram



## QAA-5160-70/25 Wiring Diagram



## QAA-4CLA and QAA-4CLAS Connection Diagram



## Network System Expansion Enclosures



### FX-2009-12NDS Large Network Main Control Unit

The FX-2009-12NDS Large Network Main Control Unit consists of a base fire alarm panel with one isolated intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC circuits, a 4 line by 20 character LCD display and a 12 Amp power supply. The FX-2009-12NDS has space to mount the FNC-2000 Fire Network Controller Module, ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and provision to mount up to 4 adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosure and supports Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator / Programmable modules.



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.

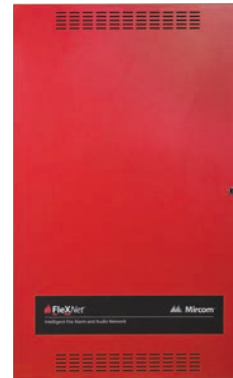


### BB-5008/BB-5014 Enclosures

The BB-5008 and BB-5014 enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

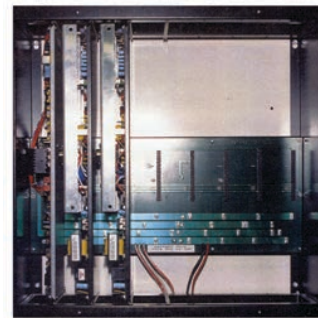
**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D



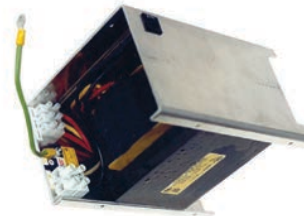
### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000N Audio Power Supply, one QBC-5000N Audio Battery Charger and up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports 7 QAA style audio amplifiers. The QMB-5000B requires one QPS-5000N Audio Power Supply and one QBC-5000N Audio Battery Charger and mounts in the QBB-5001 Audio Backbox.



### QPS-5000N Audio Power Supply

The QPS-5000N supports up to 360 watts and mounts in the QBB-5001 Audio backbox.

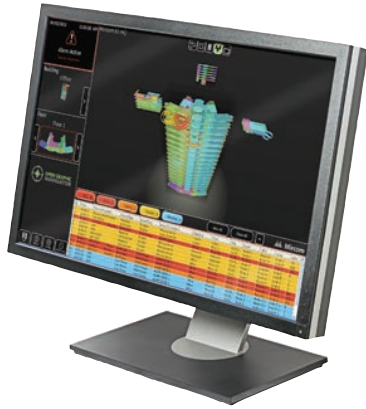


### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Audio Backbox.

**Note:** The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.

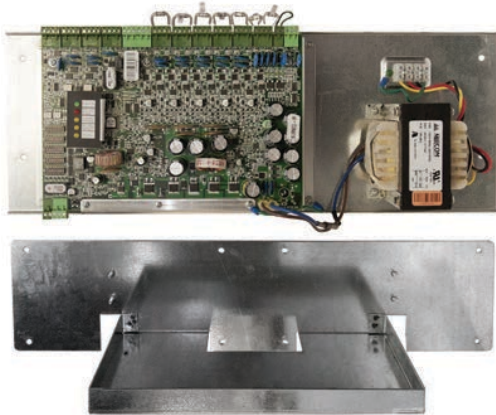
## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

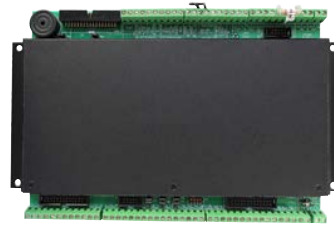
## Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Mounting Brackets



### M500-BK9 Module Mounting Bracket

The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.



### M500-BK2 Module Mounting Bracket

The M500-BK2 Module Mounting Bracket mounts inside the BBX-FXMNS enclosure and provides space to mount up to two M500 style intelligent modules.

## Local Operating Console Components

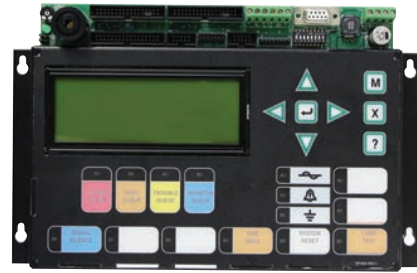


### FX-LOC Lobby Operating Console

The FX-LOC Local Operating Console provides on-site monitoring/control of voice and notification appliances for Mass Notification applications. The FX-LOC enclosure supports one RAXN-LCD remote LCD annunciator, a QMP-5101N master paging microphone and one QAZT-5302DS Paging Selector Switch. RAXN-LCD, QAZT-5302DS and QMP-5101N are ordered separately.

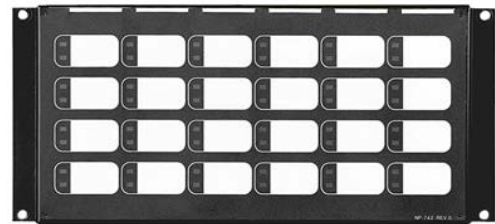
Add suffix "R" for red door.

Dimensions: 25"H x 15"W x 5.5"D



### RAXN-LCD Remote LCD Annunciator

The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides the exact functions as the FX-MNS main display. The RAXN-LCD occupies one display position in the FX-LOC enclosure.



### QAZT-5302DS Zoned Paging and Telephone Selector Module

The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302N Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.



### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N interconnects between other QMP microphone modules at the FX-MNS and within the associated FX-LOC units. The QMP-5101N occupies one module space in the FX-LOC enclosure.

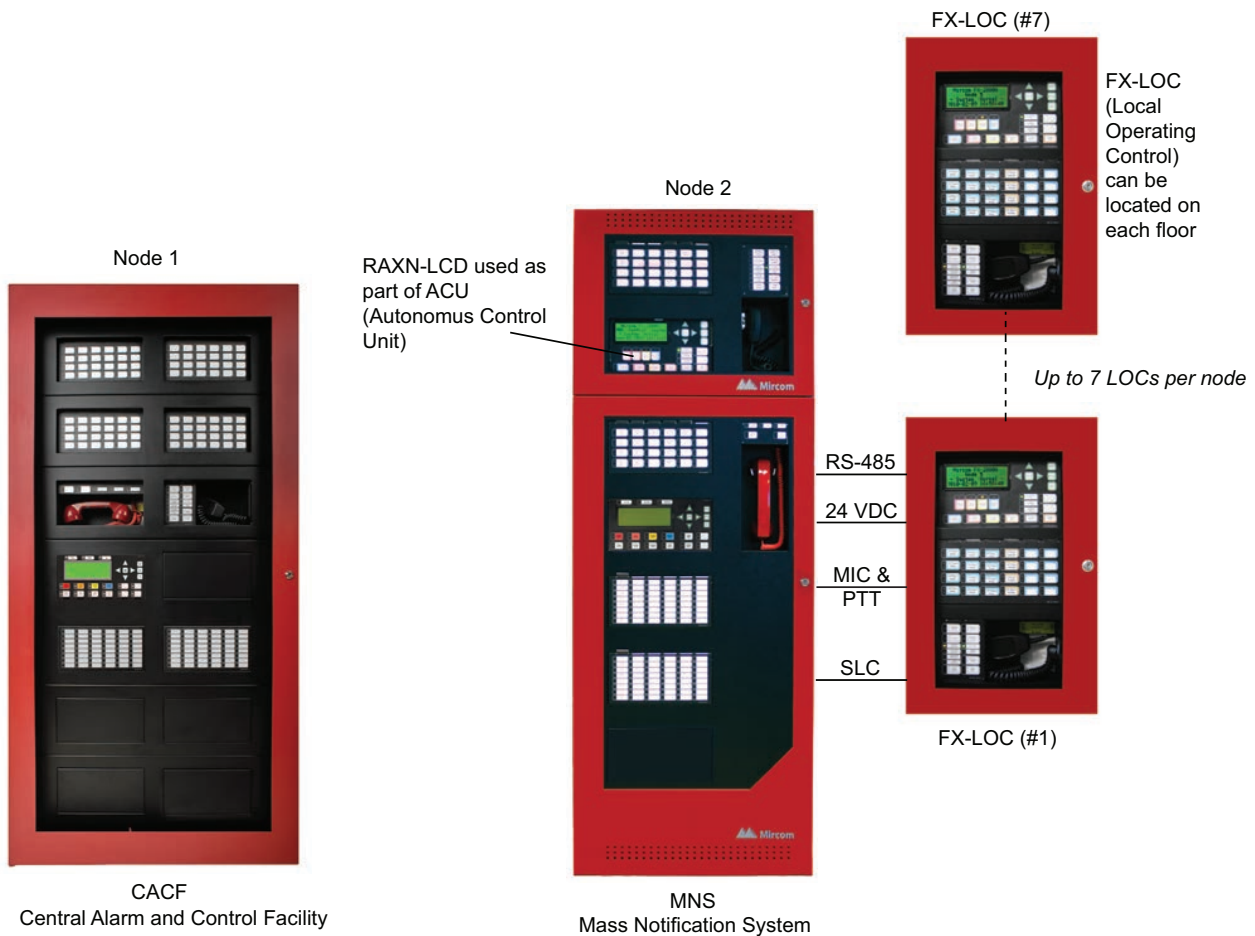
## Mircom Mass Notification System

Mircom's FleX-Net Intelligent Fire Alarm & Emergency Communications Network is comprised of an Autonomous Control Unit (FX-MNS) and the FX-LOC Local Operating Console that complies with the UL 2572 requirements for Mass Notification Systems (MNS).

The FX-LOC Local Operating Console along with the FleX-Net Network Fire Alarm provides compliance with the UL 2572 requirements for Mass Notification Systems (MNS) .

The FX-MNS Autonomous Control Unit is comprised of a BBX-FXMNS enclosure that includes a RAXN-LCD Annunciator and a Master Microphone to provide emergency audio. In addition the FX-MNS is equipped with another RAXN-LCD which annunciates the fire alarm system events, a Master Telephone for emergency use and a DSPL-420 or DSPL-2440 LCD display which annunciates all system messages (Fire Alarm and Mass Notification). A maximum of seven FX-LOC units can be connected to a FleX-Net MNS node.

### Sample In-Building Mass Notification System Configuration





## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
<b>Fire Alarm Components</b>			
FX-2000MNS	Main Network Board	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008/KI	Fan Damper Control Module	0.015	0.035
DSPL-420	Narrow Display	0.024	0.025
DSPL-420-16TZDS	Narrow Display w/ 16 additional LED Zones	0.010	0.046
DSPL-2440	Graphic Display	0.029	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
FDS-008	Selection Control Panel for MNS	0.024	112mA
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015
<b>Audio Components</b>			
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
QAA-5160-70/25	1 Zone 60W Amplifier	0.055	0.350
QAA-5230-70/25	2 Zone 30W Amplifier	0.055	0.350
QAA-5230S-70/25	2 Zone 30W Amplifier (split)	0.055	0.350
QAA-5415-70	4 Zone 15W Amplifier, 70V	0.055	0.350
QAA-5415-25	4 Zone 15W Amplifier, 25V	0.055	0.350
QMP-5101N	Master Paging Module	0.004	0.012
QMP-5101NV	Vertical Master Paging Module	0.004	0.012
QMT-5302N	Master Telephone Module	0.003	0.013
QMT-5302NV	Vertical Master Telephone Module	0.003	0.013
QAZT-5302DS	Paging/Telephone Zone Module	0.010	0.015

## Electrical Specifications

Fire Alarm Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries
Audio Primary Input Power (QPS-5000N)	120 VAC, 60Hz / 240 VAC, 50Hz 12 Amps

## Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D



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page 11 of 14

## Ordering Information

Model	Description
<b>Mass Notification Control Panels</b>	
FX-2000MNS	FX-MNS Main Network Board with 12 Amp power supply and 120/240V transformer. Mounts in the BBX-FXMNS enclosure.
QMB-5000N	Integrated Audio Network Control Chassis. Mounts in the BBX-FXMNS enclosure
PS-2040	FXMNS Network Fire Alarm and Audio Power Supply (120/240V)
BBX-FXMNS	Black backbox enclosure with white doors for FX-2000MNS. Add suffix 'R' for red doors.
DSPL-420	4 x 20 Main LCD Display for FX-2000MNS
DSPL-420-16TZDS	4 x 20 Main LCD Display for FX-2000MNS w/ Additional 16 LED Zones
DSPL-2440	Graphical Main Display for FX-2000MNS
FX-LOC	Local Operating Console enclosure for FXMNS. Add suffix "R" for red door.
<b>Paging/Telephone Modules</b>	
QMP-5101NV	Master Network Paging Control Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMT-5302NV	Master Network Telephone Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMP-5101N	Master Network Paging Control Module
QMT-5302N	Master Network Telephone Control Module
QAZT-5302DS	Paging and Telephone Selector Panel
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
ANC-5000	Audio Network Controller Module
TNC-5000	Telephone Network Controller Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 x 20 LCD display
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs

## Ordering Information continued

Audio Amplifiers	
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25 Amplifiers
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
Graphics Software	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
Power Supply Module	
INX-10AC	Internal Booster Power Supply Module
Fire & Audio Expansion Components and Enclosures	
FX-2009-12NDS	Large Network Main Chassis. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-200912NDS. Mounts in the BB-5000 series enclosures.
BB-5008	Lobby Control Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
BB-5014	Lobby Control Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
QBB-5001	Audio Backbox
QMB-5000B	Audio Motherboard and Card Cage
QPS-5000N	Audio Power Supply (120/240V)
QBC-5000N	Audio Battery Charger
Mounting Brackets	
M500-BK-9	M500 Series Mounting Bracket. Holds up to 9 modules in a BB-5000 Series enclosure.
M500-BK-2	M500 Series Mounting Bracket. Holds up to 2 modules in a BBX-FXMNS enclosure.
Accessories	
MGC NTKW SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware

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CAT. 5945  
Rev. 3



FX-2003-12NXTDS in a BBX-1024XTR enclosure with two optional RAX-1048TZDS modules

## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2003-12NXTDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2003-12NXTDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 21
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064

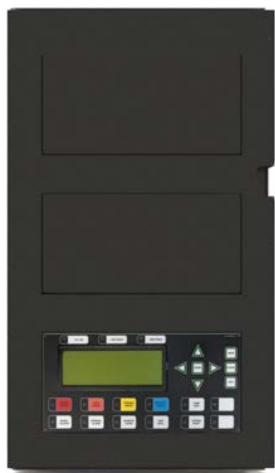


CATALOG NUMBER **5946**

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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

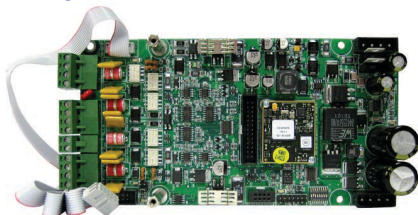
# FleX-Net™ FX-2003-12NXTDS Network Series Fire Alarm Control Units



## FX-2003-12NXTDS Network Main Control Unit

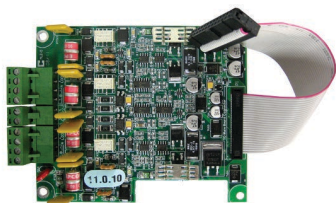
The FX-2003-12NXTDS Network Main Control Unit comes complete with one intelligent signaling line circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each, a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2003-12NXTDS provides space for the FNC-2000 Network Controller Module, up to 8 adder modules and two programmable modules. The FX-2003-12NXTDS mounts in the BBX-1024XT(R) enclosure.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.

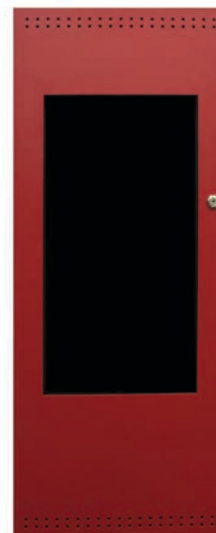


### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.



BBX-1024XT



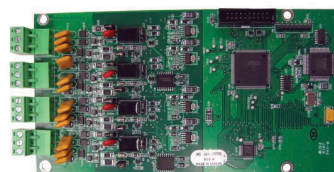
BBX-1024XTR

## BBX-1024XT(R) Enclosure

The BBX-1024XT enclosure supports one FX-2003-12NXTDS and up to 18 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (BBX-1024XT) or red exterior (BBX-1024XTR). The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

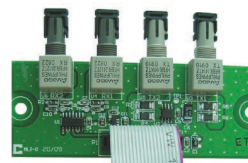
**BBX-1024XT(R) Dimensions:** 35 1/2"H x 14 1/2"W x 5 1/4"D

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2003-12NXTDS. One Fire Network Controller Module is required per network node. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2003-12NXTDS.



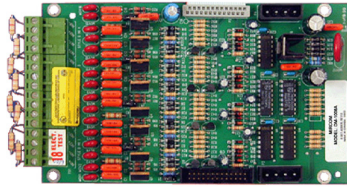
### FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FleX-Net units. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Electrical Specifications

Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

## Adder Hardware Modules



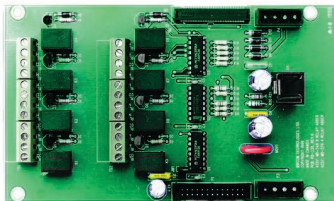
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12NXTDS.



### SGM-1004A Four Notification Appliance Circuit Module

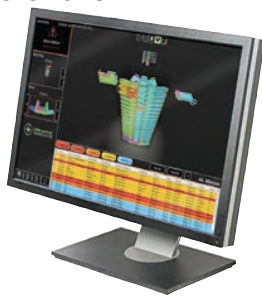
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12NXTDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NXTDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12NXTDS.

## Graphics Software



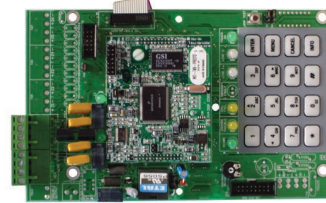
### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.



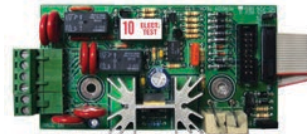
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## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NXTDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12NXTDS.



### PR-300 Polarity Reversal/City Tie Module

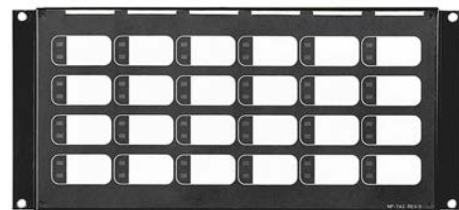
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2003-12NXTDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

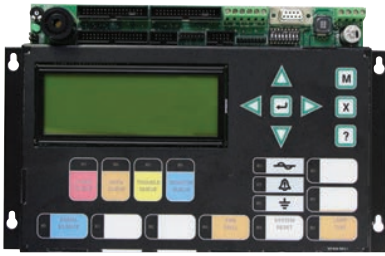
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main unit or the RAXN-LCD and occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

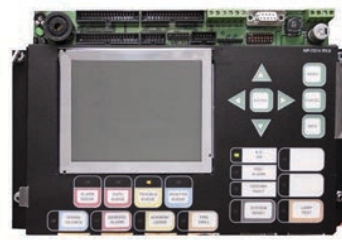
The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main unit or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

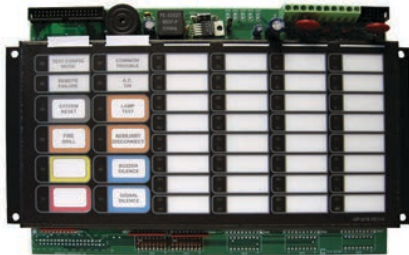
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit LCD display that provides the same functions as the main display on the fire alarm control unit. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

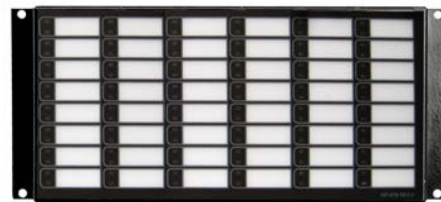
The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

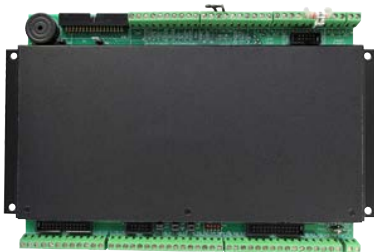
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

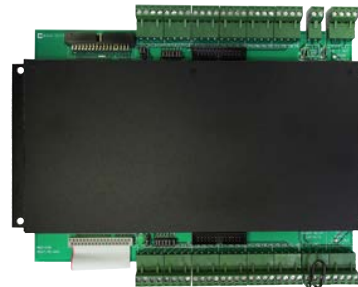
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main unit or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

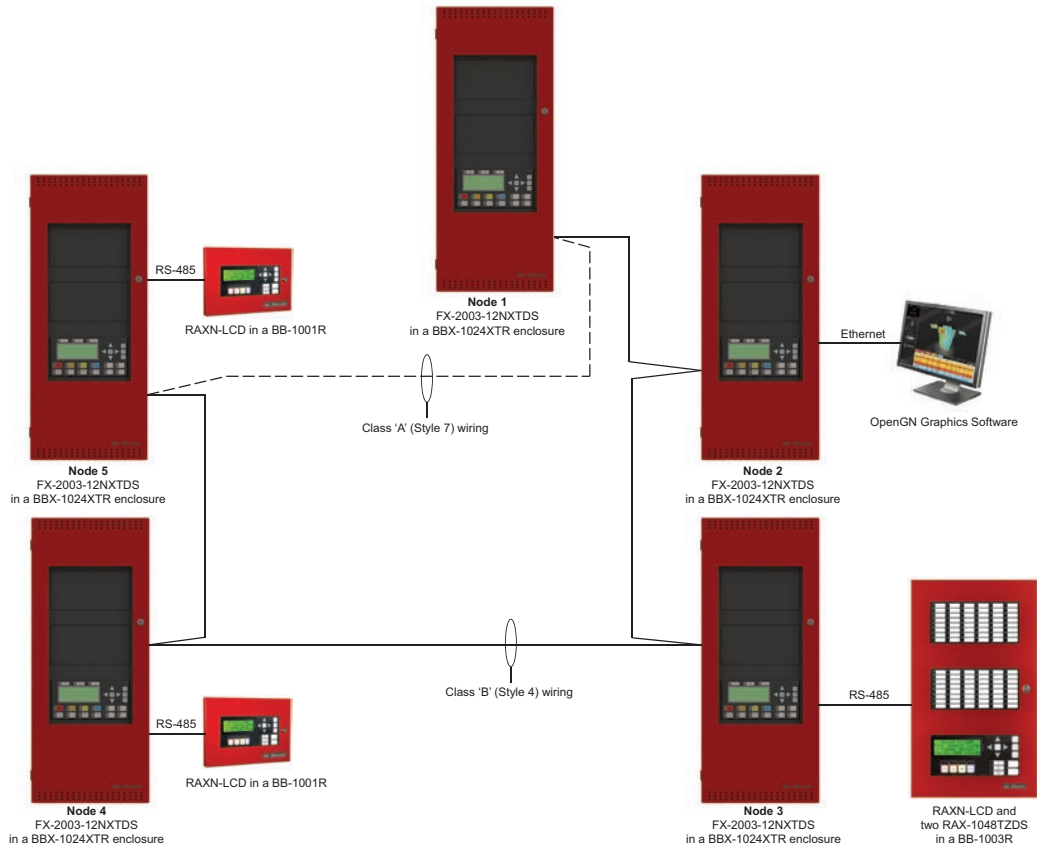
The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D



# Typical FleX-Net™ FX-2003-12NXTDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2003-12NXTDS	Network Compact Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Unit</b>	
FX-2003-12NXTDS	Network Compact Main Control Unit with 12 Amp power supply. Mounts in the BBX-1024XT(R) enclosure.
BBX-1024XT	Enclosure for FX-2003-12NXTDS c/w removable white door, black backbox and CAT-30 lock and key.
BBX-1024XTR	Enclosure for FX-2003-12NXTDS c/w removable red door, black backbox and CAT-30 lock and key.
FA-XT-TRB	Black Semi-Flush Trim Ring for BBX-1024XT(R) enclosure.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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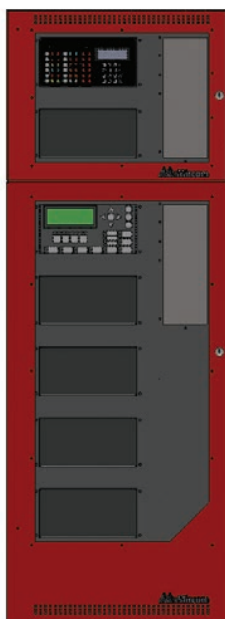
**U.S.A.**  
4575 Witmer Industrial Estates  
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CAT. 5946  
Rev. 2



## Description

The FR-320NETK is a combination panel kit that adds releasing capability to the FleX-Net system without the need for a separate external cabinet. Based upon Mircom's already UL listed FR-320 Releasing panel and FleX-Net systems, this system permits pre-release, abort, manual release, and reset control. The FR-320NETK includes all necessary items pre-connected to integrate the FR-320 releasing panel to the Mircom's FleX-Net system. The FleX-Net and FR-320 panels have independent power arrangements each with its own AC supply and battery setup. The connection between the FR-320 and the FleX-Net panels is by isolated relays. The FR-320 uses the FR-320 pre-programmed mode #2 to enable activation features via the FleX-Net initiating device circuits.

**Note:** In this particular configuration, the Mass Notification System (MNS) capability is not available for use at this panel node.

**Note:** The releasing devices used must be wired locally to this panel.

## Features

- Adds releasing capability to FleX-Net™ system
- Built-in Addressable loop which supports Classic Loop Interface Protocol (CLIP) and Advanced Protocol (AP) addressable devices
- Each SLC is capable of supporting 99 CLIP/159 AP Analog Sensors and 99 CLIP/159 AP Addressable Modules which can be wired in Style 6 or 7 Class A) or Style 4 (Class B • Tamper resistant enclosures)
- Base system is equipped with one Intelligent Signaling Line Circuit (SLC/DCL). Expandable to 21 SLCs
- Password protected features for enhanced access control
- Local and remote placement of controls and indicators
- Visible notification and strobes support
- Large LCD displays
- Fire Alarm Control Panel Interface (FACI)
- Building Management System Interface (BMSI)
- Fire Alarm Control:
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Built-in Ethernet port
- Remote diagnostics via a built-in web server

### Network Features

- Up to 63 nodes
- Fully integrated digital network audio and control over a single pair of copper wire or fibre optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Peer-to-peer network communications

### Releasing Features

- Each initiating circuit is pre-configured as: Alarm, Supervisory (Latching or nonlatching), Water-Flow, Manual Release Switch, Abort Switch, or Manual Release/Abort combination, depending upon the selected pre-programmed configuration. There are two LEDs per circuit, one for Trouble (amber), and one dual color (amber/red) LED for Supervisory (amber) and Alarm (red)
- Basic unit has 4 power limited class B (style Y) output circuits. Output circuits 1 & 2 are indicating circuits while output circuits 3 & 4 are releasing circuits (circuit 4 can work as an indicating circuit in some situations.) Each indicating circuit process type is preconfigured and can be silenceable
- The signal rates depend on the selected pre-programmed configuration.
- A pushbutton associated with each initiating, indicating, and releasing circuit can individually bypass the circuit
- Configurable Signal Silence Inhibit and Auto Signal Silence Timers
- Subsequent Alarm, Supervisory, and Trouble operation
- Relay Contacts for Common Alarm, Common Supervisory, Common Trouble, and Auxiliary Alarm Relay (disconnectable)
- RS-485 Interface for RA-1000 Series Remote Multiplex Annunciators and Smart relay Module
- Optional Modules for additional Relay Circuits, City Tie and Polarity Reversal Signaling.
- Extensive transient protection
- Easy configuration of the panel using LCD service tool (CFG-300)
- Releasing circuit protection from false alarm by disconnecting the battery if the voltage falls below 19V



NYC  
Fire Dept.

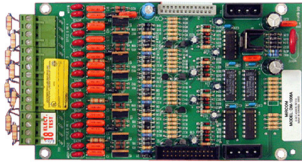
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**CATALOG NUMBER 5980**

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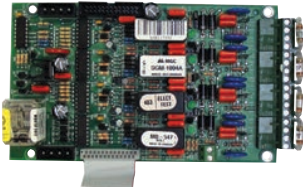
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Adder Hardware Modules



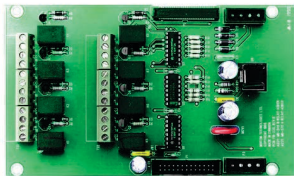
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

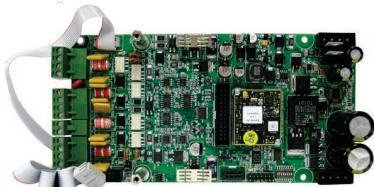
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

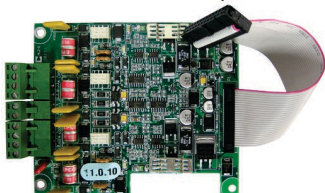
The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

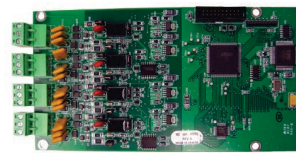
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

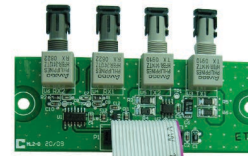
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

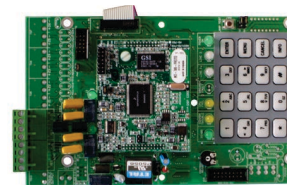
The FNC-2000 provides network capability to the system. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-MNS.



### FOM-2000-SP Fiber Optic Network Adder Module

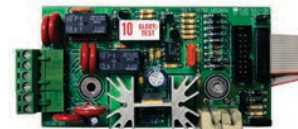
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the system. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

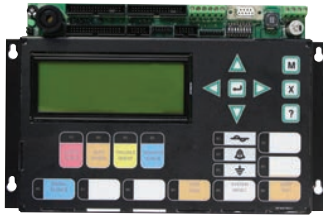
## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

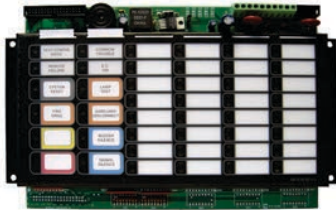
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main Flex-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

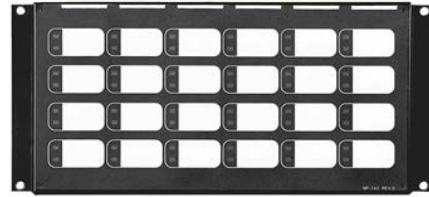
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

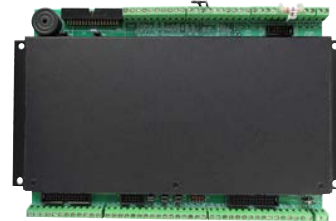
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
FX-2000MNS	Main Network Board	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008/KI	Fan Damper Control Module	0.015	0.035
RM-306	FA-300 Series Relay Adder Module (6)	0.0	0.08
DSPL-420	Narrow Display	0.024	0.025
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1016TZDS	Main Remote LED Annunciator	0.050	0.150
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Electrical Specifications

### FileX-Net

AC line voltage	120 VAC 60Hz / 240 VAC 50Hz, 4 Amps / 2 Amps (primary)
Power supply rating	12 Amps max. (Secondary)
For indicating circuits	24VDC Unfiltered 10 Amps. Max.
Battery	24VDC Gel Cell/Sealed lead acid
Battery Charging Capability	17AH-65AH

### FR-320NETK

AC line voltage	120 VAC 60Hz 1.2A / 240 VAC 50Hz 0.6A
Power supply rating	6.5AAC max. (Secondary)
Max power allowed	4A 1.7A (aux power in filtered if used) 0.5A (aux power filtered if used) 0.3A (resettable auxiliary power if used) 1.7A (for releasing circuit)
Battery	24VDC Gel Cell/Sealed lead acid
Battery Charging Capability	10AH-26AH

If no auxiliaries are used the max power is 4A for the indicating and the releasing circuit

## Ordering Information

Model	Description
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 x 20 LCD display
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1016TZDS	main Remote LED Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Coloured LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware

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## PRO-2000 X2 Panels



### Features

- Up to 1200 local detection/control devices
- Up to 5000 networked detection/control devices
- Integrated gas detection
- Agent releasing service
- Support for 2-wire addressable devices
- Support for conventional 2-wire initiating devices
- Support for notification circuits
- Support for multi-panel networking
- Battery backed-up real time clock and event log
- Independent ground fault detection circuits on each interface card for easy ground fault tracking
- Wall mount enclosure equivalent to NEMA 2

### Description

The PRO-2000 X2 panels are microprocessor-based fire alarm control units, suitable for small to medium fire detection and suppression applications. Larger applications can be covered using additional panels in a master/slave network configuration.

There are three types of X2 panels available: the X2S, the X2E and the X2M.

The X2S panel is the standard model. It has a 2 line by 40 character display, with associated controls and indicators. It also has 24 programmable indicators and 12 programmable pushbuttons.

The X2E panel has the same features as the X2S plus 48 additional programmable indicators and 24 additional programmable pushbuttons.

The X2M panel has the same features as the X2S plus a geographic mimic panel containing up to 144 indicators. The geographic mimic also supports 72 pushbuttons for special applications. The geographic mimic provides a graphical representation of the protected areas. When new events are displayed on the LCD, their location can be identified rapidly via the appropriate indicators on the geographic mimic.

The following types of devices are supported by the X2 panels:

Addressable devices:

- Smoke detectors, heat detectors, monitor modules and control modules

Conventional initiating devices:

- Non-shorting detectors (Heat detectors, smoke detectors, etc.)
- Shorting devices (Pull-stations, Abort pushbuttons)

Conventional notification devices:

- Unsupervised NO or NC relay output
- Supervised and powered relay output

The X2 panels support communication and networking functions and can be configured to communicate to several RS-232 devices such as printers or PLC's. Similarly, the X2 panels can be connected in a network configuration with several X2 panels communicating together in a master/slave setup. In the master/slave configuration, all the events detected by slave panels are reported to the master panel.



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ABS

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Accepted

The X2 panels can also be networked with X6 panels and X0 panels. The X6 panels can be connected on the network as a master or slave panel. The X0 panels can only be connected to a master or slave panel as repeater panels.

There are two types of supported networks: master/slave networks and repeater networks.

The X2 panels can support communication to one RS-232 link and to a maximum of two networks (master/slave or repeater) by using small communication modules. For enhanced networking capabilities, a communication interface card can be added to the system.

The X2 panels can be configured to support up to 2 interface cards. The interface cards can be any of the following:

- Addressable detector interface card (Smoke/heat detectors, monitor modules, control modules)
- Supervised input card (Conventional detector, shorting and non-shorting devices)
- Supervised relay card (Supervised outputs and dry contacts)
- Communication card (Networked configurations)

All the events occurring on the X2 panels (alarms, troubles, etc.) are communicated to the user using a 2-line by 40-character Liquid Crystal Display (LCD). There are four control sections associated with the LCD:

the acknowledgment section, the Display section, the System section and the user defined section.

The acknowledgment section consists of an access control key, an "Acknowledge" button, a "Reset" button and several associated indicators.

The access control key prevents unauthorized access to the system, acknowledgment and reset functions. When the control key is not present, only the display section remains enabled.

The "Acknowledge" button is used to acknowledge the currently displayed event has been observed. The "Reset" button is used to reset events which were previously acknowledged.

The Display section gives the user an easy way to access the system's display lists: Alarm, Supervisory, Trouble, Status, Isolate and Service.

The System section is used mainly for maintenance activities and is used to access various functions of the X2 panel. The Service and Isolate mode as well as the one man walk test mode may be accessed through the System section's menu.

The user defined section consists of a group of configurable indicators and buttons. There are 24 indicators and 12 buttons. Special functions such as fan control or pump control can be assigned to the configurable indicators and buttons.

## Technical Specifications

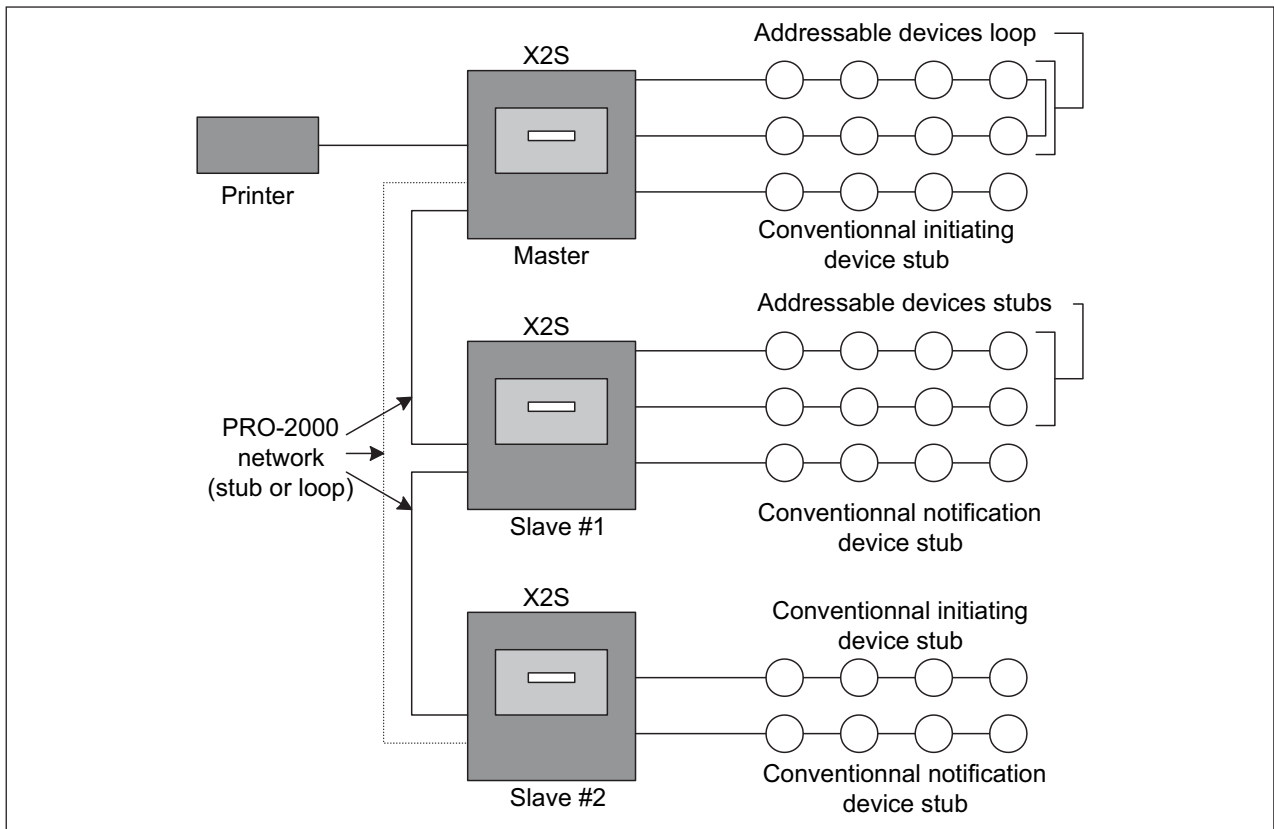
### Electrical Specifications

Primary AC Power Supply	
Voltage	115 or 220 VAC
Frequency	50 or 60 Hz
Maximum power	125 Watts
Master Alarm and Trouble Relays	
Contact rating	2 A @30 VDC 0.5 A @125 VAC
Communication Modules	
Number of sockets for communication modules	2
Interface Cards	
Number of connectors for expansion cards	2

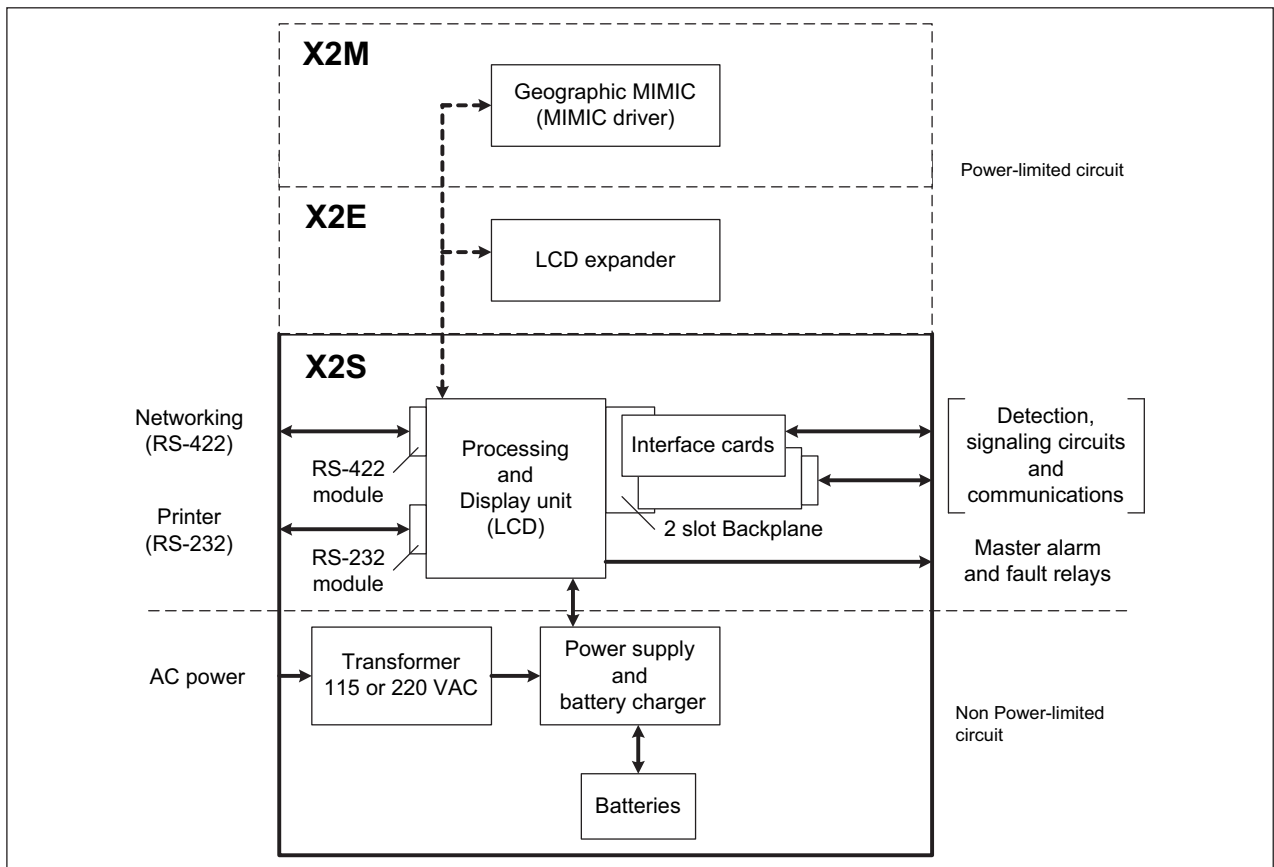
### Physical Specifications

X2S Panel
24"H x 24"W x 7"D (610mm x 610mm x 178mm)
X2E Panel
30"H x 24"W x 7"D (762mm x 610mm x 178mm)
X2M Panel
41"H x 24"W x 7"D (1041mm x 610mm x 178mm)

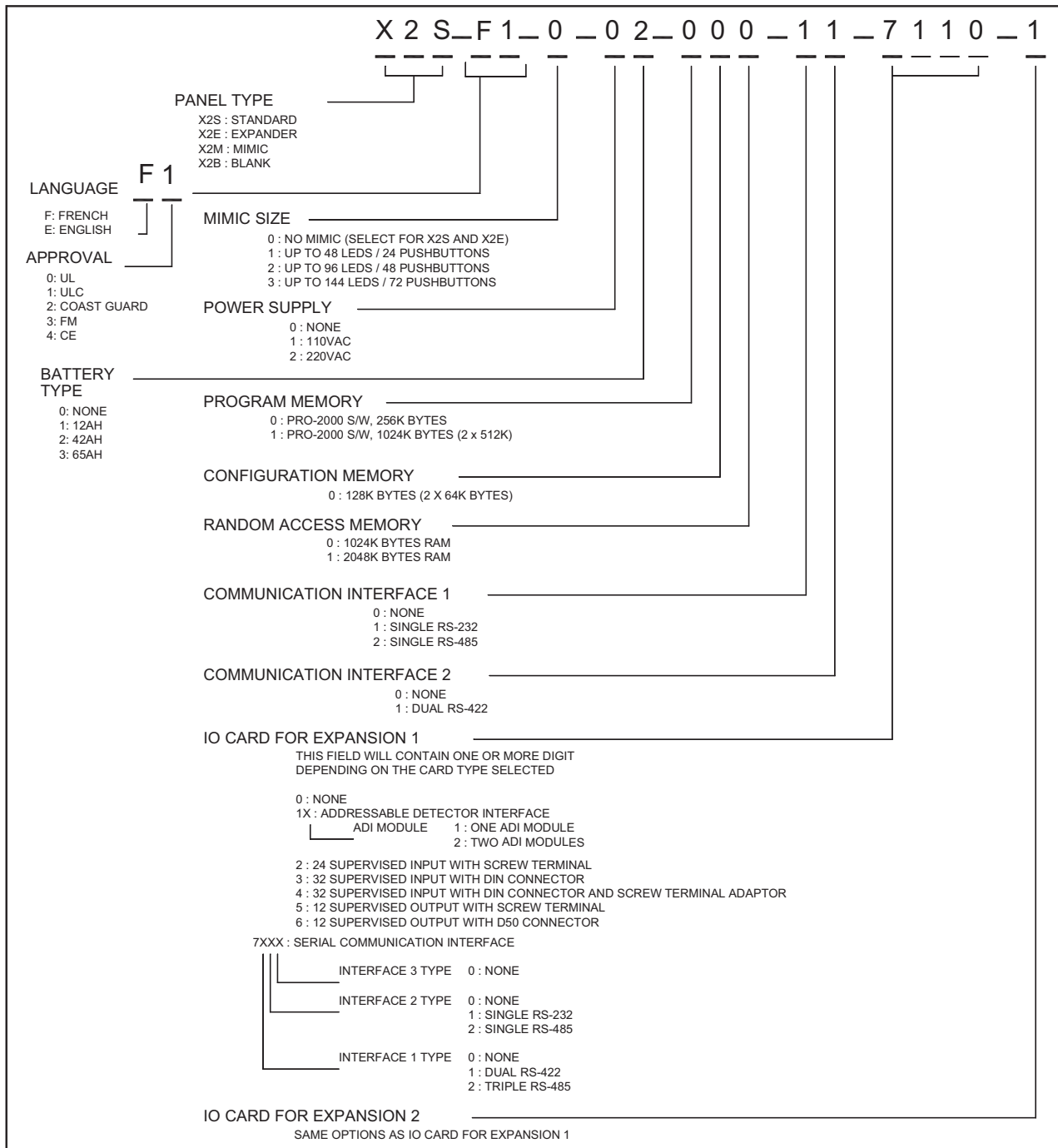
## Typical Application Diagram

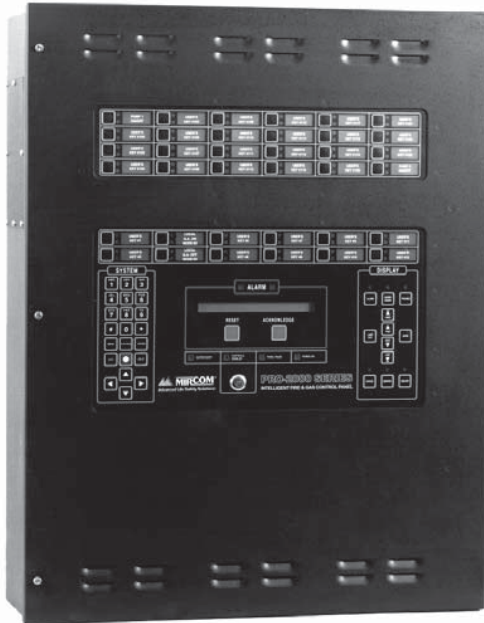


## X2 Panel Block Diagram



# Ordering Information



**PRO-2000  
X6 Panels****Features**

- Up to 3600 local detection/control devices
- Max. 10000 networked detection/control devices
- Integrated gas detection
- Agent releasing service
- Support for 2-wire addressable devices
- Support for conventional 2-wire initiating devices
- Support for notification circuits
- Support for multi-panel networking
- One man walk test
- Battery backed-up real time clock and event log with built-in battery charger
- Independent ground fault detection circuits on each interface card for easy ground fault tracking
- Wall mount enclosure equivalent to NEMA 2

**Description**

The PRO-2000 X6 panels are microprocessor-based fire alarm control units, suitable for medium to large fire detection and suppression applications. Larger applications can be covered using additional panels in a master/slave network configuration.

There are three types of X6 panels available: the X6S, the X6E and the X6M.

The X6S panel is the standard model. It has a built in LCD display (2 line by 40 characters) and associated controls and indicators. It also has 24 programmable indicators and 12 programmable pushbuttons.

The X6E panel has the same features as the X6S plus a matrix of 48 additional programmable indicators and 24 additional programmable pushbuttons.

The X6M panel has the same features as the X6S plus a geographic mimic panel containing up to 144 indicators. The geographic mimic also supports 72 pushbuttons for special applications. The geographic mimic provides a graphical representation of the protected areas. When new events are displayed on the LCD, their location can be identified rapidly by the appropriate indicators on the geographic mimic.

The following types of devices are supported by the X6 panels:

Addressable devices:

- Smoke detectors, heat detectors, monitor modules and control modules

Conventional initiating devices:

- Non-shorting detectors (Heat detectors, smoke detectors, etc...)
- Shorting devices (Pull-stations, Abort pushbuttons, Manual release-pull stations)

Conventional notification devices:

- Unsupervised NO or NC relay output
- Supervised and powered relay output

The X6 panels support communication and networking functions via different physical interfaces such as RS-232 (to connect printers, PLC's or PC's), RS-422 (panel networking), or RS-485.



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All PRO-2000 Series panels (X6, X2 and X0) may be connected together in a master/slave configuration (up to 32 panels). The X0 is only a repeater panel (remote annunciator).

The X6 panels can be configured to support up to 6 interface cards. The interface cards can be any of the following:

- Addressable detector interface card (Smoke/heat detectors, monitor modules, control modules)
- Supervised input card (Conventional detector, shorting and non-shorting devices)
- Supervised relay card (Supervised outputs and dry contacts)
- Communication card (Networked configurations)

All the events occurring on the X6 panels (alarms, troubles, etc..) are communicated to the user using a 2-line by 40-character Liquid Crystal Display (LCD). There are four control sections associated with the LCD: Display section, acknowledgment section, System section and user defined section.

The Display section gives the user an easy way of accessing the system's display list: Alarm, Supervisory, Trouble, Status, Isolate and Service.

The acknowledgment section enables the user to handle the new events and to clear the obsolete events using the associated buttons (Acknowledge and Reset). Access to these functions can only be obtained via a control key thus preventing unauthorized use of the system.

The System section is used mainly for maintenance activities and is used to access various functions of the X6 panel. The Service and Isolate mode as well as the one man walk test mode may be accessed through the System section's menu.

The user defined section consists of a group of configurable indicators and buttons. There are 24 indicators and 12 buttons. Special functions such as fan control or pump control can be assigned to the configurable indicators and buttons.

## Technical Specifications

### Electrical Specifications

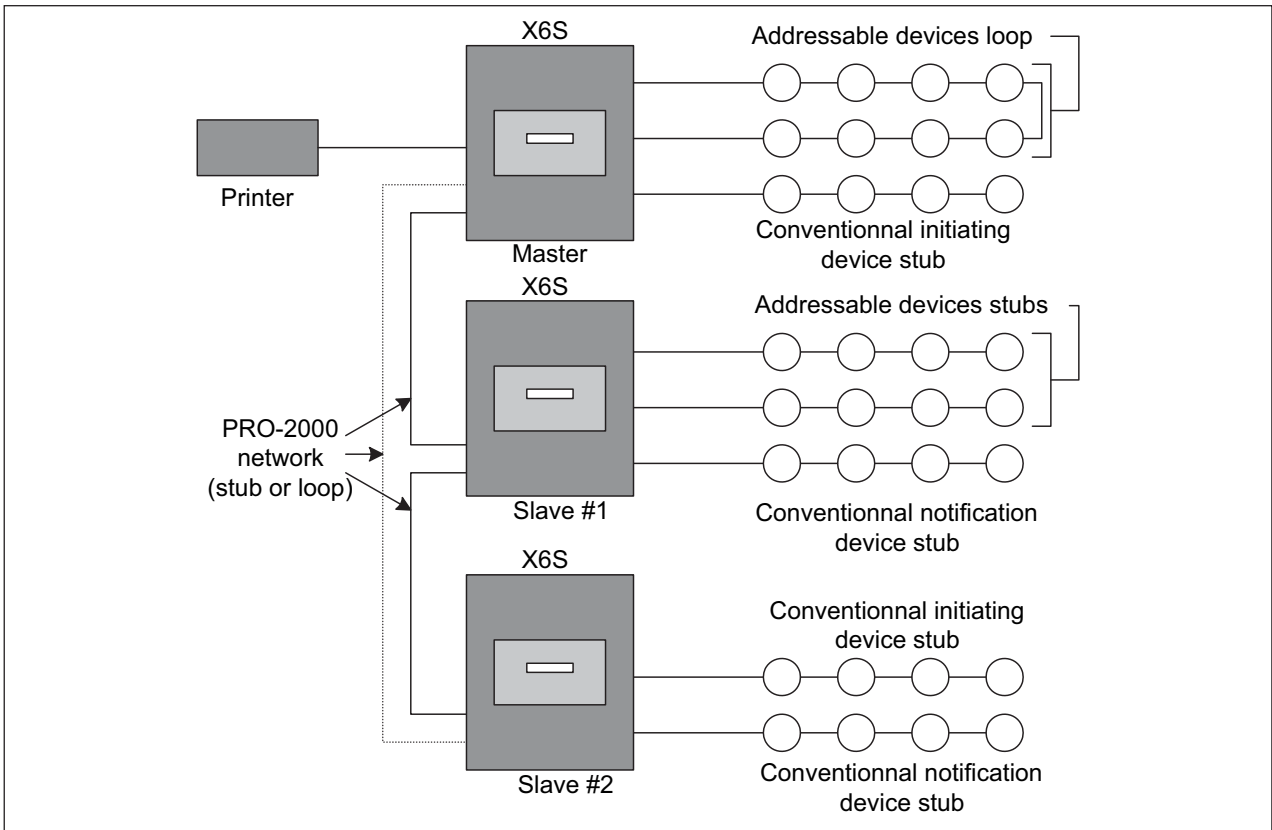
Primary AC Power Supply	
Voltage	115 or 220 VAC
Frequency	50 or 60 Hz
Maximum power	125 Watts
Master Alarm and Trouble Relays	
Contact rating	2 A @30 VDC
Communication Modules	
Number of sockets for communication modules	2*
Interface Cards	
Number of connectors for expansion cards	6

\* One socket is used for local LCD connection.

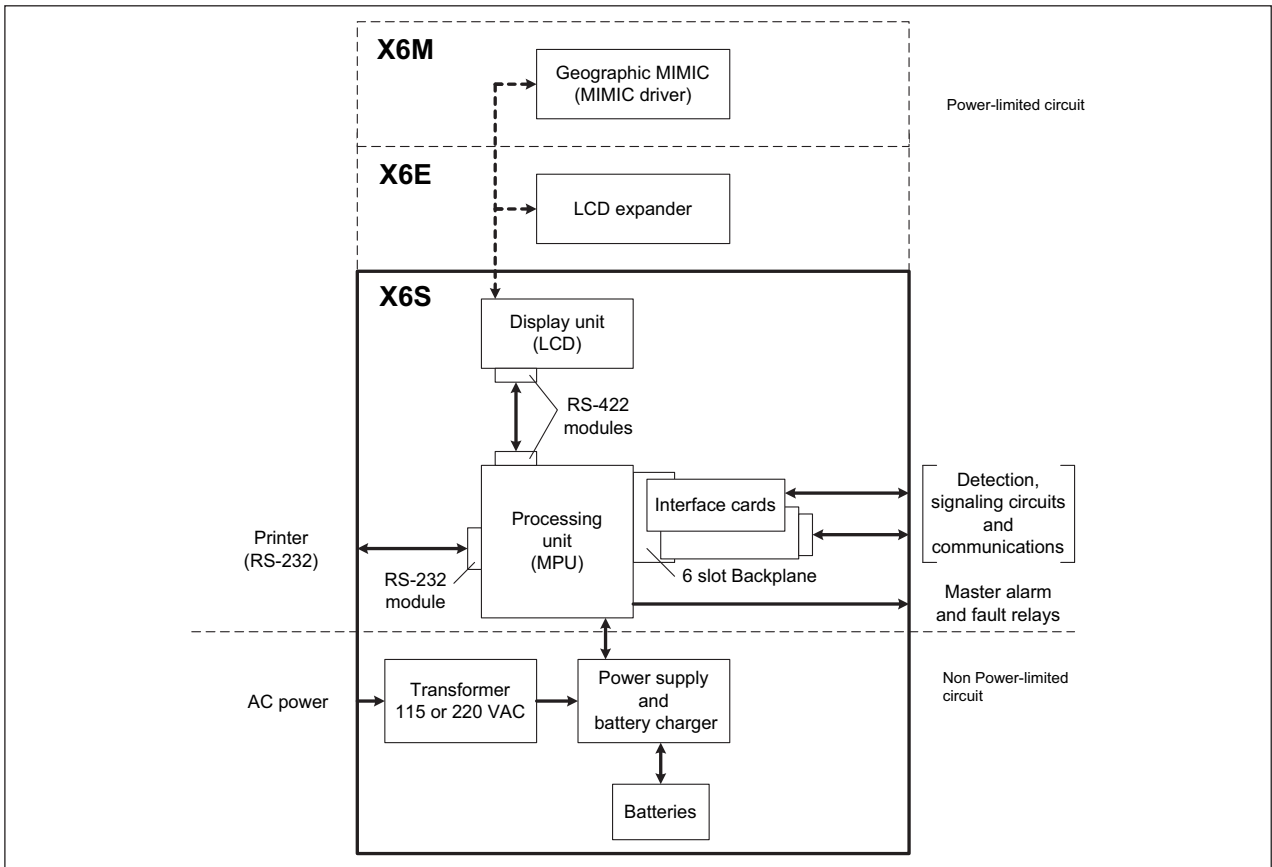
### Physical Specifications

X6S Panel
30"H x 24"W x 7"D (762mm x 610mm x 178mm)
X6E Panel
30"H x 24"W x 7"D (762mm x 610mm x 178mm)
X6M Panel
41"H x 24"W x 7"D (1041mm x 610mm x 178mm)

## Typical Application Diagram

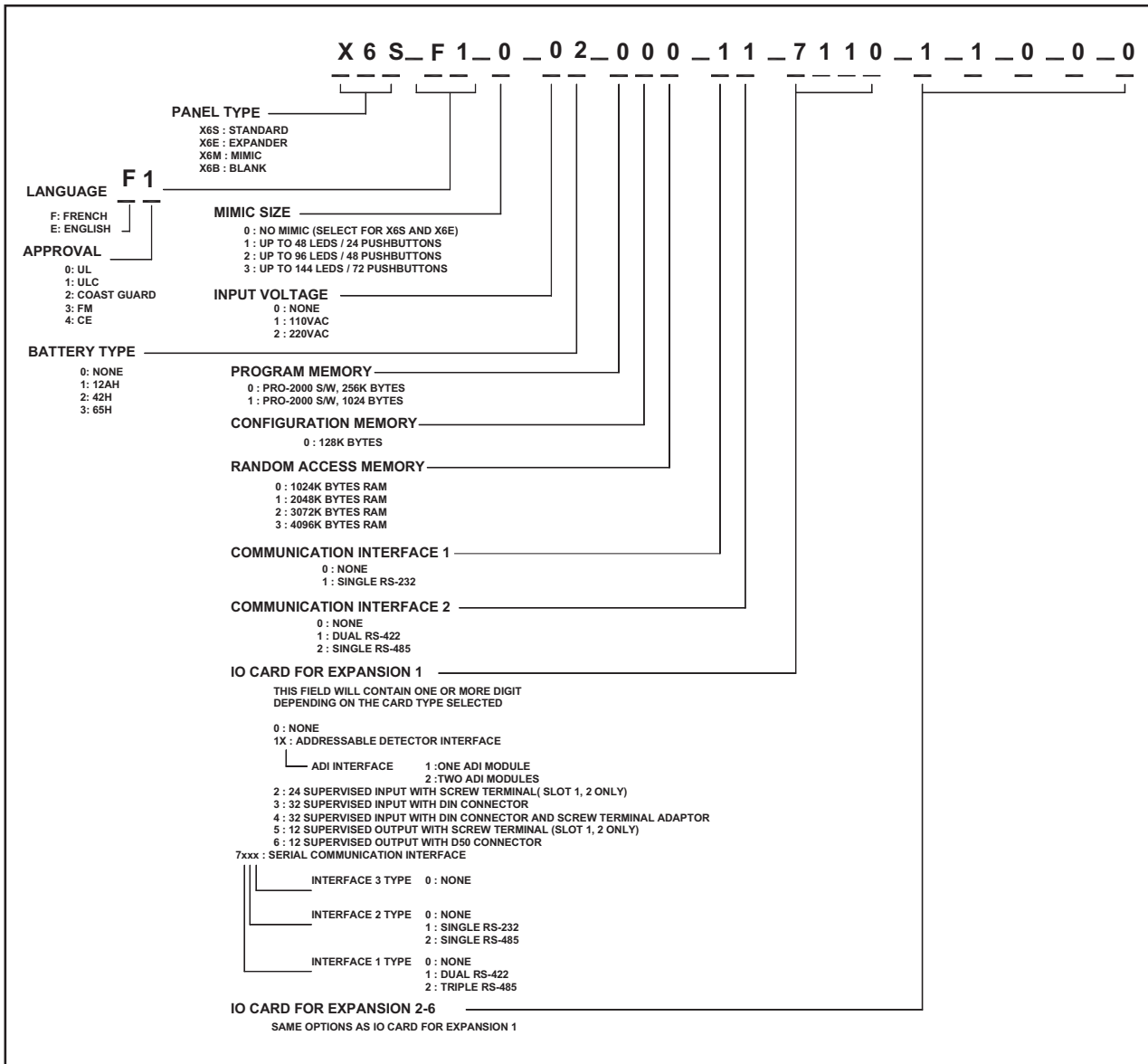


## X6 Panel Block Diagram





# Ordering Information



**PRO-2000  
LCD Expander Module**



**Features**

- 24 programmable push buttons with associated LED pair per standard panel
- Switching power supply for increased power efficiency
- Removable connectors for easy servicing
- Serial interface with the LCD/Processing and Display Unit (LCD)

**Description**

The LCD Expander card allows for any PRO-2000 Series panel to control up to 24 programmable push buttons with their associated LED pairs. This increases the range of programmable push buttons that can be controlled from a standard X0, X2 or X6 panel.

A serial link ensures that information is relayed between the LCD/Processing and Display Unit (LCD) and the LCD Expander.

On the X2 type panels, the serial communication occurs between the Processing and Display Unit (LCD) and the LCD Expander.

On the X0 and X6 type panels, the serial communication occurs between the LCD and the LCD Expander card.

Each LCD Expander card has its own step down switching power supply that provides increased efficiency and reliability.

The LCD Expander card is fitted with removable connectors that facilitate field servicing.

**Specifications**

Electrical Specifications	
Input Voltage	20 to 28.5 VDC
Standby Input Current (all LED indicators OFF)	50 mA @ 24 VDC
Maximum Input Current (all LED indicators ON)	160 mA @ 24 VDC
LED Indicator	
Current per LED	2.2 mA @ 24 VDC
Serial Communication	
Input Serial Communication	As per RS-232 electrical standards
Output Serial Communication	As per RS-232 electrical standards
Physical Specifications	
Length	16.5" (419.1 mm)
Width	4.23" (107.4 mm) with base
Thickness	1" (25.4 mm)
Weight	42.33 oz (1200 g)



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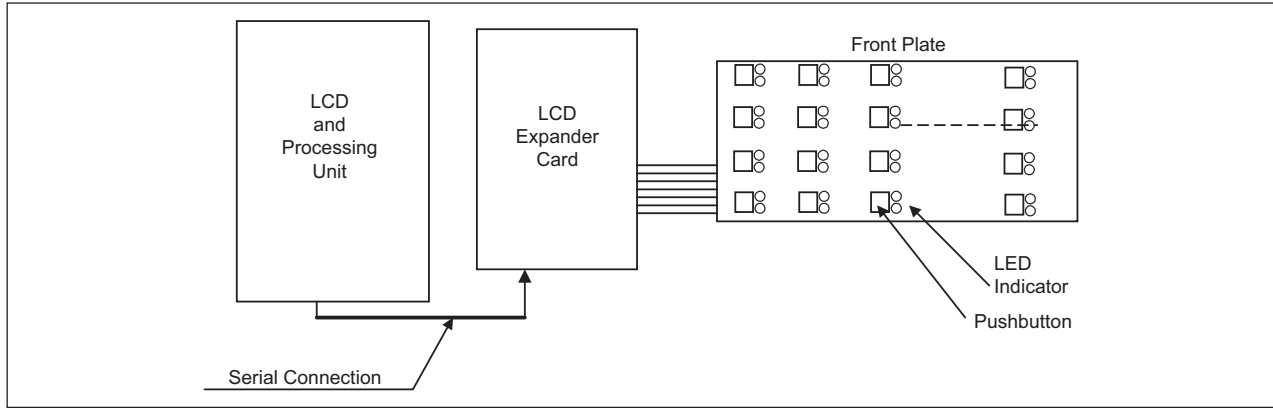


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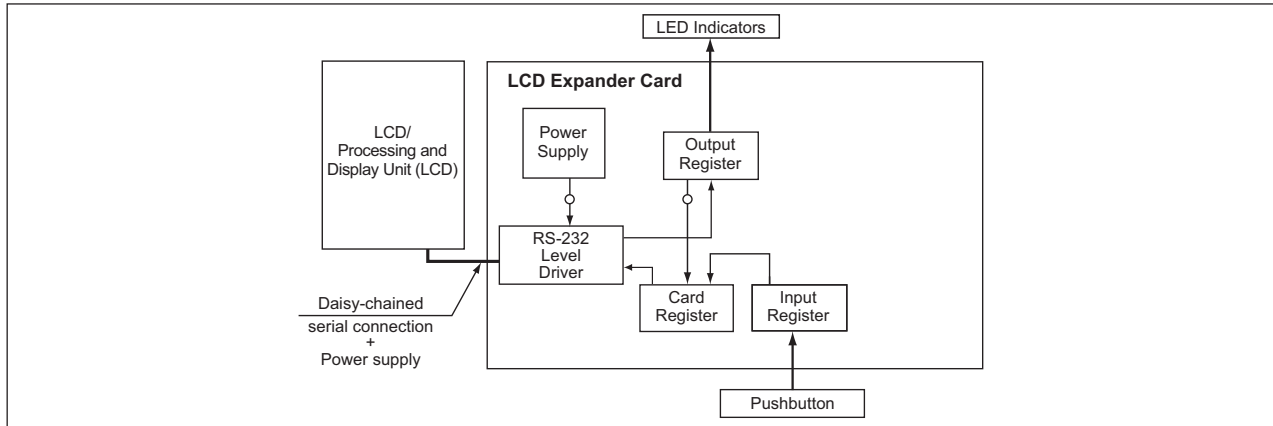
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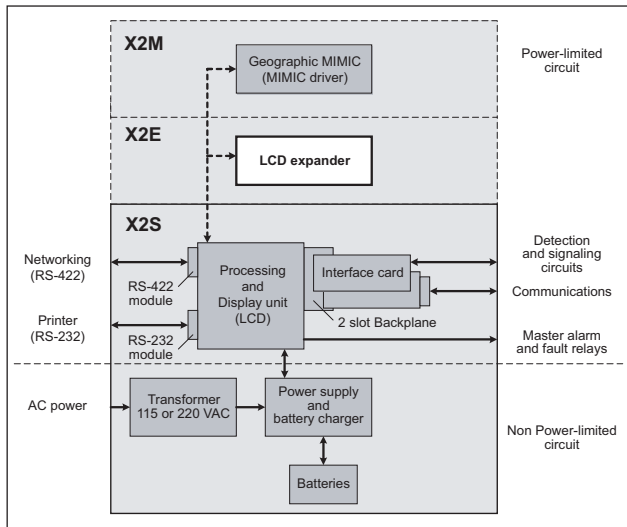
## Block Diagram



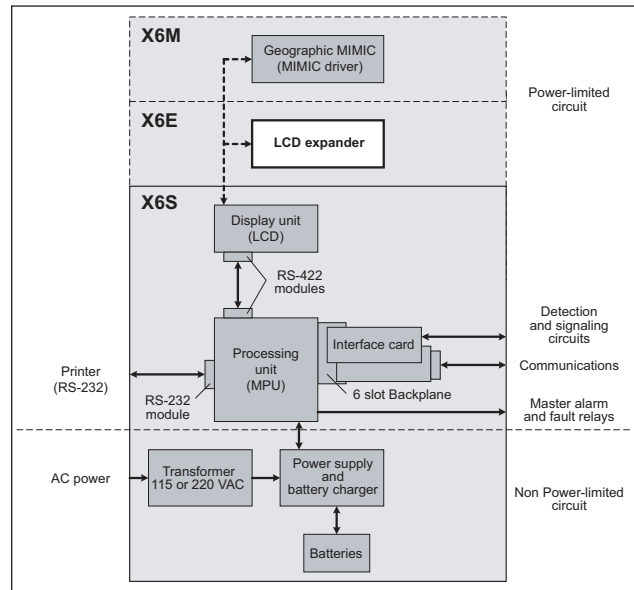
## Typical Application



## LCD Expander Card Connected to an X2 Type Panel



## LCD Expander Card Connected to an X6 Type Panel

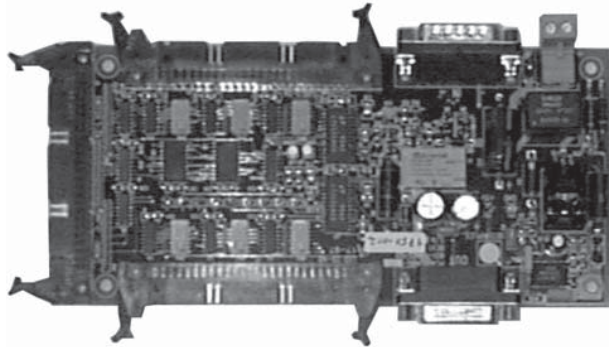


## Ordering Information

Model Number	Description
PCA-14289-00	PRO-2000 LCD Expander Card, UL/ULC
PCA-14289-01	PRO-2000 LCD Expander Card, Marine
PAM-14402-00	Front Panel FS PRO-2000 LCD Expander, UL/ULC
PAM-14402-01	Front Panel FS PRO-2000 LCD Expander, Marine



**PRO-2000  
Mimic Driver Card**



**Description**

The Mimic Driver Card enables the X0, X2 and X6 configurations of the PRO-2000 Series to power and control a geographic annunciator.

A serial link relays information between the LCD processor, the LCD display unit and the Mimic Driver Card. The serial link enables daisy chaining of up to three Mimic Drivers. Each Mimic Driver Card controls up to 48 LEDs and 72 push buttons available for a geographic annunciator.

The Mimic Driver Card has two DSUB-15 connectors: one input and one daisy-chained output, through which power and information pass.

On the X2 type panels, the serial communication occurs between the Processing and Display Unit (LCD) and the Mimic Driver.

On the X0 and X6 type panels, the serial communication occurs between the LCD and the Mimic Driver.

The Mimic Driver has removable connectors to facilitate easy installation and field support. Also a step down switching power supply is used for optimum efficiency and reliability.

**Features**

- Controls up to 48 LED indicators and 24 push buttons
- Up to three Mimic cards can be cascaded for increased capacity
- Serial interface with the LCD/Processing and Display Unit (LCD)
- Switching power supply for increased power efficiency
- Removable connectors for easy servicing

**Specifications**

Electrical Specifications	
Input Voltage	20 to 28.5 VDC
Standby Input Current (all LED indicators OFF)	50 mA @ 24 VDC
Maximum Input Current (all LED indicators ON)	160 mA @ 24 VDC
LED Indicator	
Current per LED	2.2 mA @ 24 VDC
Serial Communication	
Input Serial Communication	As per RS-232 electrical standards
Output Serial Communication	As per RS-232 electrical standards
Physical Specifications	
Length	7.0" (177.8 mm)
Width	3.25" (82.6 mm)
Thickness	1" (25.4 mm)
Weight	5.29 oz. (150 g)



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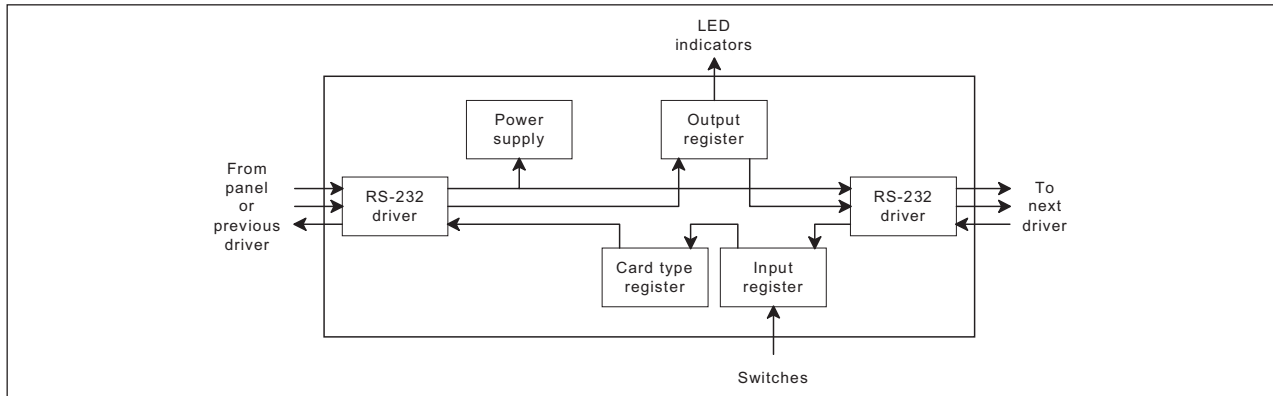


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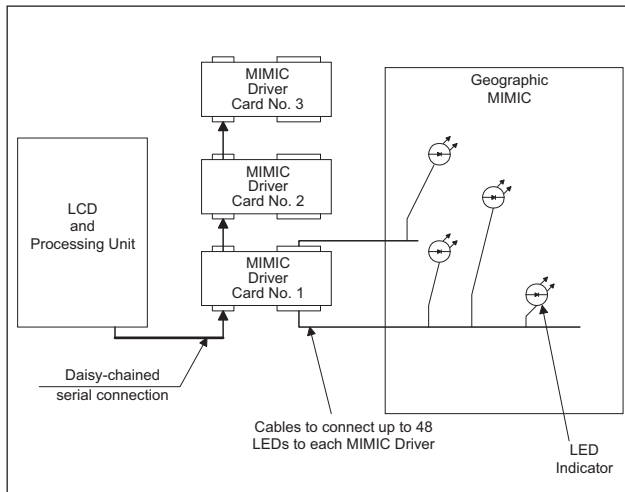
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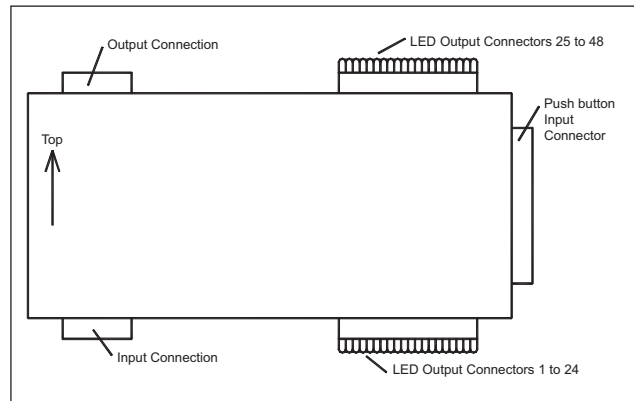
## Block Diagram



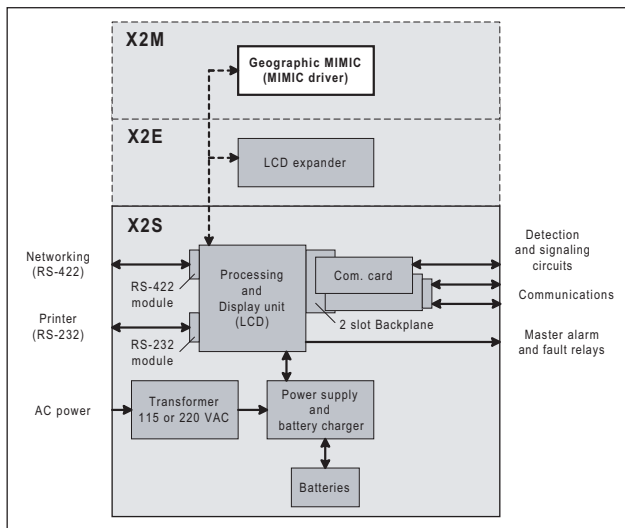
## Typical Diagram



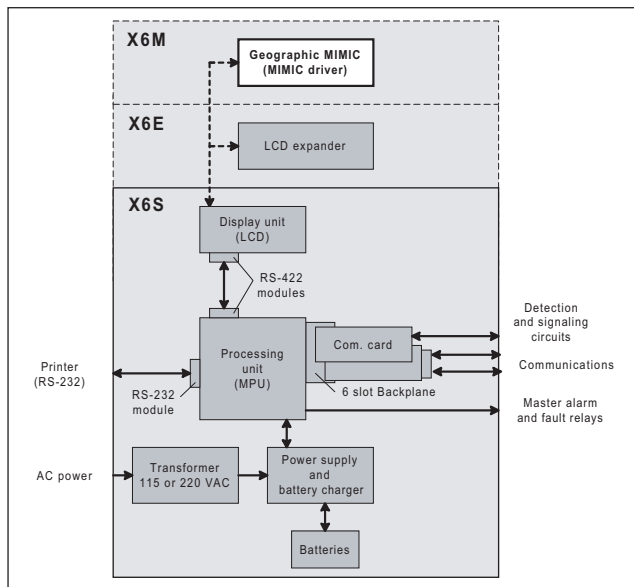
## Mimic Driver Connection Sketch



## LCD Expander Card Connected to an X2 Type Panel



## LCD Expander Card Connected to an X6 Type Panel

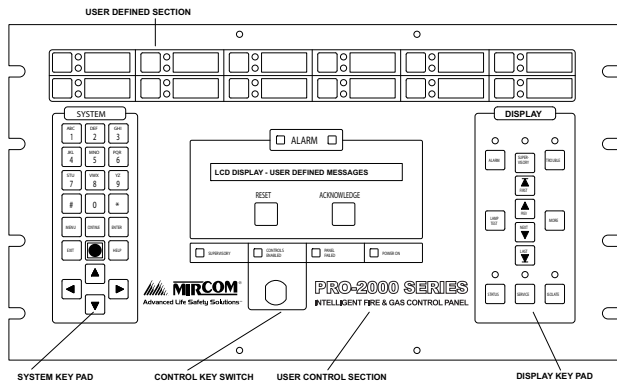


## Ordering Information

Model Number	Description
PCA-13461-00	PRO-2000 Mimic Driver Card UL/ULC
PCA-13461-01	PRO-2000 Mimic Driver Card Marine



## PRO-2000 LCD Annunciator Assembly



### Features

- Panel mount or 19-inch rack mount capability
- 2 line by 40 character LCD display
- Local or remote (repeater) installation
- Complies with UL/ULC requirements for scrolling of alarms and troubles
- 12 user-programmable push buttons
- Interchangeable “slide-in” labels
- Control key switch
- Service keypad

### Description

The LCD implements the user interface to the PRO-2000 panels using LEDs and a 2-line x 40-character LCD unit.

For X0, X6 Series, the LCD performs the user interface function only.

For , X2 Series, the LCD performs the user interface function, and provides processing and communication circuitry for the panel.

#### The User Interface

- Mounted on the enclosure door, the LCD provides the user interface for the PRO-2000 Series panel. The LCD Display comprises of an LCD card, a display/control escutcheon with configurable LEDs and push buttons, control key switch and a buzzer. The built-in buzzer draws attention to the panel on occurrence of any detected event. The buzzer sounds intermittently at two different rates: fast for alarms and slow for all other conditions. The display/control escutcheon interfaces between the operator and the panel. There are 4 selections:
- The Display section provides selectable display lists for the events you want to access. By selecting a Mode, Alarm, Supervisory, Trouble, Status, Service or Isolate, the appropriate list appears in the LCD.
- The System section provides selections for system maintenance. For example, enable/disable printing, print the event log, place/remove devices into/from service or isolate mode.

- The User Defined section contains 12 configurable push buttons and 24 status LEDs; one red and one yellow for each push button.
- The User Control section displays events and provides acknowledge and reset features.
- Membrane push button control acknowledge and silence alarms, reset the detection circuits and test the panel display. These controls also enable authorized service personnel to perform service functions. Using the System keypad, the operator can select different maintenance functions such as the event log, backlighting intensity and other maintenance related features.
- The LCD Display features a 2 line by 40 character Liquid Crystal Display (LCD) indicating the status of the panel and all connected input and output devices. When an off-normal condition occurs, the first line displays event occurrence and time, the second line provides a plain language description of the off-normal condition. The text description for the zone or device is user defined.



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When a system is first delivered the LCD card has its internal battery jumper, JP6, disabled. Prior to installation move the jumper shunt into position over both pins. If the jumper is missing the panel will announce a "Clock Battery Fault" at power up. If the jumper is in, you can remove power and the event log and the clock remain powered.

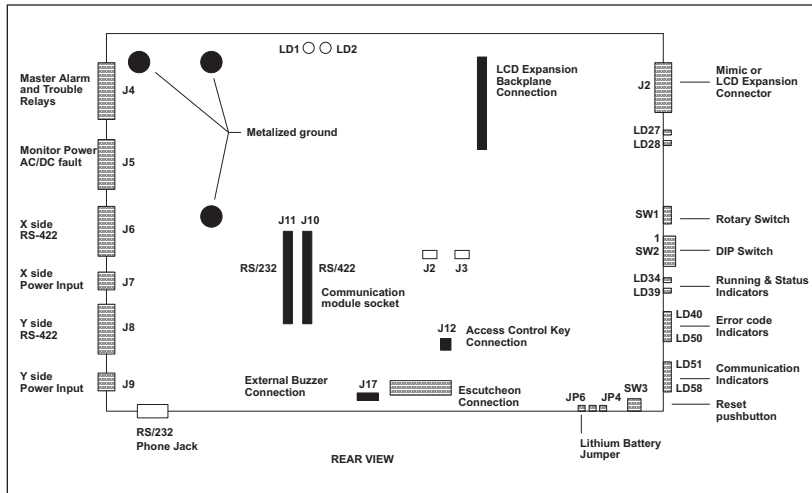
Up to two (2) expansion cards can be added via the LCD backplane. For panel models X0E, X0M, X2E, X2M, X6E, and X6M, the LCD Connector J2 connects the LCD to the Mimic Driver card or the LCD Expander card for additional display/control capabilities.

The LCD has two sockets for adding communication modules. Depending on your configuration, these could be either RS-232 or RS-422 communication modules.

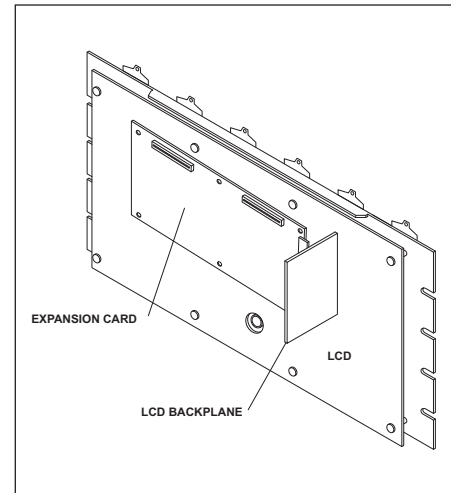
For LCDs used as processing and display units, installing an RS-232 module activates the phone jack allowing LCD software configuration through an external PC, or interfacing to a Printer. Installing an RS-422 module activates data links to other panels

The RS-232 module is not used when LCDs are display units. Installing an RS-422 module activates data links to the MPU or to a Repeater network.

## Board Layout



## LCD Backplane



## Specifications

Electrical Specifications	
Power Requirement Voltage	20 to 28.5 VDC
Standby Current	0.301 A
Common Alarm/Fault Relay Outputs	
Contact Arrangement	2 Form C
Contact Load Rating	0.3 A @ 115VAC 0.3A @ 110VAC 1 A @ 30VAC
RS-422 Communication	
Interface	RS-422 Full-Duplex Serial
Protocol	ADCCP CLASS UN
Maximum Baud Rate	38400
Maximum Cable Length	1.2 Km

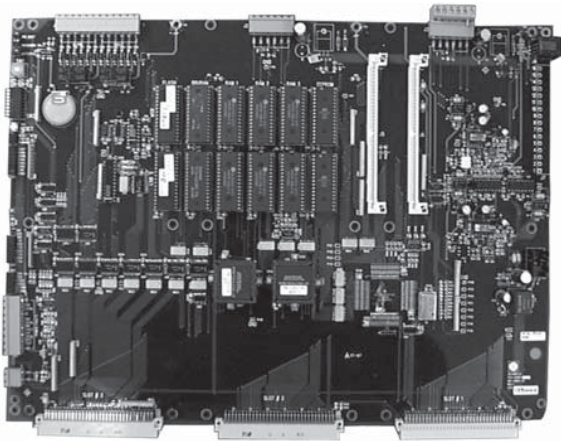
RS-232 Communication	
Interface	RS-232 Full-Duplex
Maximum Baud Rate	38400
Maximum Cable Length	20 meters
Dimensions	
Height	10.5" (266.7 mm)
Width	19.0" (482.6 mm)
Depth	1.5" (38.1 mm)

## Ordering Information

Model Number	Description
PCA-12898-00	PRO-2000 LCD Annunciator Assembly, UL/ULC
PCA-12898-01	PRO-2000 LCD Annunciator Assembly, Marine
PCA-14104-00	PRO-2000 LCD Backplane, UL/ULC
PCA-14104-01	PRO-2000 LCD Backplane, Marine
PAM-14401-00	Front Panel, PRO-2000 UL/ULC/Marine, English
PAM-14401-01	Front Panel, PRO-2000 UL/ULC/Marine, French



## PRO-2000 Main Processing Unit (MPU) Card



### Features

- Six (6) I/O expansion slot capability
- Common alarm and fault relays
- High speed RS-422 serial communication interface to annunciator panel
- 4 MB of RAM memory
- One RS-232 serial port - for printer, video display unit or programming unit
- 1000 Event History Log for Alarm, Supervisory and Trouble events
- Watchdog circuit
- Calendar/Clock
- Battery backed event memory
- On-card status indicators
- Ground fault detection circuit
- Can accommodate up to 3 repeater annunciator panels wired as Class A or B

### Description

The Main Processing Unit (MPU) provides processing and communication circuitry for the X6 series panels. It provides two RS-422 full-duplex, 4-conductor serial links used for communications with the local LCD panel.

The MPU is shipped pre-installed on the enclosure backplate with an MPU Backplane attached and an RS-422 communication module installed. The MPU Backplane enables the MPU to have up to 6 expansion cards installed, for example, the ADI, Supervised output, or Supervised Input cards.

The MPU Backplane has a side connector to plug into the MPU expansion slot providing connectivity between the MPU and the expansion cards.

The MPU provides monitoring of the power supply for AC/DC fault detection. The card provides the following visual indicators and controls:

- Various status LEDs provide a visual indication of the card's health. There are Red LEDs for error codes, blinking LEDs (Running) indicating the board is working; Green Power LEDs, and Communication LEDs.

- Reset push button to hard reset the MPU card.
- Dipswitch providing software options. Factory set only.
- Rotary switch allowing the selection of different configuration modes. Factory set only.
- Three jumpers, two for the watchdog and one for battery. These jumpers must be connected at all times. A watchdog circuit, monitoring microprocessor, halts system operation if a hardware or software failure occurs. The lithium battery provides the backup for the real-time clock and the RAM memory used for event logging. The real-time clock provides time and date for event recording.



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When a system is first delivered the MPU card has its internal battery jumper, JP3, disabled. Prior to installation move the jumper shunt (located above the board mounted battery) into position over both pins. If the jumper is missing the panel will annunciate a "Clock Battery Fault " at power up. If the jumper is in, you can remove power and the event log and the clock remain powered.

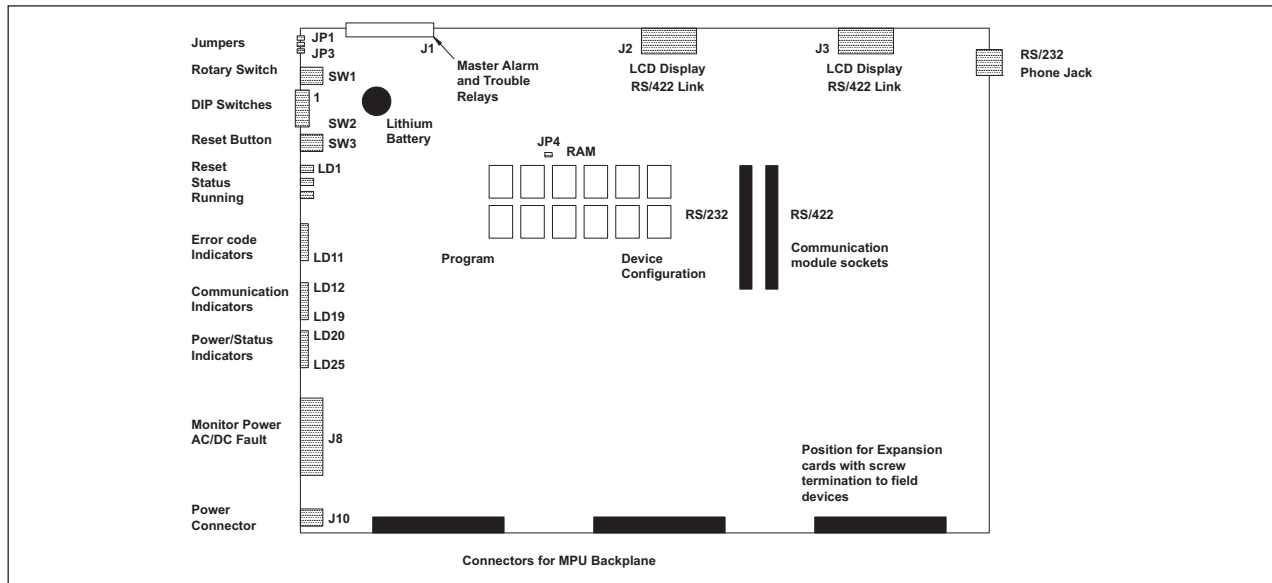
The MPU has two sockets for adding communication modules. Depending on your configuration, these could be either the RS-232 or RS-422 communication modules. Installing an RS-232 module activates the phone jack allowing MPU software configuration through an external PC or communication with a printer.

Installing an RS-422 module activates the two connectors to the LCD. The two connectors provide power to the LCD. This available power is current limited to 1 amp.

*Note: The MPU ships with a pre-installed RS-422 module.*

The MPU has built-in Master Alarm and Fault Relays; Two Form-C contacts for each relay. The Master Alarm Relay activates whenever an alarm is present on the system. The Master Fault Relay activates whenever a fault is present on the system. The rating for Master Alarm and Fault Relay is as follows: 0.3A, 115VAC, 0.3A, 110VDC 1A, 30V.

## MPU Backplane



## Specifications

Electrical Specifications	
Power Requirement Voltage	20 to 28.5 VDC
Standby Current	0.301 A
Common Alarm/Fault Relay Outputs	
Contact Arrangement	2 Form C
Contact Load Rating	0.3 A @ 115VAC 0.3A @ 110VAC 1 A @ 30VAC
RS-422 Communication	
Interface	RS-422 Full-Duplex Serial
Protocol	ADCCP CLASS UN
Maximum Baud Rate	38400
Maximum Cable Length	1.2 Km

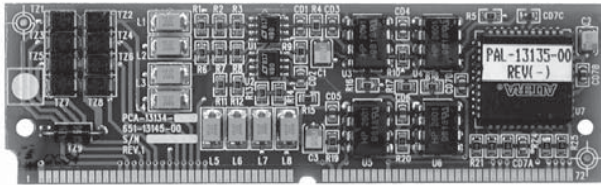
RS-232 Communication	
Interface	RS-232 Full-Duplex
Maximum Baud Rate	38400
Maximum Cable Length	20 meters
Dimensions	
Height	10.5" (266.7 mm)
Width	19.0" (482.6 mm)
Depth	1.5" (38.1 mm)

## Ordering Information

Model Number	Description
PCA-12886-00	PRO-2000 MPU, UL/ULC
PCA-12886-01	PRO-2000 MPU, Marine
PCA-12902-00	PRO-2000 MPU Backplane, UL/ULC
PCA-12902-01	PRO-2000 MPU Backplane, Marine



## PRO-2000 RS-422 Interface Module



### Description

The RS-422 communication interface module easily snaps onto the PRO-2000 Series products to enable RS-422 communication capabilities to compatible equipment.

The module has two RS-422 channels, with each channel having one "Receiver" and one "Transmitter" output.

The RS-422 module allows "point-to-point" serial communication and can be used on the following PRO-2000 Series products:

- Communication card mounted onto the backplane of the Display Unit (LCD card)
- Communication card mounted onto the backplane of the Processing Unit (MPU card)
- Communication socket of the Display Unit (LCD card)
- Communication socket of the Processing Unit (MPU card)

The RS-422 module has an optical interface to the system electronics and is powered by an isolated power supply that greatly increases electrical noise immunity.

All inputs and outputs have full transient protection that guards against electrical and electrostatic discharges that can occur in the field.

### Operation

#### Point-To-Point Communication

The point-to-point communication capability between the Master Panel and a remote LCD Unit allows installation of a remote LCD Unit away from the Master Panel. The Master Panel can be an X2 or and X6 type panel. In order to improve the reliability of the communication between panels, it is possible to add a loop back connection. The loop back connection allows fault tolerant communication between devices.

### Features

- Allows RS-422 communication on PRO-2000 products
- Full transient protection on all RS-232 inputs & outputs
- Opto-isolated interface to system electronics for an increased electrical noise immunity
- Modular design for easy replacement by insertion into the receiver board's 72-pin socket
- Two RS-422 ports on each module

#### Network Communication

This type of application displays the network capability of the PRO-2000 line of products. The Master System and/or the Slave System can be any X2 or X6 type panel.

The network protocol is handled by the master system that sends and receives information to and from the slave system.

An incoming RS-422 signal to a slave system is divided into two paths: the first path is used to signal the local slave while the second path is sent back through the second port in the RS-422 module, where a regenerated RS-422 signal is sent to the next slave system in line.

An optional loop back connection can be added from the last slave in the chain to the master in order to improve reliability and provide fault tolerant communication.

This would prevent a system shutdown and maintain network continuity in the event that a cable should short or sever. The loop back connection would ensure continued network communication from both sides of the ruptured cable. The loop back connection can be enabled or disabled when the system is configured.



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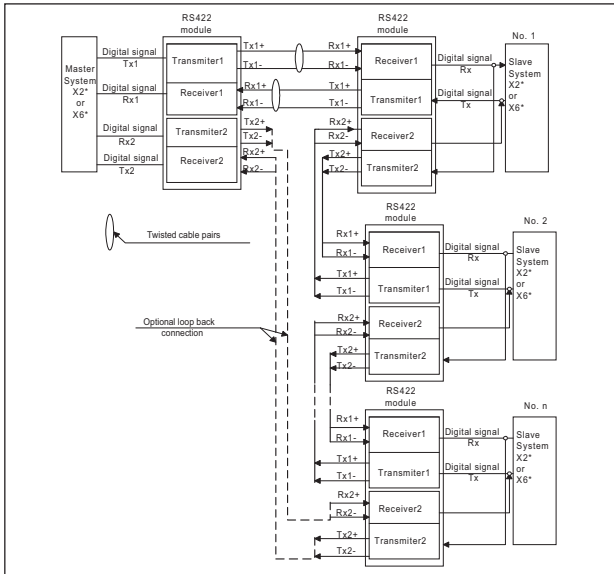
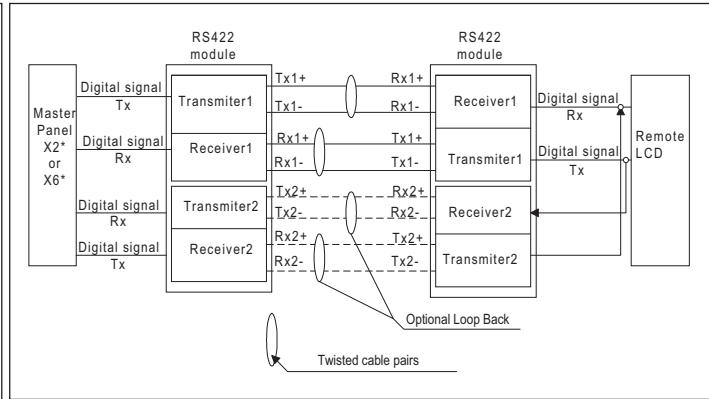
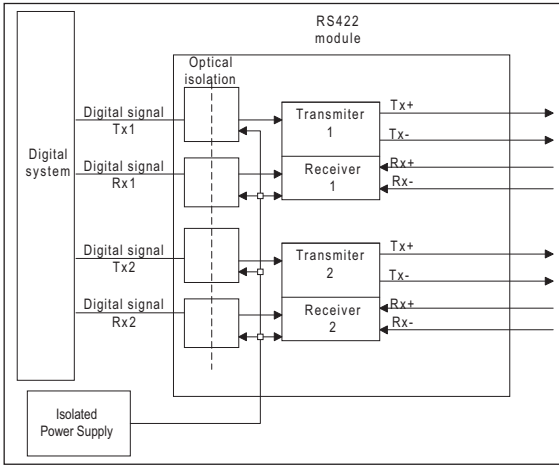
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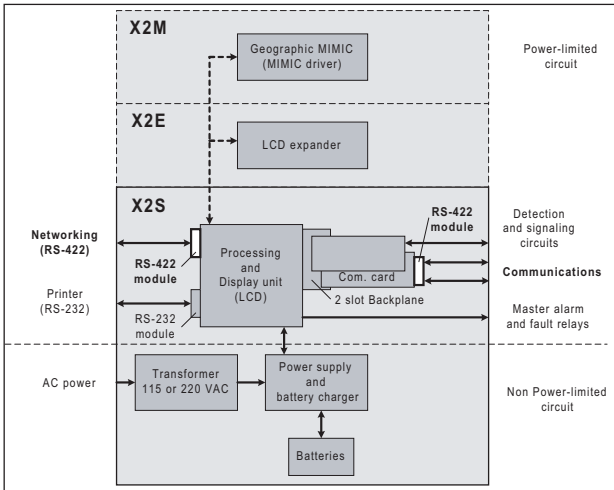
# Wiring Diagrams



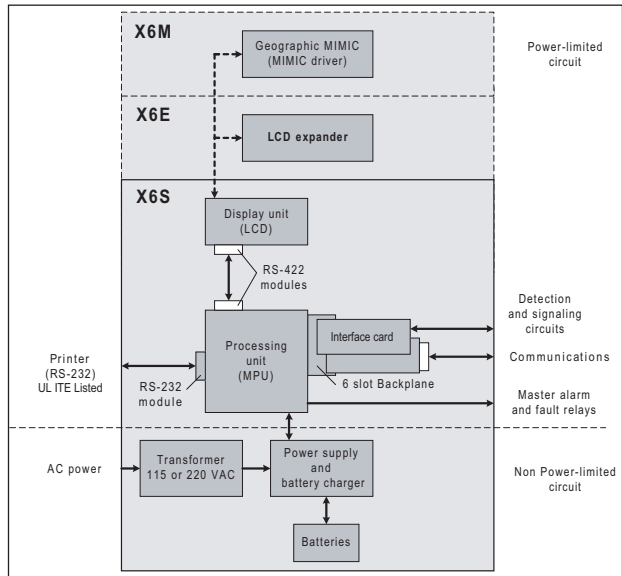
## Specifications

Electrical Specifications	
Input Voltage	5 VDC ± 0.3 VDC
Input Current	80 mA
RS-422 Outputs & Inputs	
RS-422 Output Transmitter Voltage	As per RS-422 standard
RS-422 Input Receiver Voltage	As per RS-422 standard
Physical Specifications	
Length	4.25" (108 mm)
Width	1.275" (32.4 mm)
Thickness	0.75" (19.1 mm)
Weight	0.71 oz. (20 g)

## Interface Module Connected to an X2 Type Panel



## Interface Module Connected to an X6 Type Panel

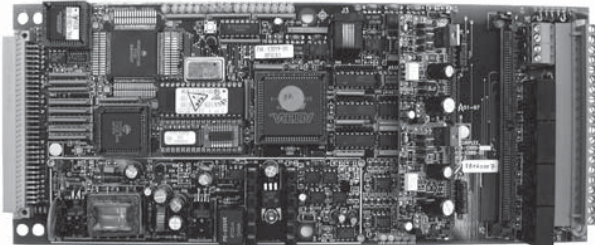


## Ordering Information

Model Number	Description
PCA-13134-00	PRO-2000 RS-422 Interface Module, UL/ULC
PCA-13134-01	PRO-2000 RS-422 Interface Module, Marine



**PRO-2000  
Addressable Detector Interface (ADI)  
Card**



**Description**

The Addressable Detector Interface (ADI) card is the connection point for all field devices to the PRO-2000 panel. Any type of analog addressable sensor or module (control or monitor) as well as the Addressable Conventional Detector Interface (ACDI) module can be connected to the ADI card.

Each ADI card can monitor or control: Two (2) analog loops as defined by the NFPA signaling line Class A, Style 6 or 7 circuits or Four (4) analog stubs as defined by the NFPA signaling line SLC Class B, Style 4 circuits.

The ADI card also features four (4) output relays which can be used for signaling or relay output. The relay out put can be a supervised or non-supervised output.

All outputs are transient protected to prevent card damage in the event that a field power surge should occur. The field electronics on the card are fully isolated from system electronics insuring an exceptional electrical noise immunity from the field connection.

The built-in ground fault detection circuit is designed to pinpoint a ground fault source at the board level, unlike other systems that give a global system level ground. This makes it easier to identify the fault wiring/circuit. A high efficiency power supply insures low power consumption.

The ADI card has two (2) slots for driver cards. The size of the detection system dictates the need for one (1) or two (2) driver cards. Each driver card can handle one (1) Loop (NFPA Signalling Line Class A, Style 6 or 7 circuits) or two (2) Stubs (NFPA SLC Class B, Style 4).

The ADI card is microprocessor controlled. The microprocessor is monitored by a watchdog circuit which halts the system's operation if a hardware or software failure occurs.

When connected to an X2S, X2E or X2M panel, the ADI card is controlled by the Processing and Display Unit. When connected to an X6S, X6E or X6M panel, the ADI card is controlled by the MPU card.

**Features**

- Microprocessor controlled
- Up to Four (4) Stub outputs or Two (2) Loop outputs for addressable devices
- Up to 99 addressable devices per stub or loop output
- Up to 99 addressable modules per stub or loop output
- Short circuit protection on each output circuit
- Four (4) supervised/unsupervised relay outputs
- Fuseless power input with supervision and power limiting
- Full transient protection on all outputs
- Field electronics fully isolated from system electronics for increased electrical noise immunity
- Built-in local ground fault detection for easier maintenance and troubleshooting
- Built-in isolated switching power supply for increased power efficiency
- Software based analysis for easy configuration and upgradability
- Built-in self diagnostics
- Surface mount technology
- Removable connectors for easy servicing
- Removable driver cards for easy servicing
- Maximum of 600 devices per ADI card
- 1000 event history log for alarm, trouble and supervisory conditions

**Specifications**

Electrical Specifications			
Input Voltage	20 to 28.5 VDC		
Standby Current (1 Driver card)	230 mA		
Standby Current (2 Driver cards)	285 mA		
Addressable Device Driver Output			
Maximum current (short circuit)	0.5A		
Maximum voltage	28 V		
Maximum cable length	Max. 4000 ft., 40 ohm, 0.5 mF		
Max. cable resistance (Loop/Stub)	40 ohm		
Maximum cable capacitance	0.5 mF		
ADI Card - Output Relays			
Contact type	1 Form C (SPDT)		
Contact rating	2A @ 28VDC or 120VAC 2A @ 240VAC Resistive		
EOL Resistor for signaling outputs	6.8K, ¼W, 5%		
Physical Specifications			
Length	11.9" (302.3mm)	Thickness	1" (25.4mm)
Width	4.85" (123.2mm)	Weight	15.9oz. (450g)



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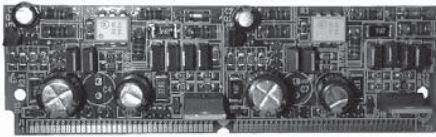
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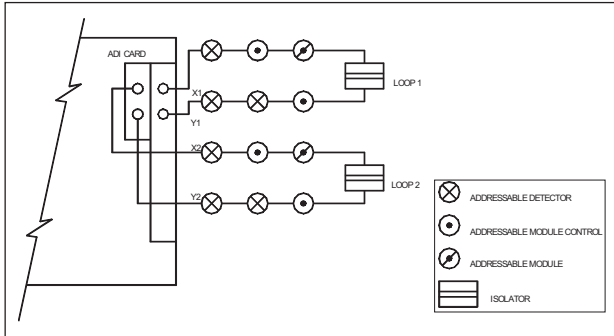
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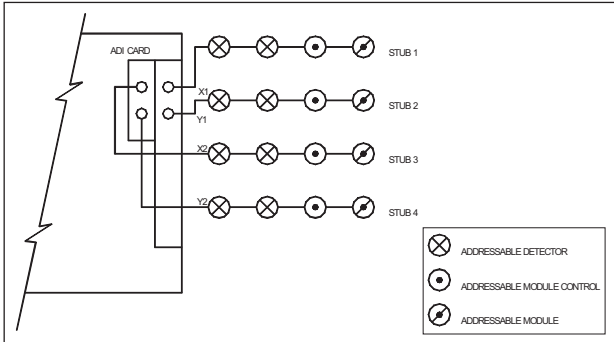
## ADI Driver Card

The Driver Card acts as a switching device that translates digital signals into a sequence of voltages (0, 5 or 24V) needed to drive the output line of addressable devices. The ADI card can have either one or two Driver cards. Input and output signals from the Driver card to the ADI card pass through two 72-pin sockets mounted on the ADI card. The Driver Card is held in place by two metallic locks. This arrangement facilitates for field servicing.

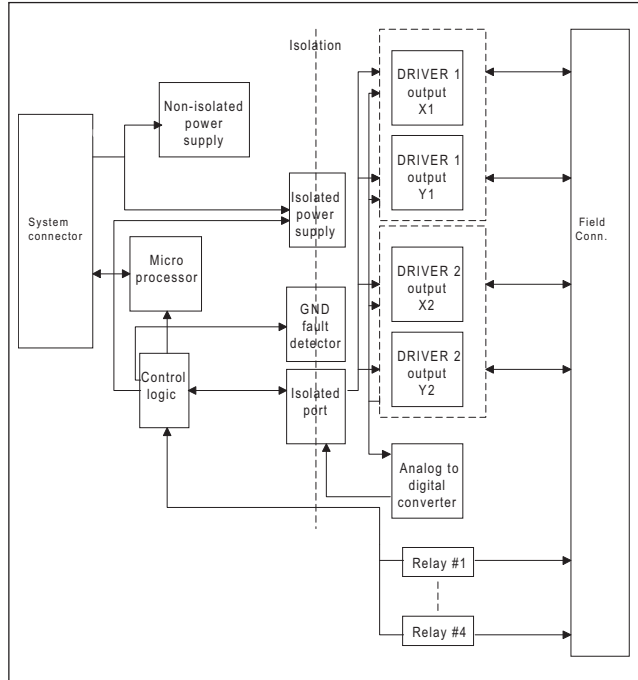
### Loop Connection



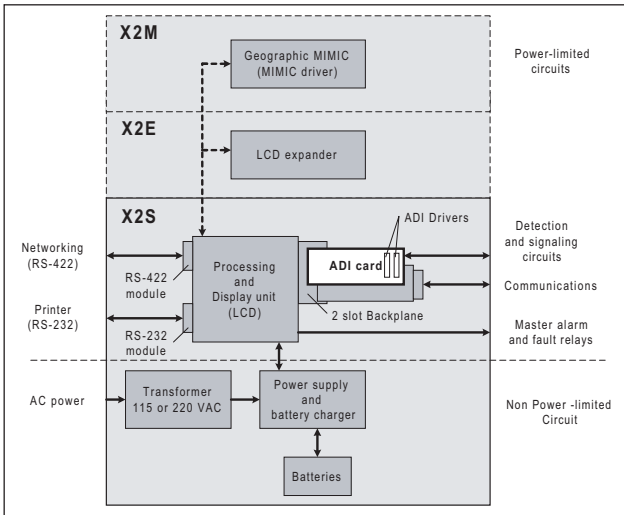
### Stub Connection



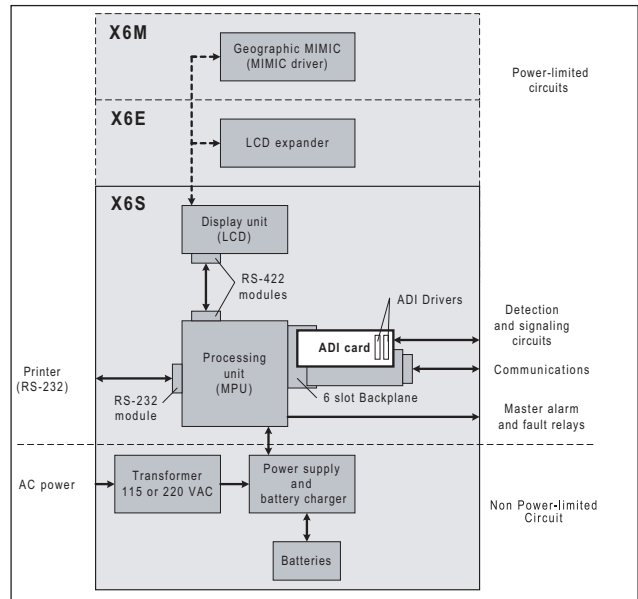
### Block Diagram



### ADI Card Connected to an X2 Panel



### ADI Card Connected to an X6 Panel

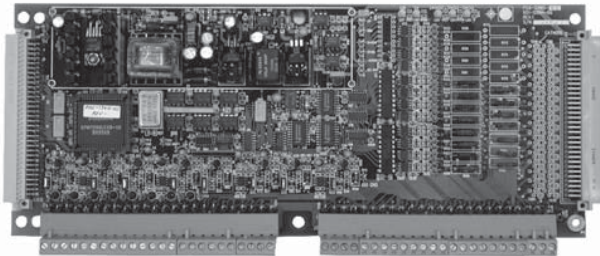


### Ordering Information

Model Number	Description
PCA-12889-00	PRO-2000 ADI Card, UL/ULC
PCA-12889-01	PRO-2000 ADI Card, Marine
PCA-14292-00	PRO-2000 ADI Driver Card, UL/ULC
PCA-14292-01	PRO-2000 ADI Driver Card, Marine



## PRO-2000 24/32 Zone Supervised Input Card



### Description

The Supervised Input Card supports connection of up to 32 initiating circuit inputs. It can be hooked up to any of the PRO-2000 Series panels. Each NFPA style B initiating circuit input is suitable to be used for waterflow, supervisory, conventional detectors and manual devices. A total of up to 20 conventional detectors can be connected on the same initiating circuit input. This allows for a maximum of 640 functional detectors to be connected and monitored by a single Supervised Input Card.

All input circuits have full transient protection to prevent damage to the card in the event that a field power surge should occur. The field interface electronics of the card are fully isolated from system electronics thus insuring an exceptional electrical immunity.

The built-in ground fault detection circuit is designed to pinpoint a ground fault source at the board level, unlike other systems that give a global system level ground fault. This makes it easier to identify the faulty wiring/circuit. A high efficiency power supply insures a lower power consumption.

Precision analog-to-digital converters are used to read the status of the initiating devices. Software processing then analyses these readings. This increased flexibility allows for multiple configurations and devices, and also insures a better compatibility with future devices.

Two versions of the Supervised Input Card are available; a 24-zone and a 32-zone model.

The 24-zone model allows for up to 24 initiating circuits through two (2) removable "Combicon" terminal blocks. The unit features on-board transient protection.

### Features

- Up to 32 initiating circuits
- Up to 20 conventional detectors per initiating circuit
- Suitable for interfacing with waterflow, supervisory, detectors and manual devices
- Fuseless initiating circuits with individual supervision and power limiting
- Full transient protection on all initiating circuits
- Field interface electronics fully isolated from system electronics for increased electrical noise immunity
- Built-in local ground fault detection for easier maintenance and troubleshooting
- Built-in isolated switching power supply for increased power efficiency
- Software based processing for easy configuration and upgradability
- Built-in self-diagnostic for increased reliability
- Surface mount technology
- Removable connectors for easy servicing
- Multiple device support through flexible software configuration

### Specifications

Electrical Specifications			
Line short circuit per channel	22 mA		
Line supervision current per channel	3 mA		
Line resistance	50 ohm. max.		
End-of-line resistor value	6.8 K		
Line standby voltage	18 - 25 VDC		
Card current consumption (excluding field devices)	281 mA @ 24 VDC		
Max. total detector standby current	Application specific		
Physical Specifications			
Length	11.9" (302.3 mm)	Thickness	1" (25.4 mm)
Width	4.88" (124 mm)	Weight	14.1oz (400g)



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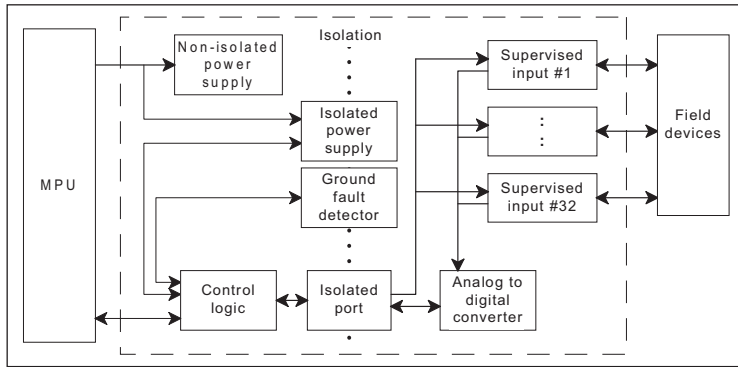
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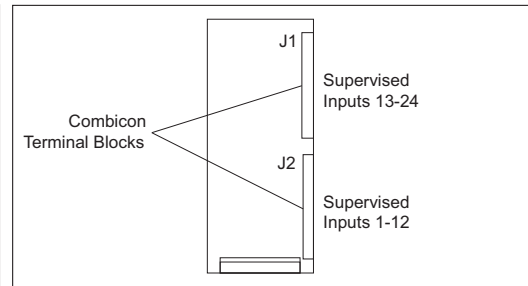
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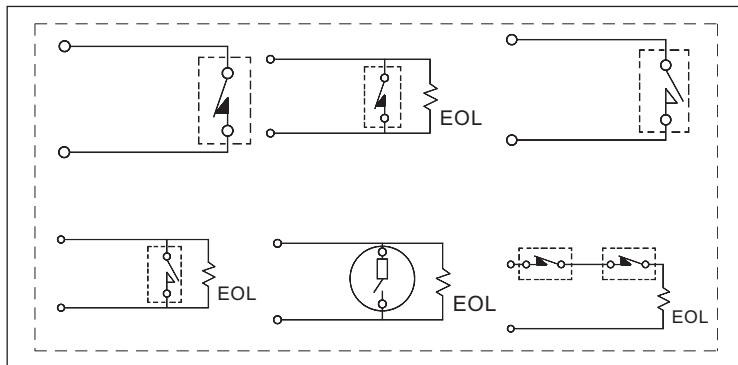
## Block Diagram



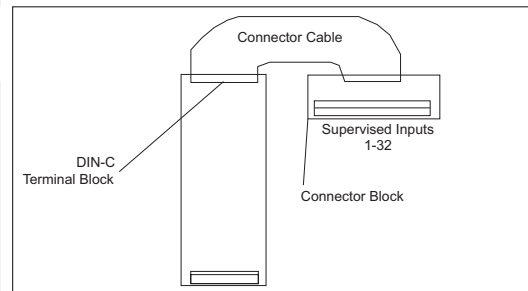
## 24-Zone Supervised Input Card



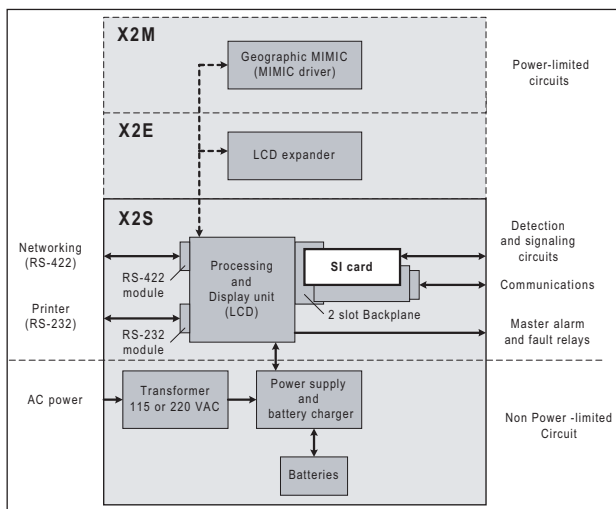
## Supported Initiating Circuit Configurations



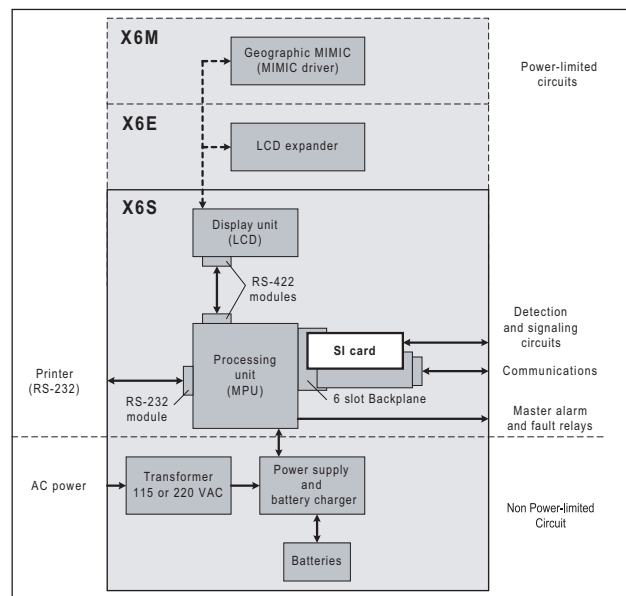
## 32-Zone Supervised Input Card



## 24/32 SICard Connected to an X2 Panel



## 24/32 SI Card Connected to an X6 Panel

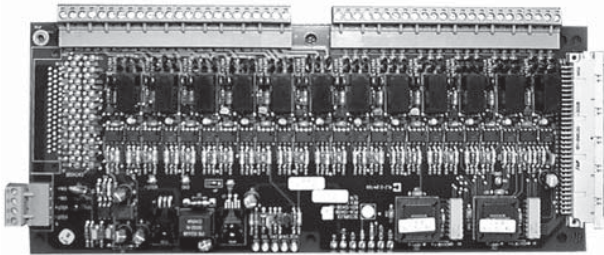


## Ordering Information

Model Number	Description
PCA-12895-00	PRO-2000 24-Zone Supervised Input Card, UL/ULC
PCA-12895-02	PRO-2000 24-Zone Supervised Input Card, Marine
PCA-12895-01	PRO-2000 32-Zone Supervised Input Card, UL/ULC
PCA-12895-03	PRO-2000 32-Zone Supervised Input Card, Marine
PCA-14308-00	PRO-2000 Connection Board for 32-Zone Input Card, UL/ULC
PCA-14308-01	PRO-2000 Connection Board for 32-Zone Input Card, Marine



**PRO-2000  
12 Zone Supervised Relay Card**



**Features**

- Up to 12 relay output circuits rated at 5A @ 30VDC/ 250VAC (resistive load)
- Suitable for interfacing with notification and activation devices
- Each output can be individually configured as supervised or unsupervised
- Each output can be individually configured as powered or unpowered
- Full transient protection
- Switching power supply for increased power efficiency
- Field electronics fully isolated from system electronics for increased electrical noise immunity
- Removable connectors for easy servicing

**Description**

The Supervised Relay Card enables a PRO-2000 Series panel to control output devices through 12 relay output circuits. Each output circuit can be configured to be supervised or not for cable fault detection. Each output can also be configured to be powered by the system supply or act as an unpowered contact.

The total current consumption for powered relays is limited to 900 mA. All outputs have full transient protection to prevent card damage in the event that a field power surge should occur.

The field electronics of the card is fully isolated from the system electronics, thus insuring an exceptional electrical noise immunity from the field connection.

The Supervised Relay Card is available in two versions. Both models are functionally equivalent with the difference residing in that one is equipped with a Combicon connector and the other with a DSUB-50 connector.

**Specifications**

Electrical Specifications	
Maximum Supplied Output Current	900 mA
Supervision Current	800 mA
Voltage Drive / Series Resistor	5V @ 330W
End-of-line Resistor Value	6.8K
Standby Current Consumption (excluding devices)	51 mA @ 24 VDC
Physical Specifications	
Length	11.9" (302.3 mm)
Width	4.85" (123.2 mm)
Thickness	1" (25.4 mm)



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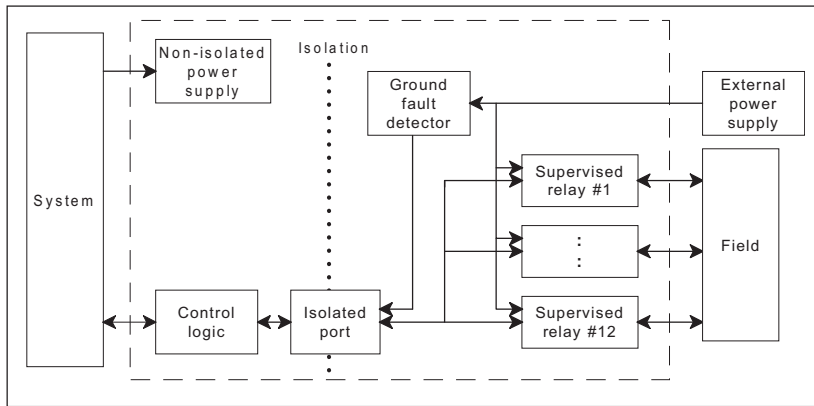
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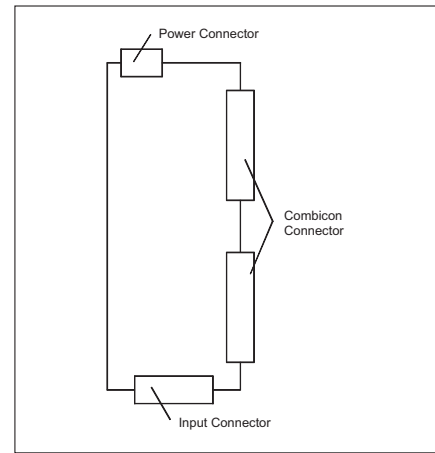
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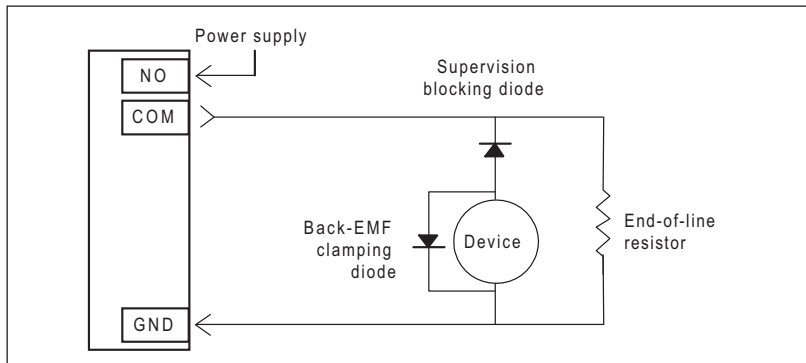
## Block Diagram



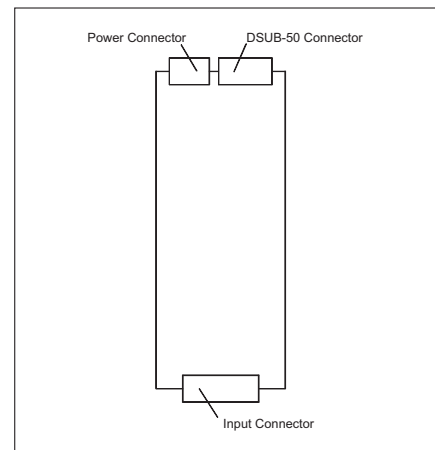
## Card With Combicon Connectors



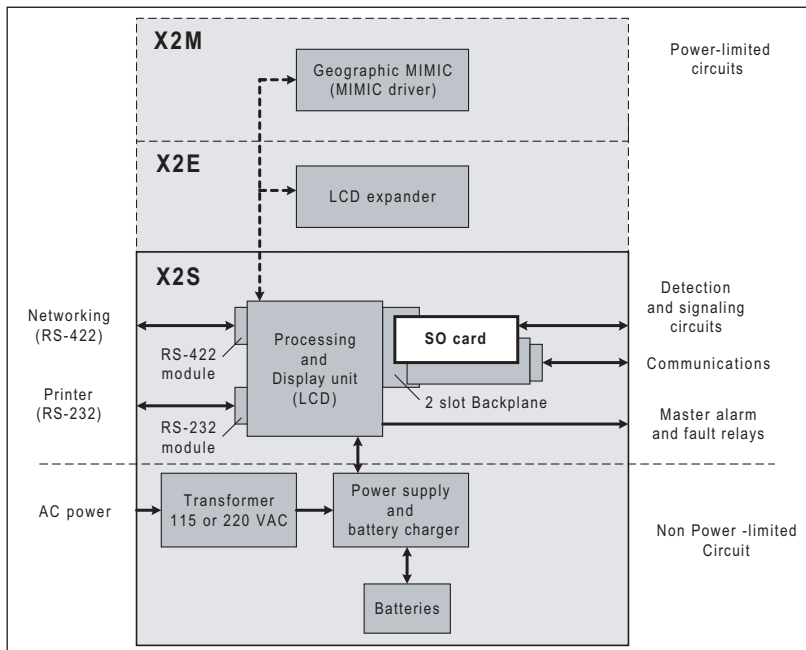
## Typical Device Connecting Sketches



## Card With DSUB-50 Connector



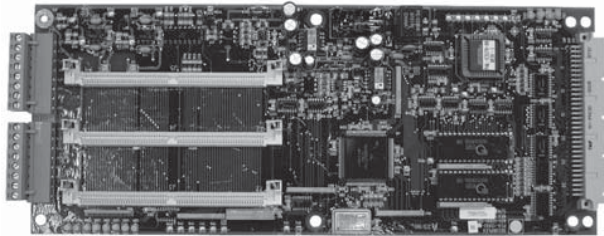
## SO Card Connected to an X2 Type Panel



## Ordering Information

Model Number	Description
PCA-13459-00	PRO-2000 12-Zone Supervised Relay Card with Combicon Connector, UL/ULC
PCA-13459-01	PRO-2000 12-Zone Supervised Relay Card with DSUB-50 Connector, UL/ULC
PCA-13459-02	PRO-2000 12-Zone Supervised Relay Card with Combicon Connector, Marine
PCA-13459-03	PRO-2000 12-Zone Supervised Relay Card with DSUB-50 Connector, Marine

**PRO-2000  
Communication Card**



**Description**

The Communication Card enables the PRO-2000 Series panels to be connected to various communication interfaces such as RS-232, RS-422 and RS-485.

Each of the three ports is built into a communication module. The user simply inserts the communication module of the desired protocol into anyone of the three available slots. The communication card can support the use of all three modules simultaneously if desired, but multiples of the same communication module cannot be used.

The RS-232 enables the PRO-2000 Series panels to communicate with personal computers and printers. The RS-422 enables the PRO-2000 Series panels to communicate in a network configuration. The RS-485 enables the PRO-2000 Series panel to communicate with specialized gas and flame detectors.

Each communication module has an isolated power supply and is fully isolated from other panel electronics and from each other. Port#1 has independent transient protection and ground fault detection. While ports #2 and #3 share transient protection and ground fault detection.

**Features**

- Microprocessor controlled
- Three (3) communication ports available
- Short circuit protection on each output circuit
- Fuseless power input with supervision and power limiting
- Full transient protection on all outputs
- Field electronics fully isolated from system electronics for increased electrical noise immunity
- Built-in local ground fault detection for easier maintenance and troubleshooting
- Built-in isolated switching power supply for increased power efficiency
- Software based analysis for easy configuration and upgradability
- Surface mount technology
- Removable connectors for easy servicing
- Removable driver cards for easy servicing

**Specifications**

Electrical Specifications	
Input Voltage	20 to 28.5 VDC
Standby Current	113 mA
Standby Current required with RS-232/RS-485/RS-422	190 mA
Physical Specifications	
Length	11.9" (302.3 mm)
Width	4.85" (123.2 mm)
Thickness	1" (25.4 mm)
Weight	14.1 oz. (400 g)



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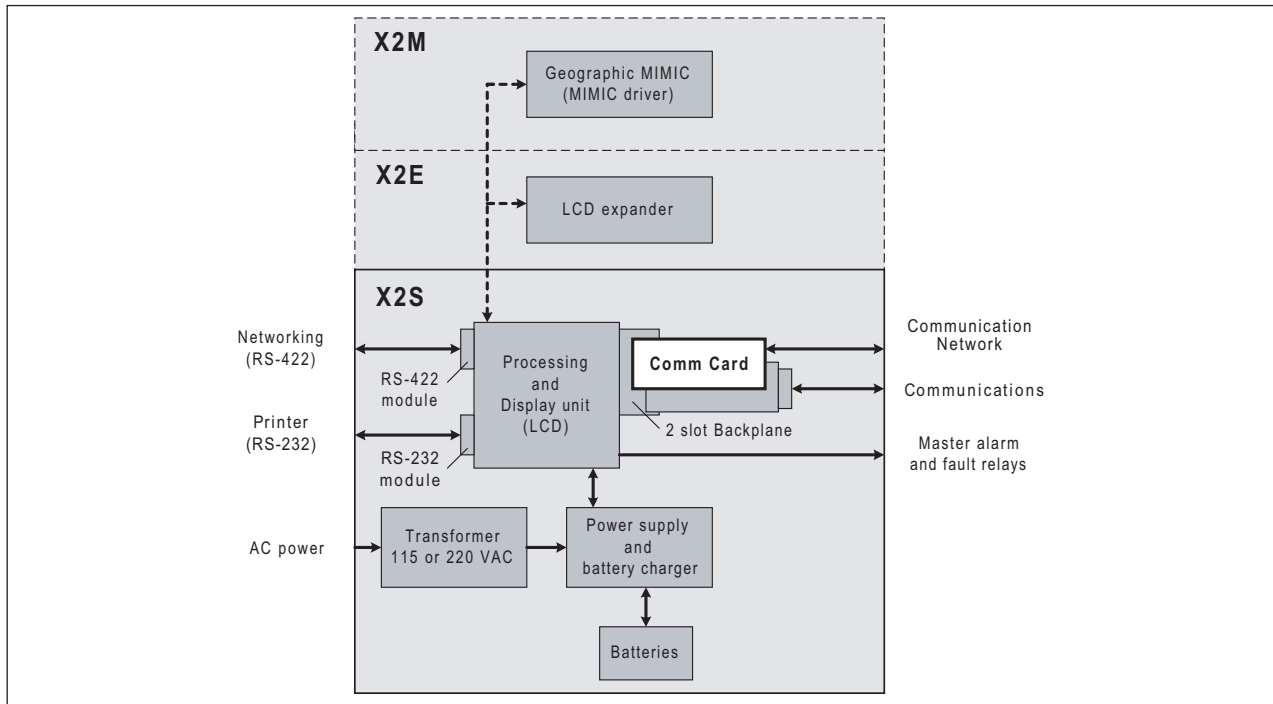
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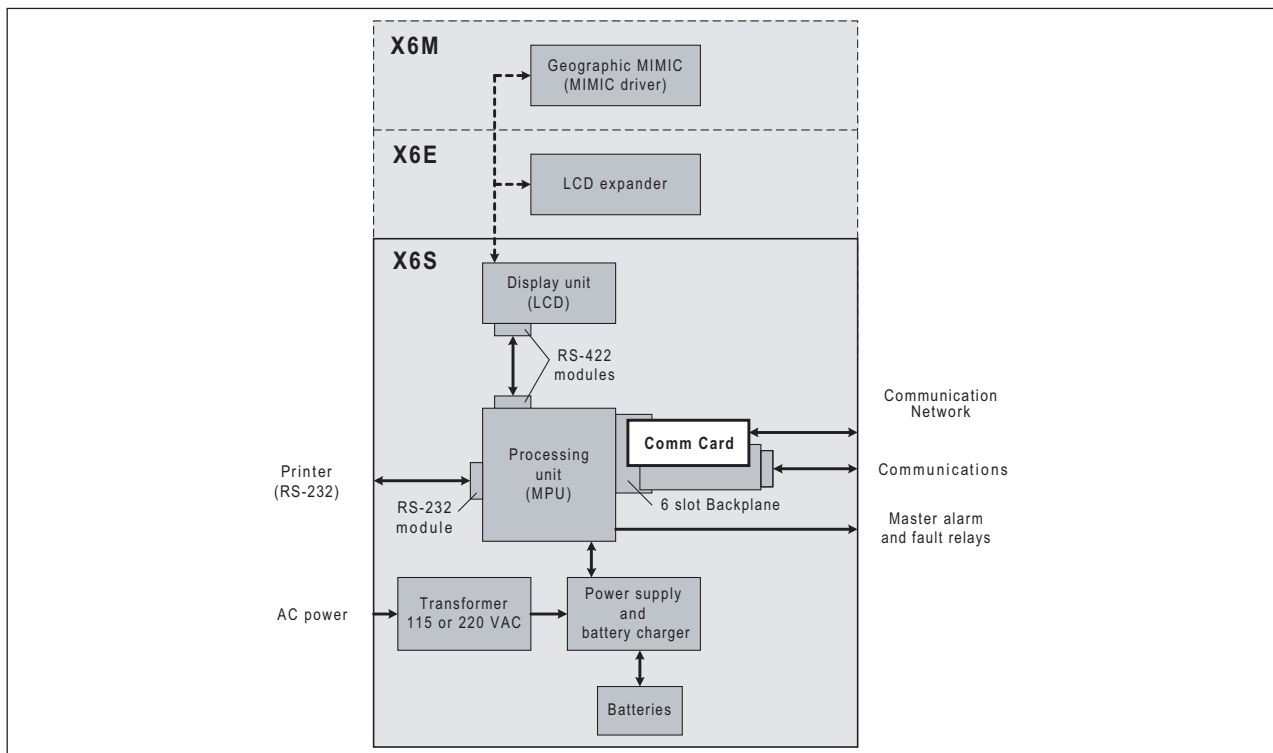
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## Communication Card Connected to an X2 Type Panel



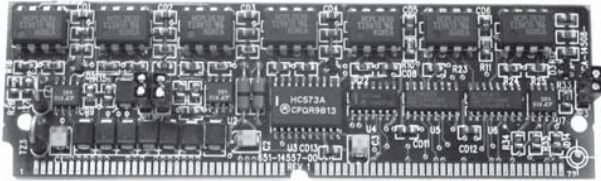
## Communication Card Connected to an X6 Type Panel



## Ordering Information

Model Number	Description
PCA-12892-00	PRO-2000 Communications Card, UL/ULC
PCA-12892-01	PRO-2000 Communications Card, Marine

## PRO-2000 RS-485 Interface Module



### Description

The RS-485 Interface Module easily snaps onto the PRO-2000 Series products to enable RS-485 MODBUS communication capabilities to compatible equipment.

The module has three RS-485 channels. A module with one RS-485 channel is also available.

The RS-485 module allows "multi drop" serial communication and can be used on the following PRO-2000 Series products:

- Communication Card mounted onto the backplane of the Display Unit (LCD Card)
- Communication Card mounted onto the backplane of the Processing Unit (MPU Card)

The RS-485 module has an optical interface to the system electronics and is powered by two isolated power supplies that greatly increases electrical noise immunity.

All inputs and outputs have full transient protection that guard against electrical and electrostatic discharges that can occur in the field.

Using the RS-485 Interface Module, a variety of detectors and devices equipped with the RS-485 MODBUS Interface can be connected to the PRO-2000 Series panel.

### Features

- Allows RS-485 MODBUS communication on PRO-2000 Series products
- Full transient protection on all inputs and outputs
- Opto-isolated interface to system electronics for increased electrical noise immunity
- Modular design for easy replacement by insertion into the receiver board's 72-pin socket
- One or three ports on each module

### Specifications

Electrical Specifications	
Input Voltage	5 VDC ± 0.3 VDC
Input Current	80 mA
RS-485 - Outputs and Inputs	
Output Transmitter Voltage	As per RS-485 standard
Input Receiver Voltage	As per RS-485 standard
Physical Specifications	
Length	4.25" (108 mm)
Width	1.275" (32.4 mm)
Thickness	0.75" (19.1 mm)
Weight	0.71 oz. (20 g)



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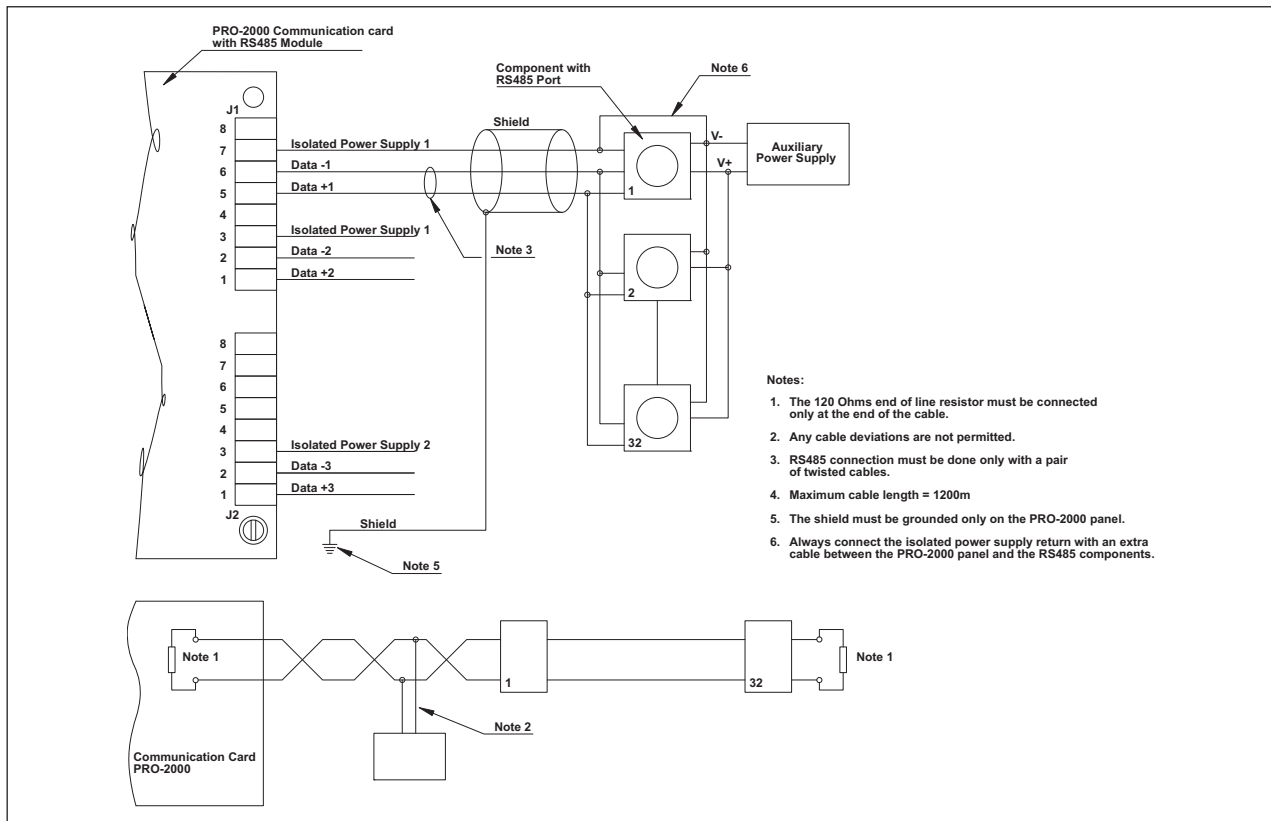
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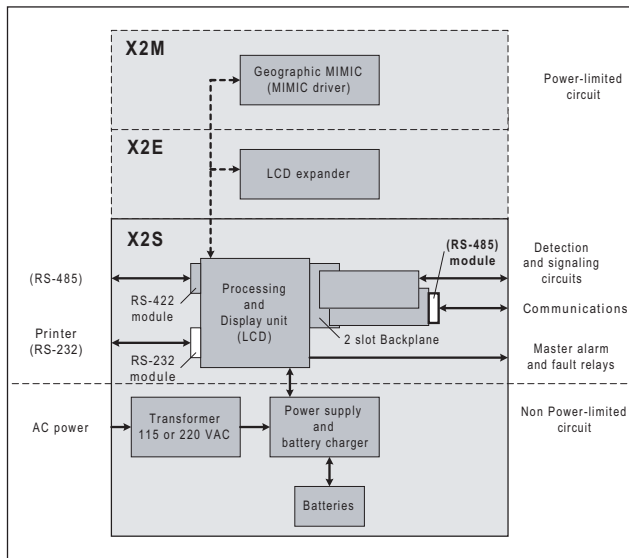
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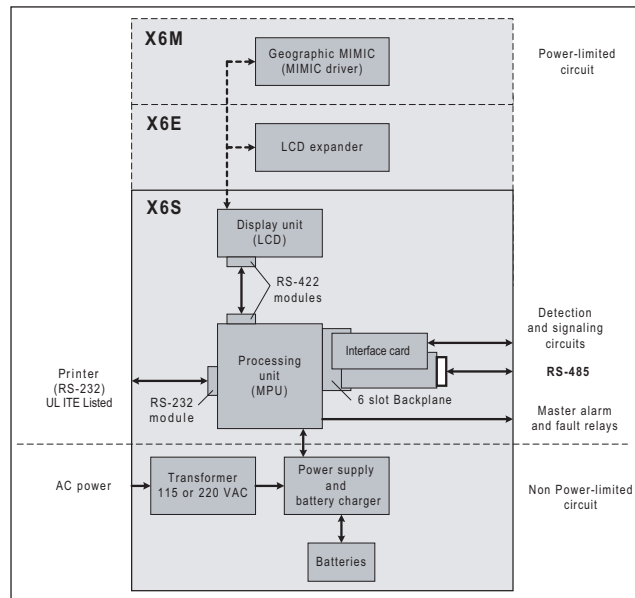
# RS-485 Interface Module Typical Connection Diagram



## RS-485 Interface Module Connected to an X2 Type Panel



## RS-485 Interface Module Connected to an X6 Type Panel

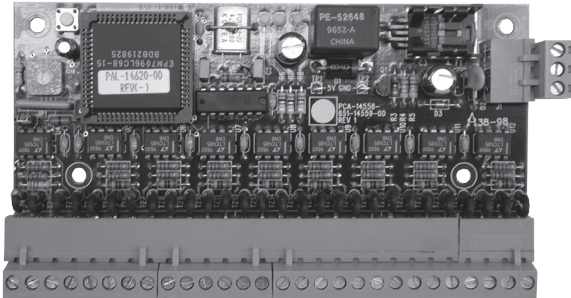


## Ordering Information

Model Number	Description
PCA-14508-00	PRO-2000 RS-485 Interface Module
PCA-14508-01	PRO-2000 RS-485 Interface Module, One Channel
PCA-14508-02	PRO-2000 RS-485 Interface Module, Coated, Marine
PCA-14508-03	PRO-2000 RS-485 Interface Module, 1 Channel, Coated, Marine



## PRO-2000 RS-485 Distribution Card (Hub)



### Features

- Eight (8) RS-485 slave ports receiving/sending data to/from the master port (maximum of 32 devices for each port)
- Selective communication speed with a 16 position rotary selector
- 8 bits asynchronous UART communications mode, 1 bit parity
- Automatic connection and disconnection of the faulted slave port
- Several RS-485 Distribution Cards can be connected in parallel to the same line
- All inputs and outputs are protected against any transients
- Supported communication speeds: 300, 600, 1200, 2400, 4800, 9600, 14000, 19200 and 28800 Baud

### Description

The RS-485 Distribution Card provides one to eight RS-485 channel splitters. Each channel is equipped with an RS-485 driver/ receiver chip set. This eliminates the problem of a communication bus failure found on multi-drop point configurations due to a single shorted device.

The RS-485 Distribution Card has nine separate ports; one (1) master port and eight (8) slave ports. The master port is connected to the PRO-2000 Series panel and directs data to the eight slave ports. The RS-485 Distribution Card monitors all ports, automatically disconnecting any shorted port and automatically reconnecting the port once the short is removed without disrupting the communication of the other ports.

The ability to operate several distribution cards in parallel provides flexibility in the system configuration. For maximum reliability each device will have a dedicated port with a maximum of eight devices per distribution card.

In a branch/star configuration, each of the eight ports can support a maximum of 32 devices. A shorted device will only disrupt the communication of the branch to which it is connected.

The rotary selector is used to select the matching communication speed of the master panel. The RS-485 Distribution Card should be mounted inside a protective box and requires a 28-Volt power source.



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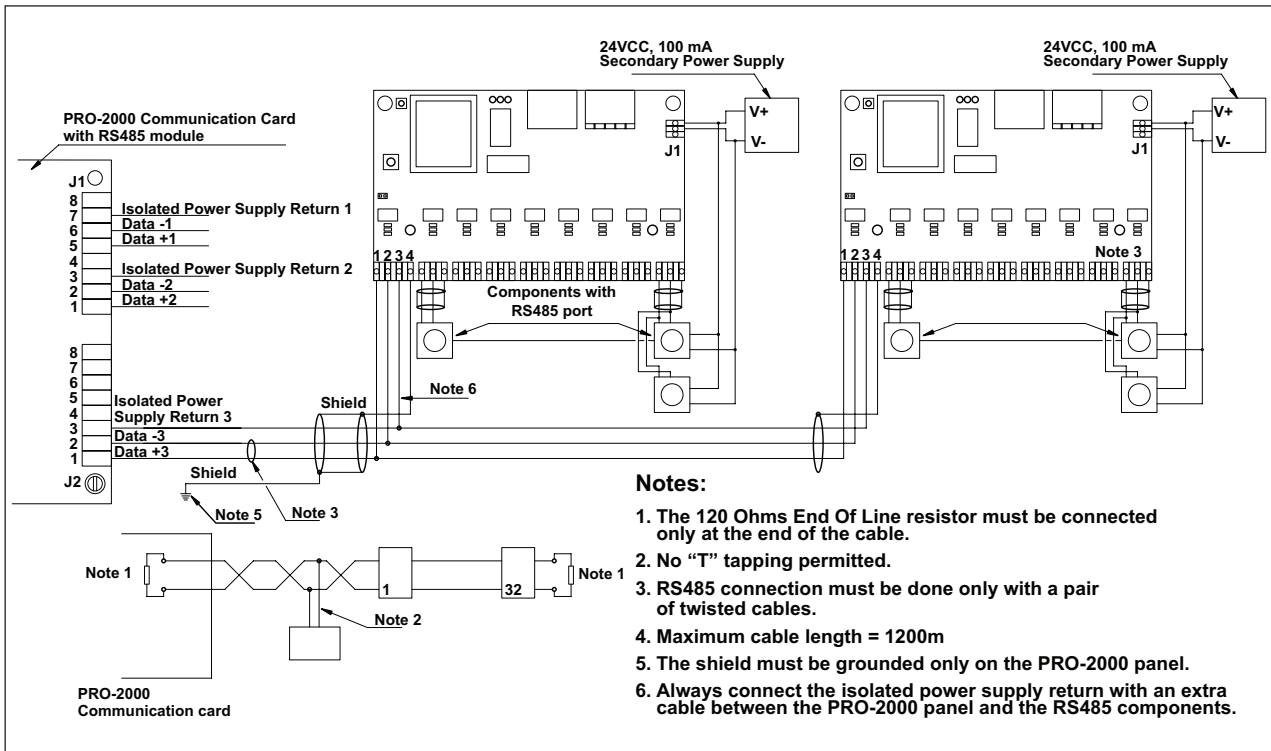
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## Typical Wiring Diagram

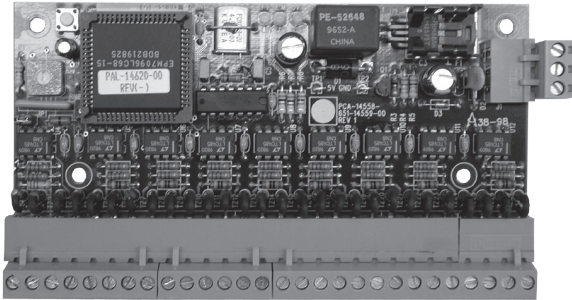


## Ordering Information

Model Number	Description
PCA-14558-02	PRO-2000 RS-485 Distribution Card, 1-In/8-Out
PCA-14558-01	PRO-2000 RS-485 Distribution Card, 1-In/8-Out, Coated, Marine

## PRO-2000

### Tarjeta de Distribución RS-485 (Hub)



### Características

- Ocho (8) puertos esclavos RS-485 de recepción/emisión conectados al puerto maestro (máximo de 32 dispositivos por cada puerto)
- Configuración de la velocidad de comunicación mediante selector rotativo de 16 posiciones
- Modo de comunicación UART asincrónico de 8 bits, con 1 bit de paridad
- Conexión y desconexión automática de puerto esclavo en falla
- Se pueden conectar varias tarjetas de distribución RS-485 en paralelo en la misma línea
- Todas las entradas y salidas están protegidas contra transitorios
- Velocidades de comunicación soportadas: 300, 600, 1200, 2400, 4800, 9600, 14000, 19200 y 28800 baudios

### Descripción

La tarjeta de distribución RS-485 proporciona de uno a ocho divisores de canal RS-485. Cada canal está equipado con un "chip set" que es driver y receptor RS-485; esto elimina el problema de falla de bus de comunicaciones por causa de un dispositivo en corto que aparece en las configuraciones "multi-drop".

La tarjeta de distribución RS-485 tiene nueve puertos: un (1) puerto maestro y ocho (8) puertos esclavos. El puerto maestro está conectado al Panel PRO-2000 y direcciona los datos hacia los ocho puertos esclavos. La tarjeta de distribución RS-485 monitorea todos los puertos, desconectando automáticamente cualquiera de ellos que esté en corto y reconectándolo automáticamente una vez que el corto desaparece, sin interrumpir la comunicación de los otros puertos.

La capacidad de operar varias tarjetas de distribución en paralelo proporciona flexibilidad en la configuración del sistema. Para una máxima confiabilidad, cada dispositivo tendrá un puerto dedicado, con un máximo de ocho dispositivos por tarjeta de distribución.

En una configuración rama/estrella, cada uno de los ocho puertos puede soportar un máximo de 32 dispositivos. Un dispositivo en corto sólo interrumpirá la comunicación de la rama en la que está conectado.

Con el selector rotativo se selecciona la velocidad de comunicación del Panel maestro. La tarjeta de distribución RS-485 debe montarse dentro de una caja protectora y requiere una fuente de alimentación de 28 V.



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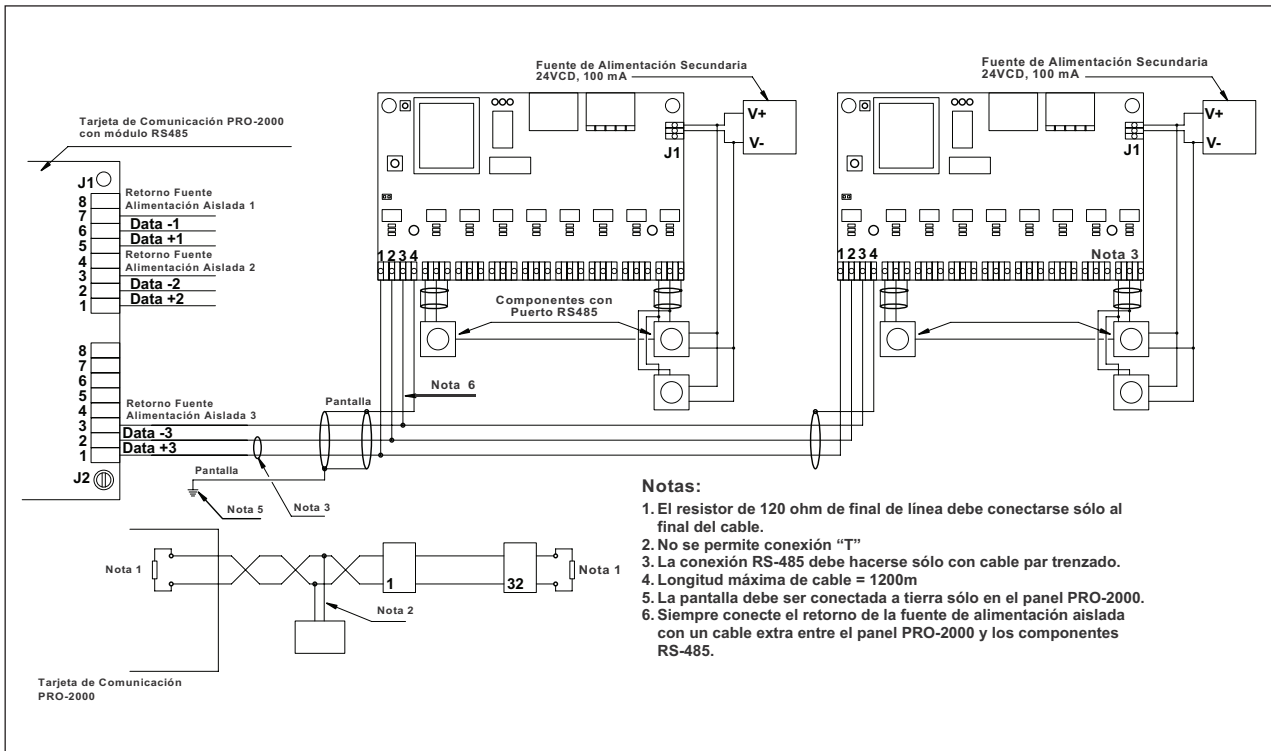
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## Diagrama de Cableado Típico

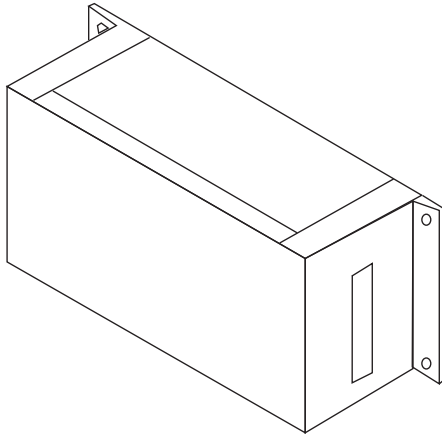


## Información de Pedido

Número de Parte	Descripción
PCA-14558-02	Tarjeta de Distribución RS-485 PRO-2000, 1-Ent / 8-Sal
PCA-14558-01	Tarjeta de Distribución RS-485 PRO-2000, 1-Ent / 8-Sal, Revestido, Marina



**PRO-2000  
Power Supply Module & Transformer  
Bracket**



**Description**

The Power Supply for the PRO-2000 has two assemblies; the Transformer Bracket and the Power Supply Module. The Transformer Bracket supplies the 20-30 VAC and is available in 115 VAC or 220 VAC configurations. The Power Supply Module requires an input of 20-30 VAC.

The Transformer Bracket Assembly is protected at the input stage by a 2 Amp fuse (1 Amp for 220 VAC service).

The Power Supply Module provides 28 VDC to the control unit microprocessor and logic circuits, as well as charging and monitoring circuits for the 24 VDC batteries.

The Power Supply Module is protected against over-current and over-voltage conditions. The battery charging circuit is protected against reverse battery connection.

Two (2) signals are provided by the Power Supply, for use by the Main Processing Unit, to monitor the power supply operation:

'AC Fault': When AC input voltage (at the Power Supply Module terminals) falls below 12 VAC, the Power Supply Module sends a logic signal to the Main Processing Unit.

'DC Fault': When the battery voltage falls below 22.6 VDC, the Power Supply Module sends a logic signal to the Main Processing Unit.

**Features**

- 125 watts total output power
- Convection cooled, no fans or blowers
- 28 VDC regulated output, up to 4.7 ± 10% Amps
- 'AC Fault', 'DC Fault' signals provided
- Plug and socket terminations for ease of installation and maintenance
- Battery charger, current limited to 2.2 Amps
- Battery test input
- 80% minimum efficiency at full load
- Over-voltage and over-current protection
- Fuse protected on AC line and Battery back-up
- Built-in transient protection
- Transformer bracket available in 115 VAC & 220 VAC configurations

**Power Supply Specifications**

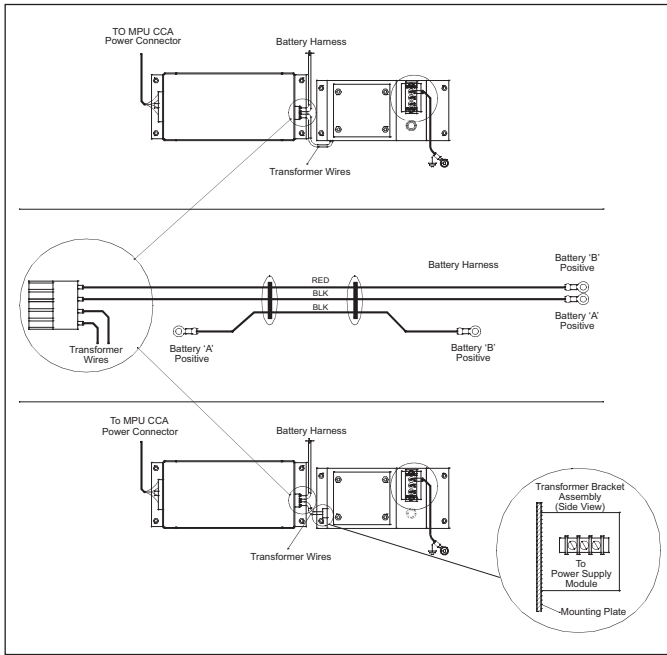
Electrical Specifications	
Input Voltage	115 VAC
Frequency	50/60 Hz
Total Supply Output Power (Output 1 + Battery Charger)	125 W Max.
Output 1	
Operating Voltage	28.5 ± 0.3 VDC
Current Limit	4.7 Amps ± 10%
Ripple and Noise (full load)	50 mV peak-to-peak max.
Battery Charger (Constant Voltage, Current Limited Type)	
Operating Voltage	27.3 VDC
Current Limit	2.2 Amps
Battery Protection	Automatic battery disconnect at 19.5V to prevent against complete discharge
Fuse Protection	5 Amps
Fault Signals (For Connection to Main Processing Unit)	
AC Fault	Open collector transistor
DC Fault	Open collector transistor
Physical Specifications	
Length	4.5" (114.3 mm)
Width	10.3" (261.6 mm)
Depth	2.9" (73.7 mm)



**USCG**  
161.002/41/1  
**ABS**  
05-MO602743-X

**CCG**  
Accepted

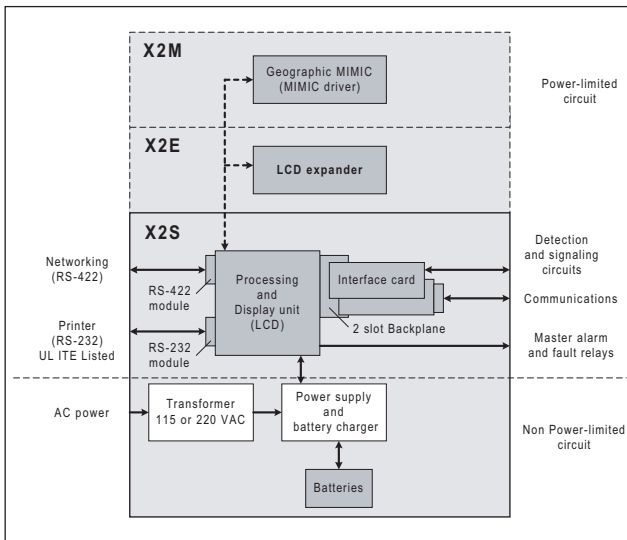
## Typical Wiring Diagram



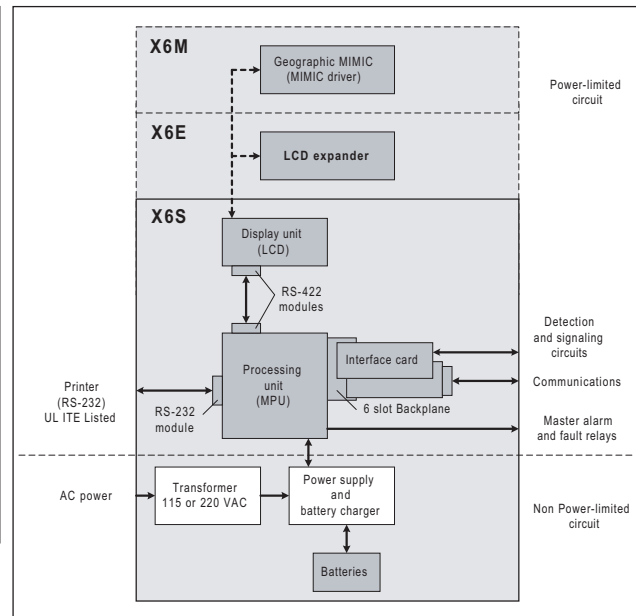
## Transformer Bracket Specifications

Electrical Specifications	
Input Voltage	120 VAC (220 VAC, optional)
Frequency	60/50 Hz
Fuse protection	2 Amps (120 VAC) 1 Amp (220 VAC)
Output Voltage	25 VAC
Maximum Current	5 Amps
Physical Specifications	
Length	4.0" (101.6 mm)
Width	8.9" (226 mm)
Depth	3.4" (86 mm)

## Power Supply Connected to an X2 Type Panel



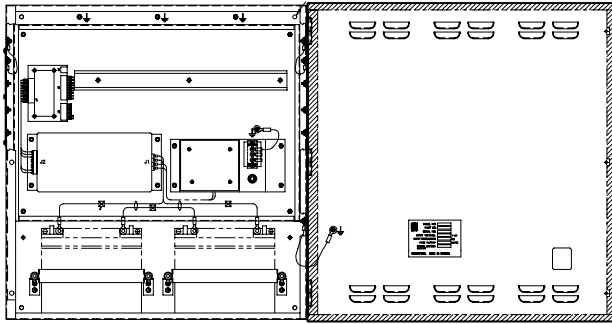
## Power Supply Connected to an X6 Type Panel



## Ordering Information

Model Number	Description
PSA-07250-01	PRO-2000 25VAC-28VDC Power Supply, UL/ULC
PSA-07250-03	PRO-2000 25VAC-28VDC Power Supply, Marine
CAS-08094-00	PRO-2000 Transformer Bracket Assembly, 110V, UL/Marine
CAS-08094-01	PRO-2000 Transformer Bracket Assembly, 110V, ULC
CAS-08095-00	PRO-2000 Transformer Bracket Assembly, 220V, UL/Marine
CAS-08095-01	PRO-2000 Transformer Bracket Assembly, 220V, ULC

## PRO-2000 APS-15291 Auxiliary Power Supply



### Features

- Rugged enclosure in 18 gauge steel
- Voltage input 115 VAC or 220 VAC
- Fuse protected on AC line and battery
- Built-in transient protection
- Up to 125 Watts total output power
- 3 output voltages: 28 VDC, 5 VDC, 28 VDC for battery charger
- Built-in local ground fault detection for easier maintenance and troubleshooting
- Built-in Ground Fault Detection with dry contact for output signaling
- Built-in AC fault detection with dry contact for output signaling
- Built-in DC fault detection with dry contact for faults detection
- Built-in isolated switching power supply for increased power efficiency
- Battery charger with voltage regulator and current limit
- Up to 2.2 A current output for battery charger
- Space in the enclosure for two 12 V batteries of 17 AH each
- Removable connectors for easy servicing

### Description

The Auxiliary Power Supply is suitable for applications where it is necessary to have a battery backup in case of loss of the main power supply. The input voltage is 115V, 60Hz or there is a second version which sustains an input voltage of 220V, 50Hz. The Power Supply Module operates in conjunction with the Transformer Bracket Assembly and the transformer input is protected by a 2A fuse (1A for 220 VAC service).

The output provides 28VDC with a current of up to 4.7A. A fraction of this current is up to 2.2A is used to charge two 12V batteries. All outputs are protected against over-current and over-voltage conditions. The battery charger is protected against reverse polarity connection.

Three signals are provided to monitor the Power Supply Module operation,. They are as follows:

- The "AC Fault" signal is activated when the AC input voltage at the Power Supply input terminal falls below 12VAC. The information is sent via a dry contact.

- The "DC Fault" signal is activated when they battery voltage falls below 22.6VDC. The information is sent via a dry contact.
- The "GND Fault" signal is activated of a condition of GND fault is detected. The information is sent via a dry contact.

Each dry contact can be used in the "normally open" or "normally closed" positions. Signals to monitor the Power Supply are provided by the fault detection module.



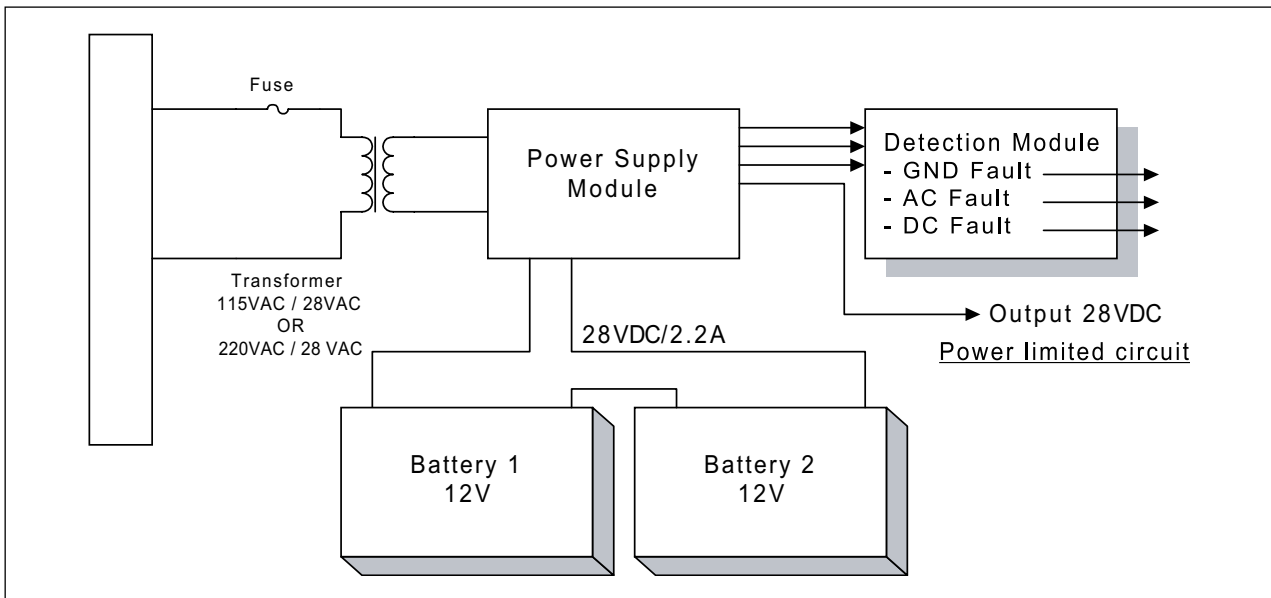
S7010



S7010

**ABS USCG**

## Typical Wiring Diagram



## Power Supply Specifications

Electrical Specifications	
Input Voltage Range	110VAC, 60Hz or 220VAC, 50Hz
Fuse Protection	2A for 115VAC 1A for 220VAC
Output Transformer	
Voltage	25 VAC
Maximum Current	5 Amps
Input Power Supply Module	
Voltage Range	20 - 30 VAC
Frequency	50/60 VAC
Total Power Supply Module Output (Output1 + Output2 + Battery Charger)	125 W
Output 1	
Operating Voltage	28.5 ± 0.3 VDC
Current Limit	4.7 Amps ± 10%
Ripple and Noise (full load)	50 mV peak-to-peak max.
Temperature Drift Coefficient	Change in output voltage 0.03%/ °C max.

Output 2	
Operating Voltage	5.0V ± 0.1V
Current Limit	3.0 ± 0.3 Amps
Ripple and Noise (Full load)	20 mV peak-to-peak max.
Temperature Drift Coefficient	Change in output voltage 0.03%/ °C max.
Battery Charger (Constant Voltage, Current Limited Type)	
Operating Voltage	27.3 VDC
Current Limit	2.2 Amps
Battery Protection	Automatic battery disconnect at 19.5V
Fuse Protection	5 Amps
Fault Signals (Dry Contacts)	
AC Fault - Relay	0.5 A, 30 VDC
DC Fault - Relay	0.5 A, 30 VDC
GND Fault - Relay	1 A, 30 VDC
Environmental	
Storage Temperature	-40°C - 60°C (-40°F - 140°F)
Physical Specifications	
24.4" H x 23.5" W x 7.25" D (610 mm x 587 mm x 181 mm)	

## Ordering Information

Model Number	Description
APS-15291-00	PRO-2000 Auxiliary Power Supply, 220V, 42AH, UL
APS-15291-01	PRO-2000 Auxiliary Power Supply, 110V, 42AH, Marine
APS-15291-02	PRO-2000 Auxiliary Power Supply, 110V, 42AH, UL
APS-15291-03	PRO-2000 Auxiliary Power Supply, 220V, 42AH, Marine
APS-15291-04	PRO-2000 Auxiliary Power Supply, 110V, 42AH, ULC
APS-15291-05	PRO-2000 Auxiliary Power Supply, 220V, 42AH, ULC



## MIX-200 SERIES

### Intelligent Low Profile Detectors



Model MIX-2251TB Detector Mounted in a Model MIX-B210LP Base

### Description

Mircom's low profile addressable plug-in smoke and heat detectors with integral communications provide features that surpass conventional detectors. Sensitivity is continuously monitored and reported to the panel where the desired detector sensitivity can be programmed. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

**Model MIX-2251B** photoelectric smoke detector provides a unique optical sensing chamber that senses smoke produced by a wide range of combustion sources.

**Model MIX-2251TB** adds dual electronic thermistors to the MIX-2251B to provide 135°F (57°C) fixed temperature thermal sensing.

**Model MIX-2251TMB** is a multi-criteria photoelectric smoke detector with supplementary 135°F thermal sensing. It uses advanced on-board software to combine the signals from the photoelectric and thermal elements. This software creates a multi-criteria detector capable of rejecting nuisance sources but still responding quickly to real fires. Additionally, this model also adjusts its sensitivity according to the local installed environment.

### Features

- Sleek, low profile design
- Analog communications
- Smoke detectors are available with photoelectric or ionization technology
- Photoelectric detectors are available with additional fixed temperature detection or with multi-criteria photo/heat detection operation
- Heat detectors are available as fixed temperature or fixed temperature with rate-of-rise detection
- Low standby current
- Rotary address switches
- Magnetic test feature
- Superior EMI protection

**Model MIX-1251B** ionization detector incorporates a unique single source, dual chamber design to respond quickly and dependably to a broad range of fires.

**Model MIX-5251B** uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MIX-5251RB** provides both 135°F fixed and rate-of-rise thermal detection. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MIX-5251H** provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6295  
(MIX-1251B,  
MIX-2251B &  
MIX-2251TB)  
S6299  
(MIX-5251B/RB/H)



CS920  
(MIX-1251B,  
MIX-2251B &  
MIX-2251TB)  
CS717  
(MIX-5251B/RB/H)



7271-1477:122  
(MIX-1251B)  
7271-1477:117  
(MIX-2251B/TB)  
7271-1477:114  
(MIX-5251B/RB/H)



148-03-E  
(MIX-1251B)  
219-02-E  
(MIX-2251B/TB)  
390-02-E  
(MIX-5251B/RB/H)



2151  
(MIX-1251B)  
2131  
(MIX-2251B/TB)



APPROVED  
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## Specifications

### Electrical

<b>Voltage Range</b>		15 to 32 VDC peak
<b>Standby Current (maximum average)</b>	Ion and Thermal	300 $\mu$ A @ 24 VDC
	Photo and Photo with Thermal	360 $\mu$ A @ 24 VDC (one communication every 5 sec with LED enabled)
<b>LED Current</b>		6.5 mA @ 24 VDC maximum

### Environmental

<b>Operating Temperature Range</b>	Ionization and Photo Detectors	32° to 120°F (0° to 49°C), models MIX-2251B and MIX-1251B
	Photo detectors with Thermal Detection	32° to 100°F (0° to 38°C), models MIX-2251TB and MIX-2251TMB
	135°F Heat Detectors	-4° to 100°F (-20° to 38°C)
	190°F Heat Detectors	-4° to 150°F (-20° to 66°C)
<b>Thermal Ratings</b>	Fixed Temperature	135°F (38°C), models MIX-5251B and MIX-5251RB
		190°F (88°C), model MIX-5251H
	Rate-of-Rise Detection	15°F/min (8.33°C/min), model MIX-5251RB
<b>Humidity Range</b>		10 to 93% RH, Noncondensing

### UL Listed Air Velocity Range

<b>Ionization Detectors</b>	0 to 1200 fpm (366 m/min)
<b>Photo/Photo with Thermal</b>	0 to 4000 fpm (1220 m/min); suitable for installation in ducts

### Mechanical

<b>Dimensions, Detector in Base</b>	2-1/8" (53 mm) high; 6-1/8" (155 mm) diameter
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## Ordering Information

### Addressable Detectors

Model	Description
MIX-1251B	Ionization Smoke Detector
MIX-2251B	Photoelectric Smoke Detector
MIX-2251TB	Photoelectric Smoke Detector with 135°F Fixed Temperature Heat Detector
MIX-2251TMB	Acclimate™ Multi-Criteria Smoke Detector
MIX-5251B	Heat Detector, 135°F fixed temperature
MIX-5251RB	Heat Detector, 135°F fixed temperature with rate-of-rise detection
MIX-5251H	High Temperature Heat Detector, 190°F fixed temperature

**Note:** For Canadian models add suffix "A".

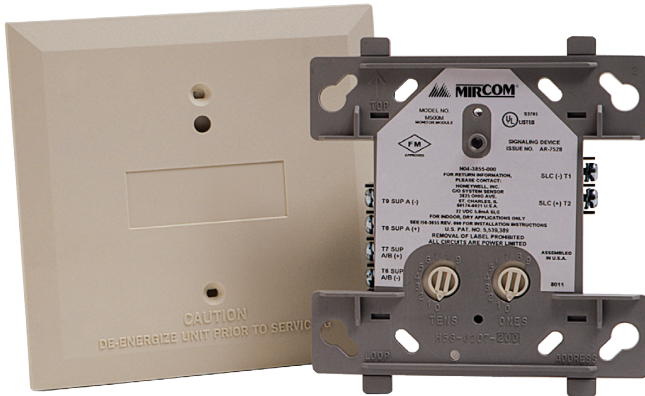
### Detector Bases

Model	Description
MIX-B210LP*	Intelligent Flanged Mounting Base
B224BI	Intelligent Isolator Base
B224RB	Intelligent Relay Base
B501	Intelligent Flangeless Mounting Base
B501BH	Intelligent Sounder Base
B501BHT	Intelligent Temporal Tone Sounder Base

**Note:** For Canadian models add suffix "A".



**MIX-M500 SERIES**  
**Intelligent Modules**



**Description**

Mircom's intelligent module products are designed to meet a wide range of applications. Monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors, and more. Each module is rigorously designed and tested for electromagnetic compatibility and environmental reliability, in many cases exceeding industry standards. Modules are addressed with easy-to-use rotary code switches. Full size modules mount in standard 4" x 4" x 2-1/8" junction box. Wiring terminals are easily accessible for troubleshooting purposes.

**MIX-M500M Monitor Module, MIX-M501M Mini Monitor Module, and MIX-M500DM Dual Input Monitor Module**

Mircom's monitor modules provide an interface to contact devices, such as security contacts, waterflow switches, or pull stations. They are capable of Styles A and B supervised wiring to the load device (MIX-M500M is capable of Style D). Conventional 4-wire smoke detectors can be monitored through their alarm and trouble contacts, wired as an initiating loop to the module. In addition to transmitting the supervised state of the monitored device (normal, open, or short), the full analog supervision measurement is sent back to the panel. This allows impedance changes in the supervised loop to the monitored device to be detected.

The MIX-M500DM is capable of monitoring two separate Class B circuits simultaneously, making it ideal for waterflow tamper switch and flow switch monitoring. The small size of the MIX-M501M allows it to fit inside devices or junction boxes behind devices.

**Features**

- Designed to meet a wide range of applications.
- SEMS screws for easing wiring
- Panel controlled status LED (except MIX-M501M)
- Analog communications
- Rotary address switches (except M500X)
- Low standby current
- Mounts in standard 4" junction box

**M500X Isolator Module**

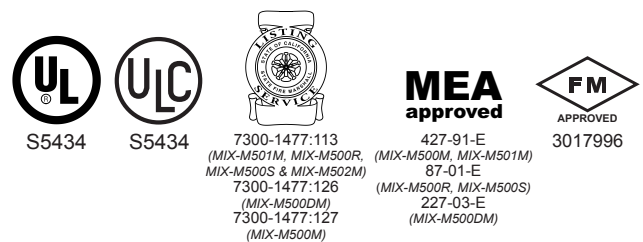
The M500X Isolator Module is an automatic switch that opens when the line voltage drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the loop continue to fully operate. No more than 25 devices are recommended for each group.

**MIX-M502M Zone Interface Module**

The MIX-M502M Zone Interface Module allows Mircom's intelligent panels to interface and monitor two-wire conventional smoke detectors. All two-wire detectors being monitored must be UL or ULC compatible with the module. The MIX-M502M is addressed through the communication line of a Mircom intelligent system. It transmits the status of one zone of two-wire detectors to the fire alarm control panel. Status conditions are reported as normal, open, or alarm. The interface module supervises the zone of detectors and the connection of the external power supply.

**MIX-M500R Relay Module**

The MIX-M500R Relay Module contains two isolated sets of Form-C contacts, which operate as a DPDT switch. The module allows the control panel to switch these contacts on command. No supervision is provided for the relay contacts.





### MIX-M500S Control Module

The MIX-M500S Control Module provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as horns, strobes, or bells. It is capable of Styles Y and Z supervision. Upon command from the control panel, the MIX-M500S will disconnect the supervision and connect the external power supply across the load device. The disconnection of the supervision provides

a positive indication to the panel that the control relay actually turned on. The external power supply is always relay isolated from the communication loop, so that a trouble condition on the power supply will never interfere with the rest of the system. Full analog measurement of the supervised wiring is transmitted back to the panel and can be used to detect impedance changes or other special test functions.

## Specifications

### General Specifications

Operating Voltage	
15-32 VDC	
Communication Line Loop Impedance	
40 Ω max.	
Temperature Range	
32° to 120°F (0° to 49°C)	
Relative Humidity	
10% to 93%: noncondensing	
Dimensions	
MIX-M501M	2.7"W x 1.7"H x 0.5"D
Others:	4.25"W x 4.65"H x 1.1"D
Shipping Weight	
MIX-M501M: 1.2 oz. (37 g)	Others: 6.3 oz. (196 g)

### MIX-M500M, MIX-M500S, MIX-M501M Specifications

Standby Current
400 µA max @ 24 VDC (one communication every 5 sec. with 47k EOL) 550 µA max @ 24 VDC (one communication every 5 sec. with EOL<1k) (short circuit condition) 5.5 mA (with LED latched on)
End-of-Line Resistance
47 kΩ (included)

### MIX-M500R Specifications

Standby Current
300 µA @ 24 VDC (one communication every 5 sec. with LED enabled)
LED Current
5.5 mA (with LED latched on)
Relay Contact Ratings
3.0 A @ 30 VDC resistive 0.9 A @ 110 VDC resistive 0.9 A @ 125 VAC resistive 0.5 A @ 125 VAC inductive (PF=.35) 0.7 A @ 75 VAC inductive (PF=.35)

### MIX-M502M Specifications

Standby Current
300 µA max @ 24 VDC (one communication every 5 sec. with LED enabled)
External Power Supply
18-28 VDC (100 mV ripple max.)
End-of-Line Resistance
3.9 kΩ (included)
External Supply Standby Current
11.5 mA @ 24 VDC (nominal)
External Supply Alarm Current
80 mA @ 24 VDC (nominal)

### MIX-M500DM Specifications

Standby Current
750 µA max. @ 24 VDC (one communication every 5 sec. with 47k EOL)
Alarm Current
970 µA max. (one communication every 5 sec.) 6 mA (with LED latched on)
End-of-Line Resistance
47 kΩ (two included)

### M500X Specifications

Standby Current
450 µA max
Isolation Current
5 mA max
Fault Detection Delay
250 ms min.
Fault Detection Threshold
4 Volts
Line Restoration Threshold
7 Volts

## Ordering Information

Model	Description
MIX-M500M	Monitor Module
MIX-M500R	Relay Module
MIX-M500S	Supervised Control Module
MIX-M501M	Mini Monitor Module
MIX-M502M	Zone Interface Module
MIX-M500DM	Dual Input Monitor Module
M500X	Isolator Module

Add suffix "A" for Canadian models.



## MIX-200 SERIES

### Special Application Intelligent Addressable Low Profile Detectors



#### Features

- Sleek, low-profile design
- Analog communications
- Low standby current
- Rotary address switches
- Superior EMI protection
- Meets MIL-S-901C Specification for Shock and Vibration
- Permanent tamper-proof tab

#### Description

Mircom's intelligent plug-in smoke detectors with integral communication provide features that surpass conventional detectors. Detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel.

Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

The detector housing and base has been made more durable to meet MIL-S-901C specifications for shock and vibration. The model MIX-B501DOD mounting base has a ribbed flange for superior support and a permanent tamper-proof tab to ensure detector stability in the base.

**Model MIX-2251DOD** photoelectric detector's unique optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources.

**Model MIX-1251DOD** ionization detector incorporates a unique single source, dual chamber design to respond quickly and dependably to a broad range of fires.

**Model MIX-5251DOD** uses an innovative thermistor sensing circuit to produce 135°F fixed detection in a low profile package.



S6295  
(MIX-1251DOD,  
MIX-2251DOD &  
MIX-B501DOD)  
S6299  
(MIX-5251DOD)

## Specifications

<b>Height</b>	2.0 inches (51 mm)
<b>Diameter</b>	5.0 inches (127 mm) installed in MIX-B501DOD base
<b>Shipping Weight</b>	
<b>Heat</b>	4.8 oz. (136 g)
<b>Photo</b>	5.2 oz. (147 g)
<b>Ion</b>	5.4 oz. (153 g)
<b>Operating Temperature Range</b>	
<b>Ion/Photo</b>	32° to 120°F (0° to 49°C)
<b>Thermal</b>	-4° to 100°F (-20° to 38°C)

<b>UL Listed Velocity Range</b>	
<b>Ion</b>	0 - 1200 fpm (0 - 6.1 m/sec)
<b>Photo</b>	0 - 4000 fpm (0 - 20 m/sec)
<b>Insect Screen Hole Size</b>	
<b>Photo</b>	0.016 inch (0.41mm) nominal
<b>Ion</b>	0.035 inch (0.89mm) nominal
<b>Relative Humidity</b>	10% - 93% noncondensing
<b>Thermal Ratings</b>	
<b>Fixed Temperature Setpoint</b>	135°F (57°C)

<b>Voltage Range</b>		15 to 32 VDC peak
<b>Standby Current (maximum average)</b>	Ion and Thermal	150 µA @ 24 VDC (without communication, LED off) 200 µA @ 24 VDC (one communication every 5 sec with LED enabled)
	Photo	250 µA @ 24 VDC (without communication, LED off) 300 µA @ 24 VDC (one communication every 5 sec with LED enabled)
<b>LED Current</b>		6.5 mA @ 24 VDC maximum

## Ordering Information

### Addressable Detectors

Model	Description
MIX-1251DOD	Special Application Ionization Smoke Detector
MIX-2251DOD	Special Application Photoelectric Smoke Detector
MIX-5251DOD	Special Application Heat Detector, 135°F fixed temperature

### Detector Base

Model	Description
MIX-B501DOD	Special Application Flangeless Mounting Base



## MIX-200 SERIES

### Detectores Direccionables Inteligentes de Bajo Perfil para Aplicaciones Especiales



## Descripción

Los detectores inteligentes "plug-in" de Mircom, con comunicación integral, tienen características superiores a las de los detectores convencionales. La sensibilidad del detector puede programarse en el Panel de control; luego esta es monitoreada continuamente e informada al panel.

La característica de identificación puntual de dispositivos, permite ajustar la dirección de los detectores mediante selectores rotativos de décadas, proporcionando la ubicación exacta de los mismos para mantenimiento selectivo, cuando la contaminación de la cámara alcanza un nivel inaceptable.

La carcasa del detector y la base se han hecho más durables para cumplir las especificaciones MIL-S-901C para golpes y vibraciones. La base de montaje modelo MIX-B501DOD posee una brida tabicada para mayor robustez y encastre anti-vandálico para asegurar el posicionamiento del detector en la base.

## Características

- Diseño elegante y de bajo perfil
- Comunicaciones analógicas
- Baja corriente de standby
- Direccionamiento mediante selectores rotativos
- Protección EMI superior
- Cumple especificación MIL-S-901C para golpes y vibraciones
- Encastre anti-vandálico

**Modelo MIX-2251DOD.** La cámara de detección óptica única de este detector fotoeléctrico está diseñada para detectar humo de una gran variedad de fuentes de combustión.

**Modelo MIX-1251DOD.** Este detector de ionización incorpora un diseño de doble cámara con única fuente para responder rápidamente y con seguridad para una amplia variedad de incendios..

**Modelo MIX-5251DOD.** Este modelo usa un innovador circuito de detección por termistor para producir detección fija en 57°C en un paquete de bajo perfil.



S6295  
(MIX-1251DOD,  
MIX-2251DOD &  
MIX-B501DOD)  
S6299  
(MIX-5251DOD)

## Especificaciones

Alto	51 mm (2,0 in)
Diámetro	127 mm (5,0 in) instalado en una base para MIX- B501DOD
<b>Peso de Envío</b>	
Térmico	136 g (4,8 oz)
Foto	147 g (5,2 oz)
Ion	153 g (5,4 oz)
<b>Rango de Temperatura de Operación</b>	
Ion/Foto	0° a 49°C (32° a 120°F)
Térmico	-20° a 38°C (-4° a 100°F)

<b>Rango de Velocidad Listado UL</b>	
Ion	0 – 6,1 m/seg (0 - 1200 fpm)
Foto	0 - 20 m/seg (0 - 4000 fpm)
<b>Tamaño de malla de Mosquitero</b>	
Foto	0,41 mm (0,016 in) nominal
Ion	0,89 mm (0,035 in) nominal
Humedad Relativa	10% - 93% sin condensación
<b>Clasificación Térmica</b>	
Set Point Temperatura Fija	57°C (135°F)

<b>Rango de Tensión</b>		15 a 32 VCD pico
<b>Corriente de Standby (promedio máximo)</b>	Ion y Térmico	150 µA @ 24 VCD (sin comunicación, LED apagado) 200 µA @ 24 VCD (una comunicación cada 4 seg con LED habilitado)
	Fotoeléctrico	250 µA @ 24 VCD (sin comunicación, LED apagado) 300 µA @ 24 VCD (una comunicación cada 4 seg con LED habilitado)
<b>Corriente de LED</b>		6,5 mA @ 24 VCD máximo

## Información de Pedido

### Detectores Direccionables

Número de Parte	Descripción
MIX-1251DOD	Detector de humo Iónico para Aplicaciones Especiales
MIX-2251DOD	Detector de Humo Fotoeléctrico para Aplicaciones Especiales
MIX-5251DOD	Detector de Temperatura para Aplicaciones Especiales, temperatura fija 57°C (135°F)

### Base de Detector

Número de Parte	Descripción
MIX-B501DOD	Base de Montaje sin Pestaña para Aplicaciones Especiales

## 2251EIS Photoelectric Smoke Sensor



### Features

- Compatible with existing System Sensor Protocol
- Low profile design
- Reliable analogue addressable communications
- Rotary decade address switches
- Tamper Resistant
- Twin LED indicators provide 360° visibility
- Built in test switch
- Must be used in conjunction with the IST200 Translator Module and Y72221 Galvanic Isolator
- Compatible with the existing standard intelligent sensor base
- BASEEFA Approved to EEx ia IIB T5 for use in up to Zone 0 hazardous environments

### Description

The 2251EIS analogue addressable photoelectric sensor is a plug in intrinsically safe smoke sensor combining an optical sensing chamber with analogue addressable communications. As an intrinsically safe sensor, the 2251EIS has been designed specifically to provide fire protection for most hazardous environments, and has therefore been engineered so that it cannot become a source of ignition in areas where potentially explosive atmospheres are likely to arise.

The 2251EIS sensors are approved by BASEEFA to EEx ia IIB T5, for use in hazardous environments. The 2251EIS sensor is therefore suitable for use in all hazardous areas up to Zone 0 areas and with most gases, excluding hydrogen and acetylene.

The 2251EIS has two integral LED's which provide local visual indication of the sensor status. These LED's provide a dual function. In the event of an alarm, they can be switched ON continuously, and can also be programmed to either blink when polled by the panel or remain off during normal conditions.

The individual loop address of each 2251EIS can be easily set and read, using the rotary decade address switches located on the rear of each sensor. The use of decimal address codes significantly reduces the potential for incorrect address selection.

Each sensor base includes a tamper resistant option which, when activated, prevents the removal of the sensor from it's base without the use of a tool. Full circuit functionality can be easily confirmed on site by use of the sensor test switch. Operation of this magnetic switch will generate an alarm response to the fire alarm control panel, making system testing both convenient and simple.



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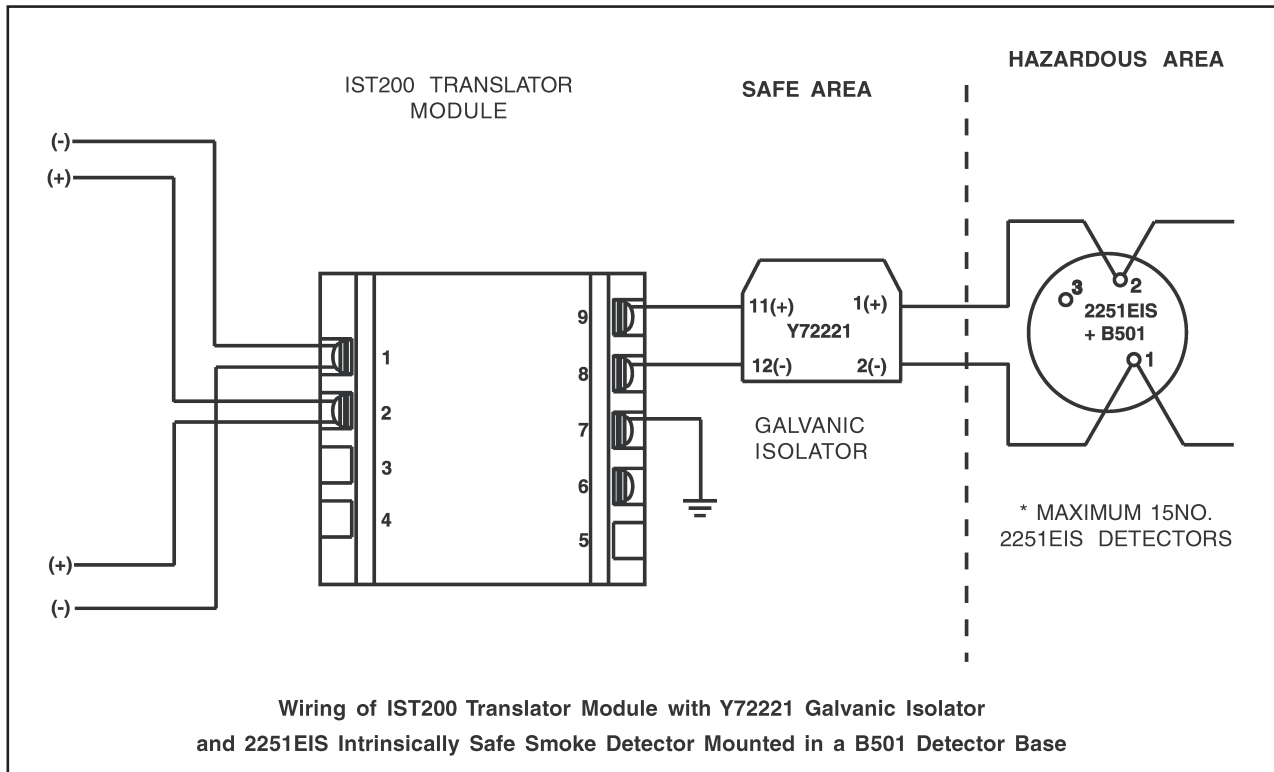
## IST200 Intelligent Translator Module

### Description

The IST200 translator module is intended for use with analogue addressable systems and in conjunction with 2251EIS intrinsically safe photoelectric smoke sensors. The IST200 translator module serves as an interface between the control panel and up to a maximum of 15 x 2251EIS smoke sensors. The IST200 must also be used in conjunction with a

Y72221 galvanic isolator barrier (see below). To ensure correct operation, the IST200 must only be connected to a listed compatible Control Panel.

The IST200 translator module can be easily mounted within System Sensor's existing SMB500 surface mount box (see diagram). The IST200 must be located within a safe environment.



## Y72221 Galvanic Isolator

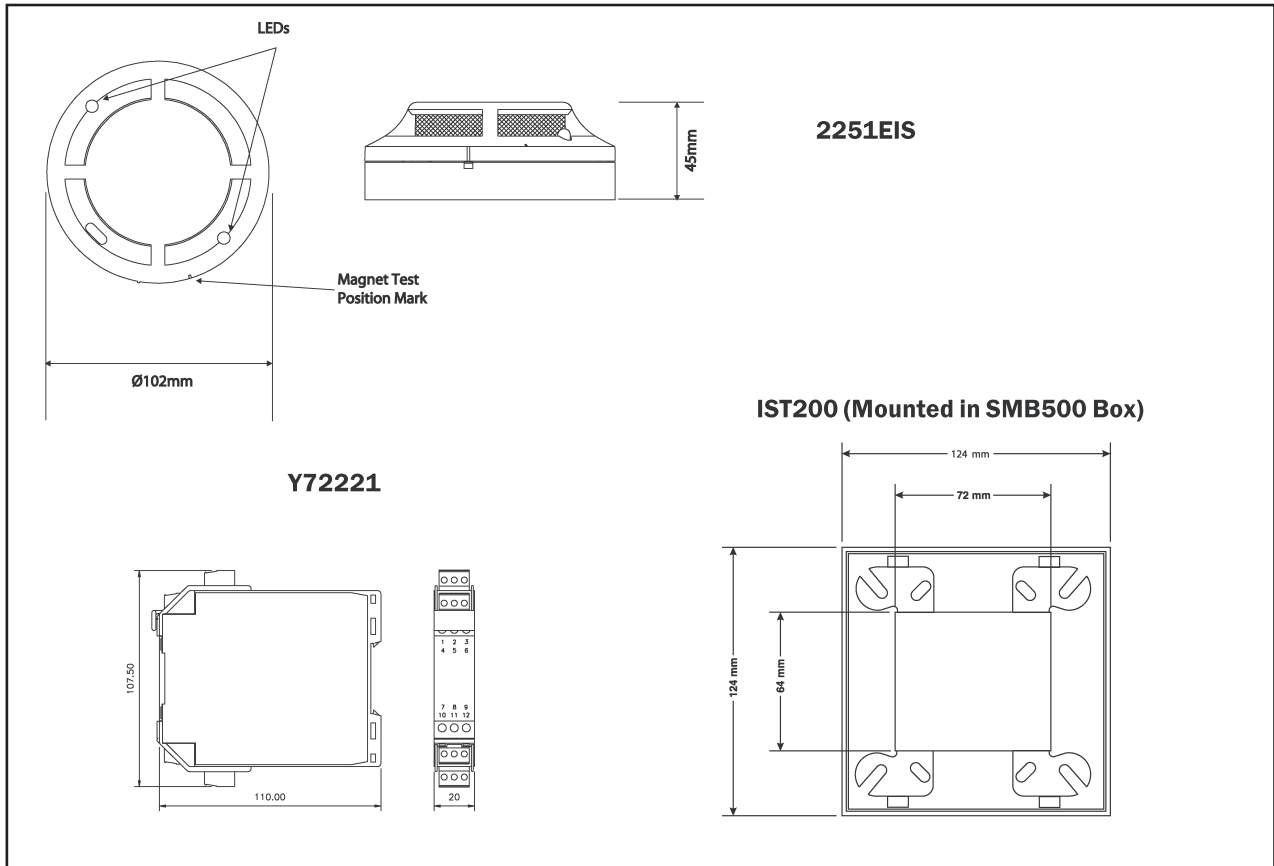
### Description

The Y72221 Galvanic Isolator is a single channel isolated repeater. It is suitable for use as an intrinsically safe isolator between an IST200 translator module and up to a maximum of 15 x 2251EIS intrinsically safe photoelectric smoke sensors. The Y72221 is designed to transfer a DC current from a safe area to the hazardous area load, from a 24V DC nominal voltage. An AC signal ranging from 0.6 to 24V will then be transferred, allowing communication to the 2251EIS sensors in the hazardous area.

We would recommend the use of the Y72221

with all installations of 2251EIS sensors. We do not recommend the use of zener barriers, as they need to be tied to a high integrity earth, which can lead to earth fault indications on some Fire Control Panels. Please refer to the Fire Control Panel manufacturer for compatibility information. The Y72221 is certified intrinsically safe to EEx ia IIC, (Baseefa00ATEX087X).

The Y72221 is suitable for DIN rail mounting and can therefore be mounted within any electrical box with suitable DIN rail.



## 2251EIS Intrinsically Safe Smoke Detector

### Electrical Specifications

Operating Voltage
15 to 24 VDC
Maximum Average Standby Current
330 $\mu$ A (with LED blink enabled)
Maximum Alarm Current (LED on)
4.2 mA at 24 VDC

### Environmental Specifications

Operating Temperature Range
-10°C to +60°C
Humidity
5% to 95% Relative Humidity (non-condensing)
Intrinsically Safe Rating
EEx ia IIB T5

### Mechanical Information

Height
43 mm installed in B501 base
Diameter
102 mm installed in B501 base
Max Wire Gauge for Terminals
2.5 mm <sup>2</sup>
Weight
110 g
Colour
Pantone Warm Grey 1C
Material
Bayblend FR110

### Wiring

The capacitance and inductance or inductance/resistance (L/R) ratio of the cable connected to the hazardous area between the 2251EIS base's (B501) power terminals (1 and 2) must not exceed the following values: -

Group	Capacitance ( $\mu$ F)	Inductance (mH)	L/R Ratio ( $\mu$ H/ohm)
IB	0.65	12.6	165
IIA	2.15	33.6	440



## IST200 Translator Module

### Electrical Specifications

<b>Input Voltage Range</b>
15 to 32 VDC
<b>Output Voltage</b>
20 to 24 VDC
<b>Input Supply Current at 15V</b>
21 mA maximum*
<b>Input Supply Current at 24V</b>
14 mA maximum*
<b>Max Wire Gauge for Terminals</b>
2.5 mm <sup>2</sup>

\* with minimum barrier resistance, recommended quantity of 2251EIS detectors, and normal operating conditions

### Environmental Specifications

<b>Operating Temperature Range</b>
0°C to 60°C
<b>Humidity</b>
5 to 95% Relative Humidity (non-condensing)

### Mechanical Information

<b>Height</b>
70 mm
<b>Width</b>
70 mm
<b>Depth</b>
32 mm
<b>Weight</b>
142 g
<b>Maximum Wire Gauge for Terminals</b>
2.5 mm <sup>2</sup>

## Y72221 Galvanic Isolator

### Electrical Specifications

<b>Input Voltage Range</b>
20 to 24 VDC
<b>Output Voltage</b>
0.6 to 24 VAC
<b>Current Range</b>
1 to 20 mA
<b>Short Circuit Current (Output)</b>
65 mA maximum

### Environmental Specifications

<b>Operating Temperature Range</b>
-20°C to +60°C

### Mechanical Information

<b>Height</b>
107.5 mm
<b>Width</b>
20 mm
<b>Depth</b>
110 mm
<b>Weight</b>
100 g
<b>Maximum Wire Gauge for Terminals</b>
2.5 mm <sup>2</sup>
<b>Maximum 2251EIS Sensors</b>
15*
<b>Maximum number IST200 between Isolators</b>
2*

\* - refer to the control panel manufacturer for overall loop capacities

## 5451EIS Rate of Rise Temperature Detector



### Features

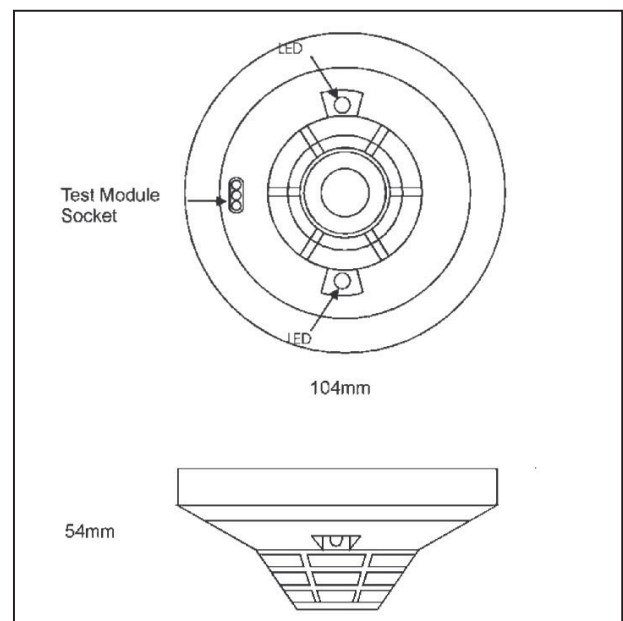
- Sleek low profile design
- Low current draw
- Remote LED option
- Simple plug-in installation
- Compatible with standard B401 mounting base
- Built-in test switch
- Tamper-resistant
- Suitable for use in up to Zone 0
- Approved for use with Zener safety barriers or galvanic isolators
- BASEEFA approval to EEX ia IIB T5
- Complies with EN54 – 5:2000 (Amendment 1) Class A1R

### Description

Model 5451EIS is an intrinsically safe rate of rise detector with fixed temperature alarm. It uses state-of-the-art dual thermistor technology to provide maximum sensitivity. This detector is designed to afford open area protection and is for use in hazardous areas where potentially explosive atmospheres are likely to arise (confirm classification of equipment required with your responsible authority). Model 5451EIS detectors are designed to be used with compatible panels only.

Each detector has two LEDs to provide a local visual indication of detector status. Once the detector senses a fire, it latches in alarm and remains in this condition until it is reset by a momentary power interruption.

Model 5451EIS rate of rise detectors include a tamper feature that prevents removal from their mounting base (if enabled) without the use of a tool. In addition, these detectors can be easily tested by activating an internal reed switch with a test magnet.

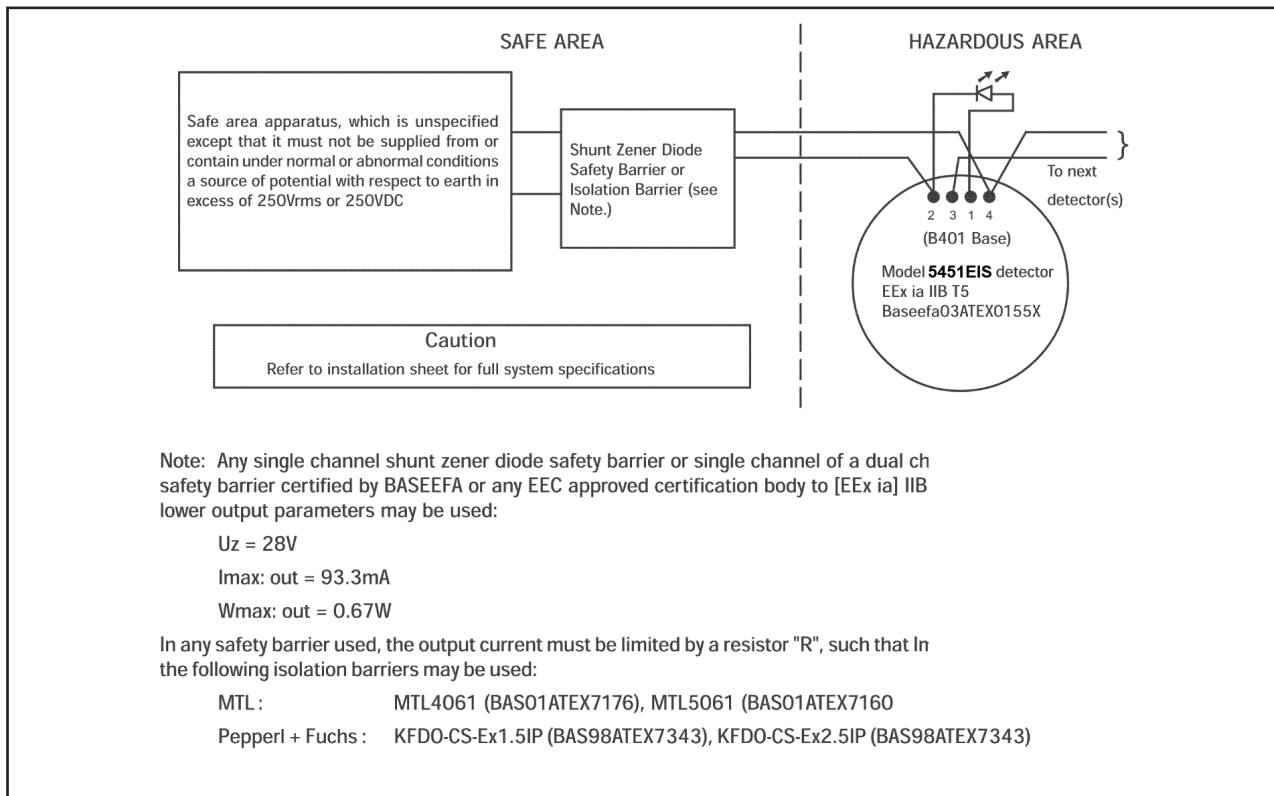


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## 5451EIS Intrinsically Safe Rate of Rise Temperature Detector



### Electrical Specifications

Operating Voltage Range
15 to 32VDC Latching alarm reset by momentary power interruption
Typical Standby Current (maximum)
100µA at 24VDC

### Environmental Specifications

Operating Temperature Range
-10°C to 55°C
Humidity
10% to 93% Relative Humidity(non-condensing)
Intrinsic Safety Rating
 II1G EEx ia IIB T5

### Product Range

Compatible Bases
B401, B401DG

### Mechanical Information

Height
54mm
Diameter
104mm
Weight
80g (excluding base)
Max Wire Gauge for Terminals
2.5 mm <sup>2</sup>
Colour
Pantone Warm Grey 1C
Material
Bayblend FR110

## 5451EIS

### Detector Termovelocimétrico



### Características

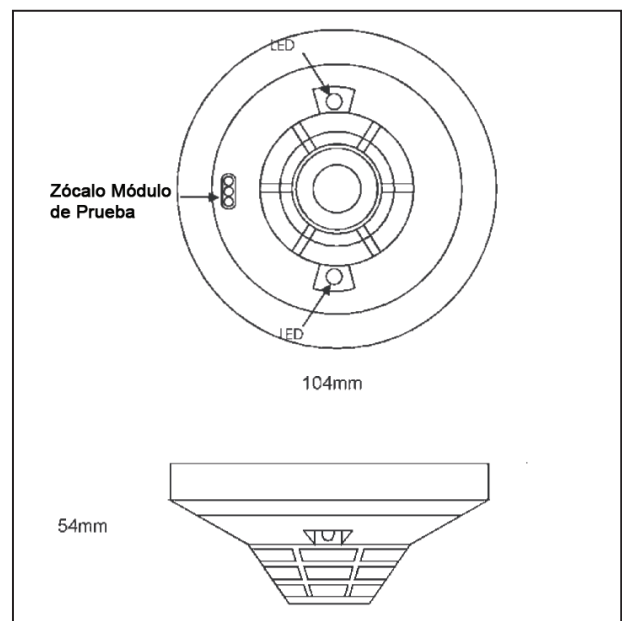
- Diseño elegante, de bajo perfil.
- Baja consumo de corriente
- Opción de LED remoto
- Simple instalación Plug-in
- Compatible con base de montaje estándar B401
- Interruptor de prueba incorporado
- Resistencia Antivandalismo
- Apto para uso hasta Zona 0
- Aprobado para uso con barreras de seguridad zener o aisladores galvánicos
- Aprobación BASEEFA para EEx ia IIB T5
- Cumple con EN54-5:2000 (Enmienda 1) Clase A1R

### Descripción

El modelo 5451EIS es un detector de velocidad de cambio de la temperatura, intrínsecamente seguro, con alarma de temperatura fija. Utiliza una moderna tecnología de doble termistor para máxima sensibilidad. Este detector está diseñado para ser usado en áreas abiertas y en áreas de riesgo donde pueden generarse atmósferas explosivas. (confirme la clasificación de equipos requerida por la autoridad competente). Los detectores modelo 5451EIS están diseñados para ser usados con Paneles compatibles únicamente.

Cada detector cuenta con dos LEDs para proporcionar indicación visual local de su estado. Una vez que el dispositivo detecta fuego, se dispara y permanece enclavado en el estado de Alarma hasta que es reiniciado con una interrupción momentánea de su alimentación.

Los detectores termovelocimétricos modelo 5451EIS incluyen una funcionalidad antivandálica que, cuando está activada, previene la remoción del dispositivo de su base de montaje si no es con el uso de una herramienta. Adicionalmente, la circuitería de estos detectores puede probarse activando un interruptor magnético interno mediante un imán de prueba.

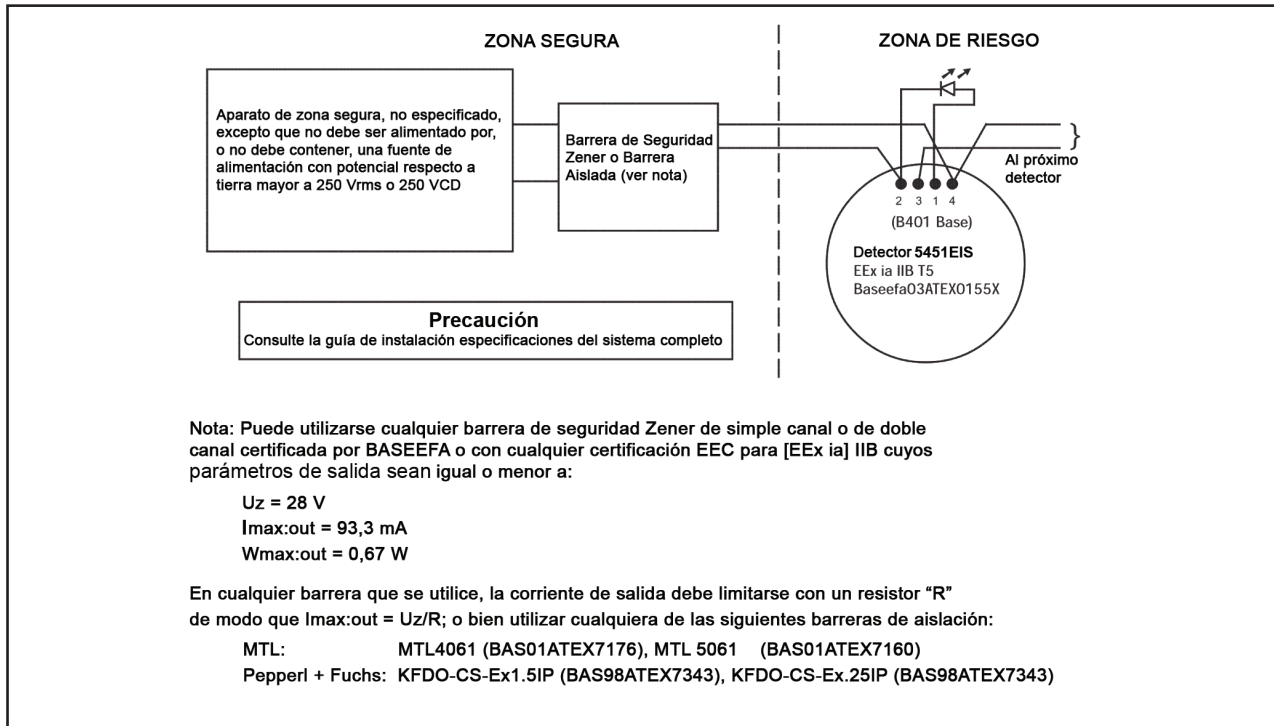


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## 5451EIS Detector Termovelocimétrico Intrínsecamente Seguro



### Especificaciones Eléctricas

<b>Rango de Tensión de Operación</b>
15 a 32 VCD Alarma enclavada reseteada por corte momentáneo del suministro
<b>Corriente típica de Standby (máxima)</b>
100µA @ 24 VCD

### Especificaciones Ambientales

<b>Rango de Temperatura de Operación</b>
-10°C a 55°C
<b>Humedad</b>
10% to 93% Humedad Relativa (sin condensación)
<b>Clasificación de Seguridad Intrínseca</b>
 II1G EEx ia IIB T5

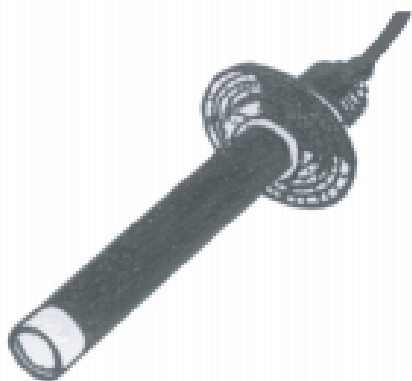
### Gama de Productos

<b>Bases Compatible</b>
B401, B401DG

### Información Mecánica

<b>Alto</b>
54 mm
<b>Diámetro</b>
104 mm
<b>Peso</b>
80 g (excluyendo base)
<b>Máx. calibre de cable para terminales</b>
2,5 mm <sup>2</sup>
<b>Color</b>
Pantone Warm Grey 1C
<b>Material</b>
Bayblend FR110

## Explosion Proof Rate Compensated Heat Detector



### Features

- Rate compensated type of detector
- Durable hermetically sealed STAINLESS STEEL shell
- Comes in a wide range of temperature settings
- Explosion proof
- Easy to install

### Description

The Rate Compensated Heat Detectors provide accurate, positive response to fire threats. They are typically used to activate alarms and actuate extinguishing systems. They virtually eliminate false alarms.

They combine the best features of both Fixed Temperature and Rate-of-Rise detectors. All models are self-restoring, hermetically sealed, shock and corrosion resistant, and tamper-proof.

The Rate Compensated Heat Detectors are as reliable as they are simple. The unit's stainless steel shell expands as the temperature increases. At a pre-determined point, the shell's expansion causes a set of contacts to close sending an alarm signal to the Control Panel.

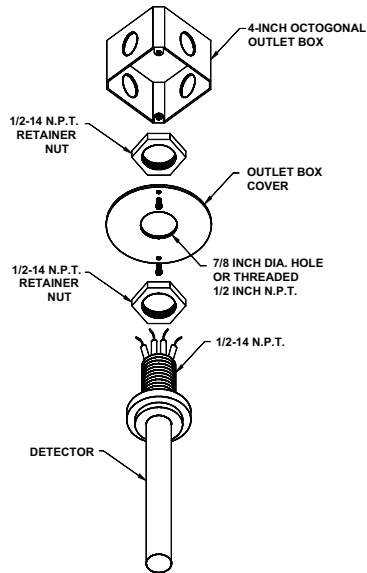
When the surrounding air temperature goes below the rated temperature level, the shell contracts which forces contacts to open, thus automatically resetting the detector.

The Rate Compensated Heat Detectors come in a variety of temperature settings including: 60°C (140°F), 88°C (190°F), 107°C (225°F), and 163°C (325°F). Call your representative for other temperatures.

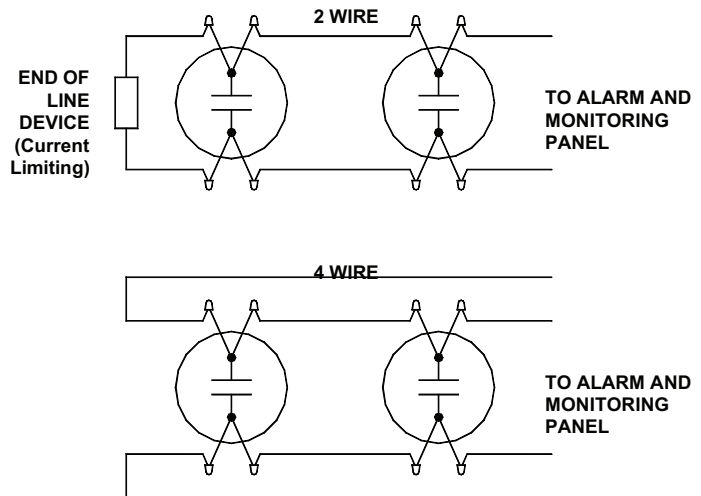
The Rate Compensated Heat Detectors can be installed in hazardous locations. They are recommended for Class 1, Groups B, C and D locations and for Class 2, Groups E, F and G locations. It is important when the detector is mounted in an explosion-proof environment that a suitable explosion-proof junction box is used.



## Installation & Wiring



NOTE: DO NOT EXCEED A MAXIMUM TORQUE OF 20 F-LB WITHOUT THREAD LUBRICANT



## Technical Specifications

Electrical			
Contact Rating (Resistive only)	5A @ 125 VAC/0.5A @ 125 VDC/2A @ 24 VDC/1A @ 48 VDC		
Physical			
Length	93 mm (3.6 in.)	Weight	170 g (6 oz.)

## Ordering Information

Model Number	Description
221-07878-00	Rate Compensated Heat Detector @ 60°C (140°F)
221-07301-00	Rate Compensated Heat Detector @ 88°C (190°F)
221-07945-00	Rate Compensated Heat Detector @ 107°C (225°F)
221-11784-00	Rate Compensated Heat Detector @ 163°C (325°F)
391-13896-00	Circular cover (4.25" dia.) with one centre hole 1/2" NPT



## Rate Compensated Heat Detector



### Features

- Rate compensated type of detector
- Durable hermetically sealed ALUMINUM shell
- All-weather and Explosion proof models available
- Easy to install
- Two temperature settings 57°C (135°F) and 90°C (194°F)

### Description

The Rate Compensated Heat Detectors provide accurate, positive response to fire threats. They are typically used to activate alarms and actuate extinguishing systems. They virtually eliminate false alarms.

They combine the best features of both Fixed Temperature and Rate-of-Rise detectors. All models are self-restoring, hermetically sealed, shock and corrosion resistant, and tamper-proof.

The Rate Compensated Heat Detectors are as reliable as they are simple. The unit's Aluminum shell expands as the temperature increases. At a pre-determined point, the shell's expansion causes a set of contacts to close sending an alarm signal to the Control Panel.

When the surrounding air temperature goes below the rated temperature level, the shell contracts which forces contacts to open, thus automatically resetting the detector.

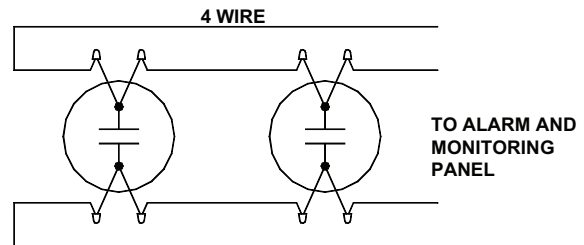
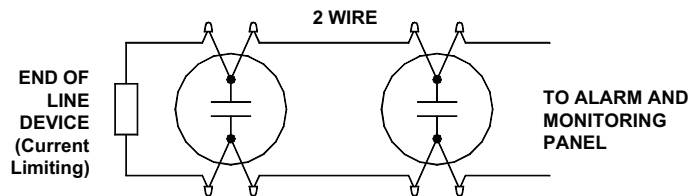
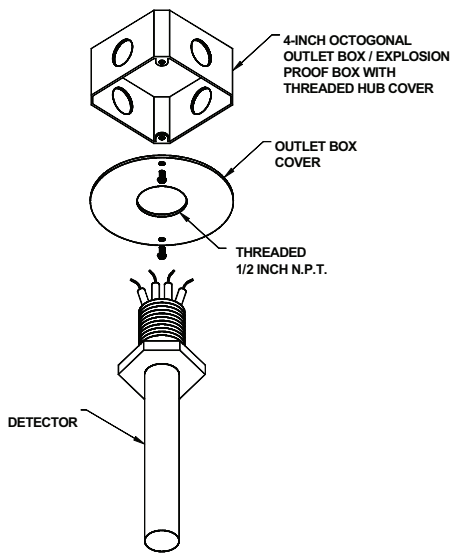
The Rate Compensated Heat Detectors come two temperature settings, 57°C (135°F) and 90°C (194°F).

The Rate Compensated Heat Detectors can be installed in hazardous locations. They are recommended for Class 1, Groups B, C and D locations and for Class 2, Groups E, F and G locations. It is important when the detector is mounted in an explosion-proof environment that a suitable explosion-proof junction box is used.





## Installation & Wiring



**NOTE: HAND TIGHTEN ONLY**

## Technical Specifications

Electrical			
Contact Rating (Resistive only)	5A @ 125 VAC/0.5A @ 125 VDC/1A @ 24 VDC		
Physical			
Length	110 mm (4.0 in.)	Weight	104 g (3.6 oz.)

## Ordering Information

Model Number	Description
221-12996-00	Rate Compensated Heat Detector @ 57°C (135°F), All weather, Anodized
221-12996-03	Rate Compensated Heat Detector @ 90°C (194°F), All weather, Anodized
221-12996-02	Rate Compensated Heat Detector @ 57°C (135°F), All weather, White Epoxy
221-12996-01	Rate Compensated Heat Detector @ 90°C (194°F), All weather, White Epoxy
221-12996-04	Rate Compensated Heat Detector @ 57°C (135°F), All weather, Explosion-proof
221-12996-05	Rate Compensated Heat Detector @ 57°C (135°F), All weather, Explosion-proof
391-13896-00	Circular cover (4.25" dia.) with one centre hole 1/2" NPT

## Linear Heat Detectors



### Description

The Linear Heat Detectors are ideally suited to industrial high risk hazards as well as many types of commercial applications. Linear heat detectors have unique advantages over other types of detectors, especially when difficult installation factors or severe environmental conditions are present.

The Linear Heat Detector is a cable that detects heat at any point along its length. The sensor cable is comprised of two steel conductors individually insulated with a heat sensitive polymer. The insulated conductors are twisted together to impose a spring pressure between them, then wrapped with a protective tape and finished with an outer jacket suitable for the environment in which the detector will be installed. The Linear Heat Detector features low moisture absorption, resistance to many chemicals and flame retardant.

### Features

- Line coverage with point sensitivity
- Four temperature ratings to accommodate the most demanding applications
- Different temperatures may be utilized in the same initiating circuit
- Withstands severe environmental conditions
- Approved for hazardous locations
- Compatible with other initiation devices on the same circuit, such as pullstation, detectors
- Sensitivity not effected by changes in ambient temperature or length of cable used
- Easy to install, test and splice with common tools

The Linear Heat Detector is a fixed temperature digital sensor and is therefore capable of initiating an alarm once its rated activation temperature is reached. At the rated temperature, the heat sensitive polymer insulation yields to the pressure upon it, permitting the inner conductors to move into contact with each other thereby initiating an alarm signal. This action takes place at the first heated point anywhere along the detector's length. A specific length is not required to be heated in order to initiate an alarm nor is system calibration necessary to compensate for changes in the installed ambient temperature.

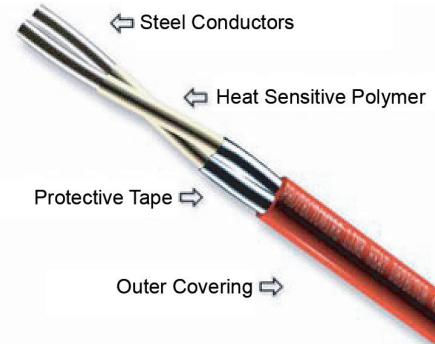
The Detector also meets intrinsically safe standards and is FM Approved for Class I, II or III, Div.1, Applicable Groups A, B, C, D, E, F & G hazardous areas, when the appropriate fire alarm panel is used.



## Installation & Wiring

Detailed instructions for splicing can be requested.

The length of linear heat detector is supervised by a conventional initiating device circuit. A small current is continuously passed through the detector and end of line resistor (ELR). The end line resistor limits the amount of current to present level which the monitoring circuit is configured to treat as a normal condition.



## Technical Specifications

Alarm Temperature			
68°C (155°F)	87°C (190°F)	138°C (280°F)	180°C (356°F)*
Max. Installed Ambient Temperature			
37.8°C (up to 100°F)	65.6°C (up to 150°F)	93.3°C (up to 200°F)	121.1°C (up to 250°F)
Weight	Maximum Spacing	Resistance	Diameter
32g/m (0.02 lbs/ft.)	7.6m (25 ft.)	Approx. 1 Ohm/1.5 m (5 ft.)	Approx. 4.00 mm (5/32")

\*FM Approved for special application use only.

## Ordering Information

Part Number	Description
224-13485-00	Linear Heat Detector Cable, 68°C (155°F), Multi-purpose
224-13485-01	Linear Heat Detector Cable, 68°C (155°F), Chemical Resistant
224-15357-02	Linear Heat Detector Cable, 87°C (190°F), Multi-purpose
224-15357-01	Linear Heat Detector Cable, 87°C (190°F), Chemical Resistant
224-13712-00	Linear Heat Detector Cable, 137°C (280°F), Chemical Resistant
224-13712-01	Linear Heat Detector Cable, 137°C (280°F), Multi-purpose
224-15595-00	Linear Heat Detector Cable, 180°C (356°F), Chemical Resistant
224-15595-01	Linear Heat Detector Cable, 180°C (356°F), Multi-purpose
297-13484-00	Splicing Connectors, 2-point, Nylon, 10/pkg

## 1151EIS Conventional Ionization Smoke Detector



### Features

- Low profile design
- Low current draw
- Remote LED option
- Two alarm LEDs providing 360° visibility
- Stable performance in high air velocities
- Removable cover for ease of maintenance
- Simple plug-in installation
- Compatible with standard B401 mounting base
- Built-in test switch
- Tamper-resistant
- Suitable for use in up to Zone 0 environments
- Approved for use with Zener safety barriers or galvanic isolators
- BASEEFA approval to EEx ia IIB T5
- Tested and approved to EN54–7:2000 (Amendment 1)

### Description

Model 1151EIS ionization smoke detectors use state-of-the-art sensing chambers and SMD circuitry for maximum reliability. These detectors are designed to afford open area protection and are for use in hazardous areas where potentially explosive atmospheres are likely to arise (confirm classification of equipment required with your responsible authority).

1151EIS detectors are designed to be used with compatible panels only and must be used in conjunction with a compatible zener barrier or galvanic isolator.

Each detector has two integral alarm LEDs to provide local visual indication of detector status. Once the detector senses a fire, it latches in alarm and remains in this condition until it is reset by a momentary power interruption.

Model 1151EIS smoke detectors include a tamper feature that prevents removal from the base without the use of a tool.

In addition, these detectors can be tested by activating an internal reed switch with a test magnet. This test simulates smoke in the detector and performs a full check of the operating circuitry.

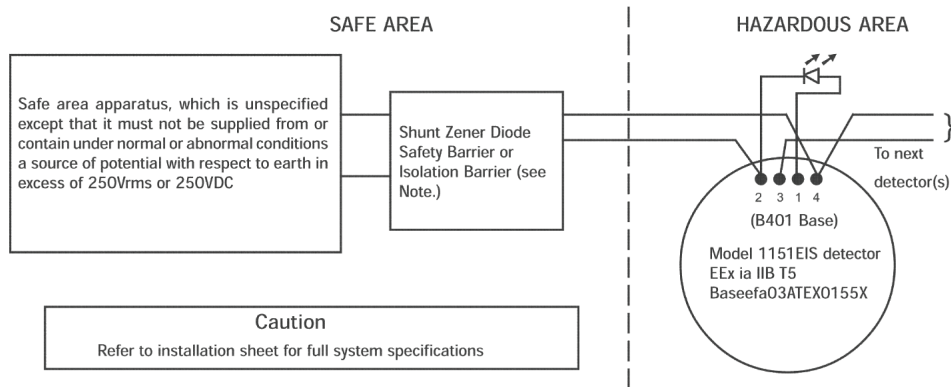


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## Typical 1151EIS System Diagram



Note: Any single channel shunt zener diode safety barrier or single channel of a dual ch safety barrier certified by BASEEFA or any EEC approved certification body to [EEx ia] IIB lower output parameters may be used:

$$U_z = 28V$$

$$I_{max: out} = 93.3mA$$

$$W_{max: out} = 0.67W$$

In any safety barrier used, the output current must be limited by a resistor "R", such that  $I_n$  the following isolation barriers may be used:

MTL: MTL4061 (BAS01ATEX7176), MTL5061 (BAS01ATEX7160)

Pepperl + Fuchs: KFDO-CS-Ex1.5IP (BAS98ATEX7343), KFDO-CS-Ex2.5IP (BAS98ATEX7343)

### Electrical Specifications

<b>Operating Voltage</b>
15 to 32VDC
<b>Standby Current (maximum)</b>
30 $\mu$ A at 24 VDC

Latching alarm reset by momentary power interruption

### Environmental Specifications

<b>Operating Temperature Range</b>
-10°C to 55°C
<b>Operating Humidity Range</b>
10% to 93% Relative Humidity (non-condensing)
<b>Intrinsic Safety Rating</b>
EEx ia IIB T5

### Product Range

<b>Compatible bases</b>
B401, B401DG

### Mechanical Information

<b>Height</b>
43mm
<b>Diameter</b>
104mm
<b>Weight</b>
110g (excluding base)



## 2251CTLE COPTIR - Photo, Thermal, CO & IR Multi-criteria



### Description

The 2251CTLE Multi-criteria Fire Sensor is the latest addition to the Series 200 plus range of fire detectors. This plug-in fire detector combines 4 separate sensing elements to act as a single unit. CO sensing (using EC cell technology) for monitoring CO products from a smouldering fire, IR sensing for measuring ambient light levels and flame signatures, optical smoke detection and heat detection.

The integration of continual monitoring for all four major elements of a fire has enabled us to create a detector that responds far more quickly to an actual fire and has the highest immunity to nuisances. The operating philosophy behind COPTIR was to configure it so that it normally operates at a high immunity level, changing to become very sensitive to fires when fire characteristics are sensed. In this way transient nuisances are monitored and ignored, reducing the false alarm rate.

2251CTLE is managed by on-board intelligence running some very advanced algorithms, which dynamically adjust the detection profile of the device in response to the input from the sensors, enabling it to be re-characterised on the fly as the ambient conditions change. Based upon the sensor signals, the program is dynamically changing sensor thresholds, changing sensor gain, changing time delays, changing combination, changing sampling rates, changing

### Features

- Unique, true four sensor Multi-criteria detector
- Fully integrated Infra Red Sensing to support the fire alarm decision
- CO gas sensing for fastest response to slow developing and smouldering fires
- Highest Possible immunity to unwanted alarms
- Compatible with all System Sensor protocols
- Automatic drift compensation of smoke sensor and CO cell
- Twin LED indicators providing 360° visibility
- Wide temperature range
- Built in test switch
- Stable communication with high noise immunity

averaging rates and, if any sensor fails, changing sensitivity of the remaining sensors as well as indicating a fault condition. The IR light sensor helps the detector recognise specific situations such as welding and makes adjustments rapidly in order to further reduce the potential for false alarms caused by nuisances.

The thermal detection function fuses thermistor technology with a software corrected linear temperature response. In areas where the normal daytime activities are likely to create unwanted alarms, the detector can be programmed to operate in a "Heat only" mode, automatically reverting to optical-thermal operation during the unoccupied period. The 2251CTLE is thus able to offer exceptional false alarm immunity and excellent fire detection.

The 2251CTLE has two integral RED LEDs which provide local visual indication of the sensor status. These LEDs provide a dual function. In the event of an alarm, they are switched ON continuously and can also be programmed to either blink when polled by the panel or remain off during normal conditions. In addition to its integral LEDs, the 2251CTLE can be connected to a Remote LED indicator.



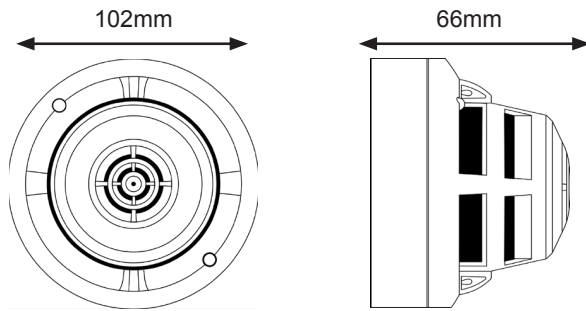
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## Specifications

### 2251CTLE COPTIR



#### Electrical Specifications

Operating Voltage Range	Maximum Standby Current	Maximum Alarm Current
15 to 32VDC	200µA at 24VDC (no communications)	7mA at 24VDC

#### Environmental Specifications

Application Temperature Range	Humidity
-20°C to +55°C	15 to 90% relative Humidity (non-condensing)

#### Mechanical Information

Height	Diameter	Weight
66mm installed in B501 base	102mm installed in B501 base	176g (inc base)
Max Wire Gauge for Terminals	Colour	Material
2.5 mm <sup>2</sup>	Ivory	Bayblend FR110
Range		
IR Limits 0-450 uW/cm2		
CO Limits 0-500 PPM		

#### Sensitivity Settings

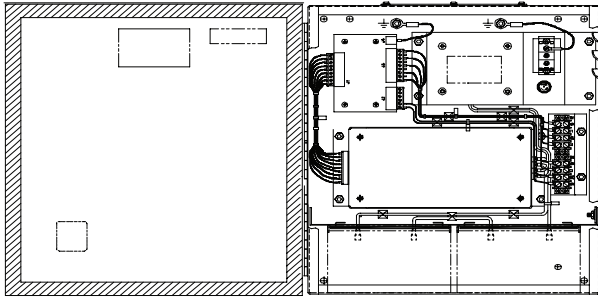
Alarm Level 1	COPTIR Low false alarm resistance, high photoelectric only sensitivity
Alarm Level 2	COPTIR Medium false alarm resistance, medium photoelectric only sensitivity
Alarm Level 3	COPTIR Standard false alarm resistance, low photoelectric only sensitivity
Alarm Level 4	COPTIR High false alarm resistance, low photoelectric only sensitivity
Alarm Level 5	COPTIR Very high false alarm resistance, low photoelectric only sensitivity
Alarm Level 6	COPTIR Expected to be Class A1R (Subject to final testing)
<b>Note</b> The panel threshold should be chosen according to the specific environment. The following would be System Sensor's recommendations: Ultra-clean applications use Level 1 for pre alarm or alarm, Clean Applications use Level 1 for pre alarm and Levels 2 & 3 for alarm Moderate environments use Level 1,2 or 3 for pre alarm and Level 4 for alarm Harsh environments use Level 2 or 3 for pre alarm and Levels 5-6 for alarm	

#### Product Range

Compatible Bases B500 Series (B501, B501DG, B524RTE, B524IEFT-1)
Other Devices in range Please refer to other Series 200 plus datasheets



## PRO-2000 APS-14127 Auxiliary Power Supply



### Features

- Rugged enclosure in 18 gauge steel
- Voltage input 115VAC or 220 VAC
- Fuse protected on AC line and battery
- Built-in transient protection
- Maximum power output 125 W
- 2 output voltages: 28VDC, 5VDC
- Built-in Ground fault detection with dry contact for output signaling
- Built-in AC fault detection with dry contact for output signaling
- Built-in DC fault detection with dry contact for output signaling
- Normally Open or Normally Closed output for fault detection
- Built-in isolated switching power supply for increased power efficiency
- Battery charger with voltage regulator and current limit
- Space in the enclosure for two 12 V batteries of 12 AH each
- Removable connectors for easy servicing

### Description

The Auxiliary Power Supply is suitable for applications where it is necessary to have a battery backup in case of loss of the main power supply. The input voltage is 115V, 60Hz or there is a second version which sustains an input voltage of 220V, 50Hz.

The output provides 28VDC with a current of up to 4.7A. A fraction of this current of up to 2.2A is used to charge two 12V batteries. All outputs are protected against over-current and over-voltage conditions. The battery charger is protected against reverse battery connection.

Three signals are provided to monitor the Power Supply Module operation, they are as follows:

- The "AC Fault" signal is activated when the AC input voltage at the Power Supply input terminal falls below 12VAC. The information is sent via a dry contact.
- The "DC Fault" signal is activated when the battery voltage falls below 22.6VDC. The information is sent via a dry contact.

- The "GND Fault" signal is activated if a condition of GND fault is detected. The information is sent via a dry contact.

Each dry contact can be used in the "normally open" or "normally closed" positions. Signals to monitor the Power Supply are provided by the fault detection module.



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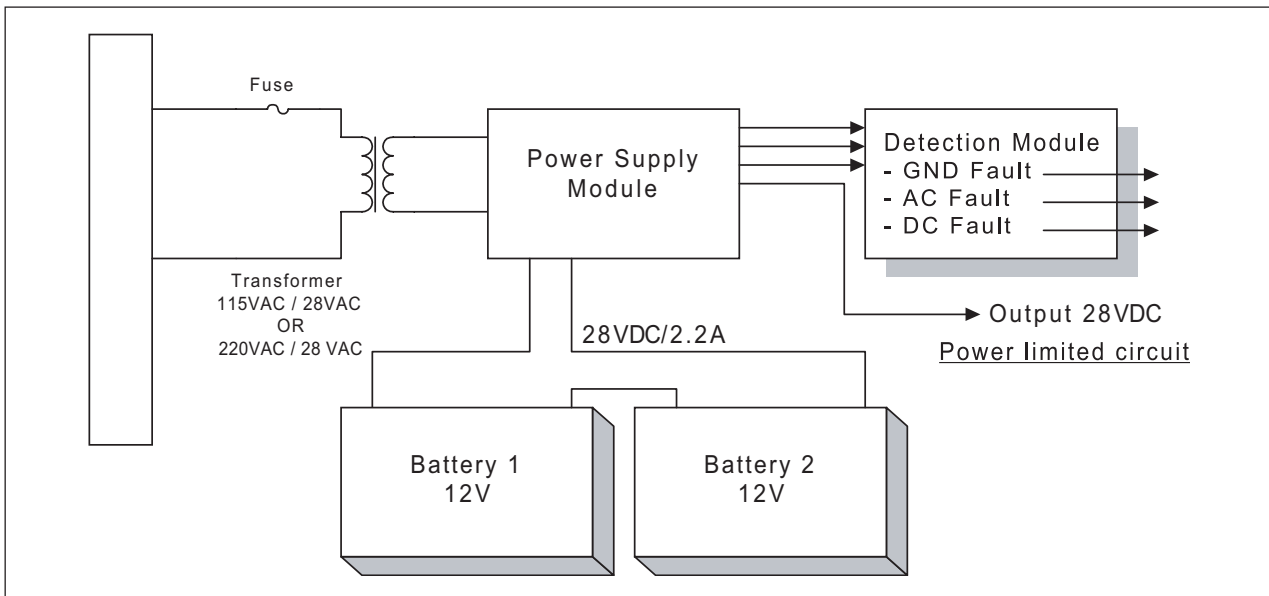


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**ABS USCG**



## Typical Wiring Diagram



## Power Supply Specifications

Electrical Specifications	
Input Voltage Range	110VAC, 60Hz or 220VAC, 50Hz
Fuse Protection	2A for 115VAC 1A for 220VAC
Output Transformer	
Voltage	25 VAC
Maximum Current	5 Amps
Input Power Supply Module	
Voltage Range	20 - 30 VAC
Frequency	50/60 VAC
Total Power Supply Module Output (Output1 + Output2 + Battery Charger)	125 W
Output 1	
Operating Voltage	28.5 ± 0.3 VDC
Current Limit	4.7 Amps ± 10%
Ripple and Noise (full load)	50 mV peak-to-peak max.
Temperature Drift Coefficient	Change in output voltage 0.03%/ °C max.

Output 2	
Operating Voltage	5.0V ± 0.1V
Current Limit	3.0 ± 0.3 Amps
Ripple and Noise (Full load)	20 mV peak-to-peak max.
Temperature Drift Coefficient	Change in output voltage 0.03%/ °C max.
Battery Charger (Constant Voltage, Current Limited Type)	
Operating Voltage	27.3 VDC
Current Limit	2.2 Amps
Battery Protection	Automatic battery disconnect at 19.5V
Fuse Protection	5 Amps
Fault Signals (Dry Contacts)	
AC Fault - Relay	0.5 A, 30 VDC
DC Fault - Relay	0.5 A, 30 VDC
GND Fault - Relay	1 A, 30 VDC
Environmental	
Storage Temperature	-40°C - 60°C (-40°F - 140°F)
Physical Specifications	
16" H x 14" W x 6" D (406.4 mm x 355.6 mm x 152.4 mm)	

## Ordering Information

Model Number	Description
APS-14127-00 (04)	PRO-2000 Auxiliary Power Supply, 110V, 12AH, UL (ULC)
APS-14127-01	PRO-2000 Auxiliary Power Supply, 110V, 12AH, Marine
APS-14127-02 (05)	PRO-2000 Auxiliary Power Supply, 220V, 12AH, UL (ULC)
APS-14127-03	PRO-2000 Auxiliary Power Supply, 220V, 12AH, Marine

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## ISD-2501UW IN-SUITE SIGNALING DEVICE



### APPLICABLE STANDARDS

- UL 464 Audible Signal Appliances
- ULC S525 Standard for Audible Signal Devices
- NFPA 72 National Fire Alarm Code

### SIGNALING



### RESIDENTS & BUILDING OWNER BENEFITS:

- **Improved Safety:**
  - Very loud buzzer exceeds UL requirements
  - Plugs into any AC outlet for optimal audibility
- **Minimal Disruption:**
  - One day installation
  - No building alterations required
  - Testing and monitoring of the buzzer in each unit can be monitored from the panel without entering the unit

### INSTALLATION & TESTING BENEFITS:

- **Cost Effective:**
  - Installs in one day
  - No drilling, pulling wires or building alterations
  - Greatly reduces labor costs
- **Quicker fire alarm testing:**
  - Operation of buzzer in each unit is monitored from the panel (*applies to installation & periodic fire alarm testing*)
- **Extended Warranty:**
  - Battery backup system now with new multi-year warranty

### DESCRIPTION

The ISD-2501UW is designed to be used with the UL/ULC listed NMC-101SW and other Fire-Link® II Components. It is intended to supplement the signaling capabilities of a building's Fire Alarm System. By utilizing the existing wiring infrastructure (i.e. the building's own 115V AC electrical wiring), Signalink offers the fire protection industry a solution that is easy to install, can be placed anywhere a standard power line outlet exists and prevents unsightly surface raceway from being installed in public hallways. The Fire-Link® II system provides a cost-benefit solution to a North America wide audibility problem without the expense of any additional wiring!

### UNIQUE POWER LINE TECHNOLOGY

The ISD-2501UW is a plug-in, addressable, battery-backed-up, audible device. It does NOT detect smoke or carbon monoxide. It is intended for use in living and sleeping areas to ensure safety and peace of mind. The ISD-2501UW uses Signalink's unique power line technology and 'mesh' networking to provide the highest possible reliability.

# **FIRE-LINK® II**

Fire Alarm Signaling System by Signalink

## **ISD-2501UW** IN-SUITE SIGNALING DEVICE

### **SOUND OPTIONS**

The buzzer can be configured from the panel for synchronized continuous, march-time or temporal sound, meeting the requirements of many authorities having jurisdiction. It also has a 10 minute silenceable feature (Canada only).

### **24 HOUR BACK UP**

Each unit is equipped with a supervised rechargeable battery pack for 24 hr backup power to maintain communication and alarm functions in the event of total building power loss, plus 30 minutes alarm condition, exceeding UL requirements.

### **TROUBLE ALERT AND TESTING**

The NMC-101SW monitors and supervises each ISD-2501UW on a continuous basis. The network addressable design permits many features and services which can be field configured to suit varied installations. When in "test mode" each ISD unit can be tested individually for buzzer operation from the NMC-101SW control unit without the added cost of entering each suite.

Enclosure Dimensions	7.5"x4.69"x2.18" (190x119x55 mm)	HxWxD (Excluding AC Blade Length)
Mounting	Electrical Power Outlet	Built-in bracket - 4 screw mounting
Supply Voltage Range	102VAC to 132VAC, 60 Hz	Operating
Power Fail Protection	Lithium Ion Battery Pack	Supervised
Enclosure Material	ABS/UL-94V0	(indoor use only)
Power Consumption	85mW, 2W	RX, TX
Operating Temperature	0 - +40 °C	<90% Humidity
Indicators	Three-color LED	Operational Status
Push to Silence (Canada) Push to Test (US & Canada)	Built-in timer Test push-button	10 minutes
Sound Output	87 dBA as tested	@10 ft. (3m) Supervised
Colors	Red, White	

**Ordering Information: Red ISD-2501UR are special order**

**Signalink Technologies Inc.**  
**14 - 2550 Acland Road**  
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1.888.491.3883

Avery® Product # 5662

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## ISD-2501UWS IN-SUITE SIGNALING DEVICE



### APPLICABLE STANDARDS

- UL 464 Audible Signal Appliances
- UL 1971 Signaling Devices for the Hearing Impaired
- ULC S525 Standard for Audible Signal Devices
- ULC S526 Standard for Visual Signal Devices
- NFPA 72 National Fire Alarm Code

### SIGNALING



#### RESIDENTS & BUILDING OWNER BENEFITS:

- **Improved Safety:**
  - Very loud buzzer exceeds UL requirements
  - Plugs into any AC outlet for optimal audibility
  - High intensity 30 candela strobe feature
- **Minimal Disruption:**
  - One day installation
  - No building alterations required
  - Testing and monitoring of the buzzer or strobe in each unit can be monitored from the panel without entering the unit

#### INSTALLATION & TESTING BENEFITS:

- **Cost Effective:**
  - Installs in one day
  - No drilling, pulling wires or building alterations
  - Greatly reduces labour costs
- **Quicker fire alarm testing:**
  - Operation of buzzer and strobes in each unit is monitored from the panel. (*applies to installation & periodic fire alarm testing*)
- **Extended Warranty:**
  - Battery backup system now with new multi-year warranty

### DESCRIPTION

The ISD-2501UWS is designed to be used with the UL/ULC listed NMC-101SW and other Fire-Link® II Components. It is intended to supplement the signaling capabilities of a building's Fire Alarm System. By utilizing the existing wiring infrastructure (i.e. the building's own 115V AC electrical wiring) Signalink offers the fire protection industry a solution that is easy to install, can be placed anywhere a standard power line outlet exists and prevents unsightly surface raceway from being installed in public hallways. The Fire-Link® II system provides a cost-benefit solution to a North America wide audibility problem without the expense of any additional wiring!

### UNIQUE POWER LINE TECHNOLOGY

The ISD-2501UWS is a plug-in, addressable, battery-backed-up, audible and visual device. It does NOT detect smoke or carbon monoxide. It is intended for use in living and sleeping areas to ensure safety and peace of mind. The ISD-2501UWS uses Signalink's unique power line technology and 'mesh' networking to provide the highest possible reliability.

# **FIRE-LINK® II**

Fire Alarm Signaling System by Signalink

## **ISD-2501UWS** IN-SUITE SIGNALING DEVICE

### **SOUND OPTIONS**

The buzzer can be configured from the panel for synchronized continuous, march-time or temporal sound meeting the requirements of many authorities having jurisdiction. It also has a 10 minute silenceable feature (Canada only).

### **STROBE FEATURE**

The ISD-2501UWS has a 30 candela synchronized supervised strobe.

### **24 HOUR BACK UP**

Each unit is equipped with a supervised rechargeable battery pack for 24 hr. backup power to maintain communication and alarm functions in the event of total building power loss, plus 30 minutes alarm condition, exceeding UL requirements.

### **TROUBLE ALERT AND TESTING:**

The NMC-101SW monitors and supervises each ISD-2501UWS on a continuous basis. The network addressable design permits many features and services which can be field configured to suit varied installations. When in "test mode" each ISD unit can be tested individually for buzzer operation from the NMC-101SW control unit without the added cost of entering each suite.

Enclosure Dimensions	7.5"x4.69"x2.18" (190x119x55 mm)	HxWxD (Excluding AC Blade Length)
Mounting	Electrical Power Outlet	Built-in bracket - 4 screw mounting
Supply Voltage Range	102VAC to 132VAC, 60 Hz	Operating
Power Fail Protection	Lithium Ion Battery Pack	Supervised
Enclosure Material	ABS/UL-94V0	(indoor use only)
Power Consumption	85mW, 2W	RX, TX
Operating Temperature	0 - +40 °C	<90% Humidity
Indicators	Three-color LED	Operational Status
Push to Silence (Canada) Push to Test (US & Canada)	Built in timer Test push-button	10 minutes
Sound Output	87 dBA as tested	@10 ft. (3m) Supervised
Strobe	30 candela as tested	Supervised
Colors	Red, White	

Ordering Information: Red ISD-2501URS are special order

**Signalink Technologies Inc.**  
14 - 2550 Acland Road  
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[sales@signalink.com](mailto:sales@signalink.com)  
1-888-491-3883

Avery® Product # 5662

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## NMC-101SW

### NETWORK MONITORING CONTROLLER



### APPLICABLE STANDARDS

- UL 864 Commercial Fire Alarm Applications (Accessory)
- UL 985 Residential Fire Warning
- ULC S527 Commercial Fire Alarm Applications (Accessory)
- ULC S545 Residential Fire Warning System
- NFPA 72 National Fire Alarm Code



**LISTED**

### TECHNICAL FEATURES:

- One NAC bell input allows the NMC to connect to any Fire Alarm Panel
- Form 'C' Alarm and trouble relay output
- Two Class 'B' initiating circuits
- Keypad Entry and Control
- 4 Line LCD Screen for Status/Information Update
- One serial RS232 Interface for laptop
- Laptop Download and Diagnostic Program
- Addressable Multi Device Networking
- Designed to meet or exceed NFPA / UL / ULC Standards

### DESCRIPTION

The NMC-101SW is the Fire-Link® system's network monitoring controller or NMC. The NMC provides all the required functionality to act as either a UL listed two detection zone stand alone fire alarm panel; or as a UL/ULC listed accessory to an existing fire alarm control panel. In either operational mode the NMC supervises itself and reports and records the state of each In-Suite Device or ISD in its network. NMC supervisory functions include battery conditions, AC power status and NMC ground faults. All system events are kept in an Event log for immediate viewing at the four line display or downloading by laptop computer for later review. The NMC-101SW is capable of monitoring a total of 225 ISD\* in multi-transformer buildings to provide audibility upgrades in most demanding situations.

### CONTROLLED GATEWAY

The NMC-101SW is a Fire Alarm Control Unit which acts as a control gateway for Signalink's Fire-Link®II network. The NMC-101SW uses our unique Power Line Technology and 'mesh' networking to provide the highest possible reliability.

### BATTERY BACKUP

The NMC-101SW has a battery backup circuit which permits installation of an SLA (Sealed Lead Acid) battery which is monitored for low voltage and excess current conditions. Operates beyond 24 hours during a power outage.

*\*Signalink recommends that at least 2/3 of the total suite count contain ISDs to ensure reliable and trouble free operation.*

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## NMC-101SW

### SPECIFICATIONS

### NETWORK MONITORING CONTROLLER

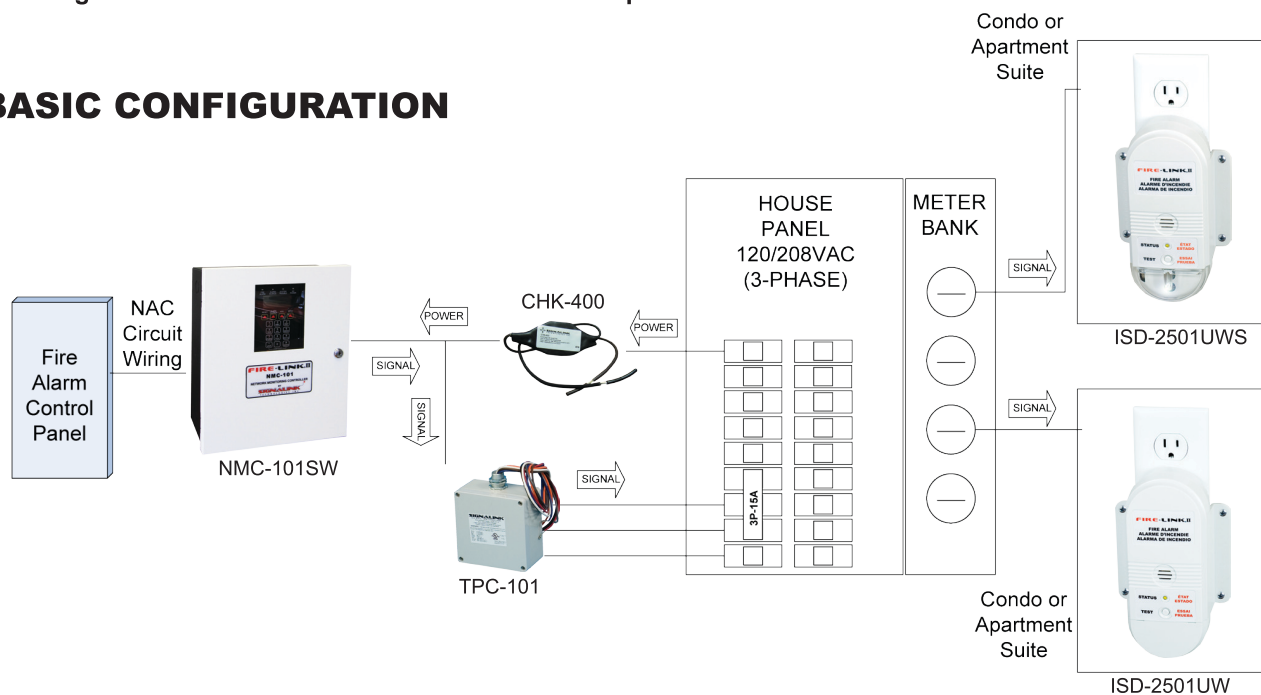
Enclosure Dimensions	14" x 12" x 4" (356 x 305 x 102)	HxWxD (mm)
Mounting	4	Screws
Supply Voltage	102-130 VAC, 60 Hz	Operating
Power Fail Battery Backup	12VDC – 12.0 AH	Sealed Lead Acid
Power Consumption	500 mW, 2.5 W	RX, TX
Operating Temperature	0 - +40 °C	< 90% Humidity
Indicators	Colored LEDs, LCD Display, Buzzer	Operational Status
Controls	Keypad, "Form C" contacts, Bell Circuit, RS-232	Operator & Fire Alarm

### ORDERING INFORMATION

Model	Description
NMC-101SW	Fire-Link® II Network Monitoring Controller, 160kHz, White Door, Black Back Box

Ordering Information: NMC-101SR with Red Door is special order

### BASIC CONFIGURATION



Signalink Technologies Inc.  
 14 - 2550 Acland Road  
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Avery® Product # 5662

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## TPC-101 TRANSFORMER PHASE COUPLER



### APPLICABLE STANDARDS

- UL-508 Industrial Control Equipment



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### TECHNICAL FEATURES:

- Simple installation into electrical distribution panel
- Couples two or three phases
- Operates on two & three phase systems

---

### DESCRIPTION

The Fire-Link® II - TPC-101 couples power line signals used in the Fire-Link® II system to two or three phases of the power distribution system in the building. One TPC-101 is required for every transformer supplying the building.

### SIMPLE INSTALLATION

The Fire-Link® II - TPC101 can be installed without difficulty to most common electrical distribution panels and can support most common voltage and network configurations. It targets all residential power line networks, light commercial power line networks, light industrial power line networks, along with two-phase-only power line networks.



# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

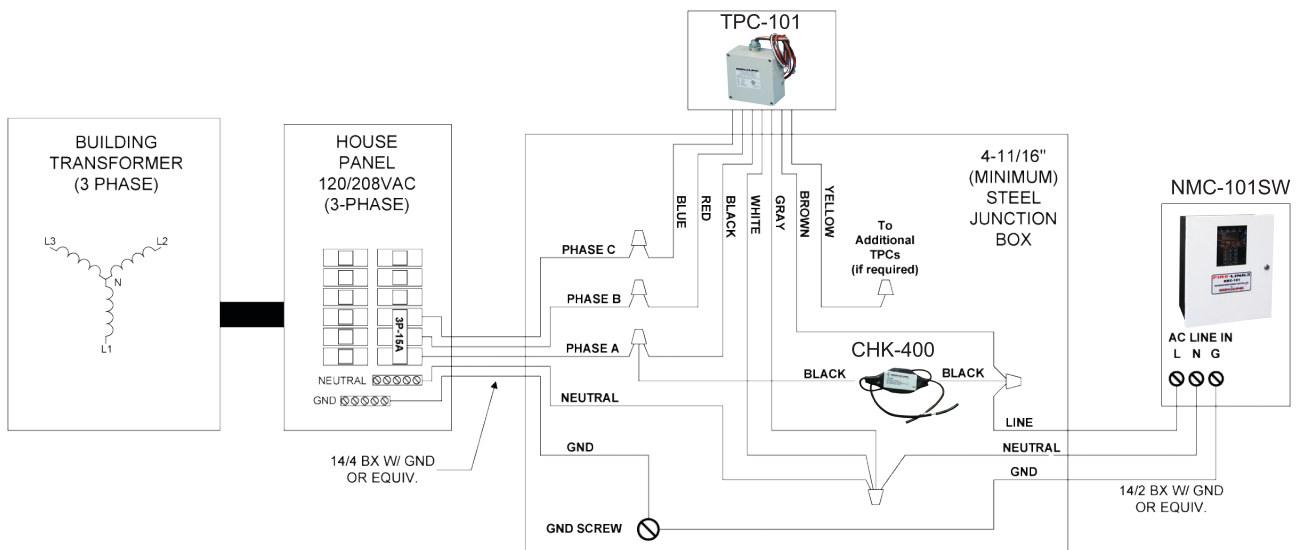
## TPC-101 TRANSFORMER PHASE COUPLER

### SPECIFICATIONS

Enclosure Dimensions	4.74"x4.75"x2"(120x120,50.8mm) 6"x4.75"x2"(152x120x50.8mm)	HxWxD nominal
Operating Voltage, Nominal	102-275V AC, 60 Hz	
Enclosure Material	ABS/UL-94V	(indoor use only)
Operating Temperature	0 to +40 °C	<90% Humidity

### ORDERING INFORMATION

Model	Description
TPC-101	Transformer Phase Coupler 160kHz



**Signalink Technologies Inc.**  
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Avery® Product # 5662

# Addressable Fire Alarm Systems



FX-3500 with two optional RAX-1048TZDS modules

## Description

Mircom's FX-3500 is a series of powerful Intelligent Addressable Fire Alarm Control Units which include Release Control Units (RCUs). These panels are UL 864Rev 9 and ULC S527-2011 listed for fire control and releasing service.

The FX-3500 is recommended for both new and retrofit special-hazard/critical- infrastructure suppression/special agent applications. Small in enclosure size yet powerful enough to deliver complex programming requirements, the FX-3500 is fully expandable.

The FX-3500 provides up to three addressable Signal Line Circuits (UL's-SLC or ULC's-Data Communication Links- DCLs) and connects up to 954 addressable devices/points. Capable of releasing up to six discrete physical hazard zones, the FX-3500 offers exceptional value for complex installations.

Elegant configuration options by onsite laptop, or when required by the Engineer of Record, by remote PC via modem, the FX-3500 can be operational with minimal set up time.

Programming versatility makes the FX-3500 Series the ideal choice for dependable fire detection, signaling and protection in industrial, commercial and institutional buildings. Typically these environments require agent-based suppression solutions easily managed by the FX-3500 Intelligent Addressable Release Control Unit.

## Hardware Features

- One onboard SLC/DCL communication circuit that supports up to 318 addressable devices/ points;
- Expandable to three SLC/DCL communication circuits that supports up to 954 addressable devices/points;
- Reliable and industry proven dedicated releasing power supply;
- Six dedicated hazard zone LED indicators;
- Convenient USB Programming port;
- Built-in UDACT/DACT for remote monitoring;
- Enhanced tactile response for operator interface;
- 4 x 20 character Liquid Crystal Display (LCD);
- Easy to read numerical keypad;
- 10 Ampere (Amp.) Power Supply to satisfy typical releasing load requirements;
- Four Class A/B Notification Appliance Circuits (NAC) rated at 1.5Amp. each;
- SLC is capable of NFPA 72 Style 4, Style 6, or Style 7 wiring & ULC's DCL-A & DCL-B;
- Resettable auxiliary power supply;
- Four easy to read status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Building Safety (Formerly Monitor) Input visual indications;
- Supports up to seven remote annunciators;
- Accessible multifunction RS-232 port for:
  - Serial Communication interface
- RS-485 Interface for remote LCD/LED Annunciators and other devices;
- Optional City Tie/Polarity Reversal module for central station monitoring.



S7010



S7010



7165-1477:0165



APPROVED  
NYC  
Fire Dept.  
COA #6165

**CATALOG NUMBER 5690**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Mechanical Features

- The FX-3500 supports both flush and surface mount applications;
- Dimensions 26" x 14.5" x 4.2"  
66 cm x 36 cm x 11 cm
- Modular display placement options;
- Fits up to 2, 18 Ampere Hour batteries.
- Durable CAT-30 lock and key.
- Removable enclosure door.
- Easy access to all modules for serviceability.

## Software and Operational Features

Audible alarm response within three seconds of activation in Advanced Protocol mode (when using AP devices only);

- AP is a completely digital protocol;
- AP is an Interrupt base protocol;
- Individual LED Control;
- Releasing capability for up to 6 Zones
- Supports Pre-Action/Agent Release and Deluge Applications;
- Supports up to 3 SLC loops and 954 points
- Supports CLIP and AP System Sensor protocols;
- Built-in strobe synchronization support for Mircom, Potter/Amseco, System Sensor, Gentex and Wheelock protocols;
- Grouped inputs and outputs;
- NACs can be configured as Silenceable or Non-Silenceable for both signals and strobes;
- Group bypass with built-in false alarm prevention technology;
- Zone Counting;
- Built-in Drift Compensation for AP protocol;
- Positive Alarm Sequence;
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test;
- Relay contacts for Common Alarm, Auxiliary/ Alarm (Disconnectable), Common Supervisory and Common Trouble;
- Two event history logs comprised of a 400 event alarm log for alarm related events and a 400 event general log for all other events;

## Additional Features

- Compatible with INX-10A Addressable Intelligent NAC Expander Panel.
- Supports Acclimate smoke detection sensors.



## Sensors can be configured as:

- Alarm Input
- Priority Alarm
- Verified Alarm
- Latched Supervisory
- Non-Latching Supervisory
- Monitor
- Trouble Input

## FX-3500 Features and Benefits

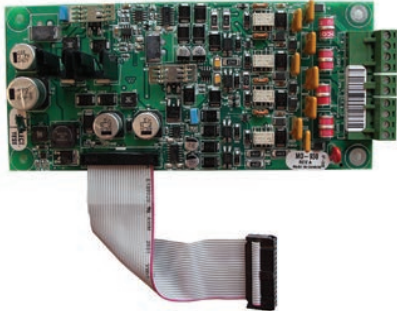
- Cross-zoned or Counting Zone Smoke Detection programming to enable release by either counting active zone detection circuits or active cross-zoned detection circuits (includes options for single, double, triple and 2 different inputs counting zones)
- The FX-3500 Series RCUs are fully expandable to meet the demanding requirements for mission critical facilities, both inside the high value asset areas and also in the office environments.

## Optional Adder Modules



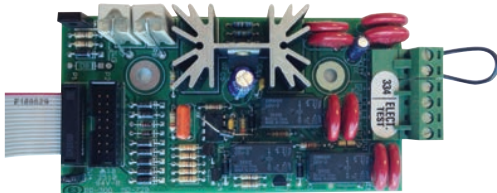
### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator provides the FX-3500 with 48 Programmable Alarm/Supervisory Bi-colored LEDs & 48 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-1048TZDS mounts in the FX-3500 enclosure.



### ALC-636 Dual Loop Controller Module

The ALC-636 Dual Analog Loop Controller Module provides two additional Signaling Line Circuits (SLC) to the FX-3500 consisting of 159 intelligent sensors and 159 intelligent modules per loop. The ALC-636 mounts in the FX-3500 enclosure.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-3500-LCD Remote LCD Annunciator

The RAM-3500-LCD provides remote annunciation through a 4 line by 20 character LCD display. It is a direct mimic of the main panel display so that the LCD, LEDs and switches are an exact duplicate of the main display. The RAM-3500-LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge, four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor, along with a numeric keypad to access the menu functions. The RAM-3500-LCD mounts in separately orderable single unit enclosures or in larger enclosures that support up to two optional RAX-1048TZDS remote LED annunciators. All remote enclosures are equipped with a CAT-30 Lock and key.



### RAX-LCD-Lite Remote LCD Annunciator

The FX-3500 also supports the RAX-LCD-LITE Remote LCD Annunciator. The RAX-LCD-LITE display mimics the main Fire Alarm Panel display at a remote location. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display that uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. There are five types of enclosure available: the BB-1001, BB-1002, BB-1003, BB-1008, and BB-1012 which can take 1,2,3,8,12 chassis respectively.

## Ordering Information

Model	Description
FX-3500	Single Loop, 318 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator, expandable to 954 points with ALC-636 Dual Loop controller module. Includes UB-1024DS back box and DOX-1024DSR red door.
FX-3500RCU	All features of the FX-3500 plus releasing capability included.
FX-3500W	Single Loop, 318 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator, expandable to 954 points with ALC-636 Dual Loop controller module. Includes UB-1024DS back box and DOX-1024DS white door.
FX-3500RCUW	All features of the FX-3500W plus releasing capability included.
<b>Optional Adder Modules</b>	
ALC-636	Dual Loop Controller Module
PR-300	Polarity Reversal/City Tie Module
PCS-100	Power Supply Interface Board
<b>Remote Annunciators</b>	
RAM-3500-LCD	Remote LCD Annunciator with 4-line display. Mounts in a BB-1000 Series enclosure.
RAX-LCD-Lite	Remote Annunciator with Large LCD display. Mounts in a BB-1000 Series enclosure.
RAX-1048TZDS	Programmable Remote LED Display Adder with 48 programmable bi-colored LEDs and 48 Trouble LEDs. Mounts in a BB-1000 Series enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in a BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in a BB-1000 Series enclosure.
AGD-048	Graphic Annunciator Adder Driver Module
MGD-32	Graphic Annunciator Driver Module
RTI-1	Remote Trouble Indicator, Buzzer and LED
<b>Enclosures for Remote Annunciators</b>	
BB-1001	Remote enclosure, white door. Houses 1 module.
BB-1001R	Remote enclosure, red door. Houses 1 module.
BB-1002	Remote enclosure, white door. Houses 2 modules.
BB-1002R	Remote enclosure, red door. Houses 2 modules.
BB-1003	Remote enclosure, white door. Houses 3 modules.
BB-1003R	Remote enclosure, red door. Houses 3 modules.
BB-1008	Remote enclosure, white door. Houses 8 modules.
BB-1008R	Remote enclosure, red door. Houses 8 modules.
BB-1012	Remote enclosure, white door. Houses 12 modules.
BB-10012R	Remote enclosure, red door. Houses 12 modules.
<b>Other Items</b>	
INX-10A	Intelligent NAC Expander Panel
BC-160	External Battery Cabinet
SRM-312W	Smart Relay Module with White Enclosure. Can support up to 12 relays.
SRM-312R	Smart Relay Module with Red Enclosure. Can support up to 12 relays.
MP-3500R	Solenoid EOL Module (Red) - 47K.
MP-3500W	Solenoid EOL Module (White) - 47K.
MP-300	End of Line Plate, White.
MP-300R	End of Line Plate, Red.

**Note:** For releasing application please see the Releasing Guide LT-1091

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CAT. 5690  
Rev7



Model MIX-5251AP sensor mounted in a B210LP base

## Description

Mircom's low profile intelligent plug-in thermal detectors with integral communications provide features that surpass conventional detectors. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations. These intelligent sensors utilize a state-of-the-art thermistor sensing circuit for fast response and are designed to provide open area protection with 50 foot spacing capability.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

### **MIX-5251AP Intelligent Heat Detector, 135°F Fixed Temperature**

The MIX-5251AP uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

## Features

- Sleek, low profile design
- Available as 135°F fixed temperature, 135°F fixed temperature with rate-of-rise detection and high temperature 190°F fixed temperature
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

### **MIX-5251RAP Intelligent Heat Detector, 135°F fixed temperature with Rate-of-Rise Detection**

The MIX-5251RAP provides both 135°F fixed and rate-of-rise thermal detection. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

### **MIX-5251HAP Intelligent High Temperature Heat Detector, 190°F Fixed Temperature**

The MIX-5251HAP provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6299



S7498



7270-1477:0160

**CATALOG NUMBER 5953**

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## Specifications

<b>Voltage Range</b>
15 - 32 volts DC peak
<b>Standby Current</b>
300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>LED Current (max.)</b>
6.5 mA @ 24 VDC (on)
<b>Height</b>
2.0 inches (51 mm)
<b>Diameter</b>
6.1 inches (155 mm) installed in B210LP Base 4.1 inches (104 mm) installed in B501 Base

<b>Shipping Weight</b>
4.8 oz. (137 g)
<b>Operating Humidity Range</b>
10% - 93% noncondensing
<b>Thermal Ratings</b>
Fixed Temperature Setpoint: 135°F (57°C) Rate of Rise Detection: 15°F/min. (8.3°C/min.) High Temperature: 190°F (88°C)
<b>Operating Temperature Range</b>
MIX-5251AP/MIX-5251RAP: -4°F to 100°F (-20°C to 38°C) MIX-5251HAP: -4°F to 150°F (-20°C to 66°C)

## Ordering Information

Model	Description
<b>Intelligent Heat Sensors</b>	
MIX-5251AP	Intelligent Heat Detector, 135°F Fixed Temperature
MIX-5251RAP	Intelligent Heat Detector, 135°F Fixed Temperature with Rate-of-Rise Detection
MIX-5251HAP	Intelligent High Temperature Heat Detector, 190°F Fixed Temperature
<b>Bases</b>	
B501	Intelligent Flangeless Mounting Base
B210LP	Intelligent Flanged Mounting Base
B224RB	Intelligent Relay Base
B224BI	Intelligent Isolator Base
B200SR	Intelligent Standard Sounder Base (Compatible with B501BH Series)
<b>Accessories</b>	
RA-100Z	Remote LED Annunciator

Add suffix "A" for ULC listed model.

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CAT. 5953  
Rev. 0





Model MIX-5251AP sensor mounted in a B210LP base

## Description

Mircom's low profile intelligent plug-in thermal detectors with integral communications provide features that surpass conventional detectors. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations. These intelligent sensors utilize a state-of-the-art thermistor sensing circuit for fast response and are designed to provide open area protection with 50 foot spacing capability.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

### **MIX-5251AP Intelligent Heat Detector, 135°F Fixed Temperature**

The MIX-5251AP uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

## Features

- Sleek, low profile design
- Available as 135°F fixed temperature, 135°F fixed temperature with rate-of-rise detection and high temperature 190°F fixed temperature
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

### **MIX-5251RAP Intelligent Heat Detector, 135°F fixed temperature with Rate-of-Rise Detection**

The MIX-5251RAP provides both 135°F fixed and rate-of-rise thermal detection. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

### **MIX-5251HAP Intelligent High Temperature Heat Detector, 190°F Fixed Temperature**

The MIX-5251HAP provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6299



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## Specifications

<b>Voltage Range</b>
15 - 32 volts DC peak
<b>Standby Current</b>
300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>LED Current (max.)</b>
6.5 mA @ 24 VDC (on)
<b>Height</b>
2.0 inches (51 mm)
<b>Diameter</b>
6.1 inches (155 mm) installed in B210LP Base 4.1 inches (104 mm) installed in B501 Base

<b>Shipping Weight</b>
4.8 oz. (137 g)
<b>Operating Humidity Range</b>
10% - 93% noncondensing
<b>Thermal Ratings</b>
Fixed Temperature Setpoint: 135°F (57°C) Rate of Rise Detection: 15°F/min. (8.3°C/min.) High Temperature: 190°F (88°C)
<b>Operating Temperature Range</b>
MIX-5251AP/MIX-5251RAP: -4°F to 100°F (-20°C to 38°C) MIX-5251HAP: -4°F to 150°F (-20°C to 66°C)

## Ordering Information

Model	Description
<b>Intelligent Heat Sensors</b>	
MIX-5251AP	Intelligent Heat Detector, 135°F Fixed Temperature
MIX-5251RAP	Intelligent Heat Detector, 135°F Fixed Temperature with Rate-of-Rise Detection
MIX-5251HAP	Intelligent High Temperature Heat Detector, 190°F Fixed Temperature
<b>Bases</b>	
B501	Intelligent Flangeless Mounting Base
B210LP	Intelligent Flanged Mounting Base
B224RB	Intelligent Relay Base
B224BI	Intelligent Isolator Base
B200SR	Intelligent Standard Sounder Base (Compatible with B501BH Series)
<b>Accessories</b>	
RA-100Z	Remote LED Annunciator

Add suffix "A" for ULC listed model.

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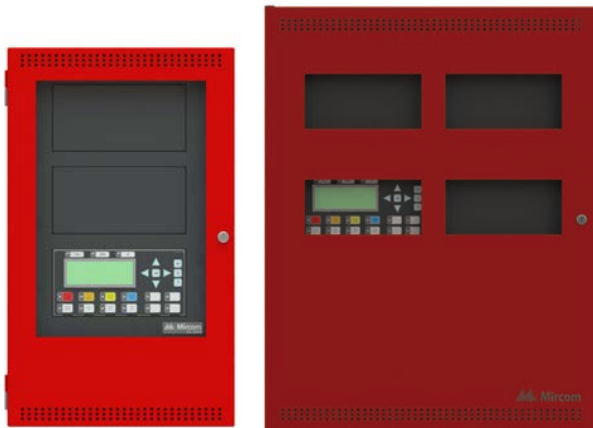
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CAT. 5953  
Rev. 0



## Description

Mircom's FX-2000 Series Microprocessor Based Intelligent Fire Alarm Control Panel is designed to provide maximum flexibility of analog system requirements while also providing easy installation and operation at a cost-effective price.

The FX-2000 base panel consists of one intelligent analog loop controller capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4). The system can be expanded by adding additional Analog Loop Controller Modules. In addition the base panel supports 16 conventional hardwire adder modules such as the DM-1008A Initiating Circuit Module, SGM-1004A Indicating Circuit Module and the RM-1008A Relay Circuit Module. Additional conventional hardwire adder modules can be added with the ALC-H16 Adder Hardwire Loop Controller Module, which allows the system to support an additional 16 conventional adder modules. The base panel also consists of 4 Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each and either a 6 or 12 Amp Power Supply.

Equipped with a large 4 x 20 Back-lit Alphanumeric LCD display, the FX-2000 utilizes a simple Menu system complete with a directional keypad, common control switches and LEDs, Alarm Queue switches and LEDs and two configurable input switches.

## Features

- Listed to UL 864, 9th edition
- Large system capacity
- Modular design
- Each Analog Loop is capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4)
- Base system supports 16 conventional hardwired modules with the provision to add more using the ALC-H16 Hardwire Loop Controller Module
- 6 or 12 Amp power supply
- Four Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each
- Configurable for Two Stage operation
- Three level password protection with field programmable definition which enables the installer to determine what functions are accessible for each password level
- Panel Security to protect site configurations
- Manual Control Enable which allows password protection for all front panel function switches
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- Auxiliary relay contacts for Common Alarm, Common Supervisory and Common Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 1000 Alarm History Log for alarm related events and a 2000 Event Log for all events
- Front Panel Auto-Configure and/or Computer laptop Programmable
- Large 4 by 20 character Back-lit LCD Display with user friendly menu
- Common Control switches and/or indicating LEDs for System Reset, Signal Silence, Fire Drill, Acknowledge, General Alarm, Lamp Test, A.C. On, Pre-Alarm and Ground Fault
- Built-in One Man Walk Test operation
- Configurable for Coded Operation
- Supports an RS-485 interface to the QX-5000 Voice Evacuation System
- Panel selection for Canadian (ULC) or U.S.A. (UL) requirements for smoke sensors (sensitivity) via computer laptop
- Capability to adjust Intelligent Smoke Detector sensitivity level



S7010



S7010



7165-1477:111  
7170-1477:119



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**CATALOG NUMBER 5910**

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## Operation

The FX-2000 is field programmable via the front panel auto configuration or a laptop computer. In addition, it allows for a three level password protection that can be field defined via a laptop computer. This unique feature allows the installer to determine what functions are accessible for each password level.

The system is also equipped with two Event History Logs; one for Alarm and the other for full panel sequence events. The Alarm History Log (1000 events) contains all alarm related functions while the Event Log (2000 events) provides a full sequence log of all operations, as well as alarms and troubles. Both Event History Logs can be used during the One Man Walk Test operation. This allows the event logs to be downloaded to a laptop or printer for a permanent record.

The FX-2000 is a very flexible system which supports both internal and external annunciation modules. The internal annunciation modules consist of the RAX-1048TZDS Programmable Zone LED Annunciator, the IPS-2424DS Programmable Input Switches Module, the FDX-008 Fan Damper Module and the AGD-048 Adder Graphic Driver Module.

## Input Correlations

All input circuits (addressable or hardwired) can be configured for non-verified alarm, verified alarm, waterflow, latching/non-latching supervisory, monitor, trouble only or remote switch inputs. All of the input configuration types listed above, with the exception of remote switch can be programmed to operate relays, signal and strobe circuits for hardwired or addressable devices. Please refer to the chart below for correlations. The input circuits configured as non-latching will cause the output circuits configured to them to follow the state of the input device. This feature allows for the connection of multiple panels together for signal operation.

All of these modules mount within the panel and are driven from the main LCD display. The external annunciator modules include the RAM-1032TZDS and RAX-1048TZDS LED Remote Annunciators, the MGD-32 Master Graphic Driver Module, and the RAX-LCD Remote LCD Shared Display. The RAX-LCD Remote LCD Shared Display provides the same features as the main display on the FX-2000. In addition the RAX-LCD also acts as a driver module that allows for the RAX-1048TZDS, IPS-2424DS, FDX-008 and AGD-048 to be connected to it. The RAX-LCD is required as a driver module any time any of the above mentioned external annunciator modules are programmed differently from those on the main panel or are mounted remote from the main panel.

In addition to these adder modules, the FX-2000 also supports the UDACT-300A Digital Communicator Module and the PR-300 Polarity Reversal/City Tie Module. The FX-2000 also supports an RS-485 interface to the QX-5000 Emergency Zoned Audio System.

The Remote Switch input, which must be momentary, allows any input type device (addressable or hardwired) to be configured as a common control functions such as fire drill, system reset, signal silence etc. The remote switches operate in a momentary mode like the control switches on the FX-2000 main panel. For functions such as fire drill, the remote switch functions in a toggle mode, with one press for "on" and one press for "off". The remote switch is supervised for "stuck in on" positions, where the switch input is activated (stuck) for more than 30 seconds. If this occurs, a trouble is generated and clears when the input goes away.

Intelligent or Conventional Input Types	Output			Control Switches
	Relay	Signal	Strobe	
Non-Verified Alarm	Yes	Yes	Yes	No
Verified	Yes	Yes	Yes	No
Waterflow	Yes	Yes	Yes	No
Non-Latching Supervisory	Yes	Yes	Yes	No
Latching Supervisory	Yes	Yes	Yes	No
Monitor	Yes	Yes	Yes	No
Trouble Only	Yes	Yes	Yes	No
Remote Switch Input	No	No	No	Yes

## FX-2000 Standard Series



### FX-2003-6DS/FX-2003-12DS Compact Main Control Units

The FX-2003-6DS and FX-2003-12DS Compact Main Control Units come complete with one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display. The FX-2003-6DS is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries while the FX-2003-12DS includes a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2003-6DS/FX-2003-12DS provides space for 3 adder modules and 2 internal annunciator adder modules. The FX-2003-6DS/FX-2003-12DS mount in a UB-1024DS backbox.



### FX-2003-6DS-16LED Compact Main Control Unit

The FX-2003-6DS-16LED Compact Main Control Unit come complete with one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display with 16 LEDs for annunciation (DSPL-420-16TZDS). This display is functionally equivalent to the classic FX-2000 main display, but more compact adding in the 16 LEDs for annunciation in addition to all the standard functions. The FX-2003-6DS-16LED is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries. The FX-2003-6DS-16LED provides space for 3 adder modules and 2 internal annunciator adder modules. The FX-2003-6DS-16LED mounts in a separate ordered UB-1024DS Backbox



### FX-2017-12ADS Mid-Size Main Control Unit

The FX-2017-12ADS Mid-Size Main Control Unit comes complete with one intelligent Signaling Line Circuit (SLC) Four Style Z/Y (Class A/B) NAC Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2017-12ADS has space for up to 17 adder modules and 3 internal annunciator adder modules. The FX-2017-12ADS mounts in the BBX-1072ADS enclosure.



### FX-2009-12DS Large Size Main Control Unit

The FX-2009-12DS Large Size Main Control Unit comes complete with one Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2009-12DS supports 16 conventional adder modules and provides space for up to 9 adder modules and 3 internal annunciator adder modules. The FX-2009-12DS mounts in the BB-5000 Series enclosures.



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12DS/FX-2009S-12 supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.

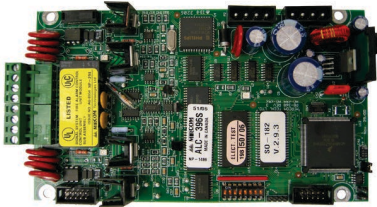
### FX-2000 Standard Series System Maximums

- **495** Input Circuits
- **150** Output Circuits
- **5** Intelligent Addressable Loops
- **4** Remote LCD Annunciators
- **4** Main LED Annunciators
- **100** Manual Control Switches

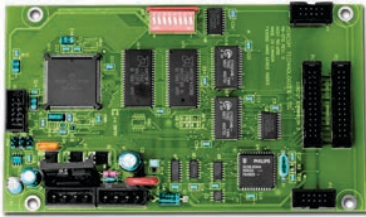
## Adder Loop Controller Modules



**ALC-198S Single Analog Loop Controller Module**  
The ALC-198S Single Analog Loop Controller Module provides an additional analog loop to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules. The ALC-198S occupies one module slot in the FX-2000 main or expander chassis.

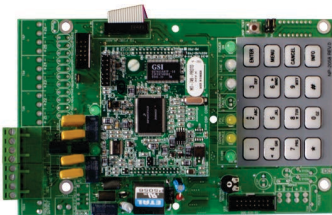


**ALC-396S Dual Analog Loop Controller Module**  
The ALC-396S Dual Analog Loop Controller Module provides two additional analog loops to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules per loop. The ALC-396S occupies one module slot in the FX-2000 main or expander chassis.



**ALC-H16 Hardwire Loop Controller Module**  
The ALC-H16 Hardwire Loop Controller Module allows the FX-2000 to support an additional sixteen (16) conventional hardwire adder modules. The hardwire modules consist of the DM-1008 Eight Initiating Circuit Module, SGM-1004 Four Indicating Circuit Module and the RM-1008 Eight Relay Circuit Module. The ALC-H16 occupies one module slot in the FX-2000 main or expander chassis.

## Adder Auxiliary Modules

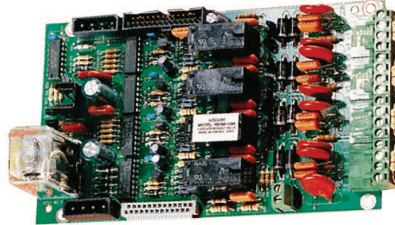


**UDACT-300A Digital Alarm Communicator Module**  
The UDACT-300A Digital Alarm Communicator Module allows the FX-2000 to transmit addressable point information to a central station. The UDACT-300A can be configured locally via the on-board keypad and the CFG-300 Configuration Tool or with a UIMA programming tool and a computer with an available serial or USB port. The UDACT-300A occupies one module slot in the FX-2000 main or expander chassis.

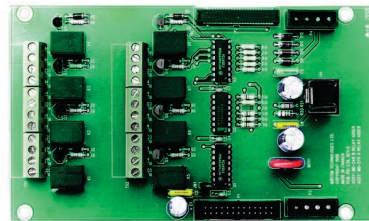
## Adder Hardware Modules



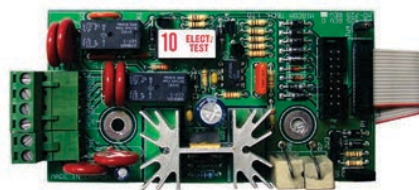
**DM-1008A Eight Initiating Circuit Module**  
The DM-1008A provides 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2000 main or expander chassis.



**SGM-1004A Four Indicating Circuit Module**  
The SGM-1004A provides 4 Class A/B (Style Z/Y) Indicating Circuits configurable as Silenceable or Non-Silenceable. Each Indicating Circuits is rated at 1.7 Amps. Each of the indicating circuits have individual signal silence inputs which are jumper selectable. The SGM-1004A occupies one module slot in the FX-2000 main or expander chassis.

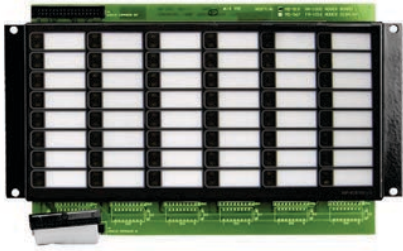


**RM-1008A Eight Relay Circuit Module**  
The RM-1008A provides the FX-2000 with 8 individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load). The RM-1008A occupies one module slot in the FX-2000 main or expander chassis.



**PR-300 Polarity Reversal/City Tie Module**  
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 mounts in the FX-2000 main chassis.

## Programmable Modules



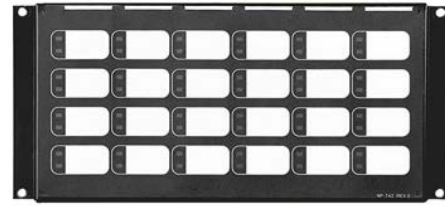
### RAX-1048TZDS Programmable Zone LED Annunciator Module

The RAX-1048TZDS Programmable Zone LED Annunciator Module provides 48 programmable bi-coloured LEDs. The RAX-1048TZDS connects to the main panel or the RAX-LCD Shared Display when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### FDX-008 Fan Damper Module

The FDX-008 Fan Damper Module provides individually programmed circuits which can be used for fan or damper control. Each circuit has a slide-in label, a three position selector switch, green “run or open” LED and an amber “off or closed” LED. The three-position selector switch has a centre “auto” position, a left “off or close” position and a right “on or open” position. The FDX-008 connects to the main panel or the RAX-LCD when mounted remotely. It uses MIX-M500CH for control of fans or dampers and two MIX-M501A for status. The FDX-008 occupies one display position in the BB-1000 or BB-5000 enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS Programmable Input Switches Module provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The switches operate in a toggle operation with one press for “on” and one press for “off”. The IPS-2424DS connects to main panel or the RAX-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 enclosures.

## Electrical Ratings

### Current Consumption

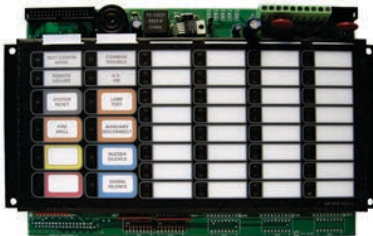
Model	Standby	Alarm
FX-2003-6DS-16LED	230 mA	380 mA
FX-2003-6DS FX-2003-12DS	230 mA	380 mA
FX-2017-12ADS	230 mA	380 mA
FX-2009-12DS	230 mA	380 mA
ALC-198S/ALC-396S	35 mA	50 mA
ALC-H16	35 mA	50 mA
DM-1008A	80 mA	100 mA
SGM-1004A	35 mA	150 mA
RM-1008A	25 mA	150 mA
PR-300	50 mA	300 mA
UDACT-300A	40 mA	60 mA
RAX-LCD	100 mA	150 mA
IPS-2424DS	10 mA	144 mA
FDX-008	10 mA	100 mA
MGD-32	35 mA	1.6 Amps
AGD-048	25 mA	2.4 Amps
RAM-1032TZDS	50 mA	150 mA
RAX-1048TZDS	15 mA	100 mA

## Remote Annunciators



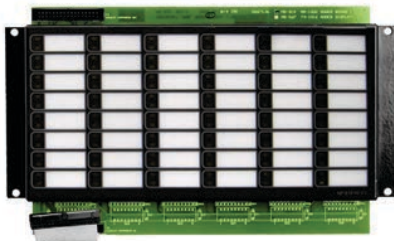
### RAX-LCD Remote Shared Display

The RAX-LCD Remote Shared Display is a remote annunciator that provides the same functions as the main display on the fire alarm control panel, less the 16 zone LEDs. In addition to operating as a remote annunciator, it can also be used as a driver module for standard LED annunciation or reduced zone annunciation (different from the main panel annunciation), graphic drivers programmed different from the main annunciators, programmable switch modules with a unique configuration and fan damper control also with a unique configuration. Each time a different type of annunciation configuration is needed an additional RAX-LCD is required. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAM-1032TZDS Main Remote LED Annunciator

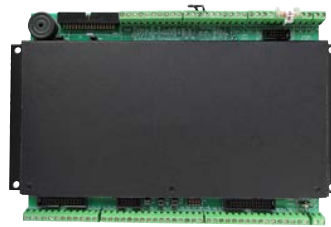
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. Each display point can be identified by the slide-in label that slides in beside the LED. The RAM-1032TZDS is equipped with sealed membrane-like buttons for Common Control functions. The RAM-1032TZDS allows for the control switches to be disabled on a per function basis for areas that do not require certain common control functions to be remotely located from the fire alarm control panel. The RAM-1032TZDS can be programmed differently than the main panel annunciator or a remote RAX-LCD. All RAM-1032TZDS remote annunciators on the system must be programmed the same. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Adder Remote LED Annunciator

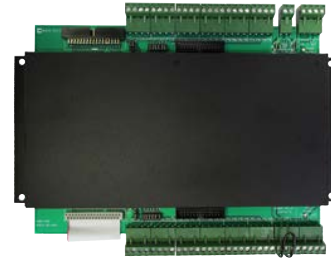
The RAX-1048TZDS Adder Remote LED Annunciator provides an additional 48 points of LED annunciation. The RAX-1048TZDS is an expandible module that connects to the RAM-1032TZDS. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. Any or all of these switch inputs can be used. There are supervised outputs for all of the support LEDs and the common control switches. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. Mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. External power supply required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 Master Graphic Driver modules, or if located remotely it must be connected and mounted with the RAX-LCD Shared Display. The AGD-048 will support an additional 48 supervised outputs. As with the master modules, the AGD-048 will support both LEDs and incandescent lamps. Mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

#### **NOTE:**

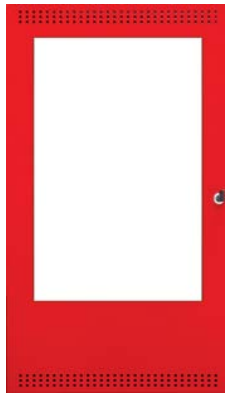
*The combined total of RAM-1032TZDS and MGD-32 per system is eight. All RA-1000 Series annunciators or Graphic driver modules must have the zoned LED or graphic LED correlated to the same combination of addressable devices or hardwired zones. However, the zoned LED annunciator on the FX-2000 main panel can be programmed differently from the annunciators mounted remotely.*



## Enclosures



DOX-1024DS



DOX-1024DSR



### UB-1024DS Universal Backbox

The UB-1024DS Universal Backbox houses the FX-2003-6DS or FX-2003-12DS main control unit and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately.

**Dimensions** (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

### DOX-1024DS(R) Door

The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).

### BBX-1072ADS

The BBX-1072ADS enclosure is capable of handling one FX-2017-12ADS Mid-Size Main Control Unit as well as up to 24 AH Batteries. The cabinet features the universal CAT-30 lock and a removable door for easy installation and servicing. The cabinet is available in a white or red exterior (BBX-1072ARDS).

**Dimensions** (minus built-in trim ring): 32.5"H x 25"W x 6.5"D



### BB-5008

The BB-5008 is a lobby control centre enclosure which is capable of handling one FX-2009-12DS Large Main Control Unit which supports 2 internal annunciator modules such as the IPS-2424DS, FDX-008, RAX-1048TZDS, etc. In addition the BB-5008 allows for 4 footprints for mounting Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator modules. The cabinet hold up to 24 AH batteries. Door and Chassis hardware are ordered separately.

**Dimensions:** 36"H x 30"W x 7"D

### Other Enclosures

- BB-1001: 9"H x 12.75"W x 1.2"D
- BB-1002: 18"H x 12.75"W x 1.2"D
- BB-1003: 26.4"H x 12.75"W x 1.2"D
- BB-1008: 33"H x 22.5"W x 1.25"D
- BB-1012: 45"H x 22.5"W x 1.25"D

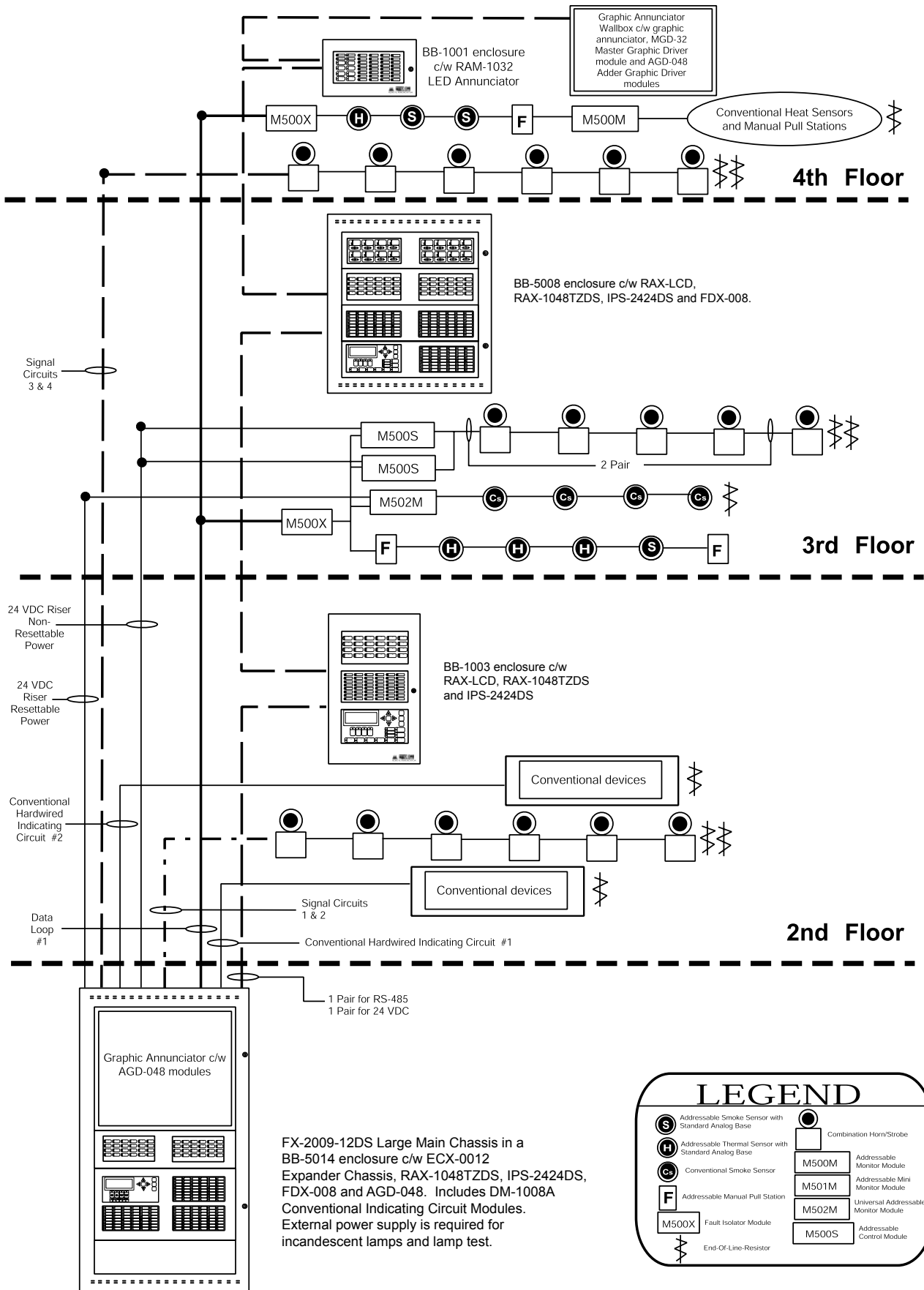


### BB-5014

The BB-5014 is a lobby control centre enclosure which is capable of handling one FX-2009-12DS Large Main Control Unit which supports 2 internal annunciator modules such as the IPS-2424DS, FDX-008, RAX-1048TZDS, etc. In addition the BB-5014 allows for 10 footprints for mounting Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator modules. The BB-5014 can also support a graphic annunciator in place of these modules. The cabinet holds up to 24 AH batteries. Door and Chassis hardware are ordered separately.

**Dimensions:** 60"H x 30"W x 7"D

# Typical FX-2000 Panel Wiring Class B (Style 4)



FX-2009-12DS Large Main Chassis in a BB-5014 enclosure c/w ECX-0012 Expander Chassis, RAX-1048TZDS, IPS-2424DS, FDX-008 and AGD-048. Includes DM-1008A Conventional Indicating Circuit Modules. External power supply is required for incandescent lamps and lamp test.

### LEGEND

	Addressable Smoke Sensor with Standard Analog Base		Combination Horn/Strobe
	Addressable Thermal Sensor with Standard Analog Base	M500M	Addressable Monitor Module
	Conventional Smoke Sensor	M501M	Addressable Mini Monitor Module
	Addressable Manual Pull Station	M502M	Universal Addressable Monitor Module
M500X	Fault Isolator Module	M500S	Addressable Control Module
	End-Of-Line-Resistor		

## Ordering Information

Model	Description
<b>FX-2000 Standard Series</b>	
FX-2003-6DS-16LED	Compact Main Control Unit c/w one Intelligent Signaling Line Circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each and a 4 line by 20 character back-lit LCD display with 16 LEDs for annunciation (DSPL-420-16TZDS). This display is functionally equivalent to the classic FX-2000 main display, but more compact adding in the 16 LEDs for annunciation in addition to all the standard functions. The FX-2003-6DS-16LED is equipped with a 6 Amp Power Supply which charges 10-24 AH batteries. The FX-2003-6DS-16LED provides space for 3 adder modules and 2 internal annunciator adder modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2003-6DS	Compact Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 6 Amp power supply and a backbox. Supports up to 16 Conventional Adder Modules. Provides space for 3 Adder Modules and 2 internal annunciation modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2003-12DS	Compact Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), a 12 Amp power supply and a backbox. Supports up to 16 Conventional Adder Modules. Provides space for 3 Adder Modules and 2 internal annunciation modules. Order UB-1024DS and DOX-1024DS(R) separately.
FX-2017-12ADS	Mid-Size Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each) and a 12 Amp power supply. Supports up to 16 Conventional Adder Modules. Provides space for 17 Adder Modules and 3 Internal Annunciation modules. Mounts in the BBX-1072ADS enclosure.
FX-2009-12DS	Large Main Control Unit c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each) and a 12 Amp power supply. Supports up to 16 Conventional Adder Modules. Provides space for 9 Adder Modules and 3 Internal Annunciation modules. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12DS c/w space to add up to 12 adder modules and 2 Internal Annunciation modules. Mounts in the BB-5000 series enclosures
<b>Adder Loop Controller Modules</b>	
ALC-198S	Single Loop Intelligent Analog Loop Controller Module (99 Analog Sensors and 99 Addressable Modules)
ALC-396S	Dual Loop Intelligent Analog Loop Controller Module (198 Analog Sensors and 198 Addressable Modules)
ALC-H16	Hardwire Loop Controller Module. Supports 16 Conventional Hardwired Modules
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Indicating Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Programmable Modules</b>	
RAX-1048TZDS	Programmable Zone LED Annunciator Module c/w 48 bi-coloured LEDs.
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
<b>Remote Annunciators</b>	
RAM-1032TZDS	Main Annunciator Chassis c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs
RAX-1048TZDS	Adder Annunciator Chassis c/w 48 Bi-Coloured LEDs
RTI-1	Remote Trouble Indicator
<b>Remote Shared Display Annunciators</b>	
RAX-LCD	Remote Shared Display LCD Annunciator c/w Display Queues and Common Controls
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Master Graphic Driver Module c/w Fire Alarm Common Control Switch Inputs and 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs

**Ordering Information cont'd**

<b>Enclosures</b>	
UB-1024DS	Universal backbox for FX-2003-6DS/FX-2003-12DS. Order DOX-1024DS separately
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
BBX-1072ADS	Black backbox enclosure for FX-2000 c/w removable door and CAT-30 lock and key. Houses one FX-2017-12ADS Mid-Size Main Control Unit and up to 24 AH batteries. Includes White door
BBX-1072ARDS	Black backbox enclosure for FX-2000 c/w removable door and CAT-30 lock and key. Houses one FX-2017-12ADS Mid-Size Main Control Unit and up to 24 AH batteries. Includes Red door
BB-5008	Lobby Control Centre Wallbox Enclosure. Supports 8 Module Footprints
DOX-5008M	White Metal Door for BB-5008
DOX-5008MR	Red Metal Door for BB-5008
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008
BB-5014	Lobby Control Centre Wallbox Enclosure. Supports 14 Module Footprints
DOX-5014M	White Metal Door for BB-5014
DOX-5014MR	Red Metal Door for BB-5014
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014

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CAT. 5910  
 Rev. 11



### Features

- Connects to a compatible main panel or a Remote Shared Display via an RS-232C interface connection
- Compact Design
- Simple Installation
- Requires 120 VAC power source
- Tractor Feed
- Dot Matrix
- Serial Input

### Description

Mircom's PTR-2000-1 Remote Line Printer is designed to work with a compatible Intelligent Fire Alarm Control Unit. The printer is able to produce a printed record of all events occurring in the system. Small and compact, the PTR-2000-1 Remote Line Printer is the ideal supplement to the system.

The PTR-2000-1 is simple to install. The unit must be plugged into a local 120 VAC isolated power source. It connects to the main panel or a Remote Shared Display via an RS-232C interface connection.

Mircom provides an interface connection kit that contains the following items:

- 1 - 10ft. standard RS-232 cable
- 1 - 6ft. 9-pin to 25-pin AT serial cable
- 1 - 9-pin to 9-pin gender changer
- 1 - AC Cheater Plug 120V

The interface connection kit is required to connect the PTR-2000-1 to a compatible main panel or the Remote Shared Display. The PTR-2000-1 must be located within 50 feet of either the main panel or Remote Shared Display.

### Specifications

<b>Power:</b>	120 VAC, 60 Hz
<b>Interface:</b>	RS-232C
<b>Baud Rate:</b>	9600 bits/second
<b>Operating Temp:</b>	5°C to 35°C (41°F to 95°F)
<b>Relative Humidity:</b>	10 to 80%
<b>Dimensions:</b>	5.8"H x 14.4"W x 10.8"D (147mm H x 366mm W x 275mm D)
<b>Weight:</b>	9.8 lbs (4.4 kg)

### Paper Type

#### Cut Sheets:

*Width:* 3.9" - 10.1" (100mm - 257mm)  
*Length:* 3.9" - 14.3" (100mm - 364mm)

#### Continuous Paper:

*Width:* 4" - 10" (101.6mm - 254mm)  
*Length:* 4" - 22" (101.6mm - 558.8mm)

#### Roll Paper:

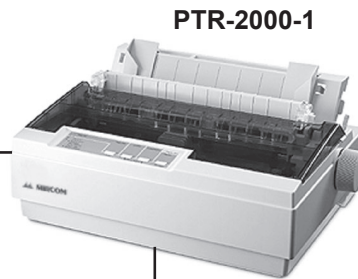
*Width:* 8.5" (216mm)

## Wiring Diagrams

### PTR-2000-1 connected to a compatible Main Control Unit



RS-232C  
Interface  
Connection  
using the  
supplied Interface  
Connection Kit



**PTR-2000-1**

120 VAC

**Note:** PTR-2000-1 must be located within 50 feet of the main unit.

### PTR-2000-1 connected to a Remote Shared Display



RS-232C  
Interface  
Connection  
using the  
supplied Interface  
Connection Kit



**PTR-2000-1**

120 VAC

**Note:** PTR-2000-1 must be located within 50 feet of the Remote Shared Display

## Ordering Information

### Model

PTR-2000-1

### Description

Remote Line Printer with Interface Connection Kit

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CAT. 5922  
Rev.5



FX-2001-6KU

## Description

Mircom's FX-2001-6K Intelligent Analog Fire Alarm Control Panel is a single loop system designed to provide maximum flexibility of analog system requirements while also providing easy installation and operation.

The FX-2001-6K consists of one intelligent analog loop capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4). The panel also consists of 4 Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each and a 6 Amp Power Supply.

Equipped with a large 4 x 20 Back-lit Alphanumeric LCD display, the FX-2001-6K utilizes a simple Menu system complete with a directional keypad, common control switches and LEDs, Alarm Queue switches and LEDs, two configurable input switches and 16 configurable zone LEDs.

The FX-2001-6K also supports one of a UDACT-100A Digital Communicator Module or a PR-300 Polarity Reversal/City Tie Module.

The cabinet is available in a beige (Canada) or Red (USA) colour. A Fire Retardant Lexan window in the hinged door allows for viewing of the LCD Display. It comes with a durable CAT-30 lock and key. Space is provided for up to 17 AH Gel Cell batteries.

## Features

- Listed to UL 864, 9th edition
- Single analog loop supports 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4)
- 6 Amp power supply
- Four Class A/B (Style Z/Y) Indicating Circuits rated at 1.7 Amps each
- Configurable for Two Stage operation
- Three level password protection with field programmable definition which enables the installer to determine what functions are accessible for each password level
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- Auxiliary relay contacts for Common Alarm, Common Supervisory and Common Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 1000 Alarm History Log for alarm related events and a 2000 Event Log for all events.
- Front Panel Auto-Configure and/or Computer laptop Programmable
- Large 4 by 20 character Back-lit LCD Display with user friendly menu
- Common Control switches and/or indicating LEDs for System Reset, Signal Silence, Fire Drill, Acknowledge, General Alarm, Lamp Test, A.C. On, Pre-Alarm and Ground Fault
- Two spare configurable input switches
- Built-in One Man Walk Test operation
- Configurable for Coded Operation
- 16 zone configurable LED annunciator complete with individual slide-in labels for zone definition
- Panel selection for Canadian (ULC) or U.S.A. (UL) requirements for smoke sensors (sensitivity) via computer laptop
- Automatic Drift Compensation
- Capability to adjust Intelligent Smoke Detector sensitivity level



S7010



S7010

7165-1477:111  
7170-1477:119**CATALOG NUMBER 5924****NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Auxiliary Adder Modules

### UDACT-100A Digital Alarm Communicator Module

The UDACT-100A Digital Alarm Communicator Module allows the FX-2001-6K to transmit addressable point information to a central station. Hardwired points will also be transmitted as zones to the central station. The UDACT-100A uses the Ademco Contact ID and SIA-DCS protocols. The UDACT-100A mounts in the FX-2001-6K main chassis.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 mounts in the FX-2001-6K main chassis.

## Ordering Information

### Model

### Description

#### Kits

FX-2001-6K Compact intelligent fire alarm control panel c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), 16 LED annunciation points, 6 Amp power supply, a white door and a black backbox. *(For Canadian Market)*

FX-2001-6KU Compact intelligent fire alarm control panel c/w one Intelligent Analog Loop Controller (99 Analog Sensors and 99 Addressable Modules), 4 x 20 Back-lit LCD display, 4 Class A/B (Style Z/Y) Indicating Circuits (1.7 Amps each), 16 LED annunciation points, 6 Amp power supply, a red door and a black backbox. *(For U.S. Market)*

FA-UNIV-TRB Universal Semi-Flush Trim Ring

#### Auxiliary Modules

UDACT-100A Digital Alarm Communicator Transmitter/Dialer Module  
PR-300 Polarity Reversal and City Tie Module

#### Remote Annunciators & Shared Display

RAM-1032 Main Annunciator Chassis c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs  
RAX-1048 Adder Annunciator Chassis c/w 48 Bi-Coloured LEDs  
RAX-LCD Remote Shared Display LCD Annunciator c/w Display Queues and Common Controls.

#### Graphic Annunciator Driver Modules

MGD-32 Master Graphic Driver Module c/w Fire Alarm Common Control Switch Inputs and 32 Supervised Outputs  
AGD-048 Adder Graphic Driver Module c/w 48 Supervised Outputs  
MGDS-16/16 Master Display Driver Module c/w Fire Alarm Common Control Switches, 16 Programmable Zoned LEDs and 16 Supervised Outputs

#### Remote Annunciator Enclosures

BB-1001 Annunciator backbox with keylock door (Houses one module)  
BB-1002 Annunciator backbox with keylock door (Houses two modules)

**Note:** *(For U.S. market add suffix "R")*

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Rev. 3





*FX-2003-12XTDS in a BBX-1024XTR enclosure*

## Description

Mircom's FX-2003-12XTDS Intelligent Analog Fire Alarm Control Panel is designed to provide maximum flexibility of intelligent system requirements while also providing easy installation and operation at a cost-effective price.

The FX-2003-12XTDS base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 99 intelligent sensors and 99 intelligent modules. In addition the base panel includes Four Class A/B (Style Z/Y) Notification Appliance Circuits rated at 1.7 Amps each, a large 4 x 20 back-lit alphanumeric LCD display and a 12 Amp power supply.

The FX-2003-12XTDS has provision to mount two programmable modules such as a RAX-1048TZDS LED annunciator, IPS-2424DS input switch module or an FDX-008 fan damper control module. In addition the FX-2003-12XTDS supports up to 9 adder modules such as the ALC-396S SLC loop adder module or SGM-1004A indicating circuit module.

The enclosure comes with a black backbox and is available with a beige or red door. A Fire Retardant Lexan window in the hinged door allows for viewing of the display and controls. The enclosure comes with a durable CAT-30 lock and key and space is provided for up to 17 AH Gel Cell batteries.

## Features

- One expandable to five Intelligent Signaling Line Circuits (SLC)
- Each SLC Loop is capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4)
- Four Class A/B (Style Z/Y) Notification Appliance Circuits rated at 1.7 Amps each
- Large 4 by 20 character Back-lit LCD Display with user friendly menu
- 12 Amp power supply
- Provision for two programmable modules and 9 internal adder modules
- Configurable for Two Stage operation
- Three level password protection with field programmable definition which enables the installer to determine what functions are accessible for each password level
- Panel Security to protect site configurations
- Manual Control Enable which allows password protection for all front panel function switches
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- Auxiliary relay contacts for Common Alarm, Common Supervisory and Common Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 1000 Alarm History Log for alarm related events and a 2000 Event Log for all events
- Front Panel Auto-Configure and/or Computer laptop Programmable
- Common Control switches and/or indicating LEDs for System Reset, Signal Silence, Fire Drill, Acknowledge, General Alarm, Lamp Test, A.C. On, Pre-Alarm and Ground Fault
- Built-in One Man Walk Test operation
- Configurable for Coded Operation
- Panel selection for UL or ULC requirements for smoke sensors (sensitivity) via computer laptop
- Capability to adjust Intelligent Smoke Detector sensitivity level

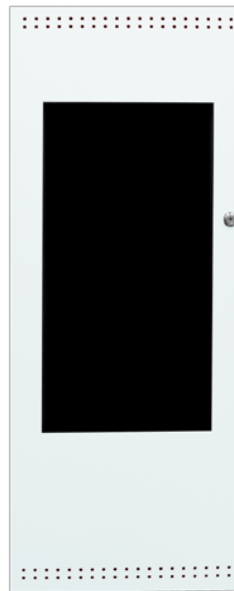


**CATALOG NUMBER 5934**

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## FX-2003-12XTDS Standard Series Fire Alarm Control Panel



BBX-1024XT



BBX-1024XTR

### FX-2003-12XTDS Expanded Main Control Unit

The FX-2003-12XTDS Expanded Main Control Unit comes complete with one intelligent signaling line circuit (99 Analog Sensors and 99 Addressable Modules), 4 Class A/B (Style Z/Y) Notification Appliance Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2003-12XTDS has provision for two programmable modules and provides space for up to 9 adder modules. The FX-2003-12XTDS mounts in the BBX-1024XT(R) enclosure.

### BBX-1024XT(R) Enclosure

The BBX-1024XT enclosure supports one FX-2003-12XTDS and up to 17 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (BBX-1024XT) or red exterior (BBX-1024XTR). The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

**BBX-1024XT(R) Dimensions:** 35 1/2"H x 14 1/2"W x 5 1/4"D

## Adder Loop Controller Modules



### ALC-198S Single Analog Loop Controller Module

The ALC-198S Single Analog Loop Controller Module provides an additional analog loop to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules. The ALC-198S occupies one module slot in the FX-2003-12XTDS.



### ALC-H16 Hardwire Loop Controller Module

The ALC-H16 Hardwire Loop Controller Module allows the FX-2000 to support an additional sixteen (16) conventional hardwire adder modules. The hardware modules consist of the DM-1008 Eight Initiating Circuit Module, SGM-1004 Four Indicating Circuit Module and the RM-1008 Eight Relay Circuit Module. The ALC-H16 occupies one module slot in the FX-2003-12XTDS.



### ALC-396S Dual Analog Loop Controller Module

The ALC-396S Dual Analog Loop Controller Module provides two additional analog loops to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules per loop. The ALC-396S occupies one module slot in the FX-2003-12XTDS.

## FX-2000 Standard Series System Maximums

- 500 Input Circuits
- 150 Output Circuits
- 5 Intelligent Addressable Loops
- 4 Remote LCD Annunciators
- 4 Main LED Annunciators
- 100 Manual Control Switches

## Adder Hardware Modules



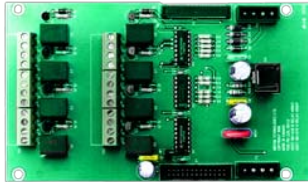
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12XTDS.



### SGM-1004A Four Indicating Circuit Module

The SGM-1004A provides 4 Class A/B (Style Z/Y) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12XTDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12XTDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @ 1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12XTDS.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

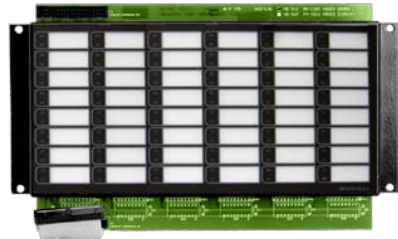
The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12N to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12XTDS.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie and Polarity Reversal connection. The PR-300 occupies one module slot in the FX-2003-12XTDS.

## Programmable Modules



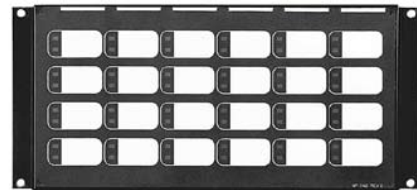
### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or a RAX-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BBX-1024XT, BB-1000 or BB-5000 Series enclosures.



### FDX-008 Fan Damper Control Module

The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAX-LCD and occupies one display position in the BBX-1024XT, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAX-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BBX-1024XT, BB-1000 or BB-5000 Series enclosures.

## FX-2003-12XTDS Electrical Specifications

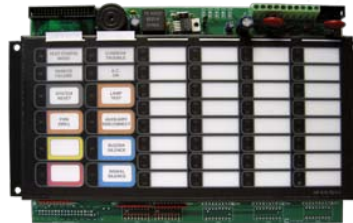
<b>AC Line Voltage</b>	120V 60Hz / 240V 50Hz 4 Amps. / 2 Amps. (primary)	
<b>Power Supply ratings</b>	12 Amps. Max. (secondary)	
<b>Indicating Circuits</b>	24VDC unfiltered 10 Amps. max.	
<b>Battery</b>	24VDC, Gel-Cell Lead-Acid	
<b>Charging Capability</b>	17-55 AH batteries	
<b>Current Consumption</b>	Standby	230 mA
	Alarm	380 mA

## Remote Annunciators



### RAX-LCD Remote LCD Annunciator

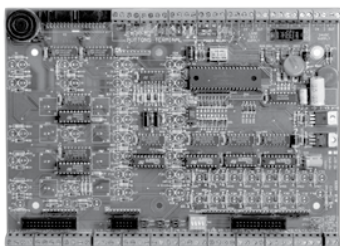
The RAX-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAM-1032TZDS Main Remote LED Annunciator

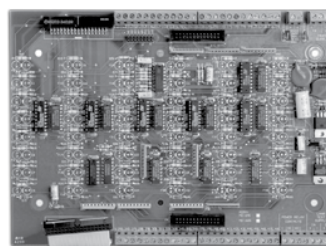
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 Bi-Coloured LEDs and 32 Trouble LEDs. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Ordering Information

Model	Description
FX-2003-12XTDS	Expanded Main Control Unit c/w one Intelligent Signaling Line Circuit (SLC), 4x20 back-lit LCD display, 4 Class A/B (Style Z/Y) Notification Appliance Circuits and a 12 Amp power supply. Provides space for two programmable modules and 9 adder modules. Mounts in the BBX-1024XT(R) enclosure.
BBX-1024XT	Enclosure for FX-2003-12XTDS c/w removable white door, black backbox and CAT-30 lock and key. (Add suffix "R" for red door)
FA-XT-TRB	Black Semi-Flush Trim Ring for BBX-1024XT(R) enclosure.
<b>Adder Loop Controller Modules</b>	
ALC-198S	Single Loop Intelligent Analog Loop Controller Module (99 Analog Sensors and 99 Addressable Modules)
ALC-396S	Dual Loop Intelligent Analog Loop Controller Module (198 Analog Sensors and 198 Addressable Modules)
ALC-H16	Hardwire Loop Controller Module. Supports 16 Conventional Hardwired Modules.
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Indicating Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Programmable Modules</b>	
RAX-1048TZDS	Programmable Adder LED Annunciator Module c/w 48 bi-coloured LEDs and 48 Trouble LEDs
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
<b>Remote Annunciators</b>	
RAX-LCD	Remote Shared Display LCD Annunciator c/w Display Queues and Common Controls.
RAM-1032TZDS	Main LED Annunciator Module c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs and 32 Trouble LEDs
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Master Graphic Driver Module c/w Fire Alarm Common Control Switch Inputs and 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs

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CAT. 5934  
Rev. 1



*FX-2003-6DS-16LED in a universal enclosure, ordered separately*

## Description

Mircom's FX-2003-6DS-16LED Intelligent Analog Fire Alarm Control Panel is designed to provide maximum flexibility of intelligent system requirements while also providing easy installation and operation at a cost-effective price.

The FX-2003-6DS-16LED base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 99 intelligent sensors and 99 intelligent modules. In addition the base panel includes Four Class A/B (Style Z/Y) Notification Appliance Circuits rated at 1.7 Amps each, a 4 x 20 back-lit alphanumeric LCD display with 16 bi-colored LEDs and a 6 Amp power supply.

The FX-2003-6DS-16LED with 16 bicolored LEDs has provision to mount two programmable modules such as a RAX-1048TZDS LED annunciator, IPS-2424DS input switch module or an FDX-008 fan damper control module. In addition the FX-2003-6DS-16LED supports up to 3 adder modules such as the ALC-396S SLC loop adder module or SGM-1004A indicating circuit module.

The enclosure which is ordered separately consists of a black backbox (UB-1024DS) with a beige (DOX-1024DS) or red (DOX-1024DSR) door. A Fire Retardant Lexan window in the hinged door allows for viewing of the display and controls. The enclosure comes with a durable CAT-30 lock and key and space is provided for up to 18 AH Gel Cell batteries.

## Features

- One expandable to five Intelligent Signaling Line Circuits (SLC)
- Each SLC Loop is capable of supporting 99 Analog Sensors and 99 Addressable Modules which can be wired in Class A (Style 6 or 7) or Class B (Style 4)
- Four Class A/B (Style Z/Y) Notification Appliance Circuits rated at 1.7 Amps each
- Large 4 by 20 character Back-lit LCD Display with user friendly menu and 16 bi-colored LEDs for annunciation
- 6 Amp power supply
- Provision for two programmable modules and 3 adder modules
- Configurable for Two Stage operation
- Three level password protection with field programmable definition which enables the installer to determine what functions are accessible for each password level
- Panel Security to protect site configurations
- Manual Control Enable which allows password protection for all front panel function switches
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- Auxiliary relay contacts for Common Alarm, Common Supervisory and Common Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 1000 Alarm History Log for alarm related events and a 2000 Event Log for all events
- Front Panel Auto-Configure and/or Computer laptop Programmable
- Common Control switches and/or indicating LEDs for System Reset, Signal Silence, Fire Drill, Acknowledge, General Alarm, Lamp Test, A.C. On, Pre-Alarm and Ground Fault
- Built-in One Man Walk Test operation
- Configurable for Coded Operation
- Panel selection for UL or ULC requirements for smoke sensors (sensitivity) via computer laptop
- Capability to adjust Intelligent Smoke Detector sensitivity level

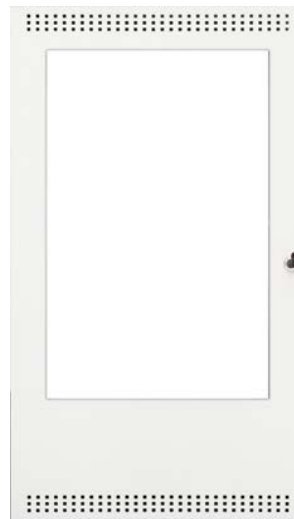


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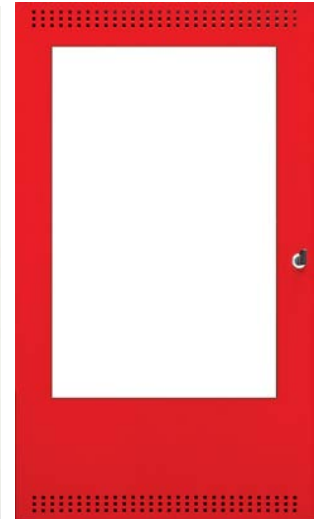
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## FX-2003-6DS-16LED Standard Series Fire Alarm Control Panel



DOX-1024DS

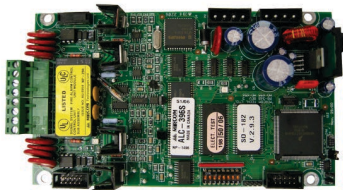


DOX-1024DSR

### FX-2003-6DS-16LED Expanded Main Control Unit

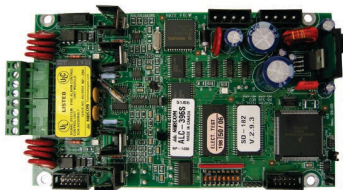
The FX-2003-6DS-16LED Main Control Unit comes complete with one intelligent signaling line circuit (99 Analog Sensors and 99 Addressable Modules), 4 Class A/B (Style Z/Y) Notification Appliance Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display with an additional 16 LED's for annunciation and a 6 Amp Power Supply which charges 10-24 AH batteries. The FX-2003-6DS-16LED has provision for two programmable modules and provides space for up to 3 adder modules. The FX-2003-6DS-16LED comes pre-mounted on a chassis that fits into the separately ordered UB-1024DS universal Backbox enclosure.

### Adder Loop Controller Modules



#### ALC-198S Single Analog Loop Controller Module

The ALC-198S Single Analog Loop Controller Module provides an additional analog loop to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules. The ALC-198S occupies one module slot in the FX-2003-6DS-16LED.



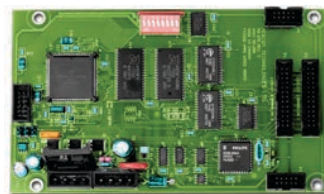
#### ALC-396S Dual Analog Loop Controller Module

The ALC-396S Dual Analog Loop Controller Module provides two additional analog loops to the FX-2000 consisting of 99 Analog Sensors and 99 Addressable Modules per loop. The ALC-396S occupies one module slot in the FX-2003-6DS-16LED.

### UB-1024DS Enclosure

The UB-1024DS enclosure supports one FX-2003-6DS-16LED and up to 18 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (DOX-1024DS) or red (DOX-1024DSR) exterior door. The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

**UB-1024DS Dimensions:** 26"H x 14.5"W x 4.2"D  
(66 cm x 36 cm x 11 cm)



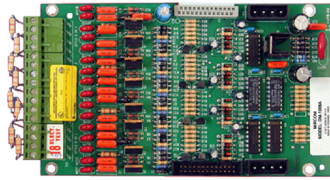
#### ALC-H16 Hardwire Loop Controller Module

The ALC-H16 Hardwire Loop Controller Module allows the FX-2000 to support an additional sixteen (16) conventional hardwire adder modules. The hardwire modules consist of the DM-1008 Eight Initiating Circuit Module, SGM-1004 Four Indicating Circuit Module and the RM-1008 Eight Relay Circuit Module. The ALC-H16 occupies one module slot in the FX-2003-6DS-16LED.

### FX-2000 Standard Series System Maximums

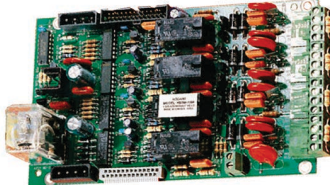
- 500 Input Circuits
- 150 Output Circuits
- 5 Intelligent Addressable Loops
- 4 Remote LCD Annunciators
- 4 Main LED Annunciators
- 100 Manual Control Switches

## Adder Hardware Modules



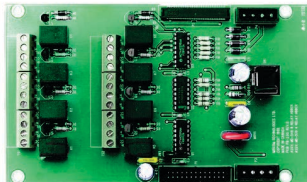
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-6DS-16LED.



### SGM-1004A Four Indicating Circuit Module

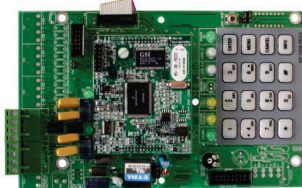
The SGM-1004A provides 4 Class A/B (Style Z/Y) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-6DS-16LED.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-6DS-16LED with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-6DS-16LED.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

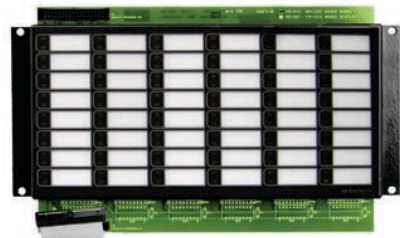
The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12N to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-6DS-16LED.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie and Polarity Reversal connection. The PR-300 occupies one module slot in the FX-2003-6DS-16LED.

## Programmable Modules



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or a RAX-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the UB-1024DS, BBX-1024XT, BB-1000 or BB-5000 Series enclosures.



### FDX-008 Fan Damper Control Module

The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAX-LCD and occupies one display position in the UB-1024DS, BBX-1024XT, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAX-LCD when mounted remotely. The IPS-2424DS occupies one display position in the UB-1024DS, BBX-1024XT, BB-1000 or BB-5000 Series enclosures.

### FX-2003-6DS-16LED Electrical Specifications

<b>AC Line Voltage</b>	120V 60Hz / 240V 50Hz 2 Amps. / 1 Amps. (primary)	
<b>Power Supply ratings</b>	6 Amps. Max. (secondary)	
<b>Indicating Circuits</b>	24VDC unfiltered 5 Amps. max.	
<b>Battery</b>	24VDC, Gel-Cell Lead-Acid	
<b>Charging Capability</b>	10-24 AH batteries	
<b>Current Consumption</b>	Standby	230 mA
	Alarm	380 mA

## Remote Annunciators



### RAX-LCD Remote LCD Annunciator

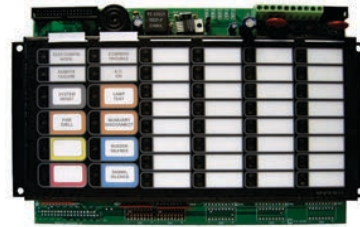
The RAX-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.

### Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply required for incandescent lamps and lamp test.



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 Bi-Coloured LEDs and 32 Trouble LEDs. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

### Ordering Information

Model	Description
FX-2003-6DS-16LED	Expanded Main Control Unit c/w one Intelligent Signaling Line Circuit (SLC), with an additional 16 LED Zones for annunciation, 4 Class A/B (Style Z/Y) Notification Appliance Circuits and a 6 Amp power supply. Provides space for two programmable modules and 3 adder modules. Mounts in the UB-1024DS enclosure.
UB-1024DS	Universal Backbox for Compact Main Control Units, Black
DOX-1024DS	Universal Door for UB-1024DS Backbox, White
DOX-1024DSR	Universal Door for UB-1024DS Backbox, Red
<b>Adder Loop Controller Modules</b>	
ALC-198S	Single Loop Intelligent Analog Loop Controller Module (99 Analog Sensors and 99 Addressable Modules)
ALC-396S	Dual Loop Intelligent Analog Loop Controller Module (198 Analog Sensors and 198 Addressable Modules)
ALC-H16	Hardwire Loop Controller Module. Supports 16 Conventional Hardwired Modules.
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Indicating Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Programmable Modules</b>	
RAX-1048TZDS	Programmable Adder LED Annunciator Module c/w 48 bi-coloured LEDs and 48 Trouble LEDs
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
<b>Remote Annunciators</b>	
RAX-LCD	Remote Shared Display LCD Annunciator c/w Display Queues and Common Controls.
RAM-1032TZDS	Main LED Annunciator Module c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs and 32 Trouble LEDs
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Master Graphic Driver Module c/w Fire Alarm Common Control Switch Inputs and 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs

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CAT. 5938  
Rev 0





### Description

The FX-350-60-DR Intelligent Fire Alarm Control Panel is a single loop addressable panel that supports up to 60 addressable points. The FX-350-60-DR is equipped with a two line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/Digital Communicator. The LCD display allows for 32 characters to be configured for user defined messages. In addition the FX-350 Series family also includes remote LED and LCD annunciators.

The FX-350-60-DR is ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The FX-350-60-DR is configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FX-350-60-DR enables the installer to configure the system to meet their specific requirements.

The FX-350-60-DR is equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

The FX-350-60-DR comes complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Single Addressable SLC Loop that supports 60 addressable points
- Points can be any combination of Addressable Sensors or Modules
- Supports Ionization Sensors, Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with a 2 line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/Digital Communicator
- LCD display allows for 32 characters to be configured for user defined messages
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Positive Alarm Sequence
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting



S7010



7165-1477-156

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313-97-E

**City of Chicago**

Approved for Class 1 Applications

**CATALOG NUMBER 5670**

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## Optional Adder Modules

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") output circuits on the FX-350 to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-350 main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD comes complete with a red enclosure and a CAT-30 Lock and key.



### RA-1000 Series Remote LED Annunciators

The RAM-1016TZ and RAM-1032TZ Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. Both models mount in a BB-1001R enclosure.



### RAM-208R/RAM-216R Remote LED Annunciators

The RAM-208R and RAM-216R provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208R and RAM-216R are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.

## Ordering Information

Model	Description
FX-350-60-DR	Single Loop 60 Point Intelligent Fire Alarm Control Panel with built-in UDACT/Digital Communicator
FA-300TRB	Black semi-flush trim ring for FX-350-60-DR enclosure
<b>Optional Adder Modules</b>	
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDR	Remote LCD Annunciator c/w enclosure.
RAM-1016TZ	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZ	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
BB-1001R	Red enclosure for RAM-1016TZ or RAM-1032TZ Annunciators. Houses 1 module.
RAM-208R	8 Zone Remote LED Annunciator
RAM-216R	16 Zone Remote LED Annunciator

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CAT. 5670  
Rev. 4



FX-351-LDW with optional RAX-332  
Programmable LED Annunciator

## Description

The FX-351-LW and FX-351-LDW Fire Alarm Control Panels are single loop addressable panels that support up to 126 addressable points. Both panels are equipped with a two line by 20 character backlit LCD display, numerical keypad and 32 zones of LED annunciation. Both can be expanded with the optional RAX-332 to support 64 zones of LED annunciation. The FX-351-LDW is equipped with an integrated UDACT/Digital Communicator. In addition both models can be expanded to a three loop 378 point system with the addition of an ALC-252 Dual Loop Controller Module.

The FX-351 panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The FX-351 panels are configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the panels enable the installer to configure the system to meet their specific requirements.

The FX-351 panels are equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

In addition the panels come complete with a white door, black enclosure, durable CAT-30 lock and key and space to mount up to 18 AH batteries. An optional trim ring is available for semi-flush mounting.

## Features

- Single Addressable SLC Loop that supports 126 addressable points. Expandable to 378 points with ALC-252 Dual Loop Controller Module.
- Points can be any combination of Addressable Sensors or Modules
- Supports Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with 2 line by 20 character backlit LCD display and numerical keypad
- LCD display allows for 32 characters to be configured for user defined messages
- Includes 32 zone Alarm & Trouble LED configurable annunciator that can be expanded to 64 zones
- Available with or without an integrated UDACT/Digital Communicator
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting



S7010

**CATALOG NUMBER** **5671**

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## Optional Adder Modules



### RAX-332 Programmable LED Annunciator

The RAX-332 Programmable LED Annunciator provides the FX-350 with an additional 32 Programmable Alarm/Supervisory Bi-Coloured LEDs & 32 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-332 mounts in the FX-351 enclosure.

### ALC-252 Dual Loop Controller Module

The ALC-252 Dual Analog Loop Controller Module provides two additional Signaling Line Circuits (SLC) to the FX-351-LDR consisting of 126 intelligent devices per loop. The ALC-252 mounts in the FX-351 enclosure.

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") output circuits on the FX-350 to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-351 main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RA-1000 Series Remote LED Annunciators

The RAM-1016TZDS and RAM-1032TZDS Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. The RAX-1048TZDS connects to the RAM-1032TZDS to provide an additional 48 points of LED annunciation. All models mount in a BB-1000 Series enclosure.



### RAM-300LCDW Remote LCD Annunciator

The RAM-300LCDW provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDW provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDW has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDW comes complete with a white enclosure and a CAT-30 Lock and key.

### Dimensions

FX-351-LW/LDW 26"H x 14½"W x 4½"D

## Ordering Information

Model	Description
FX-351-LW	Single Loop, 126 Point Intelligent Fire Alarm Control Units with 32 programmable LEDs
FX-351-LDW	Single Loop, 126 Point Intelligent Fire Alarm Control Units with built-in UDACT/Digital Communicator
FA-UNIV-TRB	Black semi-flush trim ring for FX-351 enclosure
<b>Optional Adder Modules</b>	
RAX-332	Programmable Remote LED Annunciator with 32 programmable LEDs. Mounts in FX-351-LW or FX-351-LDW.
ALC-252	Dual Loop Controller Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDW	Remote LCD Annunciator c/w enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAX-1048TZDS	48 Zone Adder LED Annunciator with trouble LEDs. Connects to RAM-1032TZDS and mounts in an BB-1000 enclosure.
BB-1001	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 1 module.
BB-1002	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 2 modules.
BB-1003	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 3 modules

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CAT. 5671  
Rev. 2



### Description

The FX-351-LDR Intelligent Fire Alarm Control Panel is a single loop addressable panel that supports up to 126 addressable points. The system can be expanded to a three loop 378 point system with the addition of an ALC-252 Dual Loop Controller Module. The FX-351-LDR is equipped with a two line by 20 character backlit LCD display, numerical keypad, integrated UDACT/Digital Communicator and the provision for up to 64 zones of LED annunciation with the optional RAX-332 modules. The LCD display allows for 32 characters to be configured for user defined messages.

The FX-351-LDR is ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, this panel is powerful enough to meet today's installation demands. The FX-351-LDR is configurable by the keypad for on-site programming or by a PC for both on-site and remote programming. Easy to install and simple to operate and configure, the FX-351-LDR enables the installer to configure the system to meet their specific requirements.

The FX-351-LDR is equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

In addition the panel comes complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 18 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Single Addressable SLC Loop that supports up to 126 addressable points. Expandable to 378 points with ALC-252 Dual Loop Controller Module.
- Points can be any combination of Addressable Sensors or Modules
- Supports Ionization Sensors, Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with 2 line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/Digital Communicator
- LCD display allows for 32 characters to be configured for user defined messages
- Provision for up to 64 zones of LED annunciation with optional RAX-332 Remote Annunciator modules
- Integrated UDACT/Digital Communicator
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Positive Alarm Sequence
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting



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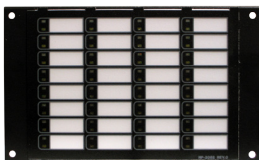
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**CATALOG NUMBER 5687**

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## Optional Adder Modules



### RAX-332 Programmable LED Annunciator

The RAX-332 Programmable LED Annunciator provides the FX-351-LDR with 32 Programmable Alarm/Supervisory Bi-Colored LEDs & 32 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-332 mounts in the FX-351-LDR enclosure.

### ALC-252 Dual Loop Controller Module

The ALC-252 Dual Analog Loop Controller Module provides two additional Signaling Line Circuits (SLC) to the FX-351-LDR consisting of 126 intelligent devices per loop. The ALC-252 mounts in the FX-351-LDR enclosure.

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts the four Class "B" (Style "Y") output circuits on the FX-351-LDR to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-351-LDR main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDR comes complete with a red enclosure and a CAT-30 Lock and key.



### RA-1000 Series Remote LED Annunciators

The RAM-1016TZDS and RAM-1032TZDS Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-colored LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. The RAX-1048TZDS connects to the RAM-1032TZDS to provide an additional 48 points of LED annunciation. All models mount in a BB-1000 Series enclosure.

## Dimensions

FX-351-LDR 26"H x 14½"W x 4½"D

## Ordering Information

Model	Description
FX-351-LDR	Single Loop, 126 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator
FA-UNIV-TRB	Black semi-flush trim ring for FX-351-LDR enclosure
<b>Optional Adder Modules</b>	
RAX-332	Programmable Remote LED Annunciator with 32 programmable LEDs. Mounts in FX-351-LDR.
ALC-252	Dual Loop Controller Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDR	Remote LCD Annunciator c/w enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAX-1048TZDS	48 Zone Adder LED Annunciator with trouble LEDs. Connects to RAM-1032TZ and mounts in an BB-1000 enclosure.
BB-1001R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 1 module.
BB-1002R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 2 modules.
BB-1003R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 3 modules

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CAT. 5687  
Rev. 3



## Description

The FX-353-LDR Intelligent Fire Alarm Control Panel is a three loop addressable panel that supports up to 378 addressable points. The FX-353-LDR is equipped with a two line by 20 character backlit LCD display, numerical keypad, integrated UDACT/Digital Communicator and the provision for up to 64 zones of LED annunciation (requires optional RAX-332 modules). The LCD display allows for 32 characters to be configured for user defined messages.

The FX-353-LDR panel is ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, this panel is powerful enough to meet today's installation demands. The FX-353-LDR is configurable by the keypad for on-site programming or by a PC for both on-site and remote programming. Easy to install and simple to operate and configure, the FX-353-LDR panel enables the installer to configure the system to meet their specific requirements.

The FX-353-LDR panel is equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

In addition the panel comes complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 18 AH batteries. An optional trim ring is available for semi-flush mounting.

## Features

- Three Addressable SLC Loops that support up to 378 addressable points
- Points can be any combination of Addressable Sensors or Modules
- Supports Ionization Sensors, Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with 2 line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/Digital Communicator
- LCD display allows for 32 characters to be configured for user defined messages
- Provision for up to 64 zones of LED annunciation with optional RAX-332 Remote Annunciator modules
- Integrated UDACT/Digital Communicator
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Wheelock, Amseco, System Sensor, Gentex and Faraday
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Positive Alarm Sequence
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting



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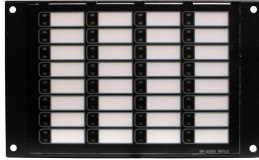
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## Optional Adder Modules



### RAX-332 Programmable LED Annunciator

The RAX-332 Programmable LED Annunciator provides the FX-353-LDR with 32 Programmable Alarm/Supervisory Bi-Colored LEDs & 32 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-332 mounts in the FX-353-LDR enclosure.

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts the four Class "B" (Style "Y") output circuits on the FX-353-LDR to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-353 main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDR comes complete with a red enclosure and a CAT-30 Lock and key.



### RA-1000 Series Remote LED Annunciators

The RAM-1016TZDS and RAM-1032TZDS Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-colored LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. The RAX-1048TZDS connects to the RAM-1032TZDS to provide an additional 48 points of LED annunciation. All models mount in an BB-1000 Series enclosure.

## Dimensions

FX-353-LDR 26"H x 14½"W x 4½"D

## Ordering Information

Model	Description
FX-353-LDR	Three Loop, 378 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator
FA-UNIV-TRB	Black semi-flush trim ring for FX-353-LDR enclosure
<b>Optional Adder Modules</b>	
RAX-332	Programmable Remote LED Annunciator with 32 programmable LEDs. Mounts in FX-353-LDR.
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDR	Remote LCD Annunciator c/w enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAX-1048TZDS	48 Zone Adder LED Annunciator with trouble LEDs. Connects to RAM-1032TZ and mounts in an BB-1000 enclosure.
BB-1001R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 1 module.
BB-1002R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 2 modules.
BB-1003R	Red enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 3 modules
MGC-32	Master Graphic Driver Module
AGD-048	Adder Graphic Driver Module

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CAT. 5688  
Rev. 3





FX-353-LW with optional RAX-332 Programmable LED Annunciator

## Description

The FX-353-LW Intelligent Fire Alarm Control Panel is a three loop addressable panel that supports up to 378 addressable points. The FX-353-LW is equipped with a two line by 20 character backlit LCD display, numerical keypad and the provision for up to 64 zones of LED annunciation (requires optional RAX-332 modules). The LCD display allows for 32 characters to be configured for user defined messages.

The FX-353-LW panel is ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, this panel is powerful enough to meet today's installation demands. The FX-353-LW is configurable by the keypad for on-site programming or by a PC for both on-site and remote programming. Easy to install and simple to operate and configure, the FX-353-LW panel enables the installer to configure the system to meet their specific requirements.

The FX-353-LW panel is equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

In addition the panel comes complete with a white door, black enclosure, durable CAT-30 lock and key and space to mount up to 18 AH batteries. An optional trim ring is available for semi-flush mounting.

## Features

- Three Addressable SLC Loops that support up to 378 addressable points
- Points can be any combination of Addressable Sensors or Modules
- Supports Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with 2 line by 20 character backlit LCD display and numerical keypad
- LCD display allows for 32 characters to be configured for user defined messages
- Provision for up to 64 zones of LED annunciation with optional RAX-332 Remote Annunciator modules
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Wheelock, Amseco, System Sensor, Gentex and Faraday
- Relay contacts for Common Alarm, Auxiliary/ Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Positive Alarm Sequence
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting

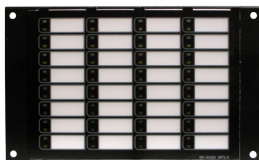


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## Optional Adder Modules



### RAX-332 Programmable LED Annunciator

The RAX-332 Programmable LED Annunciator provides the FX-353-LW with 32 Programmable Alarm/Supervisory Bi-Colored LEDs & 32 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-332 mounts in the FX-353-LW enclosure.

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts the four Class "B" (Style "Y") output circuits on the FX-353-LW to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-353 main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-1000 Series Remote LED Annunciators

The RAM-1016TZDS and RAM-1032TZDS Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. The RAX-1048TZDS connects to the RAM-1032TZDS to provide an additional 48 points of LED annunciation. All models mount in a BB-1000 Series enclosure.



### RAM-300LCDW Remote LCD Annunciator

The RAM-300LCDW provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDW provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDW has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDW comes complete with a white enclosure and a CAT-30 Lock and key.

### Dimensions

FX-353-LW      26"H x 14½"W x 4½"D

## Ordering Information

Model	Description
FX-353-LW	Three Loop, 378 Point Intelligent Fire Alarm Control Unit with 32 programmable LEDs
FA-UNIV-TRB	Black semi-flush trim ring for FX-353-LW enclosure
<b>Optional Adder Modules</b>	
RAX-332	Programmable Remote LED Annunciator with 32 programmable LEDs. Mounts in FX-353-LW.
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDW	Remote LCD Annunciator c/w enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAX-1048TZDS	48 Zone Adder LED Annunciator with trouble LEDs. Connects to RAM-1032TZDS and mounts in an BB-1000 enclosure.
BB-1001	White enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 1 module.
BB-1002	White enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 2 modules.
BB-1003	White enclosure for RAM-1016TZDS or RAM-1032TZDS Annunciators. Houses 3 modules
MGD-32	Master Graphic Driver Module
AGD-048	Adder Graphic Driver Module

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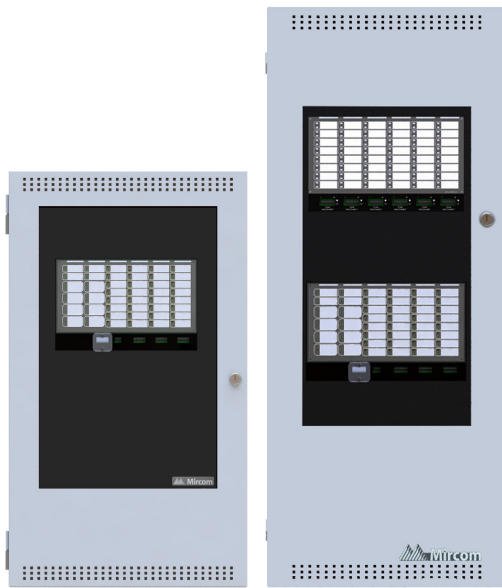
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CAT. 5689  
Rev. 1

# Conventional Fire Alarm Systems



### Description

Mircom's FA-1000 Series Microprocessor Based Fire Alarm Control Panels are Multi-Zone units designed for maximum flexibility and easy installation and operation. Fully configurable from the front panel using push buttons and DIP switches, the FA-1000 Series enables the user to configure the system to meet their specific requirements. With a large capacity of supervised Class A (Style D) or Class B (Style B) Initiating Circuits and supervised Class A (Style Z) or Class B (Style Y) Indicating Circuits, the FA-1000 Series is designed to meet virtually all applications.

The FA-1000 Series consists of a Main Fire Alarm Chassis which houses and controls all other modules. Additional modules may be installed to configure the system to meet any requirements that the user may have. The FA-1000 Series allows for additional Indicating Circuit, Initiating Circuit and Relay modules to be added to the system. In addition it allows for optional modules such as the UDACT-300A Digital Communicator and the PR-300 Polarity Reversal/City Tie Module.

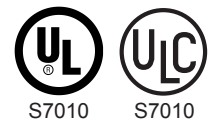
Equipped with Configuration DIP Switches on the Main Display Module the FA-1000 Series Fire Alarm Control Panels are configured through a combination of DIP switch and button settings. Through this configuration method the user can define the system as a Single Stage or Two Stage operation as well as perform various functions such as a One Man Walk Test.

### Features

- Listed to UL 864, 9th edition
- Large system capacity
- Modular design
- Each Indicating Circuit can be configured as Silenceable or Non-Silenceable
- Audibles may be configured as Steady, Temporal Code, California Code or March Time
- Each Initiating Circuit can be configured as Alarm, Supervisory, Waterflow or Trouble
- Two LEDs per Initiating circuit; one for Trouble and one for Status
- Initiating and Indicating Circuits may be individually disconnected by a DIP switch
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two-Stage Operation and One Man Walk Test
- Subsequent Alarm, Supervisory and Trouble operation
- Two outputs for 4 wire resettable smoke power supply (200 mA Max. each)
- Auxiliary relay contacts for Common Alarm and Common Supervisory as well as a Common Trouble Relay (Each relay contact Form C, 28 VDC @ 1 Amp (resistive))
- RS-485 Interface for RA-1000 Remote Multiplex Annunciators
- Interface for Remote Trouble Indicator
- Easy configuration via push buttons and DIP switches on the front panel
- Fully site or field programmable Indicating Circuits and Auxiliary Relays
- Extensive Transient Protection
- Slide-in labels for zone identification
- 6 Amp or 12 Amp power supplies available
- Removable door for easy installation and servicing
- Removable terminal blocks for easy wiring and servicing

### Optional Modules

- UDACT-300A Digital Communicator Module
- Polarity Reversal and City Tie Module



**CATALOG NUMBER 5620**

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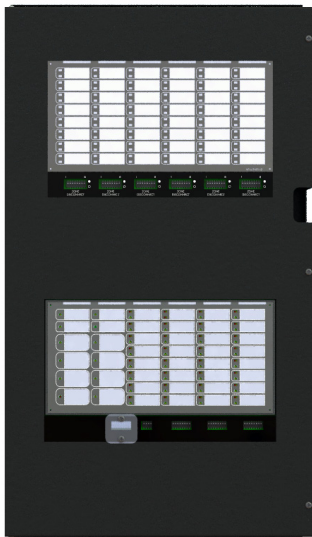
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## System Components



### MCC-1024-6ADS/MCC-1024-12ADS

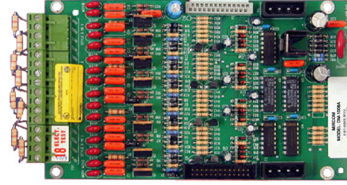
The MCC-1024-6ADS Main Control Unit comes complete with 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits, 4 Class A/B (Style Z/Y) Indicating circuits, a common control and zone identification display board for up to 24 points and a 6 Amp Power Supply which charges 10-24 AH batteries. The MCC-1024-12ADS is equipped with a 12 Amp Power Supply which charges 17-40 AH batteries. Both models are expandable with up to two adder modules of any type plus one of a UDACT-300A Digital Communicator or PR-300 Polarity Reversal/City Tie Module. Both models mount in a UB-1024DS(R) backbox.



### MCC-1024-12XTDS

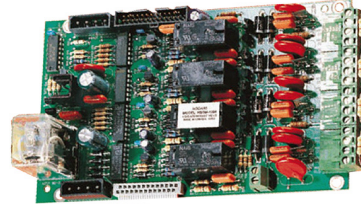
The MCC-1024-12XTDS Main Control Unit comes complete with 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits, 4 Class A/B (Style Z/Y) Indicating circuits, a common control and zone identification display board for up to 72 points and a 12 Amp Power Supply which charges 17-40 AH batteries. It is expandable with up to eight adder modules of any type plus one of a UDACT-300A Digital Communicator or PR-300 Polarity Reversal/City Tie Module. The MCC-1024-12XTDS mounts in a BBX-1024XT(R) enclosure.

## Adder Hardwire Modules



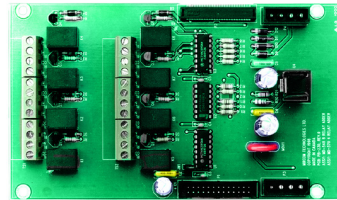
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



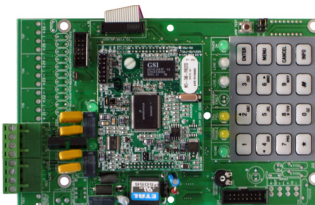
### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot.



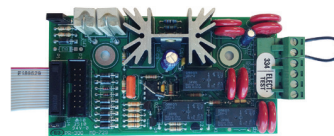
### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NXTDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.



### UDACT-300A Digital Alarm Communicator Module

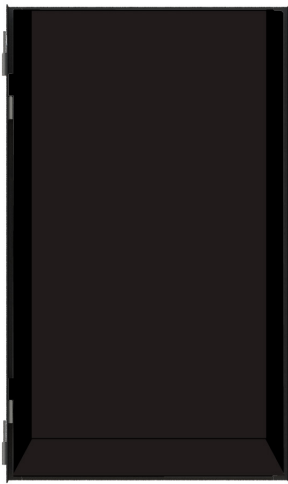
The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NXTDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



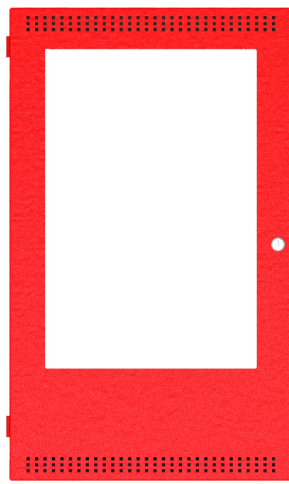
### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie and Polarity Reversal connection. The PR-300 occupies one module slot.

## FA-1000 Series Enclosures



UB-1024DS



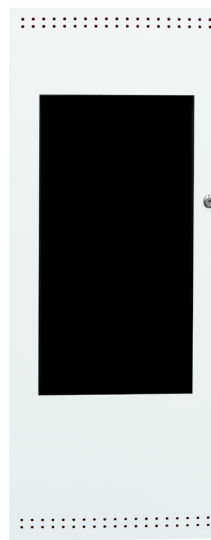
DOX-1024DSR

### UB-1024DS Universal Backbox

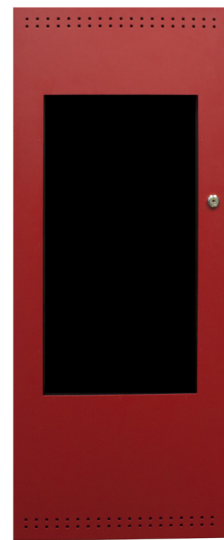
The UB-1024DS Universal backbox houses the MCC-1024-6ADS/12ADS and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately. **Dimensions** (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

### DOX-1024DS(R) Door

The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).



BBX-1024XT



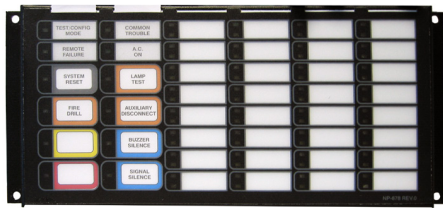
BBX-1024XTR

### BBX-1024XT(R) Enclosure

The BBX-1024XT enclosure supports one MCC-1024-12XTDS and up to 18 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (BBX-1024XT) or red exterior (BBX-1024XTR). The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

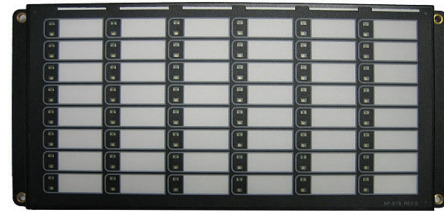
**BBX-1024XT(R) Dimensions:** 35 1/2"H x 14 1/2"W x 5 1/4"D

## RA-1000 Series Remote Multiplex Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main unit or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.



### RAM-1016TZDS Main Remote LED Annunciator

The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation as well as 16 trouble LEDs. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1016TZDS mounts in a BB-1000 series enclosure.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Electrical Ratings

### MCC-1024-6ADS

<b>AC Line Voltage</b>	120V 60Hz / 240V 50 Hz, 2A / 1A primary	
<b>Power Supply Ratings</b>	6 Amps. max. (secondary)	
<b>For Indicating Circuits</b>	24VDC unfiltered, 5 Amps maximum	
<b>Charging Capability</b>	10-24 AH batteries	
<b>Current Consumption</b>	Standby	200 mA
	Alarm	350 mA

### MCC-1024-12ADS/MCC-1024-12XTDS

<b>AC Line Voltage</b>	120V 60Hz / 240V 50 Hz, 4A / 2A primary	
<b>Power Supply Ratings</b>	6 Amps. max. (secondary)	
<b>For Indicating Circuits</b>	24VDC unfiltered, 10 Amps maximum	
<b>Charging Capability</b>	17-40 AH batteries	
<b>Current Consumption</b>	Standby	200 mA
	Alarm	350 mA

## Ordering Information

Model	Description
<b>Main Control Unit</b>	
MCC-1024-6ADS	Main Control Unit, 6 Amps. Mounts in UB-1024DS.
MCC-1024-12ADS	Main Control Unit, 12 Amps. Mounts in UB-1024DS.
MCC-1024-12XTDS	Main Control Unit, 12 Amps. Mounts in BBX-1024DS(R)
<b>Adder Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communication Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Enclosures</b>	
UB-1024DS	Universal black backbox. Requires DOX-1024DS(R) door.
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
BBX-1024XT	Enclosure for MCC-1024-12XTDS c/w removable white door, black backbox and CAT-30 lock and key.
BBX-1024XTR	Enclosure for MCC-1024-12XTDS c/w removable red door, black backbox and CAT-30 lock and key.
FA-XT-TRB	Black Semi-Flush Trim Ring for BBX-1024XT(R) enclosure
<b>Remote Annunciators</b>	
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs and 32 Trouble LEDs
RAM-1016TZDS	Main Remote LED Annunciator c/w 16 Bi-Colored LEDs and 16 Trouble LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.

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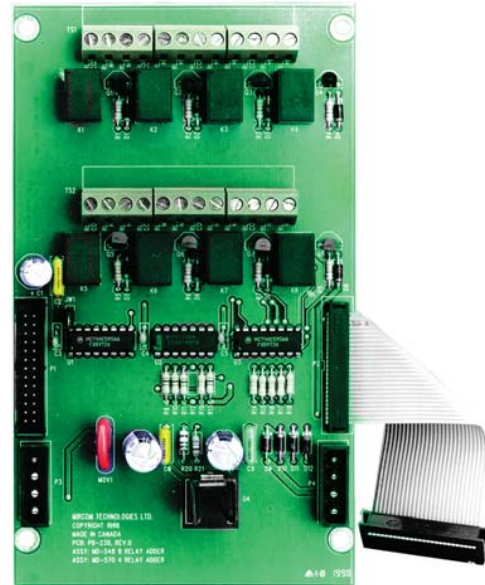


CAT. 5620  
Rev. 6

The FA-1000 Series Microprocessor Based Fire Alarm System can be configured to meet virtually any requirements. To facilitate this flexibility, the panel has a number of add-on modules which allow the system to perform certain functions. The following modules have been designed to adapt the system to suit the particular requirements of a building.

### RM-1008A Eight Relay Circuit Module

The RM-1008A Eight Relay Circuit Module provides eight programmable Form C relays. Each relay is rated for 28 VDC @ 1 Amp max. Each relay is annunciated for configuration on the front display board of the MCC-1024-6 or MCC-1024-12 Main Chassis or ECH-1048 Expander Chassis. The RM-1008A Relay Adder Module comes with removeable terminal blocks for easy wiring and servicing. The module connects via cable to the board on the main or expander chassis. The RM-1008A also mounts in the FX-2000 main and expander chassis.



### PR-300 Polarity Reversal & City Tie Module

The PR-300 Polarity Reversal & City Tie Module allows connection to two different types of monitoring systems. The City Tie provides an output of 24 VDC at 210 mA max. The module supervises the City Tie connection and will provide a system trouble if not connected. A terminating resistor is supplied with the module. The Polarity Reversal provides a 24 VDC output for normal condition and a polarity reverse 24 VDC output for alarm. The module is also capable of transmitting a system trouble "Zero Volts." This option is jumper selectable. The output current is limited to 8 mA.



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## UDACT-300A Digital Alarm Communicator Transmitter/Dialer Module

The UDACT-300A Digital Alarm Communicator Transmitter/Dialer Module allows Mircom's FA-1000 Series Fire Alarm Control Panels to transmit Alarm, Supervisory and Trouble information on two telephone lines to a monitoring facility.

The UDACT-300A is powered by the host fire alarm control panel and communicates with the fire alarm control panel via an RS-485 data link. The Digital Communicator can be programmed for dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID reporting protocols.

The UDACT-300A can be configured locally via the on-board keypad and the CFG-300 Configuration Tool or with a UIMA programming tool and a computer with an available serial or USB port. In addition the UDACT-300A can be remotely configured using a personal computer with a modem.

The UDACT-300A can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.



### Ordering Information

Model	Description
RM-1008A	Eight Relay Circuit Module c/w eight Form C relays (Rated for 28 VDC @ 1 Amp. max. per relay)
PR-300	Polarity Reversal and City Tie Module
UDACT-300A	Universal Digital Alarm Communication Transmitter/Dialer Module

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CAT. 5624  
 Rev. 6



### Description

Mircom's FA-1008KADS Fire Alarm Control Unit is a microprocessor based unit designed for maximum flexibility and easy installation. Fully configurable from the front panel using the push buttons and DIP switches, it enables the user to configure the system to meet their specific requirements.

The FA-1008KADS consists of one MCC-1024-6ADS Main Chassis in a UB-1024DS back box with a DOX-1024DS door. The MCC-1024-6ADS Main Chassis comes complete with 8 Class B (Style B) Initiating Circuits which may be configured as 4 Class A (Style D) Circuits. It can be expanded up to 24 Class B or 12 Class A circuits with the addition of the DM-1008A Initiating Circuit Module. In addition it comes equipped with 4 Class A/B (Style Z/Y) Indicating circuits which are each rated at 1.7 Amps. The Main Chassis also includes a 6 Amp Power Supply which powers the system and supplies two 4-wire resettable regulated smoke power supply of 24 VDC 200mA maximum each.

The MCC-1024-6ADS also allows for the addition of two SGM-1004A Signal Modules or two RM-1008A Relay modules in place of the DM-1008A Initiating Circuit Adder Modules. (Maximum of 3 Adder modules) The backbox provides space for up to 18 AH Gel Cell batteries.

### Features

- Listed to UL 864, 9th edition
- 8 Class B (Style B) Initiating Circuits which may be configured as 4 Class A (Style D) Circuits. Expandable up to 24 Class B or 12 Class A Initiating Circuits
- 4 Class A/B (Style Z/Y) Indicating Circuits with individual trouble indicators (1.7 Amps max. per circuit)
- Each Indicating Circuit can be configured as Silenceable or Non-Silenceable. Audibles may be configured as Steady, Temporal Code, California Code or March Time
- Each Initiating Circuit can be configured as Alarm, Supervisory, Waterflow or Trouble
- Two LEDs per Initiating circuit; one for Trouble and one for Status
- Initiating and Indicating Circuits may be individually disconnected by a DIP switch
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two-Stage Operation and One Man Walk Test
- Alarm Verification on Initiating Circuits
- Subsequent Alarm, Supervisory and Trouble operation
- Two outputs for 4 wire resettable smoke power supply (200 mA Max. each)
- Auxiliary relay contacts for Common Alarm and Common Supervisory as well as a Common Trouble Relay (Each relay contact Form C, 28 VDC @ 1 Amp (resistive))
- RS-485 Interface for RA-1000 Remote Multiplex Annunciators
- Interface for Remote Trouble Indicator
- Easy configuration via push buttons and DIP switches on the front panel
- Extensive Transient Protection
- 6 Amp Power Supply

### Optional Modules

- UDACT-300A Digital Communicator
- PR-300 Polarity Reversal and City Tie Module



**CATALOG NUMBER 5627**

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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Application

The Mircom FA-1008KADS is designed as an economical Microprocessor Based Fire Alarm Control Unit which is expandable up to 24 display points. Its modular design suits various applications. Ideal for applications such as small institutional and commercial buildings, shopping malls, offices and public establishments, the FA-1008KADS is configurable to meet virtually all requirements. The unit is designed to be easy in its installation, operation and maintenance. This makes the system cost effective and very reliable for its intended applications.

## Dimensions

(minus built-in trim ring): 26"H x 14.5"W x 4.2"D

## Electrical Ratings

<b>AC Line Voltage</b>	120V 60Hz / 240V 50 Hz, 2A / 1A primary	
<b>Power Supply Ratings</b>	6 Amps. max. (secondary)	
<b>For Indicating Circuits</b>	24VDC unfiltered, 5 Amps maximum	
<b>Charging Capability</b>	10-24 AH batteries	
<b>Current Consumption</b>	Standby	200 mA
	Alarm	350 mA

## Ordering Information

Model	Description
<b>Fire Alarm Control Unit</b>	
FA-1008KADS	Microprocessor Based Fire Alarm Control Unit expandable up to 24 display points. Includes MCC-1024-6ADS Main Chassis, UB-1024DS back box and DOX-1024DS white door.
<b>Adder Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight Form C relays (Rated for 28 VDC @ 1 Amp. max. per relay)
<b>Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communication Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAM-1016TZDS	Main Remote LED Annunciator c/w 16 Bi-Colored LEDs and 16 Trouble LEDs
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs and 32 Trouble LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
RTI-1	Remote Trouble Indicator
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
<b>End of Line Resistors</b>	
MP-300	EOL Resistor Plate
MP-300R	EOL Resistor Plate, Red

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CAT. 5627  
Rev. 0



### Description

Mircom's FA-300 Series fire alarm control panels consist of eight and twelve zone models which are equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands.

Mircom's FA-300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

All of the FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Relay modules.

The FA-300 Series panels come complete with a white door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Available in eight and twelve zone models with an integrated UDACT/Digital Communicator on select models
- Front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- Two Stage operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



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## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

The devices on the i3 zone are dirty.

#### *Out of sensitivity*

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### *Freeze trouble*

The device has detected a freeze condition, e.g. the temperature is below 41°F / 5°C (available only on model 2WT-B))

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Sileneceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

Select FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

## FA-300 Series LED Version Models



### FA-301-8LW / FA-301-8LDW Eight Zone LED Display Fire Alarm Control Panels

The FA-301-8LW and FA-301-8LDW are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-8LDW is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-8LW and FA-301-8LDW are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-8LW: 26”H x 14.5”W x 4.5”D  
FA-301-8LDW: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

### FA-301-12LW / FA-301-12LDW Twelve Zone LED Display Fire Alarm Control Panels

The FA-301-12LW and FA-301-12LDW are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-12LDW is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-12LW and FA-301-12LDW are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12LW: 26”H x 14.5”W x 4.5”D  
FA-301-12LDW: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



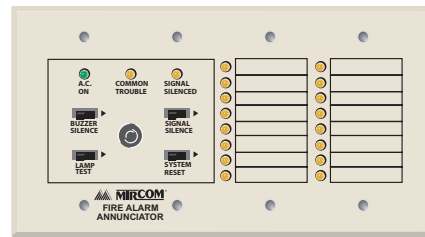
### RAM-300LCDW Remote LCD Annunciator

The RAM-300LCDW provides remote LCD annunciation through a two line by 20 character LCD display. The RAM-300LCDW provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDW has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDW is available in a white enclosure.



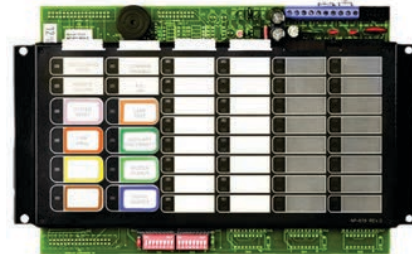
### SRM-312W Smart Relay Module

The SRM-312W provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312W is DIP switch configurable and connects to the RS-485 bus. The SRM-312W is available in a white enclosure.



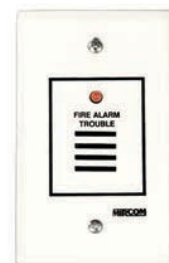
### RAM-208/RAM-216 Remote LED Annunciators

The RAM-208 and RAM-216 provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 and RAM-216 are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a white finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

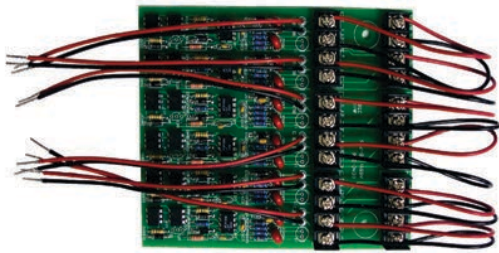
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016 comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

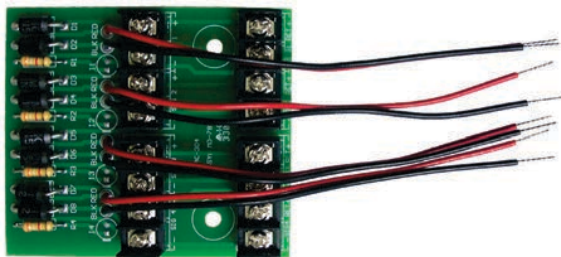
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B") initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12 series panel.



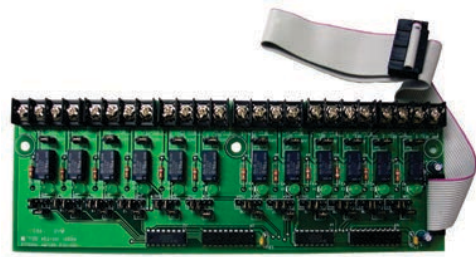
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits and is used with the FA-301-12 series panels.



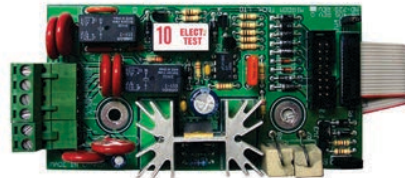
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for on-site front panel programming of the FA-300 Series LED version panels. The CFG-300 plugs into the FA-300 main board to provide a two line by 20 character LCD display. The FA-300 Series LED version panels are configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (Please refer to Battery Calculation Chart in manual for more details.) The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.



## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

4 to 12 AH

### Current Consumption

Model	Standby	Alarm
FA-301-8L(D)	136mA (96 mA*)	366mA (326 mA*)
FA-301-12L(D)	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information.)

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max

## Ordering Information

Model	Description
<b>Control Panels</b>	
FA-301-8LW	Eight-Zone LED Display Fire Alarm Control Panel
FA-301-8LDW	Eight-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator
FA-301-12LW	Twelve-Zone LED Display Fire Alarm Control Panel
FA-301-12LDW	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator
<b>Remote Annunciators and modules</b>	
RAM-300LCDW	Remote LCD Annunciator
RAM-208	Eight zone Remote LED Annunciator
RAM-216	Sixteen zone Remote LED Annunciator
RAM-1016	Sixteen zone Remote LED Annunciator
RAM-1016TZ	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312W	Remote Relay Module
RTI-1	Remote Trouble Indicator
BB-1001	White Enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WP	White Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WP
<b>Adder Modules</b>	
ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300W	Active End-of-Line Resistor with white mounting plate
<b>Accessories</b>	
FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring
UIMA	Universal Programming Tool

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CAT. 5660  
Rev. 6



### Description

Mircom's FA-300 Series fire alarm control panels consist of eight and twelve zone models which are equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands.

Mircom's FA-300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

All of the FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Relay modules.

The FA-300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Listed to UL 864, 9th edition
- Available in eight and twelve zone configurations with an integrated UDACT/Digital Communicator on select models
- Front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



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NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

The devices on the i3 zone are dirty.

#### *Out of sensitivity*

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### *Freeze trouble*

The device has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B))

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Sileneceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

Select FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

## FA-300 Series LED Version Models



### FA-301-8LR / FA-301-8LDR Eight Zone LED Display Fire Alarm Control Panels

The FA-301-8LR and FA-301-8LDR are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-8LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-8LR and FA-301-8LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-8LR: 26”H x 14.5”W x 4.5”D  
FA-301-8LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W



### FA-301-12LR / FA-301-12LDR Twelve Zone LED Display Fire Alarm Control Panels

The FA-301-12LR and FA-301-12LDR are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-12LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-12LR and FA-301-12LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12LR: 26”H x 14.5”W x 4.5”D  
FA-301-12LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



### RAM-300LCDR/RAM-300LCDW Remote LCD Annunciator

The RAM-300LCD provides remote LCD annunciation through a two line by 20 character LCD display. The RAM-300LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD is available in a red (RAM-300LCDR) or white (RAM-300LCDW) enclosure and comes complete with a CAT-30 lock and key.



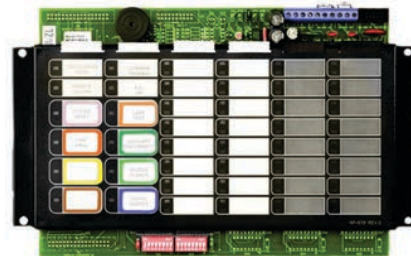
### SRM-312R Smart Relay Module

The SRM-312R provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312R is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



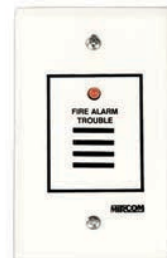
### RAM-208/RAM-216 Remote LED Annunciators

The RAM-208 and RAM-216 provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 and RAM-216 are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

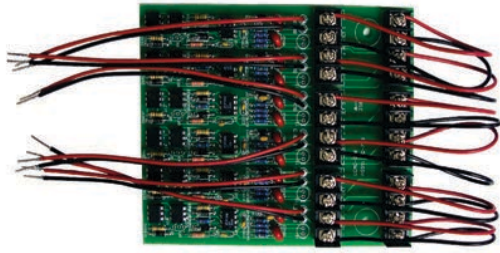
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016 comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

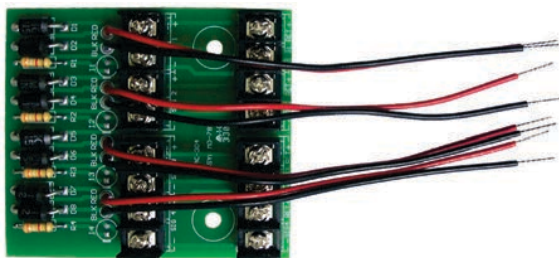
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B" initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12 series panel.



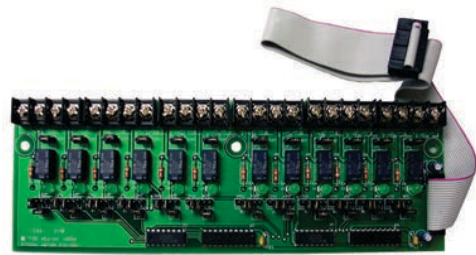
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits.



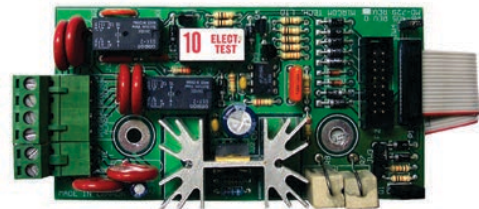
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite front panel programming of the FA-300 Series LED version panels. The CFG-300 plugs into the FA-300 main board to provide a two line by 20 character LCD display. The FA-300 Series LED version panels are configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (Please refer to Battery Calculation Chart in manual for more details.) The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.

## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

10 AH

### Current Consumption

Model	Standby	Alarm
FA-301-8L(D)	136mA (96 mA*)	366mA (326 mA*)
FA-301-12L(D)	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information.)

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max.

## Ordering Information

### Model

### Description

#### Control Panels

FA-301-8LR	Eight-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-8LDR	Eight-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
FA-301-12LR	Twelve-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-12LDR	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)

#### Remote Annunciators and modules

RAM-300LCDR	Remote LCD Annunciator (Red enclosure)
RAM-300LCDW	Remote LCD Annunciator (White enclosure)
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module
RTI-1	Remote Trouble Indicator
BB-1001R	Red Semi-Flush Enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WPR	Red Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WPR

#### Adder Modules

ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300R	Active End-of-Line Resistor with red mounting plate

#### Accessories

FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring
UIMA	Universal Programming Tool

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CAT. 5661  
Rev. 7



### Description

Mircom's FA-300 Series fire alarm control panels consist of 6 and 12 zone models which are equipped with a two line by 20 character back-lit LCD display, numerical keypad and an integrated UDACT/Digital Communicator. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The FA-300 Series panels are configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

The FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Smart Relay modules.

All FA-300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. Optional trim rings are available for semi-flush mounting.

### Features

- Listed to UL 864, 9th edition
- Available in 6 and 12 zone models
- Integrated UDACT/Digital Communicator on select models
- Equipped with 2 line by 20 character back-lit LCD display and numerical keypad
- Front panel and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim rings for semi-flush mounting



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## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module.

Each Initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

This trouble indicates that one or more device on the i3 zone is dirty.

#### *Out of sensitivity*

This trouble indicates that one or more device on the i3 zone is out of sensitivity range and cannot detect an alarm condition.

#### *Freeze trouble*

This trouble indicates that a device on the i3 zone has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B).

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Silenceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

The FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

## FA-300 Series LCD Version Models



### FA-300-6DR Six Zone LCD Display Fire Alarm Control Panel

The FA-300-6DDR is equipped with six Class “B” (Style “B”) initiating circuits and two Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) One ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-302 Two Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The cabinet will support up to 12AH batteries. The panel can be semi-flush mounted with the optional FA-300TRB trim ring.

#### Dimensions

FA-300-6DR: 20”H x 14.5”W x 4.5”D

FA-300TRB: 22.5”H x 17”W



### FA-300-6DDR Six Zone LCD Display Fire Alarm Control Panel with UDACT/Digital Communicator

The FA-300-6DDR is equipped with six Class “B” (Style “B”) initiating circuits and two Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) One ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-302 Two Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-300-6DDR has a built-in UDACT/Digital Communicator and the cabinet will support up to 12 AH batteries. The panel can be semi-flush mounted with the optional FA-300TRB trim ring.

#### Dimensions

FA-300-6DDR: 20”H x 14.5”W x 4.5”D

FA-300TRB: 22.5”H x 17”W



### FA-301-12DDR Twelve Zone LCD Display Fire Alarm Control Panel with UDACT/Digital Communicator

The FA-301-12DDR is equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits @ 1.7 Amps maximum. (Total of 5 Amps). One ICAC-306 Six Initiating Circuit Class A Converter Module may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the Indicating circuits. The FA-301-12DDR has a built-in UDACT/Digital Communicator and the cabinet will support up to 12 AH batteries. The panel can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12DDR: 26”H x 14.5”W x 4.5”D

FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



### RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDR comes complete with a red enclosure and a CAT-30 Lock and key.



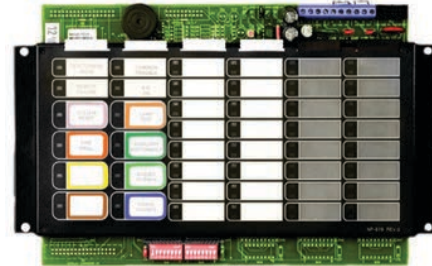
### SRM-312R Smart Relay Module

The SRM-312 provides twelve configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312 is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



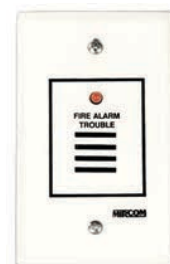
### RAM-208R/RAM-216R Remote LED Annunciators

The RAM-208R and RAM-216R provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208R and RAM-216R are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

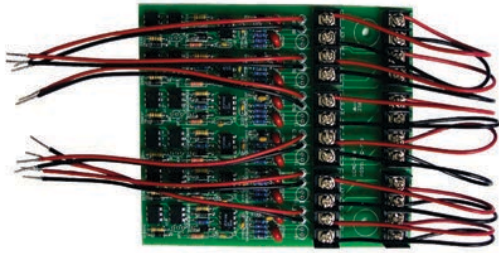
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016TZDS comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

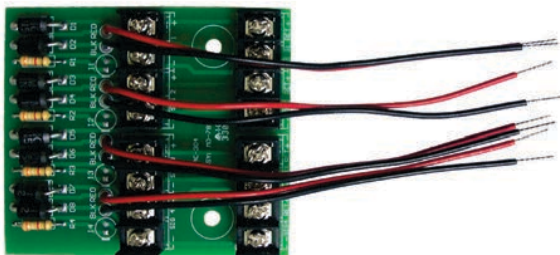
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



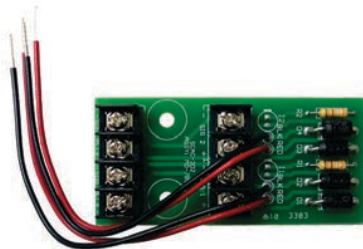
### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B") initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12DDR series panel.



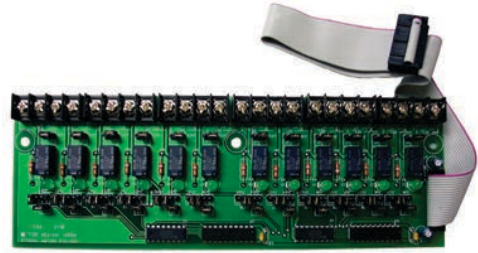
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits and is used with the FA-301-12DDR series panels.



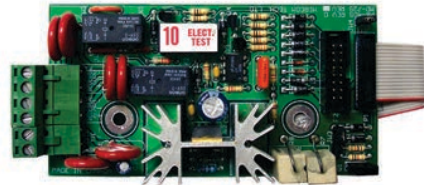
### OCAC-302 Two Indicating Circuit Class "A" Converter Module

The OCAC-302 converts two Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-302 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits and is used with the FA-300-6DDR series panels.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. *(Please refer to Battery Calculation Chart in manual for more details.)* The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.

## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

4 to 12 AH

### Current Consumption

Model	Standby	Alarm
FA-300-6D(D)	142 mA (112 mA*)	312 mA (282 mA*)
FA-301-12DD	174mA (104 mA*)	444mA (394 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information).

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit.

Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max.

## Ordering Information

Model	Description
<b>Control Panels</b>	
FA-300-6DR	Six Zone LCD Display Fire Alarm Control Panel
FA-300-6DDR	Six Zone LCD Display Fire Alarm Control Panel with built-in UDACT/Digital Communicator
FA-301-12DDR	Twelve Zone LCD Display Fire Alarm Control Panel with built-in UDACT/Digital Communicator
<b>Remote Annunciators and modules</b>	
RAM-300LCDR	Remote LCD Annunciator (Red enclosure)
RAM-300LCDW	Remote LCD Annunciator (White enclosure)
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module with red enclosure
RTI-1	Remote Trouble Indicator
BB-1001R	Red enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WPR	Red Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WPR
<b>Adder Modules</b>	
ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300R	Active End-of-Line Resistor with red mounting plate
<b>Accessories</b>	
FA-300TRB	Black Semi-Flush Trim Ring for FA-300-6 enclosures
FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring for FA-301-12 enclosures
UIMA	Universal Programming Tool

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CAT. 5662  
Rev. 5



### Description

The FA-300-6DDR-CG is a six zone conventional fire alarm control unit that is approved by the United States Coast Guard for indoor marine applications. The FA-300-6DDR-CG is equipped with six Class “B” (Style “B”) initiating circuits and two Class “B” (Style “Y”) notification circuits rated @ 1.7 Amps maximum. Optional Class A converter modules are available for both the initiating and notification appliance circuits. The control unit features a 40 character back-lit LCD display, numerical keypad, integrated UDACT/Digital Communicator and brackets to secure the internal batteries.

The FA-300-6DDR-CG is configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. The control unit is easy to install and simple to operate and configure, enabling the installer to configure the system to meet their specific requirements.

The FA-300-6DDR-CG is also equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD or LED annunciators and Remote Smart Relay modules. It comes complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Approved by the United States Coast Guard to Standard 46 CFR 161.002 for Fire Protective Systems
- Listed to UL 864, 9th edition
- Six Class “B” (Style “B”) initiating circuits and two Class “B” (Style “B”) notification appliance circuits which may be configured as Class “A” (Style “D”) using Class “A” converter modules
- Integrated UDACT/Digital Communicator
- Equipped with 2 line by 20 character back-lit LCD display and numerical keypad
- Front panel and PC programmable
- Remote upload/download capabilities
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/ Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



S7005



S7005

United States  
Coast Guard  
Approved

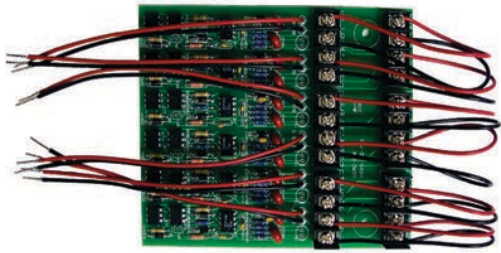
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**CATALOG NUMBER 5668**

NOT TO BE USED FOR INSTALLATION PURPOSES.

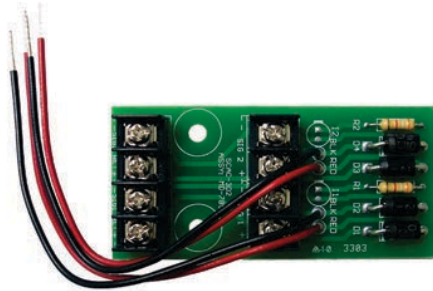
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## Adder Modules



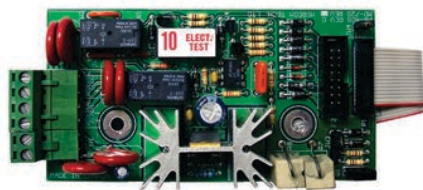
### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts the six Class "B" (Style "B") initiating circuits on the FA-300-6DDR-CG main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the main board.



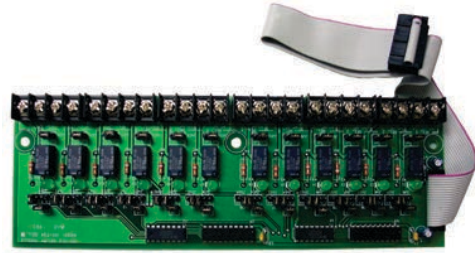
### OCAC-302 Two Indicating Circuit Class "A" Converter Module

The OCAC-302 converts the two Class "B" (Style "Y") notification appliance circuits on the FA-300-6DDR-CG main board to Class "A" (Style "Z") circuits. The OCAC-302 is equipped with wire leads to connect to the main board.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.

## Specifications

<b>AC Input</b>	
120VAC @ 60Hz / 240VAC @ 50Hz	
<b>Standby Power</b>	
24VDC standby batteries	
<b>Charging Capability</b>	
4 to 12 AH	
<b>Current Consumption</b>	
<b>Standby</b>	<b>Alarm</b>
142 mA	312 mA
<b>Dimensions</b>	
FA-300-6DDR-CG	20"H x 14.5"W x 4.5"D
FA-300TRB	22.5"H x 17"W
<b>Indicating Circuits</b>	
Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.	
<b>Aux supply (non resetable)</b>	
Power limited / 22.3VDC regulated / 500mA max	
<b>4-wire smoke supply (resetable)</b>	
Power limited/22.3VDC regulated / 300mA max	
<b>Unfiltered supply (full wave rectified)</b>	
Power limited / 24VDC unfiltered / 1.7A max at 49°C	
<b>Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)</b>	
FormC / 28VDC / 1A max.	

## Remote Annunciators



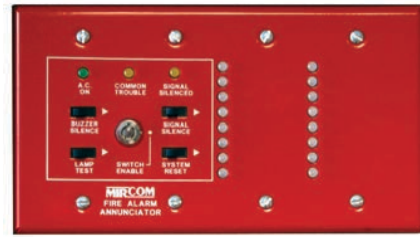
### RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDR comes complete with a red enclosure and a CAT-30 Lock and key.



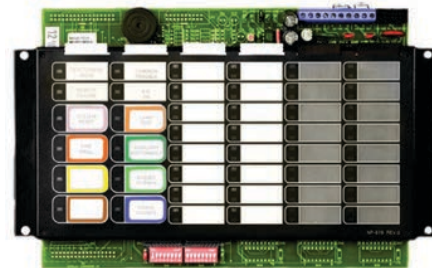
### SRM-312R Smart Relay Module

The SRM-312 provides twelve configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312 is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



### RAM-208R/RAM-216R Remote LED Annunciators

The RAM-208R and RAM-216R provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208R and RAM-216R are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

The RAM-1016TZDS Remote LED Annunciator provides sixteen points of LED annunciation. The RAM-1016TZDS comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber) as well individual trouble LEDs. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. The RAM-1016TZDS mount in a BB-1001(R) enclosure.



### RTI-1 Remote Trouble Indicator

Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.



## Ordering Information

Model	Description
<b>Control Unit</b>	
FA-300-6DDR-CG	Six Zone LCD Display Marine Fire Alarm Control Unit with built-in UDACT/Digital Communicator
<b>Adder Modules</b>	
ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators and Modules</b>	
RAM-300LCDR	Remote LCD Annunciator with a Red enclosure
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module with red enclosure
RTI-1	Remote Trouble Indicator
BB-1001R	Red enclosure for RAM-1016TZDS
<b>Accessories</b>	
FA-300TRB	Black Semi-Flush Trim Ring for FA-300-6DDR-CG
UIMA	Universal Programming Tool

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CAT. 5668  
Rev. 1



## Description

Mircom's FA-262 is a versatile, power-packed fire alarm control panel designed for small building fire protection. With its exceptional feature set, a power supply that will handle the panel's full rated load and flexible front panel programming for quick and simple configuration to suit the application at hand, the FA-262 is a powerful, versatile panel, ideally suited for small, fast turnaround fire applications.

The FA-262 is equipped with two Style B (Class B) initiating circuits, two Style Y (Class B) notification appliance circuits, one Form "C" common alarm relay, one Form "C" common trouble relay, one non-switched Aux. Power output and one switched Aux. Power output. The panel also has individual alarm, supervisory and trouble LED indicators per zone.

The panels feature a 6 Amp power supply which provides a full 3.0A of NAC power, 0.5AAux. power with the balance to run the panel and charge the batteries. No extra transformers or added power supplies are required. In addition the panels has 500mA of Auxiliary power with switched and unswitched outputs.

The FA-262 is field programmable from the front panel using the front panel LEDs and switches for simple, quick programming. All initiating and indicating circuits as well as system functions are configured from the front panel.

## Features

- Listed to UL 864, 9th edition
- 2 Style B (Class 'B') dual-use zones
- 2 Style Y (Class 'B') notification appliance circuits
- 6 Amp power supply
- 500mA of Aux. power
- Common alarm relay
- Common trouble relay
- Integral battery charger
- 'Secur-Bus' for dialer and remote annunciation
- Event buffer
- Six programmable zone options
- Class A capability, both NAC and Zones
- One-man walk test
- Programmable NAC silence timer
- 3 LEDs per zone
- Front panel programming

## Optional Modules

- Dual line dialer module
- City tie/polarity reversal module
- Relay module
- Style D (Class A) zone module
- Remote 5 zone LED annunciator
- Flush trim ring

Each initiating circuit can be individually configured as Null (zone not used), Instant (smokes, contacts instant), Verify (smokes verified, contacts instant), Waterflow, Supervisory or 4-Wire Verify.

An optional Style D (Class A) converter module converts both Style B (Class B) initiating circuits to Style D (Class A).

Each NAC zone is power limited and provides 1.5A at 24VDC full wave rectified for heavy duty signal loads. The NAC circuits can be configured for Steady, Temporal or Strobe. The notification circuits are jumper selectable to be configured as one Style Z (Class A) zone.

The FA-262 utilizes "Secur-Bus" which is a 4 wire port for communication and power to accessory components. All Secur-Bus components are supervised. Secur-Bus components include the Dual line dialer modules and the remote LED annunciators.



S7010



S7010



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313-97-E

**CATALOG NUMBER 5672****NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

# Engineering Specifications

The contractor shall supply a 2 zone, fully supervised fire alarm control panel. The panel shall supervise and monitor both 2-wire smoke detectors and contact alarm initiating devices on each two-wire zone.

The control panel shall be complete with two Style B (Class 'B') alarm initiating zones, two Style Y (Class 'B') notification appliance circuits, one Form 'C' common alarm relay, one Form 'C' common trouble relay, one non-switched Aux. power output, and one switched Aux. power output. The panel shall include individual alarm, supervisory and trouble LED indicators per zone.

Each alarm initiating zone shall be capable of being individually programmed for smoke/contact instant alarm, smoke auto-verify and contact instant, supervisory, water flow or four-wire smoke auto-verify service. Each alarm initiating zone shall limit the maximum current to 60mA and be supervised for opens and ground faults. An optional module that mounts inside the cabinet shall be available to convert the two alarm initiating zones to Style D (Class 'A').

Each notification appliance circuit shall be supervised for opens, shorts and ground faults. Each notification appliance circuit shall be capable of being individually programmed as steady or temporal (ANSI cadence). Each notification appliance circuit shall supply 24VDC full wave rectified at 1.5A and be power limited. NAC's shall be capable of being jumper programmed to operate as a single Style Z (Class 'A') NAC. NAC #2 shall also be capable of being programmed as strobe whereby the NAC will only silence after the panel is reset.

The total Aux. power shall be 24VDC, 500mA max. and be power limited. The control panel power supply shall support the Aux. power (0.5A), the two NAC's (3.0A), the battery charger (0.35A) and the control panel without the addition of any other power supplies or components.

The control panel shall include a four-wire output which shall provide power and communication for up to four remote trouble indicators and up to four remote alarm annunciator/trouble indicators. Each remote shall be supervised for its presence.

The panel shall accommodate, within the cabinet, an optional three (3) relay module. Each relay shall be Form C and be individually selectable for alarm, supervisory or trouble operation. Relay contacts will be rated at 2A @ 30 VDC.

The control panel shall accommodate, within the cabinet, an optional local energy city-tie/polarity reversal combination module.

The control panel shall include individual trouble indicators for NAC 1, NAC 2, battery, ground, signals silenced, common alarm, common trouble and AC on. The control panel shall also include controls for trouble silence, signal silence, system reset and lamp test. The switch to put the panel into the programming mode or walk test mode shall only be accessible by a qualified installer. Indicators shall always be visible and the user controls shall only be accessible once the locked cabinet door is opened. Access to batteries and system components shall be user restricted by complete dead-front construction.

The panel shall include programmable options for a 60 sec. silence inhibit period, water flow silence inhibit, automatic NAC silence and silent/audible one man walk test. All panel programming shall be done using the front panel controls and indicators. Program data shall be stored in non-volatile memory that retains the information when all power is removed from the panel. The panel shall also include an event buffer that is installer accessible so that the last 20 events can be reviewed.

## Technical Data

<b>AC Power</b>	120V 60Hz 1.5A, 240V 50Hz
<b>NAC 1</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited, Style Y, (Class 'B')
<b>NAC 2</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited, Style Y (Class 'B')
<b>NAC 1/2 as Style Z (Class A)</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited
<b>Zones</b>	24 VDC filtered regulated, 60mA alarm current max., power limited, 100 ohms max. line resistance
<b>DAT/CLK</b>	Data and clock line for remote module communications. (Secur-Bus)
<b>Aux+</b>	24 VDC filtered regulated, 500mA max., PTC overload protected, power limited

<b>COM</b>	Non-switched return for AUX+ power, 500mA
<b>SCOM</b>	Switched return for AUX+ power, 500mA
<i>Note: The 500mA from AUX+ is shared between the COM and SCOM returns. Internal and remote module power is supplied from the AUX+ and COM supply.</i>	
<b>Alarm relay contacts</b>	30 VDC, 2A max.
<b>Trouble relay contacts</b>	30 VDC, 2A max.
<b>Battery charger</b>	24 VDC, 350mA max. Will charge up to 16AH* sealed lead-acid batteries max.
<b>Cabinet</b>	14 1/2" W x 15" H x 4 1/4" D - Black

\*External cabinet required for batteries larger than 12AH.

## Ordering Information

Model	Description
FA-262R	Two Zone Fire Alarm Control Unit, Red
FA-262W	Two Zone Fire Alarm Control Unit, White
ICAC-262	Two Zone Style D (Class A) Module
RM-263	Three Programmable Form "C" Relays, 2A@30VDC
PR-281	Local Energy & Polarity Reversal Module
RTI-265	Remote Trouble Indicator
RAM-265	Five Zone Remote Annunciator
FA-260TRB	Semi-Flush Trim Ring, Black

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CAT. 5672  
Rev. 3



## Description

Mircom's FA-265 is a versatile, power-packed fire alarm control panel designed for small building fire protection. With its exceptional feature set, a power supply that will handle the panel's full rated load and flexible front panel programming for quick and simple configuration to suit the application at hand, the FA-265 is a powerful, versatile panel, ideally suited for small, fast turnaround fire applications.

The FA-265 is equipped with five Style B (Class B) initiating circuits, two Style Y (Class B) notification appliance circuits, one Form "C" common alarm relay, one Form "C" common trouble relay, one non-switched Aux. Power output and one switched Aux. Power output. The panel also has individual alarm, supervisory and trouble LED indicators per zone.

The panels feature a 6 Amp power supply which provides a full 3.0A of NAC power, 0.5AAux. power with the balance to run the panel and charge the batteries. No extra transformers or added power supplies are required. In addition the panels has 500mA of Auxiliary power with switched and unswitched outputs.

The FA-265 is field programmable from the front panel using the front panel LEDs and switches for simple, quick programming. All initiating and indicating circuits as well as system functions are configured from the front panel.

## Features

- Listed to UL 864, 9th edition
- 5 Style B (Class 'B') dual-use zones
- 2 Style Y (Class 'B') notification appliance circuits
- 6 Amp power supply
- 500mA of Aux. power
- Common alarm relay
- Common trouble relay
- Integral battery charger
- 'Secur-Bus' for dialer and remote annunciation
- Event buffer
- Six programmable zone options
- Class A capability, both NAC and Zones
- One-man walk test
- Programmable NAC silence timer
- 3 LEDs per zone
- Front panel programming

## Optional Modules

- Dual line dialer module
- City tie/polarity reversal module
- Relay module
- Style D (Class A) zone module
- Remote 5 zone LED annunciator
- Flush trim ring

Each initiating circuit can be individually configured as Null (zone not used), Instant (smokes, contacts instant), Verify (smokes verified, contacts instant), Waterflow, Supervisory or 4-Wire Verify.

An optional Style D (Class A) converter module converts both Style B (Class B) initiating circuits to Style D (Class A).

Each NAC zone is power limited and provides 1.5A at 24VDC full wave rectified for heavy duty signal loads. The NAC circuits can be configured for Steady, Temporal or Strobe. The notification circuits are jumper selectable to be configured as one Style Z (Class A) zone.

The FA-265 utilizes "Secur-Bus" which is a 4 wire port for communication and power to accessory components. All Secur-Bus components are supervised. Secur-Bus components include the Dual line dialer modules and the remote LED annunciators.



S7010



S7010



7165-1477:150

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313-97-E

**CATALOG NUMBER 5673****NOT TO BE USED FOR INSTALLATION PURPOSES.**

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# Engineering Specifications

The contractor shall supply a 5 zone, fully supervised fire alarm control panel. The panel shall supervise and monitor both 2-wire smoke detectors and contact alarm initiating devices on each two-wire zone.

The control panel shall be complete with five Style B (Class 'B') alarm initiating zones, two Style Y (Class 'B') notification appliance circuits, one Form 'C' common alarm relay, one Form 'C' common trouble relay, one non-switched Aux. power output, and one switched Aux. power output. The panel shall include individual alarm, supervisory and trouble LED indicators per zone.

Each alarm initiating zone shall be capable of being individually programmed for smoke/contact instant alarm, smoke auto-verify and contact instant, supervisory, water flow or four-wire smoke auto-verify service. Each alarm initiating zone shall limit the maximum current to 60mA and be supervised for opens and ground faults. An optional module that mounts inside the cabinet shall be available to convert the five alarm initiating zones to Style D (Class 'A').

Each notification appliance circuit shall be supervised for opens, shorts and ground faults. Each notification appliance circuit shall be capable of being individually programmed as steady or temporal (ANSI cadence). Each notification appliance circuit shall supply 24VDC full wave rectified at 1.5A and be power limited. NAC's shall be capable of being jumper programmed to operate as a single Style Z (Class 'A') NAC. NAC #2 shall also be capable of being programmed as strobe whereby the NAC will only silence after the panel is reset.

The total Aux. power shall be 24VDC, 500mA max. and be power limited. The control panel power supply shall support the Aux. power (0.5A), the two NAC's (3.0A), the battery charger (0.35A) and the control panel without the addition of any other power supplies or components.

The control panel shall include a four-wire output which shall provide power and communication for up to four remote trouble indicators and up to four remote alarm annunciator/trouble indicators. Each remote shall be supervised for its presence.

The panel shall accommodate, within the cabinet, an optional three (3) relay module. Each relay shall be Form C and be individually selectable for alarm, supervisory or trouble operation. Relay contacts will be rated at 2A @ 30 VDC.

The control panel shall accommodate, within the cabinet, an optional local energy city-tie/polarity reversal combination module.

The control panel shall include individual trouble indicators for NAC 1, NAC 2, battery, ground, signals silenced, common alarm, common trouble and AC on. The control panel shall also include controls for trouble silence, signal silence, system reset and lamp test. The switch to put the panel into the programming mode or walk test mode shall only be accessible by a qualified installer. Indicators shall always be visible and the user controls shall only be accessible once the locked cabinet door is opened. Access to batteries and system components shall be user restricted by complete dead-front construction.

The panel shall include programmable options for a 60 sec. silence inhibit period, water flow silence inhibit, automatic NAC silence and silent/audible one man walk test. All panel programming shall be done using the front panel controls and indicators. Program data shall be stored in non-volatile memory that retains the information when all power is removed from the panel. The panel shall also include an event buffer that is installer accessible so that the last 20 events can be reviewed.

## Technical Data

<b>AC Power</b>	120V 60Hz 1.5A, 240V 50Hz
<b>NAC 1</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited, Style Y, (Class 'B')
<b>NAC 2</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited, Style Y (Class 'B')
<b>NAC 1/2 as Style Z (Class A)</b>	24 VDC full-wave rectified, 1.5A max., PTC overload protected, power limited
<b>Zones</b>	24 VDC filtered regulated, 60mA alarm current max., power limited, 100 ohms max. line resistance
<b>DAT/CLK</b>	Data and clock line for remote module communications. (Secur-Bus)
<b>Aux+</b>	24 VDC filtered regulated, 500mA max., PTC overload protected, power limited

<b>COM</b>	Non-switched return for AUX+ power, 500mA
<b>SCOM</b>	Switched return for AUX+ power, 500mA
<i>Note: The 500mA from AUX+ is shared between the COM and SCOM returns. Internal and remote module power is supplied from the AUX+ and COM supply.</i>	
<b>Alarm relay contacts</b>	30 VDC, 2A max.
<b>Trouble relay contacts</b>	30 VDC, 2A max.
<b>Battery charger</b>	24 VDC, 350mA max. Will charge up to 16AH* sealed lead-acid batteries max.
<b>Cabinet</b>	14 1/2" W x 15" H x 4 1/4" D - Black

\*External cabinet required for batteries larger than 12AH.

## Ordering Information

Model	Description
FA-265R	Five Zone Fire Alarm Control Unit, Red
FA-265W	Five Zone Fire Alarm Control Unit, White
ICAC-265	Five Zone Style D (Class A) Module
RM-263	Three Programmable Form "C" Relays, 2A@30VDC
PR-281	Local Energy & Polarity Reversal Module
RTI-265	Remote Trouble Indicator
RAM-265	Five Zone Remote Annunciator
FA-260TRB	Semi-Flush Trim Ring, Black

NOT TO BE USED FOR INSTALLATION PURPOSES.



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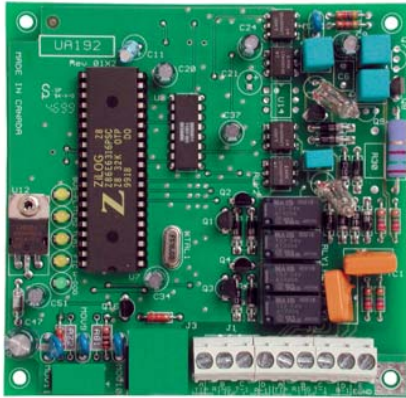
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CAT. 5673  
Rev. 3

The FA-260 Series Fire Alarm Control Panels can be configured to meet virtually any requirement. To facilitate this flexibility, the FA-260 Series panels have a number of add-on modules which allow the system to perform certain functions.



UDACT-286

### UDACT-286 Dual Line Digital Dialer

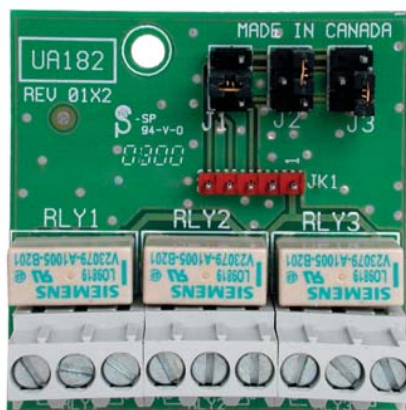
The UDACT-286 Dual Line Digital Dialer Module allows the FA-260 Series Fire Alarm Control Panels to use two phone lines to call a Central Station and report all Alarm, Trouble or Supervisory conditions. Requiring two supervised telephone lines, the UDACT-286 can be programmed to use the Security Industry Association (SIA) Digital Communication Standard (DCS), Ademco Contact ID and 10/20 bps communication protocols. The UDACT-286 connects to the FA-260 Series Fire Alarm Control Panels via an RS-485 interface. The MR-2844 Handheld Programmer is required to program the UDACT-286.

### PR-281 Polarity Reversal/Municipal Box Module

The PR-281 Polarity Reversal/Municipal Box Module is jumper programmable for polarity reversal operation or Municipal Box operation, Single or Separate Alarm and AC Fail delay. The UDACT-286 connects to the FA-260 Series Fire Alarm Control Panels via an RS-485 interface.



PR-281



RM-263

### RM-263 Auxiliary Relay Module

The RM-263 Auxiliary Relay Module provides the FA-260 Series with three form 'C' configurable auxiliary relays. Each relay is jumper programmable to activate on 'Alarm', 'Supervisory' or 'Trouble' mode and is rated for 30VDC @ 2 Amp max.



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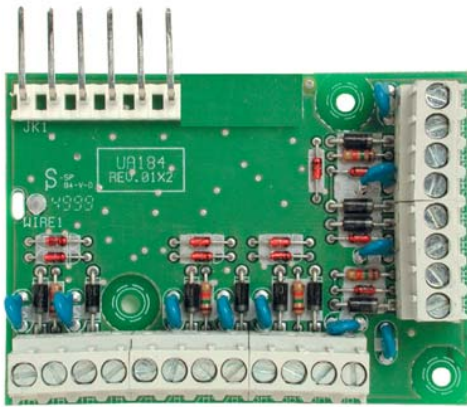
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313-97-E

**CATALOG NUMBER 5684**

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ICAC-265

## ICAC-262/ICAC-265 Class A (Style D) Input Converter Module

The ICAC-262 Zone Input Converter Module converts the two zones on the FA-262 fire alarm control panel from Class 'B' (Style 'B') to Class 'A' (Style 'D'). The ICAC-265 Zone Input Converter Module converts the five zones on the FA-265 fire alarm control panel from Class 'B' (Style 'B') to Class 'A' (Style 'D'). Both modules mount in the corresponding FA-262/265 fire alarm back box.

## MR-2844 Handheld Programmer

The MR-2844 is an LCD keypad style programmer specifically design to program the Dual Line Dialer and the FA-260 Series fire alarm control panels. The programmer includes a power/communications cable which plugs into the Dual Line Dialer. Once connected, the programmer will power up and is ready to program the dialer and the panel.



MR-2844

## Ordering Information

Model	Description
ICAC-262	Two Zone Style D (Class A) Input Converter Module
ICAC-265	Five Zone Style D (Class A) Input Converter Module
RM-263	Auxiliary Relay Module
PR-281	Polarity Reversal/Municipal Box Module
UDACT-286	Dual Line Digital Dialer
MR-2844	Handheld Programmer

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CAT. 5684  
 Rev. 2



## Description

The Mircom FA-1025T panel is designed for non-coded fire alarm systems in small commercial, institutional and industrial occupancies. A slim-line design and a neutral beige exterior colour offers an unobtrusive appearance to complement any interior.

The FA-1025T includes one circuit board providing all the essentials for a complete fire alarm system. Five Class 'B' initiating circuits and two Class 'B' indicating circuits (1.7 Amps each) are provided by the FA-1025T. The indicating circuits are protected from shorts by a self-restoring circuitry.

The FA-1025T is equipped with supervision for ground fault detection, battery low level or open wire fault, initiating and indicating circuit wiring faults and loss of A.C. power. The initiating circuits are supervised for opens and power and the indicating circuits are supervised for opens, shorts and ground faults. The FA-1025T has LED indicators for Zone Alarm, Zone Trouble, A.C. On, Battery Fault, Ground Fault, Common Trouble, Signal Trouble and Signal Silenced and switches for Zone Disconnect/Silence, Buzzer Silence and Reset.

## Features

- Five Class 'B' initiating circuits
- Two Class 'B' indicating circuits (1.7 Amps each)
- Individual Zone Silence/Disconnect switches
- Audible tones are DIP Switch selectable for Steady and Temporal Code
- Powerful 3 mA capacity per zone for 2-wire smoke detectors
- Common alarm Relay contact, Form C, 28 VDC @ 3 AMP (Resistive)
- Selectable 'N.O' or 'N.C' common trouble contact 28 VDC @ 3 Amp(Resistive)
- A.C. ON LED (Green)
- Zone Alarm LED (Amber)
- Signal Trouble LED (Amber)
- Ground Fault LED (Amber)
- Battery Fault LED (Amber)
- Alarm Silenced LED (Amber)
- Common Trouble LED & Silence switch
- Remote Trouble Indicator output
- Remote A.C. On output
- Selectable 1 minute Signal silence inhibit
- Extensive Transient Protection on all circuits
- Neutral Beige exterior colour
- Annunciator Outputs available
- All circuits are power limited

The FA-1025T has selectable audible tones which can be configured via DIP switches for Steady and Temporal Code.

The panel also includes a common alarm relay which is configurable (via jumper) to follow the signal circuit or lock on until the Alarm has been reset.

Annunciation outputs are provided for alarm, remote trouble indicator and buzzer. Lamp supervision is jumper selectable.

The cabinet is available in a beige colour and the Fire Retardant Lexan Window in the hinged door allows for viewing of the status LEDs. It comes with a durable CAT-30 lock and key. Space is provided for 4 to 6.5 AH batteries.



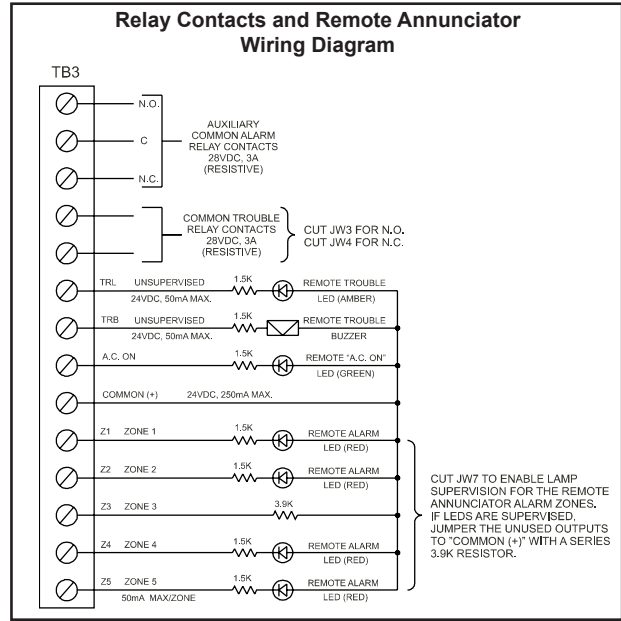
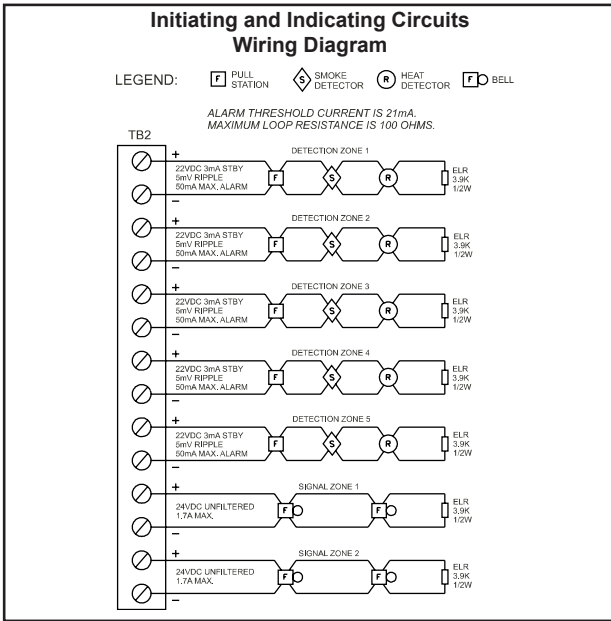
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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.



# Wiring Diagrams



## Technical Specifications

### Initiating Circuits

Output Voltage	22 VDC, filtered and regulated.
Current Limited	50 mA
Supervisory Current	3 mA (up to 30, 2-wire smoke detectors @ 100 uA each)
Loop Resistance	100 ohms, max
End of Line Resistor	3.9Kohm ± 5%, 1/2W

### Indicating Circuits

Output Voltage	24 VDC
Output Current	3.4A Total Current (1.7A ea x 2)
End of Line Resistor	3.9Kohm ± 5%, 1/2W
Auxiliary Contacts	28 VDC, 3A (Resistive)
Dimensions	13.7"(347mm)W x 12.7"(322mm)H x 2.8"(71mm)D

## Ordering Information

### Model

FA-1025T  
FA-1025T-RED  
RTI-1  
FA-102TR

### Description

Five Zone Fire Alarm Unit, White Door  
Five Zone Fire Alarm Unit, Red Door  
Remote Trouble indicator, mounts onto a single gang electrical box  
Flush Mounting Trim Ring

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5006  
Rev. 6



### Features

- One Class 'B' initiating circuit
- One Class 'B' indicating circuit (1.7 Amps)
- Individual Zone Silence/Disconnect switches
- Audible tones are DIP Switch selectable for Steady and Temporal Code
- Powerful 3 mA capacity per zone for 2-wire smoke detectors
- Common Alarm Relay contact, Form C, 28 VDC @ 3 AMP (Resistive)
- Selectable 'N.O' or 'N.C' common trouble contact 28 VDC @ 3 Amp (Resistive)
- A.C. ON LED (Green)
- Zone Alarm LED (Amber)
- Signal Trouble LED (Amber)
- Ground Fault LED (Amber)
- Battery Fault LED (Amber)
- Alarm Silenced LED (Amber)
- Common Trouble LED & Silence switch
- Remote Trouble Indicator output
- Remote A.C. On output
- Selectable 1 minute Signal silence inhibit
- Extensive Transient Protection on all circuits
- Neutral Beige exterior colour
- All circuits are power limited

### Description

The Mircom FA-101T panel is designed for non-coded fire alarm systems in small commercial, institutional and industrial occupancies. A slim-line design and a neutral beige exterior colour offers an unobtrusive appearance to complement any interior.

The FA-101T includes one circuit board providing all the essentials for a complete fire alarm system. One Class 'B' initiating circuit and one Class 'B' indicating circuit (1.7 Amps) are provided by the FA-101T. The indicating circuit is protected from shorts by self-restoring circuitry.

The FA-101T is equipped with supervision for ground fault detection, battery low level or open wire fault, initiating and indicating circuit wiring faults and loss of A.C. power. The initiating circuits are supervised for opens and power and the indicating circuits are supervised for opens, shorts and ground faults. The FA-101T has LED indicators for Zone Alarm, Zone Trouble, A.C. On, Battery Fault, Ground Fault, Common Trouble, Signal Trouble and Signal Silenced and switches for Zone Disconnect/Silence, Buzzer Silence and Reset.

The FA-101T has selectable audible tones which can be configured via DIP switches for Steady and Temporal Code.

The panel also includes a common alarm relay which is configurable (via jumper) to follow the signal circuit or lock on until the Alarm has been reset.

The cabinet is available in a beige colour and the Fire Retardant Lexan Window in the hinged door allows for viewing of the status LEDs. It comes with a durable CAT-30 lock and key. Space is provided for 4 to 6.5 AH batteries.

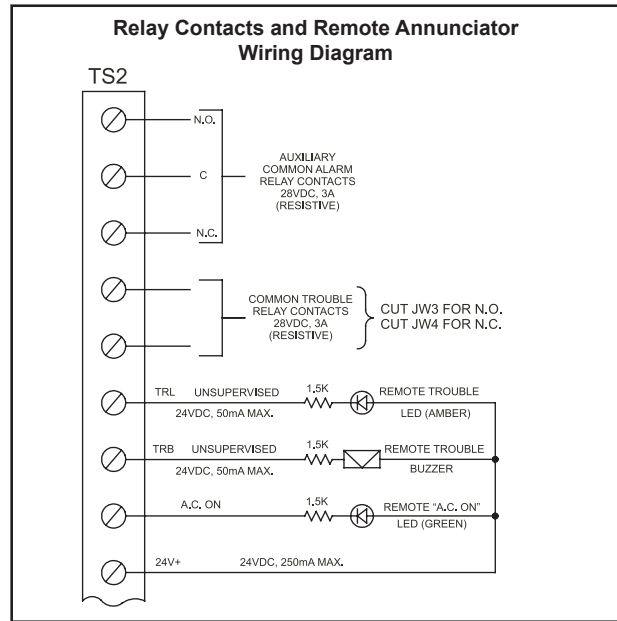
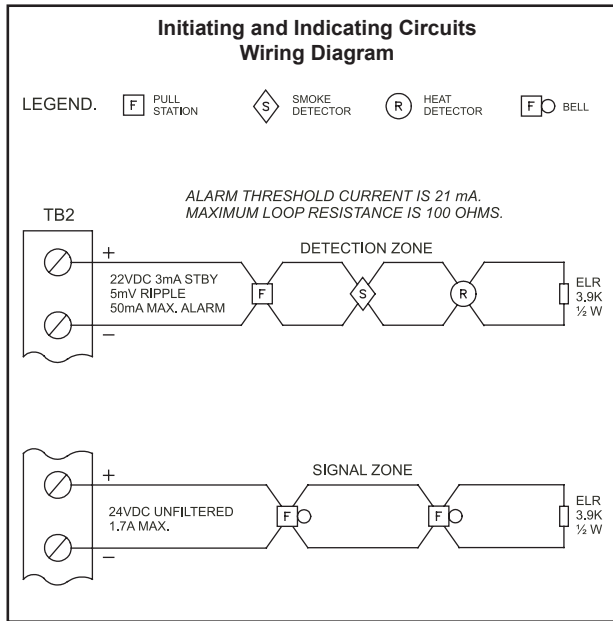


**CATALOG NUMBER** **5008**

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# Wiring Diagrams



## Technical Specifications

### Initiating Circuits

Output Voltage	22 VDC, filtered and regulated.
Current Limited	50 mA
Supervisory Current	3 mA (up to 30, 2-wire smoke detectors @ 100 uA each)
Loop Resistance	100 ohms, max
End of Line Resistor	3.9Kohm ± 5%, 1/2W

### Indicating Circuits

Output Voltage	24 VDC
Output Current	1.7A
End of Line Resistor	3.9Kohm ± 5%, 1/2W
Auxiliary Contacts	28 VDC, 3A (Resistive)
Dimensions	13.7"(347mm)W x 12.7"(322mm)H x 2.8"(71mm)D

## Ordering Information

### Model

FA-101T  
FA-101T-RED  
RTI-1  
FA-102TR

### Description

One Zone Fire Alarm Unit, White Door  
One Zone Fire Alarm Unit, Red Door  
Remote Trouble indicator, mounts onto a single gang electrical box  
Flush Mounting Trim Ring

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CAT. 5008  
Rev. 6

## Releasing & Suppression Control Units



FX-3500 with two optional RAX-1048TZDS modules

## Description

Mircom's FX-3500 is a series of powerful Intelligent Addressable Fire Alarm Control Units which include Release Control Units (RCUs). These panels are UL 864Rev 9 and ULC S527-2011 listed for fire control and releasing service.

The FX-3500 is recommended for both new and retrofit special-hazard/critical- infrastructure suppression/special agent applications. Small in enclosure size yet powerful enough to deliver complex programming requirements, the FX-3500 is fully expandable.

The FX-3500 provides up to three addressable Signal Line Circuits (UL's-SLC or ULC's-Data Communication Links- DCLs) and connects up to 954 addressable devices/points. Capable of releasing up to six discrete physical hazard zones, the FX-3500 offers exceptional value for complex installations.

Elegant configuration options by onsite laptop, or when required by the Engineer of Record, by remote PC via modem, the FX-3500 can be operational with minimal set up time.

Programming versatility makes the FX-3500 Series the ideal choice for dependable fire detection, signaling and protection in industrial, commercial and institutional buildings. Typically these environments require agent-based suppression solutions easily managed by the FX-3500 Intelligent Addressable Release Control Unit.

## Hardware Features

- One onboard SLC/DCL communication circuit that supports up to 318 addressable devices/ points;
- Expandable to three SLC/DCL communication circuits that supports up to 954 addressable devices/points;
- Reliable and industry proven dedicated releasing power supply;
- Six dedicated hazard zone LED indicators;
- Convenient USB Programming port;
- Built-in UDACT/DACT for remote monitoring;
- Enhanced tactile response for operator interface;
- 4 x 20 character Liquid Crystal Display (LCD);
- Easy to read numerical keypad;
- 10 Ampere (Amp.) Power Supply to satisfy typical releasing load requirements;
- Four Class A/B Notification Appliance Circuits (NAC) rated at 1.5Amp. each;
- SLC is capable of NFPA 72 Style 4, Style 6, or Style 7 wiring & ULC's DCL-A & DCL-B;
- Resettable auxiliary power supply;
- Four easy to read status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Building Safety (Formerly Monitor) Input visual indications;
- Supports up to seven remote annunciators;
- Accessible multifunction RS-232 port for:
  - Serial Communication interface
- RS-485 Interface for remote LCD/LED Annunciators and other devices;
- Optional City Tie/Polarity Reversal module for central station monitoring.



S7010



S7010



7165-1477:0165



APPROVED  
NYC  
Fire Dept.  
COA #6165

**CATALOG NUMBER 5690**

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## Mechanical Features

- The FX-3500 supports both flush and surface mount applications;
- Dimensions 26" x 14.5" x 4.2"  
66 cm x 36 cm x 11 cm
- Modular display placement options;
- Fits up to 2, 18 Ampere Hour batteries.
- Durable CAT-30 lock and key.
- Removable enclosure door.
- Easy access to all modules for serviceability.

## Software and Operational Features

Audible alarm response within three seconds of activation in Advanced Protocol mode (when using AP devices only);

- AP is a completely digital protocol;
- AP is an Interrupt base protocol;
- Individual LED Control;
- Releasing capability for up to 6 Zones
- Supports Pre-Action/Agent Release and Deluge Applications;
- Supports up to 3 SLC loops and 954 points
- Supports CLIP and AP System Sensor protocols;
- Built-in strobe synchronization support for Mircom, Potter/Amseco, System Sensor, Gentex and Wheelock protocols;
- Grouped inputs and outputs;
- NACs can be configured as Silenceable or Non-Silenceable for both signals and strobes;
- Group bypass with built-in false alarm prevention technology;
- Zone Counting;
- Built-in Drift Compensation for AP protocol;
- Positive Alarm Sequence;
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test;
- Relay contacts for Common Alarm, Auxiliary/ Alarm (Disconnectable), Common Supervisory and Common Trouble;
- Two event history logs comprised of a 400 event alarm log for alarm related events and a 400 event general log for all other events;

## Additional Features

- Compatible with INX-10A Addressable Intelligent NAC Expander Panel.
- Supports Acclimate smoke detection sensors.



## Sensors can be configured as:

- Alarm Input
- Priority Alarm
- Verified Alarm
- Latched Supervisory
- Non-Latching Supervisory
- Monitor
- Trouble Input

## FX-3500 Features and Benefits

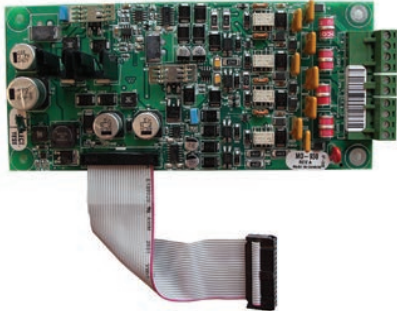
- Cross-zoned or Counting Zone Smoke Detection programming to enable release by either counting active zone detection circuits or active cross-zoned detection circuits (includes options for single, double, triple and 2 different inputs counting zones)
- The FX-3500 Series RCUs are fully expandable to meet the demanding requirements for mission critical facilities, both inside the high value asset areas and also in the office environments.

## Optional Adder Modules



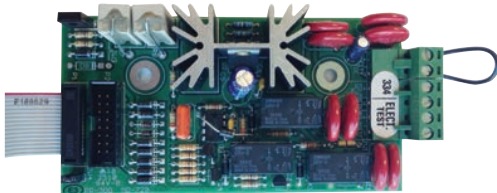
### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator provides the FX-3500 with 48 Programmable Alarm/Supervisory Bi-colored LEDs & 48 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-1048TZDS mounts in the FX-3500 enclosure.



### ALC-636 Dual Loop Controller Module

The ALC-636 Dual Analog Loop Controller Module provides two additional Signaling Line Circuits (SLC) to the FX-3500 consisting of 159 intelligent sensors and 159 intelligent modules per loop. The ALC-636 mounts in the FX-3500 enclosure.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RAM-3500-LCD Remote LCD Annunciator

The RAM-3500-LCD provides remote annunciation through a 4 line by 20 character LCD display. It is a direct mimic of the main panel display so that the LCD, LEDs and switches are an exact duplicate of the main display. The RAM-3500-LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge, four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor, along with a numeric keypad to access the menu functions. The RAM-3500-LCD mounts in separately orderable single unit enclosures or in larger enclosures that support up to two optional RAX-1048TZDS remote LED annunciators. All remote enclosures are equipped with a CAT-30 Lock and key.



### RAX-LCD-Lite Remote LCD Annunciator

The FX-3500 also supports the RAX-LCD-LITE Remote LCD Annunciator. The RAX-LCD-LITE display mimics the main Fire Alarm Panel display at a remote location. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display that uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. There are five types of enclosure available: the BB-1001, BB-1002, BB-1003, BB-1008, and BB-1012 which can take 1,2,3,8,12 chassis respectively.

## Ordering Information

Model	Description
FX-3500	Single Loop, 318 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator, expandable to 954 points with ALC-636 Dual Loop controller module. Includes UB-1024DS back box and DOX-1024DSR red door.
FX-3500RCU	All features of the FX-3500 plus releasing capability included.
FX-3500W	Single Loop, 318 Point Intelligent Fire Alarm Control Unit with built-in UDACT/Digital Communicator, expandable to 954 points with ALC-636 Dual Loop controller module. Includes UB-1024DS back box and DOX-1024DS white door.
FX-3500RCUW	All features of the FX-3500W plus releasing capability included.
<b>Optional Adder Modules</b>	
ALC-636	Dual Loop Controller Module
PR-300	Polarity Reversal/City Tie Module
PCS-100	Power Supply Interface Board
<b>Remote Annunciators</b>	
RAM-3500-LCD	Remote LCD Annunciator with 4-line display. Mounts in a BB-1000 Series enclosure.
RAX-LCD-Lite	Remote Annunciator with Large LCD display. Mounts in a BB-1000 Series enclosure.
RAX-1048TZDS	Programmable Remote LED Display Adder with 48 programmable bi-colored LEDs and 48 Trouble LEDs. Mounts in a BB-1000 Series enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in a BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in a BB-1000 Series enclosure.
AGD-048	Graphic Annunciator Adder Driver Module
MGD-32	Graphic Annunciator Driver Module
RTI-1	Remote Trouble Indicator, Buzzer and LED
<b>Enclosures for Remote Annunciators</b>	
BB-1001	Remote enclosure, white door. Houses 1 module.
BB-1001R	Remote enclosure, red door. Houses 1 module.
BB-1002	Remote enclosure, white door. Houses 2 modules.
BB-1002R	Remote enclosure, red door. Houses 2 modules.
BB-1003	Remote enclosure, white door. Houses 3 modules.
BB-1003R	Remote enclosure, red door. Houses 3 modules.
BB-1008	Remote enclosure, white door. Houses 8 modules.
BB-1008R	Remote enclosure, red door. Houses 8 modules.
BB-1012	Remote enclosure, white door. Houses 12 modules.
BB-10012R	Remote enclosure, red door. Houses 12 modules.
<b>Other Items</b>	
INX-10A	Intelligent NAC Expander Panel
BC-160	External Battery Cabinet
SRM-312W	Smart Relay Module with White Enclosure. Can support up to 12 relays.
SRM-312R	Smart Relay Module with Red Enclosure. Can support up to 12 relays.
MP-3500R	Solenoid EOL Module (Red) - 47K.
MP-3500W	Solenoid EOL Module (White) - 47K.
MP-300	End of Line Plate, White.
MP-300R	End of Line Plate, Red.

**Note:** For releasing application please see the Releasing Guide LT-1091

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CAT. 5690  
Rev7





Model MIX-5251AP sensor mounted in a B210LP base

## Description

Mircom's low profile intelligent plug-in thermal detectors with integral communications provide features that surpass conventional detectors. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations. These intelligent sensors utilize a state-of-the-art thermistor sensing circuit for fast response and are designed to provide open area protection with 50 foot spacing capability.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

### **MIX-5251AP Intelligent Heat Detector, 135°F Fixed Temperature**

The MIX-5251AP uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

## Features

- Sleek, low profile design
- Available as 135°F fixed temperature, 135°F fixed temperature with rate-of-rise detection and high temperature 190°F fixed temperature
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

### **MIX-5251RAP Intelligent Heat Detector, 135°F fixed temperature with Rate-of-Rise Detection**

The MIX-5251RAP provides both 135°F fixed and rate-of-rise thermal detection. This thermal detector provides cost effective, intelligent property protection in a variety of applications.

### **MIX-5251HAP Intelligent High Temperature Heat Detector, 190°F Fixed Temperature**

The MIX-5251HAP provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6299



S7498



7270-1477:0160

**CATALOG NUMBER 5953**

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## Specifications

<b>Voltage Range</b>
15 - 32 volts DC peak
<b>Standby Current</b>
300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>LED Current (max.)</b>
6.5 mA @ 24 VDC (on)
<b>Height</b>
2.0 inches (51 mm)
<b>Diameter</b>
6.1 inches (155 mm) installed in B210LP Base 4.1 inches (104 mm) installed in B501 Base

<b>Shipping Weight</b>
4.8 oz. (137 g)
<b>Operating Humidity Range</b>
10% - 93% noncondensing
<b>Thermal Ratings</b>
Fixed Temperature Setpoint: 135°F (57°C) Rate of Rise Detection: 15°F/min. (8.3°C/min.) High Temperature: 190°F (88°C)
<b>Operating Temperature Range</b>
MIX-5251AP/MIX-5251RAP: -4°F to 100°F (-20°C to 38°C) MIX-5251HAP: -4°F to 150°F (-20°C to 66°C)

## Ordering Information

Model	Description
<b>Intelligent Heat Sensors</b>	
MIX-5251AP	Intelligent Heat Detector, 135°F Fixed Temperature
MIX-5251RAP	Intelligent Heat Detector, 135°F Fixed Temperature with Rate-of-Rise Detection
MIX-5251HAP	Intelligent High Temperature Heat Detector, 190°F Fixed Temperature
<b>Bases</b>	
B501	Intelligent Flangeless Mounting Base
B210LP	Intelligent Flanged Mounting Base
B224RB	Intelligent Relay Base
B224BI	Intelligent Isolator Base
B200SR	Intelligent Standard Sounder Base (Compatible with B501BH Series)
<b>Accessories</b>	
RA-100Z	Remote LED Annunciator

Add suffix "A" for ULC listed model.

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CAT. 5953  
Rev. 0



## Description

Mircom's FR-320 is a dual releasing control unit that is field configurable for use on Deluge Sprinkler Systems, Pre-action Sprinkler Systems and Agent Release Systems.

The FR-320 is equipped with six Class "B" (Style "B") input circuits and four Class "B" (Style "Y") output circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) Optional Class A converter modules are available for both input and output circuits. In addition both internal and external relays are supported by the FR-320. The relays can be configured for both single and dual hazard applications.

The FR-320 is field configurable for three releasing type functions; Deluge, Pre-Action Sprinklers and Agent Releasing. The mode of operation is easily configured by selecting one of 14 pre-configured modes of operation. The simple configuration process is done via the front panel using the CFG-300 configuration tool thus eliminating the need for a laptop or complicated programming.

The FR-320 comes complete with a red (FR-320-RA) or white (FR-320-WA) door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries.

## Features

- Listed to UL 864, 9th edition
- Field configurable to operate with a Deluge Sprinkler System, a Pre-action Sprinkler System and an Agent Release System
- Six Class B (Style B) Input Circuits
- Input Circuits One to Four can be configured as Non-Verified Alarm, Non Latching Supervisory, Latching Supervisory or Agent Release/Water Flow depending on the Mode of Operation selected
- Input Circuits Five & Six can be configured as Manual Release Input, Abort Input or Abort/Manual Release Combination Input depending on the Mode of Operation selected
- Input Circuits can be converted to Class "A" (Style "D") using the ICAC-306 Converter Module
- Four Class "B" (Style "Y") Output Circuits which can be configured for Silenceable Signal, Non-Silenceable Signal, Silenceable Strobe, Non-Silenceable Strobe or Releasing Circuit (Circuits 3 & 4 Only)
- Output Circuits can be converted to Class "A" (Style "Z") using the OCAC-304 Converter Module
- 5 Amp Power Supply
- 4-wire smoke power 22.3 VDC @ 300ma max. Supervised Aux Power 22.3 VDC @ 500ma max.
- Aux Power (Unregulated) 24 VDC @ 1.7 Amp max.
- Relay contacts for Common Alarm (Non Disconnectable), Auxiliary Alarm (Disconnectable), Common Supervisory (can be converted to common alarm if no Supervisory input) and Common Trouble
- Cross Zone option
- Counting Zones option
- Output signals can be configured for Steady (fixed) or Escalating (tone changes as input operation changes)
- Release Timer 0 to 60 Seconds (5 second increments)
- Manual Release Delay 0 to 30 Seconds (5 second increments)
- Soak Timer 0 to 15 Minutes (21 Intervals)
- Abort Release Timer (Standard UL Type Delay, IRL Type Delay, NYC Type Delay, Local Jurisdiction Delay)
- Special Releasing Power Supply and Release Activation Considerations preventing false dumps
- Configurable to perform two hazard areas
- Simple panel programming through 14 Pre-Configured Modes of Operations



**CATALOG NUMBER 5664**

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## Optional Modules

### ICAC-306 Input Circuit Class “A” Converter Module

The ICAC-306 converts six Class “B” (Style “B”) input circuits on the FR-320 to Class “A” (Style “D”) circuits. The ICAC-306 is equipped with wire leads to connect to the FR-320 main board.

### OCAC-304 Output Circuit Class “A” Converter Module

The OCAC-304 converts four Class “B” (Style “Y”) output circuits on the FR-320 to Class “A” (Style “Z”) circuits. The OCAC-304 is equipped with wire leads to connect to the FR-320 main board.

### RM-306 Relay Circuit Adder Module

The RM-306 provides six configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-306 can be configured for single or dual hazard applications.

### SRM-312 Smart Relay Module

The SRM-312 provides the same features as the RM-306 module. The SRM-312 provides twelve configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The SRM-312 comes with a red enclosure and is mounted remotely from the panel on an RS-485 connection.

## Remote Annunciators

### RAM-208 Remote LED Annunciator

The RAM-208 provides eight points of LED annunciation and features bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). It has indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 is equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. The RAM-208 is available in a red or white finish and mounts in a 4-gang electrical box.

### RAM-1016TZDS Remote LED Annunciators

The RAM-1016TZDS Remote LED Annunciator provides sixteen points of LED annunciation and comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). It also provides individual trouble LEDs. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. The RAM-1016TZDS mounts in a BB-1000 series enclosure.

## Ordering Information

Model	Description
<b>Releasing Control Unit</b>	
FR-320-RA	Pre-Action/Deluge/Agent Releasing Control Unit c/w red door and black backbox. Dimensions (minus built-in trim ring): 26”H x 14.5”W x 4.2”D
FR-320-WA	Pre-Action/Deluge/Agent Releasing Control Unit c/w white door and black backbox. Dimensions (minus built-in trim ring): 26”H x 14.5”W x 4.2”D
<b>Remote Annunciators and Modules</b>	
RAM-208	Eight zone Remote LED Annunciator (White)
RAM-208R	Eight zone Remote LED Annunciator (Red)
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312W	Smart Relay Module (White enclosure)
SRM-312R	Smart Relay Module (Red enclosure)
BB-1001	White Enclosure for RAM-1016TZDS (White)
BB-1001R	Red Enclosure for RAM-1016TZDS (Red)
<b>Adder Modules</b>	
ICAC-306	Six Input Circuit Class “A” Converter Module
OCAC-304	Four Output Circuit Class “A” Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
<b>Accessories</b>	
CFG-300	Configuration Tool (Required for programming)
MP-1500R	Current Limiter Module (Red Plate)
MP-1500W	Current Limiter Module (White Plate)
MP-320R	Solenoid End-Of-Line Module (Red Plate)
MP-320W	Solenoid End-Of-Line Module (White Plate)

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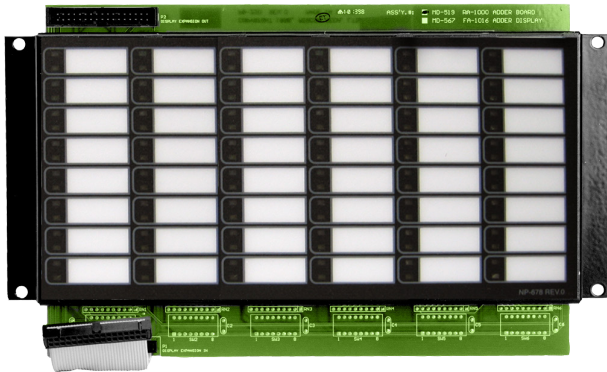
CAT. 5664  
Rev. 3

## Remote Annunciators

The FX-2000 Analog Fire Alarm Control Panel supports Programmable modules which can be connected either internally to the fire alarm panel or externally via the RAX-LCD Remote Shared Display. Connection to the RAX-LCD allows for unique configurations for a specific remote location.



RAX-LCD mounted in a BB-1001R enclosure



### RAX-LCD Remote Shared Display

The RAX-LCD Remote Shared Display is a remote annunciator that provides the same functions as the main display on the fire alarm control panel, less 16 zone LEDs. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display which uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. It also has 4 Alarm Queue switches and LEDs as well as common control switches and LEDs for Signal Silence, Fire Drill, System Reset, Lamp Test, General Alarm and Acknowledge. The RAX-LCD can be programmed to show different points than the main panel. In addition to being a remote annunciator, the RAX-LCD can also be used as a driver module for standard LED annunciation or reduced zone annunciation (different from the main panel annunciation), graphic drivers programmed different from the main annunciators, programmable switch modules with their unique configuration and fan damper control also with their unique configuration. Each time a different type of annunciation configuration is required or a different location is required an additional RAX-LCD will be needed. The RAX-LCD allows for the control switches to be disabled on a per function basis (via laptop configurator) for areas that do not require certain Common Control functions to be remotely located from the Fire Alarm Control Panel. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 enclosures.

### RAX-1048 Programmable Zone LED Annunciator Module

The RAX-1048 Programmable Zone LED Annunciator Module provides 48 programmable bi-coloured LEDs. The RAX-1048 is used if additional LED zone annunciation is required. The addressable points can be grouped together to light one LED, or they can be part of many groups and therefore may turn on many LEDs. The circuits can be selected as either Alarm to illuminate the red LED or for Supervisory to illuminate the amber LED. Any zone trouble condition will be displayed on the Shared Display. The RAX-1048 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if a programmable remote LED annunciator is required. It takes up two frames when connected to either the main or remote shared display. The RAX-1048 is used in conjunction with the RAX-LCD when a different type of annunciation configuration or a different location is required. The RAX-1048 occupies one display position in the BB-1000 or BB-5000 enclosures.



S5434



S5434



7165-1477:111  
(RAX-1048, IPS-2424  
& FDX-008)  
7120-1477:107  
(RAX-LCD)



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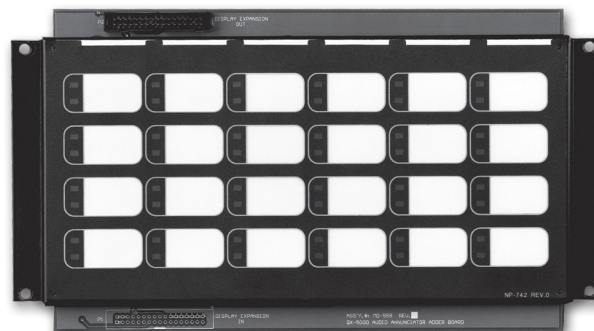
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**CATALOG NUMBER**

**5912**

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## FDX-008 Fan Damper Module

The FDX-008 Fan Damper Module provides individually programmed circuits which can be used for fan or damper control. Each circuit has a slide-in label, a three position selector switch, green "run or open" LED and an amber "off or closed" LED. The three-position selector switch has a centre "auto" position, a left "off or close" position and a right "on or open" position. In the 'auto' position the fan or damper follows the fire alarm programming when an alarm occurs. When the switch is turned to the 'off' position the fan or damper is turned 'off or closed'. If the fan or damper is normally 'on or open' it will turn 'off or close' when the switch is moved to the 'off' position. When the switch is moved to the 'on' position the fan or damper is turned 'on or open'. If the fan or damper is normally 'off or closed' it will turn 'on or open' when the switch is moved to the 'on' position. The 'on', 'off' and the 'auto' positions are configurable to remote addressable output modules (MIX-M500CH) and can be configured for normally 'on or off' fans or normally 'open or closed' dampers. The LEDs can be controlled from the program or by proving switches through mini input modules (MIX-M501M). The FDX-008 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display when a different type of fan/damper configuration or a different location is required. The FDX-008 takes up one frame when connected to the main or remote shared display. The FDX-008 occupies one display position in the BB-1000 or BB-5000 enclosures.

## IPS-2424 Programmable Input Switches Module

The IPS-2424 Programmable Input Switches Module, which provides 24 programmable switches complete with bi-coloured LEDs and slide-in labels, can be configured for ancillary functions such as zone by-pass or added common control functions. In a zone by-pass configuration, a group of addressable devices or hardwired circuits can be assigned to a programmable switch and when the switch is operated, those devices or zones are by-passed. The switches operate in a toggle operation for on and off. There are two LEDs for each switch; one for selection, the other is bi-coloured to indicate point status when the switch is returned to normal (unbypassed) position. The bi-coloured LED will flash red to indicate an alarm or it will flash amber to indicate that a supervisory alarm will be processed when the switch is returned to normal (unbypassed) position. The IPS-2424 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if unique programmable input switches are required for a specific location. The IPS-2424 takes up two frames when connected to the main or remote shared display. The IPS-2424 occupies one display position in the BB-1000 or BB-5000 enclosures.

## Ordering Information

Model	Description	Standby	Alarm
RAX-LCD	Remote Shared Display	100 mA	150 mA
RAX-1048	Programmable Zone LED Annunciator Module	15 mA	100 mA
IPS-2424	Programmable Input Switches Module	10 mA	144 mA
FDX-008	Fan Damper Module	10 mA	100 mA

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CAT. 5912  
Rev. 7

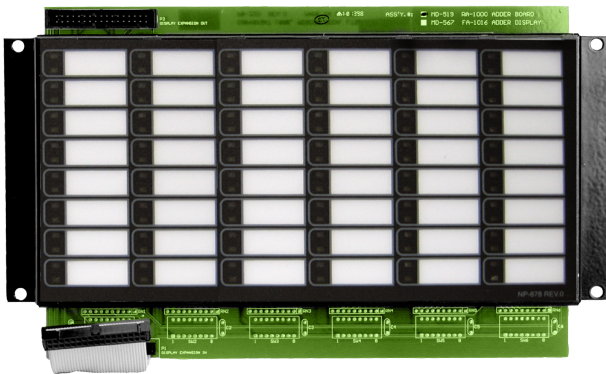
The FX-2000 Analog Fire Alarm Control Panel supports Programmable modules which can be connected either internally to the fire alarm panel or externally via the RAX-LCD Remote Shared Display. Connection to the RAX-LCD allows for unique configurations for a specific remote location.



RAX-LCD mounted in a BB-1001R enclosure

### RAX-LCD Remote Shared Display

The RAX-LCD Remote Shared Display is a remote annunciator that provides the same functions as the main display on the fire alarm control panel, less 16 zone LEDs. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display which uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. It also has 4 Alarm Queue switches and LEDs as well as common control switches and LEDs for Signal Silence, Fire Drill, System Reset, Lamp Test, General Alarm and Acknowledge. The RAX-LCD can be programmed to show different points than the main panel. In addition to being a remote annunciator, the RAX-LCD can also be used as a driver module for standard LED annunciation or reduced zone annunciation (different from the main panel annunciation), graphic drivers programmed different from the main annunciators, programmable switch modules with their unique configuration and fan damper control also with their unique configuration. Each time a different type of annunciation configuration is required or a different location is required an additional RAX-LCD will be needed. The RAX-LCD allows for the control switches to be disabled on a per function basis (via laptop configurator) for areas that do not require certain Common Control functions to be remotely located from the Fire Alarm Control Panel. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048 Programmable Zone LED Annunciator Module

The RAX-1048 Programmable Zone LED Annunciator Module provides 48 programmable bi-coloured LEDs. The RAX-1048 is used if additional LED zone annunciation is required. The addressable points can be grouped together to light one LED, or they can be part of many groups and therefore may turn on many LEDs. The circuits can be selected as either Alarm to illuminate the red LED or for Supervisory to illuminate the amber LED. Any zone trouble condition will be displayed on the Shared Display. The RAX-1048 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if a programmable remote LED annunciator is required. It takes up two frames when connected to either the main or remote shared display. The RAX-1048 is used in conjunction with the RAX-LCD when a different type of annunciation configuration or a different location is required. The RAX-1048 occupies one display position in the BB-1000 or BB-5000 enclosures.



S5434



S5434



7165-1477:111  
(RAX-1048, IPS-2424  
& FDX-008)  
7120-1477:107  
(RAX-LCD)



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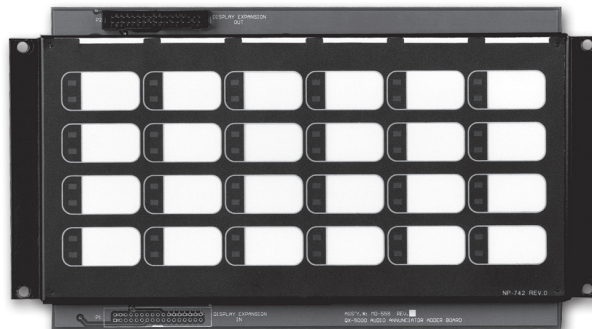
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## FDX-008 Fan Damper Module

The FDX-008 Fan Damper Module provides individually programmed circuits which can be used for fan or damper control. Each circuit has a slide-in label, a three position selector switch, green "run or open" LED and an amber "off or closed" LED. The three-position selector switch has a centre "auto" position, a left "off or close" position and a right "on or open" position. In the 'auto' position the fan or damper follows the fire alarm programming when an alarm occurs. When the switch is turned to the 'off' position the fan or damper is turned 'off or closed'. If the fan or damper is normally 'on or open' it will turn 'off or close' when the switch is moved to the 'off' position. When the switch is moved to the 'on' position the fan or damper is turned 'on or open'. If the fan or damper is normally 'off or closed' it will turn 'on or open' when the switch is moved to the 'on' position. The 'on', 'off' and the 'auto' positions are configurable to remote addressable output modules (MIX-M500CH) and can be configured for normally 'on or off' fans or normally 'open or closed' dampers. The LEDs can be controlled from the program or by proving switches through mini input modules (MIX-M501M). The FDX-008 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display when a different type of fan/damper configuration or a different location is required. The FDX-008 takes up one frame when connected to the main or remote shared display. The FDX-008 occupies one display position in the BB-1000 or BB-5000 enclosures.

## IPS-2424 Programmable Input Switches Module

The IPS-2424 Programmable Input Switches Module, which provides 24 programmable switches complete with bi-coloured LEDs and slide-in labels, can be configured for ancillary functions such as zone by-pass or added common control functions. In a zone by-pass configuration, a group of addressable devices or hardwired circuits can be assigned to a programmable switch and when the switch is operated, those devices or zones are by-passed. The switches operate in a toggle operation for on and off. There are two LEDs for each switch; one for selection, the other is bi-coloured to indicate point status when the switch is returned to normal (unbypassed) position. The bi-coloured LED will flash red to indicate an alarm or it will flash amber to indicate that a supervisory alarm will be processed when the switch is returned to normal (unbypassed) position. The IPS-2424 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if unique programmable input switches are required for a specific location. The IPS-2424 takes up two frames when connected to the main or remote shared display. The IPS-2424 occupies one display position in the BB-1000 or BB-5000 enclosures.

## Ordering Information

Model	Description	Standby	Alarm
RAX-LCD	Remote Shared Display	100 mA	150 mA
RAX-1048	Programmable Zone LED Annunciator Module	15 mA	100 mA
IPS-2424	Programmable Input Switches Module	10 mA	144 mA
FDX-008	Fan Damper Module	10 mA	100 mA

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CAT. 5912  
Rev. 7



FX-351-LDW with optional RAX-332  
Programmable LED Annunciator

## Description

The FX-351-LW and FX-351-LDW Fire Alarm Control Panels are single loop addressable panels that support up to 126 addressable points. Both panels are equipped with a two line by 20 character backlit LCD display, numerical keypad and 32 zones of LED annunciation. Both can be expanded with the optional RAX-332 to support 64 zones of LED annunciation. The FX-351-LDW is equipped with an integrated UDACT/Digital Communicator. In addition both models can be expanded to a three loop 378 point system with the addition of an ALC-252 Dual Loop Controller Module.

The FX-351 panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The FX-351 panels are configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the panels enable the installer to configure the system to meet their specific requirements.

The FX-351 panels are equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

In addition the panels come complete with a white door, black enclosure, durable CAT-30 lock and key and space to mount up to 18 AH batteries. An optional trim ring is available for semi-flush mounting.

## Features

- Single Addressable SLC Loop that supports 126 addressable points. Expandable to 378 points with ALC-252 Dual Loop Controller Module.
- Points can be any combination of Addressable Sensors or Modules
- Supports Photoelectric Sensors, Variable Heat Sensors and Multi-Sensor (Heat/Photo)
- Equipped with 2 line by 20 character backlit LCD display and numerical keypad
- LCD display allows for 32 characters to be configured for user defined messages
- Includes 32 zone Alarm & Trouble LED configurable annunciator that can be expanded to 64 zones
- Available with or without an integrated UDACT/Digital Communicator
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two Stage Operation and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional City Tie/Polarity Reversal module
- Optional trim ring for semi-flush mounting



S7010

**CATALOG NUMBER** **5671**

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## Optional Adder Modules



### RAX-332 Programmable LED Annunciator

The RAX-332 Programmable LED Annunciator provides the FX-350 with an additional 32 Programmable Alarm/Supervisory Bi-Coloured LEDs & 32 Trouble LEDs which can be configured as: Alarm (Red), Supervisory (Amber), Trouble (Amber) or Monitor (Amber). The RAX-332 mounts in the FX-351 enclosure.

### ALC-252 Dual Loop Controller Module

The ALC-252 Dual Analog Loop Controller Module provides two additional Signaling Line Circuits (SLC) to the FX-351-LDR consisting of 126 intelligent devices per loop. The ALC-252 mounts in the FX-351 enclosure.

### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") output circuits on the FX-350 to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-351 main board.

### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.

## Remote Annunciators



### RA-1000 Series Remote LED Annunciators

The RAM-1016TZDS and RAM-1032TZDS Remote LED Annunciators provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. The RAX-1048TZDS connects to the RAM-1032TZDS to provide an additional 48 points of LED annunciation. All models mount in a BB-1000 Series enclosure.



### RAM-300LCDW Remote LCD Annunciator

The RAM-300LCDW provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDW provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDW has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCDW comes complete with a white enclosure and a CAT-30 Lock and key.

### Dimensions

FX-351-LW/LDW 26"H x 14½"W x 4½"D

## Ordering Information

Model	Description
FX-351-LW	Single Loop, 126 Point Intelligent Fire Alarm Control Units with 32 programmable LEDs
FX-351-LDW	Single Loop, 126 Point Intelligent Fire Alarm Control Units with built-in UDACT/Digital Communicator
FA-UNIV-TRB	Black semi-flush trim ring for FX-351 enclosure
<b>Optional Adder Modules</b>	
RAX-332	Programmable Remote LED Annunciator with 32 programmable LEDs. Mounts in FX-351-LW or FX-351-LDW.
ALC-252	Dual Loop Controller Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
PR-300	Polarity Reversal/City Tie Module
<b>Remote Annunciators</b>	
RAM-300LCDW	Remote LCD Annunciator c/w enclosure.
RAM-1016TZDS	16 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAM-1032TZDS	32 Zone Remote LED Annunciator with trouble LEDs. Mounts in an BB-1000 Series enclosure.
RAX-1048TZDS	48 Zone Adder LED Annunciator with trouble LEDs. Connects to RAM-1032TZDS and mounts in an BB-1000 enclosure.
BB-1001	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 1 module.
BB-1002	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 2 modules.
BB-1003	White enclosure for RAM-1016TZ or RAM-1032TZDS Annunciators. Houses 3 modules

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CAT. 5671  
Rev. 2



### Description

Mircom's modular RA-1000 Series Remote Annunciators are multiplex annunciator panels that provide a large capacity of annunciation with the Mircom Fire Alarm Control Panels. The RA-1000 Series is comprised of three chassis models. The RAM-1032TZDS Main Annunciator Chassis consists of sealed membrane-like buttons and LED indicators. Complete with Common Control Features and Indicators, the RAM-1032TZDS Main Annunciator Chassis provides up to 32 points of annunciation and can be expanded with up to four RAX adder annunciator chassis modules. Defined via DIP switches, the RA-1000 Remote Annunciators are automatically configured to match the Fire Alarm Control Panel configuration.

The RAX-1048TZDS Adder Annunciator Chassis has the same basic construction as the Main Annunciator Chassis and can provide up to 48 points of annunciation. It interconnects to either a RAM-1032TZDS Main Annunciator or a RAX-1048TZDS Adder Annunciator Chassis. Up to four RAX-1048TZDS Adder Annunciator Chassis' can be connected to one RAM-1032TZDS. The annunciators come standard with Bi-coloured LEDs to annunciate Alarm or Supervisory points. Each display point can be identified by the slide-in label that slides in beside the LED. The annunciator modules can mount into five various sized enclosures.

### Features

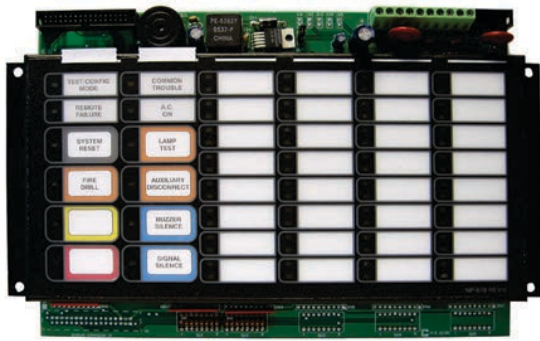
- Large capacity of annunciation
- Provides annunciation through three annunciator chassis modules
- Bi-coloured LEDs
- Slide-in labels for each display point
- Surface mount to standard gang outlet boxes
- Sealed membrane-like buttons and LED indicators
- Local Buzzer, Silence and Lamp Test switches
- LEDs for A.C. On, Common Trouble, Remote Failure, Aux. Disconnect, Acknowledge, General Alarm, Signal Silence and Test/Configuration Mode
- Controls for System Reset, Lamp Test, Fire Drill, Aux. Disconnect, Buzzer Silence, Signal Silence, General Alarm and Acknowledge
- Each annunciation point is automatically selected for either Alarm (Red) or Supervisory (Amber) to match the Fire Alarm Control Panel configuration
- Five sizes of enclosures
- Enclosures are available in a white colour for the Canadian market and a red exterior for the U.S. and International markets



**CATALOG NUMBER 5505**

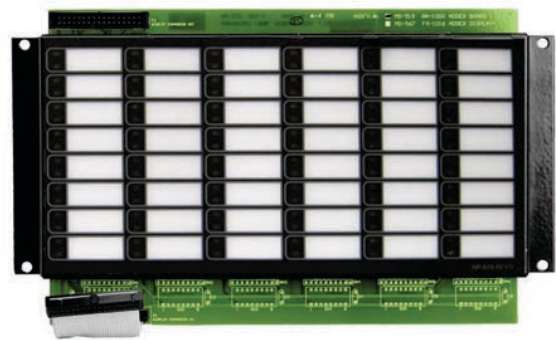
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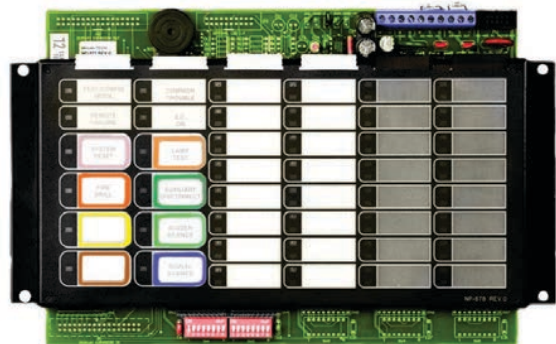
### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. Each display point can be identified by the slide-in label that slides in besides the LED. The RAM-1032TZDS allows for the control switches to be disabled on a per function basis for areas that do not require certain common control functions to be remotely located from the fire alarm control unit. The RAM-1032TZDS can be expanded with the addition of RAX-1048TZDS Programmable LED Annunciator Modules. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main control unit or main annunciator module when mounted remotely. Each display point can be identified by the slide-in label that slides in besides the LED. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAM-1016TZDS Main Remote LED Annunciator

The RAM-1016TZDS Main Remote LED Annunciator provides common annunciator functions and 16 points of LED annunciation. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. Each display point can be identified by the slide-in label that slides in besides the LED. The RAM-1016TZDS allows for the control switches to be disabled on a per function basis for areas that do not require certain common control functions to be remotely located from the fire alarm control unit. The RAM-1016TZDS is a non-expandable unit that occupies one display position in the BB-1000 or BB-5000 enclosures.

### BB-1001 Semi-Flush Enclosure

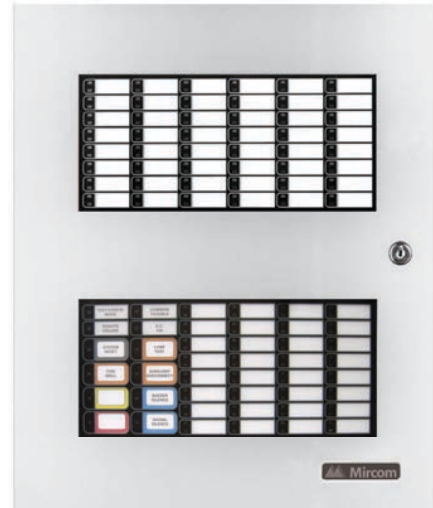
The BB-1001 comes complete with a backbox, door and hinge. The enclosure door comes with a lexan window, two keys and a durable lock. The door comes hinged to the left side of the box. The box is capable of handling one RAM-1032TZDS Main Annunciator Chassis which provides up to 32 points of annunciation.



BB-1001

### BB-1002 Semi-Flush Enclosure

The BB-1002 comes complete with a backbox, door and hinge. The enclosure door comes with lexan windows, two keys and a durable lock. The door comes hinged to the left side of the box. The enclosure is capable of handling one RAM-1032TZDS Main Annunciator Chassis and one RAX-1048TZDS Adder Annunciator Chassis.



BB-1002

### BB-1003 Semi-Flush Enclosure

The BB-1003 comes complete with a backbox, door and hinge. The enclosure door comes with lexan windows, two keys and a durable lock. The door comes hinged to the left side of the box. The enclosure is capable of handling one RAM-1032TZDS Main Annunciator Chassis and two RAX-1048TZDS Adder Annunciator Chassis.



BB-1003

### BB-1008 Semi Flush Enclosure

The BB-1008 comes complete with a backbox, door and hinge. The enclosure door comes with lexan windows, two keys and a durable lock. The door comes hinged to the left side of the box. The enclosure is capable of handling up to one RAM-1032TZDS Main Annunciator Chassis, four RAX-1048TZDS Adder Annunciator Chassis and three additional slots for a combination of either fan damper modules, zoned audio paging modules and zoned fire fighters' telephone modules.

### BB-1012 Semi Flush Enclosure

The BB-1012 comes complete with a backbox, door and hinge. The enclosure door comes with lexan windows, two keys and a durable lock. The door comes hinged to the left side of the box. The enclosure is capable of handling up to one RAM-1032TZDS Main Annunciator Chassis, four RAX-1048TZDS Adder Annunciator Chassis and seven additional slots for a combination of either fan damper modules, zoned audio paging modules and zoned fire fighters' telephone modules.

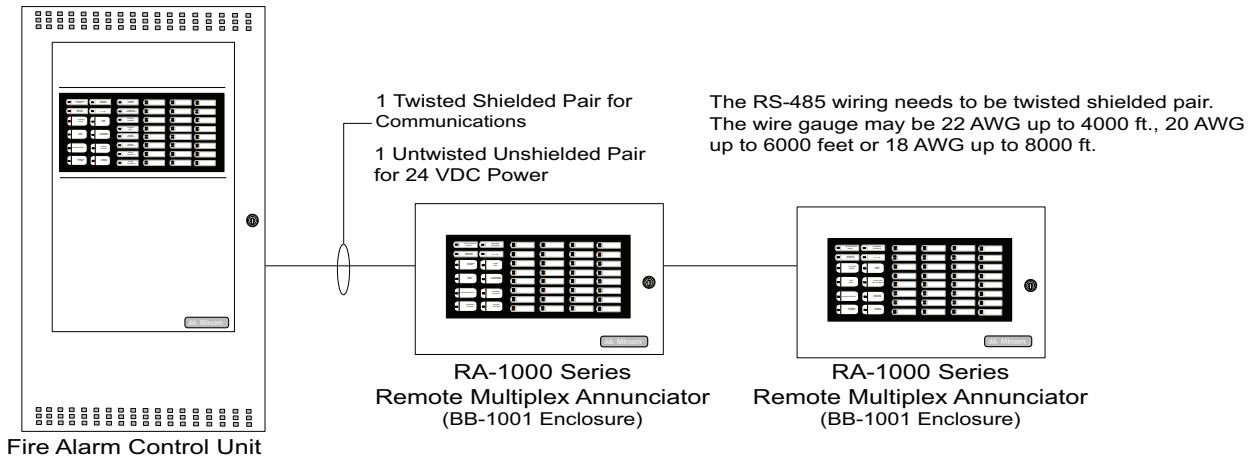
**NOTE:** All BB-1000 Series Enclosures are available in a white colour for the Canadian market and a red exterior for the U.S. and International markets.

## Dimensions

BB-1001 Enclosure: 9"H x 12.75"W x 1.2"D  
 BB-1002 Enclosure: 18"H x 12.75"W x 1.2"D  
 BB-1003 Enclosure: 26.4"H x 12.75"W x 1.2"D

BB-1008 Enclosure: 33"H x 22.5"W x 1.25"D  
 BB-1012 Enclosure: 45"H x 22.5"W x 1.25"D

## Typical Remote Annunciator Wiring Diagram



**NOTE: Annunciator wiring must be as shown. Star type or 'T' tap connections are not allowed. The RA-1000 Series Remote Annunciators must be wired in a loop configuration.**

## Ordering Information

### Model Description

#### Modules

RAM-1016TZDS Main Annunciator Chassis c/w Common Control Features, Indicators and 16 Bi-Coloured LEDs and 16 Trouble LEDs  
 RAM-1032TZDS Main Annunciator Chassis c/w Common Control Features, Indicators and 32 Bi-Coloured LEDs and 32 Trouble LEDs  
 RAX-1048TZDS Adder Annunciator Chassis c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs

#### Backboxes

BB-1001 Annunciator backbox with keylock door (Houses 1 module)  
 BB-1002 Annunciator backbox with keylock door (Houses 2 modules)  
 BB-1003 Annunciator backbox with keylock door (Houses 3 modules)  
 BB-1008 Annunciator backbox with keylock door (Houses 8 modules)  
 BB-1012 Annunciator backbox with keylock door (Houses 12 modules)

**Note:** For U.S. and International enclosures add suffix 'R' (Red exterior)

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CAT. 5505  
 Rev.9



RTI-265  
Remote Trouble Indicator



RAM-265  
Remote LED Annunciator

## Description

Mircom's FA-260 Series Remote Annunciators are designed to provide LED annunciation. The remote annunciators consist of the RTI-265 Remote Trouble Indicator and the RAM-265 Remote LED Annunciator.

The RTI-265 Remote Trouble Indicator provides remote trouble annunciation for the FA-260 Series fire alarm control panels. The RTI-265 is equipped with an AC On LED, Common Trouble LED and a Trouble Silence push button. The Remote Trouble Indicator mounts in a single gang outlet box.

The RAM-265 Remote LED annunciator provides remote alarm and trouble annunciation for the FA-260 Series fire alarm control panels. The RAM-265 is equipped with an AC On LED, Common Trouble LED, a Trouble Silence push button and five alarm and supervisory LED/zones. The Remote LED Annunciator mounts in a double gang outlet box.

A maximum of four RTI-265 and four RAM-265 units can be connected to each FA-260 Series fire alarm control panel.

## Features

- Green AC ON indicator
- Yellow Common Trouble indicator
- Trouble Silence pushbutton
- Lamp Test function

### RTI-265 Remote Trouble Indicator

- Single gang mounting
- Alarm current: 25 mA max.
- Dimensions: 2¾" x 4½" (70 mm x 115 mm)

### RAM-265 Remote LED Annunciator

- Alarm current: 40 mA max.
- Double gang mounting
- Dimensions: 4½ x 4½" (115 mm x 115 mm)
- Five Alarm & Supervisory LED/Zones

## Operation

The AC and Trouble LEDs on the remote units follow the control panel AC and Trouble LEDs. Pressing the Trouble Silence switch at the panel or at any remote unit will silence the trouble buzzer at the panel and all remote units.

Zone indicators on the RAM-265 Remote LED Annunciator follow the zone indicators of the control panel. The red LED will operate if the panel zone is programmed for 'ALARM' and the yellow LED will operate if the panel zone is programmed for 'SUPERVISORY'.

The Lamp Test is initiated by pressing and holding the Trouble Silence push button for ½ second. The LEDs will flash until the button is released.



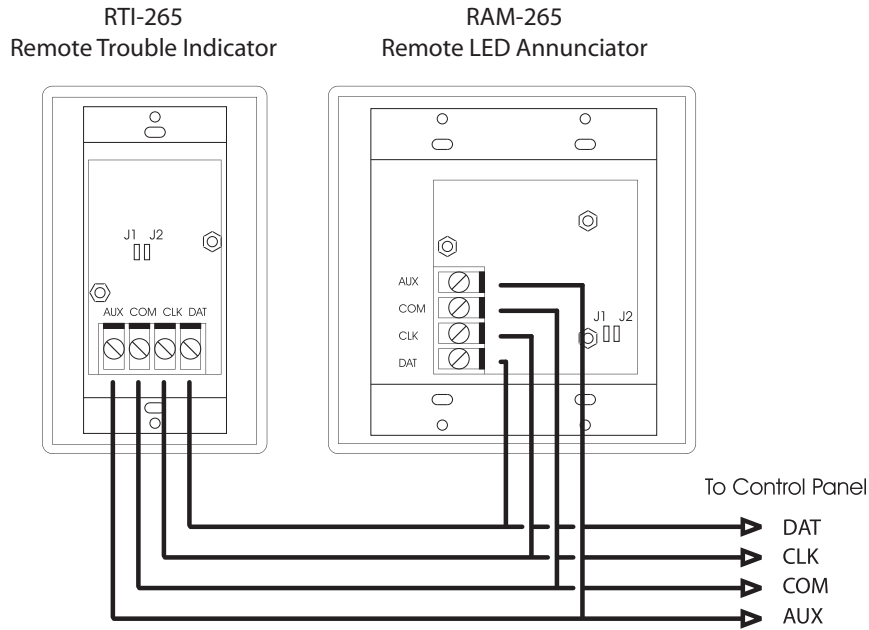
**CATALOG NUMBER 5683**

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## Typical Wiring Diagram



## Ordering Information

Model	Description
RTI-265	Remote Trouble Indicator
RAM-265	Five Zone Remote Annunciator

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CAT. 5683  
 Rev. 1



### Description

Mircom's FA-300 Series fire alarm control panels consist of eight and twelve zone models which are equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands.

Mircom's FA-300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

All of the FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Relay modules.

The FA-300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Listed to UL 864, 9th edition
- Available in eight and twelve zone configurations with an integrated UDACT/Digital Communicator on select models
- Front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



**CATALOG NUMBER 5661**

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## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

The devices on the i3 zone are dirty.

#### *Out of sensitivity*

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### *Freeze trouble*

The device has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B))

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Silenceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

Select FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

## FA-300 Series LED Version Models



### FA-301-8LR / FA-301-8LDR Eight Zone LED Display Fire Alarm Control Panels

The FA-301-8LR and FA-301-8LDR are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-8LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-8LR and FA-301-8LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-8LR: 26”H x 14.5”W x 4.5”D  
FA-301-8LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W



### FA-301-12LR / FA-301-12LDR Twelve Zone LED Display Fire Alarm Control Panels

The FA-301-12LR and FA-301-12LDR are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-12LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-12LR and FA-301-12LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12LR: 26”H x 14.5”W x 4.5”D  
FA-301-12LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



### RAM-300LCDR/RAM-300LCDW Remote LCD Annunciator

The RAM-300LCD provides remote LCD annunciation through a two line by 20 character LCD display. The RAM-300LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD is available in a red (RAM-300LCDR) or white (RAM-300LCDW) enclosure and comes complete with a CAT-30 lock and key.



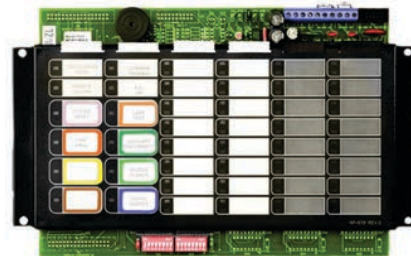
### SRM-312R Smart Relay Module

The SRM-312R provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312R is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



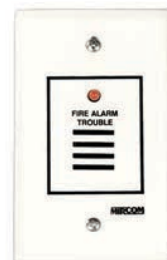
### RAM-208/RAM-216 Remote LED Annunciators

The RAM-208 and RAM-216 provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 and RAM-216 are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

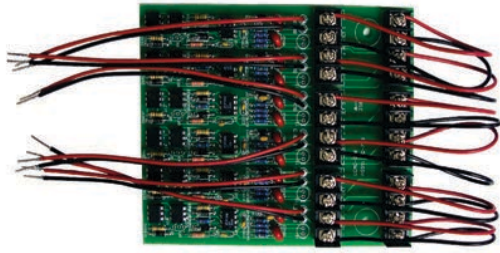
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016 comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

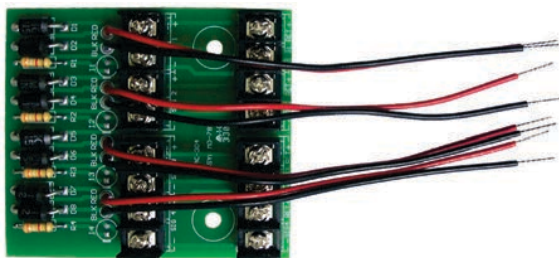
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B" initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12 series panel.



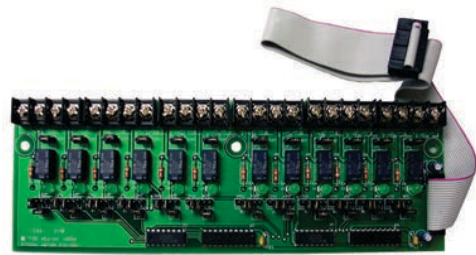
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits.



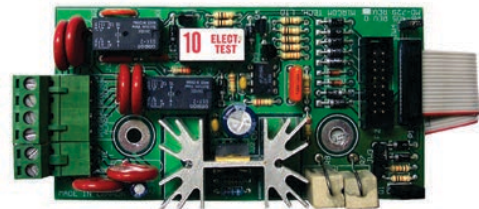
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite front panel programming of the FA-300 Series LED version panels. The CFG-300 plugs into the FA-300 main board to provide a two line by 20 character LCD display. The FA-300 Series LED version panels are configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (Please refer to Battery Calculation Chart in manual for more details.) The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.

## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

10 AH

### Current Consumption

Model	Standby	Alarm
FA-301-8L(D)	136mA (96 mA*)	366mA (326 mA*)
FA-301-12L(D)	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information.)

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max.

## Ordering Information

### Model

### Description

#### Control Panels

FA-301-8LR	Eight-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-8LDR	Eight-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
FA-301-12LR	Twelve-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-12LDR	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)

#### Remote Annunciators and modules

RAM-300LCDR	Remote LCD Annunciator (Red enclosure)
RAM-300LCDW	Remote LCD Annunciator (White enclosure)
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module
RTI-1	Remote Trouble Indicator
BB-1001R	Red Semi-Flush Enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WPR	Red Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WPR

#### Adder Modules

ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300R	Active End-of-Line Resistor with red mounting plate

#### Accessories

FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring
UIMA	Universal Programming Tool

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CAT. 5661  
Rev. 7

# Intelligent Addressable Devices





### Features

- 16 to 328 foot protection range
- Single-ended, reflective design
- Easiest alignment in the industry with digital display
- 6 field selectable sensitivity levels
- Optional integral NFPA 72 sensitivity test feature
- Removable plug-in terminal blocks
- Built-in automatic gain control compensates for signal deterioration from dust build-up
- Remote test station available
- Paintable cover
- Optional heater kits available

### Description

The BEAM200 and BEAM200S single-ended reflected beam smoke detectors are uniquely suited for protecting open areas with high ceilings where other methods of smoke detection are difficult to install and maintain.

The BEAM200 and BEAM200S intelligent reflected beam smoke detectors are designed to be used with UL Listed compatible control panels only. Since all of the wiring is connected to one side, the installation of the single-ended reflective design is much easier than dual-ended projected beam detectors. Alignment is accomplished quickly via an optical sight and a 2 digit signal strength meter incorporated into the product. Listed for operation from  $-22^{\circ}\text{F}$  to  $131^{\circ}\text{F}$ , the BEAM200 detector can be used in open area applications to provide early warning in environments where temperature extremes exceed the capability of other types of smoke detection.

The BEAM200 smoke detector includes one wired transmitter/receiver unit and one reflector. When smoke enters the area between the unit and the reflector it causes a reduction in the signal. The alarm is activated when the smoke level reaches the predetermined threshold.

The BEAM200 device has four standard sensitivity selections along with two Acclimate™ settings. When either of the two Acclimate settings are selected, the detector automatically adjusts its sensitivity using advanced software algorithms to select the optimum sensitivity for the specific environment.

The BEAM200S model is equipped with an added feature, an integral sensitivity test feature that uses a test filter attached to a Servo motor inside the detector optics. Using the remote test station RTS151, the motor is activated and moves the filter in the pathway of the light beam, thereby testing detector sensitivity. This integral sensitivity test feature allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72.



**CATALOG NUMBER 5926**

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# BEAM200 and BEAM200S Specifications

Operational Specifications	
<b>Protection Range</b>	16 ft to 328 ft (5 m to 100 m)
<b>Adjustment Angle</b>	±10 Degrees horizontal & vertical (The optics move independent of the unit)
<b>Sensitivity Levels</b>	Level 1 – 25% Level 2 – 30% Level 3 – 40% Level 4 – 50% Acclimate™ Level 1 – 30 to 50% Acclimate Level 2 – 40 to 50%
<b>Fault Condition (Trouble)</b>	96% or more obscuration blockage In alignment mode Improper initial alignment Self-compensation limit reached
<b>Alignment Aid</b>	Optical gunsight Integral signal strength indication 2 digit display
<b>Alarm Indicator</b>	Local red LED and remote alarm
<b>Trouble Indicator</b>	Local yellow LED and remote trouble
<b>Normal Indicator</b>	Local flashing green LED
<b>Test/Reset Features</b>	Integral Sensitivity Test Filter (BEAM200S only, requires additional external power supply) Sensitivity filter (Incremental scale on reflector) Local test switch Local reset switch Remote test and reset switch (Compatible with RTS151 and RTS151KEY test station)
<b>Smoke Detector Spacing</b>	On smooth ceilings, 30 to 60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics, and response requirements. See NFPA 72 and CAN/ULC S524.

Environmental Specifications	
<b>Temperature</b>	-22°F to 131°F (-30°C to 55°C)
<b>Humidity</b>	10 to 93% RH Noncondensing

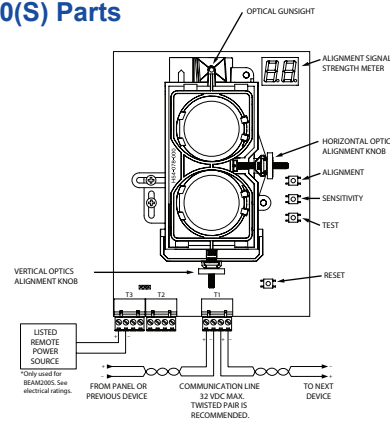
Electrical Specifications	
<b>Voltage</b>	15 to 32 VDC
<b>Avg. Standby Current (24VDC)</b>	2 mA Max
<b>Avg. Current During Testing</b>	500 mA Max
<b>Alarm Current (24VDC)</b>	8.5 mA Max
<b>Fault Current (24VDC)</b>	4.5 mA Max
<b>Alignment Mode Current (24VDC)</b>	20 mA Max

Mechanical Specifications	
<b>Detector Dimensions</b>	10 in H × 7.5 in W × 3.3 in D (254 mm H × 191 mm W × 84 mm D)
<b>Reflector Dimensions (16' to 230')</b>	7.9 in × 9.1 in (200 mm × 230 mm)
<b>Reflector Dimensions (beyond 230')</b>	15.7 in × 18.1 in (400 mm × 460 mm)

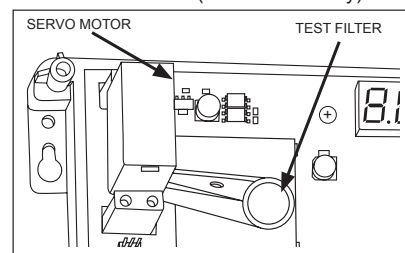
Electrical Specifications (BEAMHK)	
<b>Voltage</b>	15 to 32 V
<b>Current</b>	92 mA at 32 V
<b>Power Consumption</b>	1.6 W at 24 V; 3 W at 32 V

Electrical Specifications (BEAMHKR)	
<b>Voltage</b>	15 to 32 V
<b>Current</b>	450 mA Max at 32 V (per reflector)
<b>Power Consumption</b>	7.7 W at 24 V; 15 W at 32 V (per reflector)

## BEAM200(S) Parts



## Advanced Test Feature (BEAM200S only)



## Ordering Information

Model	Description
BEAM200*	Intelligent beam smoke detector with 8" reflector
BEAM200S*	Intelligent beam smoke detector with 8" reflector and integral sensitivity test
Accessories	
BEAMLRK	Long range accessory kit. Includes 3 additional reflectors. (Required for applications in excess of 230 ft. [70m])
BEAMMMK	Multi-mount kit. (Provides ceiling or wall mount capability with increased angular adjustment for either the beam or the reflector. When installed with the transmitter/receiver unit, BEAMSMK must be used as well)
BEAMSMK	Surface mount kit for use with BEAMMMK
6500-MMK	Heavy duty multi-mount kit (for installations prone to vibration or where there is difficulty in maintaining the set angle. When installed with the transmitter/receiver unit, 6500-SMK must be used as well)
6500-SMK	Surface mount kit for use with the 6500-MMK
BEAMHK	Heater kit for transmitter/receiver unit (See electrical requirements above)
BEAMHKR	Heater kit for reflector (See electrical requirements above)
RTS151	Remote test station used to initiate the NFPA sensitivity test function
RTS151KEY*	Remote test station with key lock

\* Add suffix "A" for ULC model.

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CAT. 5926  
Rev. 3



### Description

Mircom's MS-400AP Series are single action alarm manual stations that include a permanently attached intelligent module. The intelligent manual station has a pair of rotary decimal switches which allows for two digit address setting. Pulling the handle initiates the operation of the intelligent module. Resetting is accomplished by inserting a 1/8" screwdriver from the front. The handle, once pulled will remain open and cannot be reset without utilizing the screwdriver.

The MS-400AP Manual stations are constructed of durable aluminium and finished in red. An abrasion resistant label with large, raised letters provides clear legible instructions. The model MS-402AP (two stage) is similar to the MS-401AP (single stage) except it contains an additional General Alarm (G.A.) N.O. switch. For safety reasons, the G.A. switch is only accessible after the handle has been pulled. A special key is supplied with each unit. All manual stations can be easily converted from single action to double action station by the addition of the MS-DA double action lever.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

### Features

- Durable Extruded Aluminium Construction
- Attractive, Low Profile Design
- Standard Single Gang Mount
- Converts to Double Action
- Glass Rod Optional
- Permanently attached intelligent addressable module. Two stage model is equipped with an intelligent module that provides two addresses for 1<sup>st</sup> and 2<sup>nd</sup> stage operation
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode

### Operation

Pulling on the station's handle will release the internal switch to trigger the intelligent addressable module. The MS-402AP (two stage version) also provides a key switch which is accessible after the handle has been pulled. Operation of the key switch will initiate the 2<sup>nd</sup> stage of a two stage alarm signalling system.

### Engineer Specifications

The single action manual station shall be Mircom's MS-400AP Series. Operating instructions shall be in raised English and French lettering and the unit shall be constructed of extruded aluminium, finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the intelligent module. In addition, those stations installed in a two stage system shall come equipped with an internal key switch designed to operate the 2<sup>nd</sup> stage alarm initiating circuit. All manual fire alarm stations shall be installed as per the specific requirements outlined in the ULC codes, as well as all other applicable national or local codes.



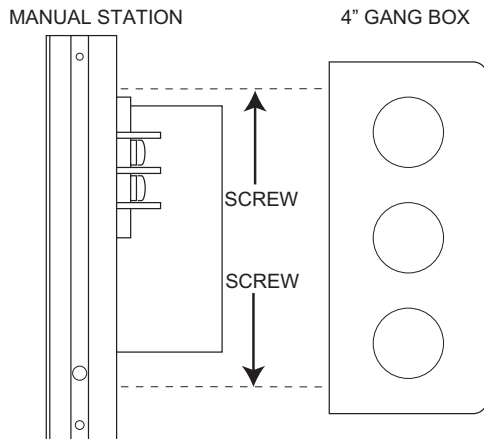
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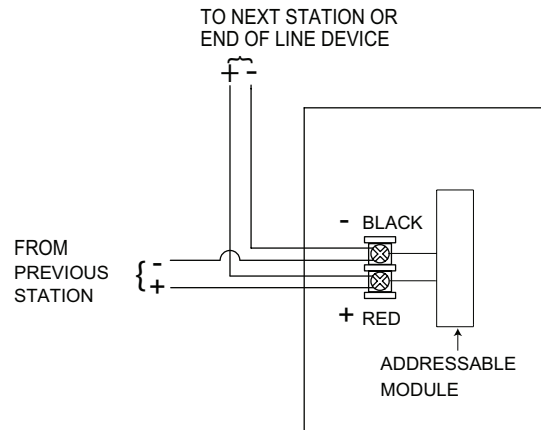
## Specifications

Model	MS-401AP	MS-402AP
Dimensions	4.55" H x 3.3" W x 2" D	4.55" H x 3.3" W x 2.1" D
Nominal Operating Voltage	15–32 VDC	15–32 VDC
Maximum Alarm Current @ 24V	600 $\mu$ A	5.4 mA
Average Operating Current @ 24V	400 $\mu$ A	600 $\mu$ A

## Mounting Diagram



## Wiring Diagram



## Ordering Information

Model	Description
MS-401AP	Advanced Protocol Intelligent Single Stage Manual Station
MS-402AP	Advanced Protocol Intelligent Two Stage Manual Station
MS-DA	Double Action Lever Kit (converts any of above to double action stations)

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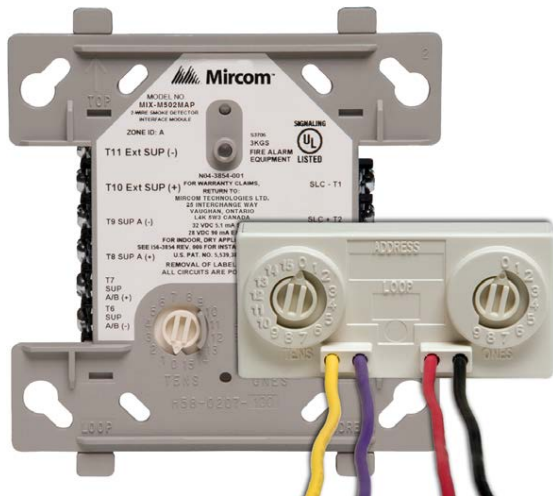
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CAT. 5955  
 Rev. 0



## Features

- Designed to meet a wide range of applications
- SEMS screws for easy wiring
- Panel controlled status LED (except MIX-M501MAP)
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode (except MIX-M500X)
- Low standby current
- Mount in 4" square junction box

## Description

Mircom's intelligent monitor modules are designed to meet a wide range of applications. The monitor modules provide an interface to contact devices, such as, manual stations, conventional smoke or heat detectors, waterflow switches, and more. The monitor modules are addressed with easy-to-use rotary code switches.

Mircom's Advanced Protocol (AP) devices use a high speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom's Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 318 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

### MIX-M500MAP Monitor Module

Mircom's MIX-M500MAP monitor module is a standard-sized module that supervises either a Style D (Class A) or Style B (Class B) circuit of dry-contact input devices. The MIX-M500MAP is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary decade switches. It provides either a 2-wire or 4-wire fault tolerant initiating circuit for normally open contact fire alarm, supervisory, or security devices. The module has a panel controlled LED indicator.

### MIX-M501MAP Mini Monitor Module

The MIX-M501MAP is a miniature monitor module that supervises a Style B (Class B) circuit of dry-contact input devices. The small size of the module allows it to fit inside devices or junction boxes behind devices. The MIX-M501MAP is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary decade switches. It provides a two-wire initiating circuit for normally open contact fire alarm and security devices.

### MIX-M502MAP Zone Interface Module

The MIX-M502MAP Zone Interface Module is a standard-sized module that monitors and supervises compatible two-wire, 24 volt, smoke detectors on a Style D (Class A) or Style B (Class B) circuit. The module allows Mircom's intelligent panels to interface and monitor two-wire conventional smoke detectors. All two-wire detectors being monitored must be UL or ULC compatible with the module. The MIX-M502MAP is addressed through the communication line of an intelligent Mircom system. It transmits the status of one zone of two-wire detectors to the fire alarm control panel. Status conditions are reported as normal, open, or alarm. The interface module supervises the zone of detectors and the connection of the external power supply.



**CATALOG NUMBER 5950**

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## M500X Isolator Module

The M500X Isolator Module is a standard-sized module that enables part of the communications loop to continue operating when a short circuit occurs on it. An LED indicator blinks in the normal condition and turns on during a short circuit condition.

The module will automatically restore the entire communications loop to the normal condition when the short circuit is removed

## Specifications

### MIX-M500MAP Monitor Module

Normal Operating Voltage	15 to 32 VDC
Max. Alarm Current (LED on)	5.0mA (LED on)
Average Operating Current	400 µA, 1 communication every 5 sec, 47k EOL
EOL Resistance	47K Ohms
Max. IDC wiring resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400µA
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

### MIX-M501MAP Mini Monitor Module

Nominal Operating Voltage	15-32 VDC
Max. Alarm Current	600 uA
Average Operating Current	400 µA, 1 communication every 5 seconds, 47k EOL
EOL Resistance	47K Ohms
Max. IDC Wiring Resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400µA
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	1.3" H x 2.75" W x 0.65" D

### MIX-M502MAP Zone Interface Module

Normal Operating Voltage	15 to 32 VDC
Maximum Alarm Current	5.1mA (LED on)
Average Operating Current	400µA, 1 communication and 1 LED flash every 5 seconds, 3.9k EOL
EOL Resistance	3.9K Ohms
Max. IDC wiring resistance	25 Ohms
IDC Supply Voltage	
Regulated DC Voltage	24 VDC power limited
Ripple Voltage	0.1 Volts RMS maximum
Current	90mA per module
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

### M500X Isolator Module

Normal Operating Voltage	15 - 32 VDC
Stand-by Current	450 µA (not isolating)
Maximum Current Draw	17mA (device in isolation)
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10 to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D

## Ordering Information

Model	Description
MIX-M500MAP	Monitor Module
MIX-M501MAP	Mini Monitor Module
MIX-M502MAP	Zone Interface Module
MIX-M500X	Isolator Module

Add suffix "A" for ULC listed model.

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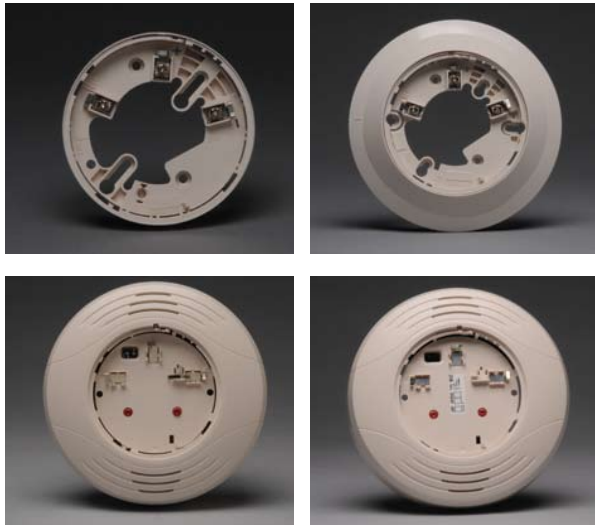
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CAT. 5950  
Rev. 0



### Features

- Bases enable quick and secure detector plug-in
- SEMS screws provide easy wiring connection
- Support for 12-24 AWG provides installation flexibility
- Multiple accessory options provide mounting flexibility
- Sounder bases are compliant with UL 464 and UL 864

### Description

Mircom's mounting bases and kits provide a variety of ways to install detectors in any application. Mircom offers relay, isolator, and sounder base options for the MIX-200 Series detectors. Relay bases provide one form C contact relay for control of auxiliary functions, such as door closure and elevator recall. Isolator bases allow loops to continue to operate under fault conditions and automatically restore when the fault is removed.

The Sounder base is available in a combination temporal 3 and continuous tone model (B200SR).

The 200 Series Bases provide a variety of mounting options to meet your installation challenges. Bases come in flanged or flangless versions for mounting to a variety of junction boxes. See the 200 Series Junction Box Selection Guide on the next page for junction box options. Surface mounting boxes are also available.

### Physical Specifications

Diameter	
B501	4.1" (104 mm)
B210LP	6.1" (155 mm)
B224RB, B224BI, B200SR	6.875" (175 mm)
Wire Gauge	
24 to 12 AWG	
Temperature Range	
B224BI, B224RB, B200SR	32°F to 120°F (0°C to 49° C)
B501, B210LP	-4°F to 150°F (-20°C to 66° C)
Humidity Range	
10% to 93% RH non-condensing	



Note: Refer to ordering information for agency listing details.

**CATALOG NUMBER 5906**

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## Specifications

### B224RB/B224BI Electrical Ratings

<b>Operating Voltage</b>
15 to 32 VDC (powered by SLC)
<b>Standby Current</b>
170/450 $\mu$ A max.
<b>Set Time (B224RB only)</b>
Short Delay: 60 to 100 msec Long Delay: 6 to 10 sec
<b>Reset Time (B224RB only)</b>
20 msec max.
<b>Relay Characteristics (B224RB only)</b>
2 coil latching relay 1 Form C contact UL/ULC Rating: 0.5 A @ 125 VAC 0.9 A @ 125 VDC 3 A @ 30 VDC

### B200SR Electrical Ratings

<b>External Supply Voltage</b>
16 to 33 VDC (VFWR)
<b>Standby Current</b>
500 $\mu$ A max.
<b>Sound Output</b>
Greater than 90 dBA measured in anechoic room at 10 feet, 24 volts. 85 dBA minimum in UL reverberant room
<b>Alarm Current</b>
35 mA max.

## 200 Series Junction Box Selection Guide

Model	Single Gang	3.5" Oct.	4" Oct.	4" Sq.	4" Sq.*	50 mm	60 mm	70 mm	75 mm
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B224RB	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B224BI	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B200SR	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No

\*with 3.0 mud ring

Note: Box depth contingent on base and wire size. Refer to National Electrical Code or applicable local codes for appropriate recommendations.

## Ordering Information

Model	Description	Agency Listing
B210LP*	6" Flanged Mounting Base	UL, ULC, FM, CSFM
B501*	4" Flangeless Mounting Base	UL, ULC, FM, CSFM
B224RB*	Relay Base	UL, ULC, FM, CSFM
B224BI*	Isolator Base	UL, ULC, CSFM, FM
B200SR*	Standard Sounder Base (Compatible with B501BH Series)	UL, ULC, CSFM

\*Add suffix "A" for Canadian ULC listed model.

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CAT. 5906  
Rev. 7





Model MIX-2251TB Detector mounted in a B210LP Base

### Description

Mircom's low profile addressable plug-in smoke and heat detectors with integral communications provide features that surpass conventional detectors. Sensitivity is continuously monitored and reported to the panel where the desired detector sensitivity can be programmed. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

**Model MIX-2251B** photoelectric smoke detector provides a unique optical sensing chamber that senses smoke produced by a wide range of combustion sources.

**Model MIX-225BR** is a remote test capable detector for use with DNR(W) duct smoke detectors.

**Model MIX-2251TB** adds dual electronic thermistors to the MIX-2251B to provide 135°F (57°C) fixed temperature thermal sensing.

**Model MIX-2251TMB** is a photoelectric smoke detector with supplementary 135°F thermal. Also known as Acclimate™, it uses advanced on-board software to combine the signals from the photo and thermal elements. The MIX-2251TMB is a true multicriteria detector capable of rejecting nuisance sources, but still responding quickly to real fires. Acclimate has the capability of adjusting its sensitivity according to the type of environment that it is installed in.

### Features

- Sleek, low profile design
- Detectors are equipped with a built-in analog communications module
- Smoke detectors are available with photoelectric or ionization technology
- Photoelectric detectors are available with additional fixed temperature detection
- Heat detectors are available as fixed temperature or fixed temperature with rate-of-rise detection
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary address switches
- Magnetic test feature
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

**Model MIX-1251B** ionization detector incorporates a unique single source, dual chamber design to respond quickly and dependably to a broad range of fires.

**Model MIX-5251B** uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MIX-5251RB** provides both 135°F fixed and rate-of-rise thermal detection. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MIX-5251H** provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6295  
(MIX-1251B,  
MIX-2251B/BR &  
MIX-2251TB)  
S6299  
(MIX-5251B/RB/H)



S6965  
(MIX-1251B,  
MIX-2251B/BR &  
MIX-2251TB)  
S7498  
(MIX-5251B/RB/H)



7271-1477-122  
(MIX-1251B)  
7271-1477-117  
(MIX-2251B/  
BR/TB)  
7271-1477-114  
(MIX-5251B/RB/H)



148-03-E  
(MIX-1251B)  
219-02-E  
(MIX-2251B/TB)  
390-02-E  
(MIX-5251B/RB/H)



2151  
(MIX-1251B)  
2131  
(MIX-2251B/TB)



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3017996

**CATALOG NUMBER 5904**

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## Specifications

<b>Voltage Range</b>
15 - 32 volts DC peak
<b>Standby Current</b>
300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>Photo/Photo with Thermal:</b>
300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>LED Current (max.)</b>
6.5 mA @ 24 VDC (on)
<b>Height</b>
2.0 inches (51 mm)
<b>Diameter</b>
6.1 inches (155 mm) installed in B210LP Base 4.1 inches (104 mm) installed in B501 Base
<b>Shipping Weight</b>
Heat: 4.8 oz. (136 g) Photo/Photo with Heat: 5.2 oz. (147 g) Ion: 5.4 oz. (153 g)

<b>Operating Humidity Range</b>
10% - 93% noncondensing
<b>Thermal Ratings</b>
Fixed Temperature Setpoint: 135°F (57°C) Rate of Rise Detection: 15°F/min. (8.3°C/min.) High Temperature: 190°F (88°C)
<b>Operating Temperature Range</b>
Ion/Photo: 32°F to 120°F (0°C to 49°C) Photo with Thermal: 32°F to 100°F (0°C to 38°C) Thermal: -4°F to 100°F (-20°C to 38°C) High Temperature: -4°F to 100°F (-20°C to 66°C)
<b>UL Listed Velocity Range</b>
Ion: 0 - 1200 fpm (0 - 6.1 m/sec) Photo/Photo with Thermal: 0 - 4000 fpm (0 - 20 m/sec) (suitable for installation in ducts)

## Ordering Information

Model	Description
<b>Intelligent Detectors</b>	
MIX-1251B	Intelligent Ionization Detector
MIX-2251B	Intelligent Photoelectric Detector
MIX-2251BR	Intelligent Photoelectric Detector. Remote test capable. For use with DNR(W) duct detectors.
MIX-2251TB	Intelligent Photoelectric Detector with 135°F Fixed Temperature Heat Detector
MIX-2251TMB	Intelligent Acclimate™ Multicriteria Smoke Detector
MIX-5251B	Intelligent Heat Detector, 135°F fixed temperature
MIX-5251RB	Intelligent Heat Detector, 135°F fixed temperature with rate-of-rise detection
MIX-5251H	Intelligent High Temperature Heat Detector, 190°F fixed temperature
<b>Bases</b>	
B501	Intelligent Flangeless Mounting Base
B210LP	Intelligent Flanged Mounting Base
B224RB	Intelligent Relay Base
B224BI	Intelligent Isolator Base
B200SR	Intelligent Standard Sounder Base (Compatible with B501BH Series)
<b>Accessories</b>	
RA-100Z	Remote LED Annunciator

Add suffix "A" for Canadian model.

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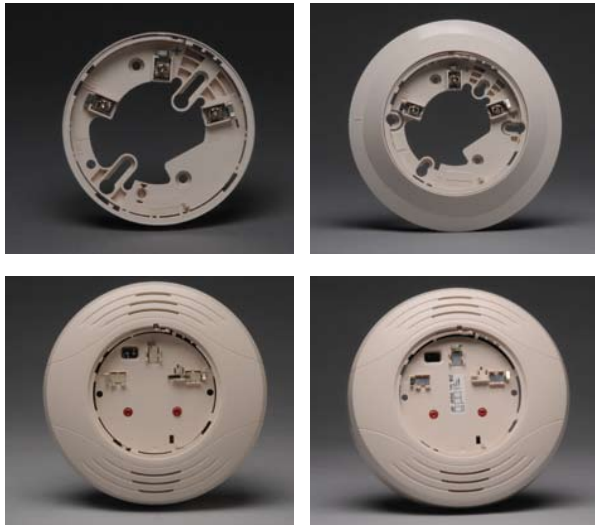
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CAT. 5904  
Rev. 7



### Features

- Bases enable quick and secure detector plug-in
- SEMS screws provide easy wiring connection
- Support for 12-24 AWG provides installation flexibility
- Multiple accessory options provide mounting flexibility
- Sounder bases are compliant with UL 464 and UL 864

### Description

Mircom's mounting bases and kits provide a variety of ways to install detectors in any application. Mircom offers relay, isolator, and sounder base options for the MIX-200 Series detectors. Relay bases provide one form C contact relay for control of auxiliary functions, such as door closure and elevator recall. Isolator bases allow loops to continue to operate under fault conditions and automatically restore when the fault is removed.

The Sounder base is available in a combination temporal 3 and continuous tone model (B200SR).

The 200 Series Bases provide a variety of mounting options to meet your installation challenges. Bases come in flanged or flangless versions for mounting to a variety of junction boxes. See the 200 Series Junction Box Selection Guide on the next page for junction box options. Surface mounting boxes are also available.

### Physical Specifications

Diameter	
B501	4.1" (104 mm)
B210LP	6.1" (155 mm)
B224RB, B224BI, B200SR	6.875" (175 mm)
Wire Gauge	
24 to 12 AWG	
Temperature Range	
B224BI, B224RB, B200SR	32°F to 120°F (0°C to 49° C)
B501, B210LP	-4°F to 150°F (-20°C to 66° C)
Humidity Range	
10% to 93% RH non-condensing	



Note: Refer to ordering information for agency listing details.

**CATALOG NUMBER 5906**

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## Specifications

### B224RB/B224BI Electrical Ratings

<b>Operating Voltage</b>
15 to 32 VDC (powered by SLC)
<b>Standby Current</b>
170/450 $\mu$ A max.
<b>Set Time (B224RB only)</b>
Short Delay: 60 to 100 msec Long Delay: 6 to 10 sec
<b>Reset Time (B224RB only)</b>
20 msec max.
<b>Relay Characteristics (B224RB only)</b>
2 coil latching relay 1 Form C contact UL/ULC Rating: 0.5 A @ 125 VAC 0.9 A @ 125 VDC 3 A @ 30 VDC

### B200SR Electrical Ratings

<b>External Supply Voltage</b>
16 to 33 VDC (VFWR)
<b>Standby Current</b>
500 $\mu$ A max.
<b>Sound Output</b>
Greater than 90 dBA measured in anechoic room at 10 feet, 24 volts. 85 dBA minimum in UL reverberant room
<b>Alarm Current</b>
35 mA max.

## 200 Series Junction Box Selection Guide

Model	Single Gang	3.5" Oct.	4" Oct.	4" Sq.	4" Sq.*	50 mm	60 mm	70 mm	75 mm
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B224RB	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B224BI	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B200SR	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No

\*with 3.0 mud ring

Note: Box depth contingent on base and wire size. Refer to National Electrical Code or applicable local codes for appropriate recommendations.

## Ordering Information

Model	Description	Agency Listing
B210LP*	6" Flanged Mounting Base	UL, ULC, FM, CSFM
B501*	4" Flangeless Mounting Base	UL, ULC, FM, CSFM
B224RB*	Relay Base	UL, ULC, FM, CSFM
B224BI*	Isolator Base	UL, ULC, CSFM, FM
B200SR*	Standard Sounder Base (Compatible with B501BH Series)	UL, ULC, CSFM

\*Add suffix "A" for Canadian ULC listed model.

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CAT. 5906  
Rev. 7



## Description

Mircom's Acclimate™ Intelligent Multi-Criteria Sensor uses advanced software to continuously sample the air in an environment and adjust its detection parameters and alarm threshold accordingly. It does this automatically, without user intervention. There's no need for an installer to set sensitivity levels at the control panel – Acclimate™ makes the educated decisions. The Multi-criteria Detection Reduces Nuisance Alarms.

Mircom's new multi-criteria sensor, Acclimate™, is an intelligent sensor in more ways than one. First, it incorporates both thermal and photoelectric technologies that interact to maximize detection. Second, an on-board microprocessor and advanced software focus on rejecting nuisance alarms.

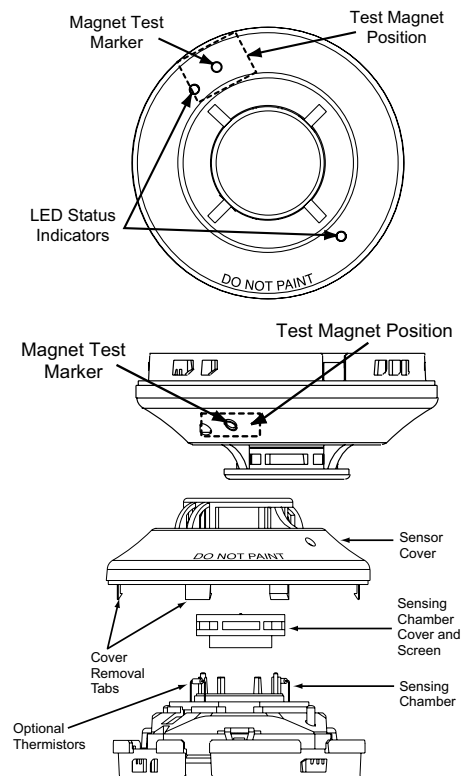
A patented photoelectric sensing chamber and dual thermistor heat detector combine with an array of onboard software tools, to maximize fire detection. In a real fire, the smoke and heat sensors work together to make the quickest possible decision. The photo sensor is optimized for smoldering fires, the heat sensors provide a faster response to flaming fires. A dual stage drift compensation feature reduces maintenance frequency.

Acclimate™ offsets the effects of gradual dust build-up and will notify the control panel before its compensation level is reached, allowing time for maintenance. Once the compensation limit is reached, a second signal is sent to the control panel indicating an urgent need for maintenance.

## Features

- Rotary address switches for fast installations
- Reliable analog communications for trouble free operation
- Configured by the compatible Fire Alarm Control Panels for distinct methods of operation
- Age resistant polymer housing
- Dual electronic thermistor design eliminates directionality
- Superior EMI resistance for reliability
- Microprocessor based design to provide maximum features
- Simple field cleaning for code compliance
- Dual LED indicators for 360° visibility
- On board drift compensation reduces maintenance
- Transmits signal to indicate maintenance required
- Detector sensitivity increases in hot fires
- Transient smoke conditions are ignored

## Installation



CATALOG NUMBER **5919**

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## Operation

Mircom's Acclimate™ Sensor can be configured by the compatible Fire Alarm Control Panels for distinct methods of operation:

### Full Multi-Criteria Integration

This method of operation allows for the Acclimate™ Sensor to provide full multi-criteria functionality.

### Time Selective Detection Sensor

This method of operation allows for the smoke sensor portion to remain off during the configured day period and turn on during the configured night period to provide full Acclimate protection. The heat sensor is configured as an alarm input to provide continuous alarm protection. This method of operation works in conjunction with the compatible Fire Alarm Control Panels for "Day/Night" mode.

#### Typical Application

A typical application for this mode of operation is a public corridor or smoking lounge. These environments normally have a high level of product of combustion present which would cause a smoke sensor to false alarm. At night these products of combustion do not exist and the added protection of a smoke sensor can be utilized.

## Specifications

### Voltage Range

15-32 volts DC

### Height

2.0 inches (51 mm)

### Diameter

6.1 inches (155 mm) installed in B210LP base

4.1 inches (104 mm) installed in B501 base

### Shipping Weight

5.2 oz. (153 g)

### Velocity Range

0 - 4000 fpm (0 to 20.3 m/sec)

### Dual Functionality In One Package

This method of operation allows for the heat sensor portion to be configured as an alarm input and the smoke sensor portion to be configured as a supervisory (latching/non-latching), trouble or monitor input. This allows the smoke portion of the sensor to act as a local intelligent smoke alarm with an optional sounder base. The heat sensor is configured as an alarm input to provide continuous alarm protection. This method of operation allows for one sensor to provide two different modes of operation, each with a distinct programmable message.

#### Typical Application

A typical application for this mode of operation is a hotel room where the smoke sensor acts as an addressable smoke alarm with a local sounder. The smoke sensor provides a local alarm while initiating an alert signal and annunciation point at the fire alarm control panel. The heat sensor acts as an addressable system alarm device which when activated initiates a general alarm.

### Thermal Rating

135°F (57°C) fixed set point

### Relative Humidity

10% - 93% noncondensing

### Self Test Capability

Magnet/control panel activated

### Compatible Bases

B210LP Six-inch flange base

B501 Four-inch flangeless base

B224RB relay base

B224BI isolator base

B501BH sounder base

## Ordering Information

Model	Description
MIX-2251TMB	Low Profile Intelligent Multi-Criteria Sensor

### 200 Series Bases

B501	Flangeless Mounting Base
------	--------------------------

B210LP	Flanged Mounting Base
--------	-----------------------

B501BH	Standard Sounder Base
--------	-----------------------

B224RB	Relay Base
--------	------------

B224BI	Isolator Base
--------	---------------

Add suffix 'A' for Canadian models

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CAT. 5919  
Rev. 7



MIX-2000  
Intelligent Mounting Base



MIX-2001  
6" Intelligent EZ-Fit Base



MIX-2001R  
6" Intelligent Relay Base



MIX-2001HT  
6" Intelligent Sounder Base

### Features

- Low profile design
- Compatible with Mircom's MIX-2000 Series Intelligent Addressable Detectors
- Device address is stored in the detector base
- Automatic addressing with the MIX-ADD card
- Variety of mounting bases
- Ease of installation
- Elegant design

### Description

Mircom's MIX-2000 Series Intelligent Mounting Bases provide a variety of ways to install detectors in any application. The MIX-3000 Series detectors can be mounted in either flanged or flangeless bases depending on the junction box selection. The MIX-ADD address card resides in the mounting base permitting for easy, cost effective detector replacement.

#### MIX-2000 Intelligent Mounting Base

The MIX-2000 Intelligent Mounting Base is a standard 4" mounting base with no flange.

#### MIX-2001 Intelligent EZ-Fit Mounting Base

The MIX-2001 EZ-Fit Mounting Base is a low profile 6" mounting base with a flange.

#### MIX-2001R Intelligent Relay Base

The MIX-2001R Intelligent Relay Base is a low profile 6" mounting base that provides one form C relay contact for control of auxiliary functions such as damper control and elevator recall.

#### MIX-2001HT Intelligent Sounder Base

The MIX-2001HT Intelligent Sounder Base provides a built-in sounder which can be used for evacuation purposes. The MIX-2001H offers selectable steady or temporal pattern output and selectable high or low volume levels. The sounder base requires an external 24VDC power supply.



7300-1477:145  
(MIX-2000, MIX-2001  
& MIX-2001R)



S6295



S6965

**CATALOG NUMBER 5674**

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### MIX-ADD Address Card

A unique, patented addressing method provides simple, user friendly and accurate identification of the detector location. A coded MIX-ADD card is inserted in the base. This can then be read by any Alpha Series detector once it is plugged in. Using this method, all the electronic components are in the detector but the location information is held in the base. The MIX-ADD card simplifies and speeds up installation and commissioning. Addressing errors during maintenance and service are eliminated.

## Specifications

### Base Specifications

Diameter
4.0" (102 mm); flangeless 6.0" (150 mm); flange
Temperature Range
32°F to 120°F (0°C to 49°C)
Humidity Range
10% to 93% RH noncondensing

### MIX-2001R Electrical Ratings

Operating Voltage
17 to 28 VDC
Standby Current
0mA @ 24VDC
Alarm Current
External Supply: 46mA @ 24VDC Associated Detector: 2mA @ 24VDC
Relay Characteristics
1 Form C contact 1.0A @ 30 VDC resistive, 0.3A @ 75 VDC resistive, 0.7A @ 50 VAC resistive

### MIX-2001HT Electrical Ratings

Operating Voltage
17 to 30 VDC (24VDC nominal)
Standby Current
0.03mA @ 24VDC
Alarm Current
External Supply: 29mA @ 24VDC Associated Detector: 8mA @ 24VDC
Sound Output
High Volume Selection: 85dB @ 10 feet Low Volume Selection: 75dB @ 10 feet

## Ordering Information

Model	Description
MIX-2000	4" Intelligent Base (No Flange) c/w MIX-ADD card
MIX-2001	6" Intelligent EZ-Fit Base c/w MIX-ADD card
MIX-2001R	6" Intelligent Relay Base c/w MIX-ADD card
MIX-2001HT	6" Intelligent Sounder Base c/w MIX-ADD card
MIX-ADD	Address Card for MIX-2000 Series Bases (Package of 10)

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5674  
Rev. 1





MIX-3100  
Photoelectric Smoke Detector



MIX-3200  
Multi-Sensor Detector



MIX-3300  
Thermal Detector

### Features

- Low profile design
- For use with the FX-350 Series Fire Alarm Control Panels
- Fast response time
- Automatic addressing with the MIX-ADD card
- Variety of mounting bases
- Ease of installation
- Elegant, unobtrusive design
- Digital communications

### Description

Mircom's Alpha Series Intelligent Addressable Detectors are designed to meet a wide range of applications. The detector's address is set in its base providing a convenient and trouble free maintenance procedure. The detectors mount into a selection of base styles to accommodate installation requirements.

#### Intelligent Photoelectric Smoke Detector (MIX-3100)

The Intelligent photoelectric smoke sensor utilizes a unique optical sensing chamber that is designed to sense smoke produced by a wide range of combustion sources. The photoelectric detector is equipped with a clear LED which flashes when the detector is polled and turns on steady when the detector goes into alarm.

#### Intelligent Multi-Sensor Detector (MIX-3200)

The Intelligent Multi-Sensor Detector is a photoelectric smoke detector with a supplementary thermal sensor. The Multi-Sensor detector combines photoelectric smoke and thermal sensor values to provide enhanced detection performance and reduction of false alarms. Information from each sensing element is processed and conditioned by an on-board advanced technology ASIC and digitally

transmitted to the FACP as a single analog value comprised of the combined responses from both the photoelectric smoke and thermal detection elements.

#### Intelligent Thermal Detector (MIX-3300)

The Intelligent Thermal Detector utilizes state of the art electronic temperature sense to provide fast and accurate temperature monitoring. The thermal detector features an adjustable temperature range that is configured from the FX-350 Series fire alarm control panel.



7272-1477-131  
(MIX-3100)  
7272-1477-142  
(MIX-3200)  
7270-1477-139  
(MIX-3300)



S6295  
(MIX-3100  
& MIX-3200)  
S6299  
(MIX-3300)



S6965  
(MIX-3100  
& MIX-3200)  
S7498  
(MIX-3300)

**CATALOG NUMBER 5676**

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### MIX-ADD Address Card

A unique, patented addressing method provides simple, user friendly and accurate identification of the detector location. A coded MIX-ADD card is inserted in the base. This can then be read by any Alpha Series detector once it is plugged in. Using this method, all the electronic components are in the detector but the location information is held in the base. The MIX-ADD card simplifies and speeds up installation and commissioning. Addressing errors during maintenance and service are eliminated.

## Specifications

### General Specifications

<b>Operating Voltage</b>	16-28 VDC
<b>Communication</b>	Class A (Style D) or Class B (Style B) switch selectable
<b>Relative Humidity</b>	0% to 95% (No condensation or icing)

<b>Operating Temperature</b>	0°F to +155°F (-20°C to +70°C)
<b>Housing/Cover Plate Finish</b>	White Polycarbonate

### MIX-3100 Photoelectric Detector

<b>Standby Current</b>	400 µA
<b>Alarm Current LED</b>	3.4 mA

### MIX-3200 Multi-Sensor Detector

<b>Standby Current</b>	500 µA
<b>Alarm Current LED</b>	3.5 mA

### MIX-3300 Thermal Detector

<b>Standby Current</b>	500 µA
<b>Alarm LED Current</b>	3.4 mA
<b>Operating Temperature Range</b>	131°F to 194°F (55°C to 90°C)

## Ordering Information

Model	Description
MIX-3100	Intelligent Addressable Photoelectric Smoke Detector
MIX-3200	Intelligent Addressable Multi-Sensor Detector
MIX-3300	Intelligent Addressable Thermal Detector
MIX-ADD	Address Card for MIX-3000 Series Intelligent Detectors

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CAT. 5676  
Rev. 2


**MIX-101P**

**MIX-100P**

**MIX-100S**

**MIX-100X**

## Features

- Designed to meet a wide range of applications
- For use with the FX-350 Series Fire Alarm Control Panels
- Fast response time
- Priority Interrupt feature on monitor modules
- Monitor modules can be wired as a Class A (Style D) or Class B (Style B)
- Each module can be addressed from 1 to 126
- Eight position dip switch for address setting
- Red light indicator
- Modules mount in standard 4" junction box

## Description

Mircom's Alpha Series Intelligent Addressable Modules are designed to meet a wide range of applications. The monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors and more. An eight position dip switch allows for the address setting of the device and the wiring class/style of the devices that are connected to the module. All modules mount in a standard 4" x 4" x 2 1/8" junction box.

### Intelligent Addressable Priority Monitor Module (MIX-100P)

The Intelligent Addressable Priority Monitor Module (MIX-100P) provides an address for a group of UL/ULC Listed normally open (N.O.) initiating devices, such as heat detectors, beam smoke detectors, 4-wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-100P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-100P has an activated red LED.

### Intelligent Addressable Priority Mini-Monitor Module (MIX-101P)

The Intelligent Addressable Priority Mini Monitor Module provides an address for a group of UL/ULC Listed Normally Open (N.O.) initiating devices, such as heat detectors, projected beam smoke detectors, 4-wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-101P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-101P has an activated red LED.

### Intelligent Addressable Relay Module (MIX-100R)

The Intelligent Addressable Relay Module connects to the same loop as the initiating devices and provides two isolated sets of Form-C contacts to control a variety of normally open or normally closed contact applications such as fan operation and door closures. The MIX-100R has an activated red LED which follows the state of the relay contacts.



S5434



S5434



7150-1477:156

**CATALOG NUMBER 5675**

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## Intelligent Addressable Supervised Control Module (MIX-100S)

The MIX-100S Control module provides supervised monitoring of wiring to signal devices that require an external power supply to operate, such as horns, strobes, bells or speaker isolators. Conventional signals will require a 24 VDC power source and speakers will require an audio input. The red LED will illuminate when the module is activated. The module is capable of Class A (Style Z) or Class B (Style Y) supervision.

## Specifications

### General Specifications

<b>Operating Voltage</b>	16-28 VDC
<b>Communication</b>	Class A (Style D) or Class B (Style B) switch selectable
<b>Relative Humidity</b>	0% to 95% (No condensation or icing)

### MIX-100P and MIX-101P

<b>Current Consumption</b>	600 $\mu$ A	
<b>Alarm Current</b>	4.6 mA (LED on)	
<b>Dimensions</b>	MIX-100P	4.0" W x 4.0" H x 1.3" D
	MIX-101P	3.0" W x 2.0" H x 0.75" D
<b>Weight</b>	MIX-100P	3.0 oz. (85.8g)
	MIX-101P	1.5 oz. (42.6g.)

### MIX-100S

<b>Current Consumption</b>	1 mA	
<b>Source Power</b>	Signals	24 VDC regulated
	Speakers	70.7 V RMS
<b>Ratings</b>	2A @ 30VDC, 0.6A @ 125VAC	
<b>Dimensions</b>	4.0" W x 4.0" H x 1.3" D	
<b>Weight</b>	3.0 oz. (85.8g)	

## Ordering Information

Model	Description
MIX-100P	Intelligent Addressable Priority Monitor Module
MIX-101P	Intelligent Addressable Priority Mini Monitor Module
MIX-100R	Intelligent Addressable Relay Module
MIX-100S	Intelligent Addressable Supervised Control Module
MIX-100X	Fault Isolator Module

## Fault Isolator Module (MIX-100X)

The MIX-100X Fault Isolator Module is used to protect the system against wire-to-wire short circuits on the analog loop. The modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. In the event of a short circuit between any two fault isolator modules, both modules immediately switch to an open circuit condition and isolate any group of sensors between them. The remaining units on the circuit will continue to operate in a normal fashion (must be wired in Class 'A' or Style 6).

<b>Operating Temperature</b>	0°F to +155°F (-20°C to +70°C)
<b>Housing/Cover Plate Finish</b>	White Polycarbonate

### MIX-100X

<b>Current Consumption</b>	35 $\mu$ A at 24V
<b>Max. Line Current</b>	1 Amp
<b>Line Resistance</b>	0.2 ohm
<b>Dimensions</b>	4.0" W x 4.0" H x 1.3" D
<b>Weight</b>	3.0 oz. (85.8g)

### MIX-100R

<b>Current Consumption</b>	250 $\mu$ A
<b>Ratings</b>	2A @ 24VDC, 0.5A @ 30VAC
<b>Dimensions</b>	4.0" W x 4.0" H x 1.3" D
<b>Weight</b>	3.0 oz. (85.8g)

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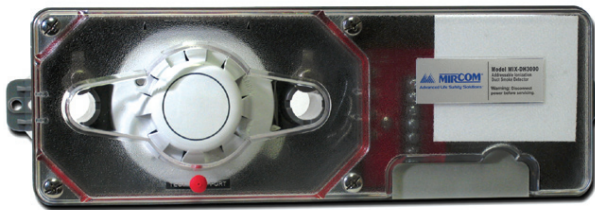
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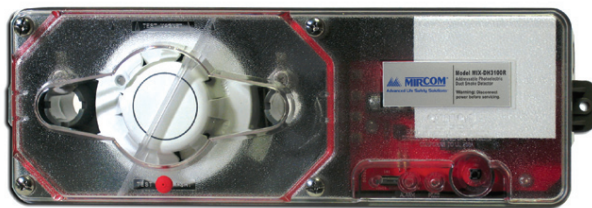


CAT. 5675  
Rev. 2

# ALPHA INTELLIGENT DUCT DETECTORS MIX-DH3000 SERIES



MIX-DH3000  
Intelligent Ionization Duct Detector



MIX-DH3100R  
Intelligent Photoelectric Duct Detector with Relay

## Description

Mircom's MIX-DH3000 Series Intelligent Smoke Duct Detectors are the latest analog addressable innovation for early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications.

The Duct Detectors are designed to prevent the recirculation or spread of smoke by air handling systems, fans, and blowers. Complete systems may be shut down via the building's fire alarm control panel (FACP) in the event of smoke detection.

The MIX-DH3000 Series are Low-Flow Ionization and Photoelectric air duct smoke detectors that are capable of sensing smoke in air velocities from 100 to 4,000 feet per minute (0.5 to 20.32 m/sec). Low-flow technology can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4,000 feet per minute.

The MIX-DH3000 Series are designed and built to meet all local code requirements, as well as the NFPA and ICC standards regarding HVAC supply and return duct smoke detectors. Output terminals are provided for a remote alarm indicator accessory.

## Features

- Low-Flow Technology: Both Ionization and Photoelectric models listed for velocities between 100-4000 ft./min
- Both Ionization and Photoelectric models listed for high temperature applications
- Units supplied with slide-in MIX-ADD Address Card for easy device addressing
- Patent pending "No-Tools Required" front or rear loading and removing sampling/exhaust tubes
- Patent pending "Test Port Valve" allows for aerosol smoke testing without cover removal
- Clear cover fitted with four captive "No-Tools Required" thumbscrews
- Instantaneous cover removal trouble indication
- Vertical terminal block for easier wiring
- Steady red LED on detector head indicates alarm
- More wiring space than competitive models
- Footprint allows easy retrofit in many applications without additional drilling
- Duct wall gaskets on back of enclosure are pre-installed
- External mounting tabs do not require cover removal to install
- Colored cover gasket indicates proper cover seal
- Large terminal connection screws
- Alpha Series interchangeable "plug-in" UL268 photoelectric or ionization heads
- Advanced detector head design yields internal dust filtering
- No additional screens or filters to clean
- Compatible with FX-350 Fire Alarm Control Panels
- Complete wiring details permanently attached to unit

### MIX-DH3000R/MIX-DH3100R (with relay)

- Operating voltages: 24VAC or 24VDC
- In-line terminal block for easier wiring
- Remote accessories available
- Includes green pilot and red alarm visual indicators
- One set of 15A form "C" alarm contacts



S6295



3240-1477-153  
(MIX-DH3000R & MIX-DH3100R)  
3240-1477-154  
(MIX-DH3000 & MIX-DH3100)

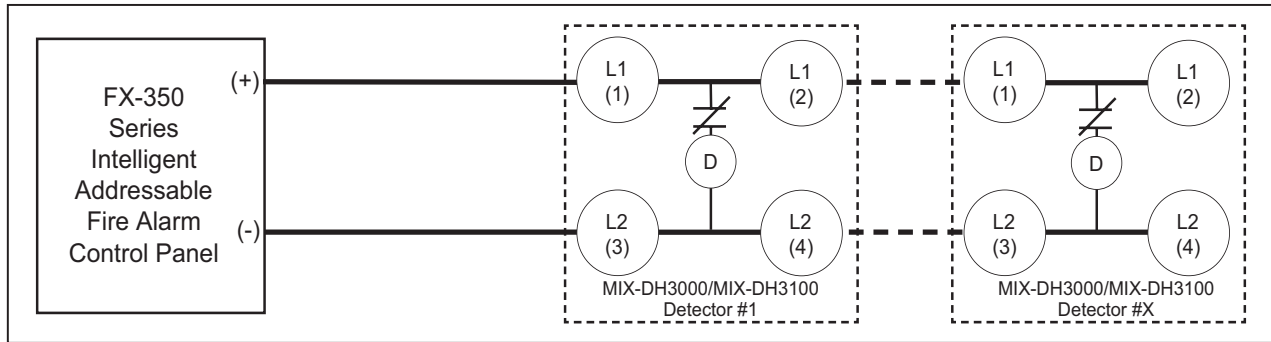
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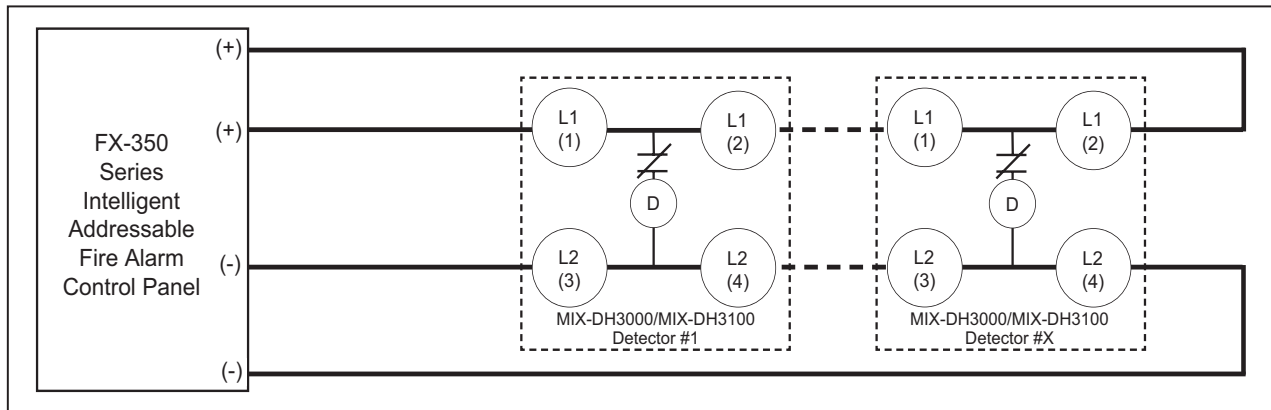
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# MIX-DH3000/MIX-DH3100 Specifications

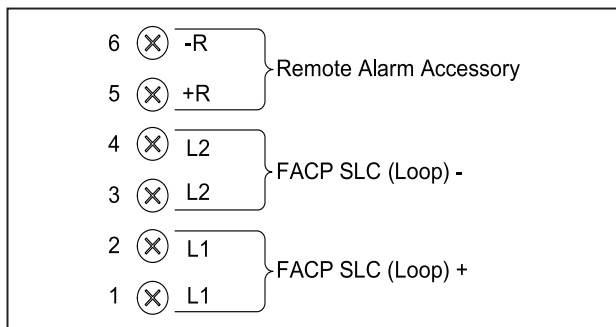
## MIX-DH3000/MIX-DH3100 Class "B" Wiring Diagram



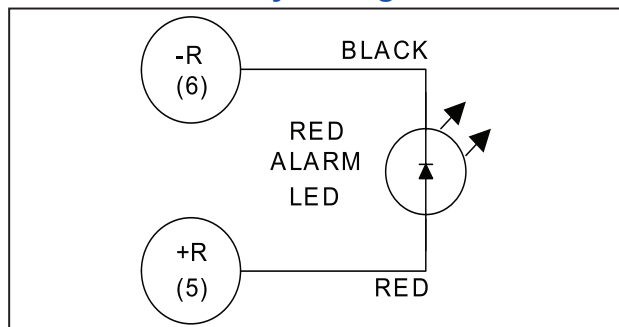
## MIX-DH3000/MIX-DH3100 Class "A" Wiring Diagram



## Terminal Connections



## Remote Accessory Wiring

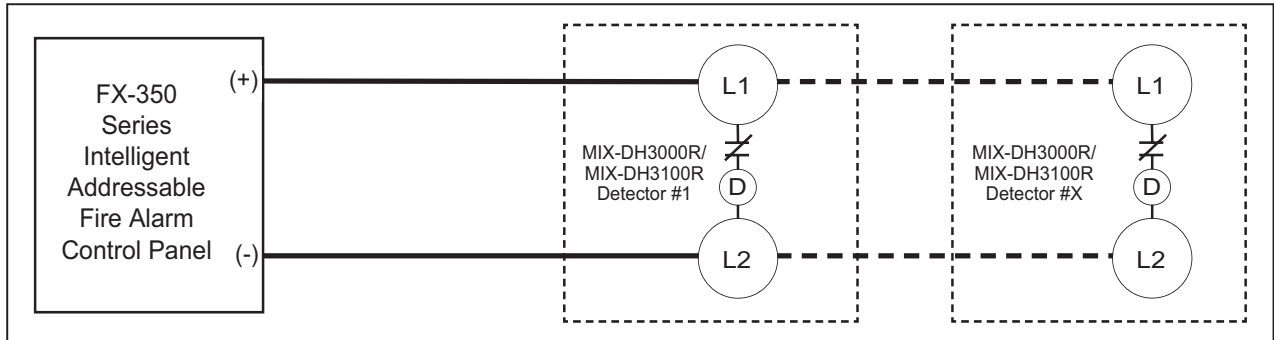


## Engineer Specifications

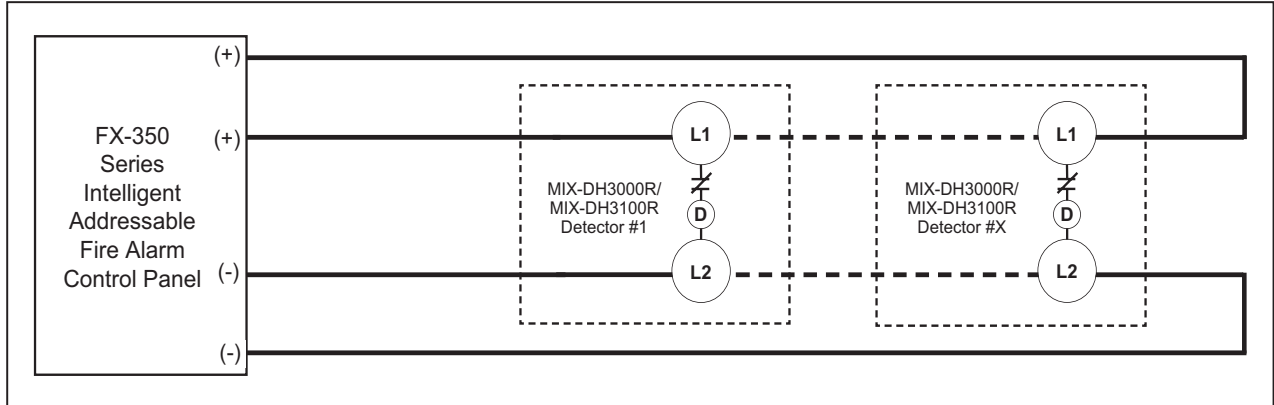
- Air duct smoke detectors shall be Mircom MIX-DH3000 Series. For ionization detectors the model number is MIX-DH3000. For photoelectric detectors the model number is MIX-DH3100. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C).
- Visual indication of alarm and power must be provided on the detector.
- Air handling unit shut down shall be accommodated via the associated FACP.
- Detector head shall not require additional filters or screens which must be maintained.
- The housing shall contain a detector base which will accept photoelectric or ionization detector heads as well as a means of detector addressing.
- Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). Terminals shall be provided for remote alarm indication. All wiring must comply with local codes and regulations.
- A method of testing the alarm function with a magnet must be provided.
- A method of smoke testing the detector without removing the cover must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/maintenance.

## MIX-DH3000R/MIX-DH3100R Specifications

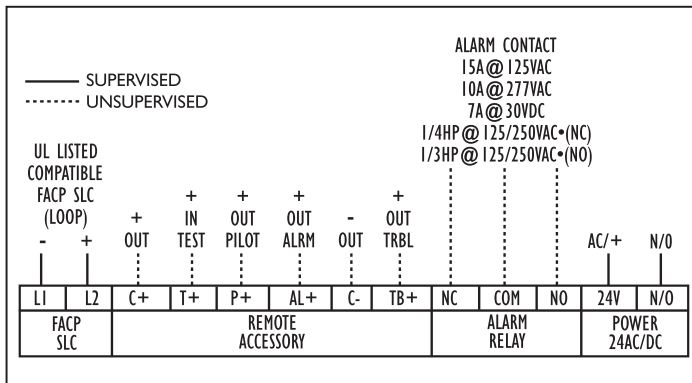
### MIX-DH3000R/MIX-DH3100R Class "B" Wiring Diagram



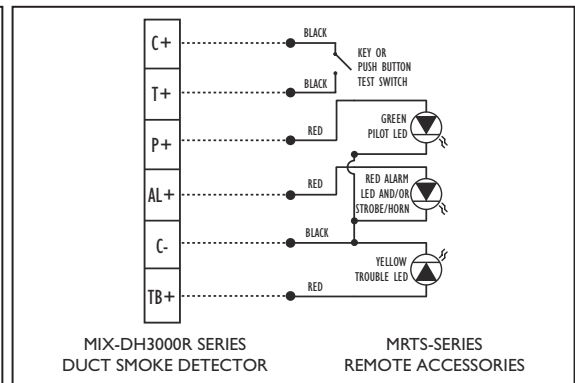
### MIX-DH3000R/MIX-DH3100R Class "A" Wiring Diagram



## Terminal Connections



## Remote Accessory Wiring



## Engineer Specifications

- Air duct smoke detectors shall be Mircom MIX-DH3000 Series. For ionization detectors the model number is MIX-3000R. For photoelectric detectors the model number is MIX-3100R. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C).
- Visual indication of alarm and power must be provided on the detector front.
- A manual relay/test switch located on the front of the device shall be provided.
- Detector head shall not require additional filters or screens which must be maintained, and shall include both a standby and alarm visual indication.
- The housing shall contain a detector base which will accept photoelectric or ionization detector heads as well as a means of detector addressing.
- Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). Terminals shall be provided for remote alarm indication. All wiring must comply with local codes and regulations.
- A method of smoke testing the detector without removing the cover must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/maintenance.

## Remote Accessories



MS-RA



MRTS-KAPR

The MS-RA and MRTS-KAPR remote accessories are designed to be used with Mircom's Duct Smoke Detectors to provide visual indication on the detector as well as remote test/reset functions. The MS-RA provides an LED indicator while the MRTS-KAPR is equipped with LEDs and a test/reset switch. Enabling the "Test" switch on the MRTS-KAPR provides a local alarm indication on the duct detector but not at the fire alarm control panel. Both models are constructed of attractive, durable brushed stainless steel and mount on a standard single gang electrical backbox.

**Power Requirements:** Alarm LED 15mA @ 24VDC  
Pilot LED 15mA @ 24VDC

**Dimensions:** 4 1/2" (114.3mm)H x 2 3/4" (69.85mm)W

## Electrical Specifications

<b>Air Velocity</b>	100 to 4,000 ft./min.	
<b>Ambient Temperature</b>	MIX-DH3000	32°F to 150°F (0°C to 66°C)
	MIX-DH300R	
	MIX-DH3100	32°F to 140°F (0°C to 60°C)
	MIX-DH3100R	
<b>Humidity</b>	10% to 95% R.H. Non-Condensing/Non-Freezing	
<b>Wiring</b>	#12 to #22 AWG terminals	
<b>Material</b>	Grey plastic backbox, clear plastic cover	
<b>Dimensions</b>	L-13 1/2" X H-4 1/2" X D-2 1/4"	
<b>Max. Net Weight</b>	MIX-DH3000 / MIX-DH3100	2 lbs.
	MIX-DH3000R / MIX-DH3100R	2 1/4 lbs.
<b>Radioactive Element</b>	For MIX-DH3000/MIX-DH3000R (Ionization) Americium 241; 0.9 Micro-Curie Do Not Expose to Corrosive Atmospheres	
<b>Hardware</b>	7" exhaust tube, sampling tube end cap, mounting template and mounting hardware included	

## MIX-DH3000R/MIX-DH3100R Electrical Specifications

### Relay Contact Ratings

Alarm Contacts	Resistive Load	Inductive Load
	1 set form "C" rated at 15 Amps @ 125VAC 10 Amps @ 277VAC 7 Amps @ 30VDC	1/4 HP @ 125/250VAC (NC) 1/4 HP @ 125/250VAC (NO)

### Control Board Power Requirements (without accessories)

Standby	24VAC	105 mA	Alarm	24VAC	195 mA
	24VDC	26 mA		24VDC	54 mA

## Ordering Information

Model	Description
MIX-DH3000	Alpha Intelligent Ionization Low-Flow Duct Smoke Detector
MIX-DH3000R	Alpha Intelligent Ionization Low-Flow Duct Smoke Detector with relay
MIX-DH3100	Alpha Intelligent Photoelectric Low-Flow Duct Smoke Detector
MIX-DH3100R	Alpha Intelligent Photoelectric Low-Flow Duct Smoke Detector with relay
MSTN-1.0	Sampling tube for 12" or less duct width
MSTN-2.5	Sampling tube for 6" to 2.5' duct width
MSTN-5.0	Sampling tube for 2.5' to 5.0' duct width
MSTN-10.0	Sampling tube for 5.0' to 10.0' duct width
MRTS-KAPR	Remote Alarm LED (Red), Pilot LED (Green) and Key-Operated Test/Reset Switch on a Single Gang Plate
MS-RA	Remote Alarm LED (Red) on a Single Gang Stainless Steel Plate

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CAT. 5685  
Rev. 3





MS-710IDU  
Intelligent Addressable  
Dual Action Manual Station



MS-701UD  
Intelligent Addressable  
Single Action Manual Station

## Description

Mircom's MS-700ID Series Intelligent Fire Alarm Manual Stations are made of a high quality, die-cast metal and are available in either single or dual action configurations with one or two permanently attached addressable modules.

The addressable manual station has DIP switches which allow for address setting. Pulling the handle initiates the operation of the addressable module.

All models are available with CAT-30 keys and mount on a standard single gang backbox, Mircom model BB-700 interior surface metal backbox, or BB-700WP weather proof backbox.

## Operation

The MS-700ID Series is operated by pulling the handle on the front of the station. The unit is reset by opening the station with the key, placing the handle in the normal upright position and relocking the station. On the dual action models, the push bar rotates inward allowing the Manual handle to be grasped in a one handed motion.

## Features

- Single or Dual Action
- Key resettable
- Permanently Attached Intelligent Addressable Module
- High-gloss red enamel finish
- Plastic breakrod
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox
- Available in English and Bilingual versions

## Specifications

The manual station shall be Mircom's MS-700ID Series. Operating instructions shall be in raised English or English and French lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the intelligent addressable module. In addition, those stations installed in a two stage system shall come equipped with an internal key switch designed to operate the 2<sup>nd</sup> stage alarm initiating circuit.

All manual fire alarm stations shall be installed to comply with the Canadian Electrical Code (CSA 22.1) and CAN/ULC-S524-01 Standard for Installation of Fire Alarm Systems. Final acceptance is subject to the local authority having jurisdiction.



**CATALOG NUMBER 5678**

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## Specifications

### Switch Rating:

1 Amp @ 30 VDC  
0.1 Amp @ 125 VAC

### Manual Station Dimensions:

4.9" H x 3.5" W x 2.0" D

### Color:

Red with raised white letters, white Manual bar with raised black letters.

## Surface Mount Backboxes



### BB-700 Surface Mount Backbox

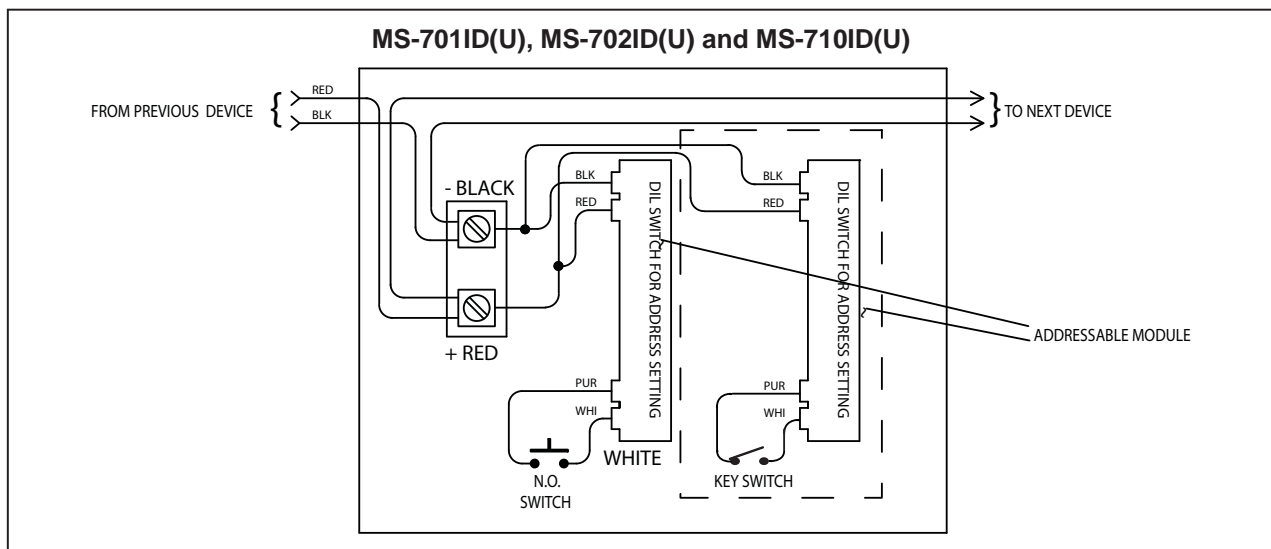
Dimensions:  
5" H x 3.6" W x 2.0" D



### BB-700WP Weatherproof Surface Mount Backbox

Dimensions:  
5" H x 3.6" W x 2.2" D

## Typical Wiring Diagram



## Ordering Information

Model	Description
MS-701ID	Alpha Intelligent Addressable Key Resettable Single Action Single Stage Manual Station (Bilingual)
MS-702ID	Alpha Intelligent Addressable Key Resettable Single Action Two Stage Manual Station (Bilingual)
MS-710ID	Alpha Intelligent Addressable Key Resettable Dual Action Single Stage Manual Station (Bilingual)
<i>Note: Add suffix "U" for English only models.</i>	
BB-700	Series 700 Interior Surface Mount Backbox, Red Finish
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5678  
Rev. 2



MS-710IDU  
Intelligent Addressable  
Dual Action Manual Station



MS-701IDU  
Intelligent Addressable  
Single Action Manual Station

## Description

Mircom's MS-700IDU Series provide manual fire reporting. These high quality, die-cast metal Intelligent Fire Alarm Manual Stations are available in either single or dual action configurations with a permanently attached addressable module.

The MS-700IDU Series stations are available as single or dual-action devices with key resets and a permanently attached addressable module. The addressable manual station has DIP switches which allow for address setting. Pulling the handle initiates the operation of the addressable module.

All models are available with CAT-30 keys and mount on a standard single gang backbox, Mircom model BB-700 interior surface metal backbox, or BB-700WP weather proof backbox.

## Operation

The MS-701IDU Single Action Intelligent Manual Station is operated by pulling down the handle marked "PULL HANDLE" on the front of the station. The MS-710IDU Dual Action Intelligent Manual Station is operated by pushing the bar labelled "PUSH BAR" and then pulling down the handle marked "PULL HANDLE". The MS-700IDU Series Manual Stations are reset by opening the station with the key, placing the handle in the normal upright position and re-locking the station.

## Features

- Single or Dual Action
- Key resettable
- Permanently Attached Intelligent Addressable Module
- High-gloss red enamel finish
- Plastic breakrod
- Meets ADA 5 lb. maximum manual-force
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox

## Specifications

The manual station shall be Mircom's MS-700IDU Series. Operating instructions shall be in raised English lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the intelligent addressable module.

All manual fire alarm stations shall be installed as per the specific requirements outlined in the UL codes, as well as all other applicable national or local codes. Final acceptance is subject to the local authority having jurisdiction.



7150-1477:128



S7005



S7005

**CATALOG NUMBER** **5679**

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## Specifications

<b>Switch Rating:</b>	1 Amp @ 30 VDC 0.1 Amp @ 125 VAC
<b>Manual Station Dimensions:</b>	4.9" H x 3.5" W x 2.0" D
<b>Color:</b>	Red with raised white letters, white Manual bar with raised red letters.

## Surface Mount Backboxes



**BB-700 Surface Mount Backbox**

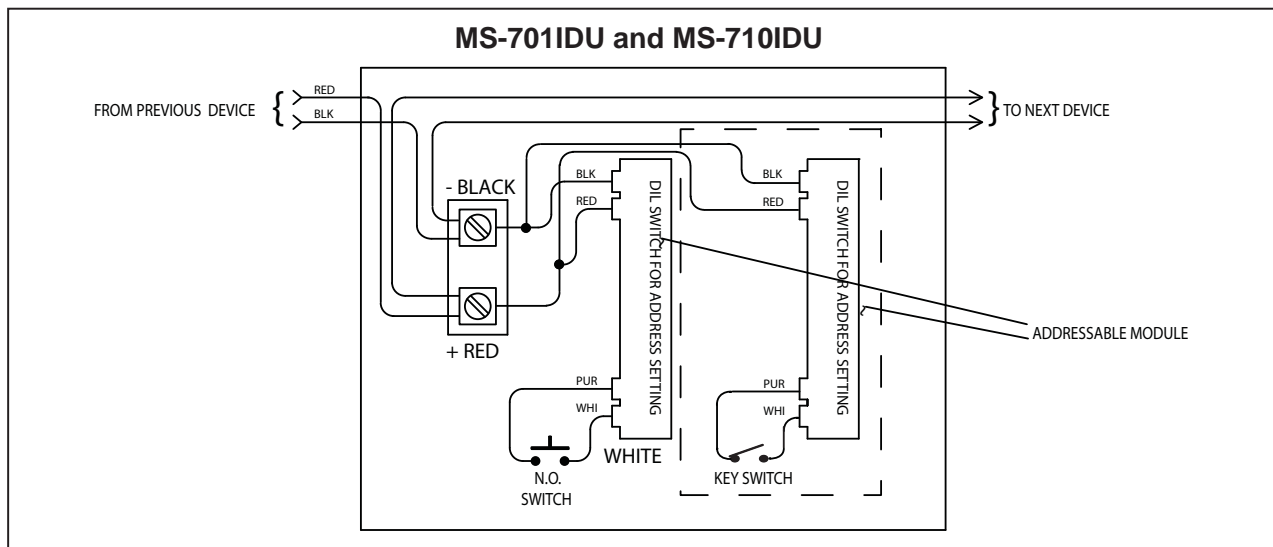
**Dimensions:**  
5" H x 3.6" W x 2.0" D



**BB-700WP Weatherproof Surface Mount Backbox**

**Dimensions:**  
5" H x 3.6" W x 2.2" D

## Typical Wiring Diagram



## Ordering Information

Model	Description
MS-701IDU	Alpha Intelligent Addressable Key Resettable Single Action Manual Station
MS-710IDU	Alpha Intelligent Addressable Key Resettable Dual Action Manual Station
BB-700	Series 700 Interior Surface Mount Backbox, Red Finish
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish

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CAT. 5679  
Rev. 1

## Conventional Devices



### Description

The i3™ series smoke detectors represent a significant advancement in conventional detection. The i3 family is founded on three principles: Installation Ease, Intelligence, and Instant Inspection.

#### Installation Ease

The i3 line redefines installation ease with its plug-in design. This allows an installer to pre-wire the bases included with the heads. The large wire entry port and in-line terminals provide ample room for neatly routing the wiring inside the base. The base accommodates a variety of back box mounting methods as well as direct mounting with drywall anchors. To complete the installation, i3 heads plug-in to the base with a simple Stop-Drop 'N Lock action.

#### Intelligence

i3 detectors offer a number of intelligent features to simplify testing and maintenance. Drift compensation and smoothing algorithms are standard with the i3 line, to minimize nuisance alarms. When connected to the 2W-MOD2 loop test/maintenance module, or a panel equipped with the i3 protocol, 2-wire i3 detectors are capable of generating a remote maintenance signal when they are in need of cleaning. This signal is indicated via an LED located at the module and the panel. To read the sensitivity of i3 detectors, the SENS-RDR is a wireless device that displays the sensitivity in terms of percent per foot obscuration.

#### Instant Inspection

The i3 series provides wide angle red and green LED indicators for instant inspection of the detector condition, indicating: normal standby, out-of-sensitivity, alarm, or freeze trouble conditions. When connected to the 2W-MOD2 loop test/maintenance module or a panel with the i3 protocol, the EZ Walk loop test feature is available on 2-wire i3 detectors. This feature verifies the initiating loop wiring by providing LED status indication at each detector.

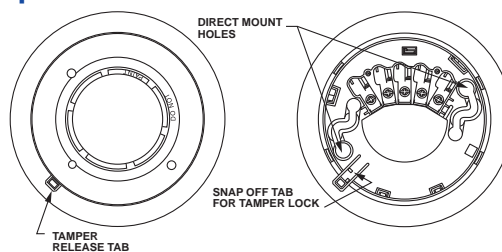
### Features

- Plug-in detector line – mounting base included
- Large wire entry port
- In-line terminals with SEMS screws
- Mounts to octagonal and single-gang backboxes, 4-square backboxes, or direct to ceiling
- Stop-Drop 'N Lock™ attachment to base
- Removable cover and chamber for easy cleaning
- Built-in remote maintenance signaling
- Drift compensation and smoothing algorithms
- Simplified sensitivity measurement
- Wide angle, dual color LED indication
- Loop testing via EZ Walk feature
- Built-in test switch

### Engineering Specifications

Smoke detector shall be an i3 Series model listed to Underwriters Laboratories UL 268 for Fire Protection Signaling Systems. The detector shall be a photoelectric type (model 2W-B, 4W-B) or a combination photoelectric/thermal (model 2WT-B, 4WT-B) with thermal sensor rated at 135°F (57.2°C). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors. Wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5% per foot nominal as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual color LED indication which blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble (model 2WT-B, 4WT-B) conditions. When used in conjunction with the 2W-MOD2 module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually.

### Tamper-Resistant Feature



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approved approved



**CATALOG NUMBER**

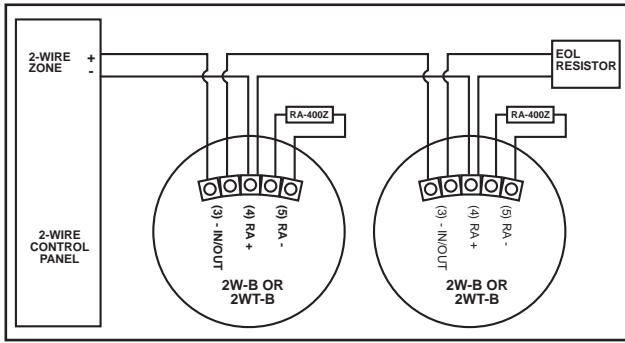
**5128**

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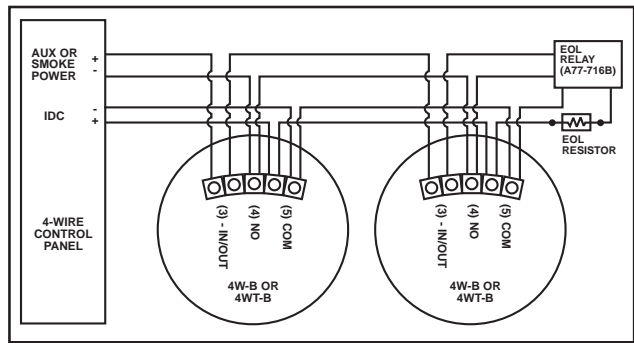
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## Wiring Diagrams

### 2W-B and 2WT-B Wiring Diagram



### 4W-B and 4WT-B Wiring Diagram



## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V non-polarized  
Min.: 8.5 V  
Max.: 35 V

### Maximum Ripple Voltage

30% of nominal (peak to peak)

### Standby Current

2-wire: 50  $\mu$ A maximum average  
4-wire: 50  $\mu$ A maximum average

### Maximum Alarm Current

2-wire: 130 mA limited by control panel  
4-wire: 20 mA @ 12V, 23mA @ 24V

### Peak Standby Current

2-wire: 100  $\mu$ A  
4-wire: n/a

### Alarm Contact Ratings

2-wire: n/a  
4-wire: 0.5 A @ 30V AC/DC

## LED Modes

LED Mode	Green LED	Red LED
Power up	Blink every 10 secs	Blink every 10 secs
Normal (standby)	Blink every 5 secs	off
Out of sensitivity	off	Blink every 5 secs
Freeze trouble	off	Blink every 10 secs
Alarm	off	Solid

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	80 seconds

## Physical Specifications

### Operating Temperature Range

2W-B and 4W-B:  
32°F–120°F (0°C–49°C)  
2WT-B and 4WT-B:  
32°F–100°F (0°C–37.8°C)

### Operating Humidity Range

0 to 95% RH non-condensing

### Thermal Sensor

135°F (57.2°C) fixed

### Freeze Trouble

2WT-B and 4WT-B only: 41°F (5°C)

### Sensitivity

2.5%/ft. nominal

### Input Terminals

14–22 AWG

### Dimensions (including base)

5.3 inches (127 mm) diameter  
2.0 inches (51 mm) height

### Weight

6.3 oz. (178 grams)

### Mounting

- 3½-inch octagonal back box
- 4-inch octagonal back box
- Single gang back box
- 4-inch square back box with a plaster ring
- Direct mount to ceiling

## Ordering Information

Model Number	Thermal Wiring	Alarm Current
2W-B	No	2-wire 130 mA max. limited by control panel
2WT-B	Yes	2-wire 130 mA max. limited by control panel
4W-B	No	4-wire 20 mA @ 12V, 23mA @ 24V
4WT-B	Yes	4-wire 20 mA @ 12V, 23mA @ 24V
<b>Accessories</b>		
2W-MOD2	i3 Series 2-wire loop test/maintenance module	
SENS-RDR	i3 Series Sensitivity Reader	
A77-AB2	i3 Series Retrofit Adapter Bracket	
RT	i3 Series Removal/Replacement Tool	

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CAT. 5128  
Rev. 4



### Features

- Allows all 2-wire i3™ detectors to be used on any compatible 2 or 4-wire fire alarm control panel
- Interprets the i3 remote maintenance signal
- Provides visual indication and an output relay when a detector on the loop requires cleaning
- Initiates the EZ Walk loop test
- Provides Style D wiring on IDC loops
- Green, red, and yellow LEDs indicate
  - Loop communication status
  - Maintenance alert
  - Freeze trouble
  - Alarm
  - EZ Walk test enabled
  - Wiring fault
- Mounts to 4"-square back box
- Durable terminal blocks with SEMS screws

### Description

The 2W-MOD2 two-wire loop test/maintenance module maximizes the benefits of the i3™ series smoke detectors, by offering detector remote maintenance signaling and EZ Walk loop testing capabilities.

### Installation Ease

The 2W-MOD2 mounts to a 4"-square back box for quick and easy installation. Terminal blocks with durable SEMS screws assure a reliable connection.

### Intelligence

The 2W-MOD2 allows communication to 2-wire i3 detectors with any listed fire alarm control panel. This in turn enables i3 detectors to initiate a remote maintenance signal when they are in need of cleaning, and to provide a visual indication of this condition at the module and at the panel. The 2W-MOD2 also features the EZ Walk loop test for 2-wire i3 series detectors. This function verifies the entire initiating loop wiring with just the press of a button.

### Instant Inspection

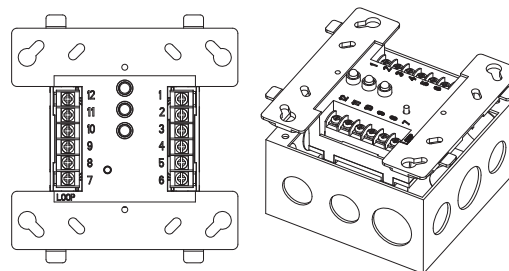
The 2W-MOD2 includes three LEDs — green, red, and yellow — that provide status indication for the loop. These LEDs indicate the following:

- Loop communication status
- Maintenance alert
- Alarm
- Freeze trouble
- EZ Walk test enabled
- Wiring fault

### Engineering Specifications

Loop test/maintenance module shall be an i3 series model number 2W-MOD2, listed to Underwriters Laboratories UL 864 for Control Units for Fire Protection Signaling Systems. The module shall include provisions for mounting to 4-inch square back boxes. Wiring connections shall be made by means of SEMS screws. The module shall provide three LED indicators which will blink or illuminate to indicate communication status, maintenance alert, alarm or freeze trouble conditions, and EZ Walk loop test mode. The module shall allow communication to 2-wire i3 detectors with any UL listed fire alarm control panel. The 2W-MOD2 shall offer provisions for Style D wiring on IDC loops, and shall provide a loop testing capability to verify the initiating loop wiring.

### Mounting



The 2W-MOD2 mounts directly to 4" square electrical boxes.



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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V

Min.: 8.5 V power limited

Max.: 35 V power limited

### Maximum Ripple Voltage

30% of nominal (peak to peak)

### Maximum Standby Current

30 mA

### Maximum Alarm Current

90 mA

### Max. Maintenance Current

53 mA

### Alarm Contact Ratings

0.5 A @ 36VDC, Resistive

### Maintenance Contact Ratings

2 A @ 30VDC, Resistive

## LED Modes

LED Color	Status	Condition
Green LED	On	Power on. Detectors on loop do not have communication capability.
	Blinking 1 sec. on / 1 sec. off	Power on. Detectors on loop are communicating normally.
	Off	Power not applied or module not in operation.
Red LED	On	Detector on loop in alarm.
	Blinking 1 sec. on / 1 sec. off	One or more detector on loop is in need of maintenance or is in freeze trouble.
Yellow LED	On	Loop wiring fault exists.
	Blinking 0.5 sec. on / 0.5 sec. off	EZ Walk test mode.

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	2 minutes
EZ Walk test available	6 minutes after reset

## Physical Specifications

### Operating Temperature

#### Range

14°F–122°F (–10°C to 50°C)

### Operating Humidity Range

0 to 95% RH non-condensing

### Input Terminals

14–22 AWG

### Dimensions

Height: 4.5 inches (114 mm)

Width: 4.0 inches (101 mm)

Depth: 1.25 inches (32 mm)

### Weight

8 oz. (225 grams)

### Mounting

4-inch square back box

## Ordering Information

### Model

2W-MOD2

### Description

2-wire loop test/maintenance module for 2-wire i3 Series standard, sounder and Form C relay smoke detectors

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CAT. 5129  
Rev. 4



### Description

The SENS-RDR sensitivity reader simplifies detector inspection with a convenient wireless device. Like all i3 series products, the SENS-RDR is intelligent, easy to use, and provides instant inspection.

#### Installation (testing) Ease

The SENS-RDR utilizes infrared technology to read the sensitivity of i3 series detectors. Being wireless, there is no need for a physical connection to the detector. Also no voltmeter or multi-meter is required, to further reduce testing time. The SENS-RDR is designed for either hand-held use or may be connected to a threaded extension pole, to eliminate the need for a ladder when measuring the detector's sensitivity.

#### Intelligence

The SENS-RDR provides specific information related to the sensitivity of the detector. Rather than displaying a voltage reading, the SENS-RDR indicates the detector's sensitivity in terms of percent per foot obscuration. This eliminates the added step of cross-referencing a voltage reading to a sensitivity range.

#### Instant Inspection

The SENS-RDR is equipped with an LED and sounder to indicate when the device has completed reading an i3 detector. Upon completion, the LCD screen displays the detector's sensitivity as well as one of three text status indications: GOOD, SERVICE, or REPLACE. Additionally, the SENS-RDR provides a low battery indication when its two AA alkaline batteries need to be replaced.

### Features

- Reads sensitivity of i3 series detectors
- Displays sensitivity in percent per foot obscuration
- Infrared technology does not require a physical connection to the detector
- Eliminates the need for a voltmeter or multi-meter
- May be used as a hand-held device or with a threaded extension pole
- LCD display indicates specific sensitivity reading and a status indication
- Provides audible and LED indication when detector sensitivity has been read
- Operates with two AA alkaline batteries
- Includes low battery indication
- Auto shut-off after 30 minutes

### Engineering Specifications

Sensitivity reader shall be an i3 series model number SENS-RDR, listed with Underwriters Laboratories as a smoke detector accessory. The reader shall be capable of reading the detector's sensitivity without the need for a physical connection to the detector, and shall not require the use of a voltmeter or multi-meter. The reader shall offer the capability of hand-held use or shall accept a threaded extension pole.

The reader shall include an LCD screen which indicates a detector's sensitivity in terms of percent per foot obscuration and a textual status indication. The reader shall operate with two AA alkaline batteries and shall be capable of indicating a low battery condition on the LCD screen.



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## Specifications

### Batteries

2 – AA alkaline batteries  
(not included)

### Dimensions

Length: 718 inches (181 mm)  
Width: 138 inches (35 mm)  
Depth: 118 inches (29 mm)

### Weight

8 oz. (225 grams)

## LCD Status Indications

Status Indication	Action
GOOD	The detector is within its sensitivity range. No action is necessary at this time.
SERVICE	The smoke detector's sensing chamber requires cleaning for continued reliable operation. Refer to the i3 Series manual for proper maintenance procedures.
REPLACE	The smoke detector is failing and should be replaced immediately.

## SENS-RDR Operation

1. Turn the reader on by pressing and holding the button for approximately 2 seconds until the reader sounds. The LCD will display the word "READY". The "READY" status indicates that the SENS-RDR is ready for accepting data from an i3 Series smoke detector.
2. Place the reader by the smoke detector being tested. Position the reader above the oval depression near the word "PAINT" (See Figure 1). Position the reader below the detector at an angle (See Figure 2). A ledge and an anti-skid tip is provided on the reader to maintain the reader in place while it reads the sensitivity.
3. Hold the reader in this position up to 10 seconds until the reader sounds and the reader's red LED illuminates. (**Note:** If the reader does not sound after 10 seconds, verify that the reader is properly positioned, and the LCD displays "READY".)
4. The LED and sounder indicate a valid reading is received. The sensitivity reading and status for the detector will be automatically displayed on the reader. (See "LCD Status Indications" above.) The reader will continue to display this information for up to 30 minutes, or until the reader is reset. (**Note:** No further readings may be taken until the reader is reset.)
5. To measure the sensitivity of the next detector, reset the reader by momentarily pressing the button. The LCD will again display the word "READY". Repeat steps 2 through 4, as necessary.
6. When finished, turn off the reader by pressing and holding the button for approximately 2 seconds until the reader sounds.

Figure 1: Reader location on i3 Series detectors

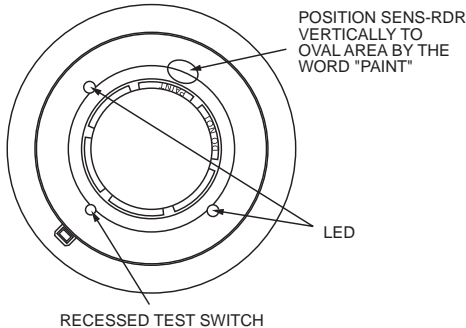
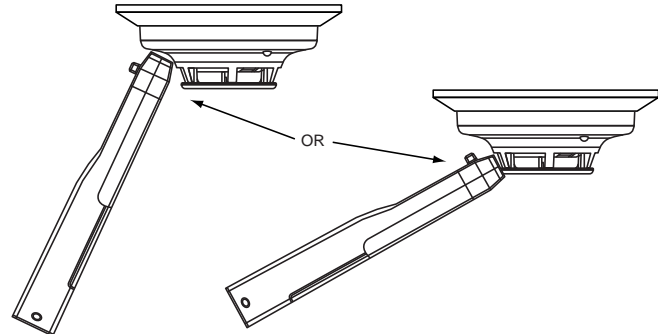


Figure 2: Position Reader on i3 Series detectors



## Ordering Information

Model	Description
SENS-RDR	Sensitivity Reader for i3 Series Smoke Detectors

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CAT. 5130  
Rev. 3



### Description

The i3™ series smoke detectors represent a significant advancement in conventional detection. The i3 family is founded on three principles: Installation Ease, Intelligence, and Instant Inspection.

#### Installation Ease

The i3 line redefines installation ease with its plug-in design. This allows an installer to pre-wire the bases included with the heads. The large wire entry port and in-line terminals provide ample room for neatly routing the wiring inside the base. The base accommodates a variety of back box mounting methods as well as direct mounting with drywall anchors. To complete the installation, i3 heads plug-in to the base with a simple Stop-Drop 'N Lock action.

#### Intelligence

i3 detectors offer a number of intelligent features to simplify testing and maintenance. Drift compensation and smoothing algorithms are standard with the i3 line, to minimize nuisance alarms. When connected to the C2W-MOD2A loop test/maintenance module, or a panel equipped with the i3 protocol, 2-wire i3 detectors are capable of generating a remote maintenance signal when they are in need of cleaning. This signal is indicated via an LED located at the module and the panel. To read the sensitivity of i3 detectors, the CSENS-RDRA is a wireless device that displays the sensitivity in terms of percent per foot obscuration.

#### Instant Inspection

The i3 series provides wide angle red and green LED indicators for instant inspection of the detector condition, indicating: normal standby, out-of-sensitivity, alarm, or freeze trouble conditions. When connected to the C2W-MOD2A loop test/maintenance module or a panel with the i3 protocol, the EZ Walk loop test feature is available on 2-wire i3 detectors. This feature verifies the initiating loop wiring by providing LED status indication at each detector.

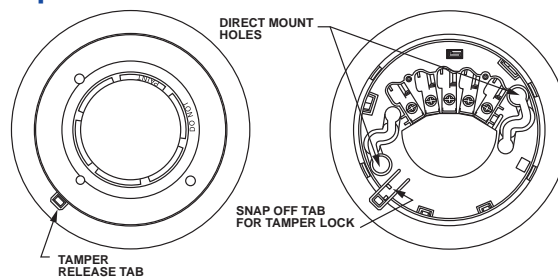
### Features

- Plug-in detector line – mounting base included
- Large wire entry port
- In-line terminals with SEMS screws
- Mounts to octagonal and single-gang backboxes, 4-square backboxes, or direct to ceiling
- Stop-Drop 'N Lock™ attachment to base
- Removable cover and chamber for easy cleaning
- Built-in remote maintenance signaling
- Drift compensation and smoothing algorithms
- Simplified sensitivity measurement
- Wide angle, dual color LED indication
- Loop testing via EZ Walk feature
- Built-in test switch

### Engineering Specifications

The smoke detector shall be an i3 Series model listed by Underwriters Laboratories of Canada (ULC). The detector shall be a photoelectric type (model C2W-BA, C4W-BA) or a combination photoelectric/thermal (model C2WT-BA, C4WT-BA) with thermal sensor rated at 135°F (57.2°C). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors. Wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5% per foot nominal as measured in the ULC smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual color LED indication which blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble (model C2WT-BA, C4WT-BA) conditions. When used in conjunction with the C2W-MOD2A module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually.

### Tamper-Resistant Feature



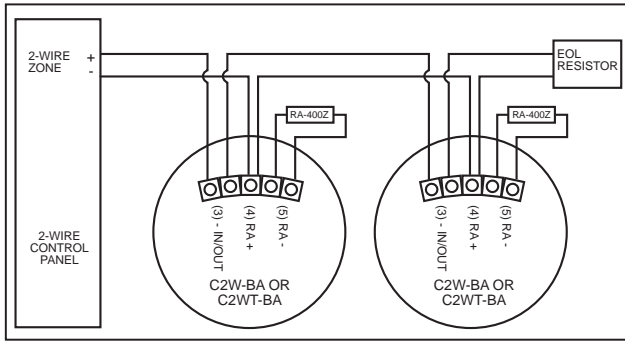
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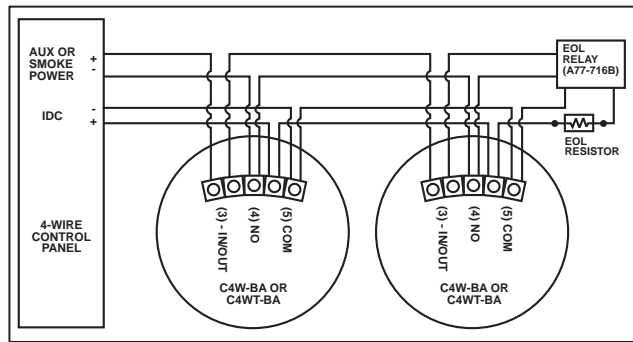
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## Wiring Diagrams

### C2W-BA and C2WT-AB Wiring Diagram



### C4W-BA and C4WT-BA Wiring Diagram



## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V non-polarized  
Min.: 8.5 V  
Max.: 35 V

### Maximum Ripple Voltage

30% of nominal (peak to peak)

### Standby Current

2-wire: 50  $\mu$ A maximum average  
4-wire: 50  $\mu$ A maximum average

### Maximum Alarm Current

2-wire: 130 mA limited by control panel  
4-wire: 20 mA @ 12V, 23mA @ 24V

### Peak Standby Current

2-wire: 100  $\mu$ A  
4-wire: n/a

### Alarm Contact Ratings

2-wire: n/a  
4-wire: 0.5 A @ 30V AC/DC

## LED Modes

LED Mode	Green LED	Red LED
Power up	Blink every 10 secs	Blink every 10 secs
Normal (standby)	Blink every 5 secs	off
Out of sensitivity	off	Blink every 5 secs
Freeze trouble	off	Blink every 10 secs
Alarm	off	Solid

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	80 seconds

## Physical Specifications

### Operating Temperature Range

C2W-BA and C4W-BA:  
32°F–120°F (0°C–49°C)

C2WT-BA and C4WT-BA:  
32°F–100°F (0°C–37.8°C)

Operating Humidity Range  
0 to 95% RH non-condensing

### Thermal Sensor

135°F (57.2°C) fixed

### Freeze Trouble

C2WT-BA & C4WT-BA only: 41°F (5°C)

### Sensitivity

2.5%/ft. nominal

### Input Terminals

14–22 AWG

### Dimensions (including base)

5.3 inches (127 mm) diameter  
2.0 inches (51 mm) height

### Weight

6.3 oz. (178 grams)

### Mounting

- 3½-inch octagonal back box
- 4-inch octagonal back box
- Single gang back box
- 4-inch square back box with a plaster ring
- Direct mount to ceiling

## Ordering Information

Model Number	Thermal	Wiring	Alarm Current
C2W-BA	No	2-wire	130 mA max. limited by control panel
C2WT-BA	Yes	2-wire	130 mA max. limited by control panel
C4W-BA	No	4-wire	20 mA @ 12V, 23mA @ 24V
C4WT-BA	Yes	4-wire	20 mA @ 12V, 23mA @ 24V

### Accessories

C2W-MOD2A	i3 Series 2-wire loop test/maintenance module
CSENS-RDRA	i3 Series Sensitivity Reader
A77-AB2	i3 Series Retrofit Adapter Bracket
RT	i3 Removal/Replacement Tool

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CAT. 5131  
Rev. 3



### Features

- Allows all 2-wire i3™ detectors to be used on any compatible 2 or 4-wire fire alarm control panel
- Interprets the i3 remote maintenance signal
- Provides visual indication and an output relay when a detector on the loop requires cleaning
- Initiates the EZ Walk loop test
- Provides Style D wiring on IDC loops
- Green, red, and yellow LEDs indicate
  - Loop communication status
  - Maintenance alert
  - Freeze trouble
  - Alarm
  - EZ Walk test enabled
  - Wiring fault
- Mounts to 4"-square back box
- Durable terminal blocks with SEMS screws

### Description

The C2W-MOD2A two-wire loop test/maintenance module maximizes the benefits of the i3™ series smoke detectors, by offering detector remote maintenance signaling and EZ Walk loop testing capabilities.

### Installation Ease

The C2W-MOD2A mounts to a 4"-square back box for quick and easy installation. Terminal blocks with durable SEMS screws assure a reliable connection.

### Intelligence

The C2W-MOD2A allows communication to 2-wire i3 detectors with any listed fire alarm control panel. This in turn enables i3 detectors to initiate a remote maintenance signal when they are in need of cleaning, and to provide a visual indication of this condition at the module and at the panel. The C2W-MOD2A also features the EZ Walk loop test for 2-wire i3 series detectors. This function verifies the entire initiating loop wiring with just the press of a button.

### Instant Inspection

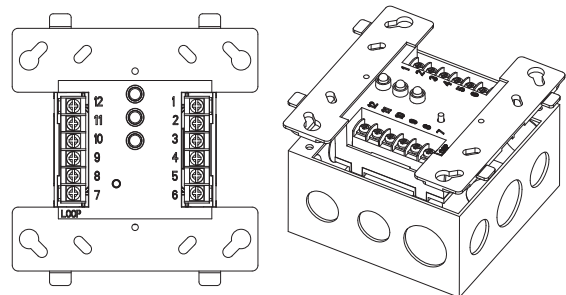
The C2W-MOD2A includes three LEDs — green, red, and yellow — that provide status indication for the loop. These LEDs indicate the following:

- Loop communication status
- Maintenance alert
- Alarm
- Freeze trouble
- EZ Walk test enabled
- Wiring fault

### Engineering Specifications

Loop test/maintenance module shall be an i3 series model number C2W-MOD2A, listed by Underwriters Laboratories of Canada (ULC). The module shall include provisions for mounting to 4-inch square back boxes. Wiring connections shall be made by means of SEMS screws. The module shall provide three LED indicators which will blink or illuminate to indicate communication status, maintenance alert, alarm or freeze trouble conditions, and EZ Walk loop test mode. The module shall allow communication to 2-wire i3 detectors with any ULC listed fire alarm control panel. The C2W-MOD2A shall offer provisions for Style D wiring on IDC loops, and shall provide a loop testing capability to verify the initiating loop wiring.

### Mounting



The C2W-MOD2A mounts directly to 4" square electrical boxes.



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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V

Min.: 8.5 V power limited

Max.: 35 V power limited

### Maximum Ripple Voltage

30% of nominal (peak to peak)

### Maximum Standby Current

30 mA

### Maximum Alarm Current

90 mA

### Max. Maintenance Current

53 mA

### Alarm Contact Ratings

0.5 A @ 36VDC, Resistive

### Maintenance Contact Ratings

2 A @ 30VDC, Resistive

## LED Modes

LED Colour	Status	Condition
Green LED	On	Power on. Detectors on loop do not have communication capability.
	Blinking 1 sec. on / 1 sec. off	Power on. Detectors on loop are communicating normally.
	Off	Power not applied or module not in operation.
Red LED	On	Detector on loop in alarm.
	Blinking 1 sec. on / 1 sec. off	One or more detector on loop is in need of maintenance or is in freeze trouble.
Yellow LED	On	Loop wiring fault exists.
	Blinking 0.5 sec. on / 0.5 sec. off	EZ Walk test mode.

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	2 minutes
EZ Walk test available	6 minutes after reset

## Physical Specifications

### Operating Temperature

#### Range

14°F–122°F (–10°C to 50°C)

### Operating Humidity Range

0 to 95% RH non-condensing

### Input Terminals

14–22 AWG

### Dimensions

Height: 4.5 inches (114 mm)

Width: 4.0 inches (101 mm)

Depth: 1.25 inches (32 mm)

### Weight

8 oz. (225 grams)

### Mounting

4-inch square back box

## Ordering Information

### Model

C2W-MOD2A

### Description

2-wire loop test/maintenance module for 2-wire i3 Series standard, sounder and Form C relay smoke detectors

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CAT. 5132  
Rev. 4



### Description

The CSENS-RDRA sensitivity reader simplifies detector inspection with a convenient wireless device. Like all i3 series products, the CSENS-RDRA is intelligent, easy to use, and provides instant inspection.

### Installation (testing) Ease

The CSENS-RDRA utilizes infrared technology to read the sensitivity of i3 series detectors. Being wireless, there is no need for a physical connection to the detector. Also no voltmeter or multi-meter is required, to further reduce testing time. The CSENS-RDRA is designed for either hand-held use or may be connected to a threaded extension pole, to eliminate the need for a ladder when measuring the detector's sensitivity.

### Intelligence

The CSENS-RDRA provides specific information related to the sensitivity of the detector. Rather than displaying a voltage reading, the CSENS-RDRA indicates the detector's sensitivity in terms of percent per foot obscuration. This eliminates the added step of cross-referencing a voltage reading to a sensitivity range.

### Instant Inspection

The CSENS-RDRA is equipped with an LED and sounder to indicate when the device has completed reading an i3 detector. Upon completion, the LCD screen displays the detector's sensitivity as well as one of three text status indications: GOOD, SERVICE, or REPLACE. Additionally, the CSENS-RDRA provides a low battery indication when its two AA alkaline batteries need to be replaced.

### Features

- Reads sensitivity of i3 series detectors
- Displays sensitivity in percent per foot obscuration
- Infrared technology does not require a physical connection to the detector
- Eliminates the need for a voltmeter or multi-meter
- May be used as a hand-held device or with a threaded extension pole
- LCD display indicates specific sensitivity reading and a status indication
- Provides audible and LED indication when detector sensitivity has been read
- Operates with two AA alkaline batteries
- Includes low battery indication
- Auto shut-off after 30 minutes

### Engineering Specifications

Sensitivity reader shall be an i3 series model number CSENS-RDRA, listed with Underwriters Laboratories as a smoke detector accessory. The reader shall be capable of reading the detector's sensitivity without the need for a physical connection to the detector, and shall not require the use of a voltmeter or multi-meter. The reader shall offer the capability of hand-held use or shall accept a threaded extension pole.

The reader shall include an LCD screen which indicates a detector's sensitivity in terms of percent per foot obscuration and a textual status indication. The reader shall operate with two AA alkaline batteries and shall be capable of indicating a low battery condition on the LCD screen.



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## Specifications

### Batteries

2 – AA alkaline batteries  
(not included)

### Dimensions

Length: 718 inches (181 mm)  
Width: 138 inches (35 mm)  
Depth: 118 inches (29 mm)

### Weight

8 oz. (225 grams)

## LCD Status Indications

Status Indication	Action
GOOD	The detector is within its sensitivity range. No action is necessary at this time.
SERVICE	The smoke detector's sensing chamber requires cleaning for continued reliable operation. Refer to the i3 Series manual for proper maintenance procedures.
REPLACE	The smoke detector is failing and should be replaced immediately.

## CSENS-RDRA Operation

1. Turn the reader on by pressing and holding the button for approximately 2 seconds until the reader sounds. The LCD will display the word "READY". The "READY" status indicates that the CSENS-RDRA is ready for accepting data from an i3 Series smoke detector.
2. Place the reader by the smoke detector being tested. Position the reader above the oval depression near the word "PAINT" (See Figure 1). Position the reader below the detector at an angle (See Figure 2). A ledge and an anti-skid tip is provided on the reader to maintain the reader in place while it reads the sensitivity.
3. Hold the reader in this position up to 10 seconds until the reader sounds and the reader's red LED illuminates. (**Note:** If the reader does not sound after 10 seconds, verify that the reader is properly positioned, and the LCD displays "READY".)
4. The LED and sounder indicate a valid reading is received. The sensitivity reading and status for the detector will be automatically displayed on the reader. (See "LCD Status Indications" above.) The reader will continue to display this information for up to 30 minutes, or until the reader is reset. (**Note:** No further readings may be taken until the reader is reset.)
5. To measure the sensitivity of the next detector, reset the reader by momentarily pressing the button. The LCD will again display the word "READY". Repeat steps 2 through 4, as necessary.
6. When finished, turn off the reader by pressing and holding the button for approximately 2 seconds until the reader sounds.

Figure 1: Reader location on i3 Series detectors

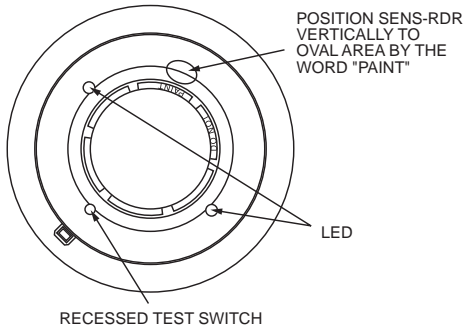
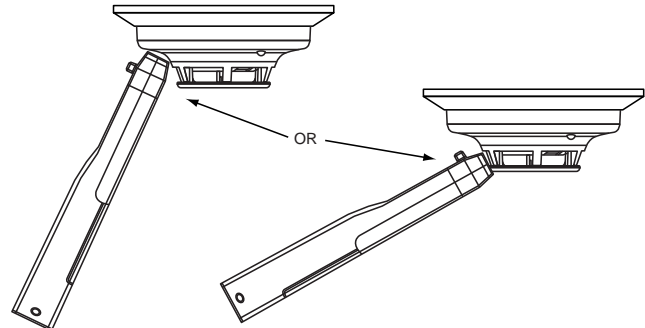


Figure 2: Position Reader on i3 Series detectors



## Ordering Information

Model	Description
CSENS-RDRA	Sensitivity Reader for i3 Series Smoke Detectors

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CAT. 5133  
Rev. 3



### Description

The i3™ sounder and relay smoke detectors apply the guiding principles of installation ease, intelligence, and instant inspection in a series of specialty conventional devices.

#### Installation ease

Throughout the i3 series, installation is simple with its installer-friendly base and plug-in design. The base accommodates a broad range of back box and direct mounting options, and provides ample space for prewiring the installation. To complete the installation, the i3 detector plugs into its base with a simple Stop Drop 'N Lock action.

#### Intelligence

To reduce the likelihood of nuisance alarms, all i3 detectors are equipped with both drift compensation and smoothing algorithms. These capabilities minimize both short- and long-term causes of nuisance alarms such as RF interference and dust accumulation. When connected to the 2W-MOD2 loop test /maintenance module or an i3 Ready™ panel, 2-wire i3 detectors can generate a remote maintenance signal when they are in a maintenance or freeze trouble condition. To measure the sensitivity of any i3 detector, the SENS-RDR displays the reading, in terms of percent per foot obscuration, within seconds.

#### Instant inspection

The i3 line's red and green LEDs simplify local status indication during power-up, standby, alarm, maintenance and freeze trouble conditions. When in alarm, i3 sounder models generate an 85dB temporal tone. If connected to the RRS-MOD reversing relay/synchronization module, all i3 sounders on the loop will activate when one detector is in alarm. Additionally, the RRS-MOD synchronizes the output of all i3 sounders, to ensure a clear audible signal. Should the application call for differentiating between a local and a general alarm, the i3 line offers an isolated thermal model, which initiates a local alarm when smoke is detected, and a general alarm when the thermal sensor is activated.

### Features

- Full line of options including:
  - 85 dB sounder
  - Form C relay
  - Isolated thermal sensor
- Maintains the i3 feature set including:
  - Plug-in design
  - Mounting base included
  - In-line terminals
  - Mounts to octagonal, single gang and 4-square back boxes, or direct to the ceiling
  - Stop-Drop 'N Lock™ attachment to the base
  - Removable cover and chamber
  - Remote maintenance signaling
  - Drift compensation and smoothing algorithms
  - Simplified sensitivity measurement
  - Dual color LEDs
  - EZ Walk loop testing

### Engineering Specifications

The smoke detector shall be an i3 Series model listed to Underwriters Laboratories UL 268 for Fire Protection Signaling Systems. The detector shall be a combination photoelectric/thermal equipped with a sounder (model 2WTA-B, 4WTA-B), a Form C relay (model 2WTR-B), a combination sounder/relay (model 4WTAR-B) or an isolated thermal/sounder/relay (model 4WITAR-B). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors.

Wiring connections shall be made by means of SEMS screws. The detector shall allow prewiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5% per foot nominal as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual color LED indication which blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble conditions. When used in conjunction with the 2W-MOD2 module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually. When used in conjunction with the RRS-MOD module, all i3 sounder models on a loop shall sound when one alarms, all shall be synchronized, and all sounders may be silenced from the panel.



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**CATALOG NUMBER 5148**

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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V non-polarized  
2-wire: 8.5 V - 35 V  
4-wire: 10 V - 35 V

### Peak Standby Current

2-wire: 100  $\mu$ A  
4-wire: n/a

### Maximum Alarm Current

2-wire: 130 mA limited by control panel  
4-wire: 4WTA-B, 4WTR-B: 35 mA  
4WTAR-B, 4WITAR-B: 50 mA

### Maximum Ripple Voltage

30% of applied (peak to peak)

### Standby Current

2-wire: 50  $\mu$ A maximum average  
4-wire: 50  $\mu$ A maximum average

### Alarm Contact Ratings

2-wire: n/a  
4-wire: 0.5 A @ 30V AC/DC

### Form C Contact Ratings

2A @ 30V AC/DC

## LED Modes

LED Mode	Green LED	Red LED
Power up	Blink every 10 secs	Blink every 10 secs
Normal (standby)	Blink every 5 secs	off
Out of sensitivity	off	Blink every 5 secs
Freeze trouble	off	Blink every 10 secs
Alarm	off	Solid

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	80 seconds

## Physical Specifications

### Operating Temperature Range

32°F–100°F (0°C–37.8°C)

### Sensitivity

2.5%/ft. nominal

### Weight

7.1 oz. (200 grams)

### Operating Humidity Range

0 to 95% RH non-condensing

### Input Terminals

14–22 AWG

### Mounting

- 3½-inch octagonal back box
- 4-inch octagonal back box
- Single gang back box
- 4-inch square back box with a plaster ring
- Direct mount to ceiling

### Thermal Sensor

135°F (57.2°C) fixed

### Dimensions (including base)

5.3 inches (134 mm) diameter  
2.0 inches (51 mm) height

### Freeze Trouble

41°F (5°C)

## Ordering Information

### Model Number

2WTA-B  
2WTR-B  
4WTA-B  
4WTR-B  
4WTAR-B  
4WITAR-B

### Thermal

Yes  
Yes  
Yes  
Yes  
Yes  
Yes

### Wiring

2-wire  
2-wire  
4-wire  
4-wire  
4-wire  
4-wire

### Alarm Current

130 mA max. limited by control panel  
130 mA max. limited by control panel  
35 mA  
35 mA  
50 mA  
50 mA

### Accessories

RRS-MOD  
2W-MOD2  
SENS-RDR  
A77-AB2  
RT

i3 Series Reversing relay/synchronization module  
i3 Series 2-wire loop test/maintenance module  
i3 Series Sensitivity Reader  
i3 Series Retrofit Adapter Bracket  
i3 Series Removal/Replacement Tool

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CAT. 5148  
Rev. 1



### Description

The RRS-MOD reversing relay/synchronization module enhances the operation of 2 and 4-wire i3 series detectors equipped with a sounder.

### Installation Ease

The RRS-MOD includes a Velcro attachment for easy installation into the fire alarm control panel cabinet. A quick-connect harness and color-coded wires simplify connections.

### Intelligence

The RRS-MOD's design is flexible to accommodate virtually any application. The RRS-MOD is compatible with both 2 and 4-wire i3 series detectors operating over 12V and 24V systems. The module can be used with either bell/alarm, alarm relay, or NAC outputs, and its field-selectable switch accommodates both coded and continuous alarm signals.

### Instant Inspection

To meet fire alarm requirements, the RRS-MOD activates all i3 sounders on a loop when one alarms. Additionally, the RRS-MOD synchronizes the output of the i3 sounders, regardless of whether the panel's alarm signal is continuous or coded, to ensure a clear alarm signal.

### Features

- Compatible with 2- and 4-wire i3 detectors equipped with a sounder
- Activates all i3 sounders on a loop when one alarms
- Synchronizes all i3 sounders on the loop for a clear alarm signal
- Can be used with bell/alarm, alarm relay, or NAC outputs
- Includes a field-selectable switch to accommodate both coded and continuous alarm signals
- Allows i3 detector silencing from the panel or keypad
- Operates on 12 and 24-volt systems
- Quick-connect harness and color coded wires facilitate connections

### Engineering Specifications

Reversing relay/synchronization module shall be a an i3 Series model number RRS-MOD, listed to Underwriters Laboratories as a smoke detector accessory. The module shall allow all 2-wire and 4-wire i3 Series detectors equipped with a sounder on a loop to sound when one alarms. The module shall provide a switch to toggle between coded mode and continuous mode. When in coded mode, the module shall synchronize the i3 sounders on the loop to mirror the input signal. When in continuous mode, the module shall synchronize the i3 sounders on the loop to the ANSI S3.41 temporal coded pattern. In either coded or continuous modes, the RRS-MOD module shall permit sounders to be silenced at the panel. The RRS-MOD module shall operate between 8.5 and 35 VDC, and shall provide 18 AWG stranded, tinned conductors connected to a quick-connect harness.



## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V  
 Min: 8.5 V  
 Max: 35 V

### Avg. Operating Current

25 mA

### Relay Contact Rating

2 A @ 35 VDC

## Physical Specifications

### Operating Temperature Range

32°F–131°F (0°C–55°C)

### Operating Humidity Range

5 to 85% non-condensing

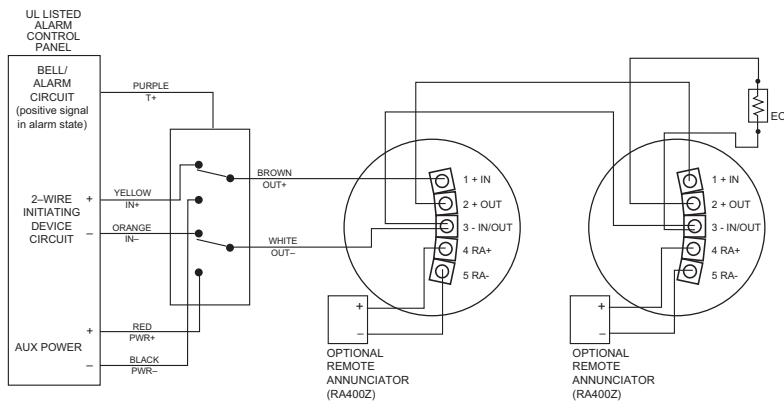
### Wire Connections

18 AWG stranded, tinned, 16" long

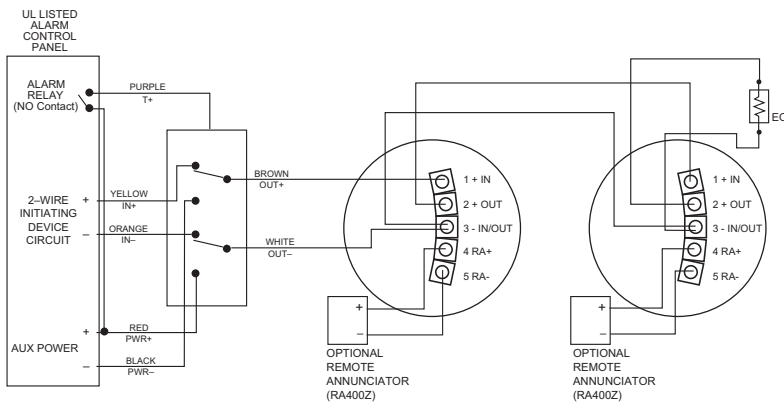
### Dimensions

Height: 2.5 inches (63 mm)  
 Width: 2.5 inches (63 mm)  
 Depth: 1 inch (25 mm)

### 2-Wire System Triggered from Alarm/Bell Circuit:



### 2-Wire System Triggered from Alarm Relay Contact:



### NOTE:

These diagrams represent two common wiring methods.

Refer to the RRS-MOD installation manual for additional wiring configurations.

## Ordering Information

### Model Number

RRS-MOD

### Description

Reversing relay/synchronization module for i3 series smoke detectors

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CAT. 5149  
 Rev. 1



## Description

The i3<sup>TM</sup> sounder and relay smoke detectors apply the guiding principles of installation ease, intelligence, and instant inspection in a series of specialty conventional devices.

### Installation ease.

Throughout the i3 series, installation is simple with its installer-friendly base and plug-in design. The base accommodates a broad range of back box and direct mounting options, and provides ample space for pre-wiring the installation. To complete the installation, the i3 detector plugs into its base with a simple Stop Drop 'N Lock action.

### Intelligence

To reduce the likelihood of nuisance alarms, all i3 detectors are equipped with both drift compensation and smoothing algorithms. These capabilities minimize both short- and long-term causes of nuisance alarms such as RF interference and dust accumulation. When connected to the C2W-MOD2A loop test /maintenance module or an i3 Ready<sup>TM</sup> panel, 2-wire i3 detectors can generate a remote maintenance signal when they are in a maintenance or freeze trouble condition. To measure the sensitivity of any i3 detector, the CSENS-RDRA displays the reading, in terms of percent per foot obscuration, within seconds.

### Instant inspection

The i3 line's red and green LEDs simplify local status indication during power-up, standby, alarm, maintenance and freeze trouble conditions. When in alarm, i3 sounder models generate an 85dB temporal tone. If connected to the CRRS-MODA reversing relay/synchronization module, all i3 sounders on the loop will activate when one detector is in alarm. Additionally, the CRRS-MODA synchronizes the output of all i3 sounders, to ensure a clear audible signal. Should the application call for differentiating between a local and a general alarm, the i3 line offers an isolated thermal model, which initiates a local alarm when smoke is detected, and a general alarm when the thermal sensor is activated.

## Features

- Full line of options including:
  - 85 dB sounder
  - Form C relay
  - Isolated thermal sensor
- Maintains the i3 feature set including:
  - Plug-in design
  - Mounting base included
  - In-line terminals
  - Mounts to octagonal, single gang and 4-square back boxes, or direct to the ceiling
  - Stop-Drop 'N Lock<sup>TM</sup> attachment to the base
  - Removable cover and chamber
  - Remote maintenance signaling
  - Drift compensation and smoothing algorithms
  - Simplified sensitivity measurement
  - Dual color LEDs
  - EZ Walk loop testing

## Engineering Specifications

Smoke detector shall be an i3 Series model listed to Underwriters Laboratories UL 268 for Fire Protection Signaling Systems. The detector shall be a combination photoelectric/thermal equipped with a sounder (model C2WTA-BA, C4WTA-BA), a Form C relay (model C2WTR-BA), a combination sounder/relay (model C4WTAR-BA) or an isolated thermal/sounder/relay (model C4WITAR-BA). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors.

Wiring connections shall be made by means of SEMS screws. The detector shall allow prewiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5% per foot nominal as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual color LED indication which blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble conditions. When used in conjunction with the A2W-MOD2A module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually. When used in conjunction with the CRRS-MODA module, all i3 sounder models on a loop shall sound when one alarms, all shall be synchronized, and all sounders may be silenced from the panel.



**CATALOG NUMBER** **5150**

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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V non-polarized  
2-wire: 8.5 V - 35 V  
4-wire: 10 V - 35 V

### Peak Standby Current

2-wire: 100  $\mu$ A  
4-wire: n/a

### Maximum Alarm Current

2-wire: 130 mA limited by control panel  
4-wire: C4WTA-BA, C4WTR-BA: 35 mA  
C4WTAR-BA, C4WITAR-BA: 50 mA

### Maximum Ripple Voltage

30% of applied (peak to peak)

### Alarm Contact Ratings

2-wire: n/a  
4-wire: 0.5 A @ 30V AC/DC

### Standby Current

2-wire: 50  $\mu$ A maximum average  
4-wire: 50  $\mu$ A maximum average

### Form C Contact Ratings

2A @ 30V AC/DC

## LED Modes

LED Mode	Green LED	Red LED
Power up	Blink every 10 secs	Blink every 10 secs
Normal (standby)	Blink every 5 secs	off
Out of sensitivity	off	Blink every 5 secs
Freeze trouble	off	Blink every 10 secs
Alarm	off	Solid

## Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	80 seconds

## Physical Specifications

### Operating Temperature Range

32°F–100°F (0°C–37.8°C)

### Sensitivity

2.5%/ft. nominal

### Weight

7.1 oz. (200 grams)

### Operating Humidity Range

0 to 95% RH non-condensing

### Input Terminals

14–22 AWG

### Mounting

- 3½-inch octagonal back box
- 4-inch octagonal back box
- Single gang back box
- 4-inch square back box with a plaster ring
- Direct mount to ceiling

### Thermal Sensor

135°F (57.2°C) fixed

### Dimensions (including base)

5.3 inches (134 mm) diameter  
2.0 inches (51 mm) height

### Freeze Trouble

41°F (5°C)

## Ordering Information

### Model Number

C2WTA-BA  
C2WTR-BA  
C4WTA-BA  
C4WTR-BA  
C4WTAR-BA  
C4WITAR-BA

### Thermal

Yes  
Yes  
Yes  
Yes  
Yes  
Yes

### Wiring

2-wire  
2-wire  
4-wire  
4-wire  
4-wire  
4-wire

### Alarm Current

130 mA max. limited by control panel  
130 mA max. limited by control panel  
35 mA  
35 mA  
50 mA  
50 mA

### Accessories

CRRS-MODA  
C2W-MOD2A  
CSENS-RDRA  
A77-AB2  
RT

i3 Series Reversing relay/synchronization module  
i3 Series 2-wire loop test/maintenance module  
i3 Series Sensitivity Reader  
i3 Series Retrofit Adapter Bracket  
i3 Series Removal/Replacement Tool

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CAT. 5150  
Rev. 1



### Description

The CRRS-MODA reversing relay/synchronization module enhances the operation of 2 and 4-wire i3 series detectors equipped with a sounder.

### Installation Ease

The module includes a Velcro attachment for easy installation into the fire alarm control panel cabinet. A quick-connect harness and colour-coded wires simplify connections.

### Intelligence

The module's design is flexible to accommodate virtually any application. The CRRS-MODA is compatible with both 2 and 4-wire i3 series detectors operating over 12V and 24V systems. The module can be used with either bell/alarm, alarm relay, or NAC outputs, and its field-selectable switch accommodates both coded and continuous alarm signals.

### Instant Inspection

To meet fire alarm requirements, the CRRS-MODA activates all i3 sounders on a loop when one alarms. Additionally, the module synchronizes the output of the i3 sounders, regardless of whether the panel's alarm signal is continuous or coded, to ensure a clear alarm signal.

### Features

- Compatible with 2- and 4-wire i3 detectors equipped with a sounder
- Activates all i3 sounders on a loop when one alarms
- Synchronizes all i3 sounders on the loop for a clear alarm signal
- Can be used with bell/alarm, alarm relay, or NAC outputs
- Includes a field-selectable switch to accommodate both coded and continuous alarm signals
- Allows i3 detector silencing from the panel or keypad
- Operates on 12- and 24-volt systems
- Quick-connect harness and color coded wires facilitate connections

### Engineering Specifications

Reversing relay/synchronization module shall be an i3 Series model number CRRS-MODA, listed to Underwriters Laboratories as a smoke detector accessory. The module shall allow all 2-wire and 4-wire i3 Series detectors equipped with a sounder on a loop to sound when one alarms. The module shall provide a switch to toggle between coded mode and continuous mode. When in coded mode, the module shall synchronize the i3 sounders on the loop to mirror the input signal. When in continuous mode, the module shall synchronize the i3 sounders on the loop to the ANSI S3.41 temporal coded pattern. In either coded or continuous modes, the module shall permit sounders to be silenced at the panel. The module shall operate between 8.5 and 35 VDC, and shall provide 18 AWG stranded, tinned conductors connected to a quick-connect harness.



**CATALOG NUMBER 5151**

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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V  
 Min: 8.5 V  
 Max: 35 V

### Avg. Operating Current

25 mA

### Relay Contact Rating

2 A @ 35 VDC

## Physical Specifications

### Operating Temperature Range

32°F–131°F (0°C–55°C)

### Operating Humidity Range

5 to 85% non-condensing

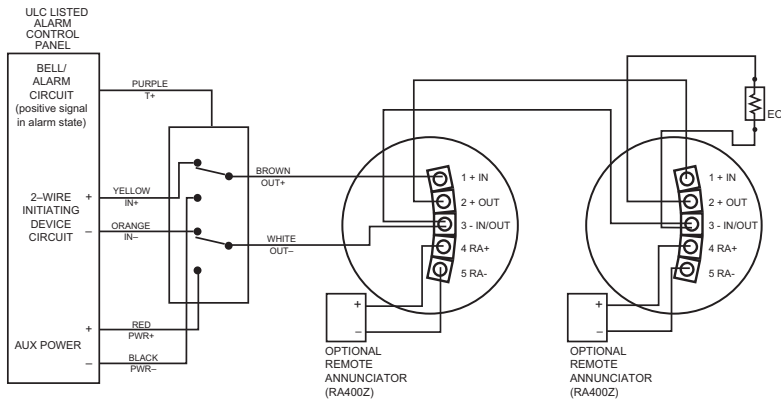
### Wire Connections

18 AWG stranded, tinned, 16" long

### Dimensions

Height: 2.5 inches (63 mm)  
 Width: 2.5 inches (63 mm)  
 Depth: 1 inch (25 mm)

### 2-Wire System Triggered from Alarm/Bell Circuit:



### NOTE:

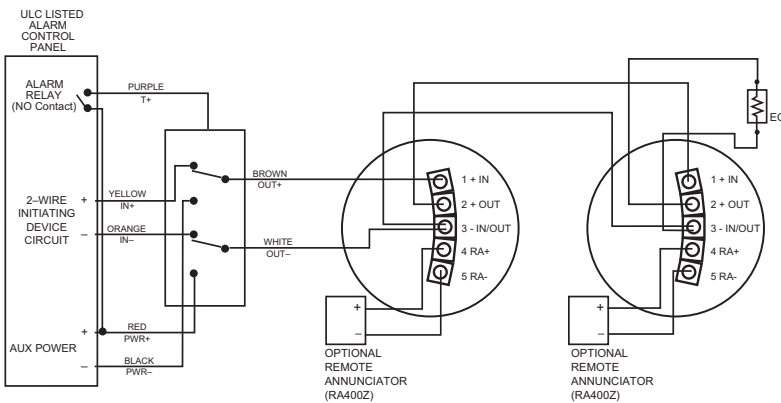
These diagrams represent two common wiring methods.

Refer to the CRRS-MODA

installation manual for additional

wiring configurations.

### 2-Wire System Triggered from Alarm Relay Contact:



## Ordering Information

### Model Number

CRRS-MODA

### Description

Reversing relay/synchronization module for i3 series smoke detectors

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CAT. 5151  
 Rev. 1



## Description

The InnovairFlex D4120 4-wire photoelectric duct smoke detector features a pivoting housing that fits both square and rectangular footprints and mounts to round or rectangular ductwork. This unit senses smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute, temperatures of  $-4^{\circ}\text{F}$  to  $158^{\circ}\text{F}$ , and a humidity range of 0 to 95 percent (non-condensing). A plug-in sensor head offers improved false alarm immunity and simple installation, testing, and maintenance. An improved cover design isolates the sensor head from the low-flow feature for simple maintenance.

The InnovairFlex housing provides ample wiring space, a  $\frac{3}{4}$ -inch conduit knockout, and built-in short circuit protection to prevent damage to sensitive components during installation. High contrast terminal designations make wiring easy. With its 2:1 sensor-to-power capability, the power board of the D4120 may be used to monitor a second sensor, D4S, simultaneously (i.e., supply and return side). As many as 50 InnovairFlex detectors can be interconnected. When one unit senses smoke, all interconnected detectors will switch their relays; only the detector sensing smoke will go into alarm, thus pinpointing the fire source.

An easy-access Test/Reset button makes it possible to test the unit with the cover on. Three DIP switches can be used to configure field selectable settings: cover tamper delay, number of sensors to be controlled, and shut down on trouble option. Each power board has two LEDs that can be used to indicate the status of connected sensors, and a quick reference imprinted on the cover explains the LED status indications (Standby, Maintenance, Trouble, and Alarm). The InnovairFlex duct smoke detector can be customized to meet local codes and specifications without additional wiring. The new InnovairFlex product line is compatible with all previous Innovair models, including remote test accessories.

**WARNING:** Duct smoke detectors have specific limitations.

DUCT SMOKE DETECTORS ARE:

**NOT** a substitute for an open area smoke detector,  
**NOT** a substitute for early warning detection, and  
**NOT** a replacement for a building's regular fire detection system.  
 Refer to NFPA 72, 90A and CAN/ULC S524 for additional duct smoke detector application information.

## Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/sec)
- Versatile mounting options in square or rectangular configuration with modular construction
- Plug-in sensor offers superb false alarm immunity and the latest sensor technology
- Broad ranges for operating temperature ( $-4^{\circ}\text{F}$  to  $158^{\circ}\text{F}$ ) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Increased wiring space with a newly added  $\frac{3}{4}$  inch conduit knockout
- One easy-access Test/Reset button and improved LED status
- Patented interconnect feature for multi-fan shutdown
- New high contrast terminal designations
- Built-in short circuit protection from operator wiring errors
- Field selectable settings for configuring the detector
- Two DPDT Form-C relay contacts
- 24 VAC/DC or 120 VAC
- Backward compatibility with existing Innovair products, including remote accessories

## Architectural/Engineering Specifications

The air duct smoke detector shall be a System Sensor InnovairFlex™ D4120(A) Photoelectric Duct Smoke Detector. The detector housing shall be UL listed per UL 268A or ULC listed specifically for use in air handling systems. The flexible housing of the duct smoke detector fits both square and rectangular footprints. The detector shall operate at air velocities of 100 ft/min to 4000 ft/min (0.5 m/sec to 20.32 m/sec). The unit shall be capable of controlling up to 50 air handling systems when interconnected with other detectors. The detector shall be capable of providing a trouble signal in the event that the front cover is removed. It shall be capable of local testing via magnetic switch or remote testing using the RTS451KEY(A) remote test station. Terminal connections shall be of the strip and clamp method suitable for 12–18 AWG wiring.

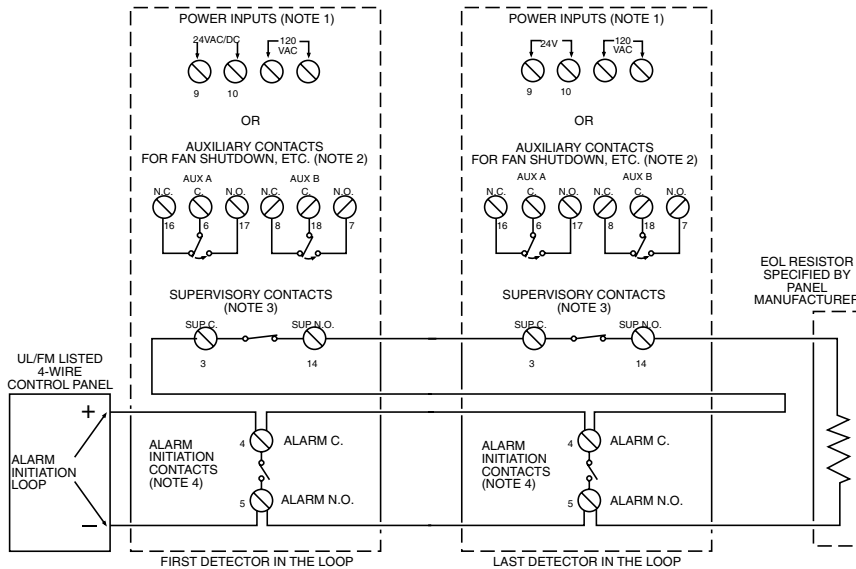


**CATALOG NUMBER 5178**

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## Wiring for 4-wire Duct Smoke Detector and Accessories



**NOTE 1:** 24V Power Inputs accept a non-polarized 24VDC or 24VAC 50-60Hz. 120VAC Power Inputs accept only 120VAC 50-60Hz. Connect power source to appropriate terminals of each detector. See specifications for additional power supply information.

**NOTE 2:** Auxiliary contacts shown in standby position. Contacts switch during alarm as indicated by arrows. Auxiliary contacts are not to be used for connection to the control panel. See specifications for contact ratings.

**NOTE 3:** Supervisory contacts shown in standby position. Open contacts indicate a trouble condition to the panel. See specifications for contact ratings.

**NOTE 4:** Alarm Initiation contacts shown in standby position. Closed contacts indicate an alarm condition to the panel. See specifications for contact ratings.

\*Please refer to the corresponding installation manual for accessory wiring diagrams.

### Accessory Current Loads at 24 VDC

Device	Standby	Alarm
RA100Z	0 mA	12 mA Max.
RTS151	0 mA	12 mA Max.
RTS151KEY	12 mA	12 mA Max.

### Electrical Ratings

Power supply voltage:	20–29 VDC	24 VAC 50–60 Hz	120 VAC 50–60 Hz
Input capacitance:	270 $\mu$ F max.	270 $\mu$ F max.	N/A
Reset voltage:	3.0 VDC min.	2.0 VAC min.	10 VAC min.
Reset time: (with RTS451)	.03 to 0.3 sec.	.03 to 0.3 sec.	.03 to 0.3 sec.
Reset time: (by power down)	0.6 sec. max.	0.6 sec. max.	0.6 sec. max.
Power up time:	35 sec. max.	35 sec. max.	35 sec. max.
Alarm response time:	15 sec.	15 sec.	15 sec.
Sensitivity Test:	See detector label	See detector label	See detector label
Current Requirements: (Using No Accessories)			
Max. standby current:	21 mA @ 24VDC	65 mA RMS @ 24VAC 60Hz	20 mA RMS @ 120VAC 60Hz
Max. alarm current:	65 mA @ 24VDC	135 mA RMS @ 24VAC 60Hz	35 mA RMS @ 120VAC 60Hz

### Physical Specifications

<b>Size: (Rectangular)</b>	14.38 in (37 cm) Length; 5 in (12.7 cm) Width; 2.5 in (6.36 cm) Depth
<b>Size: (Square)</b>	7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth
<b>Weight:</b>	2.5 lb (1.14 kg)
<b>Operating Temp. Range:</b>	<b>D4120 &amp; D4S:</b> -4°F to 158°F (-20°C to 70°C) <b>D4P120:</b> -40°F to 158°F (-40°C to 70°C)
<b>Storage Temp. Range:</b>	<b>D4120 &amp; D4S:</b> -22°F to 158°F (-30° to 70°C) <b>D4P120:</b> -40°F to 158°F (-40°C to 70°C)
<b>Operating Humidity Range:</b>	0% to 95% relative humidity non-condensing
<b>Air Duct Velocity:</b>	100 to 4000 ft/min (0.5 to 20.32 m/sec)

### Contact Ratings

<b>Alarm initiation contacts: (SPST)</b>	2.0A @ 30 VDC (resistive)
<b>Alarm auxiliary contacts: (DPDT)</b>	10A @ 30 VDC (resistive); 10A @ 250 VAC (resistive); ½ HP @ 240 VAC ; ¼ HP @ 120 VAC Note: Alarm auxiliary contacts shall not be connected to initiating circuits of control panels. Use the alarm initiation contact for this purpose.
<b>Supervisory contacts: (SPDT)</b>	2.0A @ 30 VDC (resistive); 2.0A @ 125 VAC (resistive)

### Ordering Information

Model	Description
D4120*	4-wire photoelectric low-flow duct smoke detector
<b>Accessories</b>	
D4S*	4-wire photoelectric sensor component only
D4P120*	4-wire photoelectric power board component only, 24 VAC/DC, 120 VAC
2D51*	4-wire conventional photoelectric sensor head
DST1	Metal sampling tube duct width up to 1ft (0.3m)
DST1.5	Metal sampling tube duct widths 1 ft to 2 ft (0.3 to 0.6 m)
DST3	Metal sampling tube duct widths 2 ft to 4 ft (0.6 to 1.2 m)
DST5	Metal sampling tube duct widths 4 ft to 8 ft (1.2 to 2.4 m)
DST10	Metal sampling tube duct widths 8 ft to 12 ft (2.4 to 3.7 m)
ETX	Metal exhaust tube duct width 1ft (0.3m)
RA-100Z*	Remote annunciator alarm LED
RTS151	Remote test station
RTS151KEY*	Remote test station with key lock

\* Add suffix "A" for Canadian models.

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CAT. 5178  
Rev. 0



### Features

- 16 to 328 foot protection range
- Single-ended, reflective design
- User friendly alignment procedure
- 6 user selectable sensitivity levels
- Optional integral NFPA 72 sensitivity test feature
- Removable plug-in terminal blocks
- Digital display for easy alignment
- Built-in automatic gain control compensates for signal deterioration from dust build-up
- Remote test station optional
- Paintable cover
- Easiest alignment in the industry
- Heater kits for transmitter/receiver and reflector option

### Description

System Sensor's BEAM1224 is uniquely suited for protecting open areas with high ceilings — areas where other methods of smoke detection are difficult to install and maintain.

The BEAM1224 is a four-wire conventional reflected beam smoke detector, which is uniquely suited for protecting open areas with high ceilings, where other methods of smoke detection are difficult to install and maintain. It is to be used with UL Listed compatible control panels only. An advantage of this single-ended reflective design is that it is much easier to install than the dual-ended projected beam detectors. Alignment is quickly accomplished via an optical sight and a two-digit signal strength meter incorporated into the product. Another advantage of the BEAM1224 is that it is listed for operation in temperatures ranging from -22°F to 131°F. This means it can be used in open areas to provide early warning in environments where temperature extremes may exceed the capability of other types of smoke detectors.

BEAM1224 consists of a transmitter/receiver unit and a reflector. When smoke enters the area between the unit and the reflector, the smoke causes a reduction in the signal. When the smoke level reaches the predetermined threshold, an alarm is activated.

BEAM1224 has four standard sensitivity selections, along with two Acclimate™ settings (adjustable sensitivity). When one of the two Acclimate settings is selected, the detector will automatically adjust its sensitivity using advanced software algorithms to choose the optimum sensitivity for the specific environment.

BEAM1224S is also equipped with an integral sensitivity test feature, which consists of a test filter attached to a servo motor inside the detector optics. When the remote test station RTS451 is used, the motor is activated and moves the filter into the pathway of the light beam, to test the detector's sensitivity. This integral sensitivity test feature allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72.



**CATALOG NUMBER 5154**

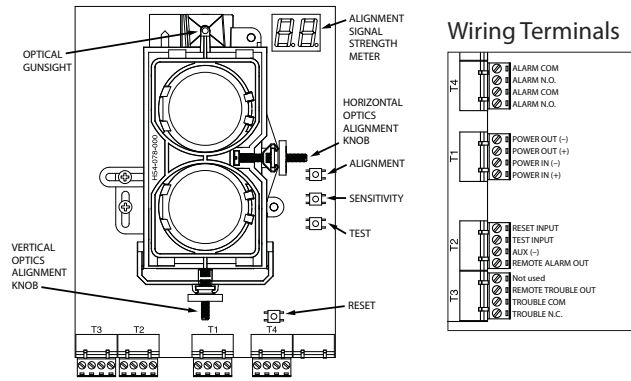
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## BEAM1224(S) Specifications

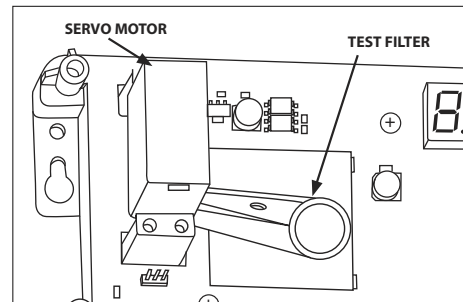
Operational Specifications	
Protection Range	16 ft. to 328 ft. (5m to 100m)
Adjustment Angle	+/- 10 Degrees horizontal & vertical (The optics move independent of the unit)
Sensitivity Levels Level	1 – 25% Level 2 – 30% Level 3 – 40% Level 4 – 50% Acclimate Level 1 – 30–50% Acclimate Level 2 – 40–50%
Fault Condition (Trouble)	96% or more obscuration blockage In alignment mode Improper initial alignment Self-compensation limit reached
Alignment Aid	Optical gunsight Integral signal strength indication 2-digit display
Alarm Indicator	Local red LED and remote alarm
Trouble Indicator	Local yellow LED and remote trouble
Normal Indicator	Local flashing green LED
Test/Reset Features	Integral Sensitivity Test Filter (BEAM1224S only) Sensitivity filter (Incremental scale on reflector) Local alarm test switch Local alarm reset switch Remote test and reset switch (Compatible with RTS451 and RTS451KEY test station)
Smoke Detector Spacing	On smooth ceilings, 30–60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics, and response requirements. See NFPA 72.
Environmental Specifications	
Temperature	-22°F to 131°F (-30°C to 55°C)
Humidity	10–93% RH Noncondensing
Electrical Specifications	
Voltage	10.2 to 32 VDC (BEAM1224) 15 to 32 VDC (BEAM1224S) BEAM1224S should not be used with 12V power sources
Avg. Standby Current (24VDC)	17mA Max
Avg. Current During Testing	500mA Max
Avg. Alarm Current (24VDC)	38.5mA Max
Avg. Fault Current (24VDC)	8.5mA Max
Avg. Alignment Mode Current (24VDC)	28mA Max
Mechanical Specifications	
Detector Dimensions	10" H x 7.5" W x 3.3" D (254mm H x 191mm W x 84mm D)
Reflector Dimensions (16' to 230')	7.9" x 9.1" (200 x 230mm)
Reflector Dimensions (beyond 230')	15.7" x 18.1" (400 x 460mm)
Electrical Specifications (BEAMHK)	
Voltage	15 to 32V
Current	92mA at 32V
Power Consumption	1.6W @ 24V; 3W @ 32V
Electrical Specifications (BEAMHKR)	
Voltage	15 to 32V
Current	450mA Max at 32V (per reflector)
Power Consumption	7.7W @ 24V; 15W @ 32V (per reflector)

## BEAM1224(S) Parts



## Advanced Test Feature

(BEAM1224S only)



## Ordering Information

Model	Description
BEAM1224	4 wire conventional beam smoke detector with 8" reflector
BEAM1224S	4 wire conventional beam smoke detector with 8" reflector and integral sensitivity test
<i>Add suffix "A" for Canadian models.</i>	
Accessories	
BEAMLRK	Long range accessory kit (3) additional reflectors (Required for applications in excess of 230 ft. [70m])
BEAMMMK	Multi-mount kit (Provides ceiling or wall mount capability with increased angular adjustment for either the beam or the reflector. When installed with the transmitter/receiver unit, BEAMSMK must be used as well)
BEAMSMK	Surface mount kit
BEAMHK	Heater kit for transmitter/receiver unit (See electrical requirements above)
BEAMHKR	Heater kit for reflector (See electrical requirements above)
RTS451KEY	Remote test station with key lock
RTS451	Remote test station used to initiate the NFPA sensitivity test function

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CAT. 5154  
Rev. 3



### Features

- ULC Listed
- Self Restoring
- Complementary, low profile white exterior
- Mounts onto standard octagon or square box with trim plate
- Automatic reset

### Description

A neutral white exterior and an unobtrusive, low profile housing make the TD heat detector blend onto any ceiling. The plastic housing fits onto any standard octagon or square electrical box with a trim plate. The unit will protrude no more than 1" below the surface of the finishing ceiling.

Using a bi-metal disc as a heat sensing element, an alarm is initiated when the air temperature exceeds the unit's rated level. Only when the air temperature decreases below the rated level will the detector automatically reset.

### Specifications

The thermal detector shall be a Mircom Model TD 135 or TD 200 as appropriate. The unit shall be a fixed temperature self restoring type, designed for low profile mounting. The detector shall be constructed of neutral white, fire resistant thermoplastic material. Operation shall consist of the closing of N.O. contact to initiate an alarm detection circuit. When the air temperature returns below the detectors rating, the contact will return to the normal position.

Coverage: 225 Square feet.

Spacing: 15 feet centre, 7.5 feet from wall.

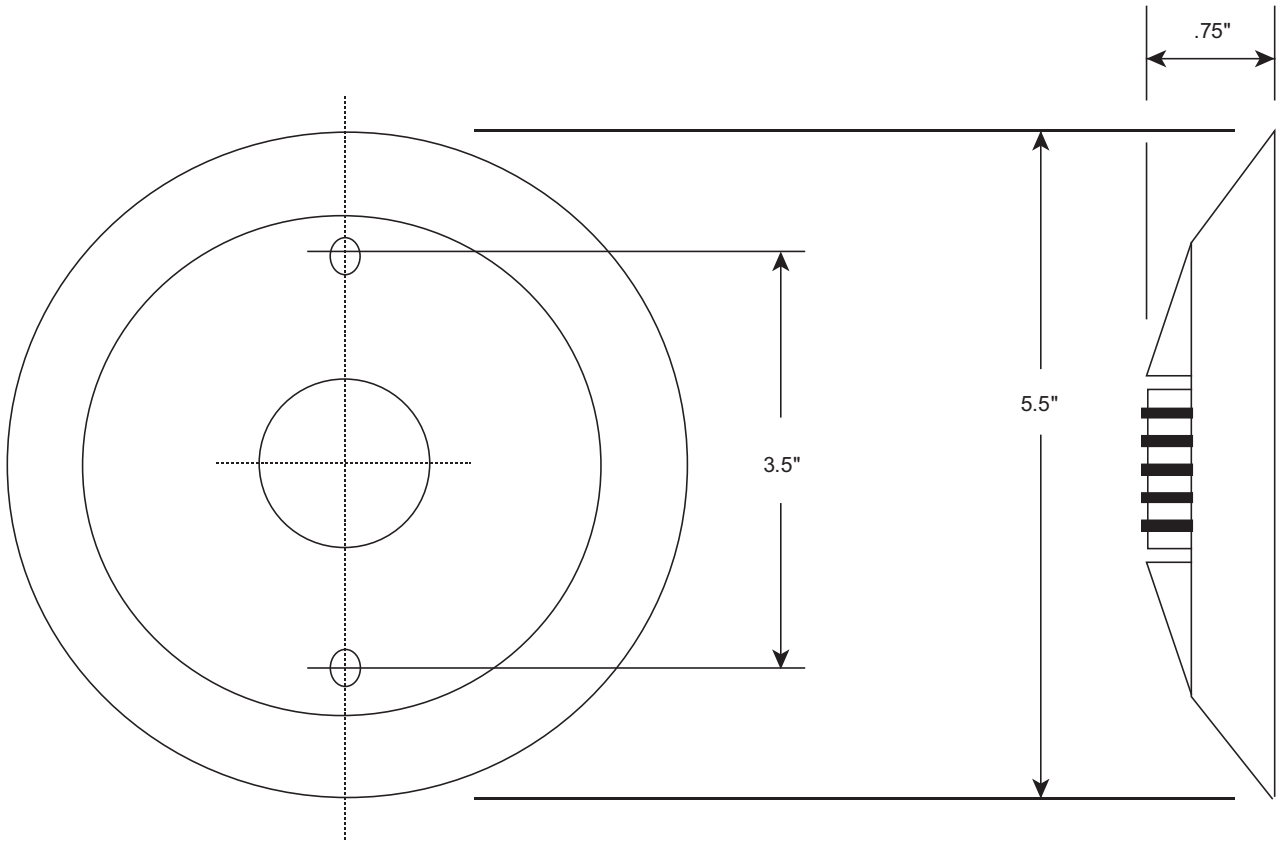
Note: The coverage and spacing figures given here are intended as a guide only. Heat detectors must always be spaced and installed as per the specific requirements outlined in the ULC codes as well as all other applicable national and local code requirements.



**CATALOG NUMBER** **5112**

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### Ordering Information

Model	Description
TD 135	Fixed Temperature 135°F (57°C) self restoring heat detector
TD 200	Fixed Temperature 200°F (94°C) self restoring heat detector

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CAT. 5112  
 Rev. 5



### Description

The CR and CF-MP Series Moisture Proof Detectors are designed for hazardous locations and Moisture Proof applications. Each Moisture Proof detector is available in single or multiple circuits with open and/or closed contact configurations, and any of the fixed temperature settings including 135, 165, 200 and 285 degrees Fahrenheit.

The Moisture Proof detector is characterized by a black phenol-plastic seal plate and black and white pigtail connections. It is specified for use in high humidity environments and areas that are subject to corrosive elements or spray washing. The suffix "MP" denotes "Moisture Proof".

#### CR-135MP

The Model CR-135MP is a combination Rate-of-Rise and Fixed Temperature detector. A set of normally open contacts will close when the ceiling temperature increases at a (minimum) rate of 8.4°C (15°F) per minute. Closing the contacts initiates the fire alarm sequence. Independent of the rate-of-rise operation, the fixed temperature portion consists of a spring-loaded plunger retained by a fusible alloy that releases when the ceiling temperature reaches 135°F (57°C). When released, the plunger strikes the contacts and holds them closed. Spacing on an uninterrupted ceiling is 70 ft. (21.3m) for the rate-of-rise; 40 ft. (12.2m) for the fixed temperature portion.

### Features

- Dual Action Rate of Rise & Fixed Temperature
- Detects Rate of Ambient temperature rise of 8°C (15°F)
- Detectors operating on fixed temperatures are only available in two settings of 135°F (57°C) or 200°F (93°C)
- Clear-anodized aluminium finish

#### CF-135MP

The Model CF-135MP is a Fixed Temperature Only detector. The fixed temperature portion consists of a spring-loaded plunger retained by a fusible alloy that releases when the ceiling temperature reaches 135°F (57°C). When released, the plunger strikes a normally open set of contacts and holds them closed. Spacing on an uninterrupted ceiling is 40 ft. (21.3m). The CF-135MP is identified by a black dot on its heat collector fin.

#### CR-200MP

The Model CR-200MP is a combination Rate-of-Rise and Fixed Temperature detector that operates in the same way as the CR-135MP, with the exception that the fixed temperature portion releases when the ceiling temperature reaches 200°F (93°C). Spacing on an uninterrupted ceiling is 70 ft. (21.3) for the rate-of-rise, and 25 ft. (7.6m) for the fixed temperature portion (a reduced spacing parameter from the CF-135MP). The CR-200MP is identified by a white dot on its heat collector fin.

#### CF-200MP

The Model CF-200MP is a Fixed Temperature Only detector. The fixed temperature portion releases when the ceiling temperature reaches 200°F (93°C). Spacing is 25 ft., (7.6m). The CF-200MP is identified by a black dot and a white dot on the heat collector fin.



**CATALOGUE NUMBER 5108**

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## Contact Configurations

Any Detector in the Moisture Proof Series is available in Normally Open (by far the most common) or Normally Closed, or Multiple Circuit configurations. The Model Number does not reflect the Normally Open configuration, however the letter "C" denotes Normally Closed. For example: "CR 135 C MP" describes a rate-of-rise / fixed temperature detector, fusing at 135°F., with Normally Closed contacts, assembled with the moisture proof seal plate.

## Specifications

### Contact Rating

3A @ 125 VAC  
1A @ 28 VDC  
0.3A @ 125 VDC  
0.1A @ 250 VDC

## Engineering Specifications

The CR & CF Series Moisture Proof detectors shall be installed in areas where corrosive elements exist or washing of walls and ceiling surfaces is commonplace. The fixed temperature portion and the rate-of-rise operation shall be determined by the ambient temperature. The Moisture Proof detectors shall be installed in areas where environmental conditions including dust, vapours, insects, etc., would cause an ionization or photoelectric type detector to initiate a false alarm.

### Dimensions

Diameter: 5.25" (13.4 cm)  
Height: 2.0" (4.85 cm)

### Weight

0.41 lb. (330 gm)

## Ordering Information

Model	Description
CR-135MP	Rate of Rise & Fixed Temperature to 135°F (57°C) Moisture Proof Heat Detector
CR-200MP	Rate of Rise & Fixed Temperature to 200°F (93°C) Moisture Proof Heat Detector
CF-135MP	Fixed Temperature 135°F (57°C) Moisture Proof Heat Detector
CF-200MP	Fixed Temperature 200°F (93°C) Moisture Proof Heat Detector

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CAT. 5108  
Rev. 5



MPD-65P Photoelectric Smoke Detector



MHD-65-135 Heat Detector



MID-65I Ionization Smoke Detector

## Description

The MIR-65 Series incorporate proven sensing technologies, together with advances in materials and electronics technology. Having a wide operating voltage of 9-33VDC, the MIR-65 Series detectors can be integrated into most Fire/Security systems. The MIR-65 Series wide voltage range family consists of photoelectric smoke, ionization smoke, and heat detectors.

### Ionization Smoke Detector Head (MID-65I)

The sensing part of the ionization detector consists of two chambers - an open outer chamber with a second semi-sealed reference chamber within. Mounted in the reference chamber is a low activity radioactive foil of Americium 241 which enables current to flow between the inner and outer chambers when the detector is powered up. As smoke enters the detector, it causes a reduction of the current flow in the outer chamber and, hence, an increase in voltage measured at the junction between the two chambers. The voltage increase is monitored by the electronic circuitry which triggers the detector into alarm state at a preset threshold. A highly visible external red LED flashes when the detector is in operational standby and changes to steady in alarm state.

### Photoelectric Smoke Detector Head (MPD-65P)

The photoelectric detector incorporates a pulsing infrared LED located in a chamber within the housing of the detector. The chamber is designed to exclude light from any external source. At an angle to the LED is a photo-diode which normally does not register the column of light emitted by the LED. In the event of smoke from a fire entering the chamber, the light pulse from the LED will be refracted into and registered by the photo-diode. If the photo-diode "sees" smoke on the two following pulses (alarm confirmation), the detector changes into the alarm state. A highly visible external clear LED flashes red when the detector is in operational standby and changes to steady red in alarm state. The clear LED allows for easy floor level detector type identification.

## Features

- Wide operating voltage range
- Advanced electronics technology
- Flashing standby/steady alarm LED
- Magnetic test switch
- Low profile (1 5/8"H x 4"Dia.)
- Can be used on security systems
- Locking feature reduces tampering
- Designed to meet approvals worldwide
- Large range of bases available
- Separate head/base design allows interchangeability and ease of installation
- High RF, noise and insect immunity
- Available in 2 and 4 Wire Kits

### Fixed and Rate-of-Rise Heat Detector Head (MHD-65-135/MHD-65-200)

The heat detector operates by using a matched pair of thermistors to sense heat. One thermistor is exposed to the ambient temperature, the other is sealed. In normal conditions the two thermistors register similar temperatures; but, on the development of a fire, the temperature recorded by the exposed thermistor will increase rapidly, resulting in an imbalance that causes the detector to change into the alarm state. Rate-of-rise detectors are designed to detect a fire as the temperature increases, but they also have a fixed upper limit at which the detector will go into alarm if the rate of temperature increase has been too slow to trigger the detector earlier. A highly visible external red LED flashes when the detector is in operational standby and changes to steady in alarm state.

### MIR-65 Series Bases

All MIR-65 Series bases have a "one-way-only" fit. The detectors are polarity sensitive and the bases are easy to wire. All bases have an earth ground connection and accept the provided standard head locking screw. MIR-65 Series relay bases are for use with control units having resettable 4-wire detector power supply and alarm initiating circuits. Where local codes allow, they may also be used in 4-wire circuits to provide volt-free control signals to auxiliary systems such as automatic door closers.



S6295  
(MID-65I, MPD-65P,  
MSB-65B)  
S6299  
(MHD-65-135,  
MHD-65-200)



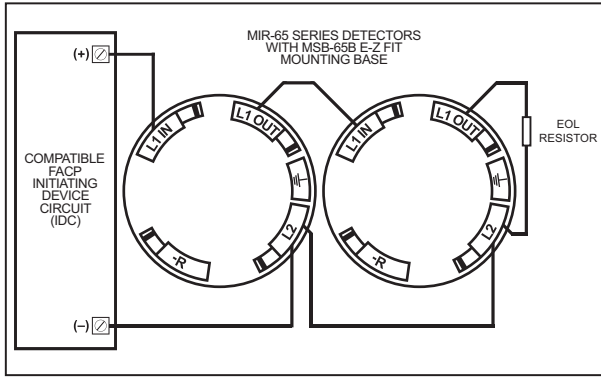
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(MID-65I)  
7272-1477:144  
(MPD-65P)  
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(MSB-65B)  
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(MHD-65-135, MHD-65-200)

**CATALOG NUMBER** **5136**

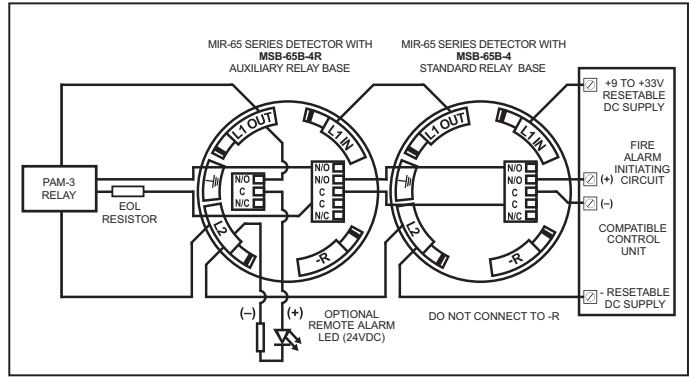
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## 2-Wire Zone Circuit (Class "B" (Style "B"))



## 4-Wire Zone Circuit (Class "B" (Style "B"))



## Specifications

### MID-65I Ionization Smoke Detector

<b>Features</b>	Flashing Red LED in Standby / Magnetic Test Switch	
<b>Supply Voltage</b>	9 to 33VDC	
<b>Average Current</b>		
Standby	24VDC	55µA
(Without accessories)	9VDC	50µA
Alarm	24VDC	52mA
(Without accessories)	9VDC	17mA
<b>Alarm Indication</b>	Steady On Red LED	
<b>Ambient Temperature</b>	-4°F to 140°F (-20°C to 60°C) (No Condensation or Icing)	
<b>Nominal Sensitivity</b>	1.2%/ft.	
<b>Max. Wind Continuous</b>	32ft./sec.	
<b>Radioactive Element</b>	Americium 241; 0.9 Micro-Curie. Do Not Expose to Corrosive Atmospheres	

### MPD-65P Photoelectric Smoke Detector

<b>Features</b>	Red Flashing Clear LED in Standby / Magnetic Test Switch	
<b>Supply Voltage</b>	9 to 33VDC	
<b>Average Current</b>		
Standby	24VDC	45µA
(Without accessories)	9VDC	40µA
Alarm	24VDC	52mA
(Without accessories)	9VDC	17mA
<b>Alarm Indication</b>	Steady on Red LED	
<b>Ambient Temperature</b>	-4°F to 140°F (-20°C to 60°C) (No Condensation or Icing)	
<b>Nominal Sensitivity</b>	2.5%/ft.	
<b>Max Wind Continuous</b>	Not Affected	

### MHD-65-135/MHD-65-200 Fixed and Rate-of-Rise Heat Detectors

<b>Features</b>	Flashing Red LED in Standby / Magnetic Test Switch	
<b>Supply Voltage</b>	9 to 33VDC	
<b>Average Current</b>		
Standby	24VDC	55µA
(Without accessories)	9VDC	50µA
Alarm	24VDC	52mA
(Without accessories)	9VDC	17mA
<b>Alarm Indication</b>	Steady on Red LED	
<b>Ambient Temperature</b>	-4°F to 195°F (-20°C to 90°C) (No Condensation or Icing)	
<b>Max Wind Continuous</b>	Not Affected	

### 2-Wire E-Z Fit Base (MSB-65B)

<b>Supply Voltage</b>	*9 to 33VDC
Compatible FACP IDC	

### 4-Wire Standard/Auxiliary Relay Bases (MSB-65B-4/MSB-65B-4R)

<b>Supply Voltage</b>	*9 to 33VDC
<b>Ambient Temperature (No Condensation or Icing)</b>	4°F to 158°F (-20°C to 70°C)
<b>Max. Switching Power</b>	30W, 50VA

<b>Max. Switching Current</b>	1A (Resistive Load)
<b>Max. Switching Voltage</b>	50VAC, 75VDC
<b>Min. Capability</b>	10µA, 10mVDC
<b>Dropout Voltage</b>	<6V

\*For 4-Wire power compatibility, please refer to control panel's power supply data.

## Ordering Information

Model	Description
MID-65I	MIR-65 Series Ionization Smoke Detector Head
MPD-65P	MIR-65 Series Photoelectric Smoke Detector Head
MHD-65-135	MIR-65 Series Fixed Temperature and Rate-of-Rise Heat Detector Head 135°F (57°C)
MHD-65-200	MIR-65 Series Fixed Temperature and Rate-of-Rise Heat Detector Head 200°F (190°C)
MSB-65B	MIR-65 Series 2-Wire E-Z Fit Base
MSB-65B-4	MIR-65 Series 4-Wire Standard Relay Base c/w Low Profile Skirt and Spanner Bar
MSB-65B-4R	MIR-65 Series 4-Wire Auxiliary Relay Base c/w Low Profile Skirt and Spanner Bar
MIR-65 Series Smoke Detector Kits	
MPD-65PK	MIR-65 Series Photoelectric Detector Kit c/w Photoelectric Detector Head and 2-Wire E-Z Fit Base
MID-65IK	MIR-65 Series Ionization Detector Kit c/w Ionization Detector Head and 2-Wire E-Z Fit Base
MPD-65PK-4	MIR-65 Series Photoelectric Detector Kit c/w Photo Detector Head and 4-Wire Standard Relay Base
MPD-65PK-4R	MIR-65 Series Photoelectric Detector Kit c/w Photo Detector Head and 4-Wire Auxiliary Relay Base

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CAT. 5136  
Rev. 5



MS-704U  
Yellow Single Action Manual  
Station



MS-703U  
Blue Single Action Manual  
Station

### Features

- Single Action
- Key resettable
- Terminal connectors
- Gold plated SPDT contacts
- High-gloss enamel in Blue and Yellow
- Normally Open or Normally Closed Alarm Contacts
- Meets ADA 5 lb. maximum manual-force

### Description

Mircom's MS-700U Emergency Manual Stations are high quality, die-cast metal manual stations that are designed to meet special use requirements. The MS-700U are designed for indoor and outdoor use.

Mircom's MS-700U Emergency Manual Stations consist of two models. The MS-703U and MS-704U are single action manual stations. The MS-703U is finished in a Blue enamel and the MS-704U is finished in a Yellow enamel.

Both models are available with key resets, CAT-30 lock and keys, SPDT contacts and terminal strip connections. The contacts are gold plated to avoid the risk of corrosion. The MS-700U Emergency Manual Stations mount on a standard single gang backbox.

### Operation

The MS-700U Single Action Emergency Manual Stations are operated by pulling down the handle marked "PULL HANDLE" on the front of the station.

The MS-700U Series Emergency Manual Stations are reset by opening the station with the key, placing the handle in the normal upright position and re-locking the station.



S7005



S7005



7150-1477:128

**MEA**  
approved

313-97-E

**CATALOG NUMBER**

**5165**

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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Specifications

### Switch Rating:

1 Amp @ 30 VDC  
0.1 Amp @ 125 VAC

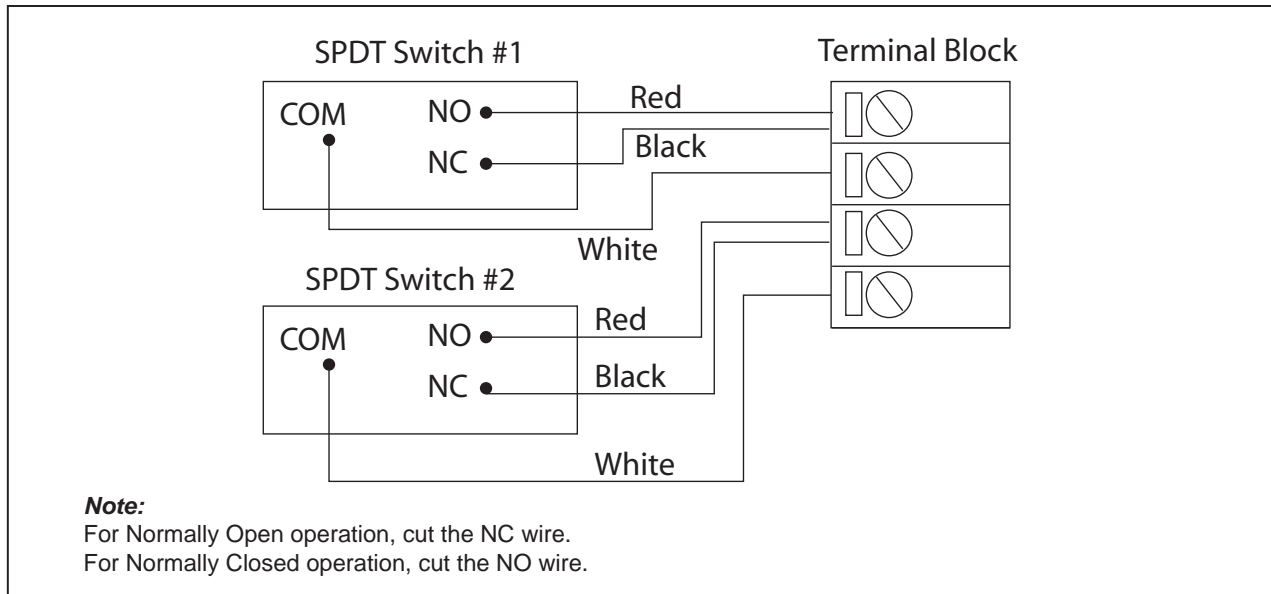
### Manual Station Dimensions:

4.9" H x 3.5" W x 2.0" D

### Colors:

Blue or Yellow with raised white letters.  
White manual bar with raised black letters.

## Typical Wiring Diagram



## Ordering Information

Model	Description
MS-703U	Blue Single Action Emergency Manual Station c/w 2 Form "C" Contacts
MS-704U	Yellow Single Action Emergency Manual Station c/w 2 Form "C" Contacts

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CAT. 5165  
Rev. 3



MS-701  
Single Action Manual Station

MS-710U  
Dual Action Manual Station

## Description

Mircom's MS-700 Series Manual Stations provide manual fire reporting. These high quality, die-cast metal manual stations are available in either single or dual action configurations with SPST contacts and terminal strip connections. The normally open contact, which closes when the manual station is activated, is rated for 1 amp, 30 VDC. The contacts are gold plated to avoid the risk of corrosion.

The MS-700 Series Manual Stations are available in many different configurations as either single or dual-action devices.

The MS-701 is a single action, single stage manual station. Model MS-710 is a single stage, dual action manual station. The MS-702 (two stage) is similar to the MS-701 (single stage) except it contains an additional General Alarm (G.A.) N.O. switch. For safety reasons, the G.A. switch is only accessible after the handle has been pulled. A special key is supplied with each unit.

All models are available with key resets, terminal connectors, SPST gold contacts and CAT-30 lock and keys. The units mount on a standard single gang backbox, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox.

The MS-700U Series Manual Stations are listed for outdoor applications when used with the BB-700WP.

## Features

- Single or Dual Action models
- Single Stage or Dual Stage models
- Key resettable
- Terminal connectors
- Gold plated SPST contacts
- Optional auxiliary contacts
- High-gloss red enamel finish
- Plastic breakrod
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox
- Available in English and Bilingual versions

## Operation

The MS-700 Series is operated by pulling the handle on the front of the station. The unit is reset by opening the station with the key, placing the handle in the normal upright position and re-locking the station. On the dual action models, the push bar rotates inward allowing the Manual handle to be grasped in a one handed motion. The MS-702 (two stage version) also provides a key switch which is accessible after the handle has been pulled. Operation of the key switch, when connected to a separate general alarm circuit, will initiate the 2<sup>nd</sup> stage of a two stage alarm signalling system.

## Specifications

The manual station shall be Mircom's MS-700 Series. Operating instructions shall be in raised English or English and French lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the alarm detection circuit. In addition, those stations installed in a two stage system shall come equipped with an internal key switch designed to operate the 2<sup>nd</sup> stage alarm initiating circuit. All manual fire alarm stations shall be installed to comply with the Canadian Electrical Code (CSA 22.1) and CAN/ULC-S524-01 Standard for Installation of Fire Alarm Systems. Final acceptance is subject to the local authority having jurisdiction.



**CATALOG NUMBER** **5156**

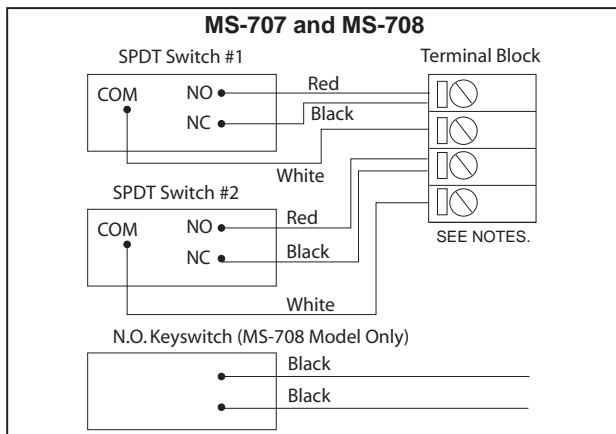
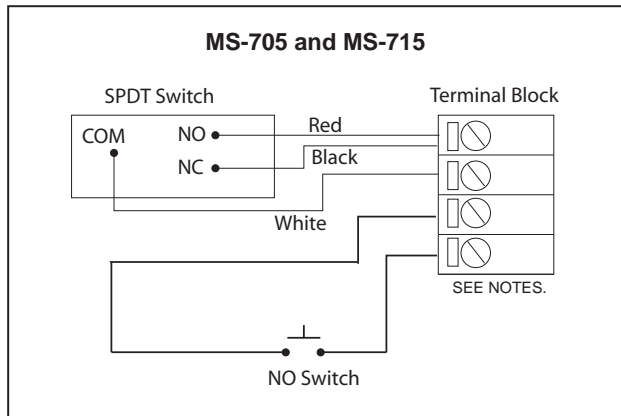
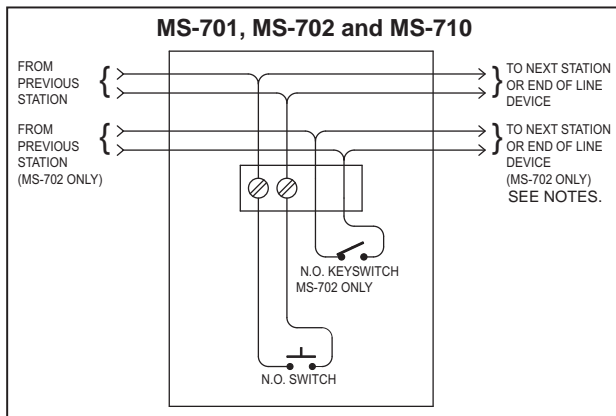
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## Specifications

<b>Switch Rating:</b>	1 Amp @ 30 VDC, 0.1 Amp @ 125 VAC
<b>Manual Station Dimensions:</b>	4.9" H x 3.5" W x 2.0" D
<b>Colour:</b>	Red with raised white letters, white manual bar with raised black letters.

## Typical Wiring Diagrams



## Surface Mount Backboxes



### BB-700 Surface Mount Backbox

**Dimensions:**  
5" H x 3.6" W x 2.0" D



### BB-700WP Weatherproof Surface Mount Backbox

**Dimensions:**  
5" H x 3.6" W x 2.2" D

### NOTES:

- Wire as shown so that supervision of connections is maintained
- Mount station to 2" x 4" x 2¼" outlet box
- Maximum size: No. 12 AWG
- For Normally Open operation, cut the NC wire
- For Normally Closed operation, cut the NO wire
- Switches shown in the Station Closed position

## Ordering Information

Model	Description
MS-701	Single Stage Single Action Manual Station (Bilingual)
MS-702	Dual Stage Single Action Manual Station (Bilingual)
MS-705	Single Stage Single Action Manual Station c/w one additional Form "C" (SPDT) Contact (Bilingual)
MS-710	Single Stage Dual Action Manual Station (Bilingual)
MS-715	Single Stage Dual Action Manual Station c/w one additional Form "C" (SPDT) Contact (Bilingual)
<i>Note: Add suffix "U" for English only models.</i>	
MS-707	Single Stage Single Action Manual Station c/w 2 Form "C" Contacts
MS-708	Dual Stage Single Action Manual Station c/w 2 Form "C" Contacts and Key Switch
BB-700	Series 700 Interior Surface Mount Backbox, Red Finish
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish

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CAT. 5156  
Rev. 6



### Features

- Dual Action
- Key resettable
- Terminal connectors
- Gold plated SPST contacts
- Optional auxiliary contacts
- High-gloss red enamel finish
- Plastic breakrod
- Meets ADA 5 lb. maximum manual-force
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox

### Description

Mircom's MS-710U Manual Station provides manual fire reporting. This high quality, die-cast metal manual station is a dual action unit with SPST contacts and terminal strip connections. The normally open contact, which closes when the manual station is activated, is rated for 1 amp, 30 VDC. The contacts are gold plated to avoid the risk of corrosion.

The MS-710U is available with a CAT-30 lock and keys and mounts on a standard single gang backbox, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox.

The MS-710U Manual Station is listed for outdoor applications when used with the BB-700WP.

### Operation

The MS-710U Dual Action Manual Station is operated by pushing the bar labelled "PUSH BAR" and then pulling down the handle marked "PULL HANDLE". The MS-710U Manual Station is reset by opening the station with the key, placing the handle in the normal upright position and re-locking the station.

### Specifications

The manual station shall be Mircom's MS-710U. Operating instructions shall be in raised English lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the alarm detection circuit. All manual fire alarm stations shall be installed as per the specific requirements outlined in the UL codes, as well as all other applicable national or local codes. Final acceptance is subject to the local authority having jurisdiction.



S7005



S7005



7150-1477:128



313-97-E



APPROVED

**CATALOG NUMBER 5157****NOT TO BE USED FOR INSTALLATION PURPOSES.**

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## Specifications

**Switch Rating:**

1 Amp @ 30 VDC  
0.1 Amp @ 125 VAC

**Manual Station Dimensions:**

4.9" H x 3.5" W x 2.0" D

**Color:**

Red with raised white letters, white manual bar with raised black letters.

## Surface Mount Backboxes



**BB-700 Surface Mount Backbox**

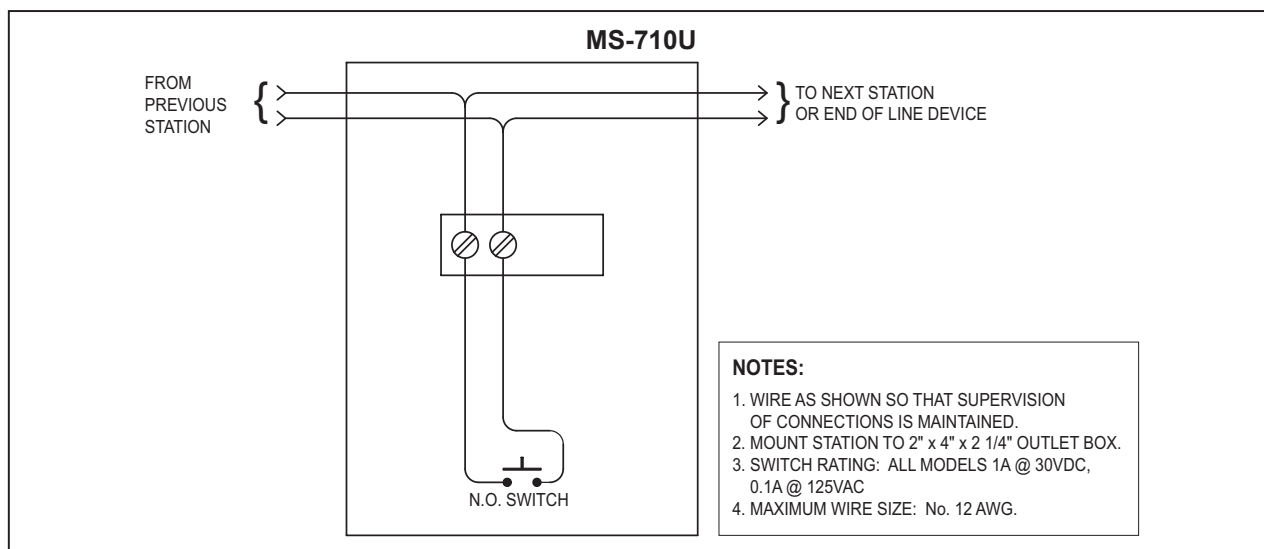
**Dimensions:**  
5" H x 3.6" W x 2.0" D



**BB-700WP Weatherproof Surface Mount Backbox**

**Dimensions:**  
5" H x 3.6" W x 2.2" D

## Typical Wiring Diagram



## Ordering Information

Model	Description
MS-710U	Dual Action Manual Station
BB-700	Series 700 Interior Surface Mount Backbox, Red Finish
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish

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CAT. 5157  
Rev. 6



### Description

Attractive and durable, Mircom's MS-400 Series Manual Stations provide manual fire reporting. The MS-400 Series manual stations are non-coded, single or double action devices which initiate an alarm when pulled. Resetting is accomplished by inserting a 1/8" screwdriver from the front. The handle, once pulled will remain open and cannot be reset without utilizing the screwdriver.

The MS-400 Series manual stations are constructed of durable aluminium and finished in red enamel paint. An abrasion resistant label with large, raised letters provides clear legible instructions.

The MS-400 Series Manual Stations are available in many different configurations. The MS-401 is a single action, single stage manual station. The MS-402 (two stage) is similar to the MS-401 (single stage) except it contains an additional General Alarm (G.A.) N.O. switch. For safety reasons, the G.A. switch is only accessible after the handle has been pulled. A special key is supplied with each unit. Models MS-405 and MS-407 are both single stage manual stations. The MS-405 has an additional N.O. switch while the MS-407 has an additional N.C. switch. Models MS-406 and MS-408 are both two stage manual stations. The MS-406 has an additional N.O. switch while the MS-408 has an additional N.C. switch.

### Features

- Durable Extruded Aluminium Construction
- Attractive, Low Profile Design
- Standard Single Gang Mount
- Converts to Double Action
- Glass Rod Optional (one provided)

All manual stations can be easily converted from a single action to a double action station with the addition of the MS-DA double action lever.

### Operation

Pulling on the station's handle will release the internal switch to trigger the alarm detection circuit.

The MS-402, MS-406 and MS-408 (two stage versions) also provide a key switch which is accessible after the handle has been pulled. Operation of the key switch, when connected to a separate general alarm circuit, will initiate the 2nd stage of a two stage alarm signalling system.

### Specifications

The manual station shall be Mircom's MS-400 Series. Operating instructions shall be in raised English and French lettering and the unit shall be constructed of extruded aluminium and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the alarm detection circuit. In addition, those stations installed in a two stage system shall come equipped with an internal key switch designed to operate the 2nd stage alarm initiating circuit. All manual fire alarm stations shall be installed as per the specific requirements outlined in the ULC codes, as well as all other applicable national or local codes.

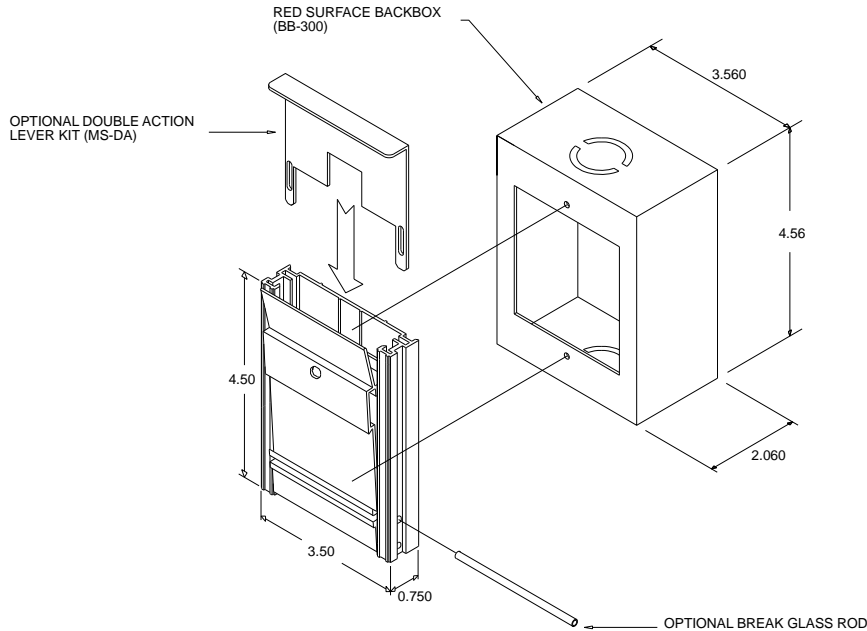


**CATALOG NUMBER** **5101**

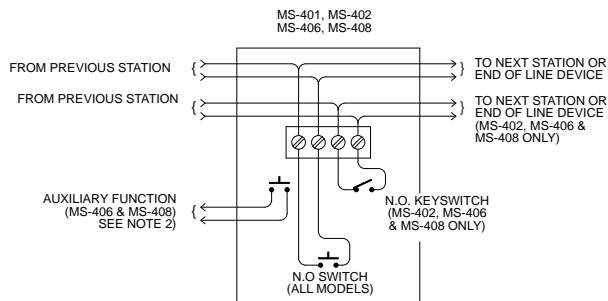
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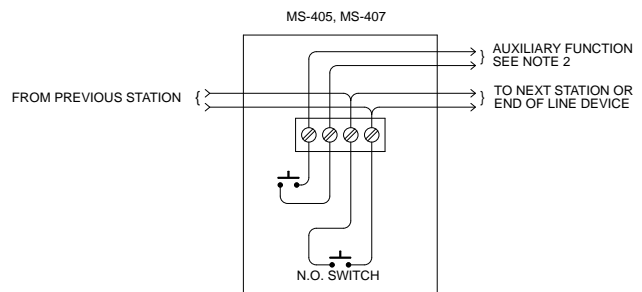
## Dimensions



## Wiring Diagrams



- NOTES:
1. WIRE AS SHOWN SO THAT SUPERVISION OF CONNECTIONS IS MAINTAINED.
  2. N.O. SWITCH FOR MODEL MS-406
  3. N.C. SWITCH FOR MODEL MS-408
  4. SWITCH RATING: ALL MODELS 1A @ 30 VDC



- NOTES:
1. WIRE AS SHOWN SO THAT SUPERVISION OF CONNECTION IS MAINTAINED.
  2. N.O. SWITCH FOR MODEL MS-405
  3. N.C. SWITCH FOR MODEL MS-407
  4. SWITCH RATING: ALL MODELS 1A @ 30 VDC

## Ordering Information

Model	Description
<b>MS-401</b>	Single Stage Manual Station
<b>MS-402</b>	Dual Stage Manual Station
<b>MS-405</b>	Single Stage Manual Station with additional N.O. Switch
<b>MS-406</b>	Dual Stage Manual Station with additional N.O. Switch
<b>MS-407</b>	Single Stage Manual Station with additional N.C. Switch
<b>MS-408</b>	Dual Stage Manual Station with additional N.C. Switch
<b>MS-DA</b>	Double Action Lever Kit (converts any of the above to double action stations)

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CAT. 5101  
Rev. 7



### Description

Esthétiques et durables, les postes métalliques de la série MS-400 de Mircom permettent de déclencher manuellement l'alarme en cas d'incendie. Il s'agit de postes non codés, à une ou deux actions, qui déclenchent l'alarme lorsqu'on tire sur la poignée. Pour réarmer le poste, il faut insérer un tournevis de 1/8 po à l'avant. La poignée, une fois qu'on l'a tirée, reste abaissée et ne peut pas être remise en place sans l'aide du tournevis.

Les postes manuels de la série MS-400 sont en aluminium durable, avec fini en peinture-émail rouge. Le mode d'emploi est inscrit en relief en grosses lettres sur une étiquette résistante à l'abrasion.

Les postes manuels de la série MS-400 sont offerts en une grande variété de modèles. Le MS-401 est un poste à une action et à une étape. Le MS-402 (deux étapes) est similaire au MS-401 (une étape), mais contient en plus un contact normalement ouvert d'alarme générale. Pour des raisons de sécurité, il faut d'abord abaisser la poignée avant d'accéder au contact d'alarme générale. Une clé spéciale est fournie avec chaque appareil. Les modèles MS-405 et MS-407 sont des postes à une étape. Tous deux comportent un contact additionnel, normalement ouvert dans le cas du MS-405 et normalement fermé dans le cas du MS-407. Les MS-406 et MS-407 sont des postes à deux étapes. Tous deux comportent un contact additionnel, normalement ouvert dans le cas du MS-406 et normalement fermé dans le cas du MS-408.

### Caractéristiques

- Construction en aluminium extrudé durable
- Conception esthétique et peu encombrante
- Fixation sur boîte électrique simple
- Convertissable en poste à double action
- Tige de verre facultative (une fournie)

On peut facilement convertir tous ces postes à action unique en postes à double action, en ajoutant le levier à double action MS-DA.

### Fonctionnement

Lorsqu'on tire sur la poignée pour l'abaisser, le contact interne est relâché et déclenche le circuit de détection d'alarme.

Les MS-402, MS-406 et MS-408 (versions à deux étapes) comportent en outre un interrupteur à clé qui est accessible lorsque la poignée est abaissée. Si cet interrupteur est branché à un circuit séparé d'alarme générale, le fait de tourner la clé déclenche la deuxième étape (deuxième signal) d'un système d'alarme à deux étapes.

### Devis technique

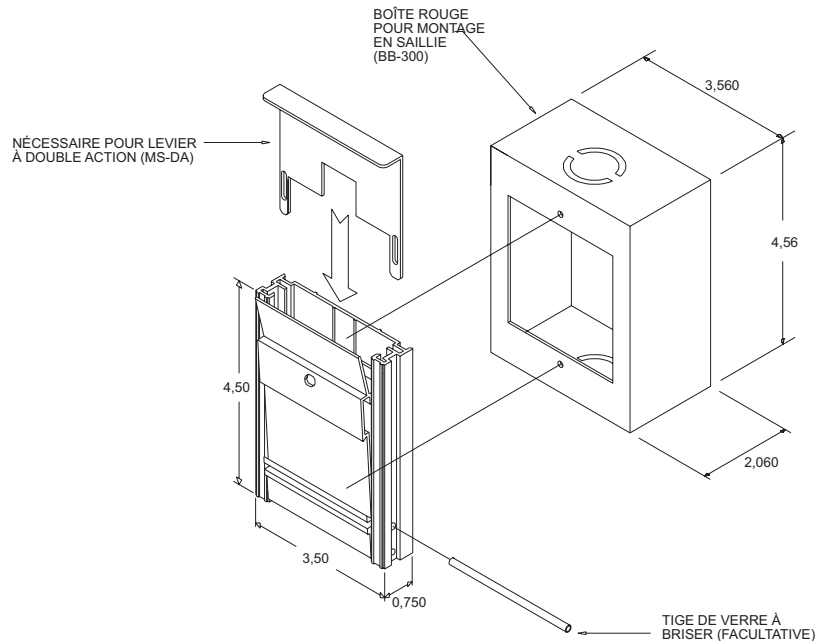
Le poste manuel d'alarme incendie à action unique doit être de la série MS-400 de Mircom. Le mode d'emploi doit être inscrit en français et en anglais, en lettres en relief. Le poste doit être en aluminium extrudé avec fini en peinture-émail rouge permettant de le repérer facilement. Le tirage de la poignée doit déclencher immédiatement le circuit de détection d'alarme. De plus, les postes installés dans un système à deux étapes doivent être équipés d'un interrupteur à clé interne conçu pour déclencher le circuit d'alarme de deuxième étape. Tous les postes manuels d'alarme incendie doivent être installés selon les exigences spécifiques des codes ULC, ainsi qu'aux dispositions pertinentes des codes nationaux et locaux.

**NUMÉRO DE CATALOGUE 5101F**

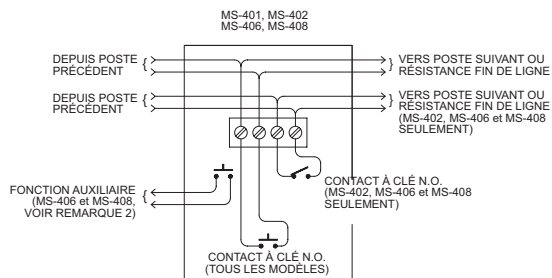
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Mircom se réserve le droit de modifier à tout moment et sans préavis les prix, les couleurs, les matériaux, les composants, l'équipement, les caractéristiques et les modèles ainsi que de cesser la fabrication de certains modèles.

## Dimensions

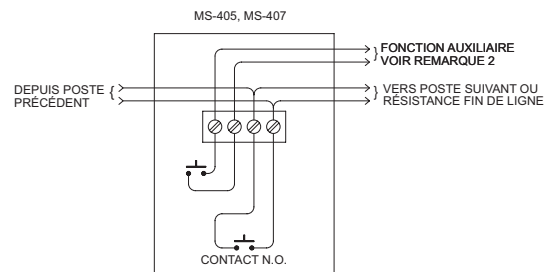


## Schémas de câblage



REMARQUES :

1. RACCORDER LES FILS COMME INDIQUÉ AFIN DE MAINTENIR LA SUPERVISION DE LA CONNEXION.
2. CONTACT N.O. POUR MODÈLE MS-406
3. FIXER LE POSTE SUR UNE BOÎTE DE 2 X 4 X 2 1/4 po.
4. POUVOIR NOMINAL DE COUPURE DU CONTACT : TOUS LES MODÈLES : 1 A à 30 V c.c.



REMARQUES :

1. RACCORDER LES FILS COMME INDIQUÉ AFIN DE MAINTENIR LA SUPERVISION DE LA CONNEXION.
2. CONTACT N.O. POUR MODÈLE MS-405
3. CONTACT N.F. POUR MODÈLE MS-407
4. FIXER LE POSTE SUR UNE BOÎTE DE 2 X 4 X 2 1/4 po.
4. POUVOIR NOMINAL DE COUPURE DU CONTACT : TOUS LES MODÈLES : 1 A à 30 V c.c.

## Renseignements pour commander

### Modèle Description

<b>MS-401</b>	Poste manuel à une étape
<b>MS-402</b>	Poste manuel à deux étapes
<b>MS-405</b>	Poste manuel à une étape avec contact N.O. additionnel
<b>MS-406</b>	Poste manuel à deux étapes avec contact N.O. additionnel
<b>MS-407</b>	Poste manuel à une étape avec contact N.F. additionnel
<b>MS-408</b>	Poste manuel à deux étapes avec contact N.F. additionnel
<b>MS-DA</b>	Poignée à double action (convertit n'importe lequel des modèles ci-dessus en postes à double action)

NE PAS UTILISER POUR L'INSTALLATION.



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CAT. 5101F  
Rev. 7



### Description

Attractive and durable, Mircom's MS-400U Series of manual stations provide manual fire reporting. The MS-400U Series manual stations are non-coded, single or double action devices which initiate an alarm when pulled. Resetting is accomplished by inserting a 1/8" screwdriver from the front. The handle, once pulled will remain open and cannot be reset without utilizing the screwdriver.

The MS-400U Series manual stations are constructed of durable aluminium and finished in red. An abrasion resistant label with large, raised letters provides clear legible instructions.

The model MS-402U (two stage) is similar to the MS-401U (single stage) except it contains an additional General Alarm (G.A.) N.O. switch. For safety reasons, the G.A. switch is only accessible after the handle has been pulled. A special key is supplied with each unit.

The model MS-405U is similar to the MS-401U except it has an additional N.O. switch. The model MS-406U is similar to the MS-402U except it has an additional N.O. switch. The model MS-407U is similar to the MS-401U except it has an additional N.C. switch. The model MS-408U is similar to the MS-402U except it has an additional N.C. switch. All manual stations can be easily converted from single action to double action station by the addition of the MS-DA double action lever.

### Features

- Durable Extruded Aluminium Construction
- Attractive, Low Profile Design
- Standard Single Gang Mount
- Converts to Double Action
- Glass Rod Optional (one provided)

### Operation

Pulling on the station's handle will release the internal switch to trigger the alarm detection circuit.

The MS-402U, MS-406U and MS-408U (two stage versions) also provide a key switch which is accessible after the handle has been pulled. Operation of the key switch, when connected to a separate general alarm circuit, will initiate the 2nd stage of a two stage alarm signalling system.

### Specifications

The single action manual station shall be Mircom's MS-400U Series. Operating instructions shall be in raised English lettering and the unit shall be constructed of extruded aluminium, finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the alarm detection circuit. In addition, those stations installed in a two stage system shall come equipped with an internal key switch designed to operate the 2nd stage alarm initiating circuit. All manual fire alarm stations shall be installed as per the specific requirements outlined in the UL codes, as well as all other applicable national or local codes.

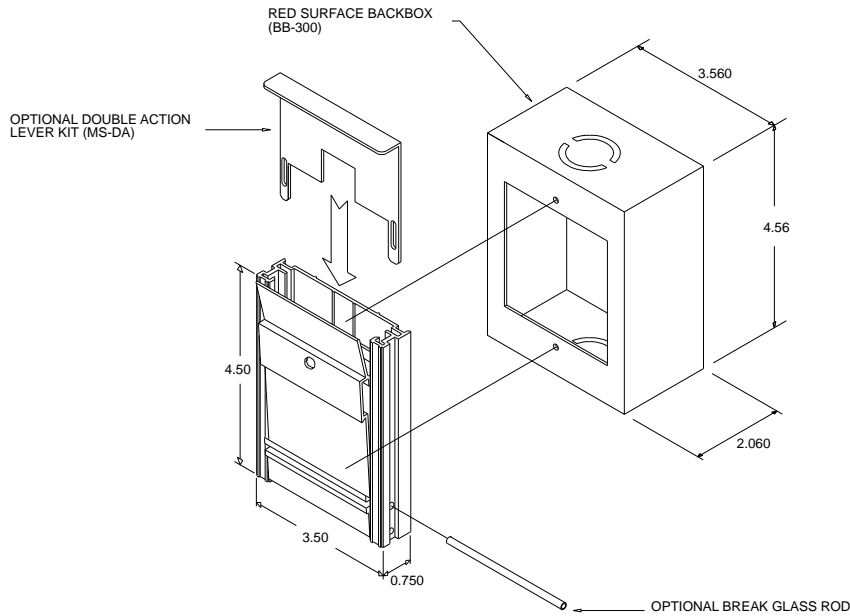


**CATALOG NUMBER** **5102**

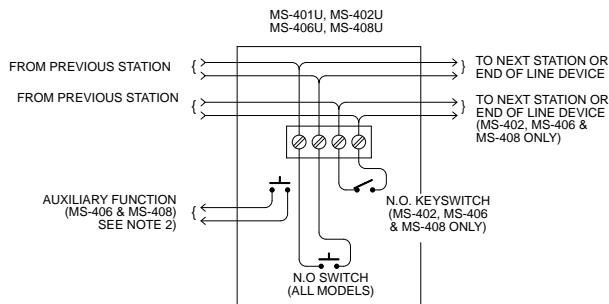
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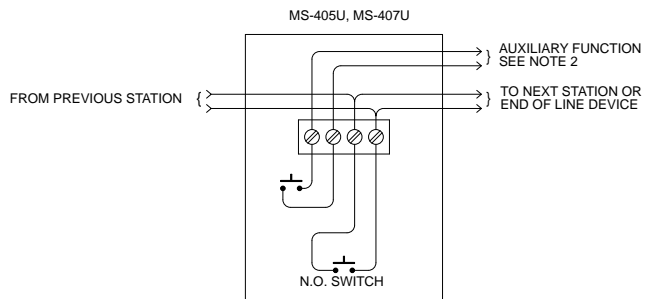
## Dimensions



## Wiring Diagrams



- NOTES:
1. WIRE AS SHOWN SO THAT SUPERVISION OF CONNECTIONS IS MAINTAINED.
  2. N.O. SWITCH FOR MODEL MS-406
  3. N.C. SWITCH FOR MODEL MS-408
  4. MOUNT STATION TO 2" X 4" X 2 1/4" OUTLET BOX.
  5. SWITCH RATING: ALL MODELS 1A @ 30 VDC



- NOTES:
1. WIRE AS SHOWN SO THAT SUPERVISION OF CONNECTIONS IS MAINTAINED.
  2. N.O. SWITCH FOR MODEL MS-405
  3. N.C. SWITCH FOR MODEL MS-407
  4. MOUNT STATION TO 2" X 4" X 2 1/4" OUTLET BOX.
  5. SWITCH RATING: ALL MODELS 1A @ 30 VDC

## Ordering Information

Model	Description
<b>MS-401U</b>	Single Stage Manual Station
<b>MS-402U</b>	Dual Stage Manual Station
<b>MS-405U</b>	Single Stage Manual Station with additional N.O. Switch
<b>MS-406U</b>	Dual Stage Manual Station with additional N.O. Switch
<b>MS-407U</b>	Single Stage Manual Station with additional N.C. Switch
<b>MS-408U</b>	Dual Stage Manual Station with additional N.C. Switch
<b>MS-DA</b>	Double Action Lever Kit (converts any of the above to double action stations)

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CAT. 5102  
Rev. 6

# Voice Evacuation



## INTELLIGENT FIRE ALARM AND AUDIO NETWORK SYSTEM




BBX-FXMNSR

BBX-5014R

### Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions.

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities.

Designed for peer-to-peer network communications, the FleX-Net Series allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The audio control provides a multi-channel distributed audio system that allows for efficient emergency paging, evacuation signaling (compatible with 520Hz low frequency signal) and fire fighters' telephone communication. Each audio card cage supports a maximum of 4 QAA style amplifiers for a maximum of 180 watts per cabinet.

The network configuration allows the FleX-Net Series control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

### Features

#### Fire Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Supports both 80 character and 960 character back-lit LCD displays with user friendly menu
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allows for multi-functional outputs
- Four Alarm Queues with selector switches and LEDs for Alarm, Supervisory, Monitor and Trouble
- RS-232 output for remote system printer or CRT
- Two Event History Logs comprised of a 6000 Alarm History Log and a 6000 Event Log for all events
- Built-in BACnet support
- System can be configured without taking the panel offline
- Supports three configuration files (current, previous and next configuration) with "hot swap" support
- Real time 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- Supports Boolean logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- UL listed for Smoke Control (UUKL)

#### Audio Control

- Multi-channel operation
- Distributed audio
- Compatible with 520Hz low frequency signal by Mircom
- 5 hard wire fire fighter telephone channels that can be expanded with intelligent fire phone modules
- 25 or 70 volt system
- Multiple amplifier sizes
- Max. of 180 watts per Integrated Fire & Audio panel
- Expansion to three 360 watts expansion cabinets for a total of 1260 watts of audio power per node

#### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Fully integrated digital network audio and control over a single pair of copper wire or fiber optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Remote diagnostics via built in web server and standard Ethernet port in every node
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064



APPROVED

CATALOG NUMBER **5940**

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## FleX-Net Integrated Fire and Audio Control Panels



### FX-2009-12NDS Large Network Main Control Unit

The FX-2009-12NDS Large Network Main Control Unit consists of a base fire alarm panel with one isolated intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC circuits, a 4 line by 20 character LCD display and a 12 Amp power supply. The FX-2009-12NDS has space to mount the FNC-2000 Fire Network Controller Module, ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and provision to mount up to 4 adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosure and supports Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator / Programmable modules.



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.

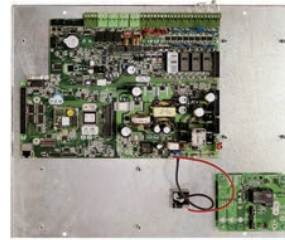


### BB-5008/BB-5014 Enclosures

The BB-5008 and BB-5014 enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D



### FX-2000MNS Main Network Board

The FX-2000MNS main network board includes one intelligent Signaling Line Circuit (SLC) and Four Style Z/Y (Class A/B) NAC circuits. The FX-2000MNS has provisions to mount up to 9 internal adder modules and mounts in the BBX-FXMNS enclosure.



### QMB-5000N Integrated Audio Network Chassis

The QMB-5000N includes the audio and telephone control which consists of an audio card cage designed for mounting the ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and up to four QAA style audio amplifiers. The QMB-5000N connects to the FX-2000MNS main board and mounts in the BBX-FXMNS enclosures. The QMB-5000N supports audio expansion with connection to up to three QBB-5001 Audio Cabinets. Each QBB-5001 can support a maximum 360 watts.

## Electrical Specifications

Fire Alarm Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries
Audio Primary Input Power (QPS-5000N)	120 VAC, 60Hz / 240 VAC, 50Hz 12 Amps

## Flex-Net Integrated Fire and Audio Control Panels



### DSPL-420 Main Display Module

The DSPL-420 Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-420 occupies one display position in the BBX-FXMNS enclosure.



### DSPL-420-16TZDS Main Display Module

The DSPL-420-16TZDS Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitoring with an additional 16 LED points of annunciation. The DSPL-420-16TZDS occupies one display position in the BBX-FXMNS enclosure.



### DSPL-2440 Graphical Main Display Module

The DSPL-2440 Graphical Main Display Module provides a 24 line x 40 character backlit LCD display, Common Controls buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-2440 occupies one display position in the BBX-FXMNS enclosure.



### BBX-FXMNS Enclosure

The BBX-FXMNS enclosure supports the FX-2000MNS Network main board, a DSPL-420, DSPL-420-16TZDS or DSPL-2440 Main LCD display, a QMB-5000N audio card cage, a QMP-5101NV Master Paging Microphone and a QMT-5302NV Master Telephone Handset. In addition the enclosure provides space for additional external modules and internal lobby control modules. The BBX-FXMNS holds up to 40 AH batteries and is available with a white (BBX-FXMNS) or red (BBX-FXMNSR) door.

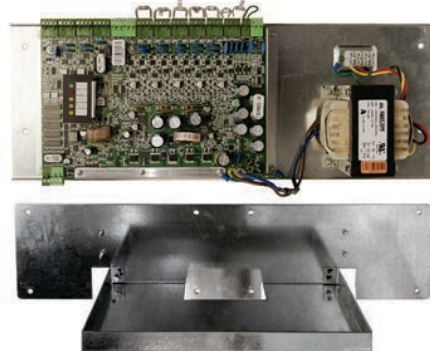
**BBX-FXMNS Dimensions:** 61.5"H x 20"W x 9"D



### QMP-5101NV Network Master Paging Control Module

The QMP-5101NV Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101NV allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

## Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

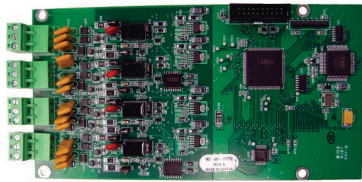
Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.



### QMT-5302NV Network Master Fire fighters' Telephone Control Module

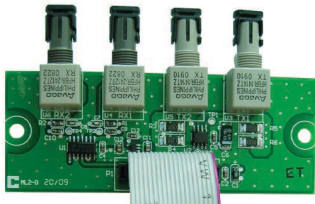
The QMT-5302NV includes the Master Telephone Handset and common control indicators. The QMT-5302NV supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

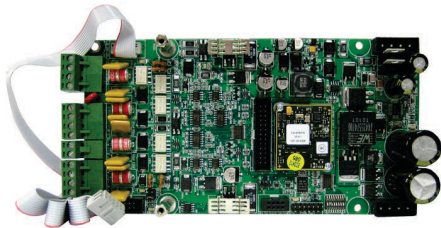
The FNC-2000 provides network capability to the FX-2009-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2009-12NDS.



### FOM-2000-SP Fiber Optic Network Adder Module

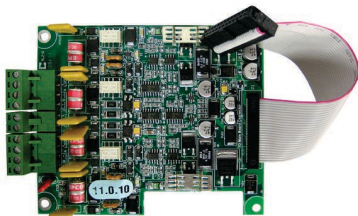
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2009-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

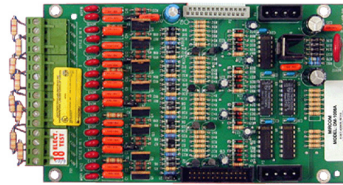
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the Flex-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

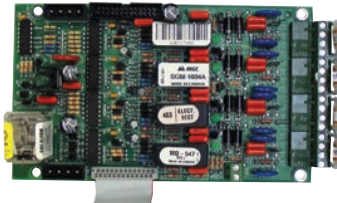
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Adder Hardware Modules



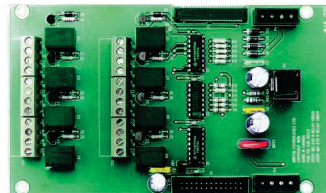
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

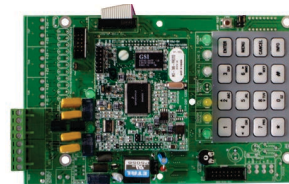
The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

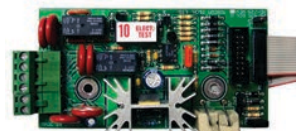
The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

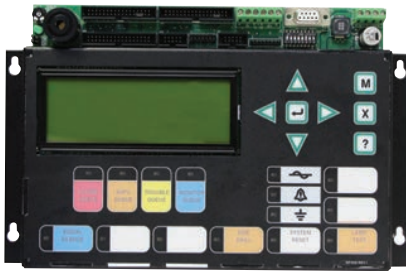
The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

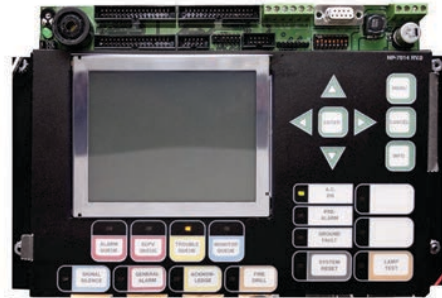
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

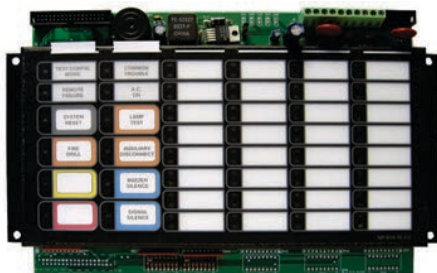
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main Flex-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

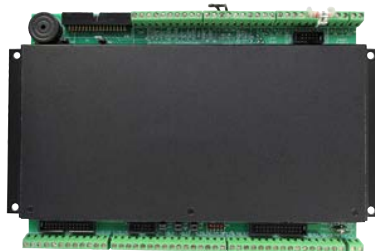
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

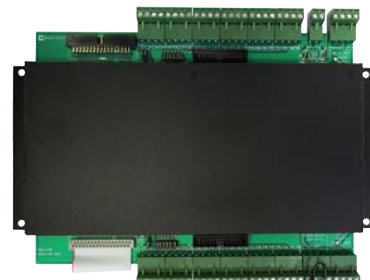
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

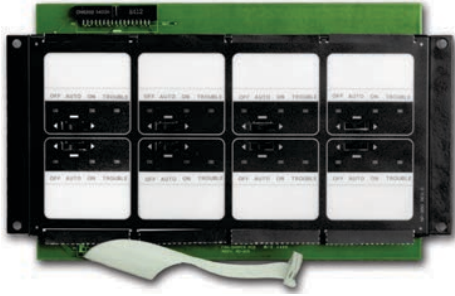
The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

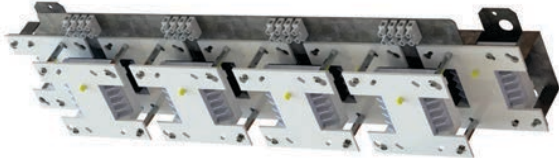
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Mounting Brackets



### M500-BK9 Module Mounting Bracket

The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.



### M500-BK2 Module Mounting Bracket

The M500-BK2 Module Mounting Bracket mounts inside the BBX-FXMNS enclosure and provides space to mount up to two M500 style intelligent modules.

## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Dimensions for Annunciator Module Enclosures

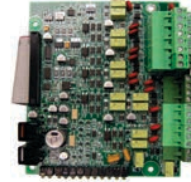
Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Flex-Net Audio and Telephone Network Controller Modules



### ANC-5000 Audio Network Controller Module

The ANC-5000 provides audio microphone control on the network system. The ANC-5000 mounts on a plate in the FX-2009-12NDS or QMB-5000N.



### TNC-5000 Telephone Network Controller Module

The TNC-5000 provides five hardwired telephone circuits for the local floor panel with the first circuit configurable for the master telephone handset. The TNC-5000 mounts in the FX-2009-12NDS or QMB-5000N.

## Paging & Telephone Control Modules



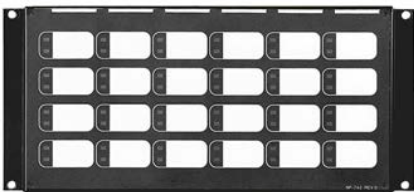
### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101N occupies one module space in the BB-5000 Series enclosures.



### QMT-5302N Network Master Firefighters' Telephone Control Module

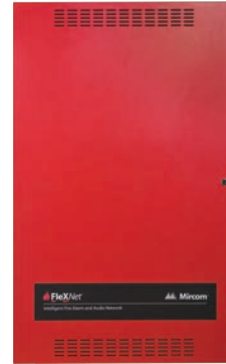
The QMT-5302N includes the Master Telephone Handset and common control indicators. The QMT-5302N supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302N occupies one module space in the BB-5000 Series enclosures.



### QAZT-5302DS Zoned Paging/Telephone Selector Module

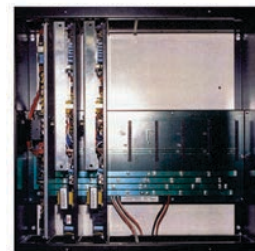
The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302 Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.

## Audio Expansion



### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000N Audio Power Supply, one QBC-5000N Audio Battery Charger and up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports 7 QAA style audio amplifiers. The QMB-5000B requires one QPS-5000N Audio Power Supply and one QBC-5000N Audio Battery Charger and mounts in the QBB-5001 backbox.



### QPS-5000N Audio Power Supply

The QPS-5000N supports up to 360 watts and mounts in the QBB-5001 Audio backbox.



### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Audio Backbox.

*Note: The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.*

## Audio Amplifiers



### QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in either the QMB-5000N or QMB-5000B card cage and occupy one amplifier slot.

### QAA-5230S-70/25 Dual 30 Watt Amplifier

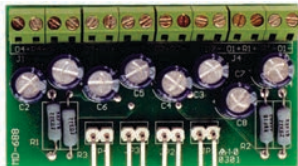
The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

### QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

### QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.



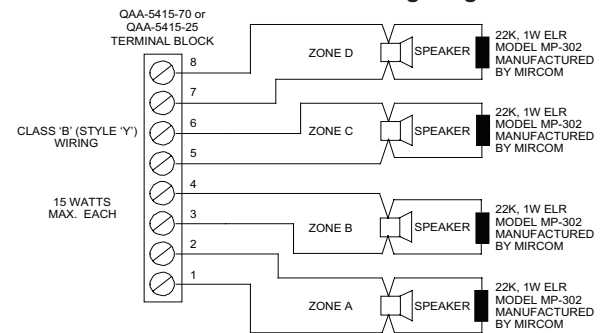
### QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

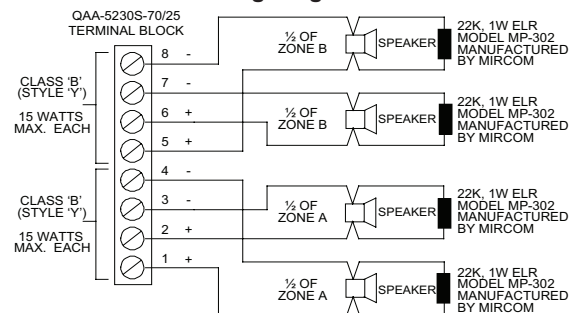
### QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLAS is required for each amplifier.

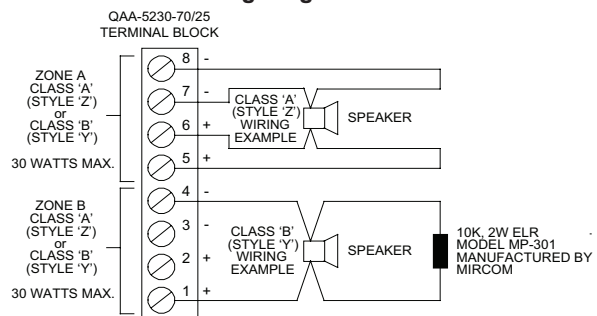
### QAA 5415-70 or QAA-5415-25 Wiring Diagram



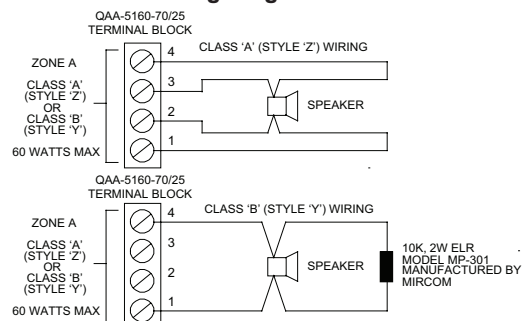
### QAA-5230S-70/25 Wiring Diagram



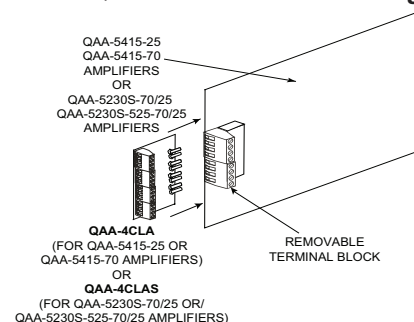
### QAA-5230-70/25 Wiring Diagram



### QAA-5160-70/25 Wiring Diagram

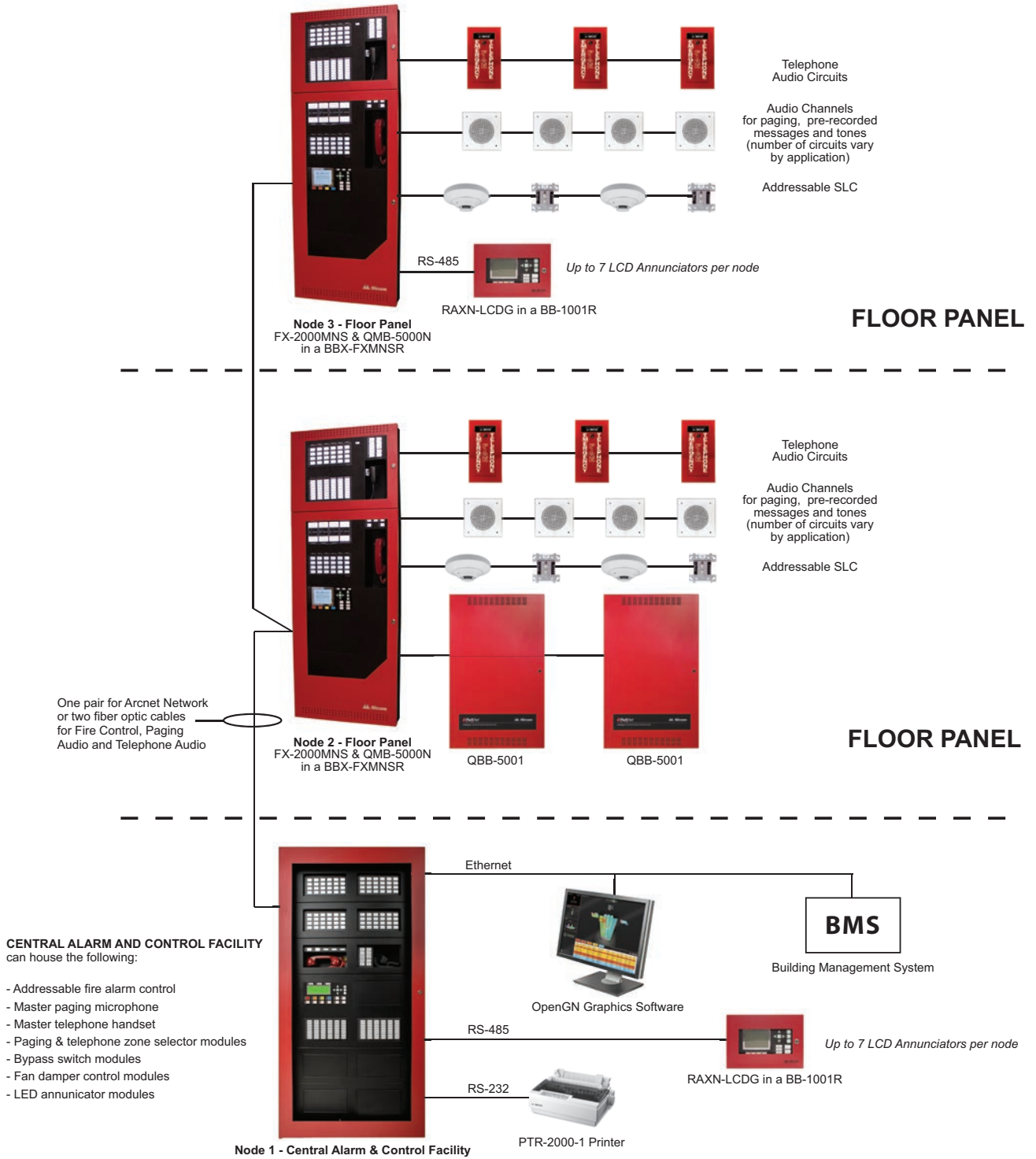


### QAA-4CLA and QAA-4CLAS Connection Diagram





# Typical Flex-Net Networked System Configuration with Audio



## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
<b>Fire Alarm Components</b>			
FX-2000MNS	Main Network Control Unit on a Chassis (12 Amp)	0.310	0.733
FX-2003-12NDS	Compact Main Network Control Unit (12 Amp)	0.310	0.733
FX-2017-12NDS	Mid-Size Main Network Control Unit (12 Amp)	0.310	0.733
FX-2009-12NDS	Large Main Network Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Quad Loop Controller Module	0.130	0.145
ALCN-792M /w ALCN-792D	Quad Loop Controller Module with Daughter Module	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
DSPL-420	Narrow Display	0.024	0.025
DSPL-420-16TZDS	Narrow Display w/ additional 16 LED Zones	0.010	0.046
DSPL-2440	Graphic Display	0.029	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
FDS-008	Selection Control Panel for MNS	0.024	0.112
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015
<b>Audio Components</b>			
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
QAA-5160-70/25	1 Zone 60W Amplifier	0.055	0.350
QAA-5230-70/25	2 Zone 30W Amplifier	0.055	0.350
QAA-5230S-70/25	2 Zone 30W Amplifier (split)	0.055	0.350
QAA-5415-70	4 Zone 15W Amplifier, 70V	0.055	0.350
QAA-5415-25	4 Zone 15W Amplifier, 25V	0.055	0.350
QMP-5101N	Master Paging Module	0.004	0.012
QMP-5101NV	Vertical Master Paging Module	0.004	0.012
QMT-5302N	Master Telephone Module	0.003	0.013
QMT-5302NV	Vertical Master Telephone Module	0.003	0.013
QAZT-5302DS	Paging/Telephone Zone Module	0.010	0.015

## Ordering Information

Model	Description
<b>Flex-Net Network Lobby Control and Floor Panels - Integrated Fire and Audio Systems</b>	
FX-2009-12NDS	Large Network Main Control Unit. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12NDS. Mounts in the BB-5000 series enclosures.
FX-2000MNS	Main Network Board with one SLC loop. Mounts in the BBX-FXMNS enclosure.
DSPL-420	4 x 20 Main LCD Display for FX-2000MNS
DSPL-420-16TZDS	4 x 20 Main LCD Display for FX-2000MNS w/16 LEDs
DSPL-2440	Graphical Main Display for FX-2000MNS
QMB-5000N	Integrated Audio Network Control Chassis
PS-2040	Network Fire Alarm and Audio Power Supply
<b>Enclosures</b>	
BB-5008	Lobby Control Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
CCH-5008G	Custom Mounting Kit for BB-5008, Required when using RAXN-LCDG as Main Display
BB-5014	Lobby Control Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
BBX-FXMNS	Black backbox enclosure with white doors for FX-2000MNS. Add suffix 'R' for red doors.
<b>Adder Loop Controller Modules</b>	
ALC-792M	Network Quad Loop Controller Module
ALC-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module c/w 8 programmable switches
<b>Power Module</b>	
INX-10AC	Internal Booster Power Supply Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Adder Annunciator Chassis c/w 48 Bi-Colored LEDs
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
ANC-5000	Audio Network Controller Module
TNC-5000	Telephone Network Controller Module

## Ordering Information continued

Paging and Telephone Control Modules	
QMP-5101NV	Master Network Paging Control Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMT-5302NV	Master Network Telephone Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMP-5101N	Master Network Paging Control Module
QMT-5302N	Master Network Telephone Control Module
QAZT-5302DS	Paging and Telephone Selector Panel
Audio Amplifiers	
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
Enclosures for Remote Annunciators / Programmable Modules	
BB-1001	Remote Annunciator/Programmable Module Enclosure Houses one module. Add suffix "R" for red door.
BB-1002	Remote Annunciator/Programmable Module Enclosure Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Annunciator/Programmable Module Enclosure Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Annunciator/Programmable Module Enclosure Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Annunciator/Programmable Module Enclosure Houses twelve modules. Add suffix "R" for red door.
Audio Expansion Components	
QMB-5000B	Audio Motherboard and Card Cage
QPS-5000N	Audio Power Supply
QBC-5000N	Audio Battery Charger
QBB-5001	Audio Backbox
Graphics Software	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/objects
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
Accessories	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5940  
Rev. 7



## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2003-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2003-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 9
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064



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CATALOG NUMBER **5941**

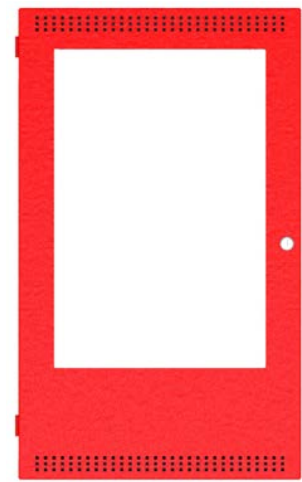
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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## FleX-Net™ FX-2003-12NDS Network Series Fire Alarm Control Panels



UB-1024DS

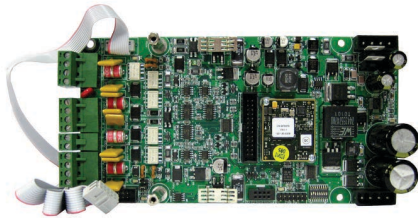


DOX-1024DSR

### FX-2003-12NDS Compact Network Main Control Unit

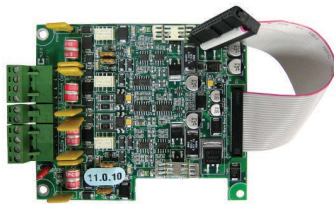
The FX-2003-12NDS Compact Network Main Control Unit complete with one Intelligent Signaling Line Circuit (Style 4, 6 or 7), Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each, a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply. The FX-2003-12NDS provides space for the FNC-2000 Network Controller Module, two internal adder modules and two programmable modules.

### Adder Loop Controller Modules



#### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



#### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

### UB-1024DS Universal Backbox

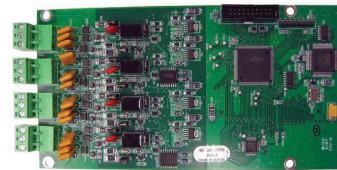
The UB-1024DS Universal backbox houses the FX-2003-12NDS and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately.

**Dimensions** (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

#### DOX-1024DS(R) Door

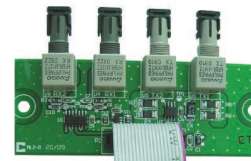
The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).

### Fire Network Controller Modules



#### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2003-12NDS panels. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2003-12NDS.



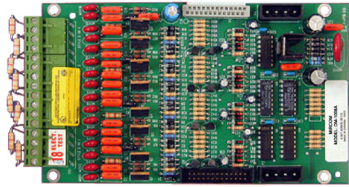
#### FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FleX-Net Series panels. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

### Electrical Specifications

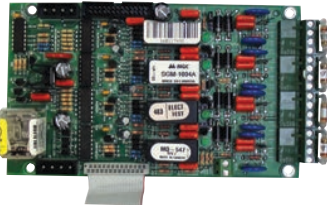
Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

## Adder Hardware Modules



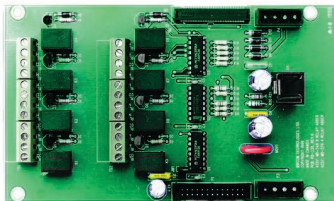
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12NDS.



### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12NDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12NDS.

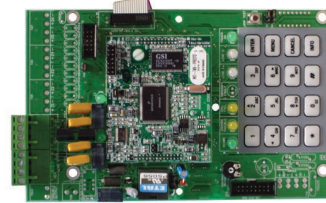
## Graphics Software



### Open Graphic Navigator (OpenGN)

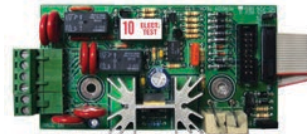
Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12NDS.



### PR-300 Polarity Reversal/City Tie Module

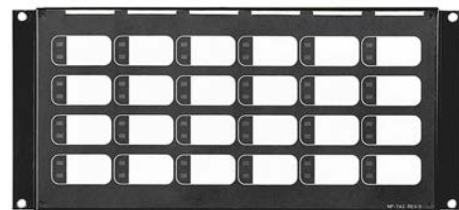
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2003-12NDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

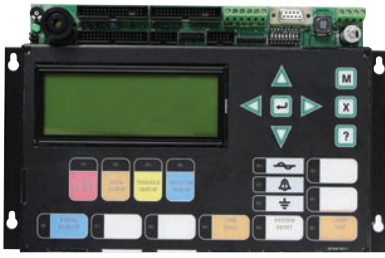
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

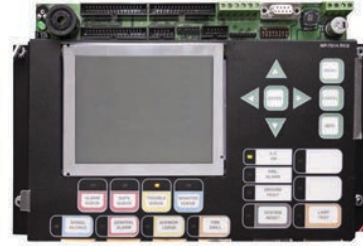
The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

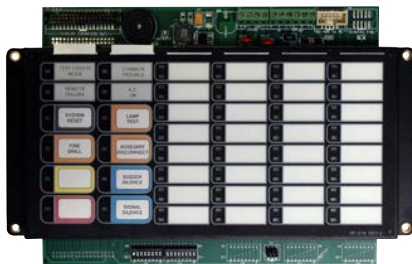
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit LCD display that provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

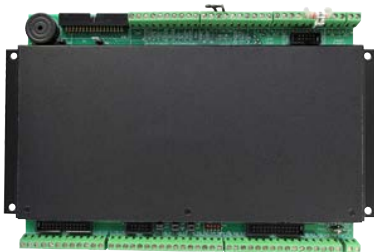
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

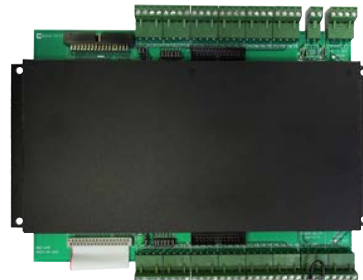
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

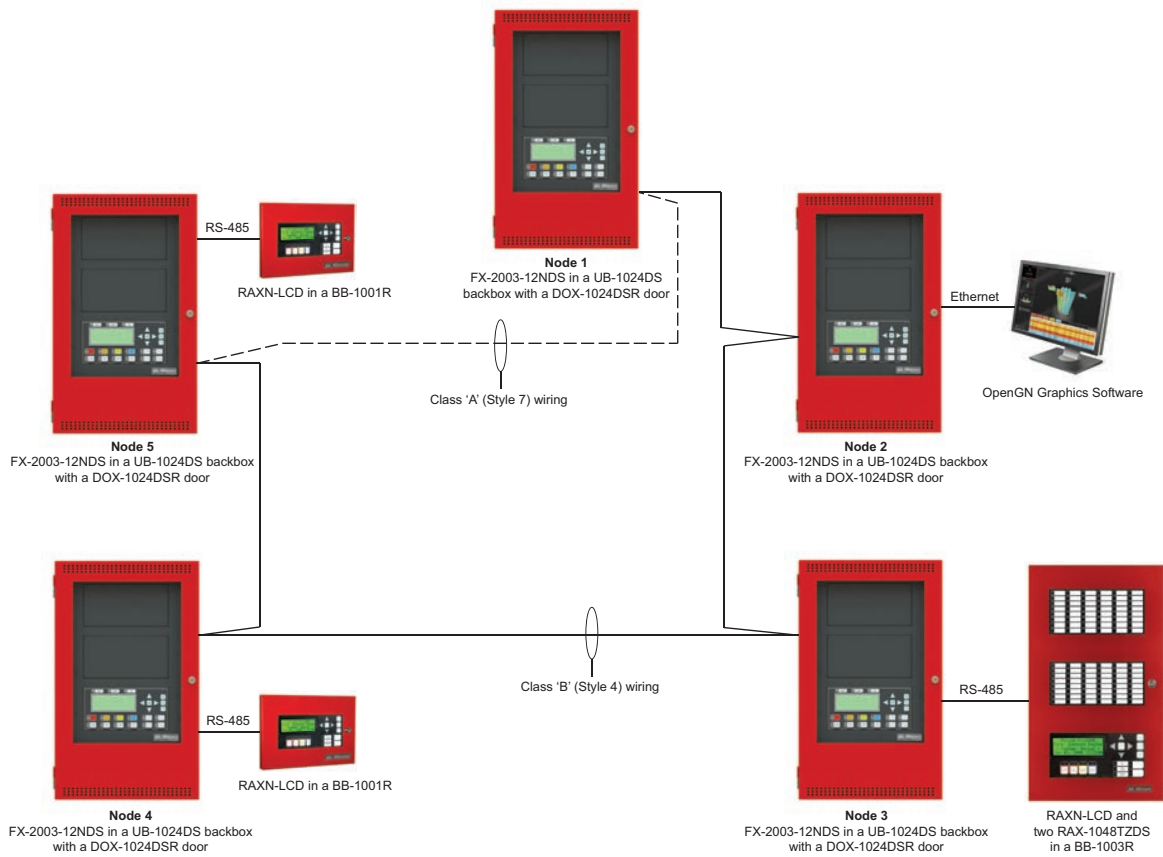
The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D



# Typical Flex-Net™ FX-2003-12NDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2003-12NDS	Network Compact Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2003-12NDS	Network Compact Main Control Unit with 12 Amp power supply. Mounts in the UB-1024DS backbox.
UB-1024DS	Universal black backbox. Requires DOX-1024DS(R) door.
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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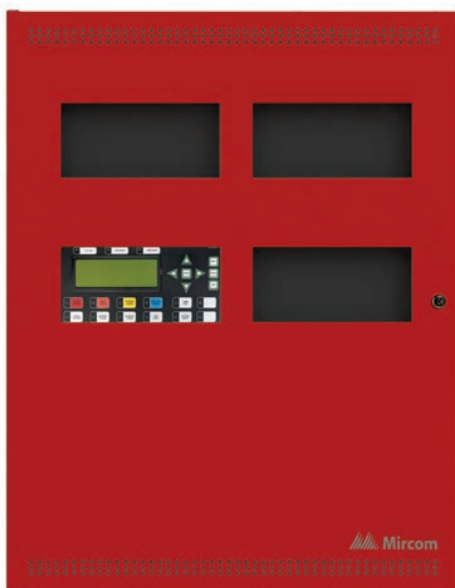
**U.S.A.**  
4575 Witmer Industrial Estates  
Niagara Falls, NY 14305  
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Fax Toll Free: (888) 660-4113

Web page: <http://www.mircom.com> Email: [mail@mircom.com](mailto:mail@mircom.com)

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CAT. 5941  
Rev.7



## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2017-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2017-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064



APPROVED

**CATALOG NUMBER 5942**

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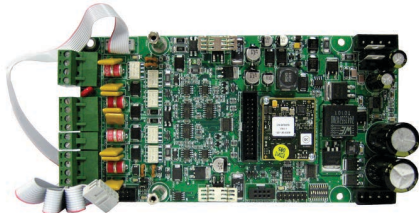
## FleX-Net™ FX-2017-12NDS Network Series Fire Alarm Control Panels



### FX-2017-12NDS Midsize Network Main Control Unit

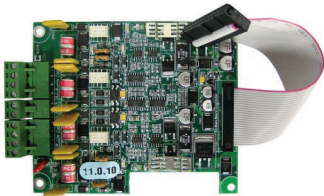
The FX-2017-12NDS Midsize Network Main Control Unit comes complete with one intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display, and a 12 Amp Power Supply. The FX-2017-12NDS provides space for the FNC-2000 Network Controller Module, up to 16 adder modules/loop controllers and 3 internal annunciator adder display modules. The FX-2017-12NDS mounts in the BBX-1072ADS enclosure.

### Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

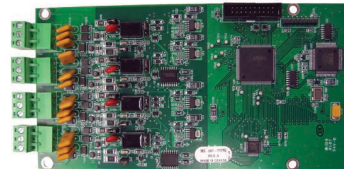


### BBX-1072ADS Enclosure

The BBX-1072ADS enclosure supports one FX-2017-12NDS and up to 40 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a beige or red exterior (BBX-1072ARDS).

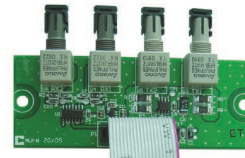
**Dimensions:** 32 1/2"H x 25"W x 6 1/2"D

### Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2017-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2017-12NDS.



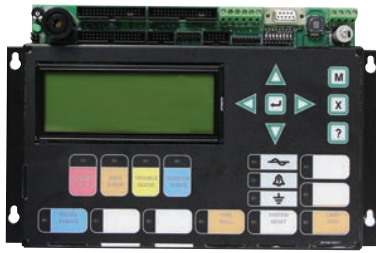
### FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2017-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

### Electrical Specifications

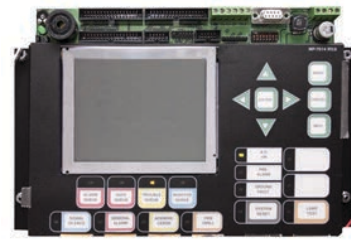
Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

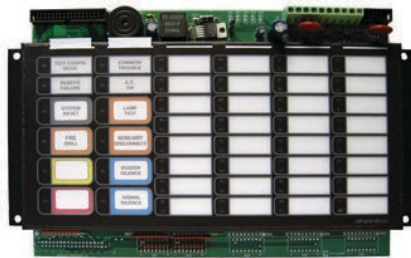
The RAXN-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

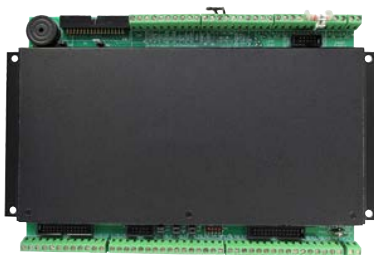
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

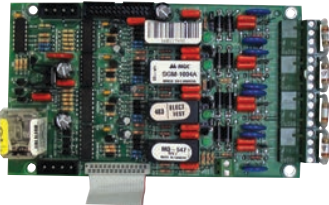
The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Adder Hardware Modules



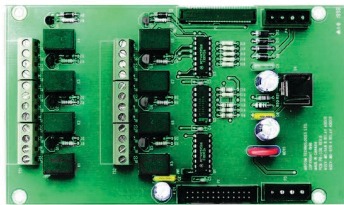
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2017-12NDS.



### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2017-12NDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2017-12NDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2017-12NDS.

## Graphics Software



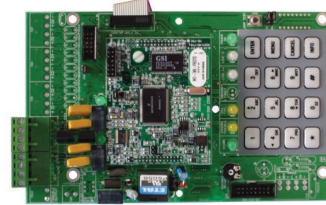
### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable..



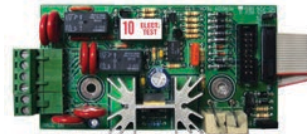
NOT TO BE USED FOR INSTALLATION PURPOSES.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2017-12NDS.



### PR-300 Polarity Reversal/City Tie Module

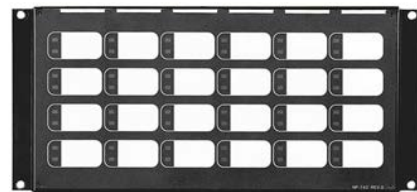
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2017-12NDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

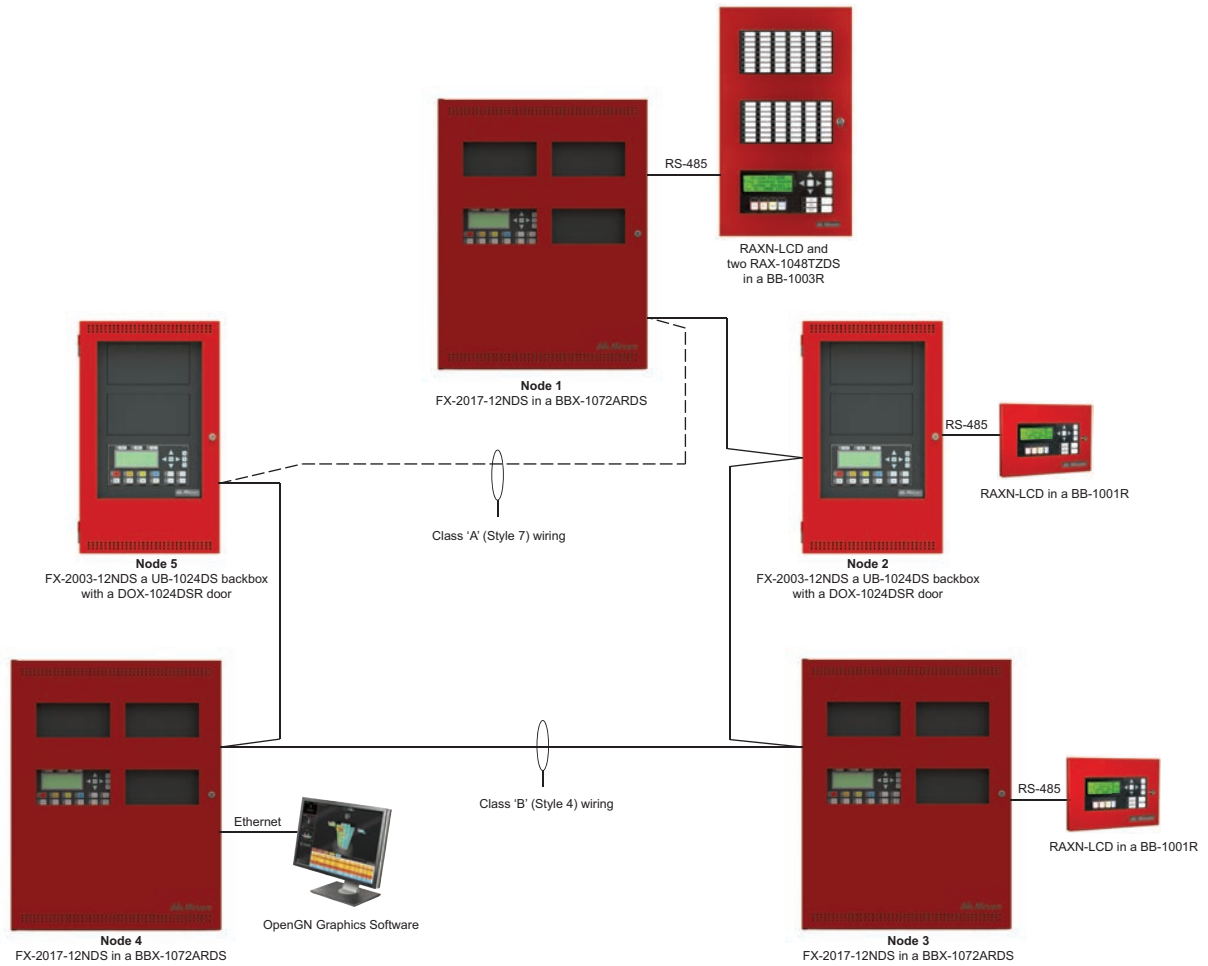
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

# Typical Flex-Net™ FX-2017-12NDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2017-12NDS	Network Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015



## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2017-12NDS	Network Main Control Unit with 12 Amp power supply. Mounts in the BBX-1072ADS/BBX-1072ARDS enclosure.
BBX-1072ADS	Black backbox enclosure for FX-2017-12NDS c/w beige door.
BBX-1072ARDS	Black backbox enclosure for FX-2017-12NDS c/w red door.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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CAT. 5942  
Rev.6



FX-2009-12NDS in a BB-5008R enclosure.

## Description

Mircom's Flex-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's Flex-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2009-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2009-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 29
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



CATALOG NUMBER **5943**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

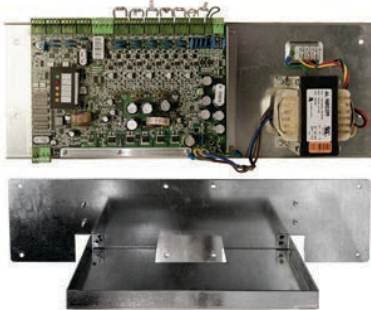
## FleX-Net™ FX-2009-12NDS Network Series Fire Alarm Control Panels



### FX-2009-12NDS Large Size Network Main Control Unit

The FX-2009-12NDS Large Size Network Main Control Unit comes complete with one Intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) Notification Appliances Circuits (1.7 Amps each), a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply. The FX-2009-12NDS provides space for the FNC-2000 Network Controller Module, up to 8 adder modules and 2 internal display adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosures.

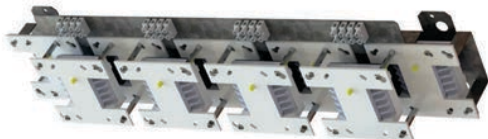
### Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.

### Mounting Brackets



### M500-BK9 Module Mounting Bracket

The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.

### Electrical Specifications

Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal display modules. The ECX-0012 mounts in the BB-5000 series enclosures.



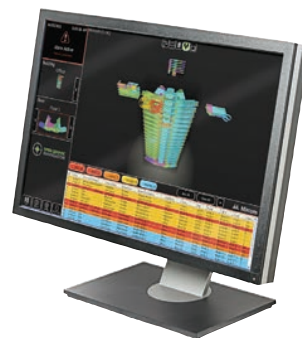
### BB-5008/BB-5014 Lobby Enclosures

The BB-5008 and BB-5014 lobby enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D

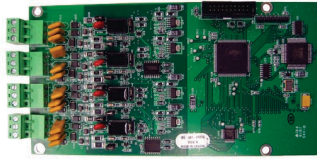
### Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

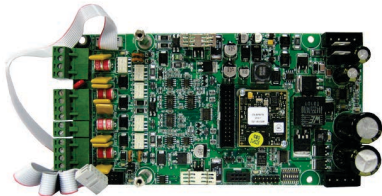
The FNC-2000 provides network capability to the FX-2009-12NDS. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2009-12NDS.



### FOM-2000-SP Fiber Optic Network Adder Module

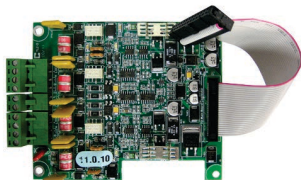
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FX-2009-12NDS. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the Flex-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



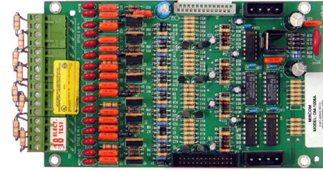
### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Adder Hardware Modules



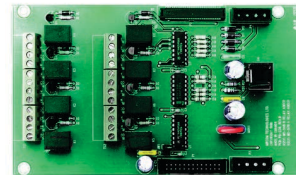
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2009-12NDS.



### SGM-1004A Four Notification Appliances Circuit Module

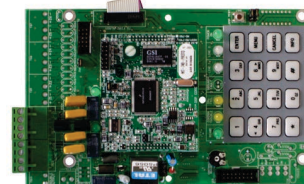
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs which are jumper selectable. The SGM-1004A occupies one module slot in the FX-2009-12NDS.



### RM-1008A Eight Relay Circuit Module

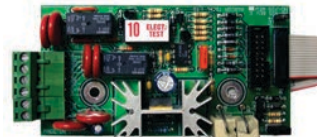
The RM-1008A provides the Flex-Net system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2009-12NDS.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

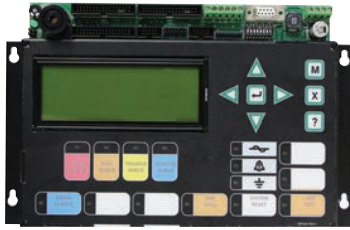
The UDACT-300A Digital Alarm Communicator Module allows the Flex-Net system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2009-12NDS.



### PR-300 Polarity Reversal/City Tie Module

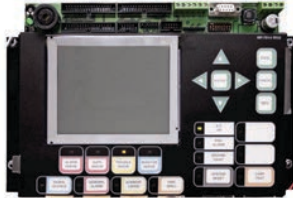
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2009-12NDS.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

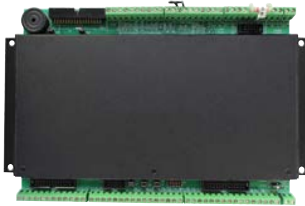
The RAXN-LCD Remote LCD Annunciator provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

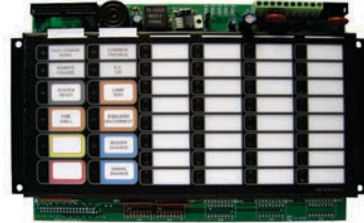
The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Remote LED Annunciators



### RAM-1032ZDS Main Remote LED Annunciator

The RAM-1032ZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032ZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032ZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032ZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

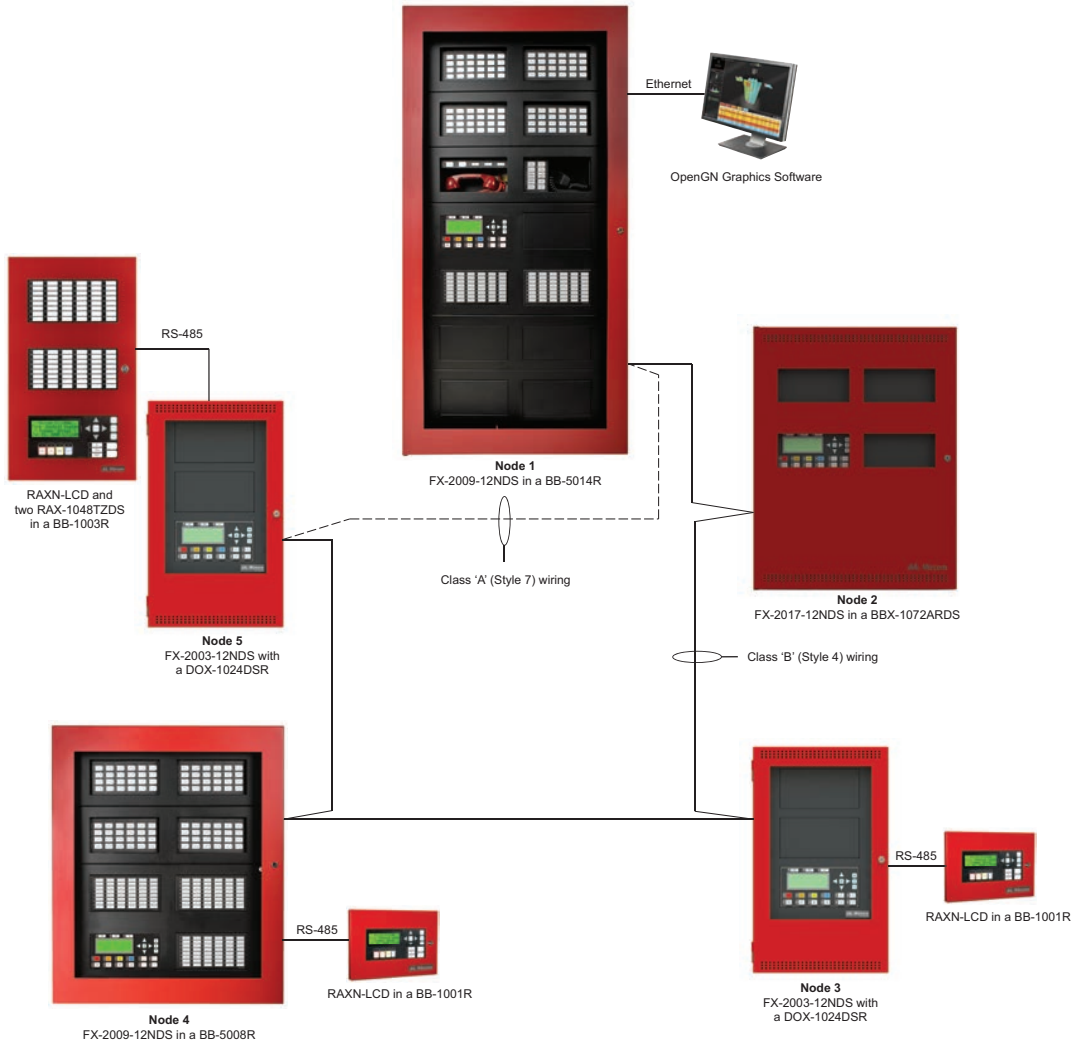
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

# Typical Flex-Net™ FX-2009-12NDS Networked System Configuration



## Current Consumption

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FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliances Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Panel</b>	
FX-2009-12NDS	Large Size Network Main Control Unit. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-2009-12NDS. Mounts in the BB-5000 series enclosures.
<b>Enclosures</b>	
BB-5008	Lobby Control Centre Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
BB-5014	Lobby Control Centre Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliances Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Programmable Modules</b>	
INX-10AC	Internal Booster Power Supply Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTKW SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.



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CAT. 5943  
Rev. 6

## REMOTE NETWORK LCD ANNUNCIATORS



### Description

Mircom's FleX-Net Intelligent Fire Alarm and Audio Network System supports several network annunciators that provide the same functions as the main display on the fire alarm control panel. The FleX-Net network annunciators connect to any node and can announce the full network system or selected network nodes.

The FleX-Net network annunciators are available in an 80 character (2x40) and 960 (24x40) character display. Both models are equipped with an easy to use menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. The remote network annunciators have four status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The network annunciators also have common control switches and LEDs for Signal Silence, Fire Drill, System Reset, Lamp Test, General Alarm and Acknowledge.

In addition to being network annunciators, these units can be used as driver modules for LED annunciation, graphic annunciation, programmable switch modules and fan damper control modules.

The FleX-Net network annunciators also allow for the control switches to be disabled on a per function basis (via laptop configurator) for areas that do not require certain Common Control functions to be remotely located from the Fire Alarm Control Panel. Both models can be mounted in a BB-1000 or BB-5000 series enclosure.

### Features

- Provide the same functions as the main display on the FleX-Net fire alarm control panel
- Available in two models
  - Large 80 character (4x20) back-lit LCD display
  - 960 character (24x40) graphical back-lit LCD display
- Connect to any node to annunciate the full network system or selected network nodes
- Do not take up a node address
- Easy to use menu system complete with a directional keypad and switches
- Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor to sort events
- Support programmable modules and annunciator modules
- RAXN-LCDG displays nine events per page with each event displayed over 2 lines with 40 characters per line
- RAXN-LCDG meets Canadian ULC sequential display requirements
- Both models can mounted in a BB-1000 Series enclosure
- The RAXN-LCD may replace the main panel display when extra headers are required to drive more display adders
- The RAXN-LCDG may also replace the main panel display for additional headers or when other language support is required such as Arabic or Hebrew. (specific deadfronts are available for each FleX-Net enclosure required for mounting the RAXN-LCDG)



S5434



S5434



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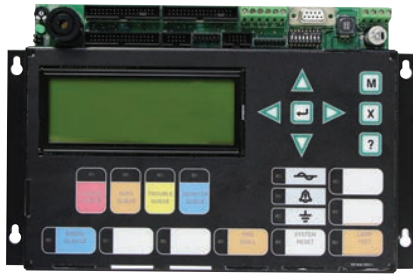
NYC  
Fire Dept.  
COA# 6064



CATALOG NUMBER **5944**

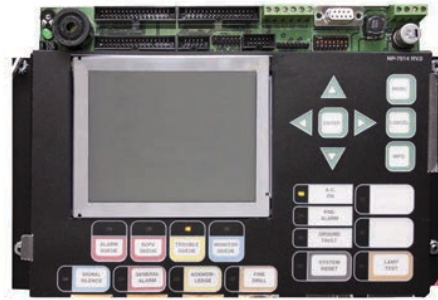
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### RAXN-LCD Remote Network LCD Annunciator

The RAXN-LCD Remote Network LCD Annunciator is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main FleX-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 series enclosures.



### RAXN-LCDG Remote Network Graphic LCD Annunciator

The RAXN-LCDG Remote Network Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in easy to read format. In addition the RAXN-LCDG meets Canadian ULC sequential display requirements. The RAXN-LCDG occupies one display position in the BBX-FXMNSG, BB-1000 or BB-5000 series enclosures.

### Dimensions for BB-1000 Series Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

### Current Consumption

Model Number	Description	Standby (Amps)	Lamp Test w/ All LEDs On (Amps)
RAXN-LCD	Remote Network LCD Annunciator	0.100	0.150
RAXN-LCDG	Remote Network Graphic LCD Annunciator	0.117	0.150

### Ordering Information

Model	Description
<b>Network Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 line x 20 character backlit LCD display
RAXN-LCDG	Remote Network Graphic LCD Annunciator c/w 24 line x 40 character backlit graphical LCD display
<b>Enclosures</b>	
BB-1001	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 1 module.
BB-1002	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 2 modules.
BB-1003	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 3 modules.
BB-1008	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 8 modules.
BB-1012	Enclosure for RAXN-LCD or RAXN-LCDG Annunciators, White Door. Houses 12 modules.

Add suffix 'R' for red door.

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CAT. 5944  
 Rev.2




## Description

Mircom's FleX-Net™ Mass Notification System (MNS) is designed to provide real-time information to all building occupants or personnel in the immediate vicinity of a building during emergency situations. The system allows for real-time information regarding the type of emergency as well as safely instructing people on where to go and what to do.

Mircom's FleX-Net MNS system offers building owners and facility managers with a simple solution to their safety requirements. The system is designed to automatically change as emergency situations change. In addition it is able to manage all mass notification functions, allow responding authorities the ability to override fire alarm notification, issue external voice announcements, and simultaneously distribute different emergency communications on any geographic scale required.

Designed with the industry's most advanced hardware and software, Mircom's FleX-Net MNS system provides reliable and clear audible and visual notification, live voice instruction and Internet based text messaging. In addition it can be easily integrated to other public safety systems for emergency communications to wide area networks.

Mircom's FleX-Net MNS is UL 2572 listed for Mass Notification and complies with NFPA 72-2010 and UFC/DOD standards for emergency communications systems. Based on the proven and reliable FleX-Net Intelligent Network Fire Alarm Control Panel and Audio System the FleX-Net MNS provides a rich feature set that delivers an extensive number of configurable options that allow for flexibility in any environment while reducing the installation and maintenance burden with an easy to install, modular setup.

## Features

### Mass Notification

- Storage and activation of pre-programmed intelligible voice messages
- Supervision of all Mass Notification (MNS) equipment
- Auxiliary inputs for general paging, background music, or other non-emergency functions
- Tamper resistant enclosures with password-protected features for enhanced access control
- One-Way and Two-Way EVACS capability
- Automatic response to MNS inputs
- Local and remote controls and indicators
- Synchronized evacuation zone signalling
- Voice message priority according to risk analysis and emergency response plan
- Visible notification and strobes support
- Local Operating Console (FX-LOC) that provides on-site monitoring/control of voice and notification appliances
- Large LCD displays
- Fire Alarm Control Panel Interface (FACI)
- Building Management System Interface (BMSI)
- Autonomous Control Unit providing real time status of all FX-LOC units
- UL 2572 Listed for Mass Notification

### Fire Alarm Control

- Base system is equipped with one Intelligent Signaling Line Circuit (SLC). Expandable up to 21 SLCs.
- Each SLC is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Built-in Ethernet port
- Remote diagnostics via a built-in web server

### Audio Control

- Multi-channel operation
- Distributed audio
- Compatible with 520Hz low frequency signal by Mircom
- 5 hard wire fire fighter telephone channels that can be expanded with intelligent fire phone modules
- 25 or 70 volt system
- Multiple amplifier sizes
- Max. of 180 watts per Integrated Fire & Audio panel
- Expansion to three 360 watts expansion cabinets for a total of 1260 watts of audio power per node

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Fully integrated digital network audio and control over a single pair of copper wire or fiber optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Remote diagnostics via built in web server and standard Ethernet port in every node
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol



S7010



S7010



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NYC  
Fire Dept.  
COA# 6064

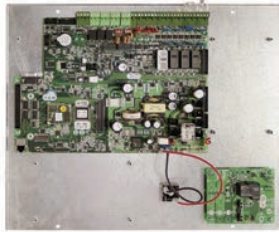


**CATALOG NUMBER 5945**

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## FX-MNS Mass Notification Control Modules



### FX-2000MNS Main Network Board

The FX-2000MNS main network board includes one intelligent Signaling Line Circuit (SLC) and Four Style Z/Y (Class A/B) NAC circuits. The FX-2000MNS has provisions to mount up to 9 internal adder modules and mounts in the BBX-FXMNS enclosure.



### QMB-5000N Integrated Audio Network Chassis

The QMB-5000N includes the audio and telephone control which consists of an audio card cage designed for mounting the ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and up to four QAA style audio amplifiers. The QMB-5000N connects to the FX-2000MNS Network fire alarm main board and mounts in the BBX-FXMNS enclosure.



### BBX-FXMNS Enclosure

The BBX-FXMNS enclosure supports the FX-2000MNS Network main board, DSPL-XXXX Main LCD display, QMB-5000N audio card cage, QMP-5101NV Master Paging Microphone and QMT-5302NV Master Telephone Handset. In addition the enclosure provides space for additional external modules and internal lobby control modules. The BBX-FXMNS holds up to 40 AH batteries and is available with white (BBX-FXMNS) or red (BBX-FXMNSR) doors.

**BBX-FXMNS Dimensions:** 61.5"H x 20"W x 9"D



### DSPL-420 Main Display Module

The DSPL-420 Main Display Module provides the FX-MNS with a 4 line by 20 character backlit LCD display, Common Controls buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-420 occupies one display position in the FX-MNS enclosure.



### DSPL-420-16TZDS Main Display Module

The DSPL-420-16TZDS Main Display Module provides a 4 line by 20 character backlit LCD display, Common Control buttons and Four Status Queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitoring with an additional 16 LED points of annunciation. The DSPL-420-16TZDS occupies one display position in the BBX-FXMNS enclosure.



### DSPL-2440 Graphical Main Display Module

The DSPL-2440 Graphical Main Display Module provides the FX-MNS with a 24 line x 40 character backlit LCD display, common controls buttons and four status queues with selector switches and LEDs for Alarm, Supervisory, Trouble and Monitor. The DSPL-2440 occupies one display position in the FX-MNS enclosure.



### QMP-5101NV Network Master Paging Control Module

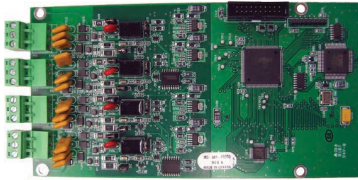
The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101NV allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101NV is vertical mount unit that mounts in the BBX-FXMNS enclosure.



### QMT-5302NV Network Master Firefighters' Telephone Control Module

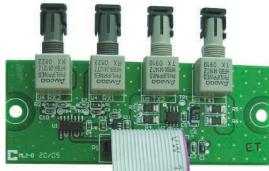
The QMT-5302NV includes the Master Telephone Handset and common control indicators. The QMT-5302NV supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302NV is a vertical mount unit that mounts in the BBX-FXMNS enclosure.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

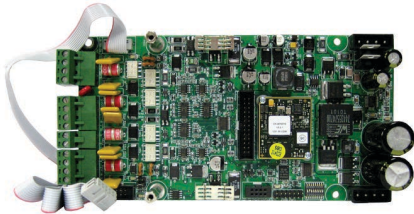
The FNC-2000 provides network capability to the system. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-MNS.



### FOM-2000-SP Fiber Optic Network Adder Module

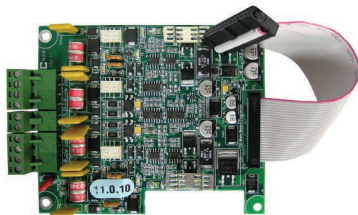
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the system. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

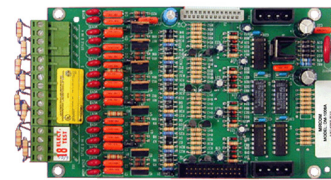
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

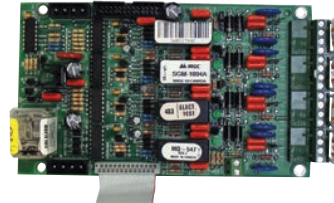
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Adder Hardware Modules



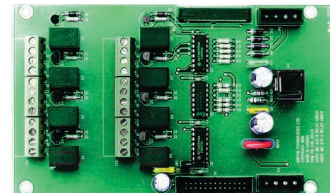
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

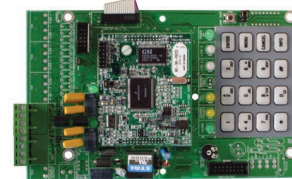
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

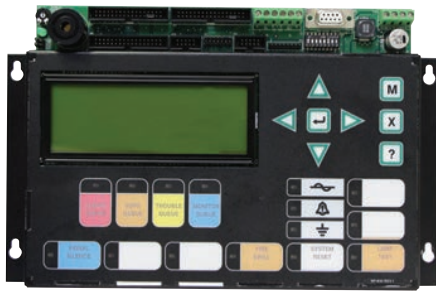
The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

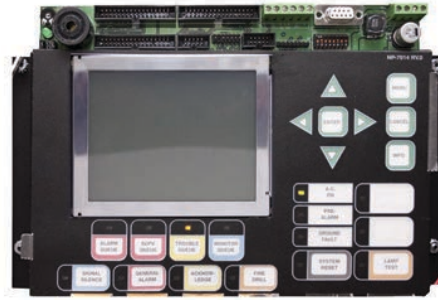
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

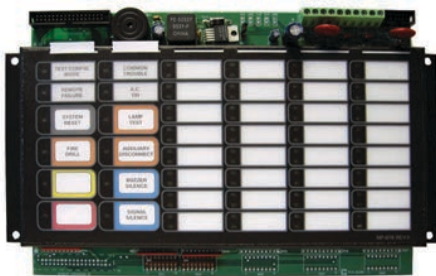
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main FleX-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in easy to read format. The RAXN-LCDG occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

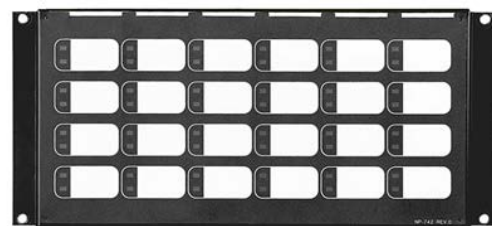
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

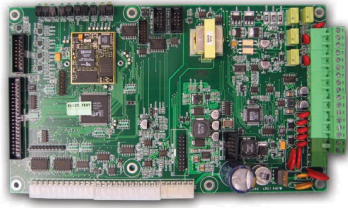
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BBX-FXMNS, BB-1000 or BB-5000 Series enclosures.

## FX-MNS Audio and Telephone Network Controller Modules



### ANC-5000 Audio Network Controller Module

The ANC-5000 provides audio microphone control on the network system. The ANC-5000 mounts on a plate in the QMB-5000N.



### TNC-5000 Telephone Network Controller Module

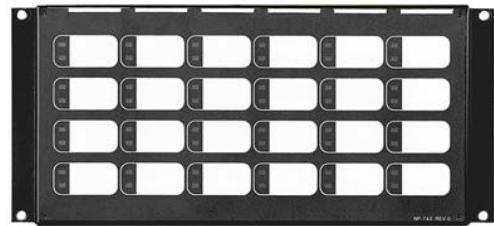
The TNC-5000 provides five hardwired telephone circuits for the local floor panel with the first circuit configurable for the master telephone handset. The TNC-5000 mounts in the QMB-5000N.

## Paging Control Modules for Remote Applications



### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N allows for all call paging or selective paging with the QAZT-5302DS Zoned Paging and Telephone Selector Modules. The QMP-5101N occupies one module space in the BB-5000 Series enclosures.



### QAZT-5302DS Zoned Paging and Telephone Selector Module

The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302N Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.

## Firefighter Telephone Control Modules



### QMT-5302N Network Master Firefighters' Telephone Control Module

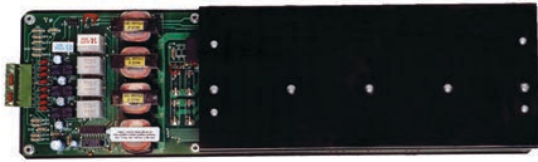
The QMT-5302N includes the Master Telephone Handset and common control indicators. The QMT-5302N supports the QAZT-5302DS Paging and Telephone selector modules. The QMT-5302N occupies one module space in the BB-5000 Series enclosures.

### Annunciator/Programmable Module Enclosures

- BB-1001: 9"H x 12.75"W x 1.2"D
- BB-1002: 18"H x 12.75"W x 1.2"D
- BB-1003: 26.4"H x 12.75"W x 1.2"D
- BB-1008: 33"H x 22.5"W x 1.25"D
- BB-1012: 45"H x 22.5"W x 1.25"D



# Audio Amplifiers



## QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in either the QMB-5000N or QMB-5000B card cage and occupy one amplifier slot.

## QAA-5230S-70/25 Dual 30 Watt Amplifier

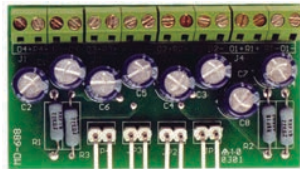
The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

## QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.

## QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in either the QMB-5000N or QMB-5000B card cage and occupies one amplifier slot.



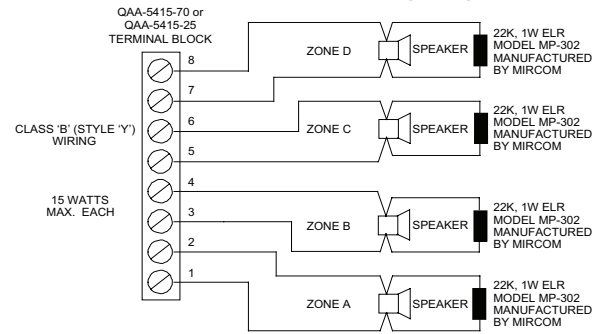
## QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

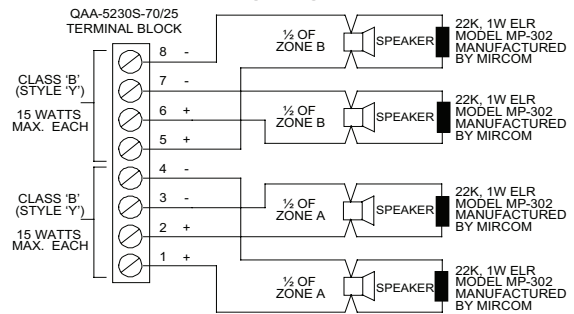
## QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLAS is required for each amplifier.

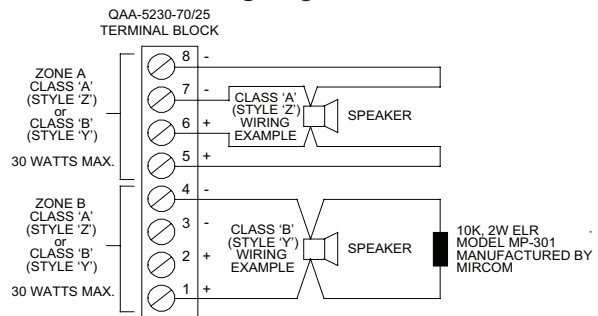
## QAA 5415-70 or QAA-5415-25 Wiring Diagram



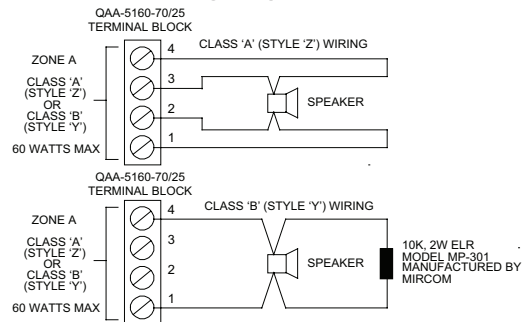
## QAA-5230S-70/25 Wiring Diagram



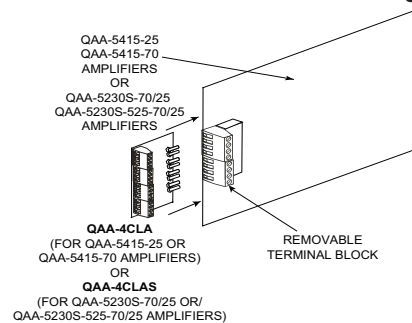
## QAA-5230-70/25 Wiring Diagram



## QAA-5160-70/25 Wiring Diagram



## QAA-4CLA and QAA-4CLAS Connection Diagram



## Network System Expansion Enclosures



### FX-2009-12NDS Large Network Main Control Unit

The FX-2009-12NDS Large Network Main Control Unit consists of a base fire alarm panel with one isolated intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7, Four Style Z/Y (Class A/B) NAC circuits, a 4 line by 20 character LCD display and a 12 Amp power supply. The FX-2009-12NDS has space to mount the FNC-2000 Fire Network Controller Module, ANC-5000 Audio Network Controller Module, TNC-5000 Telephone Network Controller Module and provision to mount up to 4 adder modules. The FX-2009-12NDS mounts in a BB-5000 Series enclosure and supports Audio Lobby Control modules, Fire Fighter's Lobby Control modules and FX-2000 Internal Annunciator / Programmable modules.



### ECX-0012 Expander Chassis

The ECX-0012 Expander Chassis for the FX-2009-12NDS supports up to 12 adder modules and has space for 2 internal annunciator modules. The ECX-0012 mounts in the BB-5000 series enclosures.



### BB-5008/BB-5014 Enclosures

The BB-5008 and BB-5014 enclosures support the FX-2009-12NDS and provide space for internal lobby control modules. The cabinets hold up to 24 AH batteries. The door and chassis hardware are ordered separately.

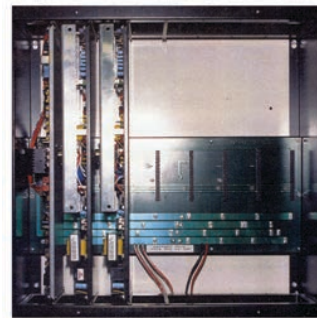
**BB-5008 Dimensions:** 36"H x 30"W x 7"D

**BB-5014 Dimensions:** 60"H x 30"W x 7"D



### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000N Audio Power Supply, one QBC-5000N Audio Battery Charger and up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports 7 QAA style audio amplifiers. The QMB-5000B requires one QPS-5000N Audio Power Supply and one QBC-5000N Audio Battery Charger and mounts in the QBB-5001 Audio Backbox.



### QPS-5000N Audio Power Supply

The QPS-5000N supports up to 360 watts and mounts in the QBB-5001 Audio backbox.

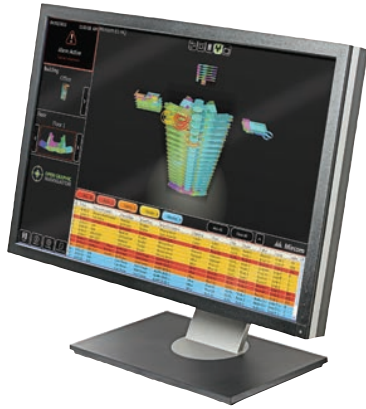


### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Audio Backbox.

**Note:** The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.

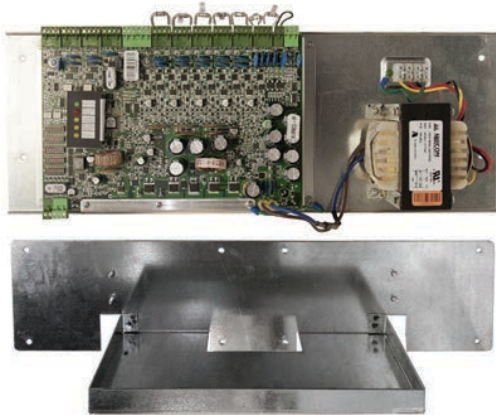
## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

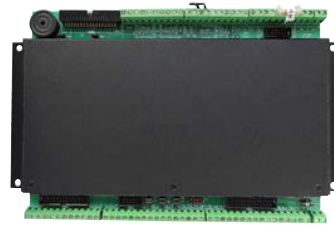
## Power Supply Expansion



### INX-10AC Internal Booster Power Supply Module

Mircom's INX-10AC is an Intelligent Booster Power Supply that extends the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. The INX-10AC has 10 amps of power and mounts inside the BB-5014 enclosure.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Mounting Brackets



### M500-BK9 Module Mounting Bracket

The M500-BK9 Module Mounting Bracket mounts inside the BB-5000 Series enclosures and provides space to mount up to nine M500 style intelligent modules.



### M500-BK2 Module Mounting Bracket

The M500-BK2 Module Mounting Bracket mounts inside the BBX-FXMNS enclosure and provides space to mount up to two M500 style intelligent modules.

## Local Operating Console Components

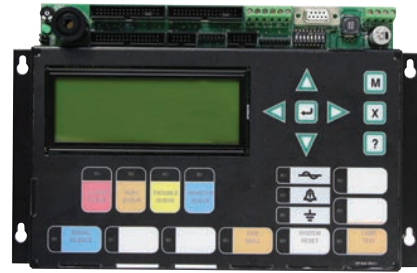


### FX-LOC Lobby Operating Console

The FX-LOC Local Operating Console provides on-site monitoring/control of voice and notification appliances for Mass Notification applications. The FX-LOC enclosure supports one RAXN-LCD remote LCD annunciator, a QMP-5101N master paging microphone and one QAZT-5302DS Paging Selector Switch. RAXN-LCD, QAZT-5302DS and QMP-5101N are ordered separately.

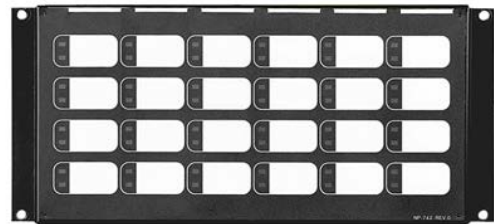
Add suffix "R" for red door.

Dimensions: 25"H x 15"W x 5.5"D



### RAXN-LCD Remote LCD Annunciator

The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides the exact functions as the FX-MNS main display. The RAXN-LCD occupies one display position in the FX-LOC enclosure.



### QAZT-5302DS Zoned Paging and Telephone Selector Module

The QAZT-5302DS Zoned Paging and Telephone Selector Module includes 24 zone selector switches and LEDs. The QAZT-5302DS is used with the QMP-5101N Network Master Paging Control module or QMT-5302N Network Master Firefighters' Telephone module. Slide-in labels are provided to label the selector zones. The QAZT-5302DS occupies one module space in the BB-1000 or BB-5000 Series enclosures.



### QMP-5101N Network Master Paging Control Module

The QMP-5101N Network Master Paging Control Module includes the paging microphone and common control indicators. The QMP-5101N interconnects between other QMP microphone modules at the FX-MNS and within the associated FX-LOC units. The QMP-5101N occupies one module space in the FX-LOC enclosure.

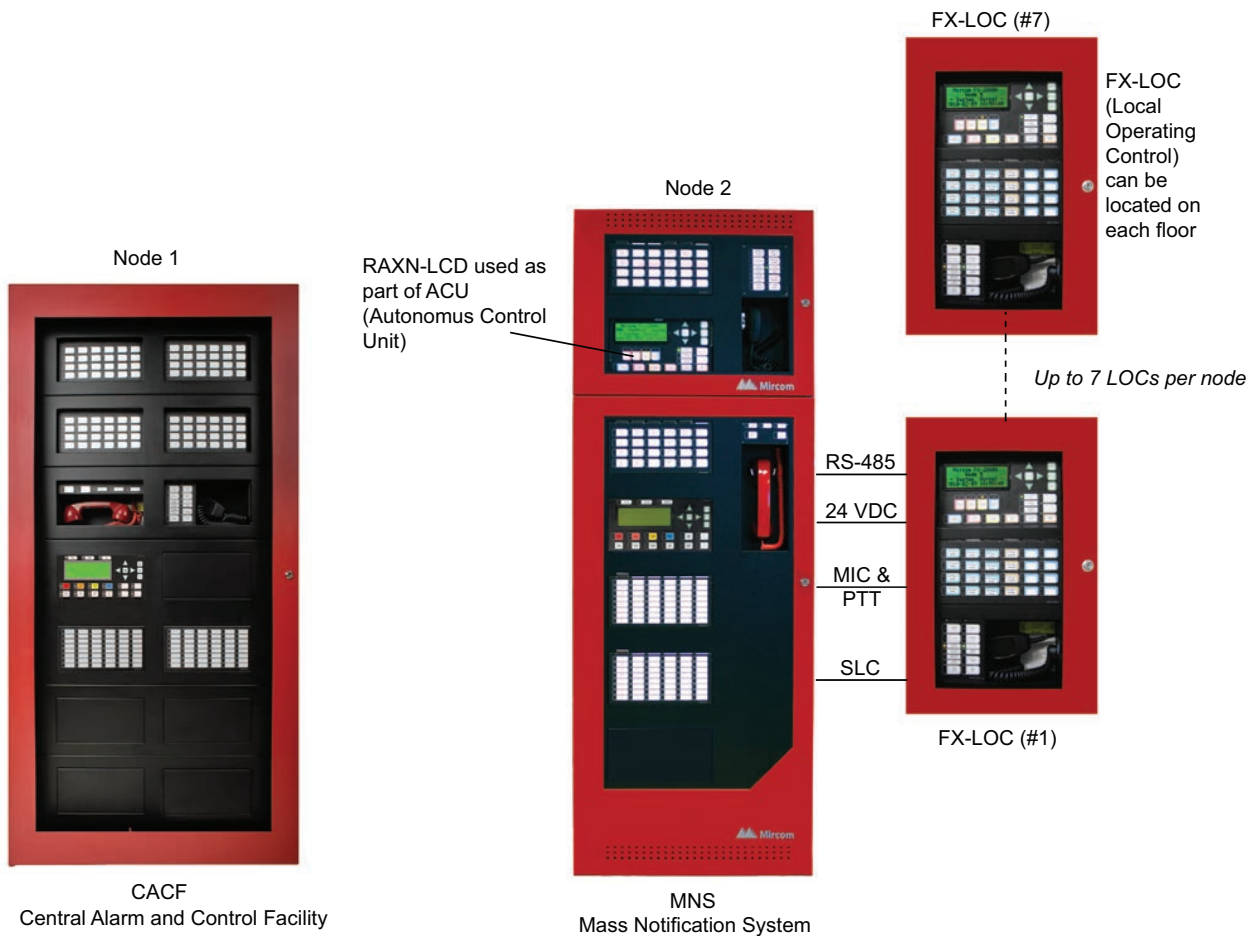
## Mircom Mass Notification System

Mircom's FleX-Net Intelligent Fire Alarm & Emergency Communications Network is comprised of an Autonomous Control Unit (FX-MNS) and the FX-LOC Local Operating Console that complies with the UL 2572 requirements for Mass Notification Systems (MNS).

The FX-LOC Local Operating Console along with the FleX-Net Network Fire Alarm provides compliance with the UL 2572 requirements for Mass Notification Systems (MNS) .

The FX-MNS Autonomous Control Unit is comprised of a BBX-FXMNS enclosure that includes a RAXN-LCD Annunciator and a Master Microphone to provide emergency audio. In addition the FX-MNS is equipped with another RAXN-LCD which annunciates the fire alarm system events, a Master Telephone for emergency use and a DSPL-420 or DSPL-2440 LCD display which annunciates all system messages (Fire Alarm and Mass Notification). A maximum of seven FX-LOC units can be connected to a FleX-Net MNS node.

### Sample In-Building Mass Notification System Configuration



## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
<b>Fire Alarm Components</b>			
FX-2000MNS	Main Network Board	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008/KI	Fan Damper Control Module	0.015	0.035
DSPL-420	Narrow Display	0.024	0.025
DSPL-420-16TZDS	Narrow Display w/ 16 additional LED Zones	0.010	0.046
DSPL-2440	Graphic Display	0.029	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
FDS-008	Selection Control Panel for MNS	0.024	112mA
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015
<b>Audio Components</b>			
ANC-5000	Audio Network Controller Module	0.255	0.265
TNC-5000	Telephone Network Controller Module	0.195	0.215
QAA-5160-70/25	1 Zone 60W Amplifier	0.055	0.350
QAA-5230-70/25	2 Zone 30W Amplifier	0.055	0.350
QAA-5230S-70/25	2 Zone 30W Amplifier (split)	0.055	0.350
QAA-5415-70	4 Zone 15W Amplifier, 70V	0.055	0.350
QAA-5415-25	4 Zone 15W Amplifier, 25V	0.055	0.350
QMP-5101N	Master Paging Module	0.004	0.012
QMP-5101NV	Vertical Master Paging Module	0.004	0.012
QMT-5302N	Master Telephone Module	0.003	0.013
QMT-5302NV	Vertical Master Telephone Module	0.003	0.013
QAZT-5302DS	Paging/Telephone Zone Module	0.010	0.015

## Electrical Specifications

Fire Alarm Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries
Audio Primary Input Power (QPS-5000N)	120 VAC, 60Hz / 240 VAC, 50Hz 12 Amps

## Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D



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page 11 of 14

## Ordering Information

Model	Description
<b>Mass Notification Control Panels</b>	
FX-2000MNS	FX-MNS Main Network Board with 12 Amp power supply and 120/240V transformer. Mounts in the BBX-FXMNS enclosure.
QMB-5000N	Integrated Audio Network Control Chassis. Mounts in the BBX-FXMNS enclosure
PS-2040	FXMNS Network Fire Alarm and Audio Power Supply (120/240V)
BBX-FXMNS	Black backbox enclosure with white doors for FX-2000MNS. Add suffix 'R' for red doors.
DSPL-420	4 x 20 Main LCD Display for FX-2000MNS
DSPL-420-16TZDS	4 x 20 Main LCD Display for FX-2000MNS w/ Additional 16 LED Zones
DSPL-2440	Graphical Main Display for FX-2000MNS
FX-LOC	Local Operating Console enclosure for FXMNS. Add suffix "R" for red door.
<b>Paging/Telephone Modules</b>	
QMP-5101NV	Master Network Paging Control Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMT-5302NV	Master Network Telephone Module for FXMNS, Vertical Mount. For use in BBX-FXMNS.
QMP-5101N	Master Network Paging Control Module
QMT-5302N	Master Network Telephone Control Module
QAZT-5302DS	Paging and Telephone Selector Panel
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
ANC-5000	Audio Network Controller Module
TNC-5000	Telephone Network Controller Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 x 20 LCD display
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs

## Ordering Information continued

Audio Amplifiers	
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25 Amplifiers
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
Graphics Software	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
Power Supply Module	
INX-10AC	Internal Booster Power Supply Module
Fire & Audio Expansion Components and Enclosures	
FX-2009-12NDS	Large Network Main Chassis. Mounts in the BB-5000 series enclosures.
ECX-0012	Expander Chassis for the FX-200912NDS. Mounts in the BB-5000 series enclosures.
BB-5008	Lobby Control Wallbox Enclosure. Supports 8 Module Footprints.
DOX-5008M	White Metal Door for BB-5008. Add suffix 'R' for red enclosure.
CCH-5008	Custom Mounting Kit for BB-5008. One required per BB-5008.
BB-5014	Lobby Control Wallbox Enclosure. Supports 14 Module Footprints.
DOX-5014M	White Metal Door for BB-5014. Add suffix 'R' for red enclosure.
CCH-5014	Custom Mounting Kit for BB-5014. One required per BB-5014.
QBB-5001	Audio Backbox
QMB-5000B	Audio Motherboard and Card Cage
QPS-5000N	Audio Power Supply (120/240V)
QBC-5000N	Audio Battery Charger
Mounting Brackets	
M500-BK-9	M500 Series Mounting Bracket. Holds up to 9 modules in a BB-5000 Series enclosure.
M500-BK-2	M500 Series Mounting Bracket. Holds up to 2 modules in a BBX-FXMNS enclosure.
Accessories	
MGC NTKW SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware



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CAT. 5945  
Rev. 3



FX-2003-12NXTDS in a BBX-1024XTR enclosure with two optional RAX-1048TZDS modules

## Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2003-12NXTDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2003-12NXTDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

## Features

### Fire Alarm Control

- 1 SLC loop expandable up to 21
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic\* and Hebrew\* language support (\*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

### Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable



S7010



S7010



7165-1477:111

NYC  
Fire Dept.  
COA# 6064

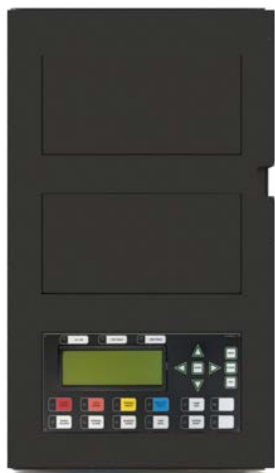


CATALOG NUMBER **5946**

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Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

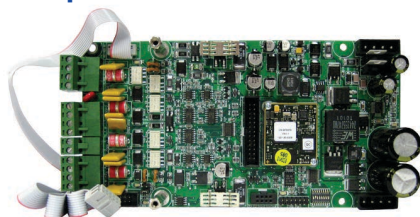
# FleX-Net™ FX-2003-12NXTDS Network Series Fire Alarm Control Units



## FX-2003-12NXTDS Network Main Control Unit

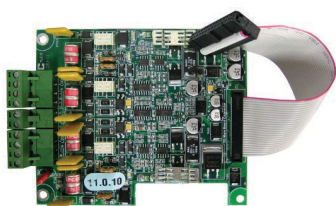
The FX-2003-12NXTDS Network Main Control Unit comes complete with one intelligent signaling line circuit, Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each, a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply which charges 17-55 AH batteries. The FX-2003-12NXTDS provides space for the FNC-2000 Network Controller Module, up to 8 adder modules and two programmable modules. The FX-2003-12NXTDS mounts in the BBX-1024XT(R) enclosure.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.

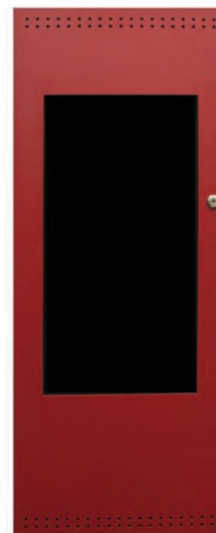


### ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.



BBX-1024XT



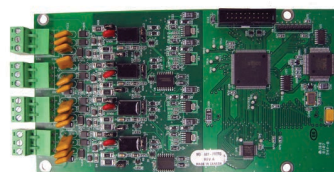
BBX-1024XTR

## BBX-1024XT(R) Enclosure

The BBX-1024XT enclosure supports one FX-2003-12NXTDS and up to 18 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (BBX-1024XT) or red exterior (BBX-1024XTR). The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

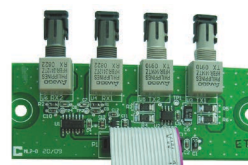
**BBX-1024XT(R) Dimensions:** 35 1/2"H x 14 1/2"W x 5 1/4"D

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2003-12NXTDS. One Fire Network Controller Module is required per network node. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2003-12NXTDS.



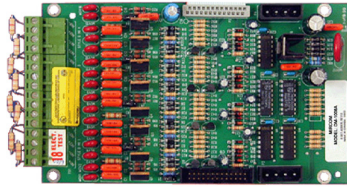
### FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FleX-Net units. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Electrical Specifications

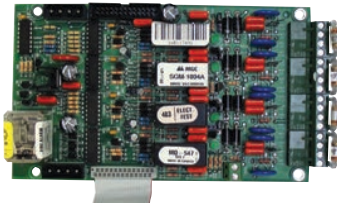
Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

## Adder Hardware Modules



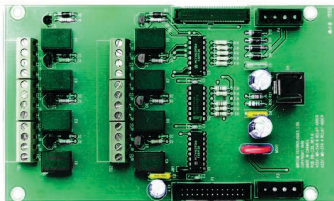
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12NXTDS.



### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12NXTDS.



### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NXTDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12NXTDS.

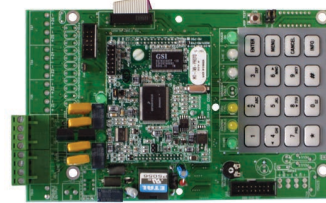
## Graphics Software



### Open Graphic Navigator (OpenGN)

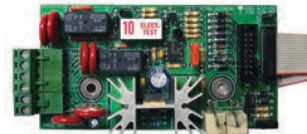
Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NXTDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12NXTDS.



### PR-300 Polarity Reversal/City Tie Module

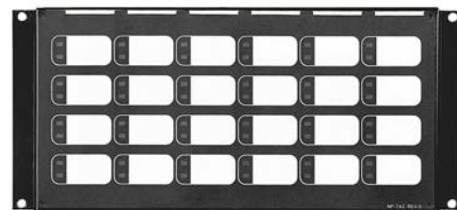
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2003-12NXTDS.

## Programmable Modules



### FDX-008 Fan Damper Control Module

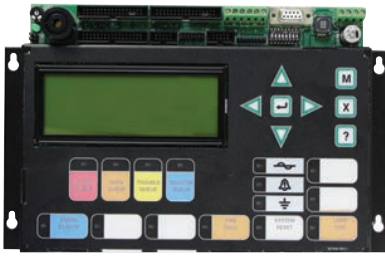
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main unit or the RAXN-LCD and occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.



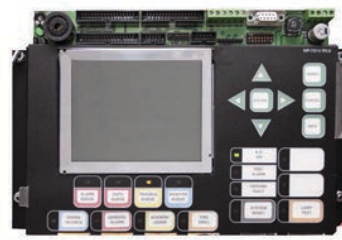
### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main unit or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.

## Remote LCD Annunciators

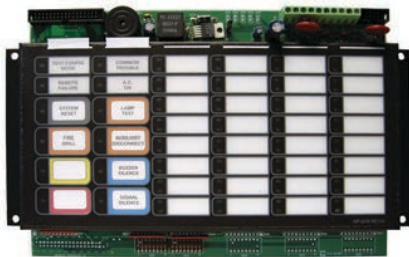


**RAXN-LCD Remote LCD Annunciator**  
 The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit LCD display that provides the same functions as the main display on the fire alarm control unit. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.

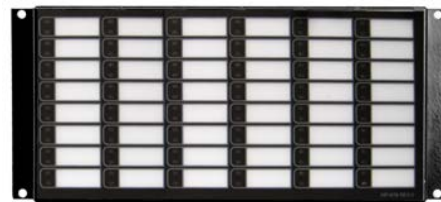


**RAXN-LCDG Remote Graphic LCD Annunciator**  
 The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators

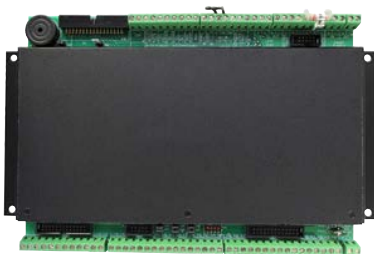


**RAM-1032TZDS Main Remote LED Annunciator**  
 The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.

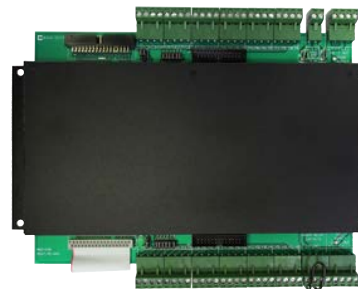


**RAX-1048TZDS Programmable LED Annunciator Module**  
 The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main unit or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



**MGD-32 Master Graphic Driver Module**  
 The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.

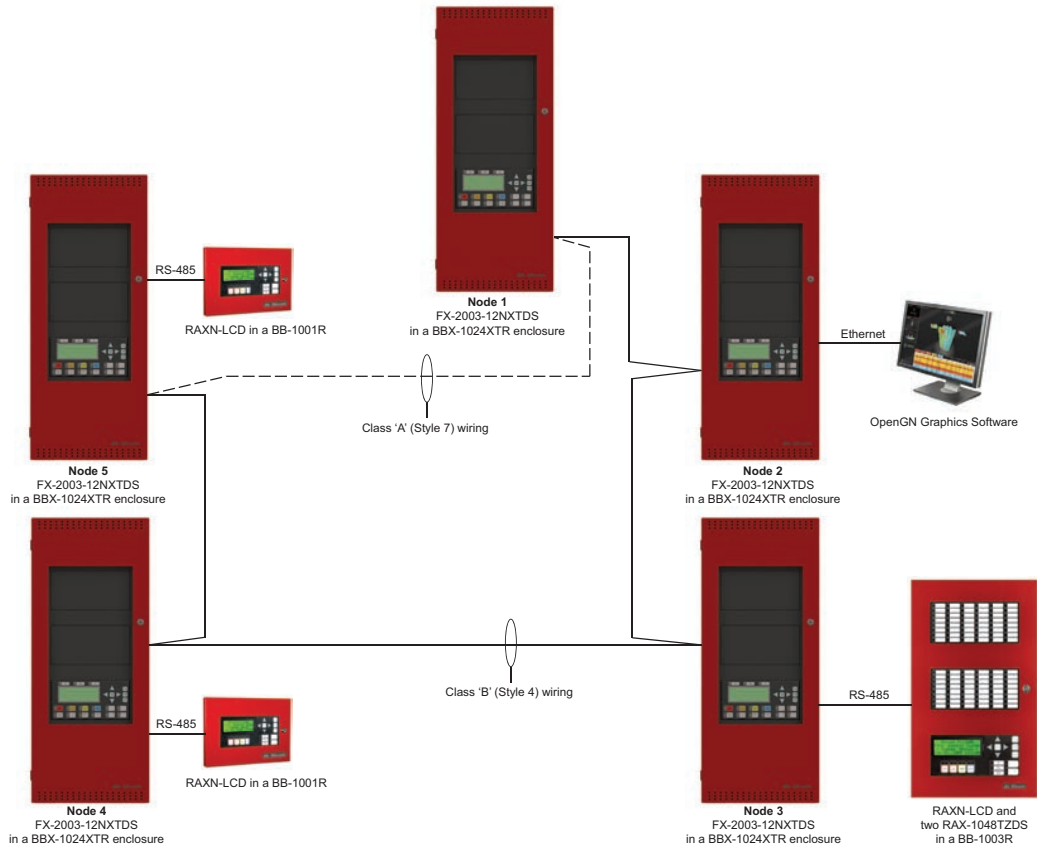


**AGD-048 Adder Graphic Driver Module**  
 The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

# Typical FleX-Net™ FX-2003-12NXTDS Networked System Configuration



## Current Consumption

Model Number	Description	Standby	Alarm
FX-2003-12NXTDS	Network Compact Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Ordering Information

Model	Description
<b>Network Fire Alarm Control Unit</b>	
FX-2003-12NXTDS	Network Compact Main Control Unit with 12 Amp power supply. Mounts in the BBX-1024XT(R) enclosure.
BBX-1024XT	Enclosure for FX-2003-12NXTDS c/w removable white door, black backbox and CAT-30 lock and key.
BBX-1024XTR	Enclosure for FX-2003-12NXTDS c/w removable red door, black backbox and CAT-30 lock and key.
FA-XT-TRB	Black Semi-Flush Trim Ring for BBX-1024XT(R) enclosure.
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Enclosures for Remote Annunciators / Programmable Modules</b>	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
<b>Graphic Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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Rev. 2





## Description

The FR-320NETK is a combination panel kit that adds releasing capability to the FleX-Net system without the need for a separate external cabinet. Based upon Mircom's already UL listed FR-320 Releasing panel and FleX-Net systems, this system permits pre-release, abort, manual release, and reset control. The FR-320NETK includes all necessary items pre-connected to integrate the FR-320 releasing panel to the Mircom's FleX-Net system. The FleX-Net and FR-320 panels have independent power arrangements each with its own AC supply and battery setup. The connection between the FR-320 and the FleX-Net panels is by isolated relays. The FR-320 uses the FR-320 pre-programmed mode #2 to enable activation features via the FleX-Net initiating device circuits.

**Note:** In this particular configuration, the Mass Notification System (MNS) capability is not available for use at this panel node.

**Note:** The releasing devices used must be wired locally to this panel.

## Features

- Adds releasing capability to FleX-Net™ system
- Built-in Addressable loop which supports Classic Loop Interface Protocol (CLIP) and Advanced Protocol (AP) addressable devices
- Each SLC is capable of supporting 99 CLIP/159 AP Analog Sensors and 99 CLIP/159 AP Addressable Modules which can be wired in Style 6 or 7 Class A) or Style 4 (Class B • Tamper resistant enclosures)
- Base system is equipped with one Intelligent Signaling Line Circuit (SLC/DCL). Expandable to 21 SLCs
- Password protected features for enhanced access control
- Local and remote placement of controls and indicators
- Visible notification and strobes support
- Large LCD displays
- Fire Alarm Control Panel Interface (FACI)
- Building Management System Interface (BMSI)
- Fire Alarm Control:
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- Built-in Ethernet port
- Remote diagnostics via a built-in web server

### Network Features

- Up to 63 nodes
- Fully integrated digital network audio and control over a single pair of copper wire or fibre optic cable
- Supports over 5,000 points per node
- Supports over 250,000 points on a single network
- Peer-to-peer network communications

### Releasing Features

- Each initiating circuit is pre-configured as: Alarm, Supervisory (Latching or nonlatching), Water-Flow, Manual Release Switch, Abort Switch, or Manual Release/Abort combination, depending upon the selected pre-programmed configuration. There are two LEDs per circuit, one for Trouble (amber), and one dual color (amber/red) LED for Supervisory (amber) and Alarm (red)
- Basic unit has 4 power limited class B (style Y) output circuits. Output circuits 1 & 2 are indicating circuits while output circuits 3 & 4 are releasing circuits (circuit 4 can work as an indicating circuit in some situations.) Each indicating circuit process type is preconfigured and can be silenceable
- The signal rates depend on the selected pre-programmed configuration.
- A pushbutton associated with each initiating, indicating, and releasing circuit can individually bypass the circuit
- Configurable Signal Silence Inhibit and Auto Signal Silence Timers
- Subsequent Alarm, Supervisory, and Trouble operation
- Relay Contacts for Common Alarm, Common Supervisory, Common Trouble, and Auxiliary Alarm Relay (disconnectable)
- RS-485 Interface for RA-1000 Series Remote Multiplex Annunciators and Smart relay Module
- Optional Modules for additional Relay Circuits, City Tie and Polarity Reversal Signaling.
- Extensive transient protection
- Easy configuration of the panel using LCD service tool (CFG-300)
- Releasing circuit protection from false alarm by disconnecting the battery if the voltage falls below 19V



NYC  
Fire Dept.

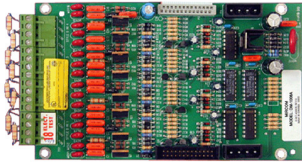
S7010

**CATALOG NUMBER 5980**

NOT TO BE USED FOR INSTALLATION PURPOSES.

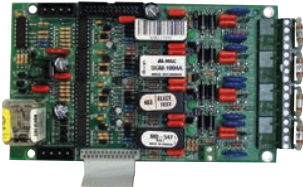
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Adder Hardware Modules



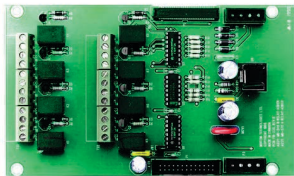
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



### SGM-1004A Four Notification Appliance Circuit Module

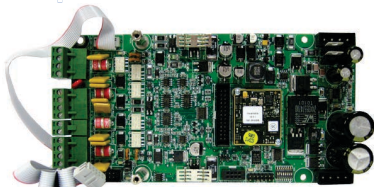
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps and has individual signal silence inputs (jumper selectable). The SGM-1004A occupies one module slot.



### RM-1008A Eight Relay Circuit Module

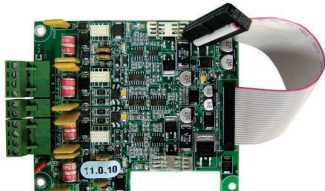
The RM-1008A provides the system with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.

## Adder Loop Controller Modules



### ALCN-792M Quad Loop Controller Module

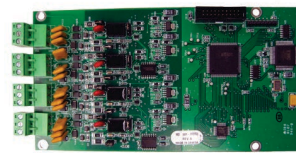
The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.



### ALCN-792D Daughter board for Quad Loop Controller Module

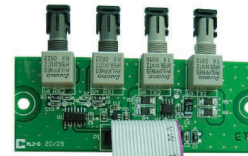
The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

## Fire Network Controller Modules



### FNC-2000 Fire Network Controller Module

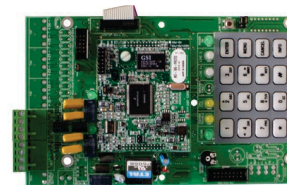
The FNC-2000 provides network capability to the system. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-MNS.



### FOM-2000-SP Fiber Optic Network Adder Module

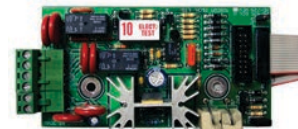
The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the system. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.

## Adder Auxiliary Modules



### UDACT-300A Digital Alarm Communicator Module

The UDACT-300A Digital Communicator allows the system to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot.

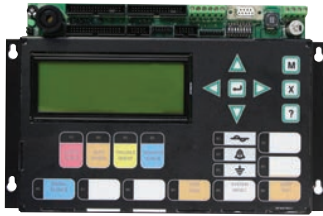
## Graphics Software



### Open Graphic Navigator (OpenGN)

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

## Remote LCD Annunciators



### RAXN-LCD Remote LCD Annunciator

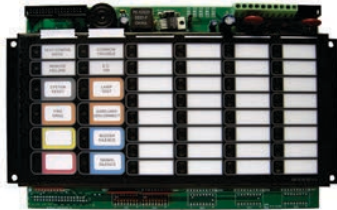
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit alphanumeric LCD display that provides an exact replica of the main Flex-Net fire alarm control panel display. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### RAXN-LCDG Remote Graphic LCD Annunciator

The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characters per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Remote LED Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

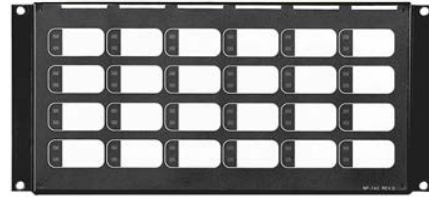
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Programmable Modules



### FDX-008 Fan Damper Control Module

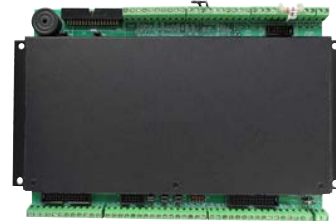
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the BB-1000 or BB-5000 Series enclosures.



### IPS-2424DS Programmable Input Switches Module

The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the BB-1000 or BB-5000 Series enclosures.

## Graphic Annunciator Driver Modules



### MGD-32 Master Graphic Driver Module

The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.



### AGD-048 Adder Graphic Driver Module

The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

## Current Consumption

Model Number	Description	Standby (Amps)	Alarm (Amps)
FX-2000MNS	Main Network Board	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008/KI	Fan Damper Control Module	0.015	0.035
RM-306	FA-300 Series Relay Adder Module (6)	0.0	0.08
DSPL-420	Narrow Display	0.024	0.025
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1016TZDS	Main Remote LED Annunciator	0.050	0.150
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

## Electrical Specifications

### FileX-Net

AC line voltage	120 VAC 60Hz / 240 VAC 50Hz, 4 Amps / 2 Amps (primary)
Power supply rating	12 Amps max. (Secondary)
For indicating circuits	24VDC Unfiltered 10 Amps. Max.
Battery	24VDC Gel Cell/Sealed lead acid
Battery Charging Capability	17AH-65AH

### FR-320NETK

AC line voltage	120 VAC 60Hz 1.2A / 240 VAC 50Hz 0.6A
Power supply rating	6.5AAC max. (Secondary)
Max power allowed	4A 1.7A (aux power in filtered if used) 0.5A (aux power filtered if used) 0.3A (resettable auxiliary power if used) 1.7A (for releasing circuit)
Battery	24VDC Gel Cell/Sealed lead acid
Battery Charging Capability	10AH-26AH

If no auxiliaries are used the max power is 4A for the indicating and the releasing circuit

## Ordering Information

Model	Description
<b>Network Controller Modules</b>	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
<b>Adder Loop Controller Modules</b>	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
<b>Adder Hardwire Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Adder Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Remote Annunciators</b>	
RAXN-LCD	Remote Network LCD Annunciator c/w 4 x 20 LCD display
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1016TZDS	main Remote LED Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Coloured LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
<b>Programmable Modules</b>	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
<b>Graphic Annunciator Driver Modules</b>	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
<b>Graphics Software</b>	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
<b>Accessories</b>	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware

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CAT. 5980  
 Rev. 2





QX-mini

### Description

The QX-mini is an emergency and fire alarm audio system designed to provide notification for small to medium applications. The QX-mini supplies 30W for audio output and 5A for Notification Appliance Circuits (NAC). The optional 30 Watt Amplifier Module increases audio output to 60W.

Notifications can be sent using stored digital message recordings, the master microphone, or remote microphones. The QX-mini comes with standard notifications and can store up to 14 messages for a total of 12 minutes of digital message recordings. Up to six remote microphones and/or LOCs can be connected to the QX-mini.

The QX-mini operates either as a stand-alone audio system or as part of a fire alarm system. Conventional fire alarm systems control the QX-mini with relays. Mircom compatible Fire Alarm Control Panels can control the QX-mini using Signalling Line Circuit (SLC).

Optional Booster Panels provide support for a distributed system. These Booster Panels have the same output as the QX-mini but do not have microphones or user interface panels. Up to five Booster Panels can be connected to a QX-mini.

### Features

- Up to 60W audio output (2 X 30W amplifiers)
- 2 X 2.5A regulated 24V output for horns and strobes (NAC). System expandable to 12 X 2.5A
- Class A or Class B Speaker and NAC wiring
- Field selectable 25V or 70.7V audio output
- Comes with standard digital messages for fire, emergency, evacuation, weather, and all clear
- Select from up to 14 digital messages at the panel
- Custom message upload using the software configurator
- Stores up to 12 minutes of audio messages
- Master microphone input with push-to-talk (PTT)
- Supports up to 6 remote microphones and/or LOCs
- Use as a separate audio system or as part of a fire alarm system
- Two inputs for activation by conventional fire alarm systems using relays
- Two strobe inputs for synchronization and activation
- Signalling Line Circuit (SLC) input for activation and communication with Mircom compatible Fire Alarm Control Panels
- Battery backup (up to 75AH charge capacity)
- Dedicated Trouble, AC Fail, and Alarm relay outputs
- Audio system supports up to 6 panels in total (one Master Panel with 5 Booster Panels)
- 12 expandable up to 36 Programmable Switches
- Auxiliary 24V supply (up to 0.2A)
- ULC, UL, CSFM

### Accessories

- Amplifier Module
- 24 Zone Selector

### Expansion Modules

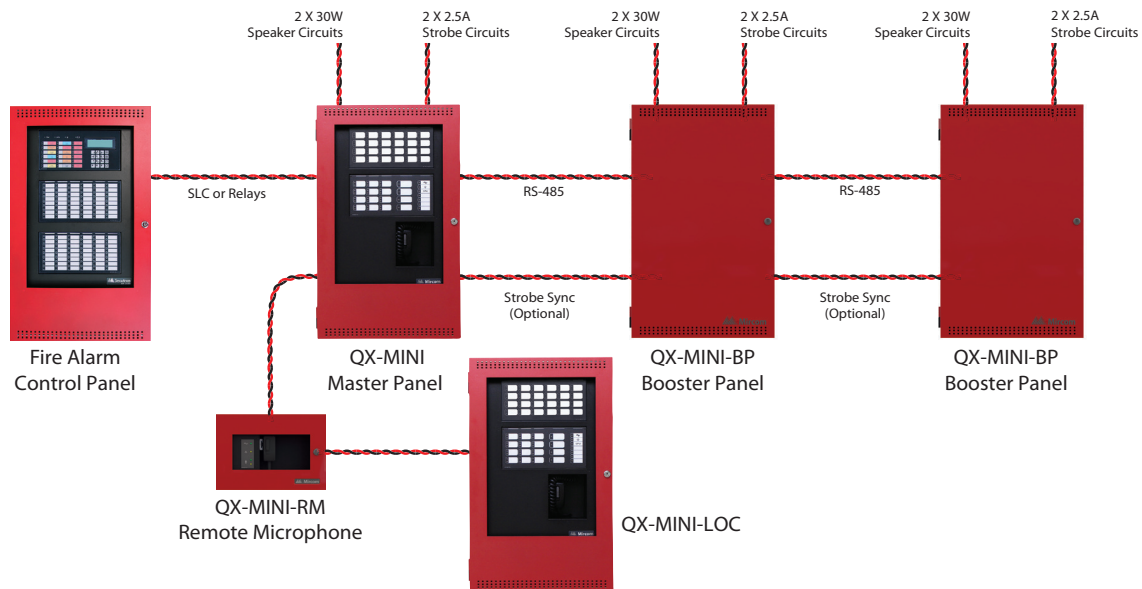
- Booster Panel
- Remote Microphone
- LOC



**CATALOG NUMBER 5810**

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Example audio system with a FACP, a QX-MINI Master Panel, two Booster Panels, and two Remote Microphones.

## Specifications

Dimensions	
26"H x 14.5"W x 4.2"D	
AC Line Voltage	
120V @ 60Hz / 240V @ 50Hz (3.1 Amps / 1.57 Amp)	
Output	
30W audio (60W max.) and 2 X 2.5A NAC (5A max.)	
Battery	
24VDC, Gel-Cell/Sealed Lead-Acid	
Charging Capability	
Up to 75AH charge capacity	
Current Consumption	
Standby: 215mA	Alarm: 9.5A

Indicators	
AC Power	Alarm Active
Ground Fault	Pretone Active
CPU Fault	Page Ready
Message Active	
Controls	
Zone Select (4)	Selection Reset
Message Select (8)	Lamp Test
All Call	Trouble Silence
Compatibility	
UL/ULC listed Fire Alarm Control Panels	

## Ordering Information

Model	Description
QX-MINI	Master Panel: Microphone, Main Display, Main Board, 1 x 30W Amplifier, Deadfront, Red Door, Backbox, Back Plate, Transformer
QX-MINI-BP	Booster Panel: Outer Red Door, Main Board, 1 x 30W Amplifier, Backbox, Back Plate, Transformer
QX-MINI-RM	Remote Microphone: Backbox, Red Door, Microphone, RMIC PCB
QX-MINI-LOC	Local Operating Console: Main Display, Microphone, RMIC PCB, Deadfront, Backbox, Red Door
QX-MINI-W	Master Panel: Microphone, Main Display, Main Board, 1 x 30W Amplifier, Deadfront, White Door, Backbox, Back Plate, Transformer
QX-MINI-BP-W	Booster Panel: Outer White Door, Main Board, 1 x 30W Amplifier, Backbox, Back Plate, Transformer
QX-MINI-RM-W	Remote Microphone: Backbox, White Door, Microphone, RMIC PCB
QX-MINI-LOC-W	Local Operating Console: Main Display, Microphone, RMIC PCB, Deadfront, Backbox, White Door
QAD-30	30 Watt Amplifier Module
QAZT-5302DS	24 Zone Controller

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CAT. 5810  
Rev 1





### Features

- Single, Dual or Three Channel Operation
- Zone or All-Call selectability (Alert/Evacuation)
- Control of fire management operations
- Zoned fire fighters' telephones capability
- Provides single or multiple command centre(s) for use in emergencies
- Multiple Building Interconnection (Campus Style)
- Microprocessor-based operations with hardware and software Watchdog Timer to ensure system operation
- Operates from 24 VDC backup batteries in the event of a power failure
- Removable terminal blocks for ease of installation and maintenance
- Indication of all required fault conditions
- Speaker circuits are integrated with amplifier circuits
- Multiple amplifier sizes (up to 7 per enclosure for a maximum of 360 watts per enclosure)
- Maintains full supervision during battery operation
- 25 or 70 Volt System
- Digitized Voice Capability

### Description

Mircom's QX-5000 Series is a multi-channel zoned audio system that allows the operator to selectively page from a central location to any of the system's audible devices. In addition, the QX-5000 allows for zoned fire fighters' telephone communication with remote telephone handsets that are permanently installed throughout a building. The QX-5000 Series consists of a card cage/ audio motherboard, an audio/fire alarm interface board, power supply and battery charger which are designed to work with Mircom's FA-1000 or FX-2000 Series Fire Alarm Control Panels. In addition it can be integrated with other compatible fire alarm control panels. All hardware and software is fully supervised for correct and reliable operation. The system has a simple interface to the fire alarm control panel, and contains its own power supply and battery backup system.

The QX-5000 Series Zoned Audio system requires one QIF-5000B Interface card which provides inputs for the fire alarm panel, the paging microphone and the zone paging module. In addition it provides an audio trouble output. Only one interface card is required per system, and it mounts in the first slot of the QMB-5000B Audio Mother Board and Card Cage.

One QIF-5000B will support seven QMB-5000B card cages. Each card cage has space for one interface card and seven QAA style amplifiers, for a maximum of 360 watts per cabinet.

Each QMB-5000B card cage requires one QPS-5000 Power Supply and QBC-5000N Battery Charger which all mount into a QBB-5001 Audio Cabinet.

The QX-5000 Series Audio System interconnects with the Mircom Fire Alarm Control Panels through a supervised connection. Selective paging is provided through the QMP-5101B/QMP-5100B Master Paging Control Module which provides the microphone and common control functions. Zone selection is provided through the QZP-5101 Zoned Paging Selector Module. A total of six QZP-5101 modules can be connected to the QMP-5101B/QMP-5100B Master Paging Control module. In addition the QX-5000 Series allows for zoned fire fighters' telephones. The QMT-5302/QMT-5300A Master Fire Fighters' Telephone Control Module provides the master telephone and common control functions. The QZT-5302 Zoned Fire Fighters' Telephone Selector Panel allows for 12 zone selector switches and LEDs. A total of six QZT-5302 can be connected to the QMT-5300A/QMT-5302 Master Fire Fighters' Telephone Control Module.



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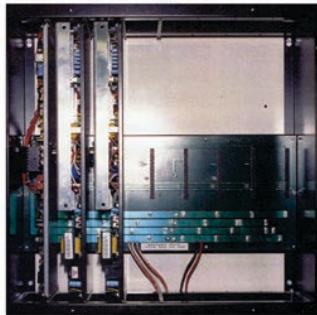
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## QX-5000 Series Audio Cabinet Components



### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000 Audio Power Supply and one QBC-5000N Audio Battery Charger. The QBB-5001 will hold up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports one QIF-5000B Audio Interface Board and 7 QAA style audio amplifiers. In addition, the card cage allows for a backup amplifier (if required) to be mounted in the last slot. Typically, the QAA-5160-70/25 is used as the backup amplifier. The QMB-5000B requires one QPS-5000 Audio Power Supply and one QBC Audio Battery Charger. The QMB-5000B mounts in the QBB-5001 Backbox enclosure.



### QRM-1001 Bell Cut Relay

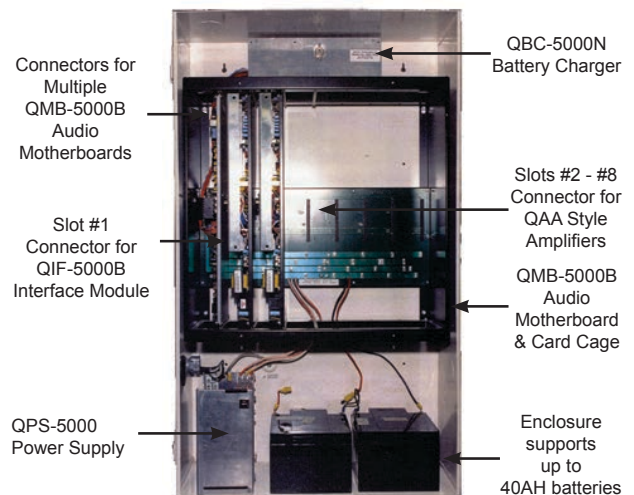
The QRM-1001 provides a Form 'C' output contact for remote signal silence on page activation.

### MD-525 Interconnection Cable

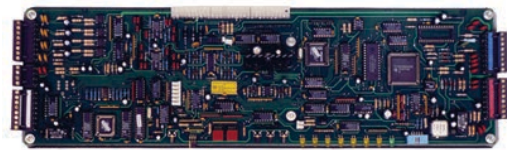
The MD-525 is used to connect additional Audio Motherboard and Card Cages up to 3 Audio Cabinets.

### MD-635 Interconnection Cable

The MD-635 is used to connect additional Audio Motherboard and Card Cages over 3 Audio Cabinets.

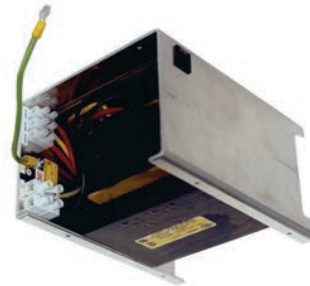


**Note:** A knockout is provided on the bottom right of the QBB-5001 backbox to allow for conduit to be run up the right hand side of the backbox.



### QIF-5000B Audio/Fire Alarm Interface Card

The QIF-5000B includes a tone generator with fire alarm input and audio trouble output. In addition, it has a paging MIC input and zone paging multiplex input. The interface module comes equipped with the following tones: Slow Whoop Pulse 20 SPM & 120 SPM and Bell Tone Generator 20 SPM & 120 SPM. Special tones are available upon request. The QIF-5000B will support seven QMB-5000B Audio Motherboard and Card Cages per system and mounts in the first slot of the QMB-5000B.



### QPS-5000 Audio Power Supply

The QPS-5000 supports up to 420 watts and mounts in the QBB-5001 Backbox enclosure.



### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Backbox enclosure.

**Note:** The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.

## QX-5000 Series Audio Amplifiers



### QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in the QMB-5000B Motherboard and Card Cage and occupy one amplifier slot.

### QAA-5230S-70/25 Dual 30 Watt Amplifier

The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5230S-525-70/25 Dual 30 Watt Amplifier

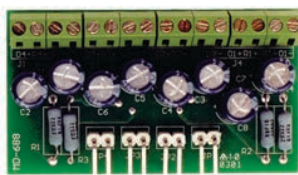
The QAA-5230S-525-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 5 watt supervised speaker outputs and two 25 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-525-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.



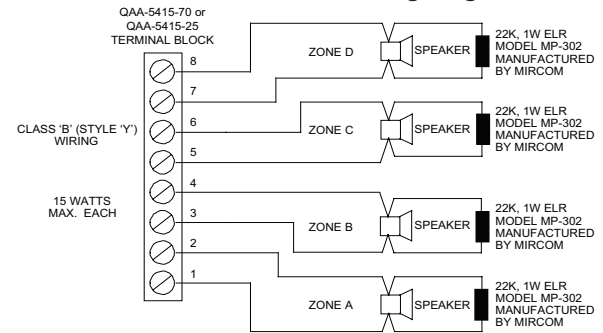
### QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

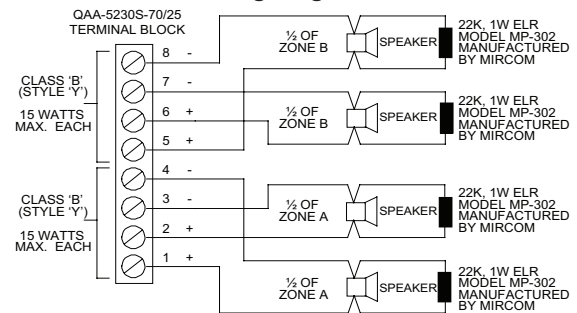
### QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

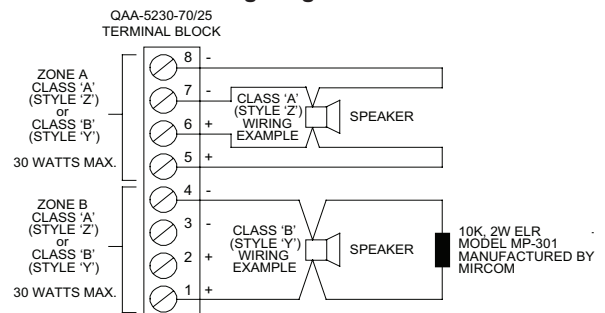
### QAA 5415-70 or QAA-5415-25 Wiring Diagram



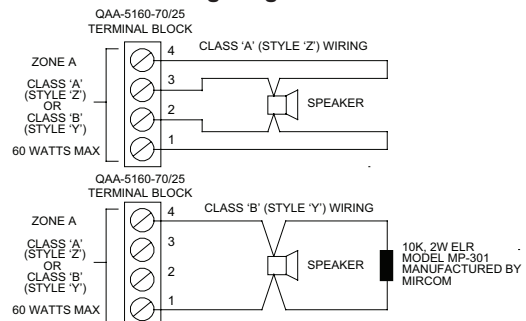
### QAA-5230S-70/25 Wiring Diagram



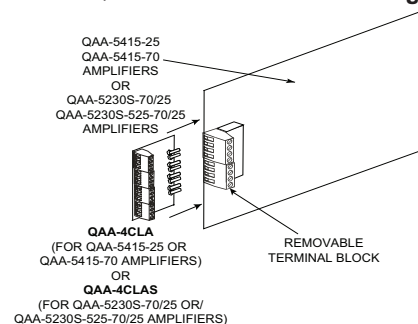
### QAA-5230-70/25 Wiring Diagram



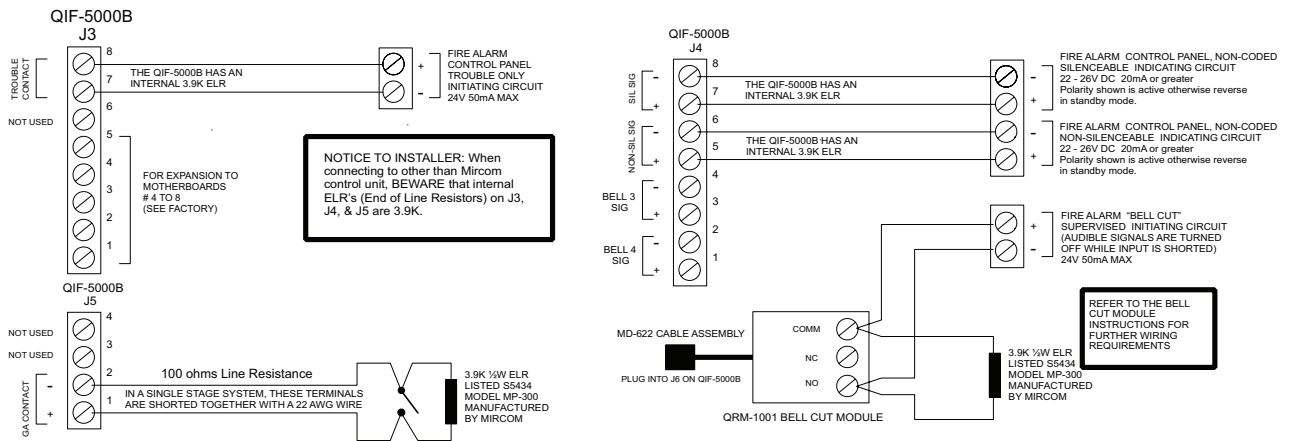
### QAA-5160-70/25 Wiring Diagram



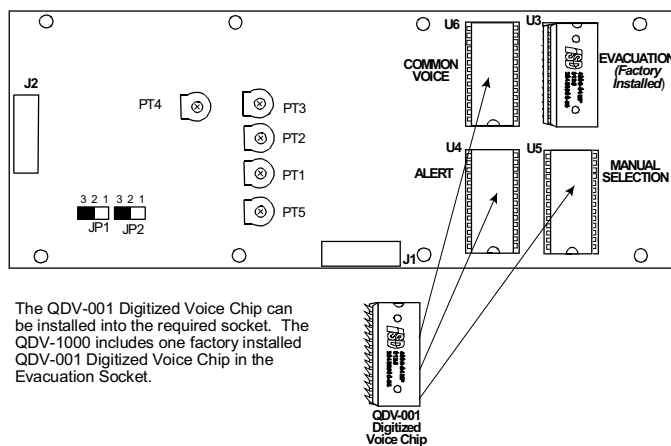
### QAA-4CLA and QAA-4CLAS Connection Diagram



## QIF-5000B Wiring Diagram

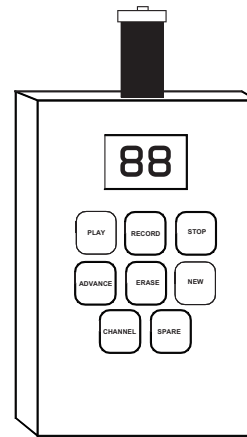


## QX-5000 Digitized Voice Components



### QDV-1000 Digitized Voice Module

The QDV-1000 Digitized Voice Module supports four simultaneous channels of digitized voice; alert, evacuation, manual selection and common voice channel. The voice channels can be voice only, voice and tone and tone only. One QDV-0001 Digitized Voice Chip is required per channel. The QDV-0001 Digitized Voice Chip is field programmable using the QDVP-100 Digitized Voice Programming Tool. In the case that the QDV-1000 fails, the QIF-5000B Tone Generator acts as a backup. The QDV-1000 includes one factory installed QDV-0001 Digitized Voice Chip in the Evacuation socket with provisions to add three adder QDV-0001 chips. The QDV-1000 mounts in the QBB-5001 Audio Backbox on top of the QBC-5000N.



### QDVP-100 Digitized Voice Programming Tool

The QDVP-100 Digitized Voice Programming Tool allows for field programming of the QDV-1000 Digitized Voice Module.

### QDV-0001 Digitized Voice Chip

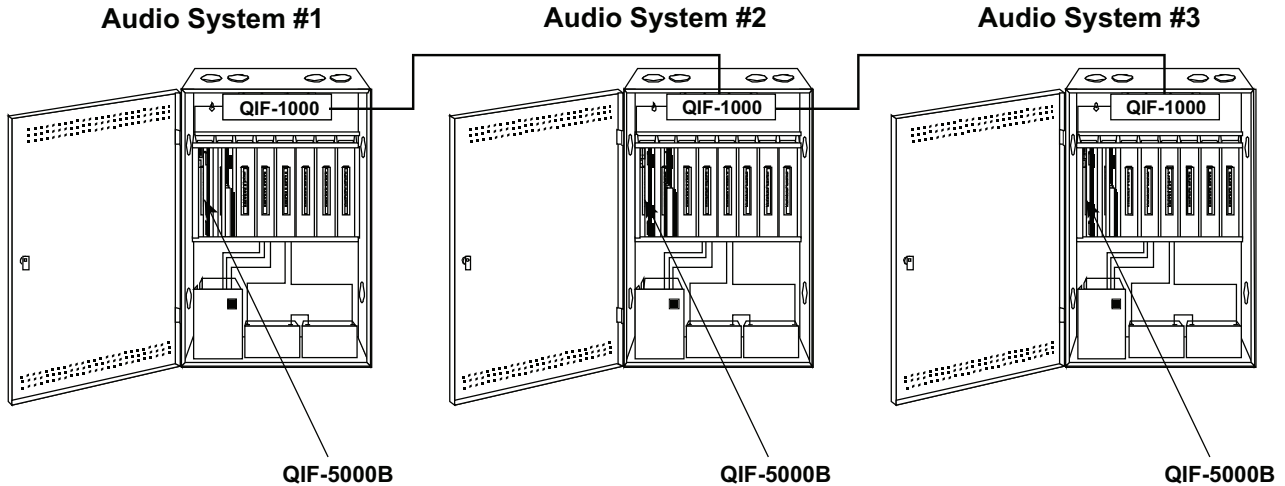
The QDV-0001 Digitized Voice Chip stores the channel specific voice or voice/tone message. One QDV-0001 is required per voice channel being used. The chip is field programmable via the QDVP-100 Digitized Voice Programming Tool. The QDV-0001 allows for the storage of approximately 4 minutes of audio messaging. Once programmed, the QDV-0001 chips plug into the appropriate sockets on the QDV-1000 Digitized Voice Module.

## QX-5000 Series Interconnection Modules

### QIF-1000 Audio Interconnection Module

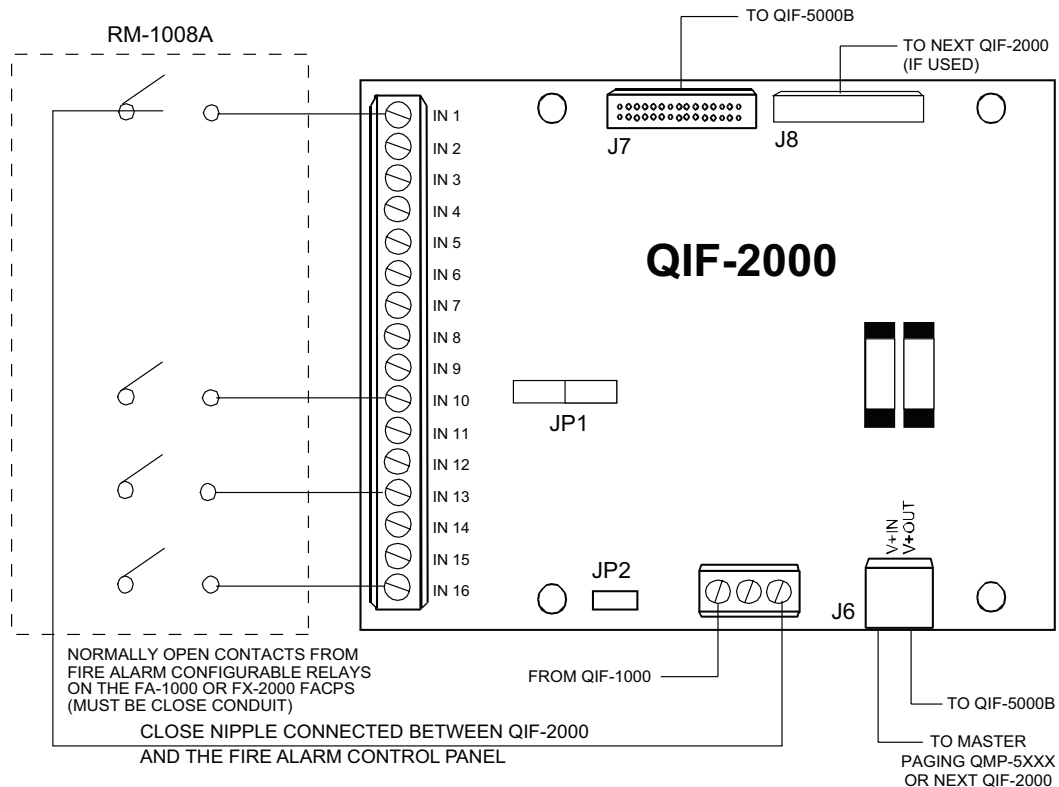
The QIF-1000 Audio Interconnection Module is used to interconnect multiple paging systems together. The QIF-1000 allows for QIF-5000B to QIF-5000B interconnection and is used for campus style "All-Call" Paging. The QIF-1000 allows each interconnected audio system to have zoned paging for the local building and all-call capabilities for each outlying building. The QIF-1000 mounts on top of the QBC-5000N.

### QIF-1000 - QIF to QIF Interconnection Wiring Diagram



### QIF-2000 Programmable Amplifier Interface Module

The QIF-2000 Programmable Amplifier Interface Module provides sixteen programmable audio inputs. Each programmable input is a dry normally open contact. The contact inputs are non-supervised and can be configured to any number of amplifiers. The amplifiers can be configured to the alert channel, the evacuation channel or to remain silent. The QIF-2000 mounts on top of the QBC-5000N. A maximum of eight QIF-2000 modules can be used per system for a total system capacity of 128 programmable inputs.



## QX-5000 Series Paging Control Modules



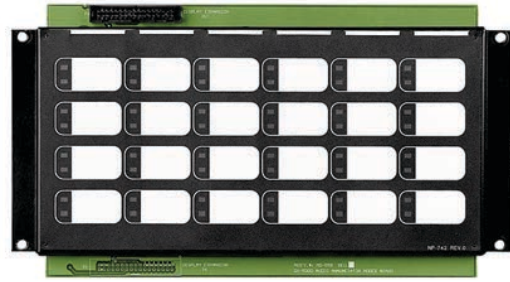
### QMP-5101B Master Paging Control Module

The QMP-5101B Master Paging Control Module includes the Paging microphone and common control indicators for A.C.-On, Common Trouble, MIC Trouble, MIC Level/Page Enable, Digitized Voice Active, Amplifier Trouble, Circuit Trouble, Remote Failure, Page Inhibit, All-Call, All-Call Minus and Warden Page. The QMP-5101B has control buttons for Audio Selector Reset, Lamp Test, All-Call, All-Call Minus, Microphone PTT and Warden Page. The QMP-5101B allows for all call paging or selective paging with the QZP-5101 Zoned Paging Selector Modules. The QMP-5101B connects to the QIF-5000B Audio Interface Card via the following connections: an RS-485 connection (twisted shielded pair), 24 VDC power, a twisted shielded pair for the microphone interface and a pair of wires for Push To Talk (PTT). The QMP-5101B features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5101B occupies one module space in the BB-5000 Series



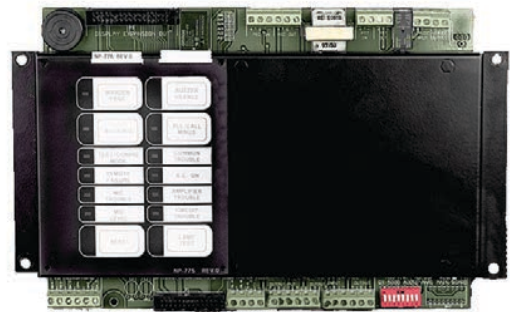
### QMP-5100B Master Paging Control Module

The QMP-5100B Master Paging Control Module is similar to the QMP-5101B Paging Module and is designed for remote mounting in the BB-1000 Series enclosures. The QMP-5100B features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5100B occupies one module space in the BB-1000 Series enclosures.



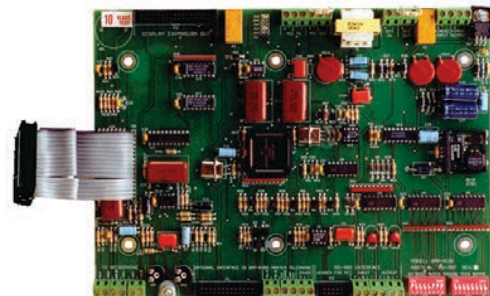
### QZP-5101 Zoned Paging Selector Panel

The QZP-5101 Zoned Paging Selector Panel includes 24 zone selector switches, 24 zone selector LEDs (Green/Red) and 24 Zone trouble LEDs (Amber). The QZP-5101 is used with the QMP-5100B/QMP-5101B Master Paging Control module. Slide-in labels are provided to label the paging zones. The QZP-5101 occupies one module space in the BB-1000 or BB-5000 Series enclosures.



### QMP-5100AX Master Paging Control Module

The QMP-5100AX Master Paging Control Module is similar to the QMP-5101B/QMP-5100B except that it does not include a paging microphone and is used for Distributed Audio systems. The QMP-5100AX features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5100AX occupies one module space in the BB-5000 Series enclosures.



### QMP-5100MSB Microphone Splitter Board

The QMP-5100MSB Microphone Splitter Board provides microphone connections for up to four QIF-5000B Interface Cards (for Distributed Audio system). The QMP-5100MSB occupies one module space in the BB-5000 Series enclosures and mounts under the QMP-5100AX Master Paging Control Module.

## QX-5000 Series Firefighter Telephone Control Modules (Hardwired)



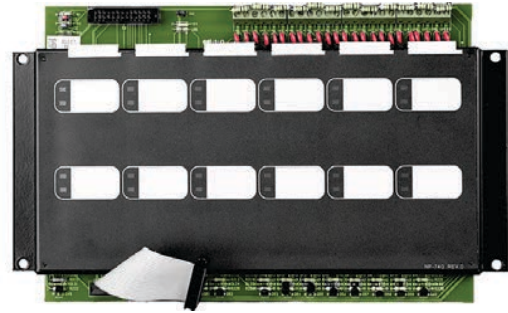
### QMT-5302 Master Firefighters' Telephone Control Module

The QMT-5302 includes the Master Telephone Handset and common control indicators for Common Telephone Trouble, Master Telephone Trouble and Incoming Call. The QMT-5302 has control buttons for Lamp Test and either Connect (on common call/talk system) or Clear All (on multi zoned system). The QMT-5302 may be used either alone as a common call/talk system or with the QZT-5302 Zone Selectors as a multi-zoned system. In a common call/talk system, the user will hear a buzzer at the QMT-5302. By picking up the handset and selecting the 'Connect' button, the user will be able to answer the call. In a multi zoned system, the user must select the appropriate telephone zone on the QZT-5302. If a second call comes in, the appropriate Telephone zone LED will light up. To answer, the user must select the appropriate telephone zone. The QMT-5302 will allow up to a maximum of six phones to be answered at a time. The QMT-5302 is powered with a 24 VDC, 200 mA external DC power source (filtered or unfiltered). The master telephone circuit can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QMT-5302 occupies one module space in the BB-5000 series enclosures.



### QMT-5300A Master Firefighters' Telephone Control Module

The QMT-5300A Master Firefighters' Telephone Control Module is similar to the QMT-5302 and is designed for remote mounting in the BB-1000 Series enclosures. The QMT-5300A occupies one module space in the BB-1000 Series Enclosures.



### QZT-5302 Zoned Firefighters' Telephone Selector Panel

The QZT-5302 includes 12 zone selector switches, 12 zone Call-In LEDs (Green) and 12 zone trouble LEDs (Amber). The QZT-5302 is used with the QMT-5302/QMT-5300A Master Telephone Control module to provide a multi-zoned system. The telephone circuits can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). A maximum of six QZT-5302 can be connected to the QMT-5302/QMT-5300A. Slide-in labels are provided to label the telephone zones. The QZT-5302 occupies one module space in the BB-1000 or BB-5000 enclosures.

### Specifications

#### Electrical Requirements

*Power Input:* 120 VAC +10%, -15%, 60 Hz, 12A (Primary)

*Power Supply Ratings:* 30A ,40V (Secondary)

*Input Current:* 11 Amps

*Standby Power:* 24 VDC Standby batteries

#### Environmental Operating Limits

*Temperature:* 0 to 49 C

*Humidity:* 0 to 95% rh (non-condensing)

#### Dimensions

QBB-5001 Backbox: 41"H x 24.25"W x 8"D

BB-1001 Enclosure: 9"H x 12.75"W x 1.2"D

BB-1002 Enclosure: 18"H x 12.75"W x 1.2"D

BB-1003 Enclosure: 26.4"H x 12.75"W x 1.2"D

BB-1008 Enclosure: 33"H x 22.5"W x 1.25"D

BB-1012 Enclosure: 45"H x 22.5"W x 1.25"D

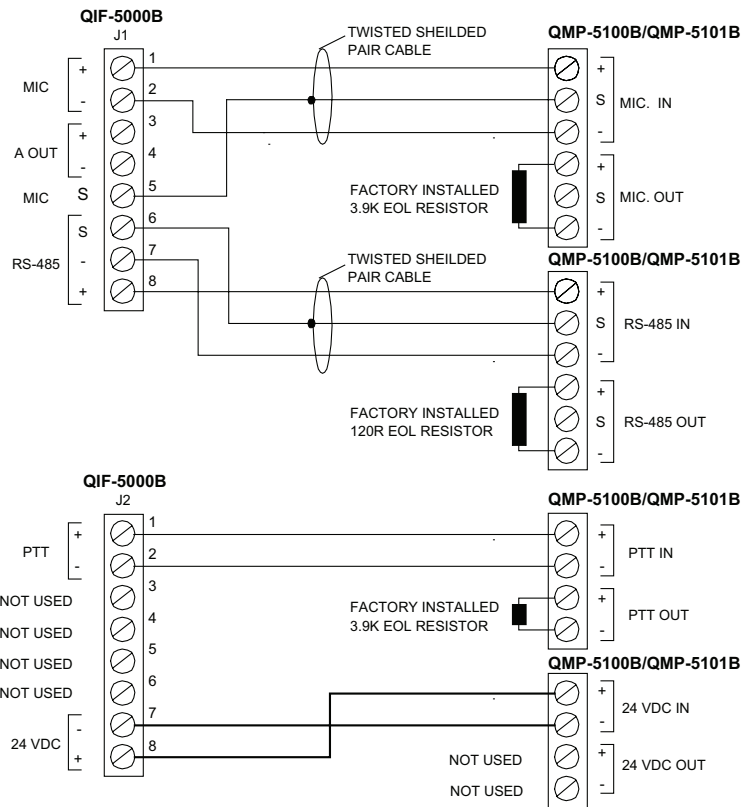
BB-5008 Enclosure: 36"H x 30"W x 7"D

BB-5014 Enclosure: 60"H x 30"W x 7"D

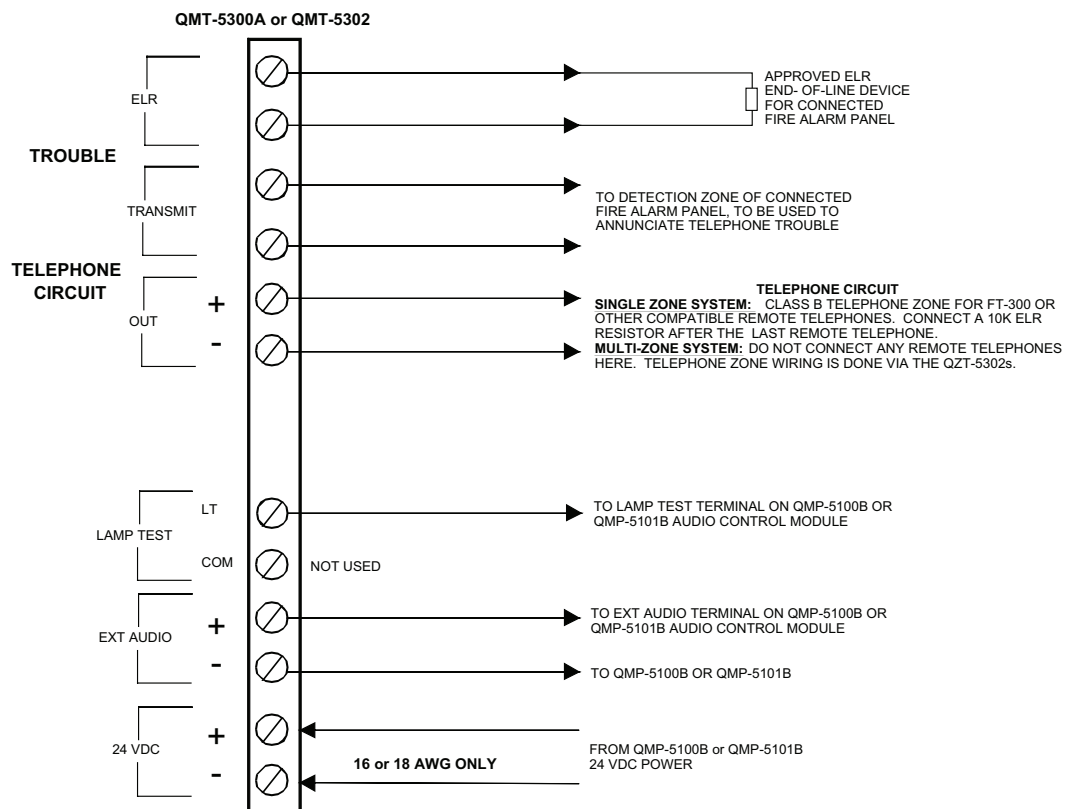
#### Audio Backbox Mounting

Surface or Semi-flush mounting (Use QBB-5001TR Flush Trim Ring)

## QMP-5100B/QMP-5101B Wiring Diagram



## QMT-5300A/QMT-5302 Wiring Diagram





## QX-5000 Series Firefighter Telephone Control Modules (Addressable)



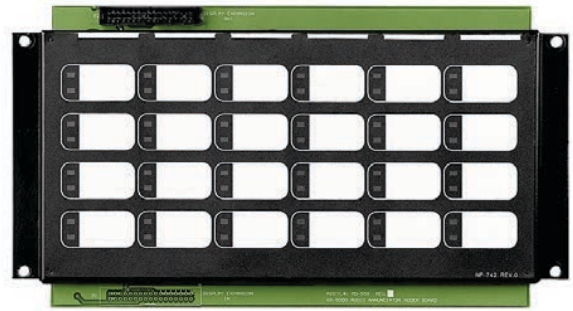
### QAMT-5302 Master Firefighters' Telephone Addressable Control Module

The QAMT-5302 includes the Master Telephone Handset and common control indicators for Common Telephone Trouble, Master Telephone Trouble and Incoming Call. The QAMT-5302 has control buttons for Lamp Test and either Connect (on common call/talk system) or Clear All (on multi zoned system). The QAMT-5302 may be used either alone as a common call/talk system or with the QAZT-5302 Zone Selectors as a multi-zoned system. In a common call/talk system, the user will hear a buzzer at the QAMT-5302. By picking up the handset and selecting the 'Connect' button, the user will be able to answer the call. In a multi zoned system, the user must select the appropriate telephone zone on the QAZT-5302. If a second call comes in, the appropriate Telephone zone LED will light up. To answer, the user must select the appropriate telephone zone. The QAMT-5302 will allow up to a maximum of six phones to be answered at a time. The QAMT-5302 is powered with a 24 VDC, 200 mA external DC power source (filtered or unfiltered). The master telephone circuit can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAMT-5302 occupies one module space in the BB-5000 Series enclosures.



### QAMT-5300 Master Firefighters' Telephone Addressable Control Module

The QAMT-5300A Master Firefighters' Telephone Addressable Control Module is similar to the QMT-5302 and is designed for remote mounting in the BB-1000 Series enclosures. The QAMT-5300A occupies one module space in the BB-1000 Series enclosures.



### QAZT-5302 Addressable Zoned Firefighters' Telephone Selector Panel

The QAZT-5302 includes 24 zone selector switches, 24 zone selector LEDs (Green or Red) and 24 trouble LEDs (Amber). The QAZT-5302 is used with the QAMT-5302/QAMT-5300 Master Firefighters' Telephone Addressable Control module to provide a multi-zoned system. Slide-in labels are provided to label the telephone zones. The QAZT-5302 occupies one module space and mounts with the Main FX-2000 panel in a BB-5000 Series enclosure or with the RAX-LCD in a BB-1000 or BB-5000 Series enclosure.

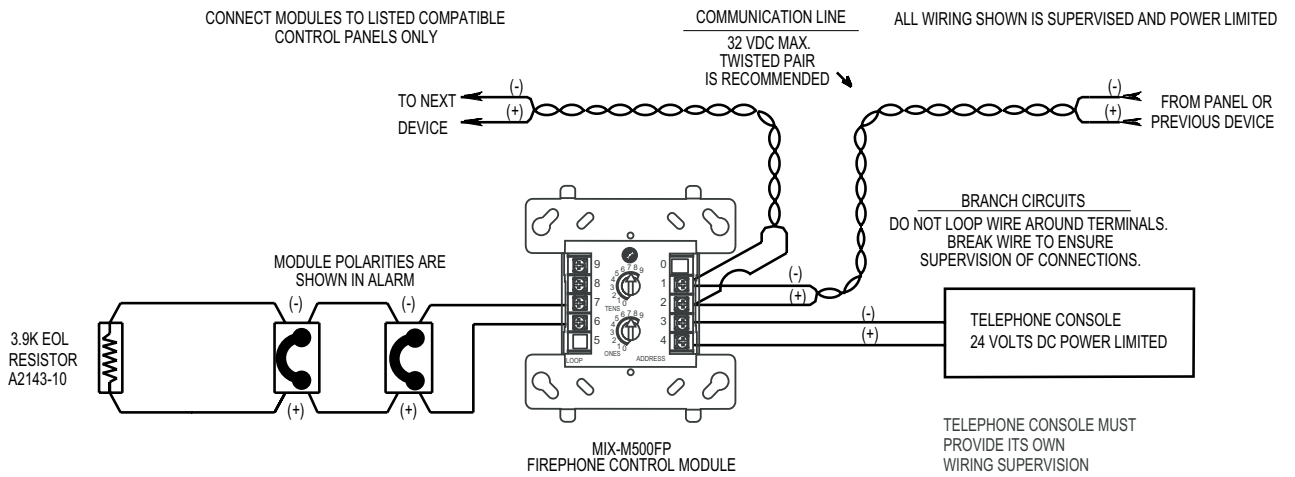


### MIX-M500FP Addressable Firephone Control Module

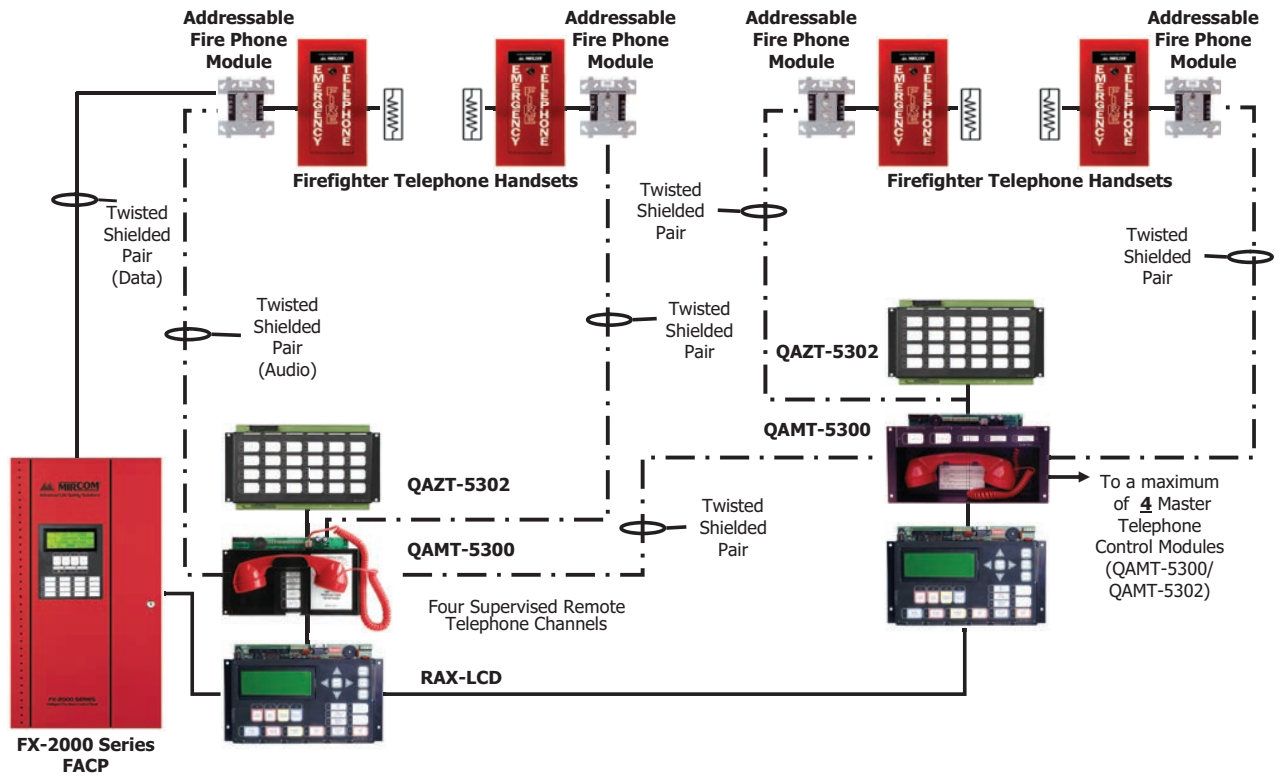
The MIX-M500FP is used with the FX-2000 Series Intelligent Fire Alarm Control Panel and is intended to monitor and control a loop of firefighter phones. It has the ability to differentiate between normal, off-hook, and trouble conditions. When taken off-hook, a phone will immediately receive a ringing tone, and the panel will receive an off-hook indication. The panel can then connect that off-hook phone to the main riser for the system.

*Add suffix "A" for Canadian model.*

# Typical Circuit Configuration Wiring Diagram, Class B (NFPA Style Y)

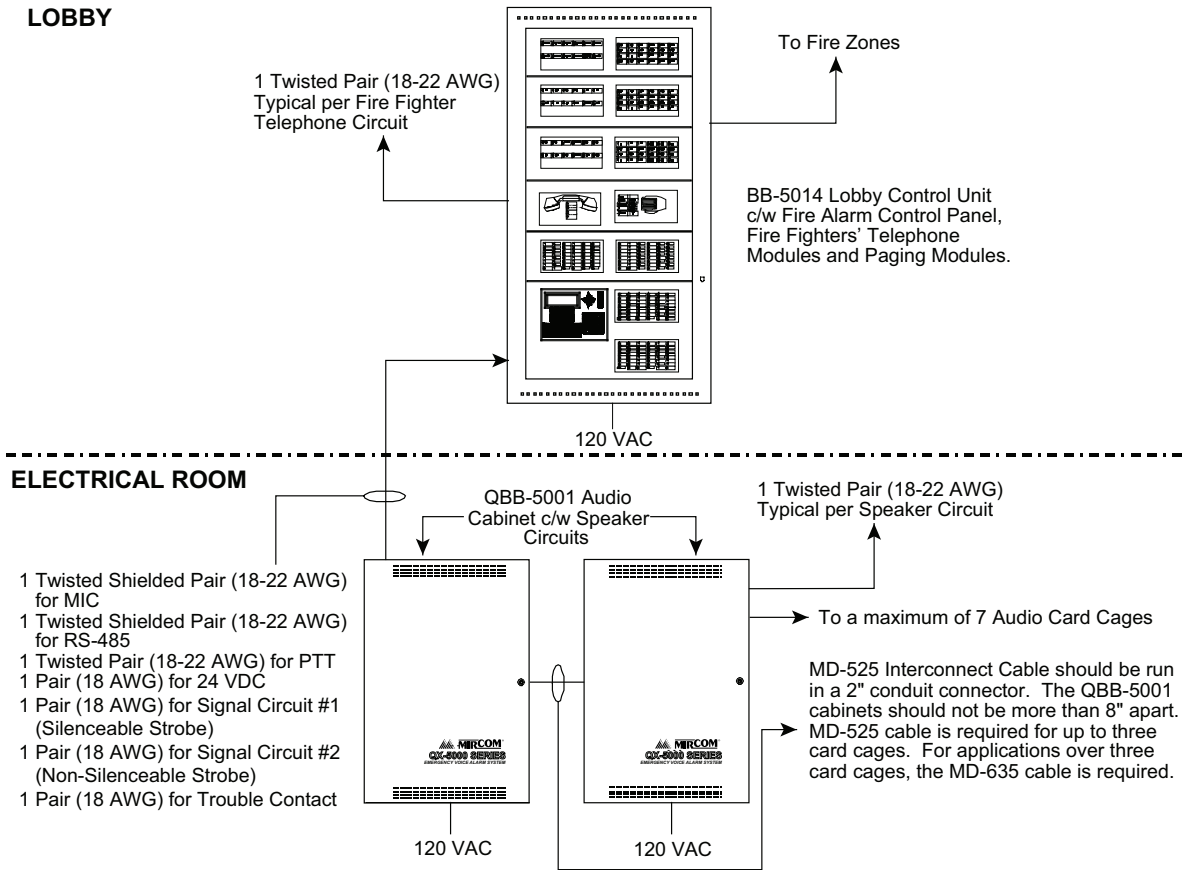


## Addressable Firefighter Handsets Operation



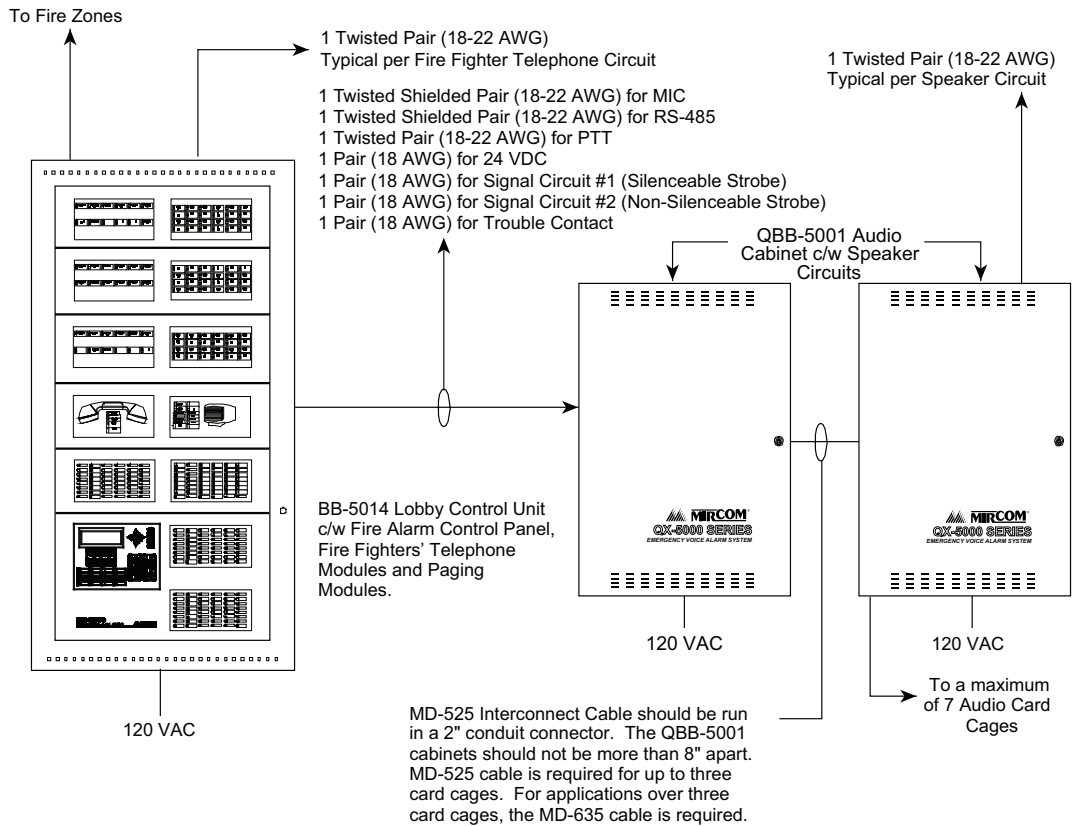
# Typical System Layout #1

Lobby Control Unit is located in the lobby while the Audio Panel is located in the electrical room.



# Typical System Layout #2

All units are located in the lobby or fire command centre.



## Ordering Information

Model	Description
<b>Emergency Audio Control Panel</b>	
QMB-5000B	Audio Motherboard & Card Cage (Supports one QIF-5000B Interface Board and 7 QAA style Audio Amplifiers)
QIF-5000B	Audio/Fire Alarm System Interface Card
QIF-1000	Audio Interconnection Module (QIF to QIF)
QIF-2000	Programmable Amplifier Interface Module
QPS-5000	Audio Power Supply
QBC-5000N	Audio Battery Charger
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-5230S-525-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25 Amplifiers
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
QBB-5001	Audio Backbox Enclosure
QBB-5001TR	Flush Trim Ring for QBB-5001 Audio Backbox
QRM-1001	QX-5000 Series Bell Cut Relay
MD-525	Interconnection cable (One required for each additional Audio Motherboard and Card Cage up to three cabinets.)
MD-635	Interconnection cable (One required for each additional Audio Motherboard and Card Cage over three.)

### Digitized Voice Components

QDV-1000	Digitized Voice Module
QDV-0001	Digitized Voice Chip
QDVP-100	Digitized Voice Programming Tool

### Zoned Paging Control

QMP-5100B	Master Paging Control Module c/w paging microphone and common control functions. Mounts in BB-1000 Series Enclosures.
QMP-5101B	Master Paging Control Module c/w paging microphone and common control functions. Mounts in BB-5000 Series Enclosures.
QZP-5101	Zoned Paging Selector Panel c/w 24 zone selector switches, 24 selector LEDs (Green) and 24 trouble LEDs (Amber). Mounts in BB-1000 or BB-5000 Series Enclosures.
QMP-5100AX	Master Paging Control Module (No Paging Microphone)
QMP-5100MSB	Microphone Splitter Board

### Zoned Firefighters' Telephone Control

QMT-5300A	Master Firefighters' Telephone Control Module c/w master handset and common control functions. Mounts in BB-1000 Series Enclosures.
QMT-5302	Master Firefighters' Telephone Control Module c/w master handset and common control functions. Mounts in BB-5000 Series Enclosures.
QZT-5302	Zoned Firefighters' Telephone Selector Panel c/w 12 zone selector switches, 12 zone Call-In LEDs 12 zone trouble LEDs and 12 Class A/B (Style Z/Y) telephone circuits. Mounts in BB-1000 or BB-5000 Enclosures.
QAMT-5300	Master Firefighters' Telephone Addressable Control Module
QAMT-5302	Master Firefighters' Telephone Addressable Control Module
QAZT-5302	Addressable Zoned Firefighters' Telephone Selector Panel
MIX-M500FP	Addressable Firephone Control Module

### Zoned Paging & Firefighters' Telephone Module Enclosures

BB-1001	Semi-Flush Backbox (Houses 1 module)
BB-1002	Semi-Flush Backbox (Houses 2 modules)
BB-1003	Semi-Flush Backbox (Houses 3 modules)
BB-1008	Semi-Flush Backbox (Houses 8 modules)
BB-1012	Semi-Flush Backbox (Houses 12 modules)
MCH-001	BB-1000 Blank Panel Insert
BB-5014	Lobby Control Centre Wallbox Enclosure (Supports 14 module foot prints)
DOX-5014M	Painted Beige Metal Door for BB-5014
CCH-5014	Custom Mounting Kit for BB-5014 (One required for each BB-5014)
BB-5008	Lobby Control Centre Wallbox Enclosure (Supports 8 module foot prints)
DOX-5008M	Painted Beige Metal Door for BB-5008
CCH-5008	Custom Mounting Kit for BB-5008 (One required for each BB-5008)

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CAT. 5800  
Rev. 7

## FIRE FIGHTER TELEPHONES



*Canadian Model  
with Bilingual Markings*

*U.S.A. Model  
with English Markings*

### Description

Mircom's Fire Fighter Telephones are designed to operate in conjunction with Mircom's QX-5000 Series Emergency Zoned Audio System. These telephone handsets are permanently installed throughout a building to allow Fire Fighters easy communication with the main control panel. The Fire Fighter telephone stations provide a handset behind a locked door. Equipped with a "break glass" feature, the unit can be accessed by unlocking the door or breaking the glass section. The door is clearly identified with the words "FIRE EMERGENCY TELEPHONE" using large white lettering for easy identification. The breakable glass section clearly indicates "To open use key or break glass" in order to access the unit.

In addition to the Fire Fighter telephone stations, Mircom provides portable Fire Fighter telephone handsets which plug-in to permanently installed telephone jacks throughout the building. Plugging in the portable handset allows the Fire Fighters to communicate with the main control panel. As with the permanently installed telephones, these portable handsets are made from durable ABS plastic and come equipped with a coiled cord and a male phone plug which plugs into the Fire Fighters' telephone jack. In addition, an optional handset storage cabinet is available to store up to six portable handsets. An optional flush trim ring is available for the storage cabinet.

### Features

- Heavy-duty construction
- Red finish
- Flush or surface mount
- Key-locked door
- Break glass insert
- Rugged ABS plastic handset with coiled cord
- Portable handsets and telephone jacks (optional)
- Optional storage cabinet for portable handsets
- Bilingual French/English Markings on Canadian models
- Supervised wiring

### Operation

The Fire Fighter Telephone handset rests on a cradle inside the enclosure. Lifting the remote handset from the cradle causes a buzzer to sound and lights a "Common Call" indicator or a zone indicator, if provided, at the Emergency Voice Evacuation panel, while the caller hears a steady tone indicating that a call is being made.

The portable handsets plug-in to the Fire Fighters' telephone jacks which are located throughout the building. Plugging in a portable telephone handset causes a buzzer to sound and lights a "Common Call" indicator or a zone indicator, if provided, at the Emergency Voice Evacuation panel, while the caller hears a steady tone indicating that a call is being made.

### Engineer Specifications

The remote telephone stations shall consist of a model FT-300 Telephone Chassis Assembly complete with a BB-330 backbox and TC-330 Flush Mount Enclosure Cover with lock and break glass insert or a TC-331 Surface Mount Enclosure Cover with lock and break glass insert. The telephone unit shall be made of red ABS plastic and be equipped with a coiled cord. The backbox and enclosure cover shall be finished in red enamel. The door shall bear a handset symbol and the words "FIRE FIGHTERS' TELEPHONE" and breakable glass "TO OPEN, USE KEY OR BREAK GLASS". Lifting the handset shall automatically identify and announce a call at the Emergency Voice Evacuation panel. A ring signal tone shall be heard in the handset until the call has been answered.



**CATALOG NUMBER 5801**

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### FT-300A Telephone Chassis Assembly

The FT-300A consists of the red telephone handset with coiled cord and red enclosure plate.



### BB-330 Backbox for Fire Fighters' Handset

Red finish backbox for flush or surface mounting.

*Backbox Dimensions:*  
14"H x 7"W x 3.5"D



### Fire Fighters' Handset Enclosure Covers

Red finish covers complete with break glass, lock and keys. Available as Surface cover and Flush mount cover.

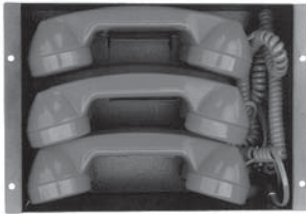
*TC-330(U) Flush Enclosure Cover Dimensions:* 15"H x 8"W

*TC-331(U) Surface Enclosure Cover Dimensions:* 14.2"H x 7.2"W



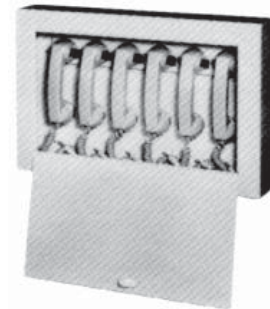
### Fire Fighters' Portable Handset & Fire Fighters' Telephone Jack

The red portable telephone handset comes with a coiled cord and a male phone plug which plugs into the Fire Fighters' Telephone Jack, allowing Fire Fighters to make direct communication with the main control panel. The Fire Fighters' Telephone Jack consists of a single phone jack which is mounted on a single gang, stainless steel plate. The stainless steel plate is clearly marked "FIRE FIGHTERS' TELEPHONE" and mounts to any standard single gang box.



### QTS-5305 Fire Fighters' Telephone Cabinet Module

The QTS-5305 Cabinet Modules houses five FH-100A portable handsets and is designed to mount in the BB-5000 series enclosures. The QTS-5305 mounts in the top right hand side of the BB-5000 series enclosures and occupies one module space.



### FHC-300 Fire Phone Storage Cabinet

The FHC-300 Storage Cabinet holds up to six portable FH-100A telephone handsets. The FHC-300 is a surface mount enclosure and comes with a keylocked door.

*Dimensions:* 13.50"H x 21.25"W x 3.75"D

## Ordering Information

Model	Description
FT-300A	Telephone Chassis Assembly c/w Handset and coiled cord
BB-330	Backbox for Fire Fighters' Handset
TC-330	Flush Mount Enclosure Cover c/w with lock and break glass insert ( <i>Add suffix "U" for U.S.A. model</i> )*
TC-331	Surface Mount Enclosure Cover c/w lock and break glass insert ( <i>Add suffix "U" for U.S.A. model</i> )*
PL-159	Replacement Break Glass
FH-100A	Portable Fire Fighters' Telephone Handset
FJ-100	Fire Fighters' Telephone Jack on a single gang front plate
FHC-300	Emergency Telephone Handsets Storage Cabinet (Holds up to six portable handsets.)
TR-300	Flush Trim Ring for FHC-300
QTS-5305	Fire Fighters' Telephone Cabinet Module. Holds up to five FH-100A Portable Handsets. (Mounts in the top right hand side of the BB-5000 series enclosures. Occupies one module space.)

\* Canadian models (TC-330/TC-331) have Bilingual markings. U.S.A. models (TC-330U/TC-331U) have English markings.

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CAT. 5801  
Rev. 6



### Features

- Single, Dual or Three Channel Operation
- Zone or All-Call selectability (Alert/Evacuation)
- Control of fire management operations
- Zoned fire fighters' telephones capability
- Provides single or multiple command centre(s) for use in emergencies
- Multiple Building Interconnection (Campus Style)
- Microprocessor-based operations with hardware and software Watchdog Timer to ensure system operation
- Operates from 24 VDC backup batteries in the event of a power failure
- Removable terminal blocks for ease of installation and maintenance
- Indication of all required fault conditions
- Speaker circuits are integrated with amplifier circuits
- Multiple amplifier sizes (up to 7 per enclosure for a maximum of 360 watts per enclosure)
- Maintains full supervision during battery operation
- 25 or 70 Volt System
- Digitized Voice Capability

### Description

Mircom's QX-5000 Series is a multi-channel zoned audio system that allows the operator to selectively page from a central location to any of the system's audible devices. In addition, the QX-5000 allows for zoned fire fighters' telephone communication with remote telephone handsets that are permanently installed throughout a building. The QX-5000 Series consists of a card cage/ audio motherboard, an audio/fire alarm interface board, power supply and battery charger which are designed to work with Mircom's FA-1000 or FX-2000 Series Fire Alarm Control Panels. In addition it can be integrated with other compatible fire alarm control panels. All hardware and software is fully supervised for correct and reliable operation. The system has a simple interface to the fire alarm control panel, and contains its own power supply and battery backup system.

The QX-5000 Series Zoned Audio system requires one QIF-5000B Interface card which provides inputs for the fire alarm panel, the paging microphone and the zone paging module. In addition it provides an audio trouble output. Only one interface card is required per system, and it mounts in the first slot of the QMB-5000B Audio Mother Board and Card Cage.

One QIF-5000B will support seven QMB-5000B card cages. Each card cage has space for one interface card and seven QAA style amplifiers, for a maximum of 360 watts per cabinet.

Each QMB-5000B card cage requires one QPS-5000 Power Supply and QBC-5000N Battery Charger which all mount into a QBB-5001 Audio Cabinet.

The QX-5000 Series Audio System interconnects with the Mircom Fire Alarm Control Panels through a supervised connection. Selective paging is provided through the QMP-5101B/QMP-5100B Master Paging Control Module which provides the microphone and common control functions. Zone selection is provided through the QZP-5101 Zoned Paging Selector Module. A total of six QZP-5101 modules can be connected to the QMP-5101B/QMP-5100B Master Paging Control module. In addition the QX-5000 Series allows for zoned fire fighters' telephones. The QMT-5302/QMT-5300A Master Fire Fighters' Telephone Control Module provides the master telephone and common control functions. The QZT-5302 Zoned Fire Fighters' Telephone Selector Panel allows for 12 zone selector switches and LEDs. A total of six QZT-5302 can be connected to the QMT-5300A/QMT-5302 Master Fire Fighters' Telephone Control Module.



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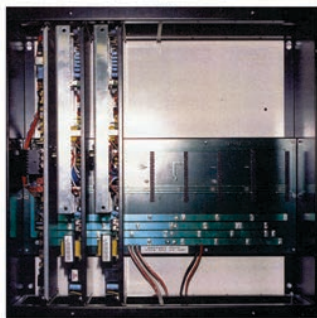
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## QX-5000 Series Audio Cabinet Components



### QBB-5001 Audio Backbox

The QBB-5001 holds one QMB-5000B Audio Motherboard and Card Cage, one QPS-5000 Audio Power Supply and one QBC-5000N Audio Battery Charger. The QBB-5001 will hold up to 40 Ah batteries.



### QMB-5000B Audio Motherboard and Card Cage

The QMB-5000B supports one QIF-5000B Audio Interface Board and 7 QAA style audio amplifiers. In addition, the card cage allows for a backup amplifier (if required) to be mounted in the last slot. Typically, the QAA-5160-70/25 is used as the backup amplifier. The QMB-5000B requires one QPS-5000 Audio Power Supply and one QBC Audio Battery Charger. The QMB-5000B mounts in the QBB-5001 Backbox enclosure.



### QRM-1001 Bell Cut Relay

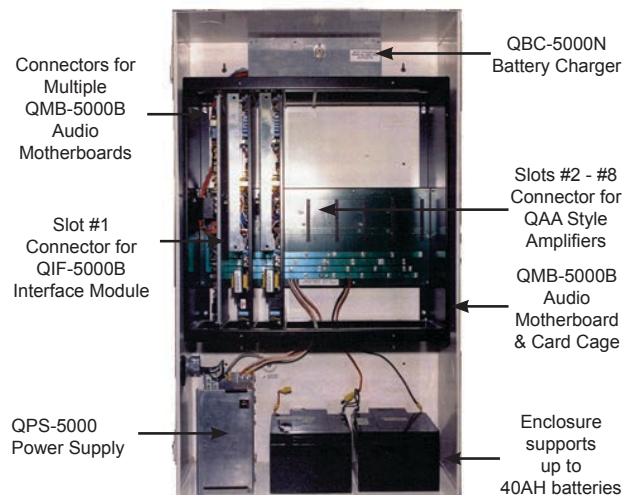
The QRM-1001 provides a Form 'C' output contact for remote signal silence on page activation.

### MD-525 Interconnection Cable

The MD-525 is used to connect additional Audio Motherboard and Card Cages up to 3 Audio Cabinets.

### MD-635 Interconnection Cable

The MD-635 is used to connect additional Audio Motherboard and Card Cages over 3 Audio Cabinets.

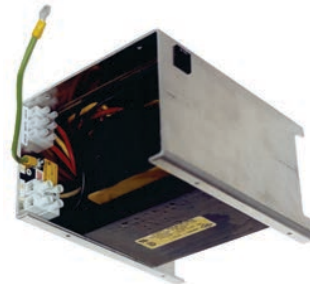


**Note:** A knockout is provided on the bottom right of the QBB-5001 backbox to allow for conduit to be run up the right hand side of the backbox.



### QIF-5000B Audio/Fire Alarm Interface Card

The QIF-5000B includes a tone generator with fire alarm input and audio trouble output. In addition, it has a paging MIC input and zone paging multiplex input. The interface module comes equipped with the following tones: Slow Whoop Pulse 20 SPM & 120 SPM and Bell Tone Generator 20 SPM & 120 SPM. Special tones are available upon request. The QIF-5000B will support seven QMB-5000B Audio Motherboard and Card Cages per system and mounts in the first slot of the QMB-5000B.



### QPS-5000 Audio Power Supply

The QPS-5000 supports up to 420 watts and mounts in the QBB-5001 Backbox enclosure.



### QBC-5000N Audio Battery Charger

The QBC-5000N will charge up to 65 Ah batteries and mounts in QBB-5001 Backbox enclosure.

**Note:** The QBB-5001 Audio Backbox will hold up to 40 Ah batteries. Larger batteries will require a BC-160 Battery Cabinet.



## QX-5000 Series Audio Amplifiers



### QAA-5415-70 and QAA-5415-25 Quad 15 Watt Amplifiers

The QAA-5415-70 and QAA-5415-25 consist of four 15 watt supervised paging/speaker circuits which can be wired in Class 'B' (Style 'Y') only. The QAA-5415-70 is a 70 Volt amplifier and the QAA-5415-25 is a 25 Volt amplifier. Both models mount in the QMB-5000B Motherboard and Card Cage and occupy one amplifier slot.

### QAA-5230S-70/25 Dual 30 Watt Amplifier

The QAA-5230S-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 15 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5230S-525-70/25 Dual 30 Watt Amplifier

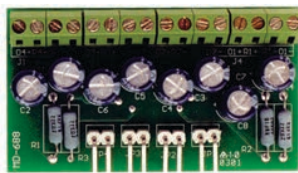
The QAA-5230S-525-70/25 consists of two 25 or 70 Volt 30 watt amplifiers. Each amplifier has two 5 watt supervised speaker outputs and two 25 watt supervised speaker outputs which are used for 'A' 'B' speakers per floor and are wired in Class 'B' (Style 'Y') only. The QAA-5230S-525-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5230-70/25 Dual 30 Watt Amplifier

The QAA-5230-70/25 consists of two 25 or 70 Volt 30 watt supervised paging/speaker circuits which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5230-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.

### QAA-5160-70/25 60 Watt Amplifier

The QAA-5160-70/25 consists of one 25 or 70 Volt 60 watt supervised paging/speaker circuit which can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAA-5160-70/25 mounts in the QMB-5000B Motherboard and Card Cage and occupies one amplifier slot.



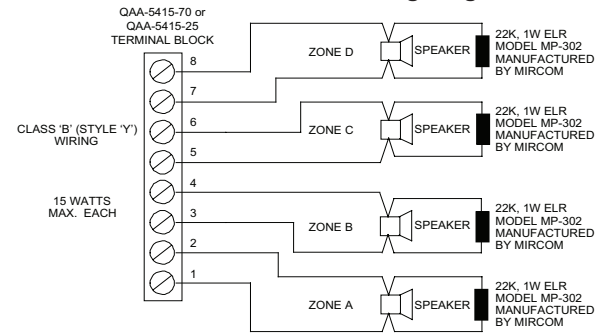
### QAA-4CLA Class 'A' (Style 'Z') Converter Module

The QAA-4CLA converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5415-70 or QAA-5415-25 Amplifiers to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

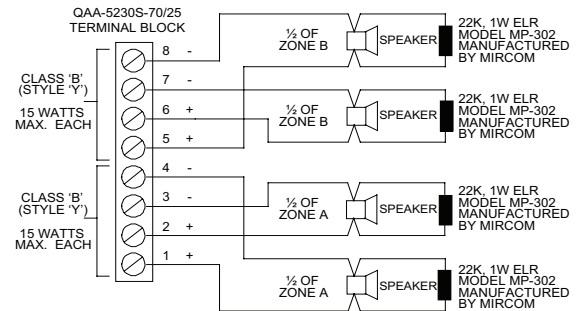
### QAA-4CLAS Class 'A' (Style 'Z') Converter Module

The QAA-4CLAS converts each of the four Class 'B' (Style 'Y') outputs on a QAA-5230S-70/25 or QAA-5230S-525-70/25 Amplifier to Class 'A' (Style 'Z'). The module attaches to the bottom of the amplifier. One QAA-4CLA is required for each amplifier.

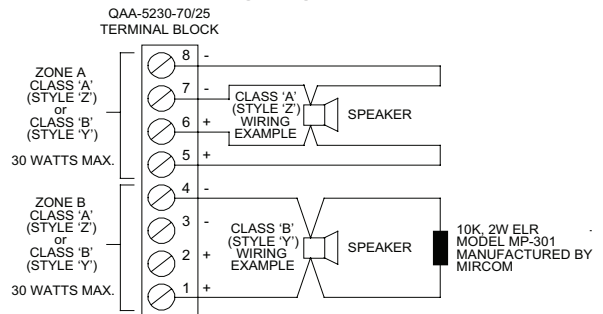
### QAA 5415-70 or QAA-5415-25 Wiring Diagram



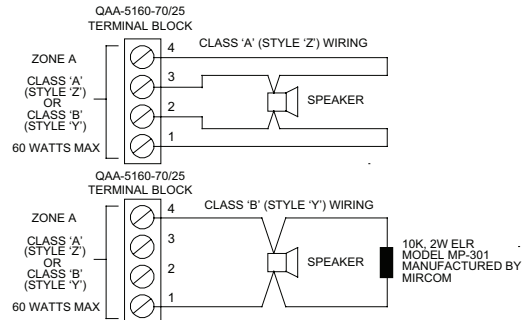
### QAA-5230S-70/25 Wiring Diagram



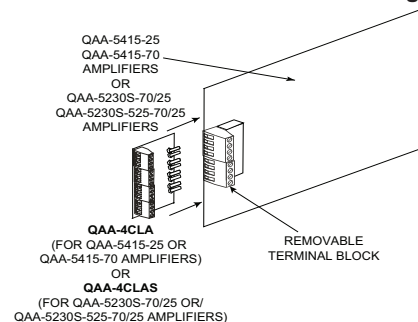
### QAA-5230-70/25 Wiring Diagram



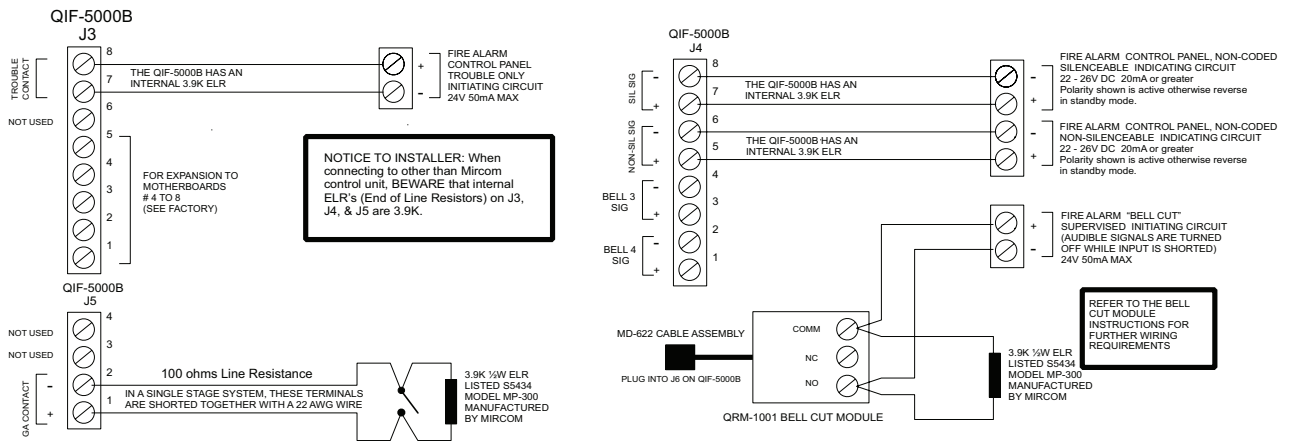
### QAA-5160-70/25 Wiring Diagram



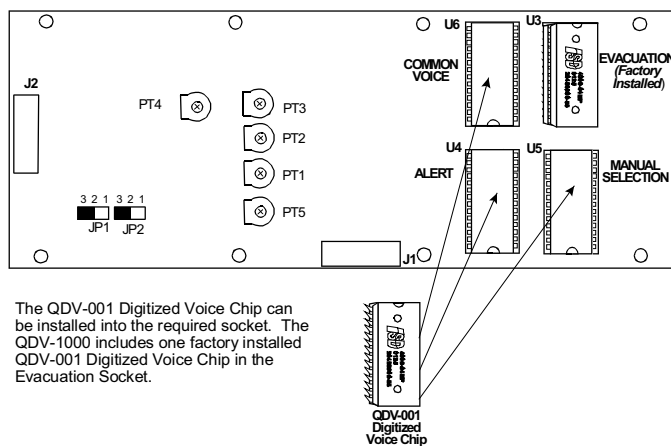
### QAA-4CLA and QAA-4CLAS Connection Diagram



## QIF-5000B Wiring Diagram



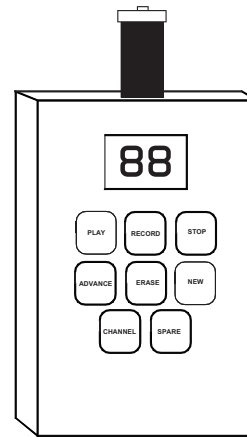
## QX-5000 Digitized Voice Components



The QDV-001 Digitized Voice Chip can be installed into the required socket. The QDV-1000 includes one factory installed QDV-001 Digitized Voice Chip in the Evacuation Socket.

### QDV-1000 Digitized Voice Module

The QDV-1000 Digitized Voice Module supports four simultaneous channels of digitized voice; alert, evacuation, manual selection and common voice channel. The voice channels can be voice only, voice and tone and tone only. One QDV-0001 Digitized Voice Chip is required per channel. The QDV-0001 Digitized Voice Chip is field programmable using the QDVP-100 Digitized Voice Programming Tool. In the case that the QDV-1000 fails, the QIF-5000B Tone Generator acts as a backup. The QDV-1000 includes one factory installed QDV-0001 Digitized Voice Chip in the Evacuation socket with provisions to add three adder QDV-0001 chips. The QDV-1000 mounts in the QBB-5001 Audio Backbox on top of the QBC-5000N.



### QDVP-100 Digitized Voice Programming Tool

The QDVP-100 Digitized Voice Programming Tool allows for field programming of the QDV-1000 Digitized Voice Module.

### QDV-0001 Digitized Voice Chip

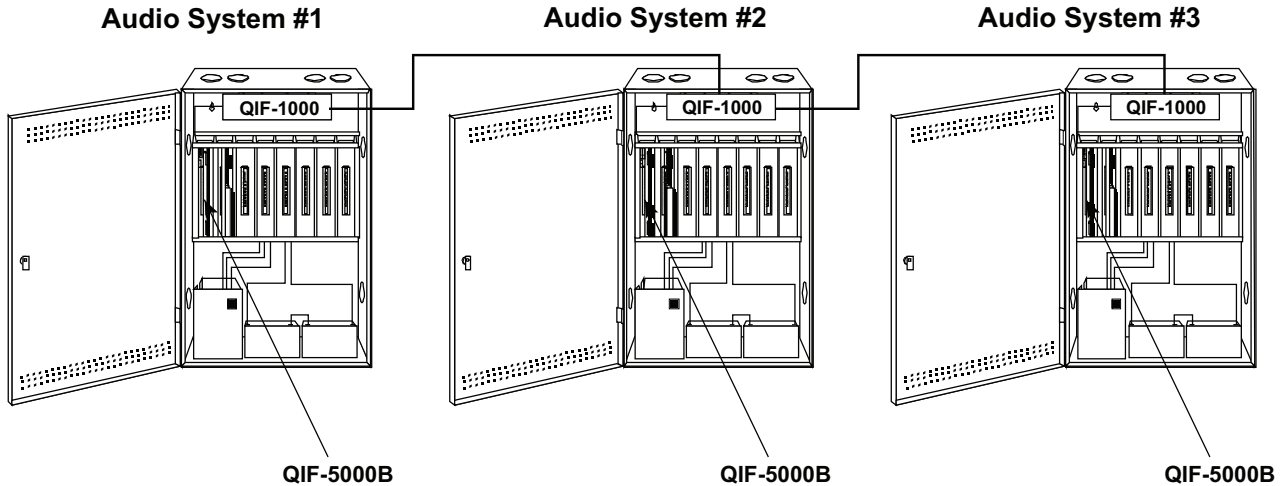
The QDV-0001 Digitized Voice Chip stores the channel specific voice or voice/tone message. One QDV-0001 is required per voice channel being used. The chip is field programmable via the QDVP-100 Digitized Voice Programming Tool. The QDV-0001 allows for the storage of approximately 4 minutes of audio messaging. Once programmed, the QDV-0001 chips plug into the appropriate sockets on the QDV-1000 Digitized Voice Module.

## QX-5000 Series Interconnection Modules

### QIF-1000 Audio Interconnection Module

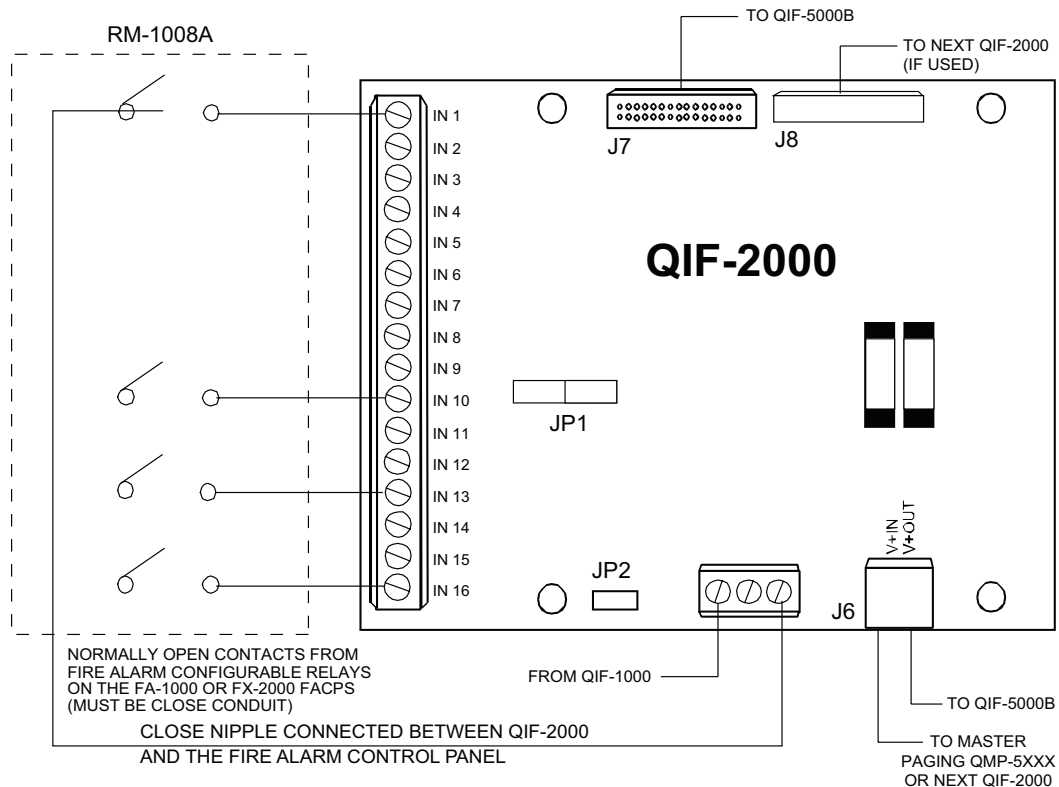
The QIF-1000 Audio Interconnection Module is used to interconnect multiple paging systems together. The QIF-1000 allows for QIF-5000B to QIF-5000B interconnection and is used for campus style "All-Call" Paging. The QIF-1000 allows each interconnected audio system to have zoned paging for the local building and all-call capabilities for each outlying building. The QIF-1000 mounts on top of the QBC-5000N.

### QIF-1000 - QIF to QIF Interconnection Wiring Diagram



### QIF-2000 Programmable Amplifier Interface Module

The QIF-2000 Programmable Amplifier Interface Module provides sixteen programmable audio inputs. Each programmable input is a dry normally open contact. The contact inputs are non-supervised and can be configured to any number of amplifiers. The amplifiers can be configured to the alert channel, the evacuation channel or to remain silent. The QIF-2000 mounts on top of the QBC-5000N. A maximum of eight QIF-2000 modules can be used per system for a total system capacity of 128 programmable inputs.



## QX-5000 Series Paging Control Modules



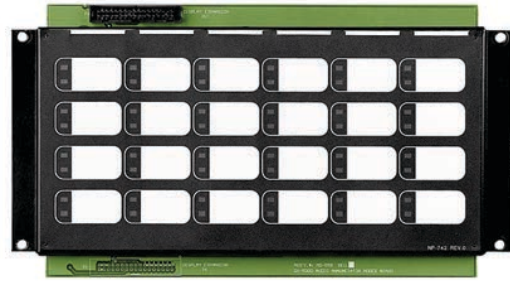
### QMP-5101B Master Paging Control Module

The QMP-5101B Master Paging Control Module includes the Paging microphone and common control indicators for A.C.-On, Common Trouble, MIC Trouble, MIC Level/Page Enable, Digitized Voice Active, Amplifier Trouble, Circuit Trouble, Remote Failure, Page Inhibit, All-Call, All-Call Minus, Microphone PTT and Warden Page. The QMP-5101B has control buttons for Audio Selector Reset, Lamp Test, All-Call, All-Call Minus, Microphone PTT and Warden Page. The QMP-5101B allows for all call paging or selective paging with the QZP-5101 Zoned Paging Selector Modules. The QMP-5101B connects to the QIF-5000B Audio Interface Card via the following connections: an RS-485 connection (twisted shielded pair), 24 VDC power, a twisted shielded pair for the microphone interface and a pair of wires for Push To Talk (PTT). The QMP-5101B features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5101B occupies one module space in the BB-5000 Series



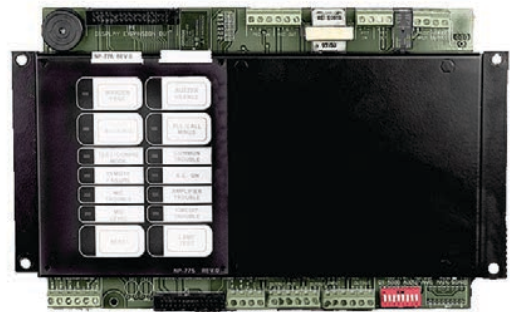
### QMP-5100B Master Paging Control Module

The QMP-5100B Master Paging Control Module is similar to the QMP-5101B Paging Module and is designed for remote mounting in the BB-1000 Series enclosures. The QMP-5100B features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5100B occupies one module space in the BB-1000 Series enclosures.



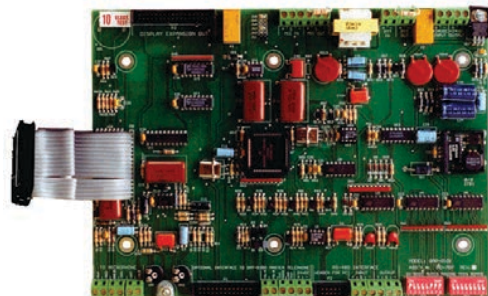
### QZP-5101 Zoned Paging Selector Panel

The QZP-5101 Zoned Paging Selector Panel includes 24 zone selector switches, 24 zone selector LEDs (Green/Red) and 24 Zone trouble LEDs (Amber). The QZP-5101 is used with the QMP-5100B/QMP-5101B Master Paging Control module. Slide-in labels are provided to label the paging zones. The QZP-5101 occupies one module space in the BB-1000 or BB-5000 Series enclosures.



### QMP-5100AX Master Paging Control Module

The QMP-5100AX Master Paging Control Module is similar to the QMP-5101B/QMP-5100B except that it does not include a paging microphone and is used for Distributed Audio systems. The QMP-5100AX features a special pre-announce tone for use with Mircom's SP-Series Silenceable Speakers. The QMP-5100AX occupies one module space in the BB-5000 Series enclosures.



### QMP-5100MSB Microphone Splitter Board

The QMP-5100MSB Microphone Splitter Board provides microphone connections for up to four QIF-5000B Interface Cards (for Distributed Audio system). The QMP-5100MSB occupies one module space in the BB-5000 Series enclosures and mounts under the QMP-5100AX Master Paging Control Module.

## QX-5000 Series Firefighter Telephone Control Modules (Hardwired)



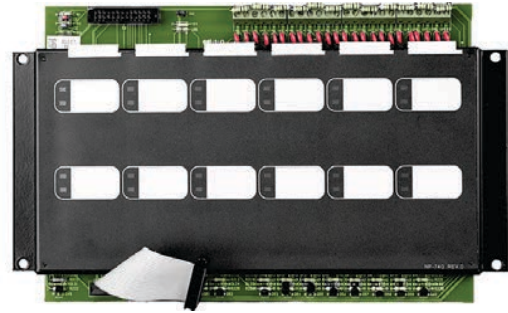
### QMT-5302 Master Firefighters' Telephone Control Module

The QMT-5302 includes the Master Telephone Handset and common control indicators for Common Telephone Trouble, Master Telephone Trouble and Incoming Call. The QMT-5302 has control buttons for Lamp Test and either Connect (on common call/talk system) or Clear All (on multi zoned system). The QMT-5302 may be used either alone as a common call/talk system or with the QZT-5302 Zone Selectors as a multi-zoned system. In a common call/talk system, the user will hear a buzzer at the QMT-5302. By picking up the handset and selecting the 'Connect' button, the user will be able to answer the call. In a multi zoned system, the user must select the appropriate telephone zone on the QZT-5302. If a second call comes in, the appropriate Telephone zone LED will light up. To answer, the user must select the appropriate telephone zone. The QMT-5302 will allow up to a maximum of six phones to be answered at a time. The QMT-5302 is powered with a 24 VDC, 200 mA external DC power source (filtered or unfiltered). The master telephone circuit can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QMT-5302 occupies one module space in the BB-5000 series enclosures.



### QMT-5300A Master Firefighters' Telephone Control Module

The QMT-5300A Master Firefighters' Telephone Control Module is similar to the QMT-5302 and is designed for remote mounting in the BB-1000 Series enclosures. The QMT-5300A occupies one module space in the BB-1000 Series Enclosures.



### QZT-5302 Zoned Firefighters' Telephone Selector Panel

The QZT-5302 includes 12 zone selector switches, 12 zone Call-In LEDs (Green) and 12 zone trouble LEDs (Amber). The QZT-5302 is used with the QMT-5302/QMT-5300A Master Telephone Control module to provide a multi-zoned system. The telephone circuits can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). A maximum of six QZT-5302 can be connected to the QMT-5302/QMT-5300A. Slide-in labels are provided to label the telephone zones. The QZT-5302 occupies one module space in the BB-1000 or BB-5000 enclosures.

### Specifications

#### Electrical Requirements

*Power Input:* 120 VAC +10%, -15%, 60 Hz, 12A (Primary)

*Power Supply Ratings:* 30A ,40V (Secondary)

*Input Current:* 11 Amps

*Standby Power:* 24 VDC Standby batteries

#### Environmental Operating Limits

*Temperature:* 0 to 49 C

*Humidity:* 0 to 95% rh (non-condensing)

#### Dimensions

QBB-5001 Backbox: 41"H x 24.25"W x 8"D

BB-1001 Enclosure: 9"H x 12.75"W x 1.2"D

BB-1002 Enclosure: 18"H x 12.75"W x 1.2"D

BB-1003 Enclosure: 26.4"H x 12.75"W x 1.2"D

BB-1008 Enclosure: 33"H x 22.5"W x 1.25"D

BB-1012 Enclosure: 45"H x 22.5"W x 1.25"D

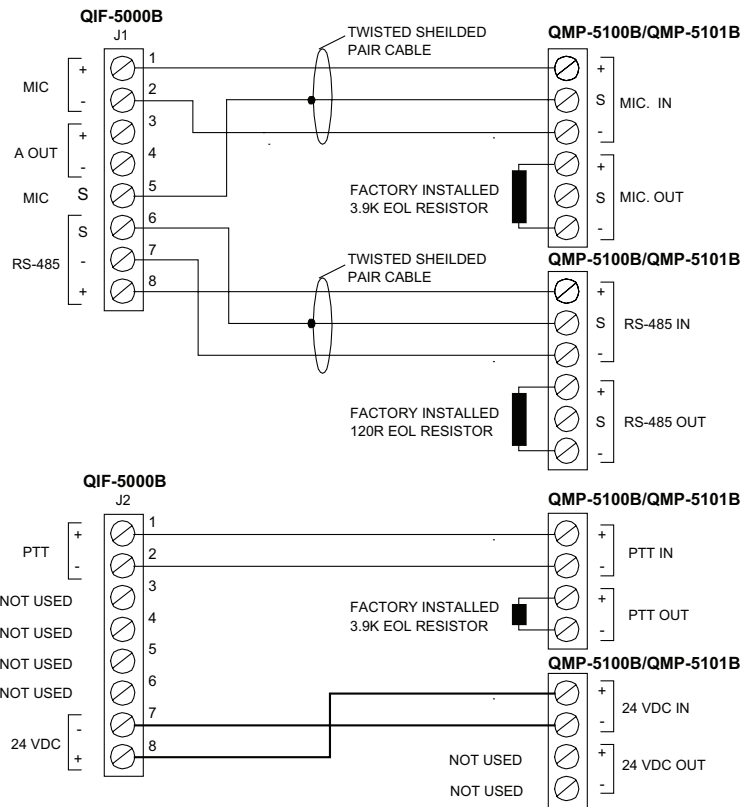
BB-5008 Enclosure: 36"H x 30"W x 7"D

BB-5014 Enclosure: 60"H x 30"W x 7"D

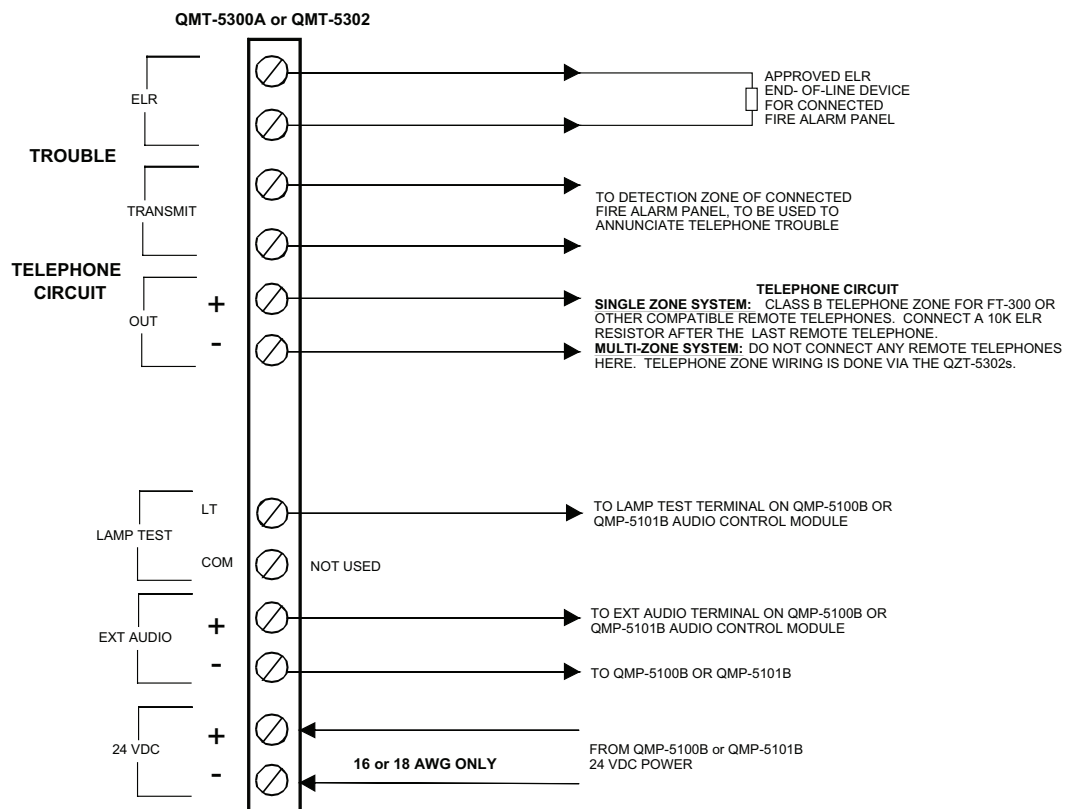
#### Audio Backbox Mounting

Surface or Semi-flush mounting (Use QBB-5001TR Flush Trim Ring)

## QMP-5100B/QMP-5101B Wiring Diagram



## QMT-5300A/QMT-5302 Wiring Diagram



## QX-5000 Series Firefighter Telephone Control Modules (Addressable)



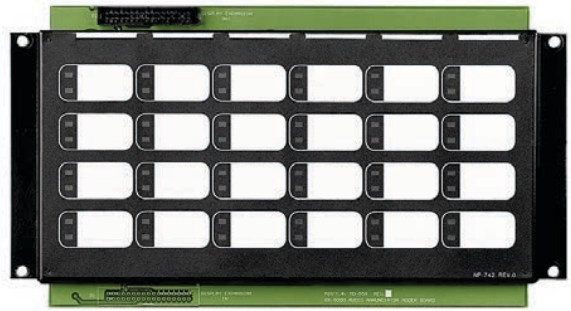
### QAMT-5302 Master Firefighters' Telephone Addressable Control Module

The QAMT-5302 includes the Master Telephone Handset and common control indicators for Common Telephone Trouble, Master Telephone Trouble and Incoming Call. The QAMT-5302 has control buttons for Lamp Test and either Connect (on common call/talk system) or Clear All (on multi zoned system). The QAMT-5302 may be used either alone as a common call/talk system or with the QAZT-5302 Zone Selectors as a multi-zoned system. In a common call/talk system, the user will hear a buzzer at the QAMT-5302. By picking up the handset and selecting the 'Connect' button, the user will be able to answer the call. In a multi zoned system, the user must select the appropriate telephone zone on the QAZT-5302. If a second call comes in, the appropriate Telephone zone LED will light up. To answer, the user must select the appropriate telephone zone. The QAMT-5302 will allow up to a maximum of six phones to be answered at a time. The QAMT-5302 is powered with a 24 VDC, 200 mA external DC power source (filtered or unfiltered). The master telephone circuit can be wired in Class 'A' (Style 'Z') or Class 'B' (Style 'Y'). The QAMT-5302 occupies one module space in the BB-5000 Series enclosures.



### QAMT-5300 Master Firefighters' Telephone Addressable Control Module

The QAMT-5300A Master Firefighters' Telephone Addressable Control Module is similar to the QMT-5302 and is designed for remote mounting in the BB-1000 Series enclosures. The QAMT-5300A occupies one module space in the BB-1000 Series enclosures.



### QAZT-5302 Addressable Zoned Firefighters' Telephone Selector Panel

The QAZT-5302 includes 24 zone selector switches, 24 zone selector LEDs (Green or Red) and 24 trouble LEDs (Amber). The QAZT-5302 is used with the QAMT-5302/QAMT-5300 Master Firefighters' Telephone Addressable Control module to provide a multi-zoned system. Slide-in labels are provided to label the telephone zones. The QAZT-5302 occupies one module space and mounts with the Main FX-2000 panel in a BB-5000 Series enclosure or with the RAX-LCD in a BB-1000 or BB-5000 Series enclosure.

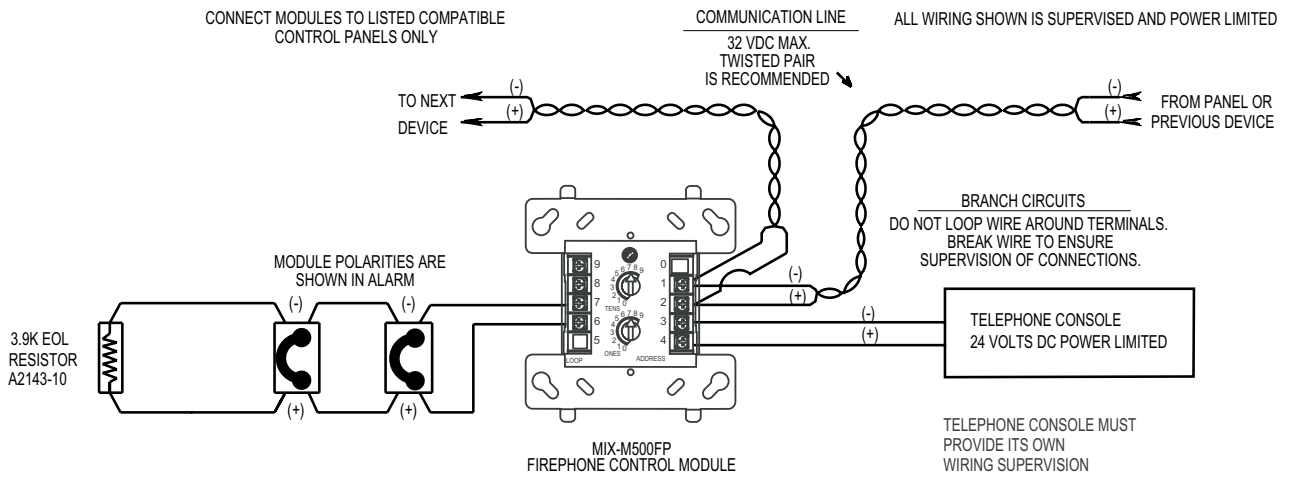


### MIX-M500FP Addressable Firephone Control Module

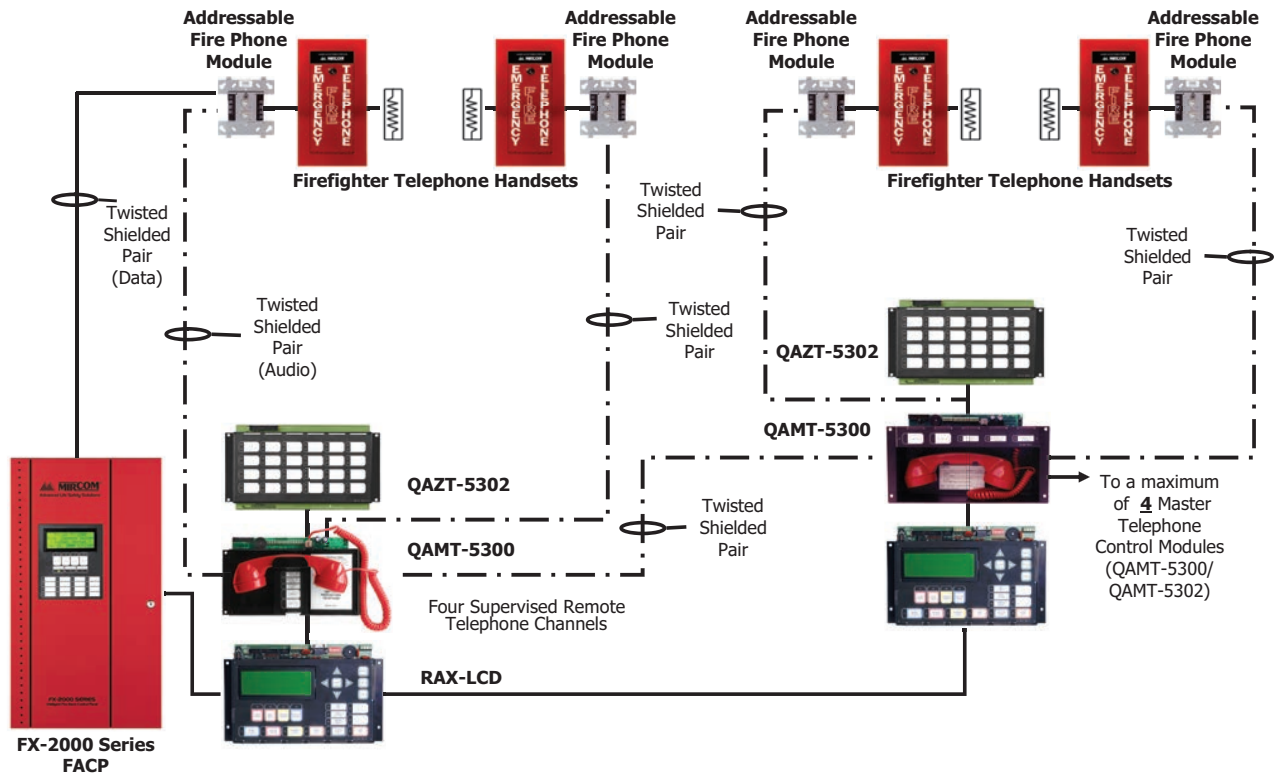
The MIX-M500FP is used with the FX-2000 Series Intelligent Fire Alarm Control Panel and is intended to monitor and control a loop of firefighter phones. It has the ability to differentiate between normal, off-hook, and trouble conditions. When taken off-hook, a phone will immediately receive a ringing tone, and the panel will receive an off-hook indication. The panel can then connect that off-hook phone to the main riser for the system.

*Add suffix "A" for Canadian model.*

# Typical Circuit Configuration Wiring Diagram, Class B (NFPA Style Y)



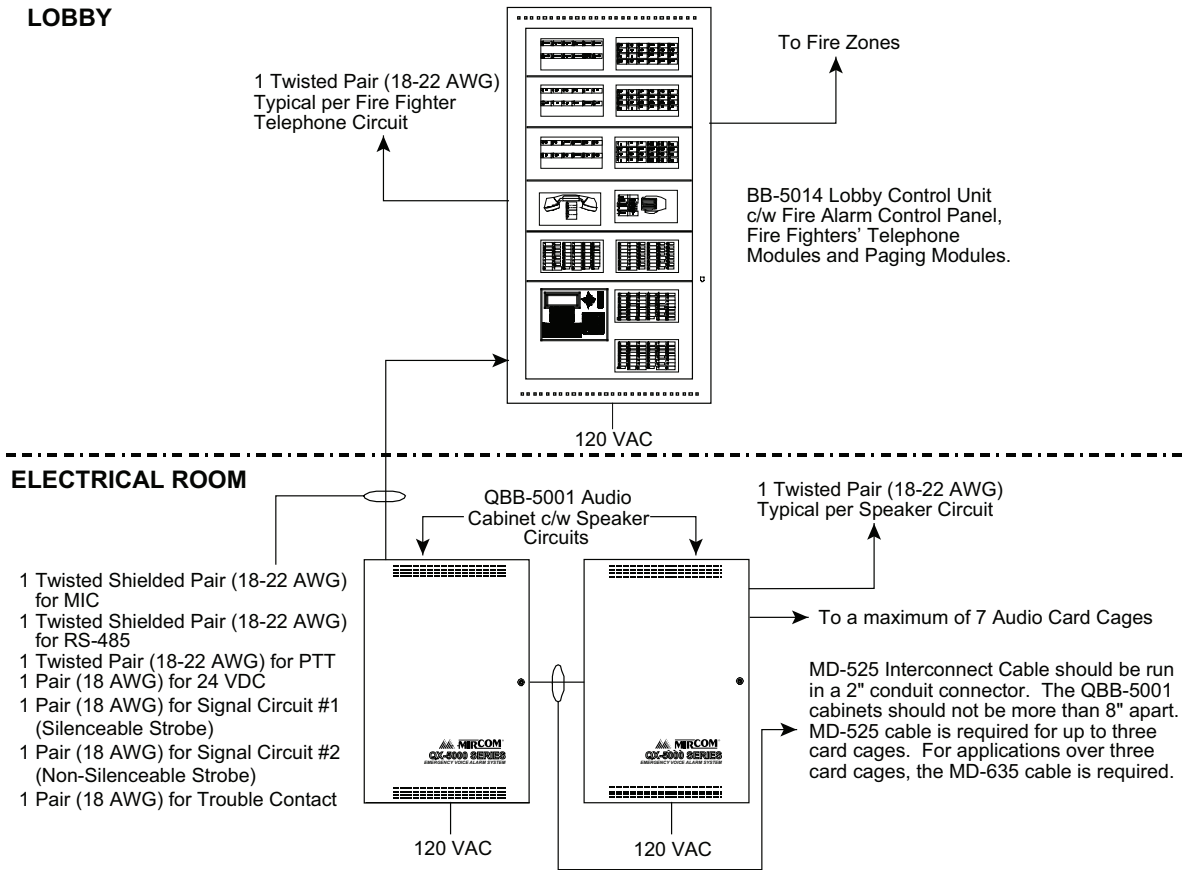
# Addressable Firefighter Handsets Operation





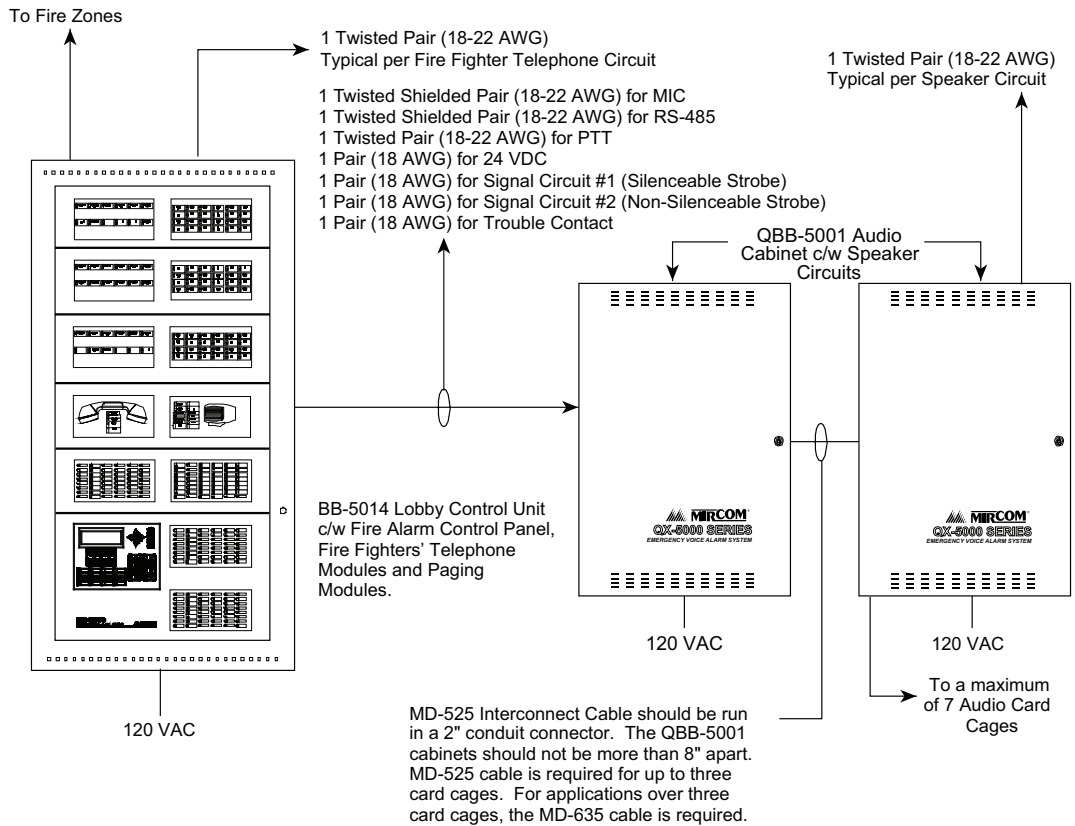
# Typical System Layout #1

Lobby Control Unit is located in the lobby while the Audio Panel is located in the electrical room.



# Typical System Layout #2

All units are located in the lobby or fire command centre.



## Ordering Information

Model	Description
<b>Emergency Audio Control Panel</b>	
QMB-5000B	Audio Motherboard & Card Cage (Supports one QIF-5000B Interface Board and 7 QAA style Audio Amplifiers)
QIF-5000B	Audio/Fire Alarm System Interface Card
QIF-1000	Audio Interconnection Module (QIF to QIF)
QIF-2000	Programmable Amplifier Interface Module
QPS-5000	Audio Power Supply
QBC-5000N	Audio Battery Charger
QAA-5415-70	70 Volt Quad 15 Watt Amplifier
QAA-5415-25	25 Volt Quad 15 Watt Amplifier
QAA-4CLA	Class 'A' (Style 'Z') Converter Module for QAA-5415-25 and QAA-5415-70 Amplifiers
QAA-5230S-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-5230S-525-70/25	25 or 70 Volt Dual 30 Watt Amplifier split 'A' 'B' circuits per floor
QAA-4CLAS	Class 'A' (Style 'Z') Converter Module for QAA-5230S-70/25 and QAA-5230S-525-70/25 Amplifiers
QAA-5230-70/25	25 or 70 Volt Dual 30 Watt Amplifier
QAA-5160-70/25	25 or 70 Volt 60 Watt Amplifier
QBB-5001	Audio Backbox Enclosure
QBB-5001TR	Flush Trim Ring for QBB-5001 Audio Backbox
QRM-1001	QX-5000 Series Bell Cut Relay
MD-525	Interconnection cable (One required for each additional Audio Motherboard and Card Cage up to three cabinets.)
MD-635	Interconnection cable (One required for each additional Audio Motherboard and Card Cage over three.)

### Digitized Voice Components

QDV-1000	Digitized Voice Module
QDV-0001	Digitized Voice Chip
QDVP-100	Digitized Voice Programming Tool

### Zoned Paging Control

QMP-5100B	Master Paging Control Module c/w paging microphone and common control functions. Mounts in BB-1000 Series Enclosures.
QMP-5101B	Master Paging Control Module c/w paging microphone and common control functions. Mounts in BB-5000 Series Enclosures.
QZP-5101	Zoned Paging Selector Panel c/w 24 zone selector switches, 24 selector LEDs (Green) and 24 trouble LEDs (Amber). Mounts in BB-1000 or BB-5000 Series Enclosures.
QMP-5100AX	Master Paging Control Module (No Paging Microphone)
QMP-5100MSB	Microphone Splitter Board

### Zoned Firefighters' Telephone Control

QMT-5300A	Master Firefighters' Telephone Control Module c/w master handset and common control functions. Mounts in BB-1000 Series Enclosures.
QMT-5302	Master Firefighters' Telephone Control Module c/w master handset and common control functions. Mounts in BB-5000 Series Enclosures.
QZT-5302	Zoned Firefighters' Telephone Selector Panel c/w 12 zone selector switches, 12 zone Call-In LEDs 12 zone trouble LEDs and 12 Class A/B (Style Z/Y) telephone circuits. Mounts in BB-1000 or BB-5000 Enclosures.
QAMT-5300	Master Firefighters' Telephone Addressable Control Module
QAMT-5302	Master Firefighters' Telephone Addressable Control Module
QAZT-5302	Addressable Zoned Firefighters' Telephone Selector Panel
MIX-M500FP	Addressable Firephone Control Module

### Zoned Paging & Firefighters' Telephone Module Enclosures

BB-1001	Semi-Flush Backbox (Houses 1 module)
BB-1002	Semi-Flush Backbox (Houses 2 modules)
BB-1003	Semi-Flush Backbox (Houses 3 modules)
BB-1008	Semi-Flush Backbox (Houses 8 modules)
BB-1012	Semi-Flush Backbox (Houses 12 modules)
MCH-001	BB-1000 Blank Panel Insert
BB-5014	Lobby Control Centre Wallbox Enclosure (Supports 14 module foot prints)
DOX-5014M	Painted Beige Metal Door for BB-5014
CCH-5014	Custom Mounting Kit for BB-5014 (One required for each BB-5014)
BB-5008	Lobby Control Centre Wallbox Enclosure (Supports 8 module foot prints)
DOX-5008M	Painted Beige Metal Door for BB-5008
CCH-5008	Custom Mounting Kit for BB-5008 (One required for each BB-5008)

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5800  
Rev. 7

## Notification Appliances



### Description

The AMT Series Multiple Input Electronic Appliances provide the industry with a ULC combination audible/visual appliance that simplifies installation and offers three (3) distinct prioritized audible signals from three isolated inputs. Priority (1) will override all other commands upon activation.

The AMT offers a choice of eight (8) self-prioritized sound combinations for suppression releasing systems, combination security and emergency evacuation systems and high risk installations as well as many other applications.

Each AMT Audible and AMT Strobe appliance has two user selective sound output levels: Standard dBA and High dBA. The AMT Audible provides 12 VDC or 24 VDC Cooperation, filtered or FWR. The AMT Strobe Appliances operate at 24 VDC and may be used with filtered or unfiltered (FWR) input voltages. Separate supervised sets of input terminals are available for each prioritized input. Jumper plugs are provided to enable both tone and strobe to operate simultaneously for all inputs.

The AMT Multitone Strobe Appliances are ULC Listed under Standard CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signaling Appliances and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visible signaling.

### Engineering Specifications

The notification appliance shall be an AMT Series audible/visual appliance or equivalent. Notification appliance shall be electronic and use solid state components. Electromechanical alternatives are not approved. Tone selection shall be by durable dip switch assembly and not clips or jumpers. The audible and the strobe shall be able to operate from a single NAC circuit while producing any of these tones.

### Features

- Approvals include: CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signal Appliances
- Three separate prioritized inputs that will activate three isolated signals
- All inputs are supervised
- Code-3 Horn and Tone meet ANSI/NFPA/ISO temporal pattern.
- Two power taps for High dBA and Standard dBA @ 10 feet
- AMT with strobe can flash independently or in unison with all audible signals
- Selectable input voltage (12 or 24 VDC) for non-strobe applications
- Polarized inputs for compatibility with standard reverse polarity type supervision of circuit wiring by an alarm panel.
- Low cost installation via standard electrical boxes. Attractive flush or surface mounting options
- No additional trimplate required for flush mounting. Fast installation with In/Out screw terminals using #12 to #18 AWG

The appliances shall provide two output sound levels: Standard and High dBA. The High anechoic dBA measurement at 10 feet at the alarm HORN SETTING shall be 98 dBA for AMT and 98 dBA for AMT Strobes, at nominal voltage. Operating voltages shall be either 12 VDC (Audible only) or 24 VDC using filtered power or unfiltered power supply (FWR). All models shall have provisions for standard reverse polarity type supervision and IN/OUT field wiring using terminals that accept #12 to #18AWG wiring.

Combination audible/visual appliances shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens or equivalent with solid state circuitry. Strobe shall meet ULC Listed under Standard CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signaling Appliances.

The combination audible/visual appliances may be installed indoors and surface or flush mounted. They shall mount to standard electrical hardware requiring no additional trimplate or adapter. The aesthetic appearance shall not have any mounting holes or screw heads visible when the installation is completed. The appliance shall be finished in a textured red color. The audible appliance may be installed indoor or outdoor with the proper backbox.



**CATALOG NUMBER** **5216**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

# Specifications

## Current Ratings for AMT Multitone Audible Signals

Tone	Tone Description	Rated Average Current (AMPS) 24 VDC-Audible		Rated Average Current (AMPS) 12 VDC-Audible	
		HI dBA	STD dBA	HI dBA	STD dBA
Horn	Broadband Horn (continuous)	.046	.025	.100	.020
Bell*	1560 Hz Modulated (0.07 Sec. On/Repeat)	.018	.014	.031	.010
March Time Horn	Horn (0.25 Sec. ON/0.25 Sec. Off/Repeat)	.046	.025	.100	.020
Code-3 Horn	Horn (ANSI S3.41 Temporal Pattern)	.046	.025	.100	.020
Code-3 Tone	500 Hz (ANSI S3.41 Temporal Pattern)	.027	.014	.060	.015
Slow Whoop	500-1200Hz Sweep (4.0 Sec. On/0.5 Sec OFF/Repeat)	.043	.025	.100	.025
Siren	600-1200 Hz Sweep (1.0 Sec. On/Repeat)	.037	.019	.082	.020
HI/LO	1000/800 Hx (0.25 Sec. On/Alternate)	.022	.016	.044	.013
Vibrating Chime	700 Hz (1.0 Sec. Decay, Repeat)	.013	.010	.027	.010

## Tone Selection

Tones			Switch Settings		
PRI 1	PRI 2	PRI 3	POS 2	POS 3	POS 4
Horn	Bell	Siren	1	1	1
Code 3 Horn	Siren	Vibrating Chime	1	0	1
Slow Whoop	March Time Horn	HI/LO	0	0	1
March Time Horn	HI/LO	Vibrating Chime	1	1	0
Code 3 Horn	Bell	Siren	0	1	1
Siren	Horn	Vibrating Chime	0	1	0
Bell	March Time Horn	Siren	1	0	0
Code 3 Tone	HI/LO	Siren	0	0	0

## UL dBA Ratings

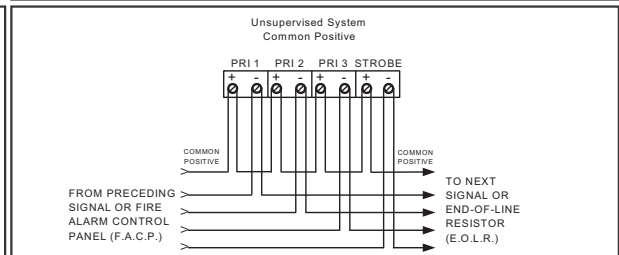
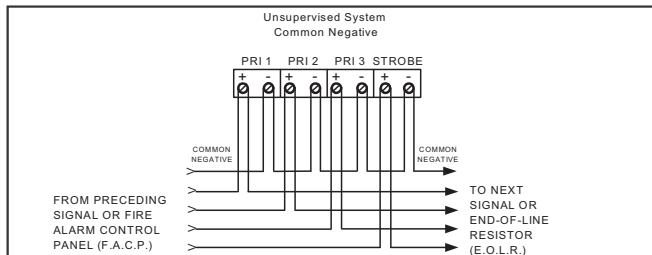
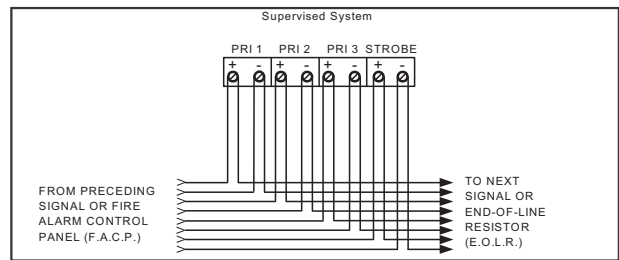
Tone	HI/LO Volume	dBA Reverberant Ratings Per UL 464	dBA Anechoic Ratings
		24V	24V
Horn	HI	92	98
	STD	86	92
Bell	HI	84	91
	STD	78	86
March Time	HI	88	98
	STD	82	92
Code 3 Horn	HI	88	98
	STD	81	92
Code 3 Tone	HI	84	94
	STD	78	89
Slow Whoop	HI	88	98
	STD	83	93
Siren	HI	89	97
	STD	83	92
HI/LO	HI	86	92
	STD	81	87
Chime	HI	78	88
	STD	71	82

## Strobe Current Requirements

Rated Current	Voltage	
	24 VDC	24 VFWR
Average	.080	.081
Peak	190	.216
Inrush	.250	.380

## Wiring Diagrams

- Isolated inputs are provided for independent supervision and actuation of the three audible inputs.
- In case of simultaneous inputs, the three audible outputs are self-prioritized as follows: 1st priority = PRI 1; 2nd priority = PRI 2, 3rd priority = PRI 3. (See table 4 for tone selection).
- Leave any unused inputs disconnected.
- For applications not requiring supervision: connect all positive (+) terminals to the power source. The negative (-) terminal for each signal will actuate the device.



## Ordering Information

Model Number	Input Voltage	Rated Candela	Average Strobe Current 24 VDC (AMPS)
AMT-12/24-R-ULC	12/24	--	--
AMT-241575W-FR	24	15/75	.072

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5216  
Rev. 5



MT Series with Strobe



MT Series without Strobe

**Description**

The MT Series and MT Strobe Multitone electronic appliances offer a choice of eight (8) nationally and internationally recognized alerting sounds: Horn, Bell, March Time Horn, Code-3 Tone, Code-3 Horn, Slow Whoop, Siren or Hi/Lo Tone. With MT and MT Strobe appliances, one alarm appliance meets most of your signaling needs. Each MT and MT Strobe appliance has two installer selective sound output levels: STANDARD dBA and HIGH dBA. Non-strobe versions provide selectable voltage capability in one unit, 12 VDC or 24 VDC, filtered or FWR. Strobe versions are specific for either 12 VDC or 24 VDC and may be used with filtered or unfiltered (full-wave-rectified) input voltages. Separate input terminals are available, shunt wires are provided to enable both tone and strobe to operate simultaneously from a single input.

The Multitone Strobe appliances are ULC Listed under Standard CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signal Appliances, and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visible signaling.

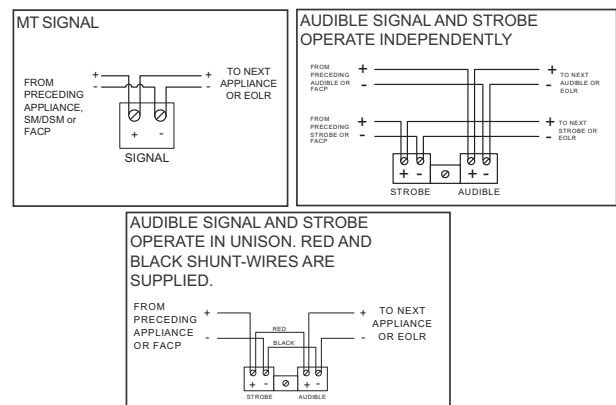
**Alarm Tones**

Tone	Alarm Tones Pattern Description
Horn	Broadband Horn (continuous)
Bell*	1560 Hz Modulated (0.07 sec. on/repeat)
March Time Horn	Horn (0.25 sec. ON/0.25 sec. off/repeat)
Code-3 Horn	Horn (ANSI S3.41 Temporal Pattern)
Code-3 Tone	500 Hz (ANSI S3.41 Temporal Pattern)
Slow Whoop	500-1200Hz Sweep (4.0 sec. on/0.5 sec off/repeat)
Siren	600-1200 Hz sweep (1.0 sec. on/repeat)
HI/LO	1000/800 Hz (0.25 sec. on/alternate)

**Features**

- Approvals include: CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signal Appliances
- Designed to meet or exceed NFPA/ANSI Standards and ADA Accessibility Guidelines. Meet OSHA 29 Part 1910.165
- Series MT appliances have IN and OUT wiring terminations that accept two #12 to #18 American Wire Gauge (AWG) wires at each terminal. Inputs are polarized for compatibility with standard reverse polarity type supervision
- One alarm appliance with (8) eight selective signals to provide superior sound penetration for various ambient and wall conditions with two field selectable sound output levels
- Code-3 Horn and Tone meet ANSI/NFPA temporal pattern for standard emergency evacuation signaling
- Audible and strobe can operate from a single NAC circuit with any of the (8) eight audible sounds
- MT Strobe models available with 15/75 and 75 candela ratings for independent or single input activations
- Selectable input voltage on non-strobe versions. Strobe versions are factory set for either 12 or 24 VDC, with wide-Listed voltage range, filtered (DC) and FWR
- Mounts to either 4" square or double gang boxes (important for retrofit installations). Attractive flush or surface mounting
- No additional trimplate required for flush mounting

**Wiring (for all models)**



# Specifications

**Table 1: Current Ratings for AMT Multitone Audible Signals**

Tone	ULC Average Current Ratings				dBA Anechoic Ratings Per CAN/ULC-525-99	
	@ 24 VDC		@ 12 VDC		@ 12 and 24 VDC	
	HI	STD	HI	STD	HI	STD
Horn	.040	.023	.100	.020	99	93
Bell	.014	.012	.031	.010	92	87
March Time Horn	.040	.023	.100	.020	99	93
Code-3 Horn	.040	.023	.100	.020	99	93
Code-3 Tone	.028	.017	.060	.015	95	90
Slow Whoop	.048	.026	.100	.025	99	94
Siren	.036	.023	.082	.020	98	93
HI/LO	.020	.014	.044	.012	93	88

Note: If the strobe and audible operate on the same circuit, add the strobe current from Table 2 to the audible current from Table 1.

For Peak and Inrush current across the listed voltage range refer to Installation Instructions.

**Table 2: Strobe Current Ratings (AMPS)**

ULC 12 and 24 VDC Voltage Range	ULC Rated Average Current				CAUTION: This setting is acceptable only for general signaling (non-fire alarm) use. Use the "high" dBA setting with this tone or use a different tone for public mode fire alarm service.  WARNING: FOR ULC VERSIONS THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE OF 20.0 - 31.- VOLTS FOR 24V MODELS AND 10.5 - 15.6 VOLTS FOR 12V MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE-RECTIFIED (FWR). APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATIONS.
	MT-2241575W	MT-2475W	MT-121575W	MTWP2475W	
20.0 VDC	.084	.178	-	.131	
24.0 VDC	.068	.140	-	.107	
31.0 VDC	.060	.124	-	.101	
10.5 VDC	-	-	.231	-	
12.0 VDC	-	-	.179	-	
15.6 VDC	-	-	.161	-	

## Engineering Specifications

The notification appliance shall be an MT Series audible/visual appliance or equivalent. Notification appliance shall be electronic and use solid state components. Electromechanical alternatives are not approved. Each electronic appliance shall provide eight (8) field selectable alarm tones. The tones shall consist of: HORN, BELL, MARCH TIME HORN, CODE-3 HORN, CODE-3 TONE, SLOW WHOOP, SIREN and HI/LO. Tone selection shall be by durable dip switch assembly and not clips or jumpers. The audible and the strobe shall be able to operate from a single NAC circuit while producing any of these tones. The appliance shall provide two output sound levels: STANDARD and HIGH dBA. The HIGH dBA setting shall provide a minimum 5 dBA increase in sound output at nominal voltage. The HIGH anechoic dBA measurement at 10 feet at the alarm HORN SETTING shall be 101 dBA minimum for MT and 99 dBA minimum for MT Strobes, at nominal voltage. Operating voltages shall be either 12 VDC or 24 VDC using filtered power or unfiltered power supply (full-wave-rectified). All models shall have provisions for standard reverse polarity type supervision and IN/OUT field wiring using terminals that accept #12 to #18AWG wiring.

Combination audible/visual appliances shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens or equivalent with solid state circuitry. Strobe shall produce

a flash rate of one (1) flash per second minimum over the voltage range. The strobe intensity shall be rated per CAN/ULC-S525-99 for Candela.

All Listed strobe appliances shall incorporate low temperature compensation to insure the lowest possible current consumption. Strobe activation shall be via independent input or from the same input circuit as the audible. The combination audible/visual appliances may be installed indoors and surface or flush mounted. They shall mount to standard electrical hardware requiring no additional trimplate or adapter. The aesthetic appearance shall not have any mounting holes or screw heads visible when the installation is completed. The appliance shall be finished in a textured red color. The audible appliance may be installed indoor or outdoor with the proper back box.

## Ordering Information

Model Number	Input Voltage	ULC Rated Candela
MT-12/24-R-ULC	12/24	-
MT-12/24-W-ULC	12/24	-
MT-241575W-FR	24	75

NOT TO BE USED FOR INSTALLATION PURPOSES.



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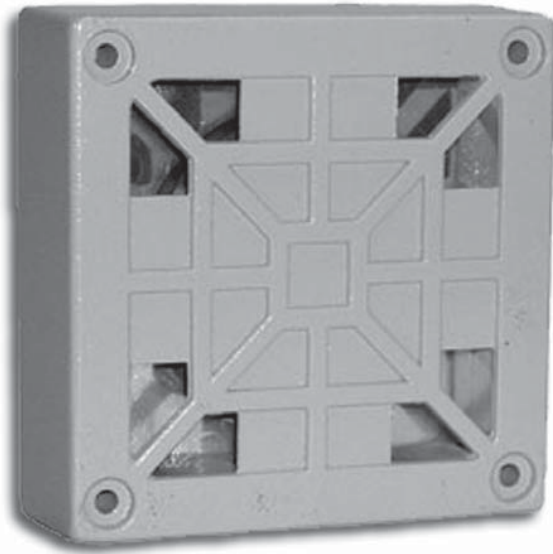
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CAT. 5217  
Rev. 4



### Features

- Approvals include: ULC, CSA
- Resonant grille design for high sound output with low current draw
- Each 31T is fully factory assembled to save installation time
- Screw terminal inputs for fast and secure in-out field wiring
- Indoor or outdoor mounting options for semi-flush, or surface mounting
- Attractive red textured finish enhances appearance and durability
- Vandal Resistant

### Description

The 31T-115-R-ULC Horn are high performance horn. They are ideal alarm signals for life safety applications where high sound output, low current draw and dependable operation are of critical concern.

The 31T-115-R-ULC Horn offers rugged, vandal resistant construction with die case metal housings for the horn mechanism.

It includes screw terminal inputs for in-out field wiring.

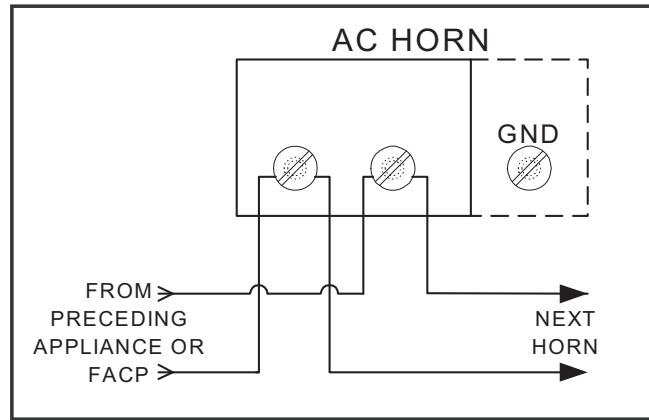
### Engineering Specifications

The AC horns shall be Series 31T-115-R, Series 31T-115-S or approved equal. Models shall be ULC Listed under CAN/ULC-S525-99 or CSA Listed for Fire Protective Service and shall include a die cast metal housing to protect the horn mechanism. Sound output shall be 95 dBA minimum at 10 feet. Mounting options shall include surface mounting in indoor or outdoor applications and semi-flush in indoor applications. All models shall have screw terminal inputs for in-out field wiring. The finish shall be textured red enamel.





## Wiring



## Ordering Information

Model Number	Description	Input Voltage	Rated Current	Rated dBA @ 10 ft
31T-115-R-ULC	AC Horn	115 VAC	0.160	95

**NOTE:** Typical dBA at 10 feet is measured in an anechoic chamber with nominal voltage.

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5219  
Rev. 4

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## ISD-2501UW IN-SUITE SIGNALING DEVICE



### APPLICABLE STANDARDS

- UL 464 Audible Signal Appliances
- ULC S525 Standard for Audible Signal Devices
- NFPA 72 National Fire Alarm Code

### SIGNALING



### RESIDENTS & BUILDING OWNER BENEFITS:

- **Improved Safety:**
  - Very loud buzzer exceeds UL requirements
  - Plugs into any AC outlet for optimal audibility
- **Minimal Disruption:**
  - One day installation
  - No building alterations required
  - Testing and monitoring of the buzzer in each unit can be monitored from the panel without entering the unit

### INSTALLATION & TESTING BENEFITS:

- **Cost Effective:**
  - Installs in one day
  - No drilling, pulling wires or building alterations
  - Greatly reduces labor costs
- **Quicker fire alarm testing:**
  - Operation of buzzer in each unit is monitored from the panel (*applies to installation & periodic fire alarm testing*)
- **Extended Warranty:**
  - Battery backup system now with new multi-year warranty

### DESCRIPTION

The ISD-2501UW is designed to be used with the UL/ULC listed NMC-101SW and other Fire-Link® II Components. It is intended to supplement the signaling capabilities of a building's Fire Alarm System. By utilizing the existing wiring infrastructure (i.e. the building's own 115V AC electrical wiring), Signalink offers the fire protection industry a solution that is easy to install, can be placed anywhere a standard power line outlet exists and prevents unsightly surface raceway from being installed in public hallways. The Fire-Link® II system provides a cost-benefit solution to a North America wide audibility problem without the expense of any additional wiring!

### UNIQUE POWER LINE TECHNOLOGY

The ISD-2501UW is a plug-in, addressable, battery-backed-up, audible device. It does NOT detect smoke or carbon monoxide. It is intended for use in living and sleeping areas to ensure safety and peace of mind. The ISD-2501UW uses Signalink's unique power line technology and 'mesh' networking to provide the highest possible reliability.

# **FIRE-LINK® II**

Fire Alarm Signaling System by Signalink

## **ISD-2501UW** IN-SUITE SIGNALING DEVICE

### **SOUND OPTIONS**

The buzzer can be configured from the panel for synchronized continuous, march-time or temporal sound, meeting the requirements of many authorities having jurisdiction. It also has a 10 minute silenceable feature (Canada only).

### **24 HOUR BACK UP**

Each unit is equipped with a supervised rechargeable battery pack for 24 hr backup power to maintain communication and alarm functions in the event of total building power loss, plus 30 minutes alarm condition, exceeding UL requirements.

### **TROUBLE ALERT AND TESTING**

The NMC-101SW monitors and supervises each ISD-2501UW on a continuous basis. The network addressable design permits many features and services which can be field configured to suit varied installations. When in "test mode" each ISD unit can be tested individually for buzzer operation from the NMC-101SW control unit without the added cost of entering each suite.

Enclosure Dimensions	7.5"x4.69"x2.18" (190x119x55 mm)	HxWxD (Excluding AC Blade Length)
Mounting	Electrical Power Outlet	Built-in bracket - 4 screw mounting
Supply Voltage Range	102VAC to 132VAC, 60 Hz	Operating
Power Fail Protection	Lithium Ion Battery Pack	Supervised
Enclosure Material	ABS/UL-94V0	(indoor use only)
Power Consumption	85mW, 2W	RX, TX
Operating Temperature	0 - +40 °C	<90% Humidity
Indicators	Three-color LED	Operational Status
Push to Silence (Canada) Push to Test (US & Canada)	Built-in timer Test push-button	10 minutes
Sound Output	87 dBA as tested	@10 ft. (3m) Supervised
Colors	Red, White	

Ordering Information: Red ISD-2501UR are special order

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Avery® Product # 5662

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## ISD-2501UWS IN-SUITE SIGNALING DEVICE



### APPLICABLE STANDARDS

- UL 464 Audible Signal Appliances
- UL 1971 Signaling Devices for the Hearing Impaired
- ULC S525 Standard for Audible Signal Devices
- ULC S526 Standard for Visual Signal Devices
- NFPA 72 National Fire Alarm Code

### SIGNALING



#### RESIDENTS & BUILDING OWNER BENEFITS:

- **Improved Safety:**
  - Very loud buzzer exceeds UL requirements
  - Plugs into any AC outlet for optimal audibility
  - High intensity 30 candela strobe feature
- **Minimal Disruption:**
  - One day installation
  - No building alterations required
  - Testing and monitoring of the buzzer or strobe in each unit can be monitored from the panel without entering the unit

#### INSTALLATION & TESTING BENEFITS:

- **Cost Effective:**
  - Installs in one day
  - No drilling, pulling wires or building alterations
  - Greatly reduces labour costs
- **Quicker fire alarm testing:**
  - Operation of buzzer and strobes in each unit is monitored from the panel. (*applies to installation & periodic fire alarm testing*)
- **Extended Warranty:**
  - Battery backup system now with new multi-year warranty

### DESCRIPTION

The ISD-2501UWS is designed to be used with the UL/ULC listed NMC-101SW and other Fire-Link® II Components. It is intended to supplement the signaling capabilities of a building's Fire Alarm System. By utilizing the existing wiring infrastructure (i.e. the building's own 115V AC electrical wiring) Signalink offers the fire protection industry a solution that is easy to install, can be placed anywhere a standard power line outlet exists and prevents unsightly surface raceway from being installed in public hallways. The Fire-Link® II system provides a cost-benefit solution to a North America wide audibility problem without the expense of any additional wiring!

### UNIQUE POWER LINE TECHNOLOGY

The ISD-2501UWS is a plug-in, addressable, battery-backed-up, audible and visual device. It does NOT detect smoke or carbon monoxide. It is intended for use in living and sleeping areas to ensure safety and peace of mind. The ISD-2501UWS uses Signalink's unique power line technology and 'mesh' networking to provide the highest possible reliability.

# **FIRE-LINK® II**

Fire Alarm Signaling System by Signalink

## **ISD-2501UWS** IN-SUITE SIGNALING DEVICE

### **SOUND OPTIONS**

The buzzer can be configured from the panel for synchronized continuous, march-time or temporal sound meeting the requirements of many authorities having jurisdiction. It also has a 10 minute silenceable feature (Canada only).

### **STROBE FEATURE**

The ISD-2501UWS has a 30 candela synchronized supervised strobe.

### **24 HOUR BACK UP**

Each unit is equipped with a supervised rechargeable battery pack for 24 hr. backup power to maintain communication and alarm functions in the event of total building power loss, plus 30 minutes alarm condition, exceeding UL requirements.

### **TROUBLE ALERT AND TESTING:**

The NMC-101SW monitors and supervises each ISD-2501UWS on a continuous basis. The network addressable design permits many features and services which can be field configured to suit varied installations. When in "test mode" each ISD unit can be tested individually for buzzer operation from the NMC-101SW control unit without the added cost of entering each suite.

Enclosure Dimensions	7.5"x4.69"x2.18" (190x119x55 mm)	HxWxD (Excluding AC Blade Length)
Mounting	Electrical Power Outlet	Built-in bracket - 4 screw mounting
Supply Voltage Range	102VAC to 132VAC, 60 Hz	Operating
Power Fail Protection	Lithium Ion Battery Pack	Supervised
Enclosure Material	ABS/UL-94V0	(indoor use only)
Power Consumption	85mW, 2W	RX, TX
Operating Temperature	0 - +40 °C	<90% Humidity
Indicators	Three-color LED	Operational Status
Push to Silence (Canada) Push to Test (US & Canada)	Built in timer Test push-button	10 minutes
Sound Output	87 dBA as tested	@10 ft. (3m) Supervised
Strobe	30 candela as tested	Supervised
Colors	Red, White	

Ordering Information: Red ISD-2501URS are special order

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Avery® Product # 5662

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## NMC-101SW

### NETWORK MONITORING CONTROLLER



### APPLICABLE STANDARDS

- UL 864 Commercial Fire Alarm Applications (Accessory)
- UL 985 Residential Fire Warning
- ULC S527 Commercial Fire Alarm Applications (Accessory)
- ULC S545 Residential Fire Warning System
- NFPA 72 National Fire Alarm Code



**LISTED**

### TECHNICAL FEATURES:

- One NAC bell input allows the NMC to connect to any Fire Alarm Panel
- Form 'C' Alarm and trouble relay output
- Two Class 'B' initiating circuits
- Keypad Entry and Control
- 4 Line LCD Screen for Status/Information Update
- One serial RS232 Interface for laptop
- Laptop Download and Diagnostic Program
- Addressable Multi Device Networking
- Designed to meet or exceed NFPA / UL / ULC Standards

### DESCRIPTION

The NMC-101SW is the Fire-Link® system's network monitoring controller or NMC. The NMC provides all the required functionality to act as either a UL listed two detection zone stand alone fire alarm panel; or as a UL/ULC listed accessory to an existing fire alarm control panel. In either operational mode the NMC supervises itself and reports and records the state of each In-Suite Device or ISD in its network. NMC supervisory functions include battery conditions, AC power status and NMC ground faults. All system events are kept in an Event log for immediate viewing at the four line display or downloading by laptop computer for later review. The NMC-101SW is capable of monitoring a total of 225 ISD\* in multi-transformer buildings to provide audibility upgrades in most demanding situations.

### CONTROLLED GATEWAY

The NMC-101SW is a Fire Alarm Control Unit which acts as a control gateway for Signalink's Fire-Link®II network. The NMC-101SW uses our unique Power Line Technology and 'mesh' networking to provide the highest possible reliability.

### BATTERY BACKUP

The NMC-101SW has a battery backup circuit which permits installation of an SLA (Sealed Lead Acid) battery which is monitored for low voltage and excess current conditions. Operates beyond 24 hours during a power outage.

*\*Signalink recommends that at least 2/3 of the total suite count contain ISDs to ensure reliable and trouble free operation.*

# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

## NMC-101SW

### SPECIFICATIONS

### NETWORK MONITORING CONTROLLER

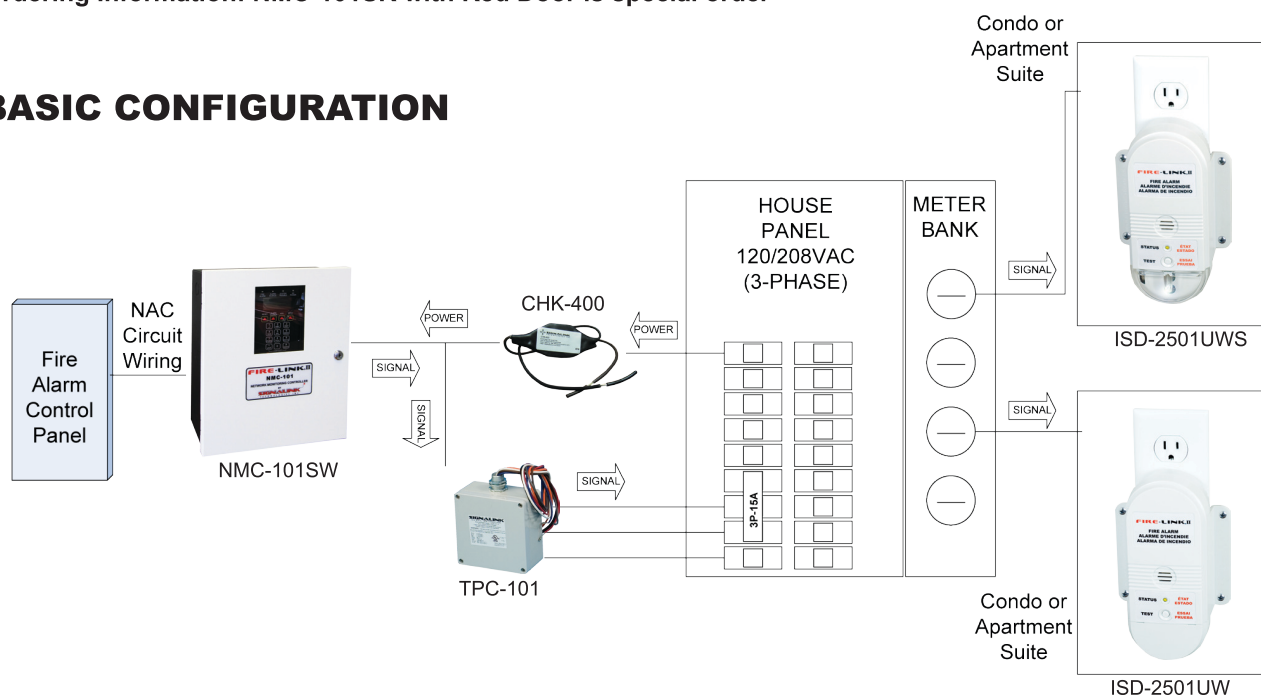
Enclosure Dimensions	14" x 12" x 4" (356 x 305 x 102)	HxWxD (mm)
Mounting	4	Screws
Supply Voltage	102-130 VAC, 60 Hz	Operating
Power Fail Battery Backup	12VDC – 12.0 AH	Sealed Lead Acid
Power Consumption	500 mW, 2.5 W	RX, TX
Operating Temperature	0 - +40 °C	< 90% Humidity
Indicators	Colored LEDs, LCD Display, Buzzer	Operational Status
Controls	Keypad, "Form C" contacts, Bell Circuit, RS-232	Operator & Fire Alarm

### ORDERING INFORMATION

Model	Description
NMC-101SW	Fire-Link® II Network Monitoring Controller, 160kHz, White Door, Black Back Box

Ordering Information: NMC-101SR with Red Door is special order

### BASIC CONFIGURATION



Signalink Technologies Inc.  
 14 - 2550 Acland Road  
 Kelowna, BC, Canada V1X 7L4  
 Phone: 1.250.491.3883  
 Toll Free: 1.888.491.3883  
 Fax: 1.250.491.3895  
 Web: www.signalink.com

sales@signalink.com  
 1.888.491.3883

Avery® Product # 5662

# **FIRE-LINK® II**

Fire Alarm Signaling System by Signalink

## **TPC-101** TRANSFORMER PHASE COUPLER



### **APPLICABLE STANDARDS**

- UL-508 Industrial Control Equipment



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### **TECHNICAL FEATURES:**

- Simple installation into electrical distribution panel
- Couples two or three phases
- Operates on two & three phase systems

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### **DESCRIPTION**

The Fire-Link® II - TPC-101 couples power line signals used in the Fire-Link® II system to two or three phases of the power distribution system in the building. One TPC-101 is required for every transformer supplying the building.

### **SIMPLE INSTALLATION**

The Fire-Link® II - TPC101 can be installed without difficulty to most common electrical distribution panels and can support most common voltage and network configurations. It targets all residential power line networks, light commercial power line networks, light industrial power line networks, along with two-phase-only power line networks.



# FIRE-LINK® II

Fire Alarm Signaling System by Signalink

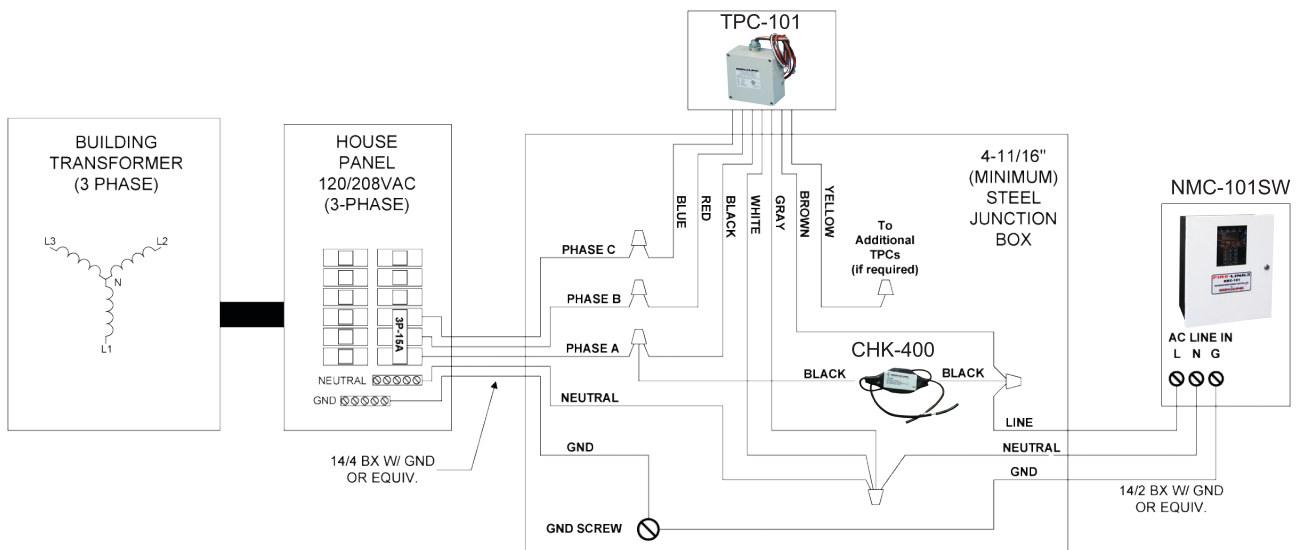
## TPC-101 TRANSFORMER PHASE COUPLER

### SPECIFICATIONS

Enclosure Dimensions	4.74"x4.75"x2"(120x120,50.8mm) 6"x4.75"x2"(152x120x50.8mm)	HxWxD nominal
Operating Voltage, Nominal	102-275V AC, 60 Hz	
Enclosure Material	ABS/UL-94V	(indoor use only)
Operating Temperature	0 to +40 °C	<90% Humidity

### ORDERING INFORMATION

Model	Description
TPC-101	Transformer Phase Coupler 160kHz



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Avery® Product # 5662



### Description

Mircom's BL-6B and BL-10B Motorized Steel Bells are designed for today's fire alarm applications. The durable steel construction provides loud resonant tones necessary for fire alarm installations.

The BL-6B and BL-10B bells use a varistor suppression element to prevent RFI and EMF noise problems to modern fire alarm control panels.

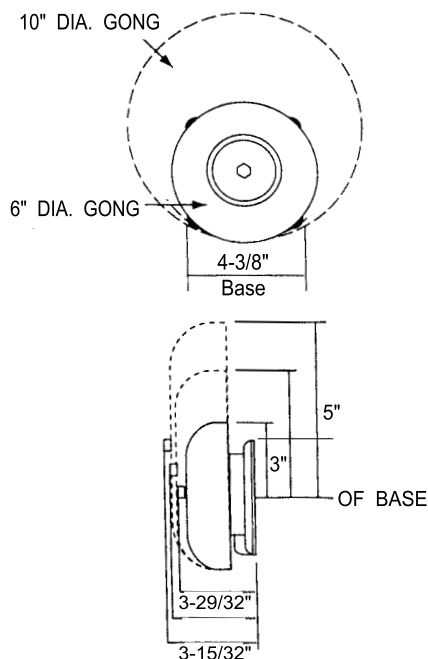
The motor used on the BL-6B and BL-10B bells operate at a very low current (20 mA) to maximize the number of bells per circuit. Both models are equipped with a pigtail connection for wiring.

Both the BL-6B and BL-10B mount on a standard 4" square electrical box for indoor use or on a BB-206WP weatherproof backbox for outdoor applications. Mounting on a 4" octagon outlet box requires the MP-101 Universal Mounting Plate.

### Features

- Low current draw (20 mA)
- 6 and 10 inch diameter steel shells for long term reliability
- RFI and EMF suppression prevents noise problems to the fire alarm control panel
- Polarized for DC supervision
- Pigtail connection
- Standard 4 inch square electrical box mounting
- Weatherproof backbox available for outdoor applications
- Red finish

### Dimensions

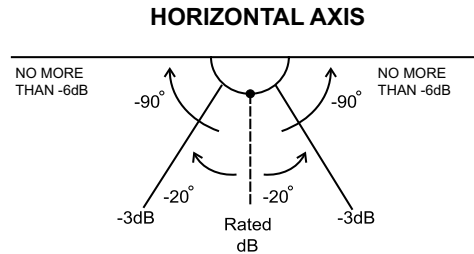
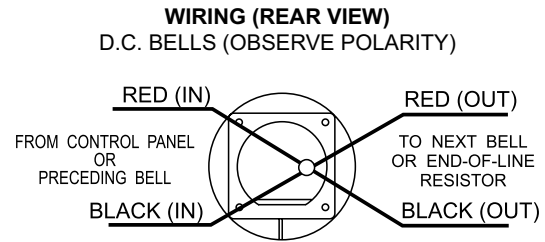
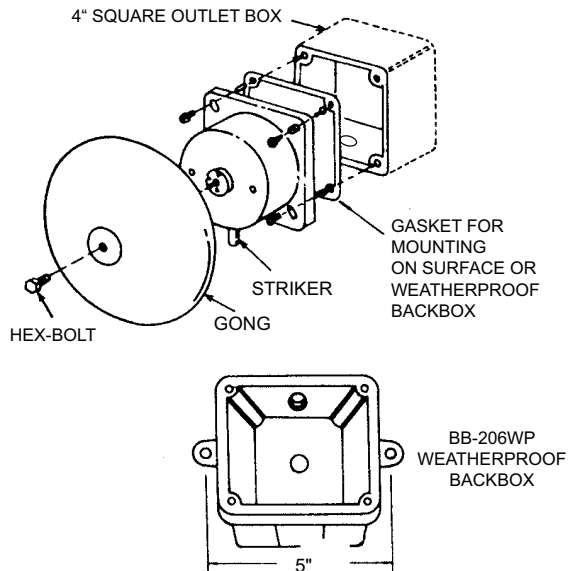


**CATALOG NUMBER 5261**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Installation Instructions



### Installation Instructions:

1. Remove the bell.
2. Wire the bell in the circuit.
3. Mount ball mechanism on 4" square standard outlet box with the striker facing down.
4. Replace the bell.
5. The bell must be mounted a minimum of 8 ft. above the floor, or as close to the ceiling as possible.
6. Polarized bell provides red(+) and black(-) lead wires. When you install the bell, polarity must be observed.

### Caution:

When electrical supervision is required, use in and out leads as shown.

### Notes:

1. Observe polarity.
2. Red wires positive (+).
3. Black wires negative (-).
4. For installation in Canada, installation must comply to Canadian Electrical Code, Part 1, ULC-S524-01, the standard for the installation of fire alarm system, and only subject to final acceptance of local AHJ.
5. For indoor use: Motor fire bell only.
6. For outdoor use: Motor fire alarm bell attached to waterproof box only.
7. Mounting to a 4" octagon box requires MP-101 mounting plate.

## Specifications

Model	Description	Voltage	Rated Current	Sound Level at 10 ft. dB
BL-6B	6" Motorized Steel Bell	24 VDC	20 mA	85
BL-10B	10" Motorized Steel Bell	24 VDC	20 mA	85

## Ordering Information

Model	Description
BL-6B	6" Motorized Steel Bell
BL-10B	10" Motorized Steel Bell
Accessories	
BB-206WP	Weatherproof Backbox
MP-101	Universal Mounting Plate
M-1995	Yard Hood
SG-210	Grill for 10" Bell Backbox
SG-210S	Brushed Stainless Steel Grill for 10" Backbox

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5261  
Rev. 2



Indoor Models  
CVX10  
CSX10



Outdoor Models  
CVXG10  
CSXG10

### Description

The CVX/CSX Series Explosion-Proof Bells have earned the reputation for rugged, reliable performance over years of service in hazardous environments. They are ideal as loud appliances or alarms in mining, chemical process plants, grain storage and refineries, to name only a few.

### UL Listed for Hazardous Atmospheres

Class	Group	Contents of Hazardous Atmosphere
I	B	Hydro
I	C	Ethyl and ether vapors
I	D	Gasoline, petroleum, naphtha, alcohol, acetone, benzene, lacquer solvent, vapors, natural gas
II	F	Carbon black, coal, coke dust
II	G	Flour, starch, grain dusts

### Features

- CSA Approved
- Rugged cast mechanism enclosure
- Available in single stroke and vibrating models
- Available in 24 VDC and 115 VAC versions.
- High sound output with large 10" bell shell
- Outdoor models include protective hood and guard

### Engineering Specifications

The alarm bells shall be Series CVX/CSX explosion-proof bells or approved equals. They shall be UL Listed for Hazardous Atmospheres, and suitable for use in Division One applications: Class One, groups B, C and D; and Class Two, groups F and G. They shall be CSA approved.

Specific models shall be designed for either single stroke or vibrating mode, and operation for either 24 VDC or 115 VAC.

Sound output at 10 feet shall be 87 dBA for single stroke versions and 90 dBA for the vibrating version.

All versions shall be polarized for DC supervision.

Operating current shall be as follows: .220 amperes for 115 VAC vibrating, .125 amperes for 115 VAC single stroke; .500 amperes for 24 VDC single stroke.

Outdoor versions shall incorporate a cast protective hood and guard over the bottom half of the bell shell. Dimensions for the indoor versions shall be 10 and one-eighth inches wide, 11 inches high and 6 and one-half inches deep. Outdoor versions shall measure 11 and one-half inches wide, 11 and one-half inches high, and 7 and one-half inches deep.



## Ordering Information

Model Number	Outdoor/Indoor	Input Voltage (VDC)	Shell Size	Input Current	dBA @ 10 ft.
CSX10-24VDC-R	Indoor	24 VDC	10"	0.500	87
CSX10-115VAC-R	Indoor	115 VAC	10"	0.125	87
CVX10-115VAC-R	Indoor	115 VAC	10"	0.220	90
CSXG10-24VDC-R	Outdoor	24 VDC	10"	0.500	87
CSXG10-115VAC-R	Outdoor		10"	0.125	87
CVXG10-115VAC-R	Outdoor	115 VAC	10"	0.220	90

**NOTES:**

All models include integral cast backbox for surface mounting with ½" threaded conduit entrances on top and bottom of housing.

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5220  
Rev. 4



### Description

The MB Series Motor Bells provide a better engineered motorbell for fire and life safety alarm systems. The MB Series Bells include higher dBA, low current draw, built-in trim plate for semi-flush mounting, low frequency aluminum shells, and low RFI noise. The motor for MB Series Bells is a durable, high torque permanent magnet motor selected for its high performance and long life.

These DC vibrating MB Series Motor Bells are offered in 6" and 10" shell sizes in both 12 and 24 VDC models.

### Features

- Approvals include: CAN/ULC-S525-99
- High sound output with low current draw
- Low frequency aluminum shells for better audibility through walls, doors and other structures
- 6" and 10" shell sizes in 12 or 24 VDC models
- Integral RFI suppression to minimize included noise on the NAC circuit
- Mounting options for surface, semi-flush, outdoor, and concealed conduit installation
- Built-in trim plate makes semi-flush mounting simpler and less expensive
- Screw terminals permit fast in-out field wiring of #12 to 18 AWG wire
- Polarized for DC supervision of NAC circuits.
- Operates on filtered or unfiltered DC
- For combined audible (bell) and visual signaling, convenient retrofit plate assemblies are available with Multi-Candela or Single candela strobes

### Engineering Specifications

The audible signal appliances shall be MB Series vibrating Motor Bells or approved equal. They shall be ULC Listed for Fire Protective Service. Shells shall be aluminum in 6" or 10" diameter. Sound output at 10 feet shall be 92 dBA @ 10 feet. The bells shall incorporate a permanent magnet motor and provide the necessary suppression to minimize RFI. They shall include a built-in trim plate for semi-flush mounting to standard 4" square backboxes, or surface mounting to the indoor BB backbox or outdoor WBB backbox.

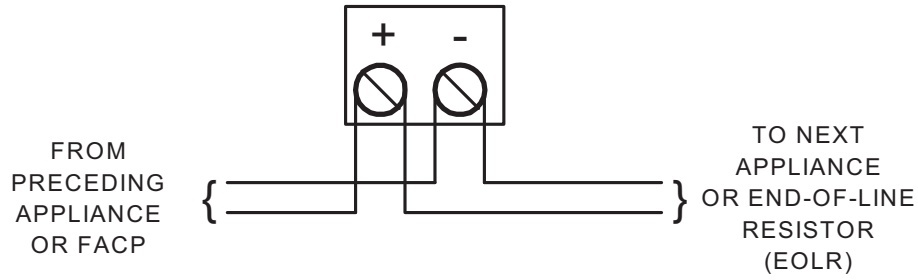


**CATALOG NUMBER** **5221**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Wiring



## Ordering Information

Model Number	Strobe Output (Candela)	Input Voltage (VDC)	Shell Size	Input Current	dBA @ 10 ft.
<b>MB-G6-12-R-ULC</b>	15, 30, 75, 110	12	6"	0.060	92
<b>MB-G6-24-R-ULC</b>	15, 30, 75, 110	24	6"	0.030	
<b>MB-G10-12-R-ULC</b>	135, 185	12	10"	0.060	
<b>MB-G10-24-R-ULC</b>	135, 185	24	10"	0.030	

**NOTE:** Typical dBA at 10 feet is measured in an anechoic chamber.

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5221  
Rev. 5



### Features

- 25 & 70 volt line matching transformers
- High dBA output (over 90 dBA at 10 feet @ 2 watts)
- D.C. blocking capacitor for line supervision
- Terminal block connection for speaker tap/output selection
- Multiple output taps. Selection for ¼, ½, 1 or 2 watts
- Moisture resistant
- Fire retardant cone material
- Factory assembled and tested
- Each speaker is equipped with a ground wire
- Off white speaker baffle
- Round or square baffles

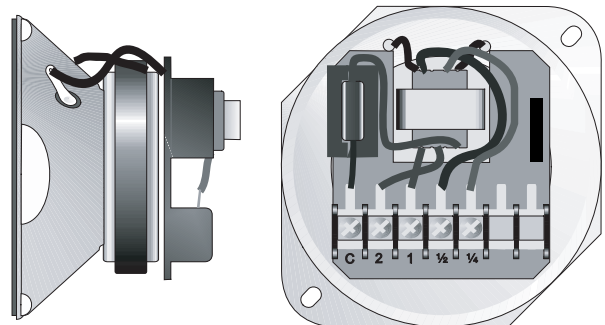
### Description

Mircom's SP-Series 4" Speakers are designed for broadcasting high quality tone signals and are ideal for alarm signaling in hotels, malls, apartments and other areas where attractive appearance and dependable performance are prime concerns.

The SP-Series 4" Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of ¼, ½, 1 and 2 watt(s). Tap selection is made by wiring into the appropriate slot on the speaker's terminal block. The SP-Series speakers install easily using the surface or flush backboxes.

Mircom fire alarm speakers are specially designed for high quality emergency fire alarm signals and voice communication. These units must be used with Mircom's QX-5000 Voice Evacuation System or any voice alarm equipment approved by Underwriters Laboratories of Canada (ULC).

### Wiring Instructions



Desired wattage is selected by wiring into the corresponding terminal on the speaker terminal block.





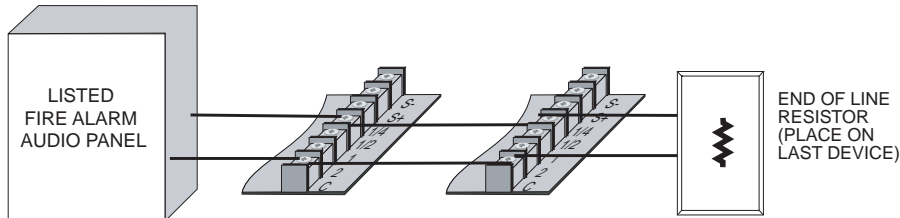
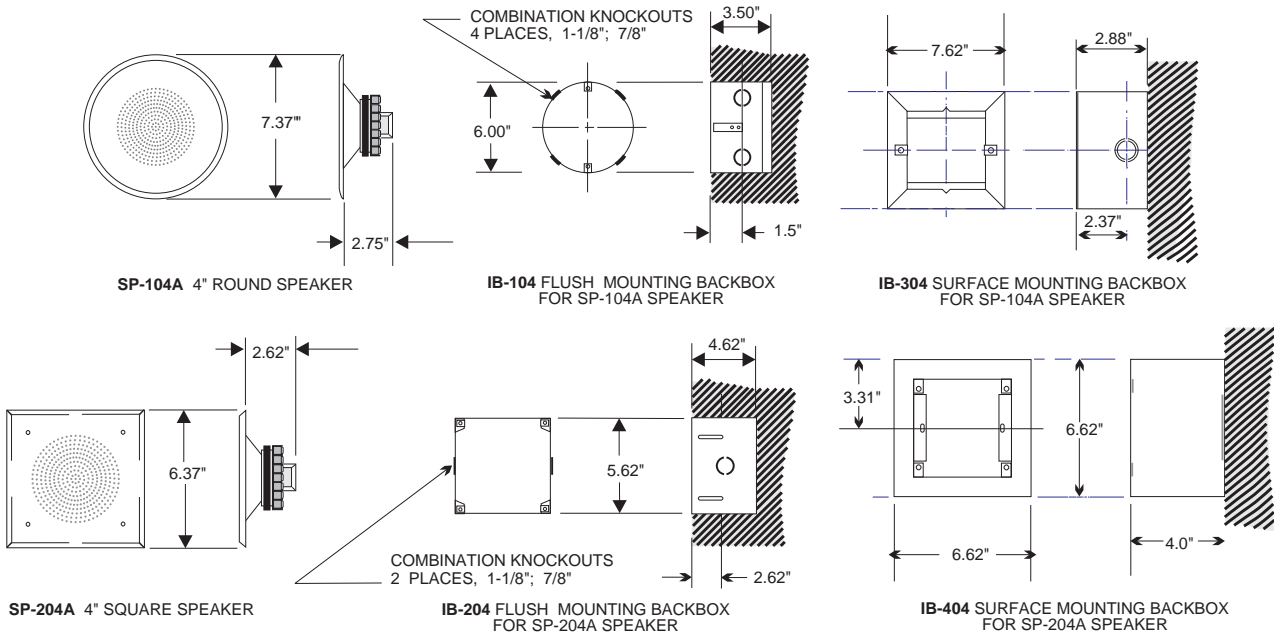
# Speaker Specifications

MODEL NUMBER	SPEAKER VOLTAGE	SPEAKER dBA 10 FT.				MOUNTING CONFIGURATIONS		BAFFLE SHAPE
		WATT TAP		TYPICAL dBA		FLUSH	SURFACE	
		¼ WATT	½ WATT	1 WATT	2 WATT			
SP-104A-25	25	85	86	89	91	IB-104	N/A	ROUND
SP-104A-70	70	85	86	89	91	IB-104	N/A	ROUND
SP-204A-25	25	85	86	89	91	IB-204	IB-404	SQUARE
SP-204A-70	70	85	86	89	91	IB-204	IB-404	SQUARE

dBA Sound Pressure Level is measured using the transformer tap shown at a distance of 10 feet (3 meters). This measurement is obtained in accordance with ULC Standard CAN/ULC-S541-M87.

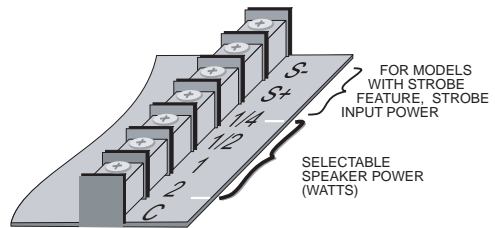
**NOTE: All Mircom enclosures are equipped with a ground screw hole. Each speaker unit is equipped with a ground wire.**

## Installation Instructions



### CAUTION

**DO NOT LOOP SIGNAL CIRCUIT FIELD WIRES AROUND TERMINALS. ELECTRICAL SUPERVISION REQUIRES WIRE RUN TO BE BROKEN AT EACH END.**



NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5700 Rev. 5



### Features

- 25 & 70 volt line matching transformers
- High dBA output (over 90 dBA at 10 feet @ 2 watts)
- D.C. blocking capacitor for line supervision
- Multiple output taps. Selection for ½, 1, 2 or 4 watts
- Moisture resistant
- Fire retardant cone material
- Factory assembled and tested
- Each speaker is equipped with a ground wire
- Off white speaker baffle
- Round or square baffles

### Description

Mircom's SP-Series 8" Speakers are designed for broadcasting high quality alert/alarm tone signals and are ideal for alarm signalling in hotels, malls, apartments and other areas where attractive appearance and dependable performance are prime concerns.

The SP-Series 8" Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of: ½, 1, 2 and 4 watt(s). The tap selection is accomplished by wiring into the appropriate slot on the speaker's terminal block.

The SP-Series speakers install easily using the surface or flush backboxes.

Mircom's fire alarm speakers are specially designed for high quality emergency fire alarm signals and voice communications. These units must be used with Mircom's QX-5000 Series Emergency Zoned Audio System or any voice alarm equipment approved by Underwriters Laboratories of Canada (ULC).



**CATALOG NUMBER** **5701**

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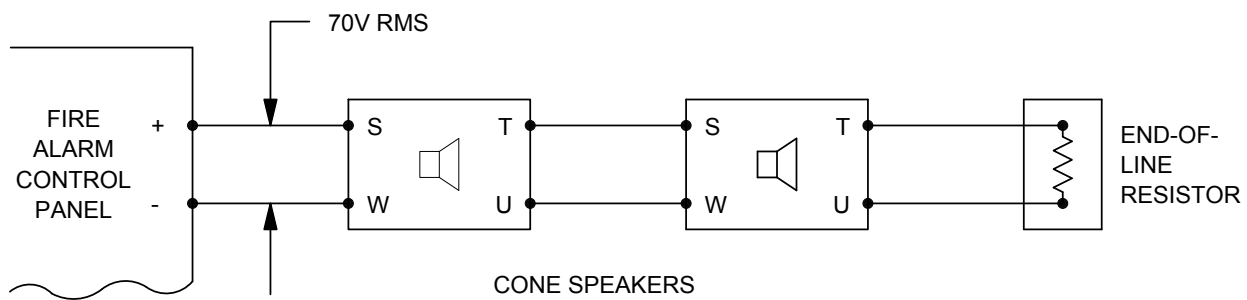
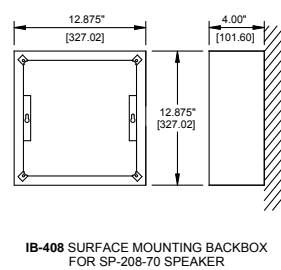
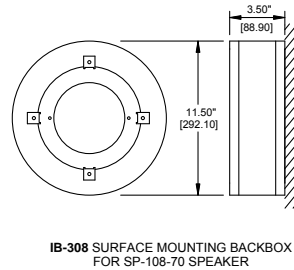
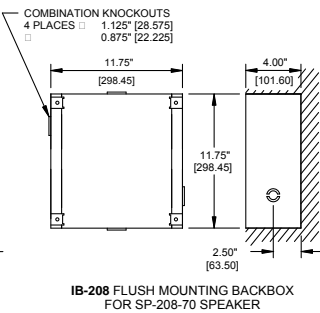
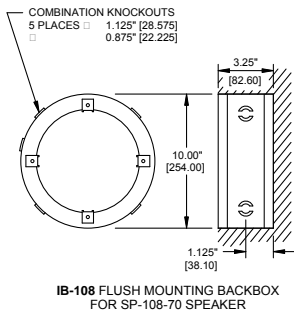
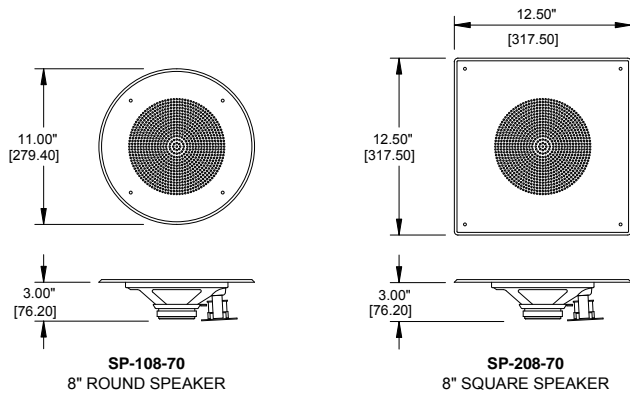
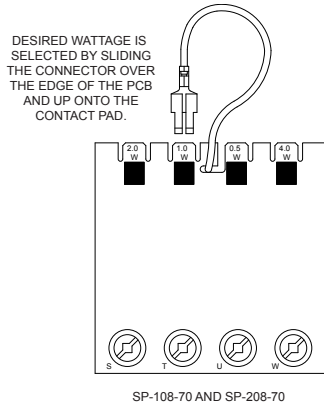
# Speaker Specifications

MODEL NUMBER	SPEAKER VOLTAGE	SPEAKER dBA 10 FT.				MOUNTING CONFIGURATIONS		BAFFLE SHAPE
		WATT TAP		TYPICAL dBA		FLUSH	SURFACE	
		½ WATT	1 WATT	2 WATT	4 WATT			
SP-108-25	25	83	87	90	93	IB-108	N/A	ROUND
SP-108-70	70	83	87	90	93	IB-108	N/A	ROUND
SP-208-25	25	83	87	90	93	IB-208	IB-408	SQUARE
SP-208-70	70	83	87	90	93	IB-208	IB-408	SQUARE

dBA is sound pressure measurement measured using the transformer tap shown at a distance of 10 feet (2.54 meters). This measurement is obtained using the ULC standard CAN/ULC-S541-M87.

**NOTE: All Mircom enclosures are equipped with a ground screw hole. Each speaker unit is equipped with a ground wire.**

## Installation Instructions



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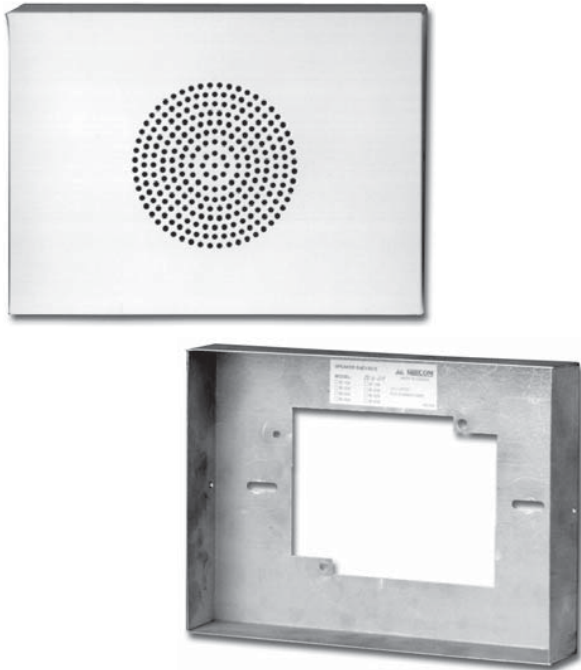
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CAT. 5701 Rev. 5



### Features

- 25 & 70 volt line matching transformers
- High dBA output (over 90 dBA at 10 feet @ 2 watts)
- D.C. blocking capacitor for line supervision
- Terminal block connection for speaker tap/output selection
- Multiple output taps. Selection for ¼, ½, 1 or 2 watts
- Moisture resistant
- Fire retardant cone material
- Factory assembled and tested
- Each speaker is equipped with a ground wire
- Off white speaker baffle
- Easily mounts over existing apartment intercom suite stations

### Description

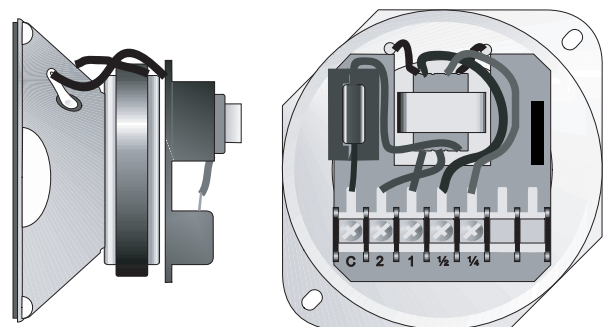
Mircom's SP-304A-25 and SP-304A-70 are retrofit speakers designed for broadcasting high quality tone signals and are ideal for alarm signaling in hotels, malls, apartments and other areas where attractive appearance and dependable performance are prime concerns.

The SP-Series 4" Retrofit Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of ¼, ½, 1 and 2 watt(s). Tap selection is made by wiring into the appropriate slot on the speaker's terminal block.

The SP-Series 4" Retrofit Speakers mount over existing apartment intercom suite stations. The suite stations that can be used are Mircom/Mirtone IS-400 Series stations, Canadian Sound and Signal's CS-10W and Couch intercom suite stations.

Mircom's fire alarm speakers are specially designed for high quality emergency fire alarm signals and voice communications. These units must be used with Mircom's QX-5000 Voice Evacuation system or with any voice alarm equipment approved by Underwriters Laboratories of Canada (ULC).

### Wiring Instructions



Desired wattage is selected by wiring into the corresponding terminal on the speaker terminal block.



**CATALOG NUMBER 5705**

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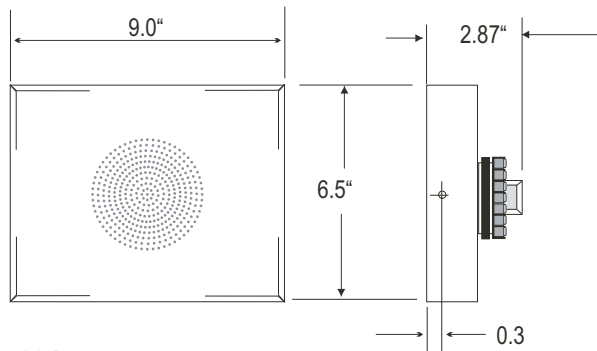
## Speaker Specifications

MODEL NUMBER	SPEAKER VOLTAGE	SPEAKER dBA 10 FT.				BAFFLE SHAPE
		WATT TAP		TYPICAL dBA		
		¼ WATT	½ WATT	1 WATT	2 WATT	
SP-304A-25	25	85	86	89	91	RECTANGLE
SP-304A-70	70	85	86	89	91	RECTANGLE

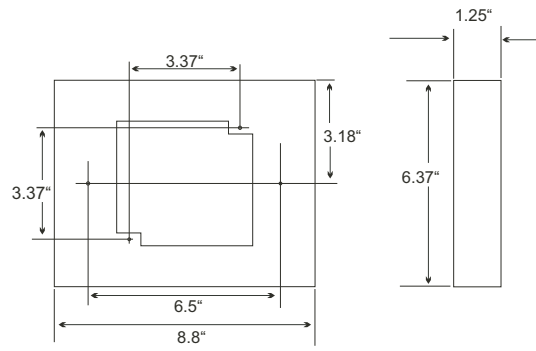
dBA Sound Pressure Level is measured using the transformer tap shown at a distance of 10 feet (3 meters). This measurement is obtained in accordance with ULC Standard CAN/ULC-S541-M87.

**NOTE: All Mircom enclosures are equipped with a ground screw hole. Each speaker unit is equipped with a ground wire.**

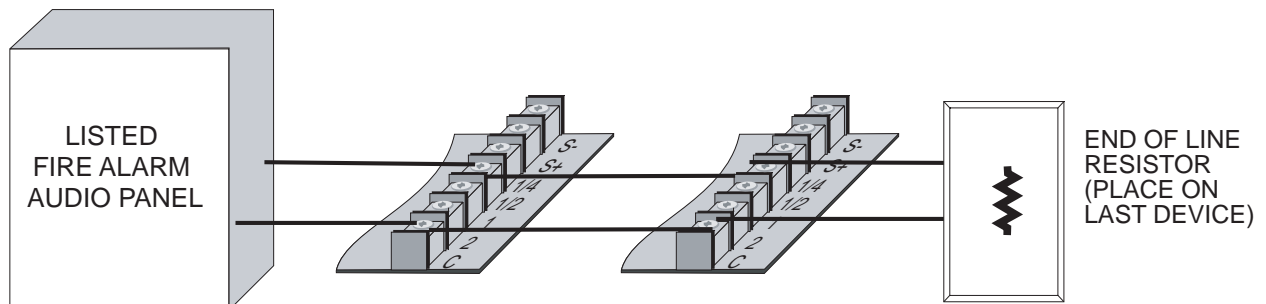
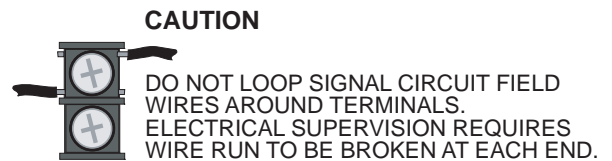
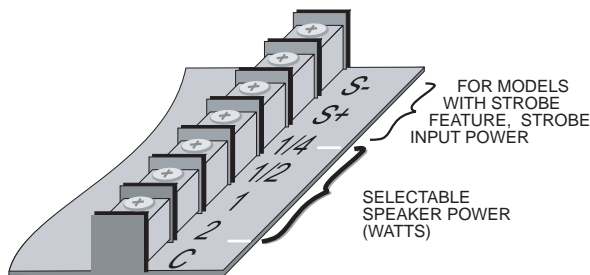
## Installation Instructions



**SP-304A** 4" RECTANGULAR SPEAKER



**IB-604** FLUSH MOUNTING BACKBOX FOR SP-304A SPEAKER



NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5705  
Rev. 5



### Description

Mircom's low profile fire alarm speakers are designed to generate attention grabbing tones and voice commands for emergency signaling evacuation applications. These highly efficient low profile speakers are available with field selectable taps from ¼ - 2 watts. The low profile speakers are available in two input voltage models 25 Vrms and 70.7 Vrms. The SPS series speaker/strobe are designed with the new Select-A-Strobe. The strobe features a unique candela intensity field selector switch for switching the candela output from 15/75 to 30/120 cd. The strobe housing is clearly labelled with "FIRE" lettering and is polarized for connecting to supervised fire alarm circuits. The strobe is designed with a xenon flashtube and provides a candela intensity field selector switch for maximum performance.

The Strobe can be synchronized by using the SDM-240 sync module. The strobe signals are listed for indoor use, ceiling and wall mount.

The SPS-Series speaker-strobe install easily using the surface or flush backboxes.

### Features

- 25 & 70 Volt line matching transformers
- DC blocking capacitor for line supervision
- Output power taps of ¼, ½, 1, and 2 watts
- Terminal block connection for speaker tap/output selection
- ULC listed for Wall or Ceiling mount
- Fire retardant cone material
- Strobe with two field selectable settings 15/75 or 30/120cd
- Polarized strobes with wide listed voltage ranges using filtered DC or unfiltered FWR input voltage
- Tamper-proof candela selector switch
- Strobe synchronization requires an SDM-240 Sync Module
- Round or square baffles
- Available in a white housing

### Specifications

The SPS-Series 4" Speaker-Strobes consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of: ¼, ½, 1 and 2 watt(s). Tap selection is done using the speaker's terminal block. The speaker shall be approved for fire alarm signaling use.

The signaling strobe's candela output shall be field selectable, having a dual setting of 15/75 cd or 30/120 cd output. The signaling strobe shall operate on 24VDC from a non-coded regulated DC supply or full-wave rectified, unfiltered supply. The signaling strobe shall be designed to produce a signal flash of one flash per second with continuously applied minimum voltage. The SPS-Series speakers shall be capable of WALL or CEILING mounting.



**CATALOG NUMBER** **5706**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Output & Current Draw Table

SPEAKER	INPUT VOLTAGE	POWER TAPS				COIL IMPEDANCE	UL FREQUENCY RANGE	SPEAKER FREQUENCY RANGE	BAFFLE COLOUR
		¼W	½W	1W	2W				
SPS-104A-25	25V RMS	85db	86db	89db	91db	8 ohms	400 Hz TO 4000 Hz	320 Hz TO 11000 Hz	OFF WHITE STEEL BAFFLE
SPS-104A-70	70V RMS								
SPS-204A-25	25V RMS								
SPS-204A-70	70V RMS								

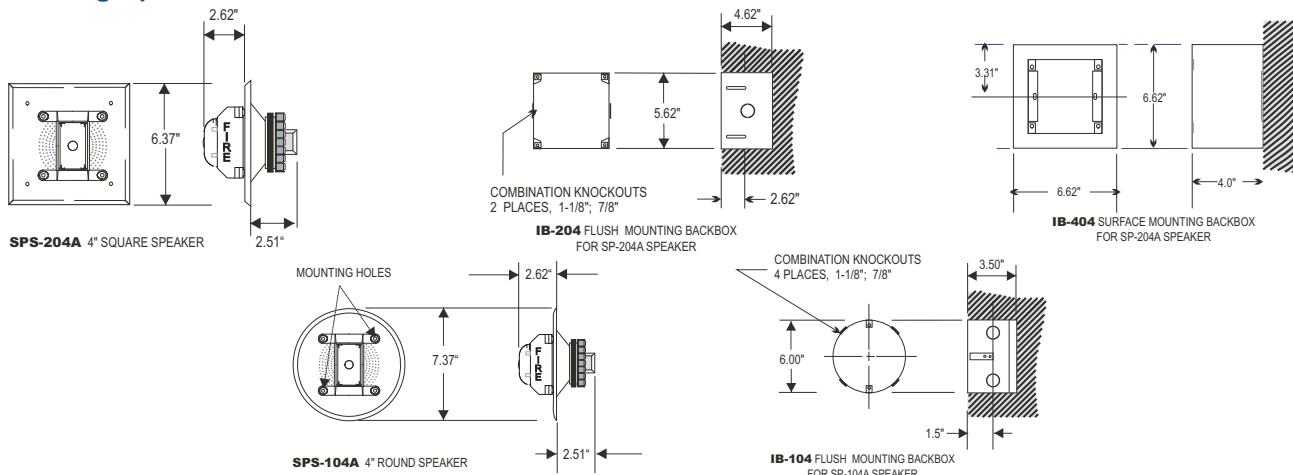
*dBA at 10ft. (3m) as measured in reverberant room per UL 1480. Meets or exceeds 85 dBA at 10ft. (3m) in an anechoic chamber using highest wattage tap per ULC-S541-1987.*

### Current Draw Table for STROBE only:

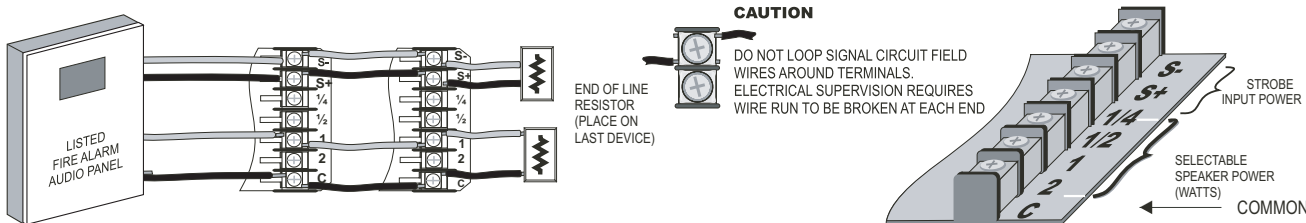
Candela	Average Current (mA) 24 volt models						Peak Current (mA) 24 volt models						In-Rush Current (mA) 24 volt models					
	19.2V		24V		26.4		19.2V		24V		26.4V		19.2V		24V		26.4V	
	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR
15/75	105	132	86	111	79	107	189	225	154	220	140	220	232	260	248	280	256	288
30/120	144	164	114	132	104	125	213	245	175	235	163	235	236	264	252	350	260	293

The strobes are listed for indoor use with a temperature operating range of 32° F to 120°F (0°C to 49°C)

## Mounting Options & Dimensions



## Typical Wiring Diagram



## Ordering Information

Model	Description
SPS-104A-25	4" Round Speaker, 25 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-104A-70	4" Round Speaker, 70 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-204A-25	4" Square Speaker, 25 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-204A-70	4" Square Speaker, 70 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
IB-104	4" Flush Backbox for Round Speakers
IB-204	4" Flush Backbox for Square Speakers
IB-404	4" Surface Backbox for Square Speakers
SDM-240	Series 200 Select-A-Horn/Strobe Sync. Module

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CAT. 5706  
Rev. 5



## Description

Mircom's low profile fire alarm speakers are designed to generate attention grabbing tones and voice commands for emergency signaling evacuation applications. These highly efficient low profile speakers are available with field selectable taps from ¼ - 2 watts. The low profile speakers are available in two input voltage models 25 Vrms and 70.7 Vrms. The SPS series speaker/strobe are designed with the new Select-A-Strobe. The strobe features a unique candela intensity field selector switch for switching the candela output from 15/75 to 30/120 cd. The strobe housing is clearly labelled with "FIRE" lettering and is polarized for connecting to supervised fire alarm circuits. The strobe is designed with a xenon flashtube and provides a candela intensity field selector switch for maximum performance.

The Strobe can be synchronized by using the SDM-240 sync module. The strobe signals are listed for indoor use, ceiling and wall mount.

The SPS-Series speaker-strobe install easily using the surface or flush backboxes.

## Features

- 25 & 70 Volt line matching transformers
- DC blocking capacitor for line supervision
- Output power taps of ½, 1, 2 and 4 watts
- Terminal block connection for speaker tap/output selection
- ULC listed for Wall or Ceiling mount
- Fire retardant cone material
- Strobe with two field selectable settings 15/75 or 30/120cd
- Polarized strobes with wide listed voltage ranges using filtered DC or unfiltered FWR input voltage
- Tamper-proof candela selector switch
- Strobe synchronization requires an SDM-240 Sync Module
- Round or square baffles
- Available in a white housing

## Specifications

The SPS-Series 8" Speaker-Strobes consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of: ½, 1, 2 and 4 watt(s). Tap selection is done using the speaker's terminal block. The speaker shall be approved for fire alarm signaling use.

The signaling strobe's candela output shall be field selectable, having a dual setting of 15/75 cd or 30/120 cd output. The signaling strobe shall operate on 24VDC from a non-coded regulated DC supply or full-wave rectified, unfiltered supply. The signaling strobe shall be designed to produce a signal flash of one flash per second with continuously applied minimum voltage. The SPS-Series speakers shall be capable of WALL or CEILING mounting.





## Output & Current Draw Table

SPEAKER	INPUT VOLTAGE	POWER TAPS				COIL IMPEDANCE	UL FREQUENCY RANGE	SPEAKER FREQUENCY RANGE	BAFFLE COLOUR
		½W	1W	2W	4W				
SPS-108A-25	25V RMS	85db	88db	89db	90db	8 ohms	400 Hz TO 4000 Hz	320 Hz TO 11000 Hz	OFF WHITE STEEL BAFFLE
SPS-108A-70	70V RMS								
SPS-208A-25	25V RMS								
SPS-208A-70	70V RMS								

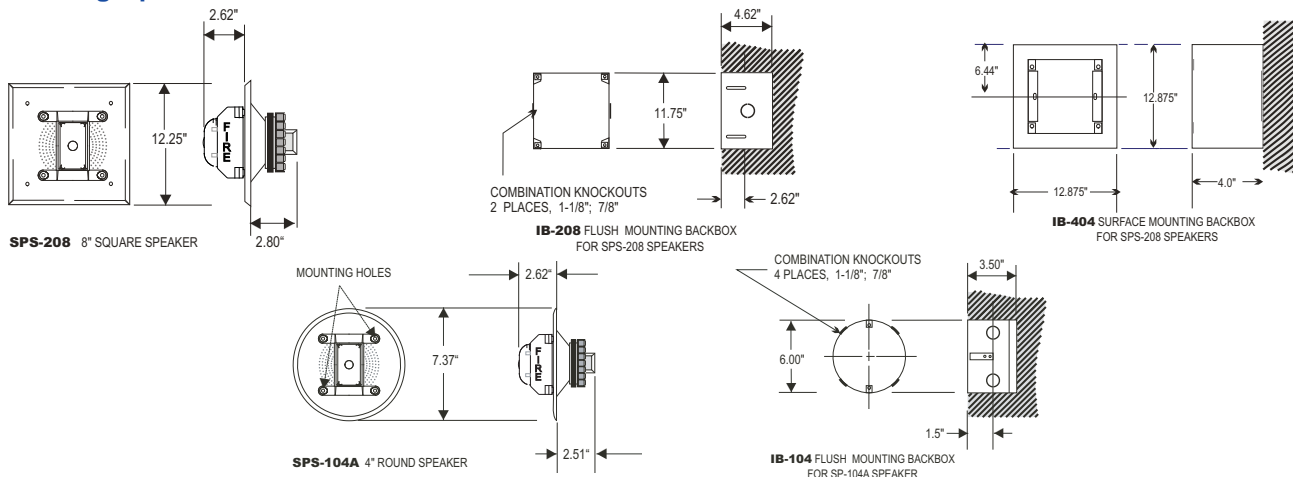
**dBA at 10ft. (3m) as measured in reverberant room per UL 1480. Meets or exceeds 85 dBA at 10ft. (3m) in an anechoic chamber using highest wattage tap per ULC-S541-1999.**

### Current Draw Table for STROBE only:

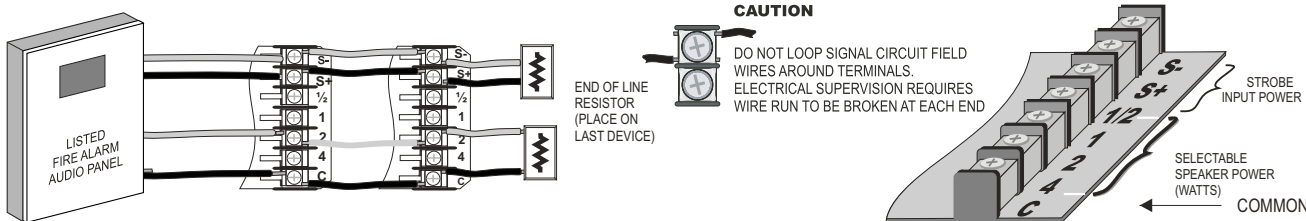
Candela	Average Current (mA) 24 volt models						Peak Current (mA) 24 volt models						In-Rush Current (mA) 24 volt models					
	19.2V		24V		26.4		19.2V		24V		26.4V		19.2V		24V		26.4V	
	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR	DC	FWR
15/75	105	132	86	111	79	107	189	225	154	220	140	220	232	260	248	280	256	288
30/120	144	164	114	132	104	125	213	245	175	235	163	235	236	264	252	350	260	293

The strobes are listed for indoor use with a temperature operating range of 32° F to 120°F (0°C to 49°C)

## Mounting Options & Dimensions



## Typical Wiring Diagram



## Ordering Information

Model	Description
SPS-108A-25	8" Round Speaker, 25 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-108A-70	8" Round Speaker, 70 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-208A-25	8" Square Speaker, 25 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
SPS-208A-70	8" Square Speaker, 70 Volt with Select-A-Strobe, White 15/75 or 30/120 Strobe Candela
IB-108	8" Flush Backbox for Round Speakers
IB-208	8" Flush Backbox for Square Speakers
IB-408	8" Surface Backbox for Square Speakers
SDM-240	Series 200 Select-A-Horn/Strobe Sync. Module

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CAT. 5719  
Rev. 1



## Description

Mircom's SP-Series 4" Smart Silenceable Speakers are designed to work with Mircom's QX-5000 Emergency Zoned Audio System for installations where it is necessary to provide silencing and resound of a local fire alarm speaker. The QX-5000 zoned audio system requires a QMP-5100A Zoned Paging module to operate with the silenceable speakers. In addition all of the silenceable speakers are compatible with Mircom's SIS-204 and SISA-204 Speaker Isolators.

The 4" smart silenceable speakers are equipped with an integral or remote switch. The SP-404SW-70A (Round) and SP-504SW-70A (Square) speakers come equipped with a built-in silence switch. The SP-404-70A (Round) and SP-504-70A (Square) speakers require the use of the SSW-100 Remote Silence Switch Module. The SSW-100 mounts in a standard single gang electrical box. Both the speakers with the built-in silence switch and the SSW-100 remote silence switch are equipped with a red LED indicator that follows the status of the signal circuit. A push-button switch is provided for local silencing of the in-suite speaker(s).

The smart silenceable speakers obtain power from the QX-5000 audio system's 70-volt audio line, thus eliminating the need for additional wiring. The silence circuitry adds ¼ watt to the tap selected. For example, a speaker tapped at ¼ watt would be calculated at ½ watt. In addition, Mircom's smart silenceable speakers allow for the silencing of non-smart speakers in the same suite. This means that only one smart speaker is required in the suite, allowing for the balance of the in-suite speakers to be conventional 70-volt speakers.

## Features

- Available with the "silence switch" either on the baffle or mounted remotely
- Designed to work with Mircom's QX-5000 Zoned Audio System (requires QMP-5100A)
- Can be used with Digitized Voice Messaging
- Compatible with the SIS-204 and SISA-204 Speaker Isolators
- 70 volt line matching transformer
- High dBA output (over 90 dBA at 10 feet @ 2 watts)
- Multiple output taps. Selection for ¼, ½, 1 or 2 watts
- Off white speaker baffle
- Round or square baffles
- Supports additional non-smart in-suite speakers
- Requires no additional wires to provide the silenceable feature

The SP-Series 4" Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 70 volt transformer is of the matching type and includes output power taps of ¼, ½, 1 and 2 watt. Tap selection is easy by wiring into the appropriate slot on the speaker's terminal block.

## Operation

Activation of the silence switch will silence the connected speaker(s) for not more than 10 minutes before resounding. When a paging message is initiated from the QMP-5100A, a 3 second pre-announce tone is used to reactivate the speaker(s) to allow for the paging message to be heard. The speaker will resound after the page is completed. In addition, when the timer expires, the speaker will resound if the alarm signal is still active. The speaker may be re-silenced in the same manner. The speaker must sound for 10 seconds before it can be silenced.

The speaker will return to "normal mode" (if previously silenced) automatically after the audio signal has ceased for more than 30 seconds. If a subsequent alarm occurs, prior to the 30 second time period (if previously silenced), the speaker will not resound until the silence time period has elapsed. Any subsequent alarm that is processed after the fire alarm panel has been silenced beyond the 30 second time period will sound immediately.



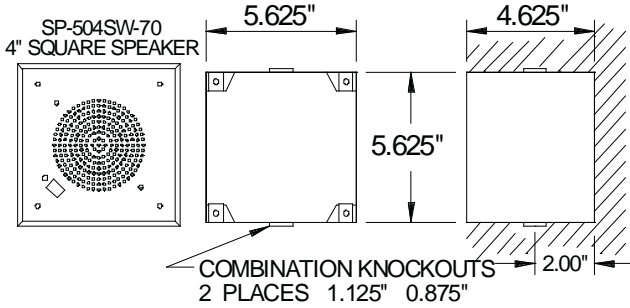
**CATALOG NUMBER** **5710**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

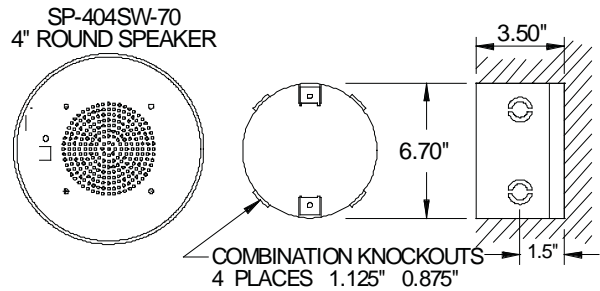
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Installation Instructions

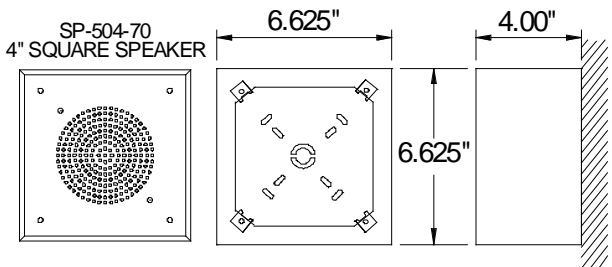
The silenceable speakers are mounted to the appropriate backboxes using the 4 screws provided. The 4" round speakers are mounted to the IB-104A backbox for flush mounting. The 4" square speakers can be mounted to either the IB-204 backbox for flush mounting or the IB-404 backbox for surface mounting.



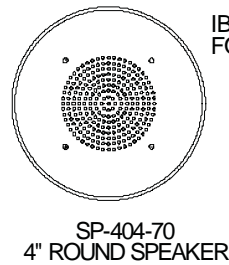
IB-204 FLUSH MOUNTING BACKBOX  
FOR SP-504-70 SPEAKERS  
SP-504SW-70 SPEAKERS



IB-104A FLUSH MOUNTING BACKBOX  
FOR SP-504-70 SPEAKERS  
SP-504SW-70 SPEAKERS



IB-404 SURFACE MOUNTING BACKBOX  
FOR SP-504-70 SPEAKERS  
SP-504SW-70 SPEAKERS

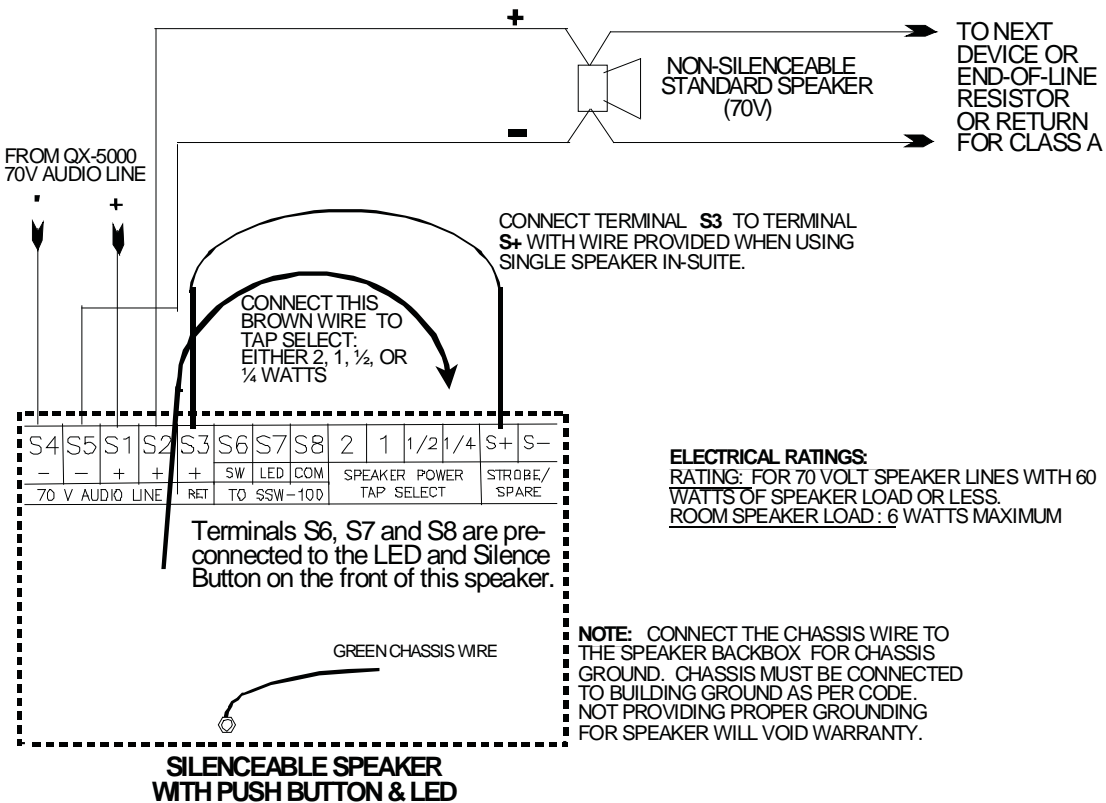


SP-404-70  
4" ROUND SPEAKER

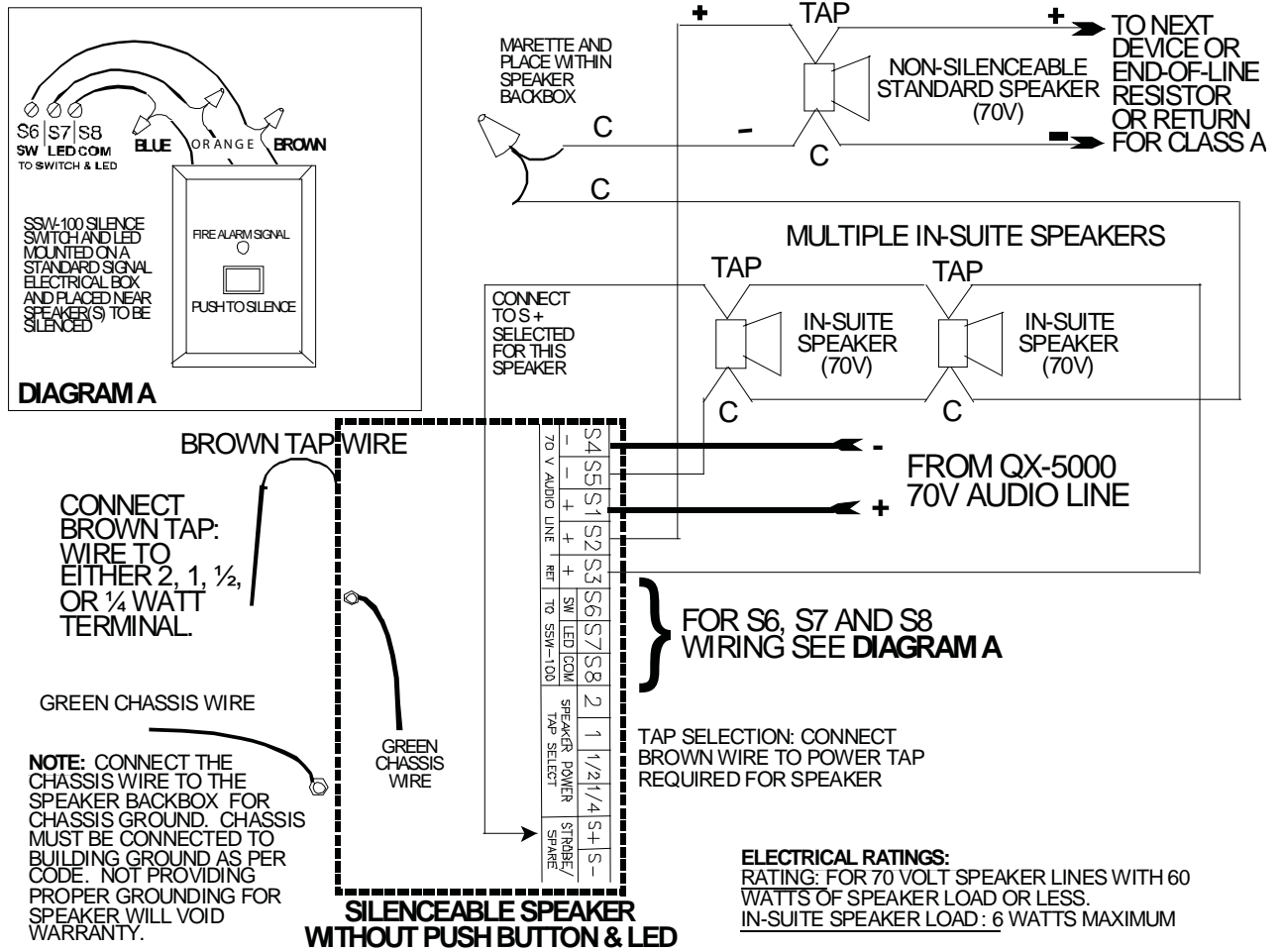
## Wiring Instructions

### Wiring Silenceable Speakers with built-in Silence switch.

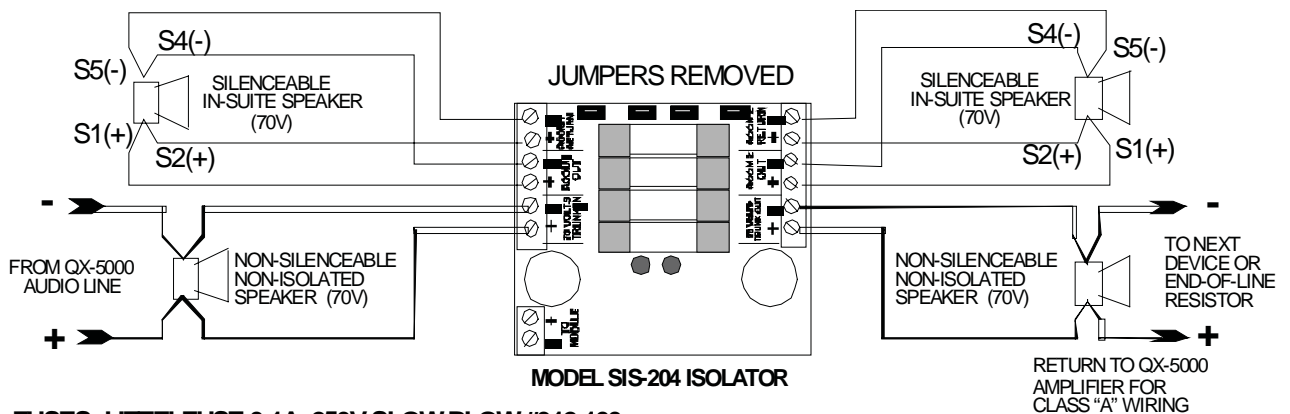
#### Models SP-404SW-70A (Round) and SP-504SW-70A (Square)



**Wiring Silenceable Speakers via the SSW-100 Silence Switch.  
Models SP-404-70A (Round) and SP-504-70A (Square)**



**Wiring Silenceable Speakers with an SIS-204 or SISA-204 Speaker Isolator Module**



**ELECTRICAL RATINGS:**  
RATING: FOR 70 VOLT SPEAKER LINES WITH 60 WATTS OF SPEAKER LOAD OR LESS.  
IN-SUITE SPEAKER LOAD: 6 WATTS MAXIMUM  
MAXIMUM NUMBER OF ISOLATORS ON A SPEAKER LINE: WITH SPECIFIED LITTELFUSE TYPE 312 FUSE.

## Speaker Specifications

MODEL NUMBER	SPEAKER VOLTAGE (RMS)	SPEAKER dBA 10 FT.				MOUNTING CONFIGURATIONS		BAFFLE SHAPE
		WATT TAP		TYPICAL dBA				
		¼ WATT	½ WATT	1 WATT	2 WATT			
SP-404-70A	25	85	86	89	91	IB-104	N/A	ROUND
SP-404SW-70A	70	85	86	89	91	IB-104	N/A	ROUND
SP-504-70A	25	85	86	89	91	IB-204	IB-404	SQUARE
SP-504SW-70A	70	85	86	89	91	IB-204	IB-404	SQUARE

dBA Sound Pressure Level is measured using the transformer tap shown at a distance of 10 feet (3 meters). This measurement is obtained in accordance with ULC Standard CAN/ULC-S541-M87.

**NOTE: All Mircom enclosures are equipped with a ground screw hole. Each speaker unit is equipped with a ground wire.**

## Electrical Specifications

Input Voltages: 70V RMS  
 Speaker Coil Impedance: 8 Ohms  
 Power Taps: ¼ watt, ½ watt, 1 watt, 2 watt  
 UL Frequency Range: 400 to 4000 Hz  
 Speaker Frequency Range: 320 to 11000 Hz  
 Standby Power: 0.0 watt  
 Power Consumption in Alarm: ¼ watt plus (add) wattage of power tap selected.  
*Maximum Number of Silenceable Speakers on a circuit is limited by the available amplifier power.*

### Ordering Information

Model	Description
SP-404-70A	In-suite Silenceable 4" Speaker, Round, 70V
SP-404SW-70A	In-suite Silenceable 4" Speaker, Round, 70V with built-in Silence Switch
SP-504-70A	In-suite Silenceable 4" Speaker, Square, 70V
SP-504SW-70A	In-suite Silenceable 4" Speaker, Square, 70V with built-in Silence Switch
SSW-100	In-suite Silence Switch used with models: SP-404-70 and SP-504-70 Mounts into a single gang electrical box. Use Temco #2104-LLE or compatible device boxes.
IB-104A	4" Flush Backbox for Round Speakers
IB-204	4" Flush Backbox for Square Speakers
IB-404	4" Surface Backbox for Square Speakers

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 Rev. 5



## Description

Mircom's SP-Series 4" Smart Silenceable Speakers are designed to work with Mircom's QX-5000 Emergency Zoned Audio System for installations where it is necessary to provide silencing and resound of a local fire alarm speaker. The QX-5000 zoned audio system requires a QMP-5100A Zoned Paging module to operate with the silenceable speakers. In addition all of the silenceable speakers are compatible with Mircom's SIS-204 and SISA-204 Speaker Isolators.

The 4" smart silenceable speakers are equipped with an integral or remote switch. The SP-404SW-70A (Round) and SP-504SW-70A (Square) speakers come equipped with a built-in silence switch. The SP-404-70A (Round) and SP-504-70A (Square) speakers require the use of the SSW-100 Remote Silence Switch Module. The SSW-100 mounts in a standard single gang electrical box. Both the speakers with the built-in silence switch and the SSW-100 remote silence switch are equipped with a red LED indicator that follows the status of the signal circuit. A push-button switch is provided for local silencing of the in-suite speaker(s).

The smart silenceable speakers obtain power from the QX-5000 audio system's 70-volt audio line, thus eliminating the need for additional wiring. The silence circuitry adds ¼ watt to the tap selected. For example, a speaker tapped at ¼ watt would be calculated at ½ watt. In addition, Mircom's smart silenceable speakers allow for the silencing of non-smart speakers in the same suite. This means that only one smart speaker is required in the suite, allowing for the balance of the in-suite speakers to be conventional 70-volt speakers.

## Features

- Available with the "silence switch" either on the baffle or mounted remotely
- Designed to work with Mircom's QX-5000 Zoned Audio System (requires QMP-5100A)
- Can be used with Digitized Voice Messaging
- Compatible with the SIS-204 and SISA-204 Speaker Isolators
- 70 volt line matching transformer
- High dBA output (over 90 dBA at 10 feet @ 2 watts)
- Multiple output taps. Selection for ¼, ½, 1 or 2 watts
- Off white speaker baffle
- Round or square baffles
- Supports additional non-smart in-suite speakers
- Requires no additional wires to provide the silenceable feature

The SP-Series 4" Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 70 volt transformer is of the matching type and includes output power taps of ¼, ½, 1 and 2 watt. Tap selection is easy by wiring into the appropriate slot on the speaker's terminal block.

## Operation

Activation of the silence switch will silence the connected speaker(s) for not more than 10 minutes before resounding. When a paging message is initiated from the QMP-5100A, a 3 second pre-announce tone is used to reactivate the speaker(s) to allow for the paging message to be heard. The speaker will resound after the page is completed. In addition, when the timer expires, the speaker will resound if the alarm signal is still active. The speaker may be re-silenced in the same manner. The speaker must sound for 10 seconds before it can be silenced.

The speaker will return to "normal mode" (if previously silenced) automatically after the audio signal has ceased for more than 30 seconds. If a subsequent alarm occurs, prior to the 30 second time period (if previously silenced), the speaker will not resound until the silence time period has elapsed. Any subsequent alarm that is processed after the fire alarm panel has been silenced beyond the 30 second time period will sound immediately.



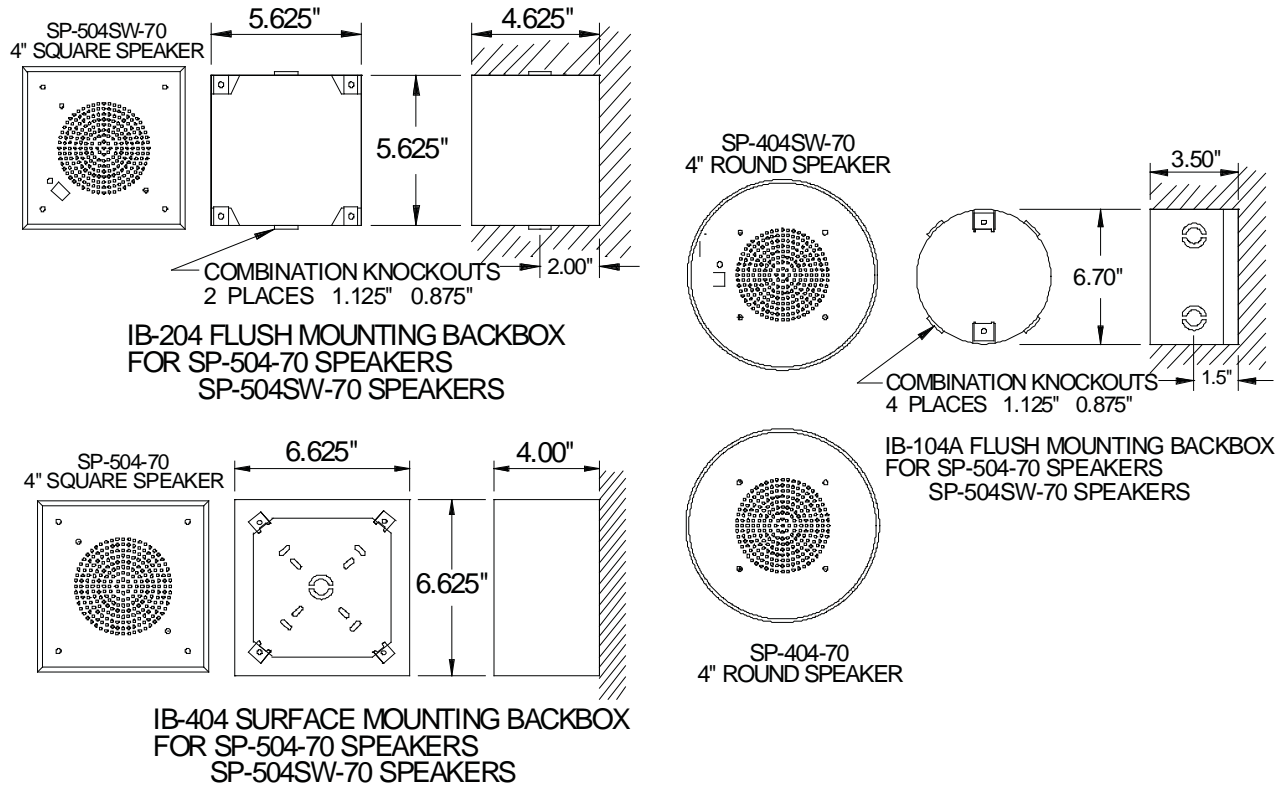
**CATALOG NUMBER 5710**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

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## Installation Instructions

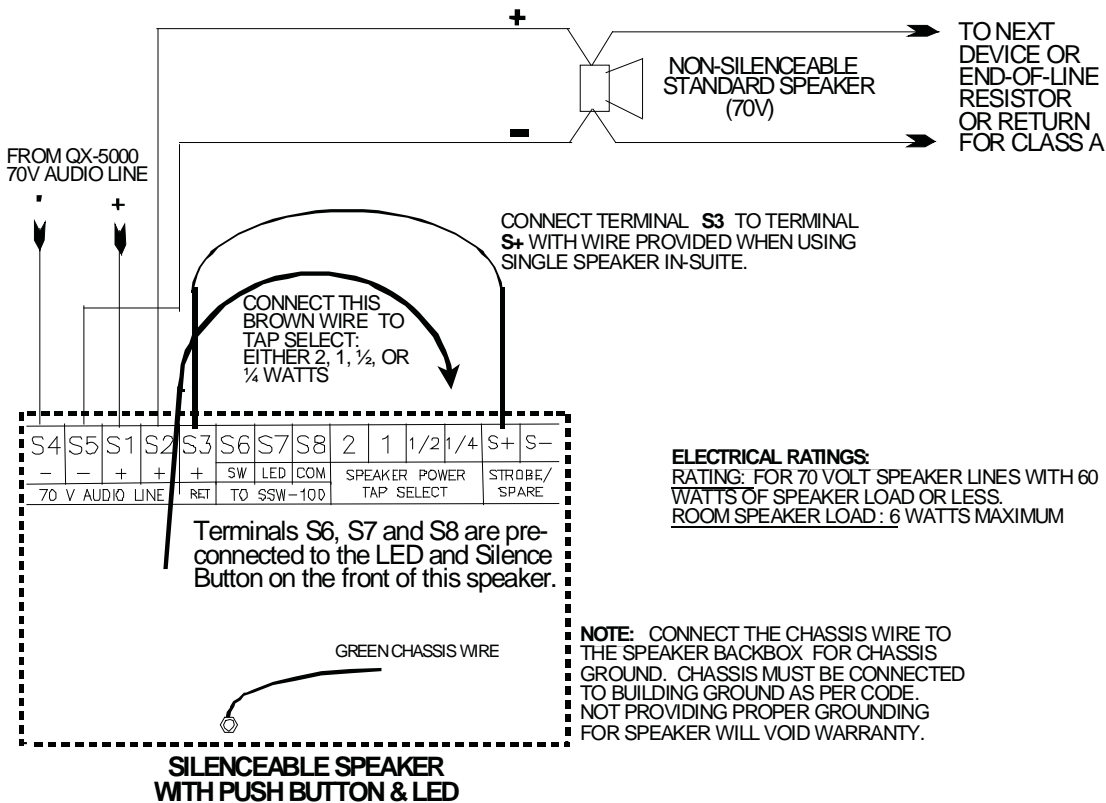
The silenceable speakers are mounted to the appropriate backboxes using the 4 screws provided. The 4" round speakers are mounted to the IB-104A backbox for flush mounting. The 4" square speakers can be mounted to either the IB-204 backbox for flush mounting or the IB-404 backbox for surface mounting.



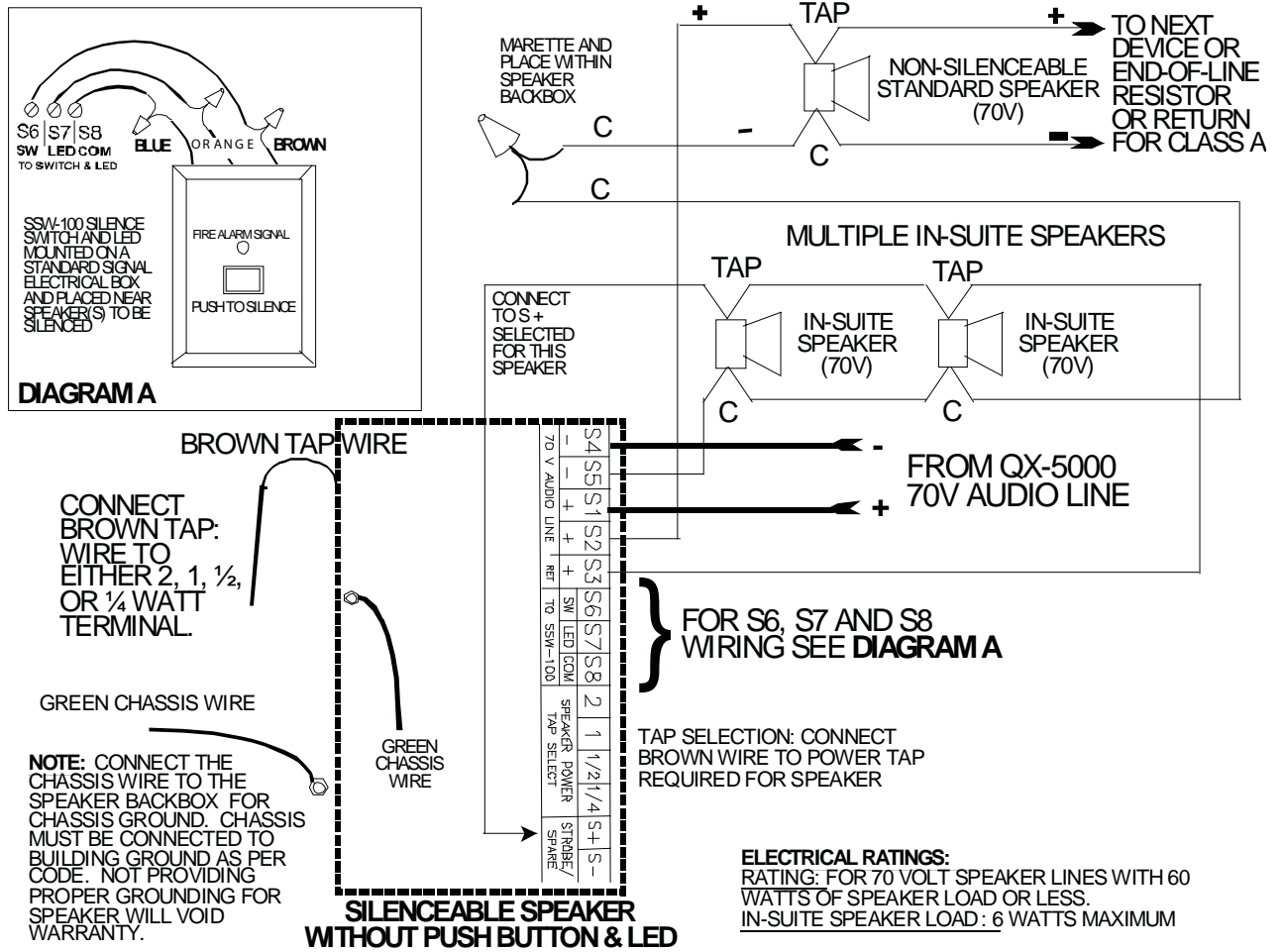
## Wiring Instructions

**Wiring Silenceable Speakers with built-in Silence switch.**

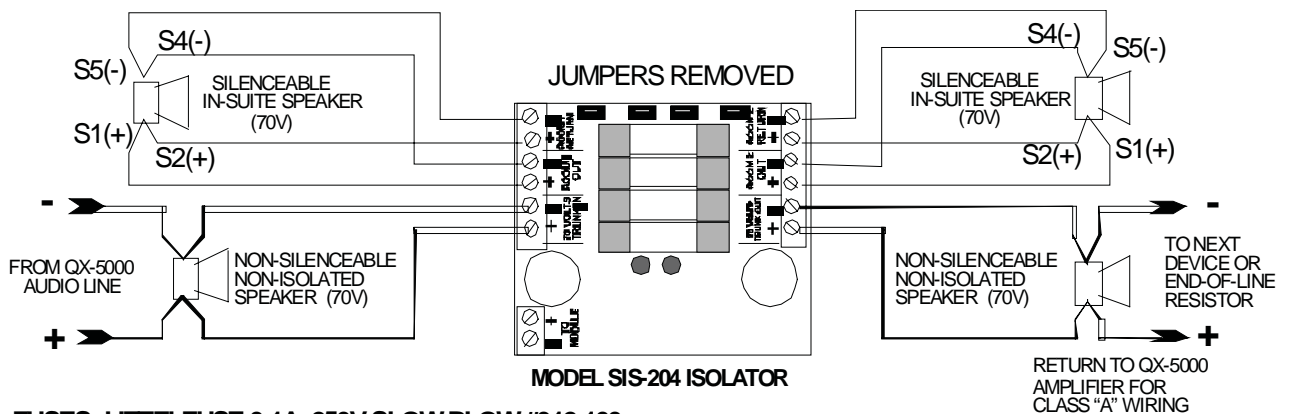
**Models SP-404SW-70A (Round) and SP-504SW-70A (Square)**



**Wiring Silenceable Speakers via the SSW-100 Silence Switch.  
Models SP-404-70A (Round) and SP-504-70A (Square)**



**Wiring Silenceable Speakers with an SIS-204 or SISA-204 Speaker Isolator Module**



**FUSES: LITTELFUSE 0.1A, 250V SLOW BLOW #312 100**

**ELECTRICAL RATINGS:**  
RATING: FOR 70 VOLT SPEAKER LINES WITH 60 WATTS OF SPEAKER LOAD OR LESS.  
IN-SUITE SPEAKER LOAD: 6 WATTS MAXIMUM  
MAXIMUM NUMBER OF ISOLATORS ON A SPEAKER LINE: WITH SPECIFIED LITTELFUSE TYPE 312 FUSE.



## Speaker Specifications

MODEL NUMBER	SPEAKER VOLTAGE (RMS)	SPEAKER dBA 10 FT.				MOUNTING CONFIGURATIONS		BAFFLE SHAPE
		WATT TAP		TYPICAL dBA				
		¼ WATT	½ WATT	1 WATT	2 WATT			
SP-404-70A	25	85	86	89	91	IB-104	N/A	ROUND
SP-404SW-70A	70	85	86	89	91	IB-104	N/A	ROUND
SP-504-70A	25	85	86	89	91	IB-204	IB-404	SQUARE
SP-504SW-70A	70	85	86	89	91	IB-204	IB-404	SQUARE

dBA Sound Pressure Level is measured using the transformer tap shown at a distance of 10 feet (3 meters). This measurement is obtained in accordance with ULC Standard CAN/ULC-S541-M87.

**NOTE: All Mircom enclosures are equipped with a ground screw hole. Each speaker unit is equipped with a ground wire.**

## Electrical Specifications

Input Voltages: 70V RMS  
 Speaker Coil Impedance: 8 Ohms  
 Power Taps: ¼ watt, ½ watt, 1 watt, 2 watt  
 UL Frequency Range: 400 to 4000 Hz  
 Speaker Frequency Range: 320 to 11000 Hz  
 Standby Power: 0.0 watt  
 Power Consumption in Alarm: ¼ watt plus (add) wattage of power tap selected.  
*Maximum Number of Silenceable Speakers on a circuit is limited by the available amplifier power.*

### Ordering Information

Model	Description
SP-404-70A	In-suite Silenceable 4" Speaker, Round, 70V
SP-404SW-70A	In-suite Silenceable 4" Speaker, Round, 70V with built-in Silence Switch
SP-504-70A	In-suite Silenceable 4" Speaker, Square, 70V
SP-504SW-70A	In-suite Silenceable 4" Speaker, Square, 70V with built-in Silence Switch
SSW-100	In-suite Silence Switch used with models: SP-404-70 and SP-504-70 Mounts into a single gang electrical box. Use Temco #2104-LLE or compatible device boxes.
IB-104A	4" Flush Backbox for Round Speakers
IB-204	4" Flush Backbox for Square Speakers
IB-404	4" Surface Backbox for Square Speakers

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CAT. 5710  
 Rev. 5

## SERIES E70 SPEAKERS AND SPEAKER STROBES



E70 Series Speaker Strobe



E70 Series Speaker



E90 Series Speaker Strobe



E90 Series Speaker

### Description

The Wheelock Series E Low Profile Speakers and Speaker Strobes are designed for high efficiency sound output, with dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 2 watts. The low profile design incorporates a speaker mounting plate for faster and easier installation. Each model has a built-in level adjustment feature and an aesthetic two (2) screw grille cover.

The Series E Speaker Strobe models incorporate the Low Current draw Series RSS Strobes.

Strobe options for wall mount models include 1575 or Wheelock patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd.

Ceiling mount models are available in Wheelock patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

Series E Speakers and Speaker Strobes provide high audio output with clear audibility and are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired.

The strobe portion of all Series E Speaker Strobes may be synchronized when used in conjunction with the Wheelock SM, DSM Sync Modules or Wheelock PS-24-8MC power supply with Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

Series E Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances), and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visual signaling. All inputs are supervised and employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for the Series E Speakers and Speaker Strobes are red, white and nickel plated.

### Features

- Approvals include: UL Standard 1971, UL Standard 1480, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM) and Chicago (BFP) See approvals by model in Specifications and Ordering Information
- ADA/NFPA/ANSI compliant
- Complies with OSHA 29 Part 1910.165
- Wall mount models are available with Field Selectable Candela Settings of 15/30/75/110cd or 135/185cd (Multi-Candela models), or 1575cd (Single Candela model)
- Ceiling mount models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd (Multi-candela models)
- Strobes produce 1 flash per second over the regulated voltage range
- 24 VDC with wide UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Synchronize with Wheelock SM, DSM or Wheelock PS-24-8MC Power Supply with built-in sync protocol
- Field selectable taps for 25 or 70 VRMS operation from 1/8 watt up to 2 watts
- High efficiency design for maximum output at minimum wattage across a frequency range of 400 to 4000 HZ
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires



CATALOG NUMBER **5250**

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**General Notes:**

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Voltage Range”. Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.
- Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- “Regulated Voltage Range” is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology “Listed Voltage Range”.

**Table 1: Average RMS Current**

E70/E90 Speaker Strobes	E70 Strobe Current - Wall Mount							E90 Strobe Current - Ceiling Mount						
	241575W	24MCW				24MCWH		24MCC				24MCCH		
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd	
<b>24 vdc</b>	<b>0.060</b>	<b>0.041</b>	<b>0.063</b>	<b>0.109</b>	<b>0.140</b>	<b>0.195</b>	<b>0.270</b>	<b>0.045</b>	<b>0.070</b>	<b>0.119</b>	<b>0.159</b>	<b>0.195</b>	<b>0.270</b>	
UL max*	0.090	0.060	0.092	0.165	0.220	0.300	.0420	0.065	0.105	0.189	0.249	0.300	0.420	

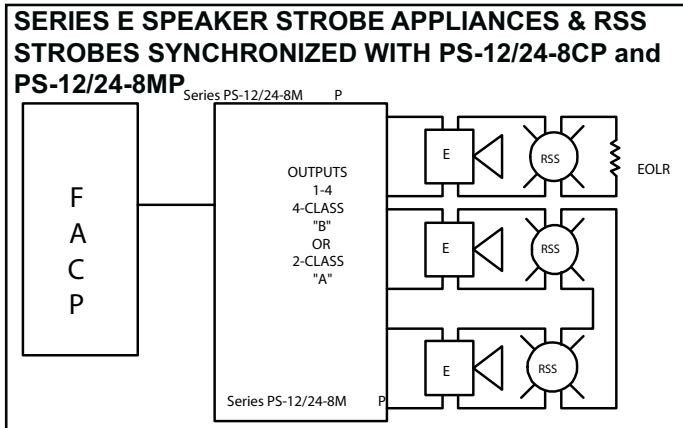
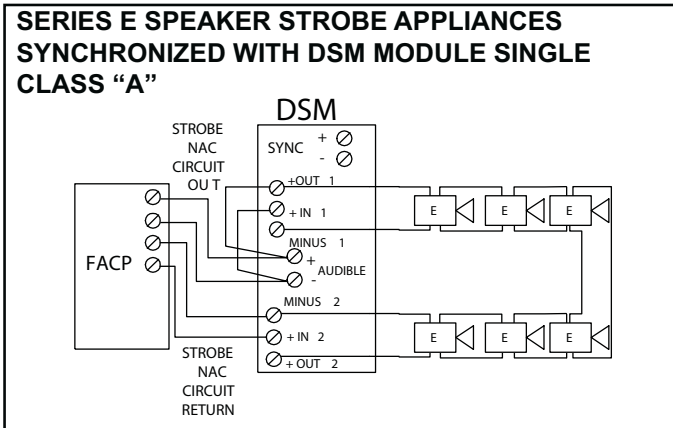
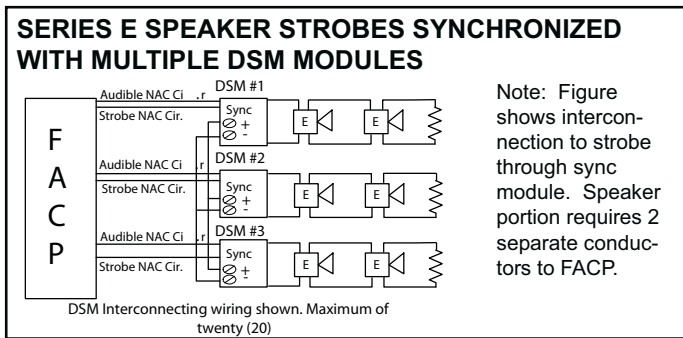
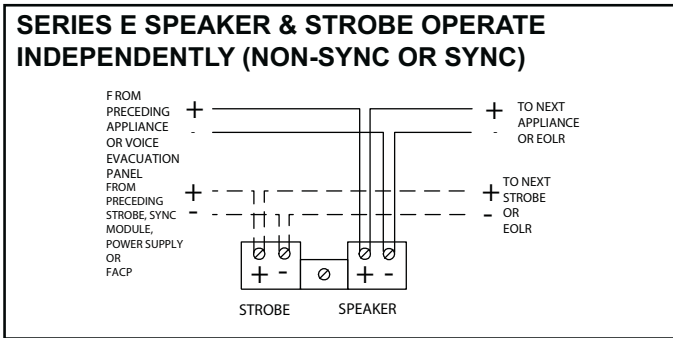
**Table 2: E70/E90 UL Reverberant dBA @ 10 Feet\*\***

watts	1/8	1/4	1/2	1	2
<b>E Speaker</b>	77	81	83	86	89
<b>E Speaker Strobe</b>	76	80	82	85	88

\*\*dBA ratings are based on testing under UL Standard 1480.

\* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

## Wiring Diagrams#



## Specifications and Ordering Information

Model	Order Code	Wall Mount	Ceiling Mount	Strobe Sync w/ SM, DSM or PS-24-8MC	Strobe Candela	Model Color RED	Model Color White	Model Color Nickel	Mounting Options	Agency Approvals				
										UL	MEA	CSFM	FM	BFP
E70-24MCW-FR	9022	X	-	X	15/30/75/110	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-24MCW-FW	9023	X	-	X	15/30/75/110	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-24MCW-FN	3099	X	-	X	15/30/75/110	-	-	X	Q,U	X	X	X	X	X
E70-241575W-FR	7871	X	-	X	15 (75 on Axis)	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-241575W-FW	7876	X	-	X	15 (75 on Axis)	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-241575W-FN	3100	X	-	X	15 (75 on Axis)	-	-	X	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-R	7866	X	X	-	-	X	-	-	Q,U	X	X	X	X	X
E70-W	7868	X	X	-	-	-	X	-	Q,U	X	X	X	X	X
E70-N	3108	X	X	-	-	-	-	X	Q,U	X	X	X	X	X
E70-24MCWH-FR	3470	X	-	X	135/185	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	*
E70-24MCWH-FW	3474	X	-	X	135/185	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	*
E70-24MCWH-FN	0059	X	-	X	135/185	-	-	X	Q,U	X	X	X	X	*
E90-24MCC-FW	3166	-	X	X	15/30/75/95	-	X	-	Q,U,V	X	X	X	X	*
E90-24MCC-FR	3165	-	X	X	15/30/75/95	X	-	-	Q,U,V	X	X	X	X	*
E90-24MCC-FN	3185	-	X	X	15/30/75/95	-	-	X	Q,U,V	X	X	X	X	*
E90-W	7869	X	X	-	-	-	X	-	Q,U,V	X	X	X	X	X
E90-R	7867	X	X	-	-	X	-	-	Q,U,V	X	X	X	X	X
E90-N	3109	X	X	-	-	-	-	X	Q,U,V	X	X	X	X	X
E90-24MCCH-FW	3471	-	X	X	115/177	-	X	-	Q,U,V	X	X	X	X	*
E90-24MCCH-FR	3481	-	X	X	115/177	X	-	-	Q,U,V	X	X	X	X	*
E90-24MCCH-FN	0062	-	X	X	115/177	-	-	X	Q,U,V	X	X	X	X	*

\*PENDING

## Architects and Engineers Specifications

The speaker appliances shall be Wheelock Series E Speakers and the speaker strobe appliances shall be Wheelock Series E Speaker Strobes or approved equals. The speakers shall be UL Listed under Standard 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL Standard 1971 for Emergency Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class B.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts. All models shall have listed sound output of up to 87 dB at 10 feet and a listed frequency response of 400 to 4000 Hz. The speaker shall also incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The strobe shall be of low current design. Where Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mount and 15/30/75/95cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance).

When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock SM, DSM sync modules or Wheelock PS-24-8MC power supply with built-in Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor surface or flush mounting. The speaker and speaker strobe shall incorporate a speaker mounting plate with a grille cover which is secured with two screws for a level, aesthetic finish and shall mount to standard electrical hardware requiring no additional trimplate or adapter.

The finish of the Series E speakers and strobe speakers shall be white, red, or nickel plate.

All speaker and speaker strobe appliances shall be backward compatible.

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## SERIES ET SPEAKERS AND SPEAKER STROBES



ET70 Series Speaker Strobe



ET70 Series Speaker



ET90 Series Speaker Strobe



ET90 Series Speaker

### Description

The Wheelock high performance Series ET Speakers and Series ET Speaker Strobes provide high audio output, clear audibility, dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 8 watts. They are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired.

The low profile design incorporates a speaker mounting plate for faster and easier installation. Each model has a built-in level adjustment feature and an aesthetic two (2) screw grille cover.

The Series ET Speaker Strobe models incorporate Low Current draw Series RSS Strobes.

Strobe options for wall mount models include 1575 cd or Wheelock's patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd.

Ceiling mount models are available in Wheelock's patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

The strobe portion of all Series ET Strobes may be synchronized when using the Wheelock SM, DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

Series ET70 and ET90 Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing Impaired) and Standard 1480 (Speaker Appliances), and use a Xenon flashtube with solid state circuitry enclosed in a rugged

Lexan® lens to provide maximum reliability for effective visual signaling. All inputs are supervised and employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for Series ET speakers and speaker strobes are red, white, or nickel plated. Series ET70 and ET90 Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing Impaired) and Standard 1480 (Speaker Appliances), and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visual signaling. All inputs are supervised and employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for Series ET speakers and speaker strobes are red, white, or nickel plated.

### Features

- Approvals include: UL Standard 1971, UL Standard 1480, New York City (MEA), California State Fire Marshall (CSFM), Factory Mutual (FM), and Chicago (BFP) See approvals by model in Specifications and Ordering Information
- ADA/NFPA/UFC/ANSI compliant
- Meets OSHA 29 Part 1910.165
- Wall mount models are available with Field Selectable Candela Settings of 15/30/75/110cd or 135/185cd (Multi-Candela models) or 1575cd (Single Candela model)
- Ceiling mount models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd (multi-candela models)
- Strobes produce 1 flash per second over the regulated voltage range
- 24 VDC with wide UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Synchronize with sync modules or power supplies with built-in sync protocol
- Field selectable taps for 25 or 70 VRMS operation from 1/8 watt to 8 watts
- High efficiency design for maximum output at minimum wattage across a frequency range of 400 to 4000 HZ
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires



CATALOG NUMBER **5251**

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**General Notes:**

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Voltage Range”. Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.
- Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- “Regulated Voltage Range” is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology “Listed Voltage Range”.

**Table 1: UL Max Current\***

ET70/ET90 Speaker Strobes	ET70 Strobe current - Wall Mount							ET90 Strobe current - Ceiling Mount					
	241575W	24MCW				24MCWH		24MCC				24MCCH	
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
16-33 VDC	0.090	0.060	0.092	0.165	0.220	0.300	0.420	0.065	0.105	0.189	0.249	0.300	0.420

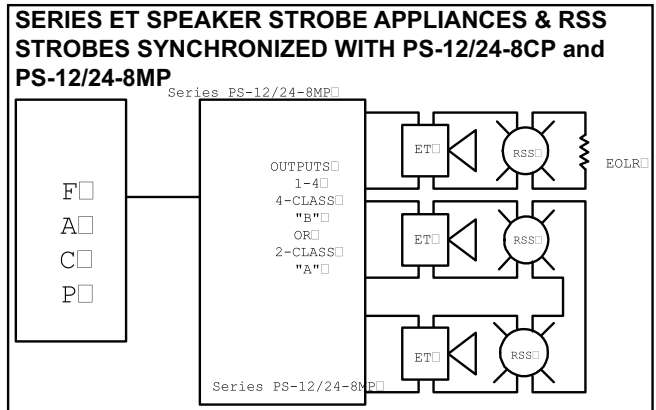
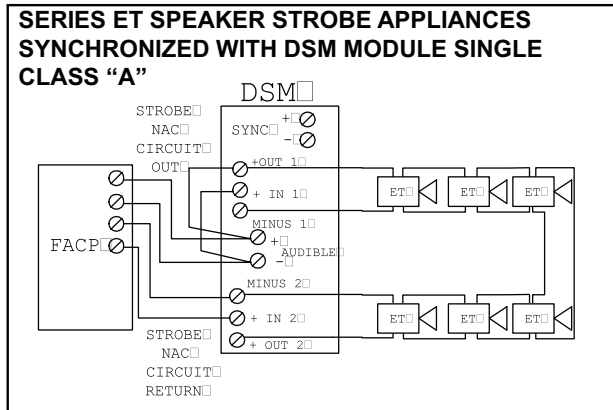
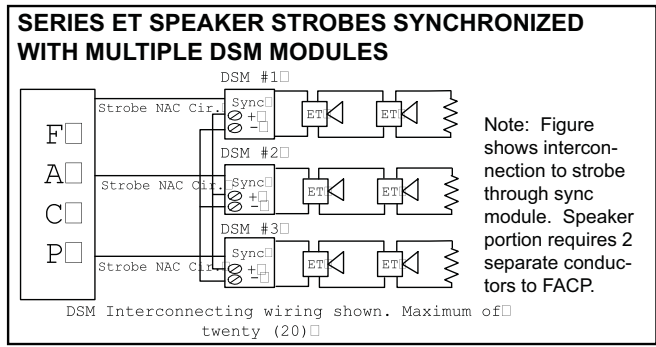
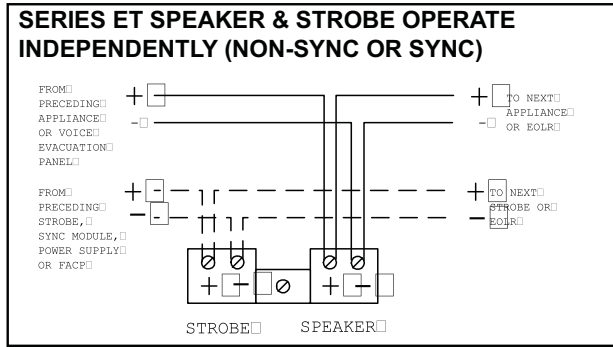
**Table 2: ET70/ET90 UL Reverberant dBA @ 10 Feet\*\***

watts	1/8	1/4	1/2	1	2	4	8
ET Speaker	75.0	78.0	81.0	84.0	87.0	90.0	93.0
ET Speaker Strobe	75.0	78.0	81.0	84.0	87.0	90.0	93.0

\*\*dBA ratings are based on UL testing under UL Standard 1480

\* UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

## Wiring Diagrams



## Specifications and Ordering Information

Model	Order Code	Wall Mount	Ceiling Mount	Non-Sync	Strobe Sync w/ SM, DSM or PS-12/24-8CP/MP	Strobe Can- dela	# Model Color RED	# Model Color White	# Model Color Nickel	Mounting Options	Agency Approvals				
											UL	MEA	CSFM	FM	BFP
ET70-24MCW-FR	9020	X	-	X	X	15/30/75/110	X	-		L,O,P,Q,U,Y	X	X	X	X	X
ET70-24MCW-FW	9021	X	-	X	X	15/30/75/110	-	X		L,O,P,Q,U,Y	X	X	X	X	X
ET70-24MCW-FN	3091	X	-	X	X	15/30/75/110	*	-	X	L,O,P,Q,U,Y	X	X	X	X	X
ET70-241575W-FR	7848	X	-	X	X	15 (75 on Axis)	X	-		L,O,P,Q,U,Y	X	X	X	X	X
ET70-241575W-FW	7853	X	-	X	X	15 (75 on Axis)	-	X	-	L,O,P,Q,U,Y	X	X	X	X	X
ET70-241575W-FN	3092	X	-	X	X	15 (75 on Axis)	-	-	X	L,O,P,Q,U,Y	X	X	X	X	X
ET70-24MCWH-FR	3472	X	-	X	X	135/185	X	-	-	L,O,P,Q,U,Y	X	X	X	X	*
ET70-24MCWH-FW	3475	X	-	X	X	135/185	-	X	-	L,O,P,Q,U,Y	X	X	X	X	*
ET70-24MCWH-FN	0061	X	-	X	X	135/185	-	-	X	L,O,P,Q,U,Y	X	X	X	X	*
ET70WP-2475-FR	9077	X	-	X	X	180	X	-	-	M (Outdoor)	X	X	X	*	*
ET90-24MCC-FW	3164	-	X	X	X	15/30/75/95	-	X	-	L,Q,U,V,Y	X	X	X	X	*
ET90-24MCC-FR	3163	-	X	X	X	15/30/75/95	X	-	-	L,Q,U,V,Y	X	X	X	X	*
ET90-24MCC-FN	3186	-	X	X	X	15/30/75/95	-	-	X	L,Q,U,V,Y	X	X	X	X	*
ET90-24MCCH-FW	3473	-	X	X	X	115/177	-	X	-	L,Q,U,V,Y	X	X	X	X	*
ET90-24MCCH-FR	0139	-	X	X	X	115/177	X	-	-	L,Q,U,V,Y	X	X	X	X	*
ET90-24MCCH-FN	0062	-	X	X	X	115/177	-	-	X	L,Q,U,V,Y	X	X	X	X	*
ET70-R	7840	X	X	-	-	-	X	-	-	L,O,P,Q,U,Y	X	X	X	X	X
ET70-W	7844	X	X	-	-	-	-	X	-	L,O,P,Q,U,Y	X	X	X	X	X
ET70-N	3097	X	X	-	-	-	-	-	X	L,O,P,Q,U,Y	X	X	X	X	X
ET90-R	7842	X	X	-	-	-	X	-	-	L,Q,U,V,Y	X	X	X	X	X
ET90-W	7846	X	X	-	-	-	-	X	-	L,Q,U,V,Y	X	X	X	X	X
ET90-N	3098	X	X	-	-	-	-	-	X	L,Q,U,V,Y	X	X	X	X	X

\*PENDING



## Architects and Engineers Specifications

The speaker appliances shall be Wheelock Series ET Speakers and speaker strobe appliances shall be Wheelock Series ET Speaker Strobes or approved equals. The speakers shall be UL Listed under Standard 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL Standard 1971 for Signaling Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class B.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 8 watts.

All models shall have listed sound output of up to 93 dB at 10 feet and a listed frequency response of 400 to 4000 Hz. The speaker shall also incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes.

The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The strobe shall be of low current design. Where, Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mount and 15/30/75/95 cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 1575 strobe shall be specified when 15 candela UL Standard 1971 listing with 75 candela onaxis is required (e.g. ADA compliance).

When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock's SM, DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels with built-in Wheelock Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor surface or flush mounting. The speaker and speaker strobe shall incorporate a speaker mounting plate with a grille cover which is secured with two screws for a level, aesthetic finish and shall mount to standard electrical hardware requiring no additional trimplate or adapter.

The finish of the Series ET speakers and speaker strobes shall be white, red or nickel plate.

All speakers and speaker strobes shall be backward compatible.

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5251  
Rev. 3



## Description

Mircom's MH-25 Series mini horns are compact electronic alarm appliances that are ideal for alarm signalling in individual rooms, apartments, hotels and offices where attractive appearance and dependable performance are prime concerns. When activated, the MH-25 Series mini-horns produce a high sound output of over 90 dBA at 10 feet with a minimum current draw of 15.5 milliamps at 24 VDC (unfiltered) on the non silenceable models. Designed as alert or alarm signal appliances for use with any conventional Fire Alarm Control panel, the MH-Series mini horns are available in a standard version (MH-25) and a Silenceable version (MH-S25).

The MH-S25 versions are silenceable mini horns equipped with a "Silence" push button and a red LED to indicate "active signal circuit" when lit. The push button allows the user to silence the mini-horn for a maximum of 10 minutes upon which the mini-horn will sound again until the signal circuit is inactive or the mini horn is silenced again or the fire alarm panel is reset. Upon the fire alarm being reset, it takes approximately 25 seconds for the MH-S25 Mini-Horns to reset.

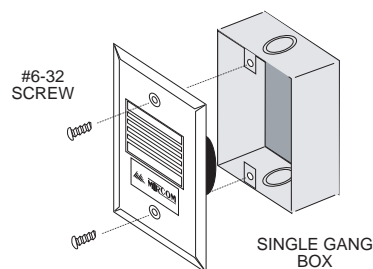
All MH-25 Series mini horns are designed for easy installation with convenient mounting to standard single gang boxes and in-out wire leads for fast connection. The front face plates are ruggedly constructed of high impact thermoplastic and are available in fire alarm red or off-white to blend with any room decor.

## Features

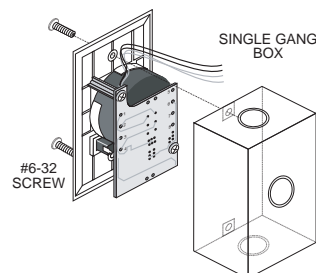
- High sound output for enhanced audibility (over 90 dBA at 10 feet) @ 24VDC
- "Silence" push button and red LED to indicate "active signal circuit" on MH-S25 versions
- 24 VDC models with wide listed voltage range, filtered DC (Non Silenceable only)
- Polarized inputs for compatibility with standard reverse polarity supervision of circuit wiring by an alarm panel
- Mounts into standard single gang box
- Flush or surface mounting options
- Compatible with sensitive detection and communication circuits
- Available in red or off-white finish

## Installation Instructions

### MH-25 Mini-Horn



### MH-S25 Silenceable Mini-Horn



**Note:** The MH-25 Series mini-horns are compatible with the CSIS-202 and CNSIS-204 Conventional Signal Isolator Modules. Please refer to Cat. Sheet #5223 and #5224.



S5375  
(MH-25R/  
MH-25W)



S5375



7135-1477:118  
(MH-25R/  
MH-25W)

**MEA**  
approved

313-97-E  
(MH-25R/  
MH-25W)

CATALOG NUMBER **5208**

NOT TO BE USED FOR INSTALLATION PURPOSES.

Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

# Specifications

## MH-25R/MH-25W

Rated Voltage	10-28VDC			
Operating Voltage (V)	10	12	24	28
Current (mA)	5	6	17	27
Sound Level (dB)	85	87	91	95

## MH-S25R/MH-S25W

Rated Voltage	24-28VDC (Filtered or unfiltered (full-wave rectified))		
Rated Current	30 mA		
Sound Level (dB)	Operating Voltage (V)	24	28
	Indoor Measurement (dB @ 10 ft)	90	90

### Operating Temperature

-4°F to 140°F (-20°C to 60 °C)

### Weight

2.2oz (63g)

### Colour Selection

Red/White

### Plate

A.B.S.

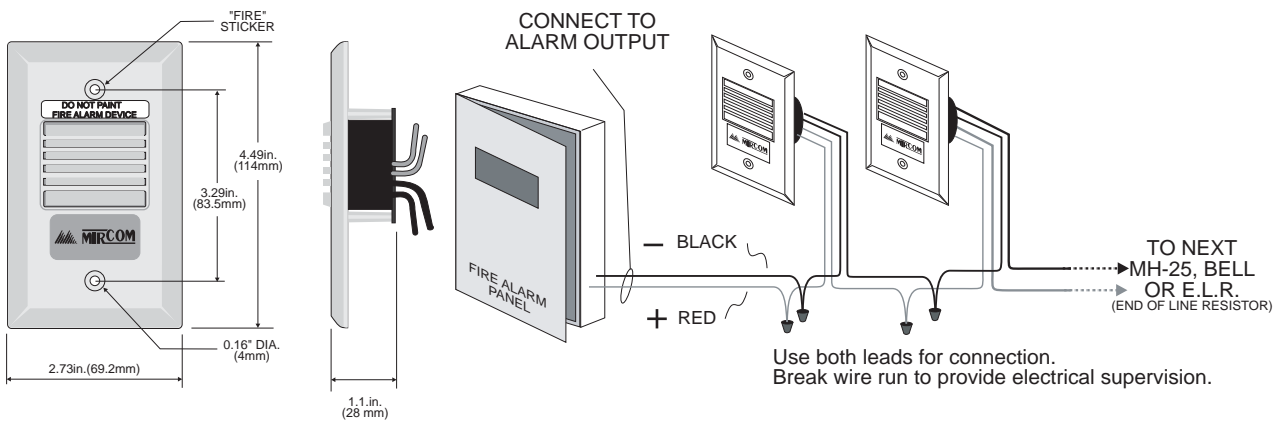
### Silencing Time (MH-S25 only)

9 to 10 minutes

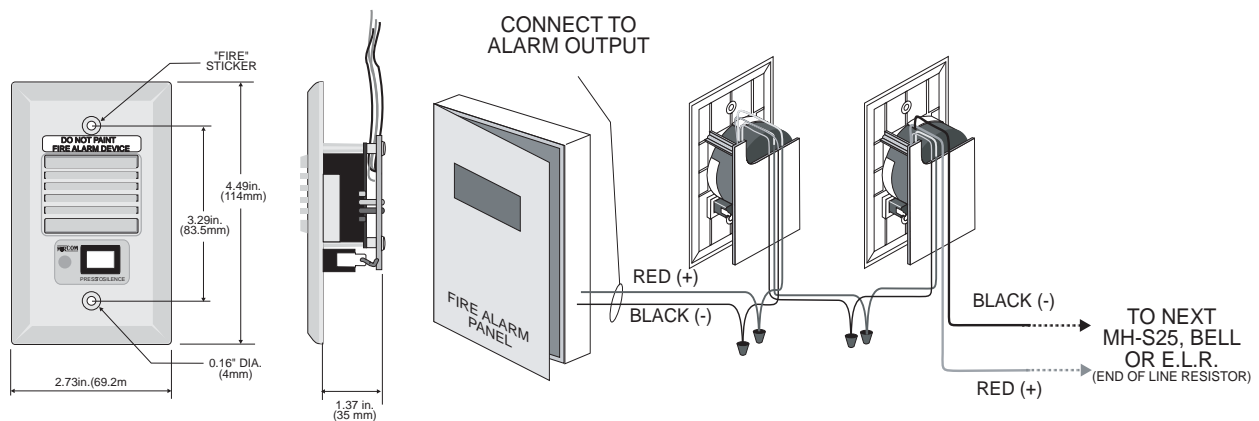
Note: Sound level in an indoor installation may vary depending upon the space surroundings.

## Typical Wiring Diagrams

### MH-25 Mini-Horn



### MH-S25 Silenceable Mini-Horn



## Ordering Information

Model	Description	Colour	Approval Listings
MH-25R	Mini-Piezo	Red	UL, ULC, CSFM, MEA
MH-25W	Mini-Piezo	White	UL, ULC, CSFM, MEA
MH-S25RA	Silenceable Mini-Piezo	Red	ULC
MH-S25WA	Silenceable Mini-Piezo	White	ULC

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CAT. 5208  
Rev. 5



**Description**

Mircom’s MH-25 Series mini horns are compact electronic alarm appliances that are ideal for alarm signalling in individual rooms, apartments, hotels and offices where attractive appearance and dependable performance are prime concerns. When activated, the MH-25 Series mini-horns produce a high sound output of over 90 dBA at 10 feet with a minimum current draw of 15.5 milliamps at 24 VDC (unfiltered) on the non silenceable models. Designed as alert or alarm signal appliances for use with any conventional Fire Alarm Control panel, the MH-Series mini horns are available in a standard version (MH-25) and a Silenceable version (MH-S25).

The MH-S25 versions are silenceable mini horns equipped with a “Silence” push button and a red LED to indicate “active signal circuit” when lit. The push button allows the user to silence the mini-horn for a maximum of 10 minutes upon which the mini-horn will sound again until the signal circuit is inactive or the mini horn is silenced again or the fire alarm panel is reset. Upon the fire alarm being reset, it takes approximately 25 seconds for the MH-S25 Mini-Horns to reset.

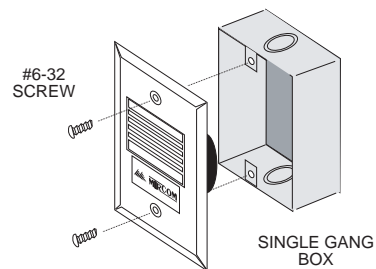
All MH-25 Series mini horns are designed for easy installation with convenient mounting to standard single gang boxes and in-out wire leads for fast connection. The front face plates are ruggedly constructed of high impact thermoplastic and are available in fire alarm red or off-white to blend with any room decor.

**Features**

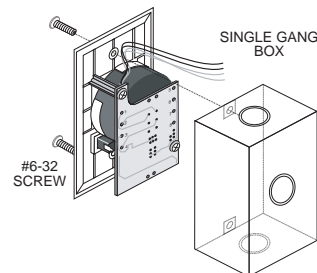
- High sound output for enhanced audibility (over 90 dBA at 10 feet) @ 24VDC
- “Silence” push button and red LED to indicate “active signal circuit” on MH-S25 versions
- 24 VDC models with wide listed voltage range, filtered DC (Non Silenceable only)
- Polarized inputs for compatibility with standard reverse polarity supervision of circuit wiring by an alarm panel
- Mounts into standard single gang box
- Flush or surface mounting options
- Compatible with sensitive detection and communication circuits
- Available in red or off-white finish

**Installation Instructions**

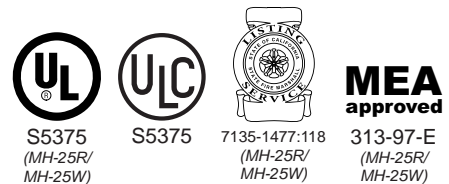
**MH-25 Mini-Horn**



**MH-S25 Silenceable Mini-Horn**



**Note:** The MH-25 Series mini-horns are compatible with the CSIS-202 and CNSIS-204 Conventional Signal Isolator Modules. Please refer to Cat. Sheet #5223 and #5224.



**CATALOG NUMBER 5208**

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# Specifications

## MH-25R/MH-25W

Rated Voltage	10-28VDC			
Operating Voltage (V)	10	12	24	28
Current (mA)	5	6	17	27
Sound Level (dB)	85	87	91	95

## MH-S25R/MH-S25W

Rated Voltage	24-28VDC (Filtered or unfiltered (full-wave rectified))		
Rated Current	30 mA		
Sound Level (dB)	Operating Voltage (V)	24	28
	Indoor Measurement (dB @ 10 ft)	90	90

### Operating Temperature

-4°F to 140°F (-20°C to 60 °C)

### Weight

2.2oz (63g)

### Colour Selection

Red/White

### Plate

A.B.S.

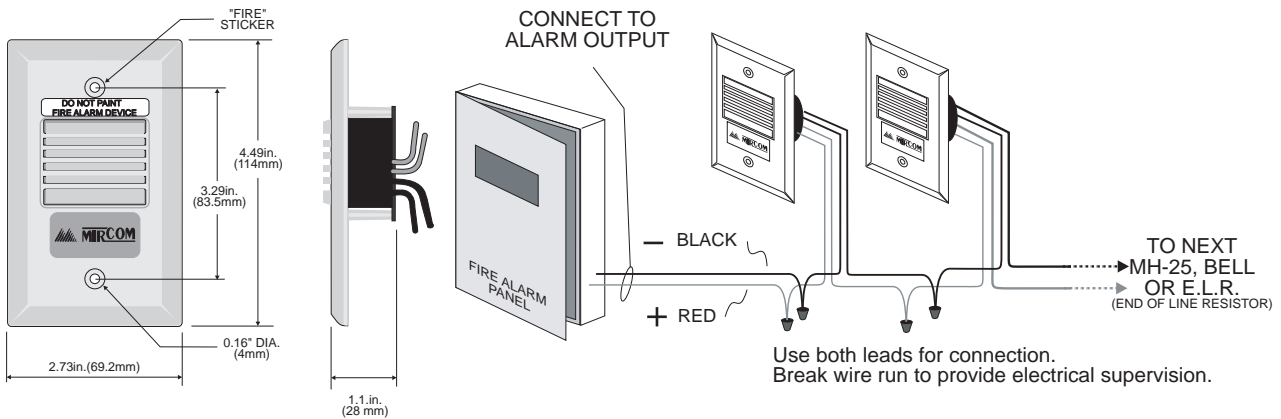
### Silencing Time (MH-S25 only)

9 to 10 minutes

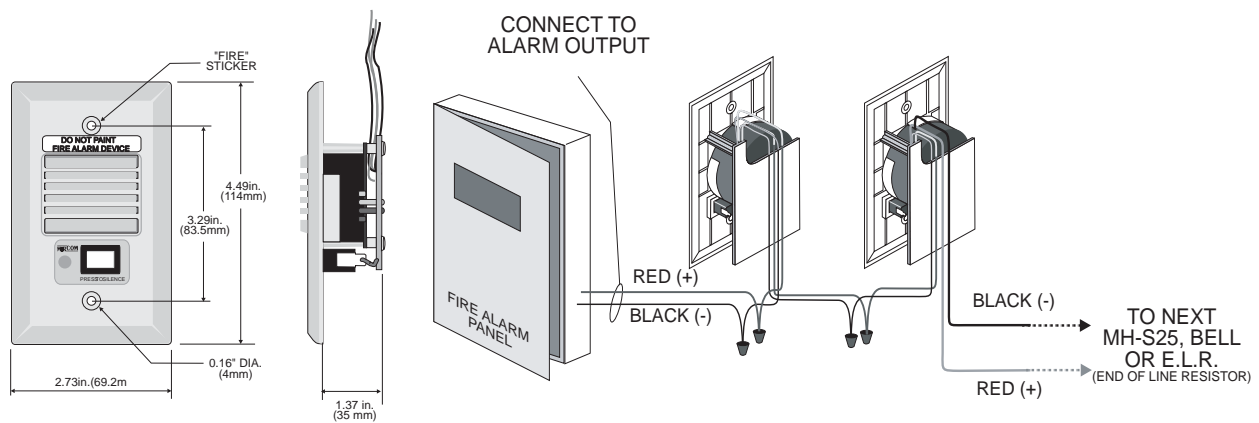
Note: Sound level in an indoor installation may vary depending upon the space surroundings.

## Typical Wiring Diagrams

### MH-25 Mini-Horn



### MH-S25 Silenceable Mini-Horn



## Ordering Information

Model	Description	Colour	Approval Listings
MH-25R	Mini-Piezo	Red	UL, ULC, CSFM, MEA
MH-25W	Mini-Piezo	White	UL, ULC, CSFM, MEA
MH-S25RA	Silenceable Mini-Piezo	Red	ULC
MH-S25WA	Silenceable Mini-Piezo	White	ULC

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CAT. 5208  
Rev. 5



### Description

The FHS-340 Horn/Strobe Series provides a wide range of candela light output options in a single device. The candela settings include a 12 or 24 volt DC operation for the 15, 35 and 60 (75 on axis) candela settings and 24 volt DC operation for the 15, 35, 60, 75, 95 and 110 candela settings. The candela setting is displayed through the front window and is selectable using a drum wheel.

The horn settings include Temporal, Non-Temporal, March Time and a Chime sound. The horn also has Low, Mid and High volume settings for each pattern and tone. The tones include 2400 Hz, Electro-Mechanical, Broadband and Chime.

The voltage input can be either regulated DC or full wave rectified (FWR) 12 volt or 24 volt operation with an operating range from 8 to 33 V DC. The strobes can be synchronized using a control panel with the Mircom (Amseco) sync protocol or an SDM-240 sync module.

The FHS-340 utilizes a universal mounting plate that will mount on a single gang, double gang, octagon and 4" square electrical boxes. The back plate allows the installer to mount the plate and connect the wire connections. The strobe attaches in a hinge fashion from the top and is secured by a single mounting screw. The strobe completely covers the mounting back plate, therefore it can be mounted before other trades work is completed and not affect the final look.

### Features

- UL and C-UL listed
- 12 VDC with 15, 35 or 60 cd settings
- 24 VDC with 15, 35, 60, 75, 95 or 110 cd settings
- 6 distinct candela settings
- Candela selection view window
- 15/75 ADA compliant on 60cd setting
- 33 sound output settings
- Horn or chime sound output
- Pre-wire back plate
- Universal back plate mounting (single gang, double gang, octagon, or 4" square)
- Single screw mounting
- For indoor applications

### Engineering Specifications

The installer shall provide and install the FHS-340 selectable horn/strobe. The strobe shall have six (6) candela settings. The candela settings shall be selectable using a drum roller and shall display the candela setting on the front of the device. The horn shall have 33 selectable settings configurable by dip switches. The sounder shall be capable of ANSI Temporal Code 3, March Time and produce a chime output. The horn shall have three distinct volume levels. The horn/strobe shall operate at 12 or 24 VDC regulated or full wave rectified. The horn/strobe shall have an operating range between 8 and 33 VDC. The strobes can be synchronized using a control panel with the Mircom sync protocol or the SDM-240 sync module. The strobe shall utilize a mounting plate that allows the installer to pre-wire the mounting plate. The mounting plate shall be universal and mount on a single gang, double gang, octagon or 4 inch square box. The mounting plate shall be completely covered by the strobe and shall be secured by a single screw. The strobe shall be UL listed to standard 1638, General Signaling, and standard 1971, Signaling Devices for the Hearing Impaired. In addition, the strobes shall be C-UL listed to CAN-ULC S526. The horn shall be UL listed to standard 464, Audible Signaling Devices.



**CATALOG NUMBER 5269**

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

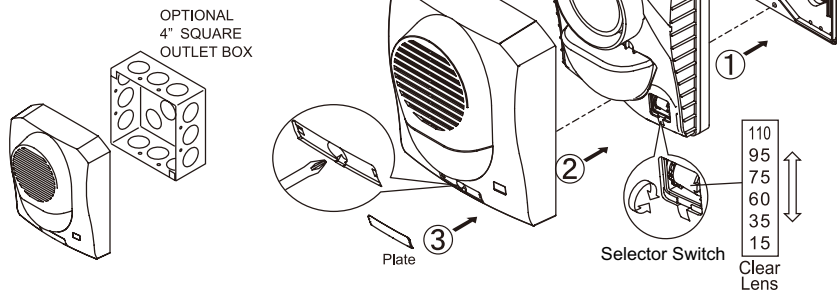
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Installation

### CAUTION

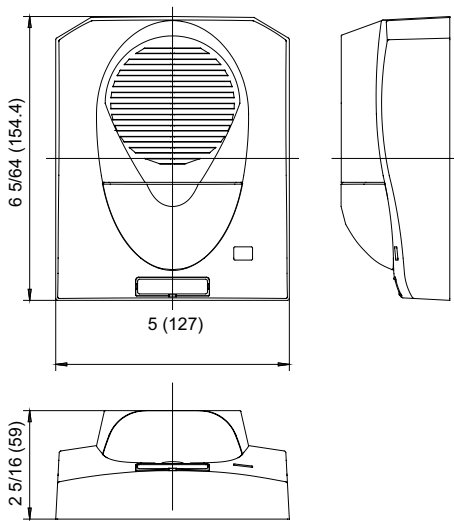
A jumper plug is provided to test for correct wiring in the supervisory mode only. Do not pass alarm current through the jumper.

**Note:** Installation must comply in accordance with applicable standards.



## Dimensions

Inches (mm)

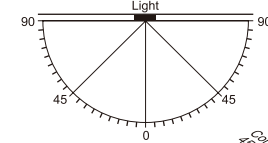


## Light Output

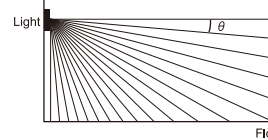
Light output in percentage when measured from the following directions per UL 1971.

Wall and ceiling mount horizontal dispersion

Ceiling mount vertical dispersion



Wall mount vertical dispersion



Degrees	% of Rating	
	Horizontal	Vertic
0	100	100
5-25	90	90
30	75	90
35	75	65
40	75	46
45	75	34
50	55	27
55	45	22
60	40	18
65	35	16
70	35	15
75	30	13
80	30	12
85-90	25	12

### WARNING

High voltage may be present inside the light assembly even though power is not connected. If access to the component board is required (removal or replacement), the capacitor must be discharged by touching a wire to both ends of the flash tube.

DO NOT attempt to touch or move the assembly until the capacitor has been discharged.

## Specifications

### Strobe Current

Light Output	Max. RMS Operating Current (mA RMS)			
	Reg. 12 VDC	Reg. 12 FWR	Reg. 24 VDC	Reg. 24 FWR
15cd	116	152	62	99
35cd	209	267	102	152
60/75cd	254	258	131	190
75cd	NA	NA	146	208
95cd	NA	NA	177	243
110cd	NA	NA	196	268

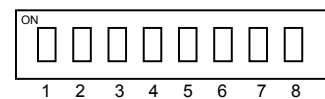
<b>Voltage</b>	12/24V	
<b>UL Designation</b>	Regulated 12 DC/FWR	Regulated 24 DC/FWR
<b>Operating Voltage Range</b>	8 - 17.5V	16 - 33V
<b>Flash Rate</b>	60 times/min.	
<b>Sync Module (SDM-240)</b>	N/A	Available
<b>Operating Temperature Range</b>	Indoor model: 32°F to 120°F (0°C to 49°C)	

## Dipswitch Settings

### Horn Dipswitch

#### Pattern

- 1 ON - Non-temporal
- 1 OFF - Temporal
- Both 2 = OFF
- 1 and 2 ON = March Time



#### Tone

- 3 and 4 ON = 2400Hz
- 3 ON and 4 OFF = Electromechanical
- 3 and 4 OFF = Chime
- 3 OFF and 4 ON = Broadband

#### Volume

- 5 and 6 ON = High
- 5 ON and 6 OFF = Mid
- 5 and 6 OFF = Low
- 7 and 8 ON = Horn/strobe on 2 wires
- 7 and 8 OFF = Horn and strobe on 4 wires

## Specifications

### Non-Temporal Horn Current

Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	119	79	87	125	87	87	99	100
	Mid	44	46	28	74	82	82	94	96
	Low	30	30	18	41	79	80	92	92
Electro-Mechanical	High	118	77	81	121	86	87	100	100
	Mid	43	43	26	67	82	84	96	97
	Low	27	29	16	36	79	80	93	93
Broadband	High	146	125	78	148	86	86	101	102
	Mid	41	63	26	64	81	82	96	98
	Low	28	40	16	39	77	79	94	95
Chime	High	27	35	21	27	70	70	86	86
	Mid	11	15	8	13	62	62	79	80
	Low	9	11	7	12	58	57	75	75

### Temporal Horn Current

Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	124	70	87	132	82	82	100	100
	Mid	46	38	30	83	77	79	95	96
	Low	30	28	18	36	74	75	92	92
Electro-Mechanical	High	114	69	80	134	83	82	100	101
	Mid	42	40	27	67	78	80	95	96
	Low	28	27	16	36	75	76	93	93
Broadband	High	151	117	80	146	82	82	101	102
	Mid	45	59	26	73	77	78	97	98
	Low	30	42	16	31	75	76	94	95
Chime	High	29	35	21	28	68	70	86	86
	Mid	10	17	9	12	61	61	79	79
	Low	9	12	8	9	55	55	75	76

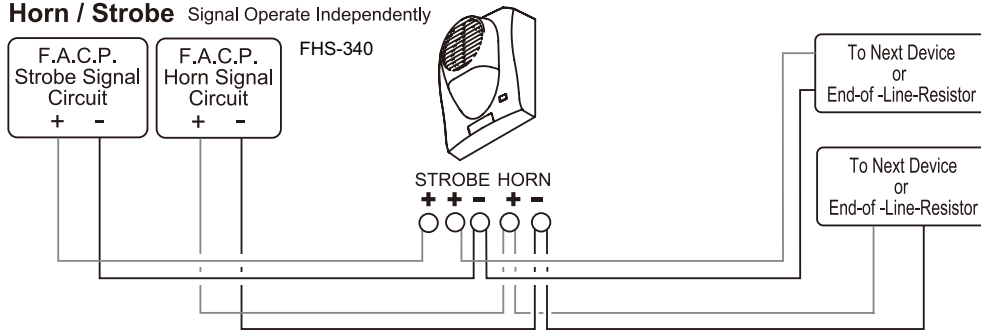
### March Time Horn Current

Pattern	Volume	Max. RMS Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	121	70	92	132	83	84	99	100
	Mid	47	39	31	76	79	81	95	96
	Low	36	25	19	35	76	77	92	92
Electro-Mechanical	High	114	69	86	125	83	83	100	100
	Mid	42	37	27	67	80	81	95	96
	Low	30	26	19	37	77	77	92	93
Broadband	High	153	121	77	126	83	84	101	102
	Mid	42	55	28	56	79	80	97	98
	Low	29	42	16	26	76	77	94	95

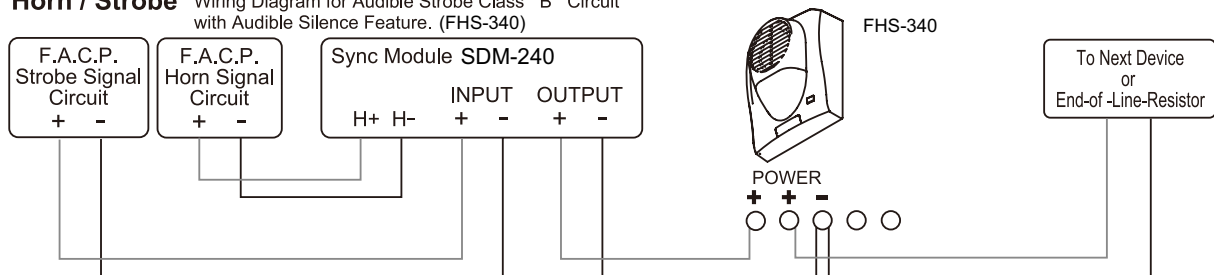


## Wiring Diagram

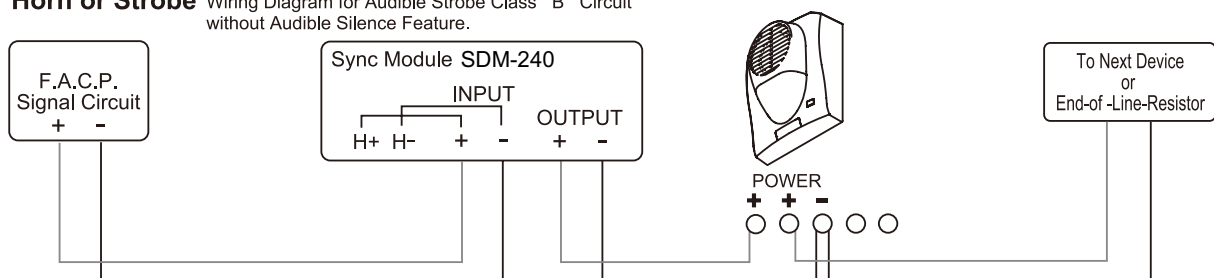
### Horn / Strobe Signal Operate Independently



### Horn / Strobe Wiring Diagram for Audible Strobe Class "B" Circuit with Audible Silence Feature. (FHS-340)



### Horn or Strobe Wiring Diagram for Audible Strobe Class "B" Circuit without Audible Silence Feature.



Refer to the SDM-240 Sync Module instruction manual for Class "A" wiring or other application diagrams.

## Ordering Information

Model Number	Description
FHS-340R	Wall Mount Horn/Strobe, Red
FHS-340W	Wall Mount Horn/Strobe, White

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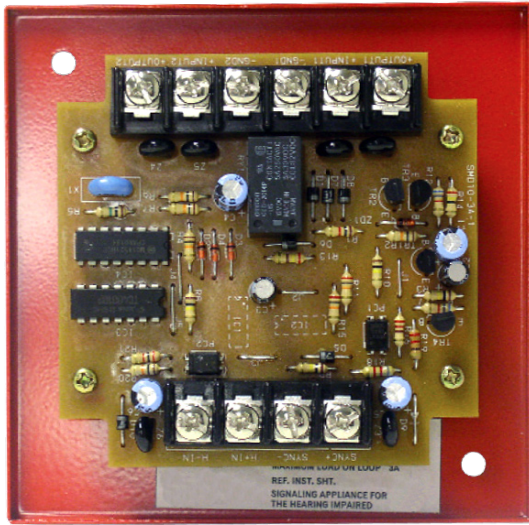
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CAT. 5269  
Rev. 1



### Description

The SDM-240 Sync Module is designed to work with Mircom's 240 and 340 Series Notification Appliances to provide a synchronized temporal pattern (code 3) tone, synchronize the strobe flashes and silence the horn while maintaining the strobe flashes.

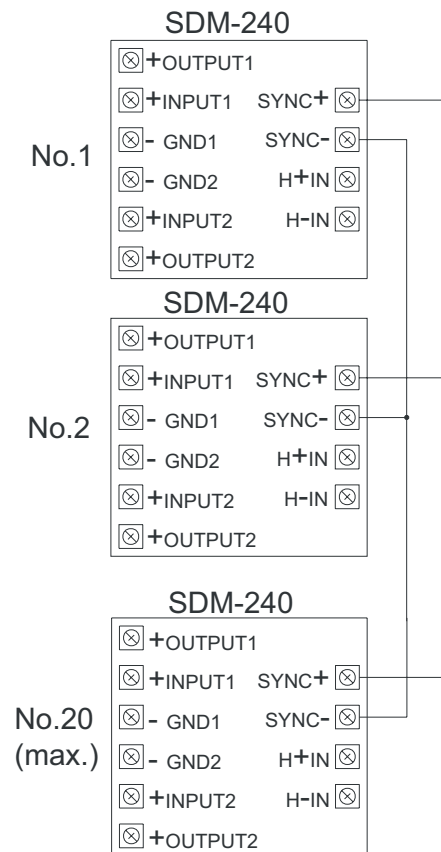
The SDM-240 has the capability of connecting two Style Y (Class B) circuits or one Style Z (Class A) circuit and is rated for 3 Amperes per circuit.

The SDM-240 can be interconnected so that more than two alarm zones can be synchronized by connecting the SYNC terminals (daisy chain connection). The maximum number of interconnected modules is twenty. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by the fire alarm control panel.

### Features

- Polarized with wide operating voltage range using filtered
- DC or unfiltered FWR input voltage
- Mounts onto 4" square back box
- Daisy chain up to 20 modules maximum
- Screw terminal capacity up to 12 AWG
- Red metal plate

### Daisy Chain Wiring Diagram



**CATALOG NUMBER 5714**

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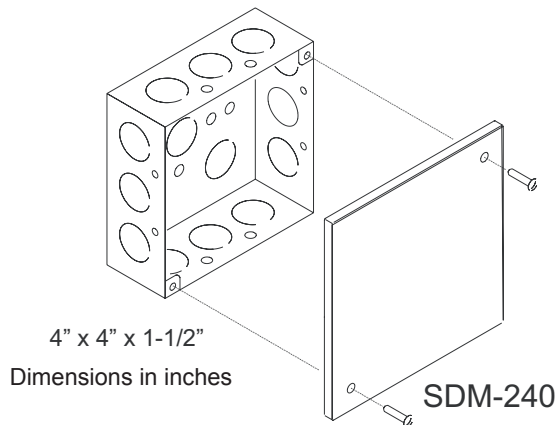
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## Specifications

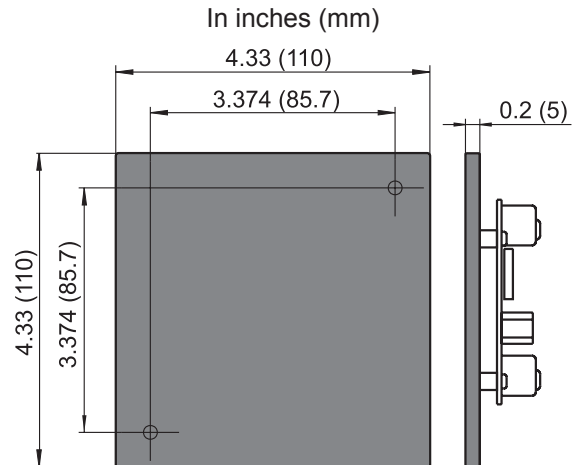
<b>Input Voltage</b>	Regulated 24V DC/FWR	
<b>Operating Voltage Range</b>	16 ~ 33V DC/FWR	
<b>Maximum Load on Loop</b>	3A Average Max. 5A Peak	
<b>Max. RMS Operating Current</b>	<b>DC</b>	34mA
	<b>FWR</b>	68mA
<b>Mounting Backbox</b>	4" x 4" x 1½"	
<b>Operating Temperature Range</b>	32°F ~ 120°F (0°C ~ 49°C)	

## Mounting Options

Electrical Backbox



## Dimensions



## Ordering Information

Model Number	Description
SDM-240	Sync Module

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CAT. 5714  
 Rev. 6



## Description

The FHS-340R-WP Horn/Strobe provides a wide range of candela light output options in a single device. The candela settings include a 12 or 24 volt DC operation for the 15, 35 and 60 (75 on axis) candela settings and 24 volt DC operation for the 15, 35, 60, 75, 95 and 110 candela settings. The candela setting is displayed through the front window and is selectable using a drum wheel. The strobes can be synchronized using a control panel with the Mircom (Amseco) sync protocol or an SDM-240 sync module.

The horn settings include Temporal, Non-Temporal, March Time and a Chime sound. The horn also has Low, Mid and High volume settings for each pattern and tone. The tones include 2400 Hz, Electro-Mechanical and Broadband.

The voltage input can be either regulated DC or full wave rectified (FWR) 12 volt or 24 volt operation with an operating range of 8 to 33V DC.

The FHS-340R-WP utilizes a universal mounting plate. The back plate allows the installer to mount the plate and terminate the wire connections. The horn/strobe attaches in a hinge fashion from the top and is secured by a single mounting screw. The horn/strobe completely covers the mounting back plate, therefore it can be mounted before other trades work is completed and not affect the final look.

The FHS-340R-WP is listed for both outdoor and indoor installations and comes complete with a matching weatherproof back box.

## Features

- UL and C-UL listed
- 12 VDC with 15, 35 or 60 cd settings
- 24 VDC with 15, 35, 60, 75, 95 or 110 cd settings
- Outdoor and indoor
- 6 distinctive candela settings
- Candela selection view window
- 15/75 ADA compliant on 60cd setting
- 33 sound output settings
- Horn or chime sound output
- Pre-wire back plate
- Universal back plate mounting (single gang, double gang, octagon, or 4" square)
- Single screw mounting

## Engineering Specifications

The installer shall provide and install the FHS-340R-WP selectable horn/strobe. The strobe shall have six (6) candela settings. The candela settings shall be selectable using a drum roller and shall display the candela setting on the front of the device. The horn shall have 33 selectable settings configurable by dip switches. The sounder shall be capable of ANSI Temporal Code 3, March Time and produce a chime output. The horn shall have three distinct volume levels. The horn/strobe shall operate at 12 or 24 VDC regulated or full wave rectified. The horn/strobe shall have an operating range between 8 and 33 VDC. The strobes can be synchronized using a control panel with the Mircom(Amseco) sync protocol or an SDM-240 sync module. The horn/strobe shall utilize a mounting plate that allows the installer to pre-wire the mounting plate. The FHS-340R-WP is listed for both outdoor and indoor applications. For outdoor installations, the device must be mounted on the matching weatherproof backbox. The mounting plate shall be completely covered by the horn/strobe and shall be secured by a single screw. The horn/strobe shall be UL listed to standard 1638, General Signaling, and standard 1971, Signaling Devices for the Hearing Impaired. In addition, the horn/strobes shall be C-UL listed to CAN-ULC S526. The horn shall be UL listed to standard 464, Audible Signaling Devices.



**CATALOG NUMBER** **5271**

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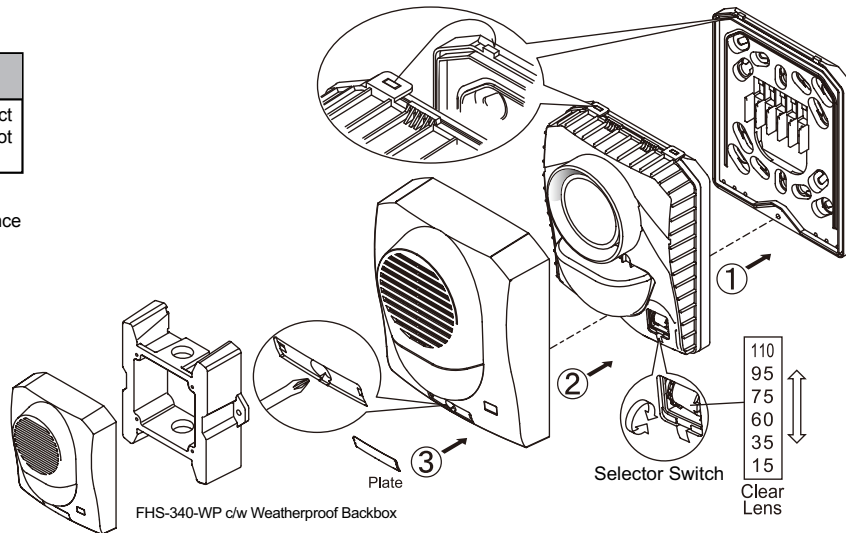
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## Installation

### CAUTION

A jumper plug is provided to test for correct wiring in the supervisory mode only. Do not pass alarm current through the jumper.

**Note:** Installation must comply in accordance with applicable standards.

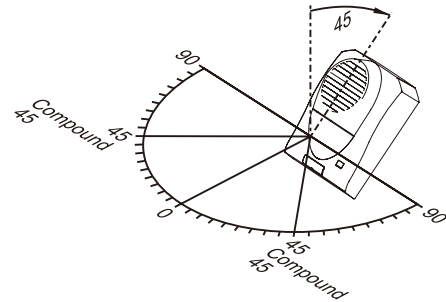
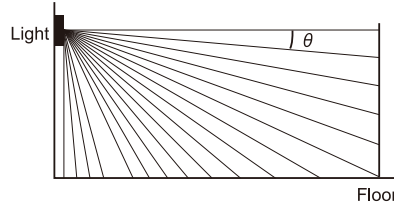


## Light Output

Light output in percentage when measured from the following directions per UL 1971.

Degrees	% of Rating	
	Horizontal	Vertical
0	100	100
5~25	90	90
30	75	90
35	75	65
40	75	46
45	75	34
50	55	27
55	45	22
60	40	18
65	35	16
70	35	15
75	30	13
80	30	12
85~90	25	12

Wall mount vertical dispersion



### WARNING

High voltage may be present inside the light assembly even though power is not connected. If access to the component board is required (removal or replacement), the capacitor must be discharged by touching a wire to both ends of the flash tube. DO NOT attempt to touch or move the assembly until the capacitor has been discharged.

## Specifications

### Strobe Current

Setting	Light Output	Max. RMS Operating Current (mA RMS)			
		Reg. 12 VDC	Reg. 12 FWR	Reg. 24 VDC	Reg. 24 FWR
1	15cd	129	185	100	102
2	35cd	160	214	135	161
3	60/75cd	193	239	171	202
4	75cd	NA	NA	190	228
5	95cd	NA	NA	211	255
6	110cd	NA	NA	225	284

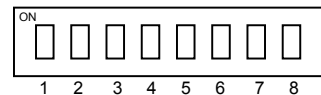
Voltage	12/24V	
UL Designation	Regulated 12 DC/ FWR	Regulated 24 DC/ FWR
Operating Voltage Range	8 - 17.5V	16 - 33V
Flash Rate	60 times/min.	
Sync Module (SDM-240)	N/A	Available
Operating Temperature Range	Indoor installations: 32°F to 120°F (0°C to 49°C) Outdoor installations: -40°F to 151°F (-40°C to 66°C)	

## Dipswitch Settings

### Horn Dipswitch

#### Pattern

- 1 ON - Non-temporal
- 1 OFF - Temporal
- Both 2 = OFF
- 1 and 2 ON = March Time



#### Tone

- 3 and 4 ON = 2400Hz
- 3 ON and 4 OFF = Electromechanical
- 3 and 4 OFF = Chime
- 3 OFF and 4 ON = Broadband

#### Volume

- 5 and 6 ON = High
- 5 ON and 6 OFF = Mid
- 5 and 6 OFF = Low
- 7 and 8 ON = Horn/strobe on 2 wires
- 7 and 8 OFF = Horn and strobe on 4 wires

# Specifications

## Non-Temporal Horn Current

Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	119	79	87	125	87	87	99	100
	Mid	44	46	28	74	82	82	94	96
	Low	30	30	18	41	79	80	92	92
Electro-Mechanical	High	118	77	81	121	86	87	100	100
	Mid	43	43	26	67	82	84	96	97
	Low	27	29	16	36	79	80	93	93
Broadband	High	146	125	78	148	86	86	101	102
	Mid	41	63	26	64	81	82	96	98
	Low	28	40	16	39	77	79	94	95
Chime	High	27	35	21	27	70	70	86	86
	Mid	11	15	8	13	62	62	79	80
	Low	9	11	7	12	58	57	75	75

## Temporal Horn Current

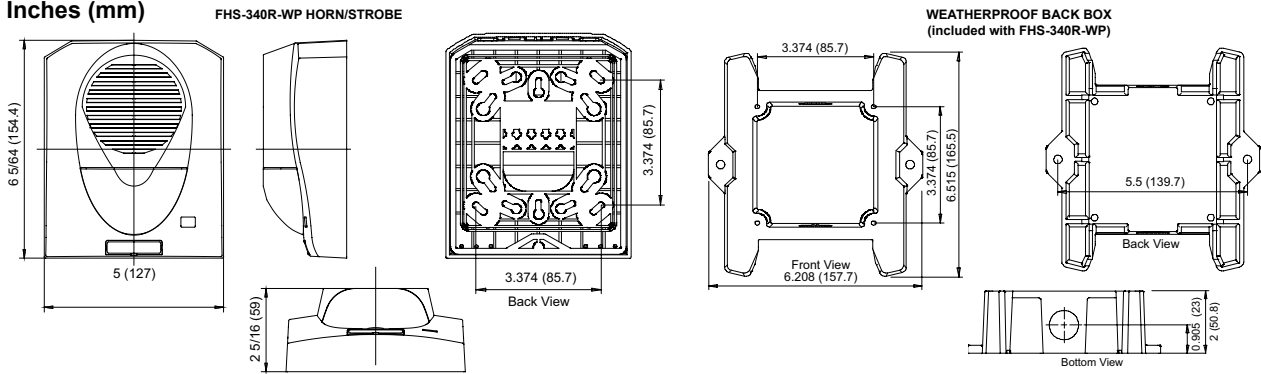
Pattern	Volume	Max. RMS Operating Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	124	70	87	132	82	82	100	100
	Mid	46	38	30	83	77	79	95	96
	Low	30	28	18	36	74	75	92	92
Electro-Mechanical	High	114	69	80	134	83	82	100	101
	Mid	42	40	27	67	78	80	95	96
	Low	28	27	16	36	75	76	93	93
Broadband	High	151	117	80	146	82	82	101	102
	Mid	45	59	26	73	77	78	97	98
	Low	30	42	16	31	75	76	94	95
Chime	High	29	35	21	28	68	70	86	86
	Mid	10	17	9	12	61	61	79	79
	Low	9	12	8	9	55	55	75	76

## March Time Horn Current

Pattern	Volume	Max. RMS Current (mA RMS Current)				dBA Reverberant Ratings per UL464 (dBA @ 10 ft.)		dBA Anechoic Ratings per CAN/ULC S525 (dBA @ 10 ft.)	
		Reg 12 VDC	Reg 12 FWR	Reg 24 VDC	Reg 24 FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR	Reg 12 VDC/FWR	Reg 24 VDC/FWR
2400 Hz	High	121	70	92	132	83	84	99	100
	Mid	47	39	31	76	79	81	95	96
	Low	36	25	19	35	76	77	92	92
Electro-Mechanical	High	114	69	86	125	83	83	100	100
	Mid	42	37	27	67	80	81	95	96
	Low	30	26	19	37	77	77	92	93
Broadband	High	153	121	77	126	83	84	101	102
	Mid	42	55	28	56	79	80	97	98
	Low	29	42	16	26	76	77	94	95

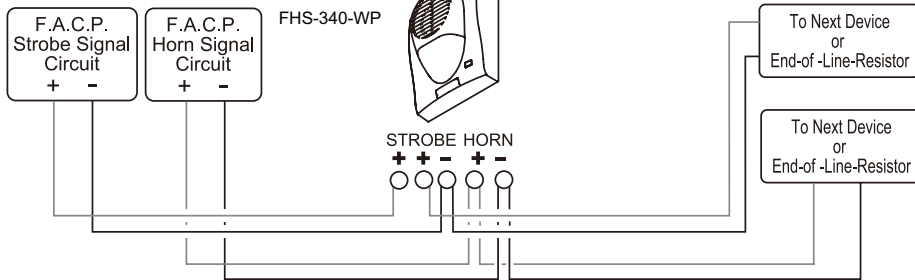
## Dimensions

Inches (mm)

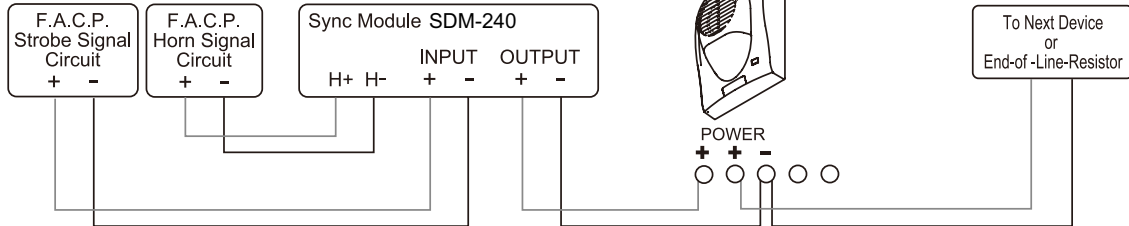


## Wiring Diagram

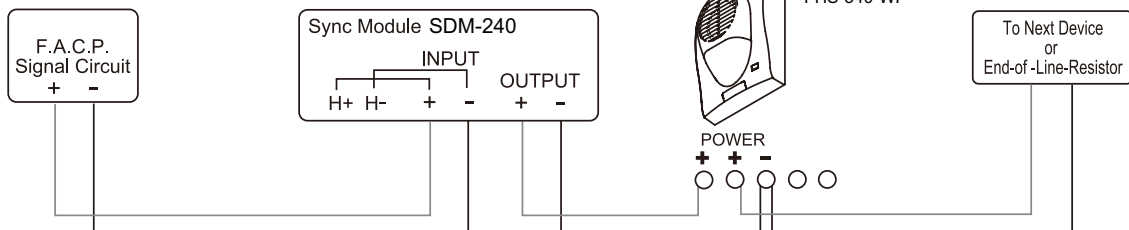
**Horn / Strobe** Signal Operate Independently



**Horn / Strobe** Wiring Diagram for Audible Strobe Class "B" Circuit with Audible Silence Feature. (FHS-340)



**Horn or Strobe** Wiring Diagram for Audible Strobe Class "B" Circuit without Audible Silence Feature.



Refer to the SDM-240 Sync Module instruction manual for Class "A" wiring or other application diagrams.

## Ordering Information

Model Number	Description
FHS-340R-WP	Wall Mount Weatherproof Horn/Strobe c/w weatherproof backbox, Red

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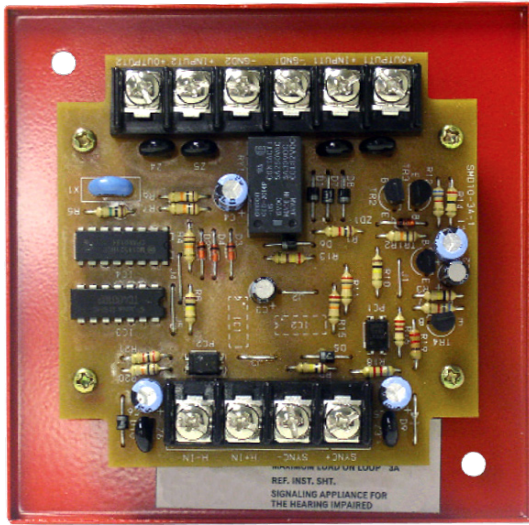
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### Description

The SDM-240 Sync Module is designed to work with Mircom's 240 and 340 Series Notification Appliances to provide a synchronized temporal pattern (code 3) tone, synchronize the strobe flashes and silence the horn while maintaining the strobe flashes.

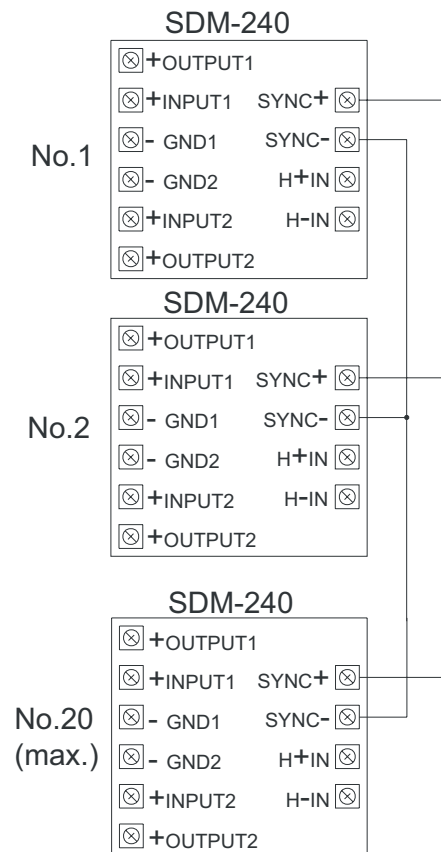
The SDM-240 has the capability of connecting two Style Y (Class B) circuits or one Style Z (Class A) circuit and is rated for 3 Amperes per circuit.

The SDM-240 can be interconnected so that more than two alarm zones can be synchronized by connecting the SYNC terminals (daisy chain connection). The maximum number of interconnected modules is twenty. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by the fire alarm control panel.

### Features

- Polarized with wide operating voltage range using filtered
- DC or unfiltered FWR input voltage
- Mounts onto 4" square back box
- Daisy chain up to 20 modules maximum
- Screw terminal capacity up to 12 AWG
- Red metal plate

### Daisy Chain Wiring Diagram



**CATALOG NUMBER 5714**

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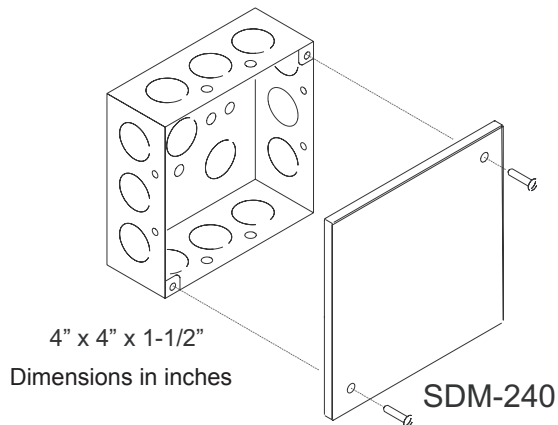


## Specifications

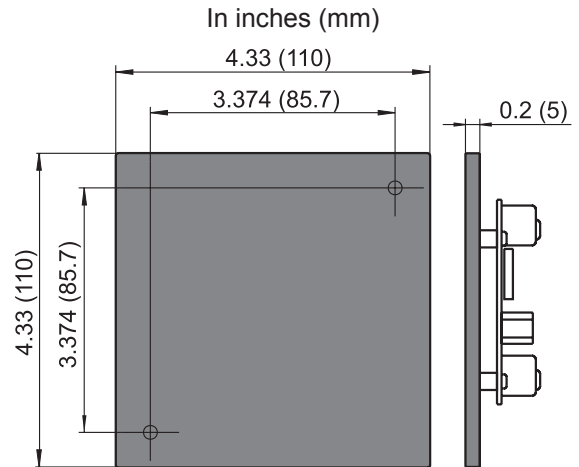
<b>Input Voltage</b>	Regulated 24V DC/FWR	
<b>Operating Voltage Range</b>	16 ~ 33V DC/FWR	
<b>Maximum Load on Loop</b>	3A Average Max. 5A Peak	
<b>Max. RMS Operating Current</b>	<b>DC</b>	34mA
	<b>FWR</b>	68mA
<b>Mounting Backbox</b>	4" x 4" x 1½"	
<b>Operating Temperature Range</b>	32°F ~ 120°F (0°C ~ 49°C)	

## Mounting Options

Electrical Backbox



## Dimensions



## Ordering Information

Model Number	Description
SDM-240	Sync Module

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## Features

- UL and C-UL listed
- 12 VDC with 15, 35 or 60 cd settings
- 24 VDC with 15, 35, 60, 75, 95 or 110 cd settings
- 6 distinct candela settings
- Candela selection view window
- 15/75 ADA compliant on 60 cd setting
- Pre-wire back plate
- Universal back plate mounting (single gang, double gang, octagon, or 4" square)
- Single screw mounting
- For indoor applications

## Description

The FS-340 Strobe Series provides a wide range of candela light output options in a single device. The candela settings include a 12 or 24 volt DC operation for the 15, 35 and 60 (75 on axis) candela settings and 24 volt DC operation for the 15, 35, 60, 75, 95 and 110 candela settings. The candela setting is displayed through the front window and is selectable using a drum wheel.

The voltage input can be either regulated DC or full wave rectified (FWR) 12 volt or 24 volt operation with an operating range from 8 to 33 V DC. The strobes can be synchronized using a control panel with the Mircom (Amseco) sync protocol or an SDM-240 sync module.

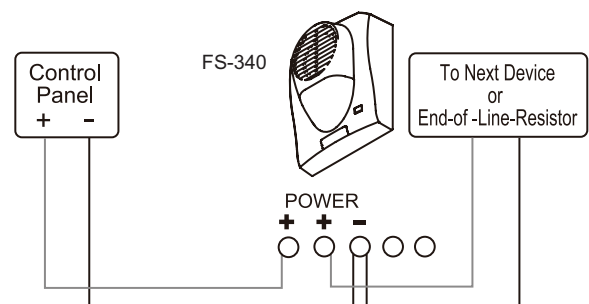
The FS-340 utilizes a universal mounting plate that will mount on a single gang, double gang, octagon and 4" square electrical boxes. The back plate allows the installer to mount the plate and connect the wire connections. The strobe attaches in a hinge fashion from the top and is secured by a single mounting screw. The strobe completely covers the mounting back plate, therefore it can be mounted before other trades work is completed and not affect the final look.

## Engineering Specifications

The installer shall provide and install the FS-340 selectable strobe. The strobe shall have six (6) candela settings. The candela settings shall be selectable using a drum roller and shall display the candela setting on the front of the device. The strobe shall operate at 12 or 24 VDC regulated or full wave rectified. The strobe shall have an operating range between 8 and 33 VDC.

The strobes can be synchronized using a control panel with the Mircom sync protocol or the SDM-240 sync module. The strobe shall utilize a mounting plate that allows the installer to pre-wire the mounting plate. The mounting plate shall be universal and mount on a single gang, double gang, octagon or 4 inch square box. The mounting plate shall be completely covered by the strobe and shall be secured by a single screw. The strobe shall be UL listed to standard 1638, General Signaling, and standard 1971, Signaling Devices for the Hearing Impaired. In addition, the strobes shall be C-UL listed to CAN-ULC S526.

## Wiring Diagram



CATALOG NUMBER **5268**

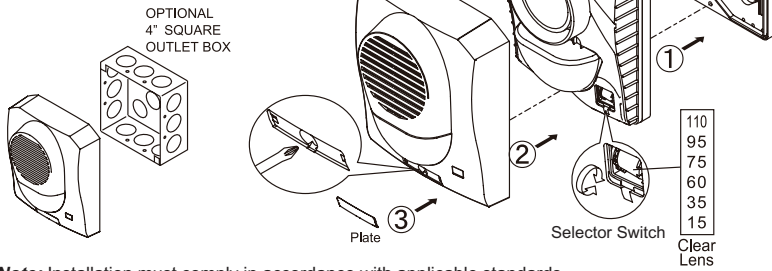
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## Installation

### CAUTION

A jumper plug is provided to test for correct wiring in the supervisory mode only. Do not pass alarm current through the jumper.



**Note:** Installation must comply in accordance with applicable standards.

### WARNING

High voltage may be present inside the light assembly even though power is not connected. If access to the component board is required (removal or replacement), the capacitor must be discharged by touching a wire to both ends of the flash tube.

DO NOT attempt to touch or move the assembly until the capacitor has been discharged.

## Specifications

### Strobe Current

Light Output	Max. RMS Operating Current (mA RMS)			
	Reg. 12 VDC	Reg. 12 FWR	Reg. 24 VDC	Reg. 24 FWR
15cd	116	152	62	99
35cd	209	267	102	152
60/75cd	254	258	131	190
75cd	NA	NA	146	208
95cd	NA	NA	177	243
110cd	NA	NA	196	268

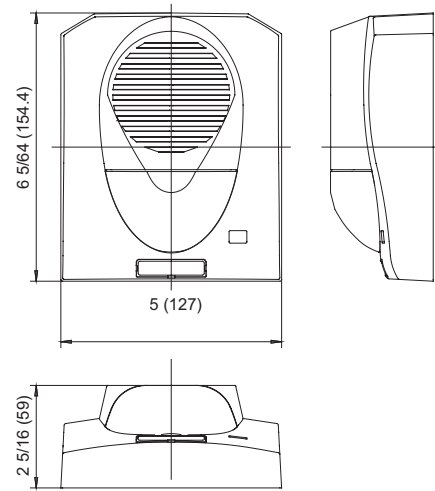
<b>Voltage</b>	12/24V	
<b>UL Designation</b>	Regulated 12 DC/ FWR	Regulated 24 DC/ FWR
<b>Operating Voltage Range</b>	8 - 17.5V	16 - 33V
<b>Flash Rate</b>	60 times/min.	
<b>Sync Module (SDM-240)</b>	N/A	Available
<b>Operating Temperature Range</b>	32°F to 120°F (0°C to 49°C)	

## Ordering Information

Model Number	Description
FS-340R	Wall Mount Strobe, Red
FS-340W	Wall Mount Strobe, White

## Dimensions

Inches (mm)



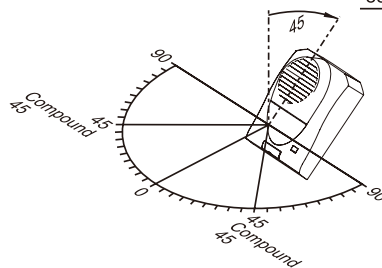
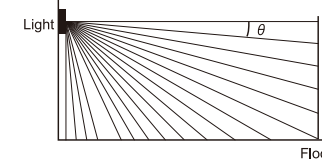
## Light Output

Light output in percentage when measured from the following directions per UL 1971.

Wall and ceiling mount horizontal dispersion

Degrees	% of Rating	
	Horizontal	Vertical
0	100	100
5-25	90	90
30	75	90
35	75	65
40	75	46
45	75	34
50	55	27
55	45	22
60	40	18
65	35	16
70	35	15
75	30	13
80	30	12
85-90	25	12

Wall mount vertical dispersion



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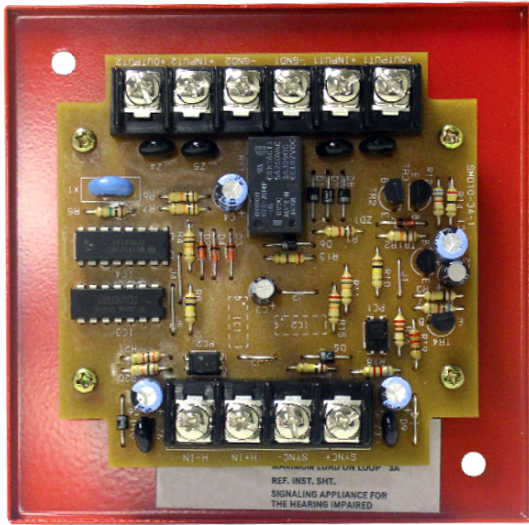
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Rev. 0



### Description

The SDM-240 Sync Module is designed to work with Mircom's 240 and 340 Series Notification Appliances to provide a synchronized temporal pattern (code 3) tone, synchronize the strobe flashes and silence the horn while maintaining the strobe flashes.

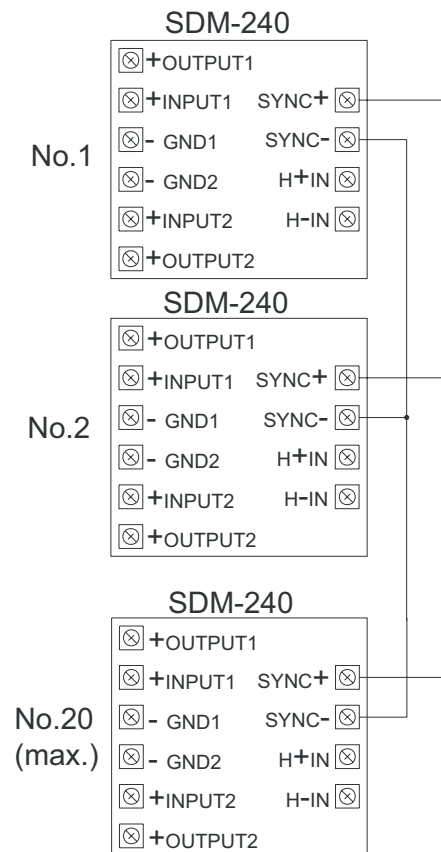
The SDM-240 has the capability of connecting two Style Y (Class B) circuits or one Style Z (Class A) circuit and is rated for 3 Amperes per circuit.

The SDM-240 can be interconnected so that more than two alarm zones can be synchronized by connecting the SYNC terminals (daisy chain connection). The maximum number of interconnected modules is twenty. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by the fire alarm control panel.

### Features

- Polarized with wide operating voltage range using filtered
- DC or unfiltered FWR input voltage
- Mounts onto 4" square back box
- Daisy chain up to 20 modules maximum
- Screw terminal capacity up to 12 AWG
- Red metal plate

### Daisy Chain Wiring Diagram



**CATALOG NUMBER 5714**

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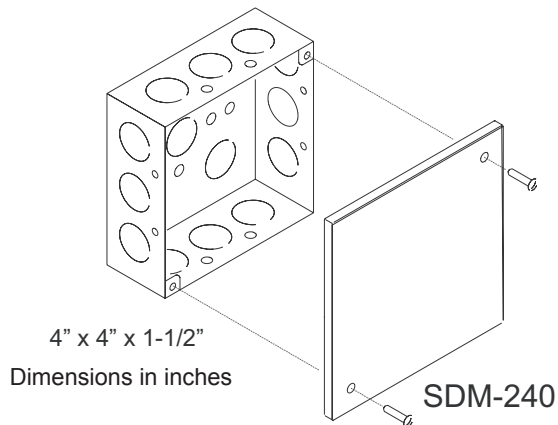
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## Specifications

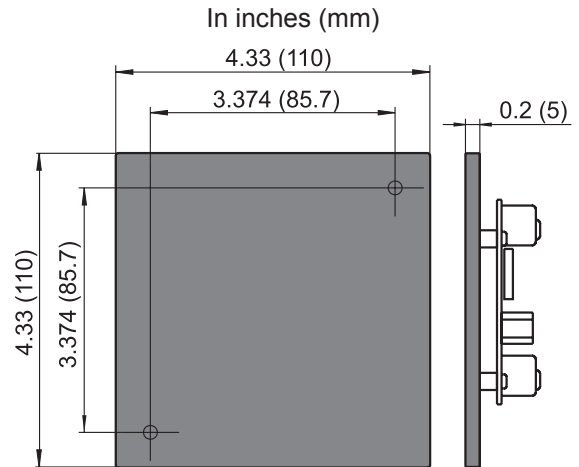
<b>Input Voltage</b>	Regulated 24V DC/FWR	
<b>Operating Voltage Range</b>	16 ~ 33V DC/FWR	
<b>Maximum Load on Loop</b>	3A Average Max. 5A Peak	
<b>Max. RMS Operating Current</b>	<b>DC</b>	34mA
	<b>FWR</b>	68mA
<b>Mounting Backbox</b>	4" x 4" x 1½"	
<b>Operating Temperature Range</b>	32°F ~ 120°F (0°C ~ 49°C)	

## Mounting Options

Electrical Backbox



## Dimensions



## Ordering Information

Model Number	Description
SDM-240	Sync Module

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CAT. 5714  
 Rev. 6

## Power Supplies & Accessories



## Description

The DTC-300A Stand-Alone Digital Alarm Communicator Transmitter/Dialer Module is a six zone fire alarm communicator that can be connected to any 24 VDC fire alarm control panel to provide fire reporting to a monitoring facility.

The DTC-300A utilizes two telephone lines to transmit information for six configurable input zones to a Digital Alarm Communicator Receiver (DACR). The input zones can be configured for Common Alarm, Common Trouble, Common Supervisory, Common Waterflow Alarm, AC Power Fail Trouble and Battery Trouble.

The DTC-300A requires a 24VDC filtered or 24VDC Full Wave Rectified (FWR) power source. The Digital Communicator can be programmed for dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID reporting protocols.

The DTC-300A can be configured locally via the on-board keypad and the CFG-300 Configuration Tool or with a UIMA programming tool and a computer with an available serial or USB port. In addition the DTC-300A can be remotely configured using a personal computer with a modem.

## Features

- Connects to any 24VDC fire alarm control panel to provide fire reporting to a monitoring facility
- Transmits information for six configurable input zones on two telephone lines to a Digital Alarm Communicator Receiver (DACR)
- Input zones can be configured for Common Alarm, Common Supervisory, Common Trouble, Common Waterflow Alarm, AC Power Fail Trouble and Battery Trouble
- DTC-300A has the ability of disconnecting the incoming and outgoing calls and capturing the line for transmission to the Digital Alarm Communicator Receiver (DACR)
- Onsite or remote programming
- Onsite configurable with the on-board keypad and the CFG-300 Configuration Tool or using the UIMA Programming Tool and a computer with an available serial or USB port
- Remotely configurable via a Personal Computer with a modem (Configuration is passcode protected)
- Provides telephone line monitoring and reports status via LED indication on-board
- Provides event logs of 500 entries each to save events from local dialer or remote fire alarm panel
- Logs can be reviewed locally with the CFG-300 Configuration Tool or remotely via modem
- Continuously supervises the status of each of two connected telephone lines at approximately one minute intervals
- Provides LED indication for AC Power, Common Trouble, CPU Fail and Ground Fault
- Requires 24VDC filtered or 24VDC Full Wave Rectified (FWR) power supply



S5434



7300-1477:151

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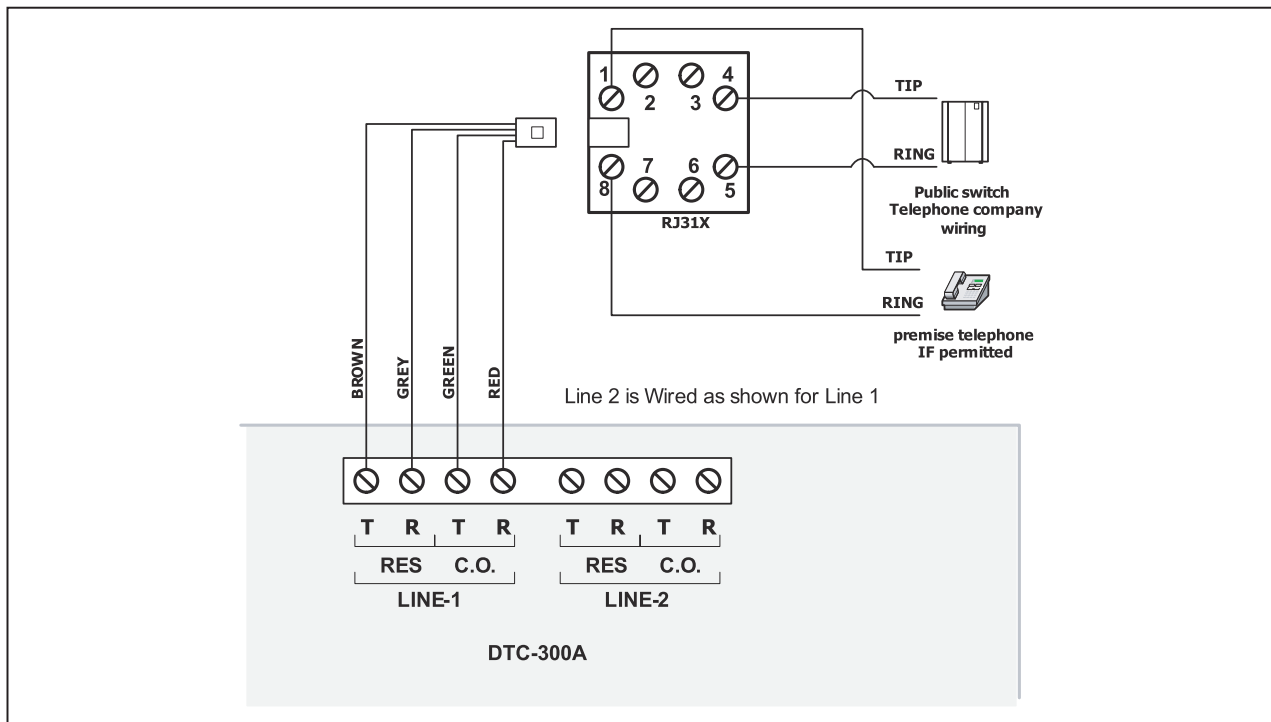
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite programming of the DTC-300A. The CFG-300 plugs into the DTC-300A to provide a two line by 20 character LCD display. The CFG-300 tool is used for configuration purposes only and not for normal operation.

### Current Consumption

Standby	60 mA
Alarm	110 mA

### DTC-300A Wiring Diagram

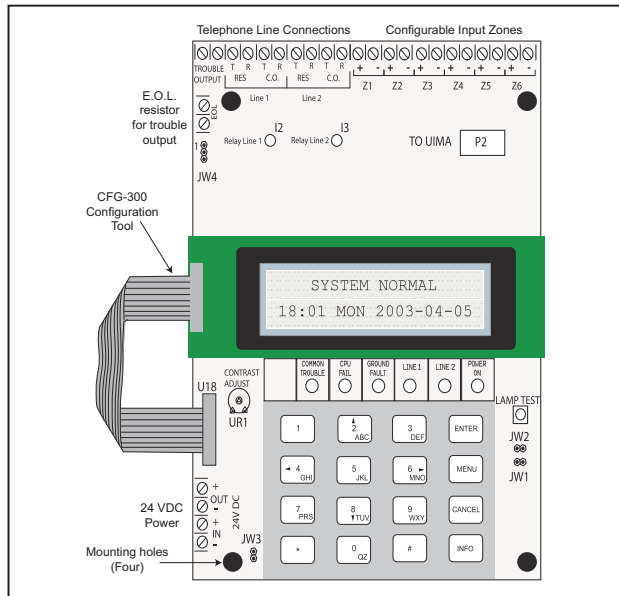


### Ordering Information

Model	Description
DTC-300A*	Standalone Digital Alarm Communicator Transmitter
CFG-300	Configuration Tool
UIMA	Universal Programming Tool

\*add suffix "R" for red and "W" for white

### DTC-300A Connection Diagram



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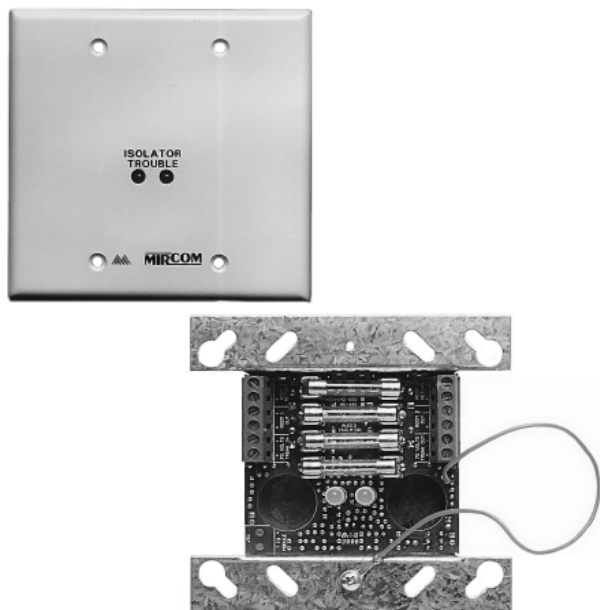
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CAT. 5316  
 Rev. 1





### Description

Mircom's SIS-204 Speaker Isolator Module is designed for installations where disconnection of, or damage to an in-suite speaker will not interfere with the ability of speakers in other dwelling units, public corridors or suites to sound on an alarm. The SIS-204 works in conjunction with the QX-5000 Zoned Audio System and comes equipped with trouble LEDs. The LEDs are only operable when the isolator is used in a supervised connection.

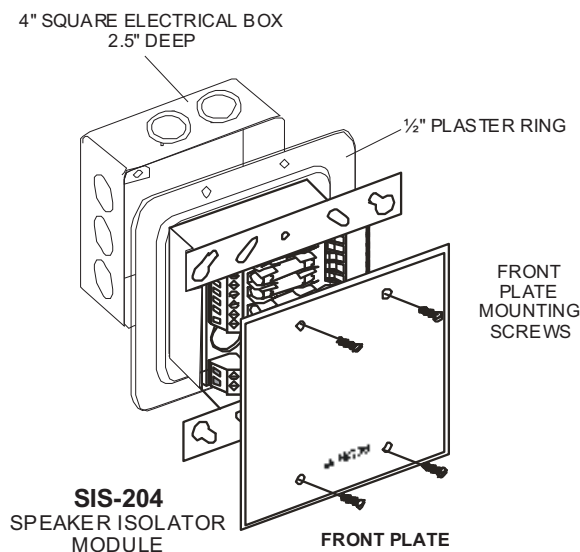
The SIS-204 Speaker Isolator Module can be connected in a supervised or non-supervised configuration. In a supervised configuration, the SIS-204 provides two supervised outputs. Under this scenario, if the in-suite speaker has an open circuit, the fire or audio control panel will indicate a zone trouble and the isolator LED will flash to indicate which isolator has the fault. The trouble LEDs flash to indicate a positive or negative fault on the isolator. When the left amber trouble LED flashes, it indicates an open on the positive side and consequently, when the right amber LED flashes, it indicates an open on the negative side. In a non-supervised configuration, the SIS-204 provides four non-supervised outputs. Under this scenario, if a short or open circuit occurs, the isolator disconnects the speaker from the circuit but it does not indicate a trouble on the fire or audio control panel. In this configuration, an open circuit in the suite does not indicate a trouble on the control panel.

### Features

- Designed for installations where disconnection of, or damage to an in-suite speaker will not interfere with the ability of speakers in other dwelling units, public corridors or suites to sound on an alarm
- Operates in conjunction with the QX-5000 Emergency Zoned Audio System to provide 2 supervised isolator outputs or 4 non-supervised outputs
- Include two isolator trouble LEDs (operable when the isolator is used in a supervised configuration)
- Mount in a 4" square electrical box

### Installation Instructions

#### Mounting of the SIS-204 Speaker Isolator Module



S5375

**CATALOG NUMBER 5222**

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## Electrical Specifications

**Rating:** For 70V speaker lines

**In-Suite Speaker Load:** 6 watts max.

**Max. Number of Isolators on a speaker line:** 15 with specified Littelfuse type 312 fuse

**Note:** The SIS-204 is used with Mircom's 4" 70 Volt Speakers (Standard or Smart Silenceable Speakers).

**Fuse:** Littelfuse 0.1A, 250V Slow Blow #312.100

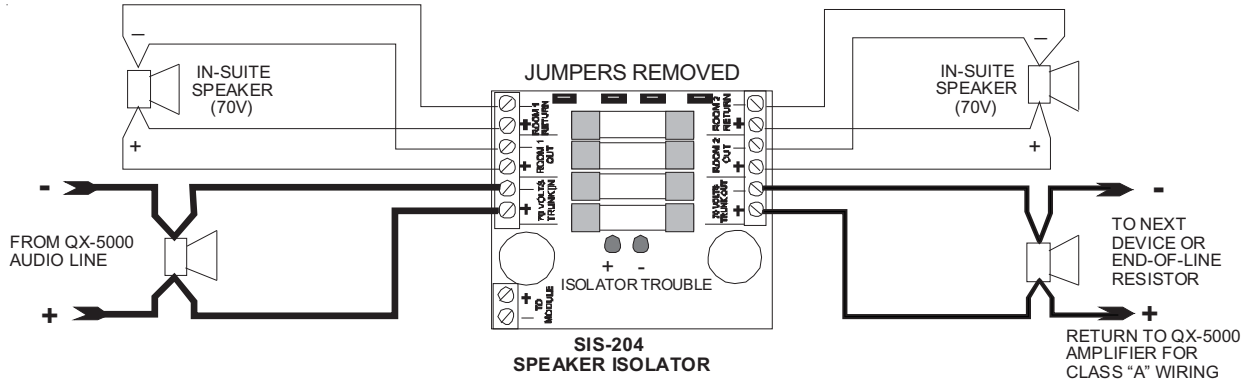
**Standby:** 0.0 A

**Open circuit on (+) or (-) side:** 200uA

**Open circuit on both sides:** 100uA

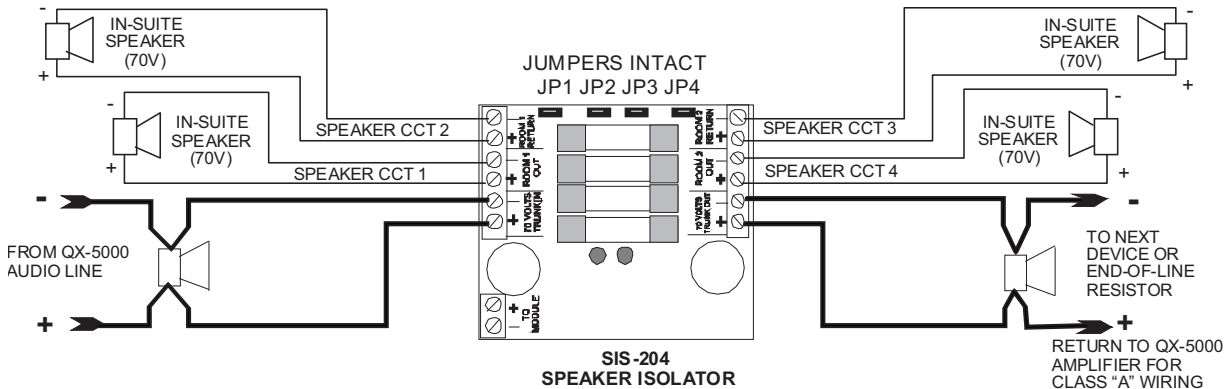
## Typical Wiring Diagrams

### Typical Wiring of the SIS-204 Speaker Isolator Module in a Supervised Configuration



THE (+) LED WILL BLINK FOR AN OPEN ON THE POSITIVE SIDE OF THE IN-SUITE SPEAKER, SIMILARLY, THE (-) LED BLINKS FOR AN OPEN CIRCUIT ON THE NEGATIVE SIDE OF THE IN-SUITE SPEAKER.

### Typical Wiring of the SIS-204 Speaker Isolator Module in a Non-Supervised Configuration



**Note:** Mircom does not recommend the installation of unsupervised signal circuits. Mircom recommends that occupants follow proper measures for fire procedures for their premises.

Mircom recommends that all suite isolators should be mounted outside of the suite they are protecting.

## Ordering Information

Model	Description
SIS-204	Speaker Isolator Module

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CAT. 5222  
Rev. 6



### Description

Mircom's BPS-602 is an extremely cost effective 6.5 amp voltage regulated remote power supply/battery charger. It may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC such as strobes and horns) expansion support to meet ADA requirements. It also provides auxiliary power to support system accessories. The unit delivers regulated and filtered 24 or 12 volt power to Class B or Class A NAC loop circuits.

Additionally, a separate 1.0A auxiliary output with reset for four (4)-wire smoke detectors is available. The 6.5 amp rated supply current can be divided between the four (4) outputs for powering NAC devices. Each output is rated at 2.5 amp max., and can be independently programmed for Steady, Temporal Code 3 or Strobe Synchronization. All outputs may be programmed for Input to Output Follower Mode (output will follow input. i.e. March Time Input, March Time Output). An individual output of 4 amp is achieved by paralleling 2 outputs.

The BPS-602 in non-alarm condition independent loop supervision for Class A and/or Class B FACP NAC circuits is provided. In the event of a loop trouble the FACP will be notified via the steered input (input 1 or input 2). In addition, there are common trouble output terminals (N.C., C, N.O.) which are used to indicate general loop/system trouble. A common trouble input is provided for optional NC (normally closed) devices to report trouble to the FACP. Two (2) FACP signaling outputs can be employed and directed to control supervision and power delivery to any combination of the four (4) outputs. The unit also features "Loop Output" trouble memory indication to help identify trouble some sporadic problems.

### Features

- Power input 115VAC 60 Hz, 1.45 amp.
- Two (2) Class A or two (2) Class B FACP inputs
- Field selectable 24VDC or 12VDC voltage regulated power limited outputs
- 24VDC or 12VDC rated @ 6.5 amp max total alarm current
- 2.5 amp max current per output
- Separate 1 Amp auxiliary output with built-in and remote reset capability
- Two (2) outputs may be paralleled for more power on an indicating circuit
- Programmable supervised indicating circuit outputs: Up to Four (4) Class B or Two (2) Class A or One (1) Class A and Two (2) Class B Thermal and short circuit protection with auto reset
- Built-in charger for sealed lead acid or gel type batteries
- Automatic switchover to stand-by battery when AC Fails
- Zero voltage drop when switching over to battery backup
- PTC battery protection
- AC fail supervision (form "C" contact, 1 amp / 28VDC). Factory set for 1 minute with optional 18 hour delay setting (field selectable)
- Battery presence and low battery supervision (form "C" contact, 1 amp / 28VDC)
- Input and output status LED indicators
- 2 wire horn/strobe Sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Temporal Code 3, Steady Mode, Input to Output Follower Mode (maintains synchronization of notification appliances circuit)
- Horn/Strobe sync protocols include Mircom, Amseco, Gentex, System Sensor, Faraday and Wheelock
- March Time
- Compatible with 12 or 24VDC fire panels.
- Filtered and electronically regulated output
- Output loop supervision steered to input 1 or input 2
- Common trouble input and output
- Ground fault detection
- Unit includes power supply, red enclosure, cam lock, open frame transformer and battery leads



S5434



7315-1477:148

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220 95E-14

**CATALOG NUMBER 5665**
**NOT TO BE USED FOR INSTALLATION PURPOSES.**

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## Power Supply Specifications

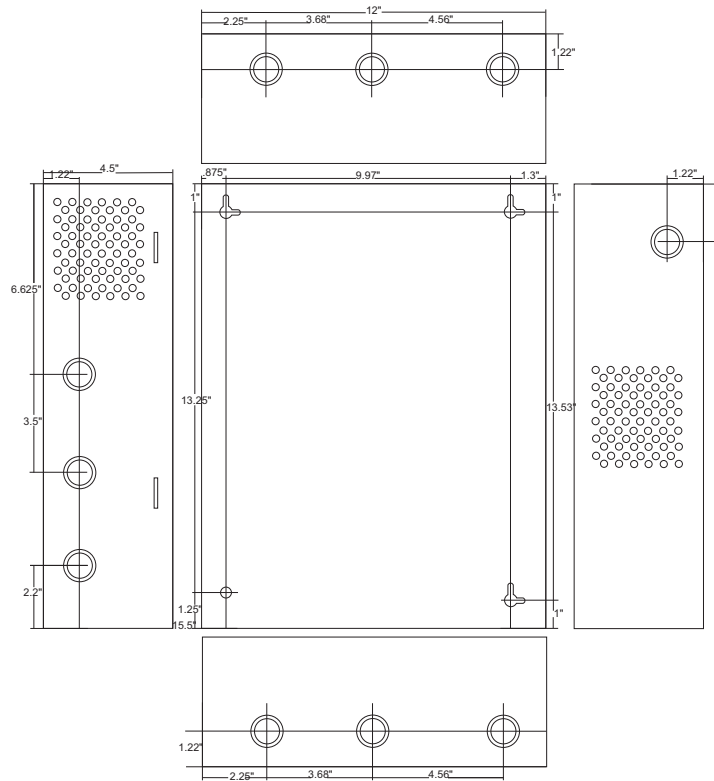
<b>AC Input</b>	115VAC / 1.45 amp @ 60Hz
<b>Output</b>	12 - 24VDC. Maximum 2.5 amp per output Total of 6.5 amp in Alarm Condition
<b>Battery</b>	For 12VDC operation use a 12VDC / 12AH battery For 24VDC operation use two (2) 12VDC / 12AH or two (2) 12VDC / 7AH batteries connected in series
<b>Stand-by/Alarm Current:</b>	75mA/150mA
<b>EOL Resistor (end of line)</b>	2.2K (2200 ohm)

## Standby Specifications

Standby Batteries	Standby Time	Alarm Output Total Amp/Minutes	Aux Output Current
24VDC/12AH (use two (2) 12VDC batteries in series)	24 Hours	6.5 amp/15 Minutes	50mA
	60 Hours	6.5 amp/5 Minutes	-
24VDC/7AH	24 Hours	6.5 amp/5 Minutes	-
12VDC/12AH	24 Hours	6.5 amp/15 Minutes	50mA
	60 Hours	6.5 amp/5 Minutes	-
24VDC/36AH Battery	24 Hours	6.5 amp/15 Minutes	1 amp
12VDC/36AH Battery	24 Hours	6.5 amp/15 Minutes	1 amp

## Enclosure Dimensions

15.5"H x 12"W x 4.5"D



## Ordering Information

Model	Description
BPS-602	6.5 Amp Remote Power Supply

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CAT. 5665  
Rev. 2



### Description

Mircom's BPS-802 is an extremely cost effective 8 amp voltage regulated remote power supply/battery charger. It may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC such as strobes and horns) expansion support to meet ADA requirements. It also provides auxiliary power to support system accessories. The unit delivers regulated and filtered 24 or 12 volt power to Class B or Class A NAC loop circuits.

Additionally, a separate 1.0A auxiliary output with reset for four (4)-wire smoke detectors is available. The 8 amp rated supply current can be divided between the four (4) outputs for powering NAC devices. Each output is rated at 2.5 amp max., and can be independently programmed for Steady, Temporal Code 3 or Strobe Synchronization. All outputs may be programmed for Input to Output Follower Mode (output will follow input. i.e. March Time Input, March Time Output). An individual output of 4 amp is achieved by paralleling 2 outputs.

The BPS-802 in non-alarm condition independent loop supervision for Class A and/or Class B FACP NAC circuits is provided. In the event of a loop trouble the FACP will be notified via the steered input (input 1 or input 2). In addition, there are common trouble output terminals (N.C., C, N.O.) which are used to indicate general loop/system trouble. A common trouble input is provided for optional NC (normally closed) devices to report trouble to the FACP. Two (2) FACP signaling outputs can be employed and directed to control supervision and power delivery to any combination of the four (4) outputs. The unit also features "Loop Output" trouble memory indication to identify trouble some sporadic problems.

### Features

- Power input 115VAC 60 Hz, 1.45 amp.
- Two (2) Class A or two (2) Class B FACP inputs
- Field selectable 24VDC or 12VDC voltage regulated power limited outputs
- Two (2) NC dry contact trigger inputs
- 24VDC or 12VDC rated @ 8 amp max total alarm current
- 2.5 amp max current per output
- Separate 1 Amp auxiliary output with built-in and remote reset capability
- Two (2) outputs may be paralleled for more power on an indicating circuit
- Programmable supervised indicating circuit outputs: Up to Four (4) Class B or Two (2) Class A or One (1) Class A and Two (2) Class B Thermal and short circuit protection with auto reset
- Built-in charger for sealed lead acid or gel type batteries
- Automatic switchover to stand-by battery when AC Fails
- Zero voltage drop when switching over to battery backup
- PTC battery protection
- AC fail supervision (form "C" contact, 1 amp / 28VDC). Factory set for 1 minute with optional 18 hour delay setting (field selectable)
- Battery presence and low battery supervision (form "C" contact, 1 amp / 28VDC)
- Input and output status LED indicators
- 2 wire horn/strobe Sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Temporal Code 3, Steady Mode, Input to Output Follower Mode (maintains synchronization of notification appliances circuit)
- Horn/Strobe sync protocols include Mircom, Amseco, Gentex, System Sensor, Faraday and Wheelock
- March Time
- Compatible with 12 or 24VDC fire panels.
- Filtered and electronically regulated output
- Output loop supervision steered to input 1 or input 2
- Common trouble input and output
- Ground fault detection
- Unit includes power supply, red enclosure, cam lock, open frame transformer and battery leads



**CATALOG NUMBER** 5666

**NOT TO BE USED FOR INSTALLATION PURPOSES.**

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## Power Supply Specifications

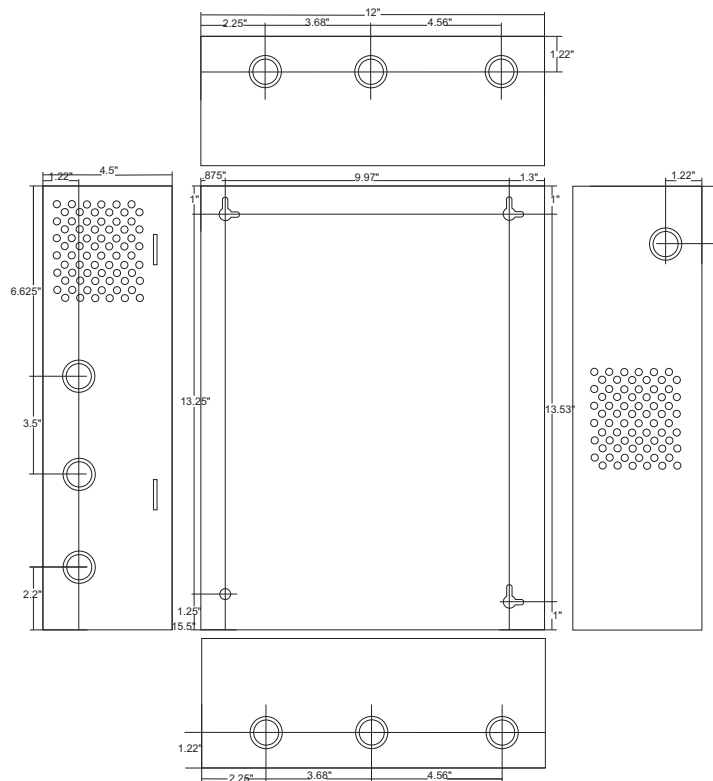
<b>AC Input</b>	115VAC / 1.45 amp @ 60Hz
<b>Output</b>	12 - 24VDC. Maximum 2.5 amp per output Total of 8 amp in Alarm Condition
<b>Battery</b>	For 12VDC operation use a 12VDC / 12AH battery For 24VDC operation use two (2) 12VDC / 12AH or two (2) 12VDC / 7AH batteries connected in series
<b>Stand-by/Alarm Current:</b>	75mA/150mA
<b>EOL Resistor (end of line)</b>	2.2K (2200 ohm)

## Standby Specifications

Standby Batteries	Standby Time	Alarm Output Total Amp/Minutes	Aux Output Current
24VDC/12AH (use two (2) 12VDC batteries in series)	24 Hours	8 amp/15 Minutes	50mA
	60 Hours	8 amp/5 Minutes	-
24VDC/7AH	24 Hours	8 amp/5 Minutes	-
12VDC/12AH	24 Hours	8 amp/15 Minutes	50mA
	60 Hours	8 amp/5 Minutes	-
24VDC/36AH Battery	24 Hours	8 amp/15 Minutes	1 amp
12VDC/36AH Battery	24 Hours	8 amp/15 Minutes	1 amp

## Enclosure Dimensions

15.5"H x 12"W x 4.5"D



## Ordering Information

Model	Description
BPS-802	8 Amp Remote Power Supply

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CAT. 5666  
Rev. 2



### Description

Mircom's BPS-1002 is an extremely cost effective 10 amp voltage regulated remote power supply/battery charger. It may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC such as strobes and horns) expansion support to meet ADA requirements. It also provides auxiliary power to support system accessories. The unit delivers regulated and filtered 24 volt power to Class B or Class A NAC loop circuits.

Additionally, a separate 1.0A auxiliary output with reset for four (4)-wire smoke detectors is available. The 10 amp max. alarm current can be divided between the four (4) outputs for powering NAC devices. Each output is rated at 2.5 amp max., and can be independently programmed for Steady, Temporal Code 3 or Strobe Synchronization. All outputs may be programmed for Input to Output Follower Mode (output will follow input. i.e. March Time Input, March Time Output). An individual output of 4 amp is achieved by paralleling 2 outputs.

The BPS-1002 in non-alarm condition provides independent loop supervision for Class A and/or Class B FACP NAC circuits. In the event of a loop trouble, the FACP will be notified via the steered input (input 1 or input 2). In addition, there are common trouble output terminals (N.C., C, N.O.) which are used to indicate general loop/system trouble. A common trouble input is provided for optional NC (normally closed) devices to report trouble to the FACP. Two (2) FACP signaling outputs can be employed and directed to control supervision and power delivery to any combination of the four (4) outputs. The unit also features "Loop Output" trouble memory indication to help identify trouble some sporadic problems.

### Features

- Power input 115VAC 60 Hz, 4.4 amp.
- Two (2) Class A or two (2) Class B FACP inputs
- Field selectable 24VDC or 12VDC voltage regulated power limited outputs
- Two (2) NC dry contact trigger inputs
- 24VDC @ 10 amp max total alarm current
- 2.5 amp max current per output
- Separate 1 Amp auxiliary output with built-in and remote reset capability
- Two (2) outputs may be paralleled for more power on an indicating circuit
- Programmable supervised indicating circuit outputs: Up to Four (4) Class B or Two (2) Class A or One (1) Class A and Two (2) Class B Thermal and short circuit protection with auto reset
- Built-in charger for sealed lead acid or gel type batteries
- Automatic switchover to stand-by battery when AC Fails
- Zero voltage drop when switching over to battery backup
- PTC battery protection
- AC fail supervision (form "C" contact, 1 amp / 28VDC). Factory set for 1 minute with optional 18 hour delay setting (field selectable)
- Battery presence and low battery supervision (form "C" contact, 1 amp / 28VDC)
- Input and output status LED indicators
- 2 wire horn/strobe Sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Temporal Code 3, Steady Mode, Input to Output Follower Mode (maintains synchronization of notification appliances circuit)
- Horn/Strobe sync protocols include Mircom, Amseco, Gentex, System Sensor, Faraday and Wheelock
- March Time
- Compatible with 12 or 24VDC fire panels.
- Filtered and electronically regulated output
- Output loop supervision steered to input 1 or input 2
- Common trouble input and output
- Ground fault detection
- Unit includes power supply, red enclosure, cam lock, open frame transformer and battery leads



**CATALOG NUMBER** **5667**

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## Power Supply Specifications

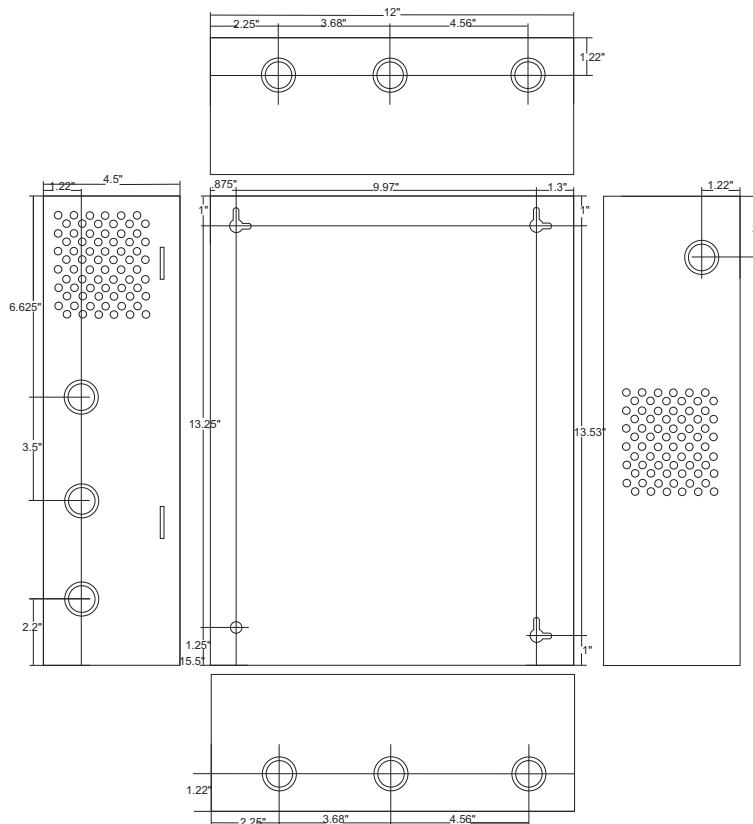
<b>AC Input</b>	115VAC / 4.4 amp @ 60Hz
<b>Output</b>	24VDC. Maximum 2.5 amp per output Total of 10 amp in Alarm Condition
<b>Battery</b>	For 12VDC operation use a 12VDC / 12AH battery For 24VDC operation use two (2) 12VDC / 12AH or two (2) 12VDC / 7AH batteries connected in series
<b>Stand-by/Alarm Current:</b>	90mA/175mA
<b>EOL Resistor (end of line)</b>	2.2K (2200 ohm)

## Standby Specifications

Standby Batteries	Standby Time	Alarm Output Total Amp/Minutes	Aux Output Current
24VDC/12AH (use two (2) 12VDC batteries in series)	24 Hours	10 amp/15 Minutes	50mA
	60 Hours	10 amp/5 Minutes	-
24VDC/7AH	24 Hours	10 amp/5 Minutes	-
24VDC/36AH Battery	24 Hours	10 amp/15 Minutes	1 amp
12VDC/36AH Battery	24 Hours	10 amp/15 Minutes	1 amp

## Enclosure Dimensions

15.5"H x 12"W x 4.5"D



## Ordering Information

Model	Description
BPS-1002	10 Amp Remote Power Supply

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5667  
Rev. 2





## Description

Mircom's BPS-1100 Signal Booster Power Supply is designed to extend the power capabilities of existing indicating circuits and to provide power for other ancillary devices. The BPS-1100 may be connected to any ULC Listed Fire Alarm Control Panel to provide indicating circuit expansion.

The BPS-1100 consists of four indicating circuits, which can be expanded up to twelve with the addition of two SGM-1004A Four Indicating Circuit Module. Each indicating circuit is rated at 1.7 Amp maximum with a total output capacity of 11 Amps. The outputs may be configured as four Class A/B (Style Z/Y).

The BPS-1100 will also support additional relay circuits with the addition of the RM-1008A Eight Relay Circuit Module. The RM-1008A is normally used for interconnecting multiple BPS-1100 units.

Mircom's BPS-1100 provides four supervised programmable contact inputs, trouble and local ground detection output contacts and support for supervised and non-supervised suite isolators.

## Features

- Four 4 Class A/B (Style Z/Y) Indicating Circuits with individual trouble indicators (1.7 Amps max. per circuit)
- Each Indicating Circuit can be configured as Steady, Temporal Code, California Code or March Time Alert
- Four supervised programmable contact inputs
- Indicating Circuits may be individually disconnected by a DIP switch
- Auxiliary relay contacts for Booster Ground Fault and Common Trouble (Each relay contact Form C, 28 VDC @ 1 Amp (resistive))
- Easy configuration via push buttons and DIP switches on the front panel
- Extensive Transient Protection
- 11 Amp maximum unregulated output
- Supports supervised and non-supervised suite isolators
- Indicating circuits can be expanded up to twelve with two SGM-1004A
- Regulated auxiliary 24VDC Output (1.7 Amp)
- Space for 6 to 17 AH battery

The indicating circuits on the BPS-1100 can be configured for Alarm (Silenceable), Evacuation 2<sup>nd</sup> Stage (Silenceable) or Strobe (Non-Silenceable) and correlated to the programmable contact inputs.

The indicating circuits can be configured for the following audible signal rates: Steady, Temporal Code, California Code or March Time Alert.

The BPS-1100 is enclosed in a beige colour cabinet and comes with a durable CAT-30 lock and key. The BPS-1100 contains its own battery charger capable of charging up to 17 AH batteries. The cabinet provides space to mount up to 17 AH Gel Cell batteries.



**CATALOG NUMBER** **5635**

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## Specifications

### AC Line Voltage:

120V, 60Hz / 240V, 50Hz

2 Amps / 1Amp (primary)

### Power Supply Ratings:

12 Amps. max. (secondary)

### For Indicating Circuits:

24VDC unfiltered, 11 Amps. max.

### Battery:

24VDC, Gel-Cell/Sealed Lead-Acid

### Charging Capability:

10-17 AH batteries

### Current Consumption:

Standby: 200 mA, Alarm: 350 mA

### Cabinet Dimensions:

26"H x 14½"W x 4½"D

### Battery Space:

Up to two 17 AH batteries

### Auxiliary Relays: (resistive loads)

Common Ground: Form C, 1 Amp, 28 VDC

Common Trouble: Form C, 1 Amp, 28 VDC

## Ordering Information

Model	Description
BPS-1100	Signal Booster Power Supply

### Adder Modules

SGM-1004A Four Class A/B (Style Z/Y) Indicating Circuit Module (Rated at 1.7 Amps per circuit)

RM-1008A Eight Relay Circuit Module (Form C relays rated for 28 VDC @ 1 Amp. max. per circuit)

NOT TO BE USED FOR INSTALLATION PURPOSES.



#### Canada

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CAT. 5635  
Rev. 4

## FX-2000 SERIES

## PROGRAMMABLE MODULES

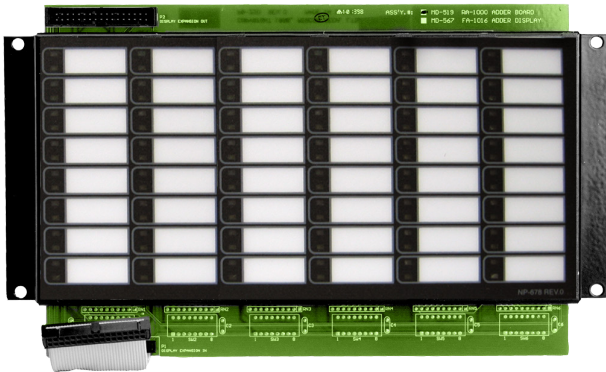
The FX-2000 Analog Fire Alarm Control Panel supports Programmable modules which can be connected either internally to the fire alarm panel or externally via the RAX-LCD Remote Shared Display. Connection to the RAX-LCD allows for unique configurations for a specific remote location.



RAX-LCD mounted in a BB-1001R enclosure

### RAX-LCD Remote Shared Display

The RAX-LCD Remote Shared Display is a remote annunciator that provides the same functions as the main display on the fire alarm control panel, less 16 zone LEDs. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display which uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. It also has 4 Alarm Queue switches and LEDs as well as common control switches and LEDs for Signal Silence, Fire Drill, System Reset, Lamp Test, General Alarm and Acknowledge. The RAX-LCD can be programmed to show different points than the main panel. In addition to being a remote annunciator, the RAX-LCD can also be used as a driver module for standard LED annunciation or reduced zone annunciation (different from the main panel annunciation), graphic drivers programmed different from the main annunciators, programmable switch modules with their unique configuration and fan damper control also with their unique configuration. Each time a different type of annunciation configuration is required or a different location is required an additional RAX-LCD will be needed. The RAX-LCD allows for the control switches to be disabled on a per function basis (via laptop configurator) for areas that do not require certain Common Control functions to be remotely located from the Fire Alarm Control Panel. The RAX-LCD occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048 Programmable Zone LED Annunciator Module

The RAX-1048 Programmable Zone LED Annunciator Module provides 48 programmable bi-coloured LEDs. The RAX-1048 is used if additional LED zone annunciation is required. The addressable points can be grouped together to light one LED, or they can be part of many groups and therefore may turn on many LEDs. The circuits can be selected as either Alarm to illuminate the red LED or for Supervisory to illuminate the amber LED. Any zone trouble condition will be displayed on the Shared Display. The RAX-1048 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if a programmable remote LED annunciator is required. It takes up two frames when connected to either the main or remote shared display. The RAX-1048 is used in conjunction with the RAX-LCD when a different type of annunciation configuration or a different location is required. The RAX-1048 occupies one display position in the BB-1000 or BB-5000 enclosures.



S5434



S5434



**MECA**  
approved

313-97-E

7165-1477:111  
(RAX-1048, IPS-2424  
& FDX-008)  
7120-1477:107  
(RAX-LCD)



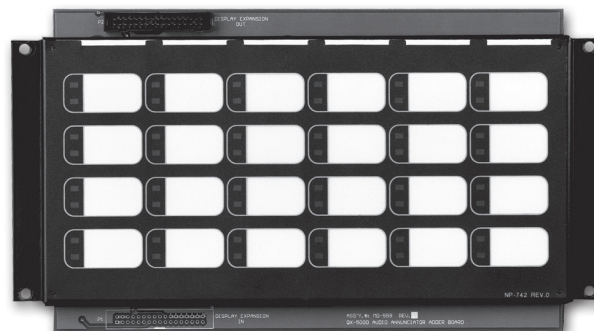
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3017996

**CATALOG NUMBER**

**5912**

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## FDX-008 Fan Damper Module

The FDX-008 Fan Damper Module provides individually programmed circuits which can be used for fan or damper control. Each circuit has a slide-in label, a three position selector switch, green "run or open" LED and an amber "off or closed" LED. The three-position selector switch has a centre "auto" position, a left "off or close" position and a right "on or open" position. In the 'auto' position the fan or damper follows the fire alarm programming when an alarm occurs. When the switch is turned to the 'off' position the fan or damper is turned 'off or closed'. If the fan or damper is normally 'on or open' it will turn 'off or close' when the switch is moved to the 'off' position. When the switch is moved to the 'on' position the fan or damper is turned 'on or open'. If the fan or damper is normally 'off or closed' it will turn 'on or open' when the switch is moved to the 'on' position. The 'on', 'off' and the 'auto' positions are configurable to remote addressable output modules (MIX-M500CH) and can be configured for normally 'on or off' fans or normally 'open or closed' dampers. The LEDs can be controlled from the program or by proving switches through mini input modules (MIX-M501M). The FDX-008 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display when a different type of fan/damper configuration or a different location is required. The FDX-008 takes up one frame when connected to the main or remote shared display. The FDX-008 occupies one display position in the BB-1000 or BB-5000 enclosures.

## IPS-2424 Programmable Input Switches Module

The IPS-2424 Programmable Input Switches Module, which provides 24 programmable switches complete with bi-coloured LEDs and slide-in labels, can be configured for ancillary functions such as zone by-pass or added common control functions. In a zone by-pass configuration, a group of addressable devices or hardwired circuits can be assigned to a programmable switch and when the switch is operated, those devices or zones are by-passed. The switches operate in a toggle operation for on and off. There are two LEDs for each switch; one for selection, the other is bi-coloured to indicate point status when the switch is returned to normal (unbypassed) position. The bi-coloured LED will flash red to indicate an alarm or it will flash amber to indicate that a supervisory alarm will be processed when the switch is returned to normal (unbypassed) position. The IPS-2424 can be connected to the main panel or it can be connected to the RAX-LCD Remote Shared Display if unique programmable input switches are required for a specific location. The IPS-2424 takes up two frames when connected to the main or remote shared display. The IPS-2424 occupies one display position in the BB-1000 or BB-5000 enclosures.

## Ordering Information

Model	Description	Standby	Alarm
RAX-LCD	Remote Shared Display	100 mA	150 mA
RAX-1048	Programmable Zone LED Annunciator Module	15 mA	100 mA
IPS-2424	Programmable Input Switches Module	10 mA	144 mA
FDX-008	Fan Damper Module	10 mA	100 mA

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CAT. 5912  
Rev. 7



Cabinet Type #1



Cabinet Type #2



Cabinet Type #3



Cabinet Type #4

### Features

- 120/347VAC 60Hz Input, field selectable
- 6VDC, 12VDC or 24VDC emergency power output versions
- 120VAC line cord supplied standard
- Standard unit includes two PAR 18 small style lamp heads with 9 watt Tungsten lamps
- Top head mounting is standard
- 30 Minutes emergency power duration standard
- Wattage capacities from 18 to 720 watts
- High efficiency, rapid recovery, precision control charging system
- Solid state design and construction
- Momentary push button test switch
- Diagnostic/pilot LEDs for AC ON and CHARGE
- Maintenance free, sealed lead acid battery
- White powder coat finish standard

### Description

The Mircom MLS Series provide an economical, compact and attractive solution for typical emergency lighting needs. The low profile, all steel housings are designed for simple installation and long lasting durability. Large magnum terminals allow for the connection of various remote loads.

The MLS units are completely self-contained emergency lights made for use on 120 or 347 volt circuits. The units are available in 6V, 12V, and 24V versions and can provide between 18 to 720 watts of emergency power. A maintenance free, sealed lead acid battery is included with the units, which will provide the specified wattage for a 30 minute duration. All units come standard with a white finish.

### Circuitry

The MLS units come complete with high quality, pulse action chargers which are up to 70% more efficient than constant voltage chargers. The intelligent chargers are complete with low voltage disconnect, brownout, and short circuit protections.

A dual LED display indicates AC ON and High Charge, and all chargers are complete with a quick test, push-button switch for easy maintenance and testing. Recharge time is 24 hours. Optional automatic self diagnostic/test control boards are also available.

All units come standard with two Thermoplastic Heads featuring a fully adjustable locking tilt and swivel. Each head has a 9 watt Tungsten lamp.

Approvals:  
CSA Certified to C22.2 #141



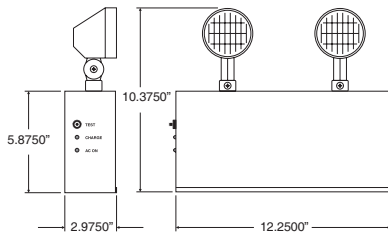
**CATALOG NUMBER 4100**

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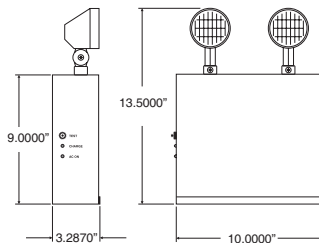
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## Dimensions

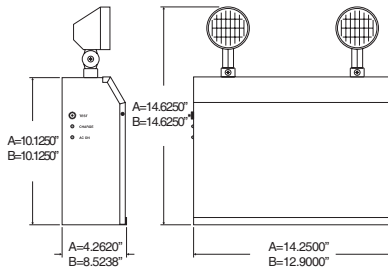
### Cabinet Type #1



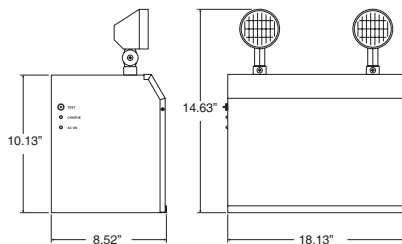
### Cabinet Type #2



### Cabinet Type #3



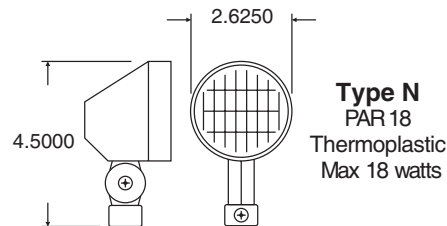
### Cabinet Type #4



## Model Ratings

Model	Voltage	Wattage Capacities				Cabinet Type
		30 min.	60 min.	90 min.	120 min.	
MLS-06018	6	18	9	N/A	N/A	#1
MLS-06036	6	36	18	12	9	#1
MLS-06050	6	50	25	16	12	#1
MLS-06072	6	72	36	24	18	#2
MLS-06100	6	100	50	33	25	#2
MLS-06160	6	160	80	53	40	#3
MLS-06180	6	180	90	60	45	#3
MLS-12036	12	36	18	12	9	#1
MLS-12072	12	72	36	24	18	#1
MLS-12100	12	100	50	33	25	#2
MLS-12160	12	160	80	53	40	#3
MLS-12200	12	200	100	66	50	#3
MLS-12250	12	250	125	83	62	#3
MLS-12360	12	360	180	120	90	#3
MLS-24144	24	144	72	48	36	#3
MLS-24200	24	200	100	66	50	#3
MLS-24320	24	320	160	106	80	#3
MLS-24350	24	350	175	116	87	#4
MLS-24550	24	550	275	183	137	#4
MLS-24720	24	720	360	240	180	#4

## Head Type



## Ordering Information

Series	Voltage	Wattage	Battery	Head Type	Lamp Type
MLS	06 - 6V 12 - 12V 24 - 24V	See model rating	Blank - Regular HP - High Power (6V or 12V only)	2H - Two PAR18 00 - No Heads	9 - Two 9 Watt Tungsten

**NOTE:** Due to cabinet/space limitations, not all options are available for all models in any given combination. Please consult with your factory representative regarding specific options.

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 4100  
Rev. 0



### Features

- LED Ultra-bright light source
- 120/347VAC Input, field selectable
- Solid state design and construction
- Maintenance free, sealed lead acid battery
- 20 Gauge steel construction
- Universal spider knockout pattern stamped into backplate for junction box mounting
- 6VDC or 12VDC emergency power output versions
- PAR18 small style, high impact thermoplastic heads are standard
- White powder coat finish standard

### Description

The Mircom MCE & MCS series of C860 certified commercial, slim line steel combination signs are designed to provide the greatest flexibility in meeting emergency lighting needs. The clean, contemporary appearance of the sign is combined with the reliability and performance of an emergency lighting unit. Available with long-life, high brightness LEDs with energy efficient consumption as low as just 4.7w AC. Each sign is designed with a simple slide-out face/backplate for quick and easy installation and all backplates are stamped with a universal mounting pattern. Multiple conduit knockouts and a universal mounting canopy kit complete each model.

The MCE & MCS are a series of completely self-contained, combination emergency light and sign, made for use on 120 or 347 volt circuits. The MCE & MCS series are designed with 20 gauge steel construction and all faceplates have field removable knock out chevron/ arrows. A maintenance free, sealed lead acid battery is included with the unit that will provide the specified wattage for 30 minutes duration. Multiple conduit knockouts and a universal mounting pattern are stamped into the unit. White baked finish is standard.

### Circuitry

The Mircom MCE & MCS units come complete with high quality, pulse action chargers which are up to 70% more efficient than constant voltage chargers. The solid state chargers are complete with low voltage disconnect, brownout, and short circuit protections. All models are standard 120VAC or 347VAC dual input, field selectable. A dual LED display indicates AC-ON and High charge, and all chargers are complete with a quick test, push-button switch for easy maintenance and testing. Recharge time is 24 hours.

Approvals:  
CSA Certified to C22.2 #141



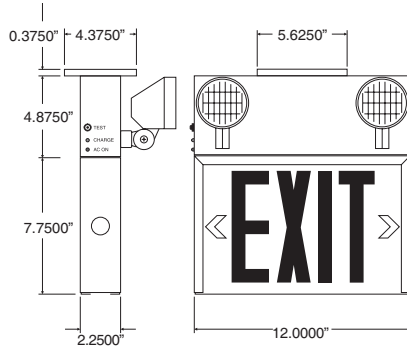
**CATALOG NUMBER** **4102**

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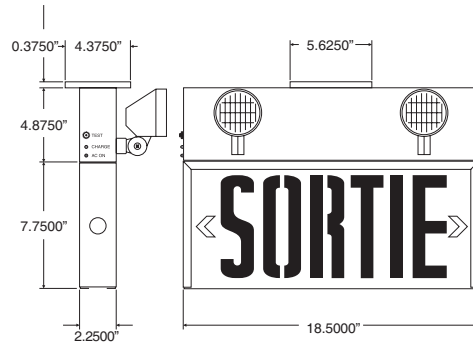
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## Dimensions

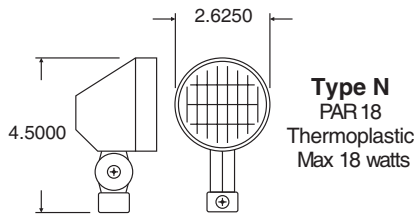
### MCE Series Combination Exit Sign



### MCS Combination Sortie Sign



### Head Type



## Ordering Information

Model Number	Voltage	Wattage Capacities				Face Type	Head Type	Lamp Type
		30 min.	60 min.	90 min.	120 min.			
<b>MCE Series Combination Exit Signs</b>						Universal	Two PAR18 Small Style Lamp Heads	Two 9 Watt Tungsten Lamps
MCE-06036-0-2H9	6	36	18	12	9			
MCE-06036HP-0-2H9	6	36	18	12	9			
MCE-06050-0-2H9	6	50	25	16	12			
MCE-12036-0-2H9	12	36	18	12	9			
MCE-12072-0-2H9	12	72	36	24	18			
<b>MCS Series Combination Sortie Signs</b>								
MCS-06036-0-2H9	6	36	18	12	9			
MCS-06036HP-0-2H9	6	36	18	12	9			
MCS-06072-0-2H9	12	72	36	24	18			
MCS-12036-0-2H9	12	36	18	12	9			
MCS-12072-0-2H9	12	72	36	24	18			

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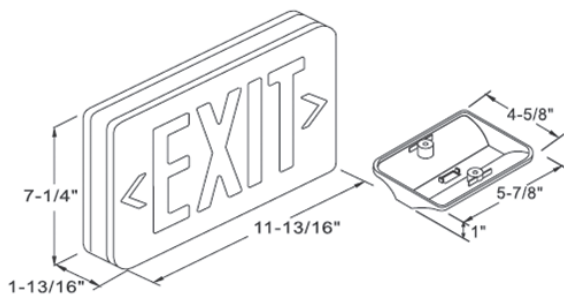
MSP Series

### Description

By combining value with a modern design, the Mircom MSP series of high impact thermoplastic commercial exit signs provide ideal exit signage solutions. Supplied standard with long-life, high brightness LEDs, the MSP series are also energy efficient with energy consumption as low as just 1.8W AC. Installation is quick and easy since each sign is designed and supplied with quick-snap faceplates, backplate and universal canopy. All backplates are stamped with a universal mounting pattern for even greater installation ease and flexibility.

The Mircom MSP exit series are designed utilizing an all thermoplastic construction. The plastic is UV stabilized, lightweight, impact and scratch resistant. All faceplates are designed with field removable snap out chevron/arrows. The standard MSP is white in colour.

All MSP exit signs are supplied with 120/347VAC dual input voltage, available in AC only and self-powered models. Self-powered models utilize an internal, solid state charger and come complete with a high-performance Ni-Cad battery, supplying 90 minutes of emergency power.



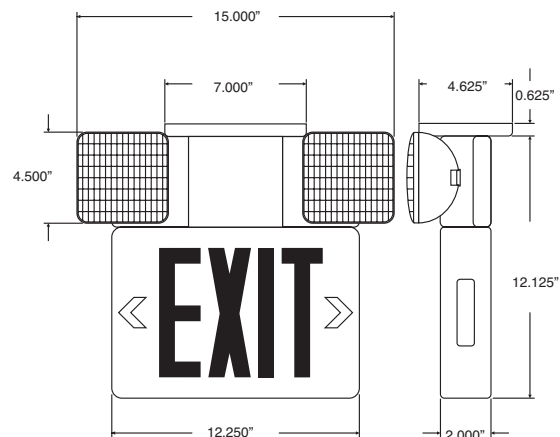
### Features

- High impact, UV stabilized, thermoplastic construction
- LED Ultra-bright light source
- 120/347VAC Input, field selectable
- Universal spider knockout pattern stamped into backplate for junction box mounting
- White colour is standard



MCP Series

The MCP Series is a combination thermoplastic exit sign that is C860 certified.



Approvals:  
CSA Certified to C22.2 #141



**CATALOG NUMBER 4104**

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## Ordering Information

Model	Description
<b>MSP Series</b>	
MSP-E-COWH	Universal Plastic LED Exit Sign, 120/347VAC
MSP-E-COWH-IB	Universal Plastic LED Exit Sign, 120/347VAC, Self-Powered
<b>MCP Series</b>	
MCP-06036-0-2H9	Combination Plastic LED exit/pack, 6V, 36W Capacity, 120/347VAC Operation.

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**Features**

- 20 Gauge Steel construction
- 120/347VAC Input, field selectable
- LED Ultra-bright light source
- AC/DC and self-powered models
- White powder coat finish

**Description**

The Mircom MSS Series of commercial, slim line steel signs are designed with a clean, contemporary appearance that is perfectly suited to today's modern interiors. Available in long-life, high brightness LED versions with energy efficient consumption as low as:

	VDC		IB	
	120V	347V	120V	347V
<b>EXIT</b>	1.2	1.4	4.7	4.7
<b>SORTIE</b>	1.4	1.5	4.0	4.0

Each sign is designed with a simple slide-out face/backplate for quick and easy installation and all backplates are stamped with a universal mounting pattern. Multiple conduit knockouts and a universal mounting canopy kit complete each model.

The Mircom MSS Series signs are designed with 20 gauge steel construction that wraps and interlocks completely, eliminating annoying light leaks. All faceplates are designed with field removable knock out chevron/arrows. The MSS Series is finished with a durable white baked powder coat finish.

**Circuitry**

All standard LED models are 120/347VAC dual input voltage, available in AC/DC and self-powered models. AC/DC models feature universal emergency backup DC voltages: 6, 12 or 24VDC, each field selectable. Emergency power wattages for EXIT LED models are as follows:

	6V	12V	24V
<b>EXIT</b>	0.5	1.5	3.5
<b>SORTIE</b>	0.5	1.5	3.5

Self-powered models utilize an internal, solid state charger and come complete with a high-performance Ni-Cad battery, supplying 90 minutes of emergency power.

Approvals:  
CSA Certified to C22.2 #141

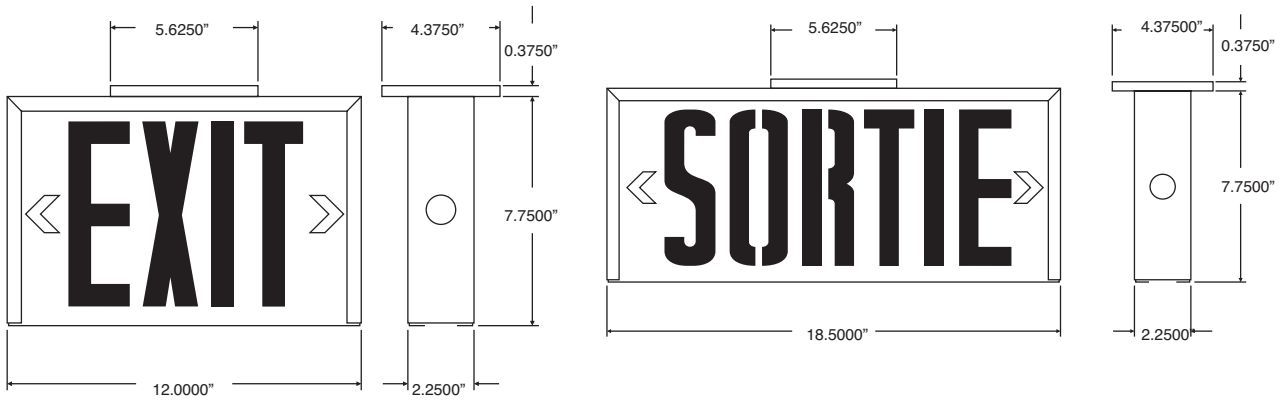


**CATALOG NUMBER 4105**

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## Dimensions



## Ordering Information

Model	Description
<b>MSS EXIT Signs</b>	
MSS-E-C0WH	Universal Steel LED Exit Sign, 120/347VAC, 6-24VDC
MSS-E-C0WH-IB	Universal Steel LED Exit Sign, 120/347VAC, Self-Powered
<b>MSS SORTIE Signs</b>	
MSS-S-C0WH	Universal Steel LED Sortie Sign, 120/347VAC, 6-24VDC
MSS-S-C0WH-IB	Universal Steel LED Sortie Sign, 120/347VAC, Self-Powered

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### Features

- High impact, UV stabilized, thermoplastic construction
- 120/347VAC 60Hz Input, field selectable
- Maintenance free, sealed lead acid battery
- Universal spider knockout pattern stamped into backplate for direct octagon box mounting
- White colour is standard

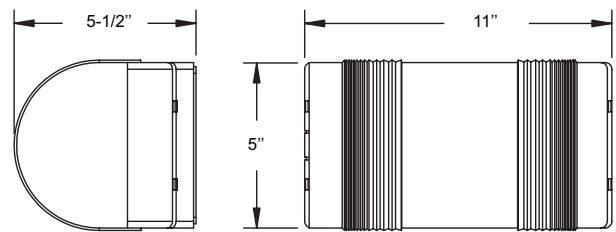
### Description

The Mircom MLP-2 series is a decorative emergency light which will fit well in any commercial application. The MLP-2 comes with two EMR16 base, integral lamps which will provide superior lighting in the event of a power outage. The housing and lens is made of impact, heat and scratch resistant, UV stabilized thermoplastic. Mounting is made easy with the universal mounting plate in the back.

The MLP-2 unit is a completely self-contained emergency light which is made for use on 120 or 347 volt circuits. A 6V maintenance free, sealed lead acid battery is included with the MLP-2 which will provide 30 watts for 30 minutes of emergency lighting. The universal mounting plate is made to fit over a standard octagon box for simple, low cost installation. Once the plate is pre-mounted and all wiring connections terminated, the unit is snapped onto the plate, completing installation. White finish is standard.

The Mircom MLP-2 emergency lighting units come complete with high quality, pulse action chargers which are up to 70% more efficient than constant voltage chargers. The chargers are solid state and are complete with low voltage disconnect, brownout, and short circuit protections. An LED display indicates AC-ON status and all chargers are complete with a quick test, push-button and optional laser test switch for easy maintenance and testing. Recharge time is 24 hours.

### Dimensions



Approvals:  
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**CATALOG NUMBER 4106**

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## Ordering Information

Model	Description
MLP-2	Decorative Thermoplastic Emergency Light 6V, 30 watt 120/347VAC operation.

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Rev. 0



### Description

Mircom's FA-300 Series fire alarm control panels consist of eight and twelve zone models which are equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands.

Mircom's FA-300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

All of the FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Relay modules.

The FA-300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Listed to UL 864, 9th edition
- Available in eight and twelve zone configurations with an integrated UDACT/Digital Communicator on select models
- Front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



**CATALOG NUMBER 5661**

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## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

The devices on the i3 zone are dirty.

#### *Out of sensitivity*

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### *Freeze trouble*

The device has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B))

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Silenceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

Select FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.



## FA-300 Series LED Version Models



### FA-301-8LR / FA-301-8LDR Eight Zone LED Display Fire Alarm Control Panels

The FA-301-8LR and FA-301-8LDR are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-8LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-8LR and FA-301-8LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-8LR: 26”H x 14.5”W x 4.5”D  
FA-301-8LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W



### FA-301-12LR / FA-301-12LDR Twelve Zone LED Display Fire Alarm Control Panels

The FA-301-12LR and FA-301-12LDR are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-12LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-12LR and FA-301-12LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12LR: 26”H x 14.5”W x 4.5”D  
FA-301-12LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



### RAM-300LCDR/RAM-300LCDW Remote LCD Annunciator

The RAM-300LCD provides remote LCD annunciation through a two line by 20 character LCD display. The RAM-300LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD is available in a red (RAM-300LCDR) or white (RAM-300LCDW) enclosure and comes complete with a CAT-30 lock and key.



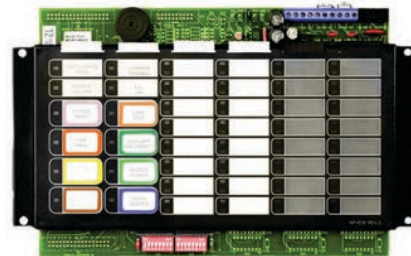
### SRM-312R Smart Relay Module

The SRM-312R provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312R is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



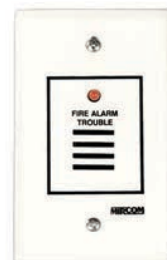
### RAM-208/RAM-216 Remote LED Annunciators

The RAM-208 and RAM-216 provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 and RAM-216 are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

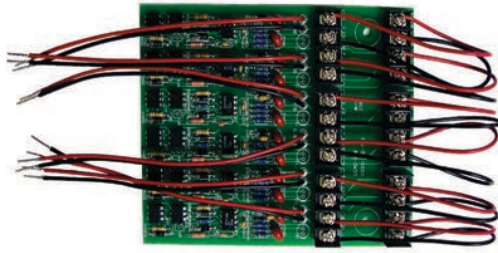
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016 comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

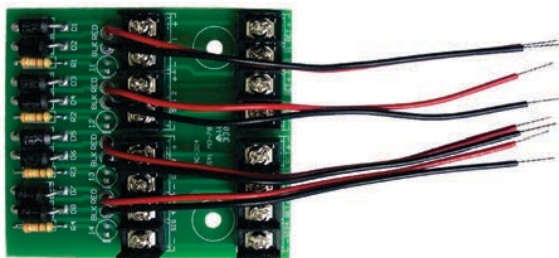
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B" initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12 series panel.



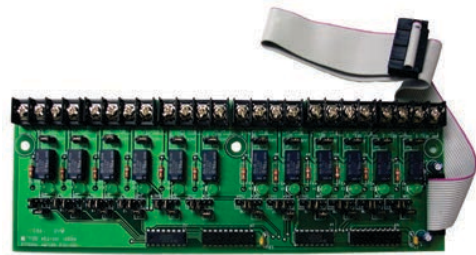
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits.



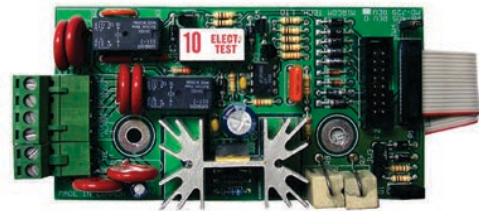
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite front panel programming of the FA-300 Series LED version panels. The CFG-300 plugs into the FA-300 main board to provide a two line by 20 character LCD display. The FA-300 Series LED version panels are configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (Please refer to Battery Calculation Chart in manual for more details.) The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.

## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

10 AH

### Current Consumption

Model	Standby	Alarm
FA-301-8L(D)	136mA (96 mA*)	366mA (326 mA*)
FA-301-12L(D)	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information.)

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max.

## Ordering Information

### Model

### Description

#### Control Panels

FA-301-8LR	Eight-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-8LDR	Eight-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
FA-301-12LR	Twelve-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-12LDR	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)

#### Remote Annunciators and modules

RAM-300LCDR	Remote LCD Annunciator (Red enclosure)
RAM-300LCDW	Remote LCD Annunciator (White enclosure)
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module
RTI-1	Remote Trouble Indicator
BB-1001R	Red Semi-Flush Enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WPR	Red Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WPR

#### Adder Modules

ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300R	Active End-of-Line Resistor with red mounting plate

#### Accessories

FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring
UIMA	Universal Programming Tool

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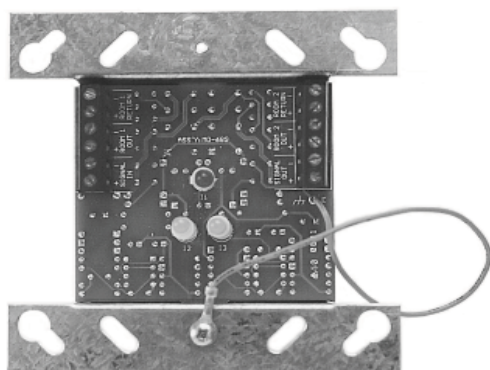
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CAT. 5661  
Rev. 7



## Description

Mircom's CNSIS-204 Non-Supervised Signal Isolator Module is designed for installations where disconnection of, or damage to an in-suite audible device will not interfere with the ability of audible devices in other dwelling units, public corridors or suites to sound on an alarm. The CNSIS-204 mounts in a 4" square electrical box.

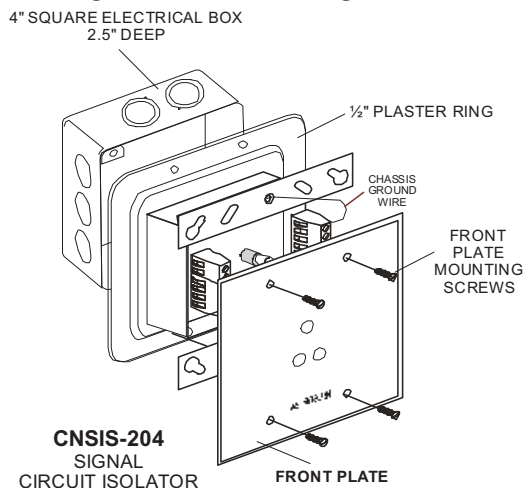
The CNSIS-204 provides four non-supervised isolator outputs. Under this configuration, if a short or open circuit occurs, the isolator disconnects the audible device from the circuit but it does not indicate a trouble on the fire alarm control panel. In this configuration, an open circuit in the suite does not indicate a trouble on the control panel.

## Features

- Designed for installations where disconnection of, or damage to an in-suite audible device will not interfere with the ability of audible devices in other dwelling units, public corridors or suites to sound on an alarm
- Operates with bells and horns
- Provides 4 non-supervised isolator outputs
- Isolates the in-suite faults but does not indicate a trouble on the fire alarm control panel
- Mounts in a 4" square electrical box

## Installation Instructions

### Mounting of the CNSIS-204 Signal Isolator Module



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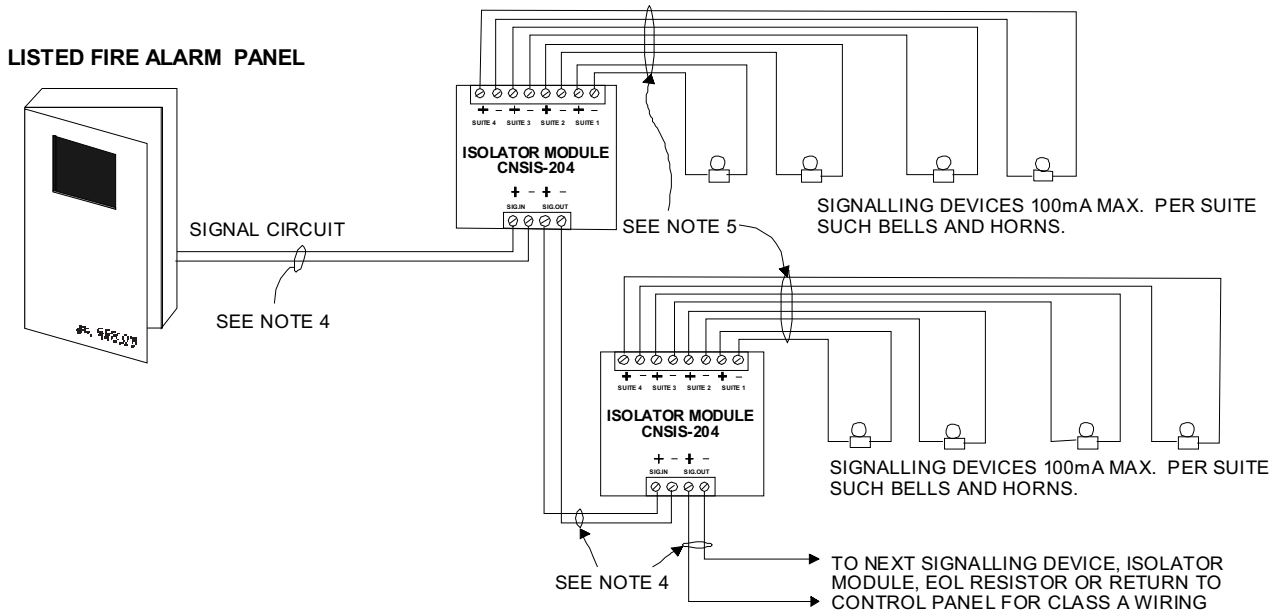
**CATALOG NUMBER** **5224**

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## Typical Wiring Diagram

### Typical Wiring of the CNSIS-204 Non-Supervised Signal Isolator Module



#### NOTES:

1. Do not exceed 100mA per suite.
2. For proper system operation refer to detailed installation instructions provided with control panel and local installation standards.
3. Wiring supervised by the fire alarm control panel as per code
4. Unsupervised wiring.
5. Refer to the signal device instructions for wiring gauge information.
6. Mircom recommends that all suite isolators should be mounted outside of the suite they are protecting.

**Mircom does not recommend the installation of unsupervised signal circuits. Mircom recommends that occupants follow proper measures for fire procedures for their premises.**

#### Ordering Information

Model	Description
CNSIS-202	Non-Supervised Signal Isolator Module

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CAT. 5224  
 Rev. 6



INX-10A

## Description

Mircom's INX-10A is an Intelligent NAC expander/power supply that works with listed compatible Intelligent fire alarm control panels. Available in a 10 Amp configuration, the INX-10A can extend the power capabilities of existing notification appliance circuits as well as provide power for other ancillary devices. In addition, the INX-10A has the ability to operate with any UL/ULC Listed 24 VDC fire alarm control panel to provide Notification Appliance Circuit expansion.

The INX-10A is equipped with five individual Class B (Style Y) or Class A (Style Z) output circuits that can be independently configured for NAC operation or auxiliary power. The INX-10A provides the option of configuring all five circuits as an output to provide general purpose power. In addition output circuits four and five can be configured to provide auxiliary power for four-wire detectors or door holders.

Each output circuit is rated for 2.5 Amps. When configured for NAC operation the outputs can be set for Steady, Temporal Code, California Code or March Time. In addition the output circuits have field selectable built-in strobe and horn synchronization protocols to support Amseco, System Sensor, Wheelock and Gentex devices, eliminating the need for additional external synchronization modules.

## Features

- 10 Amp output
- 120 / 240V operation
- Works with listed compatible Series Intelligent Fire Alarm Control Units
- Easily configured using DIP switches
- One isolated input from the host panel
- Five Class B (Style Y) or Class A (Style Z) synchronized output circuits
- DC regulated outputs
- Configurable AC Power fail delay
- Ground fault enable or disable
- Option available on configuration to enable or disable the battery charger on activation
- From 7 to 15 Address functions (Combination of inputs and outputs, depending on the application)
- Outputs individually controllable
- Separate Relay for Ground Fault and Common Trouble available on terminals
- Horn/Strobe synchronization protocols include Amseco, Gentex, System Sensor and Wheelock
- Two-wire horn/strobe Sync Mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Output circuits four and five can be configured to provide auxiliary power for four-wire detectors or door holders.
- Canadian two stage operation
- Output fault notification to fire alarm control panel
- Ability to sync outputs for multiple INX-10A units
- 2.5 Amp max. current per output
- 1.7 Amp auxiliary power output
- Built-in charger for sealed lead acid or gel type batteries
- Unit includes power supply, charger, red door, black backbox, transformer and battery leads
- Compatible with any UL/ULC listed 24VDC conventional fire alarm control panel to provide Notification Appliance Circuit expansion



S5434



S5434



7315-1477-0163

**CATALOG NUMBER** **5321**

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## Modes of Operation

### Intelligent NAC Expander (INX) Modes

The INX-10A features three modes of NAC Expander operation:

- INX Mode with Internal Sync
- INX Mode with External Sync
- INX Mode with Redundant Input

#### Input Mode with Internal Sync

In this mode all signal and sync strobe rates are produced in the INX-10A.

#### INX Mode with External Sync

When one of the Sync Inputs is activated, the INX-10A outputs follow the signal pattern of the Sync Input. The INX-10A must be configured as a slave to operate in this mode.

#### INX Mode with Redundant Input

The system continuously monitors the SLC loop. If there is no activity for a notable time, an SLC trouble is generated. While the SLC trouble is active, if either of the Sync Inputs are activated then all NAC outputs follow.

### Power Supply Modes

In addition to the NAC expander modes, some or all of the NAC outputs on the INX-10A can be configured for the following power supply modes of operation:

- NAC Outputs as Power Supply Outputs
- NAC Outputs for Door Release
- NAC Outputs for 4-Wire Smoke Supply

#### NAC Outputs as Power Supply Outputs

This mode allows any NAC output to be configured as a power supply. The SLC and Sync inputs are ignored for the power supply outputs.

#### NAC Outputs for Door Release

This mode allows NAC circuits 4 and/or 5 to provide power for door holders.

#### NAC Outputs for 4-Wire Smoke Supply

This mode allows NAC circuits 4 and/or 5 to provide auxiliary power for 4-wire smoke detectors.

## Specifications

Dimensions	
20"H x 14½"W x 4½"D	
AC Line Voltage	
120V 60Hz / 240V, 50Hz, 2 Amps / 1 Amp (primary)	
NAC Circuits	
24VDC regulated, Power Limited 10A Total, 2.5A maximum per circuit	
Battery	
24VDC, Gel-Cell/Sealed Lead-Acid	
Charging Capability	
Up to 40 AH batteries	
Current Consumption from INX-10(A) Power Supply	
Standby	200 mA
Alarm	350 mA
Current Consumption from Compatible FACP Intelligent Loop (SLC)	
4.5mA	

Common Indicators	
Power On Addressable Line Activity/Alarm Common Trouble Battery Charger/Trouble CPU Fail	
Trouble LEDs	
Auxiliary Output Trouble Synchronized Output Trouble Ground Fault Trouble	
Other LEDs	
Addressable (SLC) Loop Indicators (3 LEDs) Synchronized Input Indicators (2 LEDs) Synchronized Output Indicators (2 LEDs) Trouble LED Indicator Alarm Relay Indicator	
Controls	
Acknowledge Button Configuration DIP Switches	

## Ordering Information

Model	Description
INX-10A	Intelligent NAC Expander, 10 Amps c/w backbox and red door
INX-10AC	Intelligent NAC Expander, 10 Amps Addressable Chassis Mounts into BB-5008 or BB-5014 enclosure

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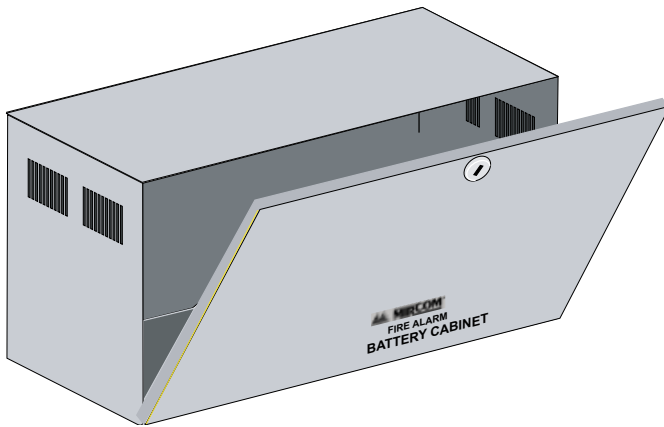
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CAT. 5321  
Rev. 5





### Features

- Intended for use with Mircom Fire Alarm Control Panels
- Bottom hinged door that opens downwards
- Holds up to 60 AH batteries
- Beige finish

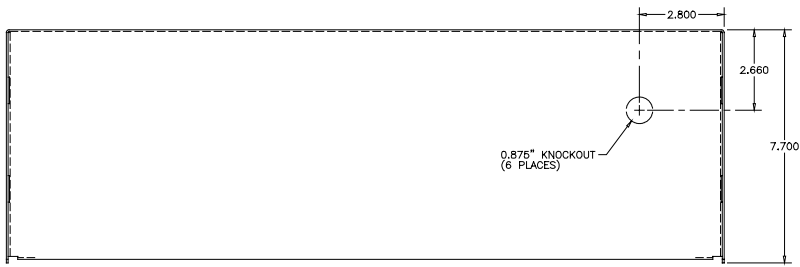
### Description

Mircom's BC-160 Battery Cabinet is intended for use with Mircom Fire Alarm Control Panels. It comes complete with a lockable bottom hinged door that opens downwards to allow access to the battery compartment. The BC-160 Battery Cabinet has a beige finish and holds up to 60 AH batteries.

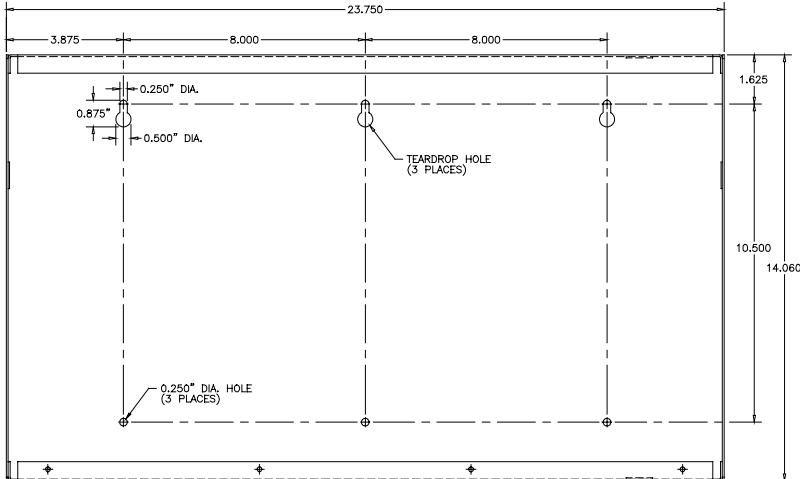
### Installation

Place the BC-160 Cabinet in a clean, dry, vibration-free area, a minimum of 6" below the Control Panel it is being used with. Align the BC-160 Cabinet and Control Panel knock-outs so as to simplify conduit installation. Mount the BC-160 Cabinet, using the 6 pre-drilled mounting holes, to the wall. Connect the BC-160 Cabinet to the Control Panel cabinet with conduit between the adjacent knock-outs.

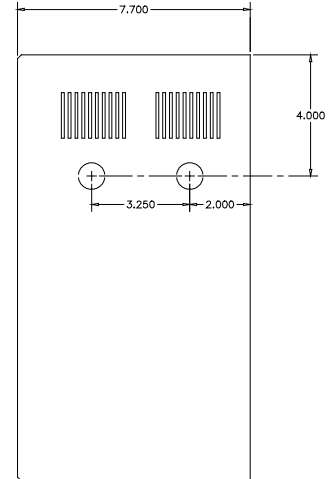
## Dimensions



TOP VIEW



FRONT VIEW



SIDE VIEW

## Ordering Information

Model	Description
BC-160	Battery Cabinet

NOT TO BE USED FOR INSTALLATION PURPOSES.



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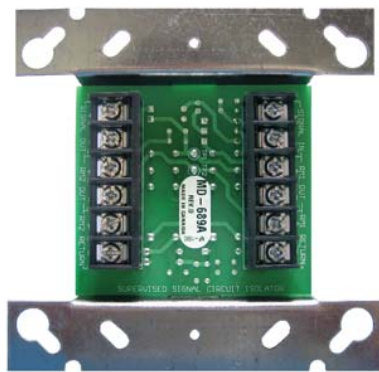
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CAT. 5307  
 Rev. 6



### Features

- Designed for installations where disconnection of, or damage to an in-suite audible device will not interfere with the ability of audible devices in other dwelling units, public corridors or suites to sound on an alarm
- Operates with bells and horns
- Provides 2 supervised isolator outputs
- Signals the fire alarm control panel for a short or open on the suite signals
- Mounts in a 4" square electrical box
- Terminals support up to 14 AWG wire
- Equipped with two 8 Amp rated relays
- Area on mounting plate for labeling the suite number

### Description

Mircom's CSIS-202A Supervised Signal Isolator Module is designed for installations where disconnection of, or damage to an in-suite audible device will not interfere with the ability of audible devices in other dwelling units, public corridors or suites to sound on an alarm. The CSIS-202A mounts in a 4" square electrical box.

The CSIS-202A provides two supervised isolator outputs. Under this configuration, if the in-suite audible device has a open circuit, the fire control panel will indicate a zone trouble.

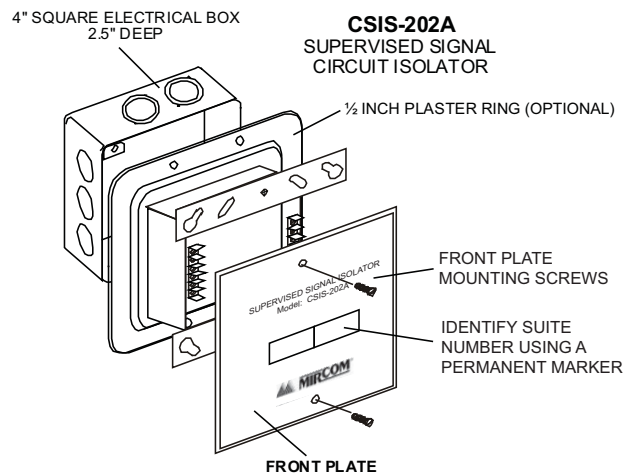
### Electrical Ratings

Signal In:	Regulated 24 FWR/24 VDC
Suite Current:	0.0A
Standby Current:	0.0A

**Note:** Subtract 0.4A from the total signal circuit current when using any number of these isolators i.e. 1.7A subtract 0.4A equals 1.3A available for signalling when using isolators.

### Installation Instructions

#### Mounting of the CSIS-202A Supervised Signal Isolator Module



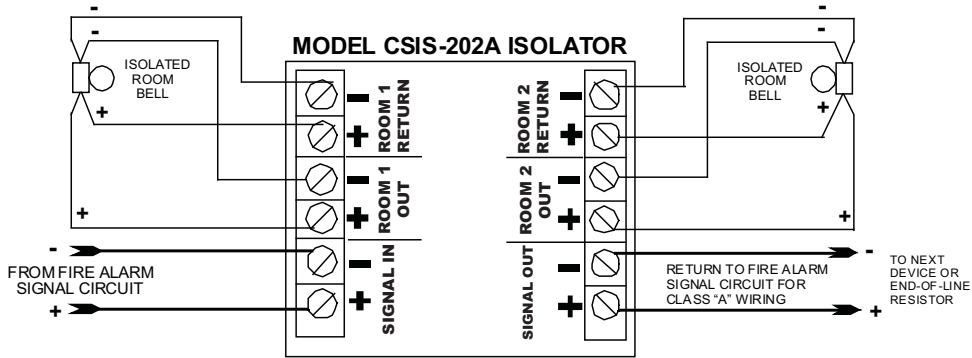
**CATALOG NUMBER 5265**


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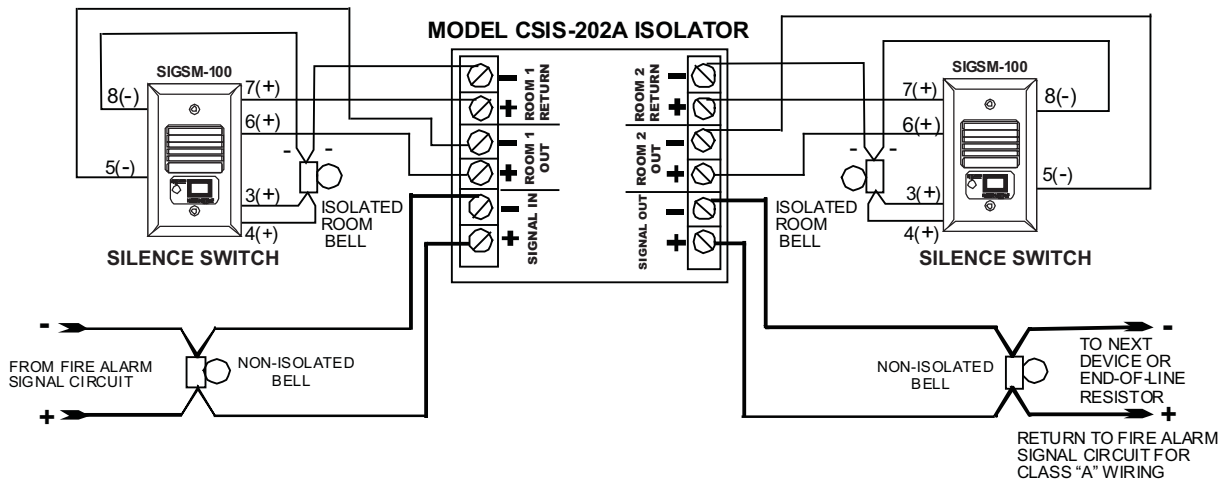
# Typical Wiring Diagrams

## Typical Wiring of the CSIS-202A Supervised Signal Isolator Module



 BELLS ARE SHOWN IN THE DRAWINGS, BUT THEY REPRESENT HORNS AND STROBES AS WELL.

## Typical Wiring of the CSIS-202A Supervised Signal Isolator Module using SIGSM-100 Silence Switch Module



### NOTES:

1. All unused screw terminals must be tightened to prevent shorting to front plate.
2. For proper system operation refer to detailed installation instructions provided with control panel and local Installation standards.
3. Wiring supervised by the fire alarm control panel as per code.
4. Refer to signal device instruction for wiring gauge information.
5. To locate faulted suite device:
  - a. Set all other signal circuits to bypass except the circuit under test.
  - b. If Class A circuit, disconnect the return wire at the panel.
  - c. Sound signals.
  - d. Walk the floor to locate area where the sound ceases, this is the location of the fault.

### Ordering Information

Model	Description
CSIS-202A	Supervised Signal Isolator Module

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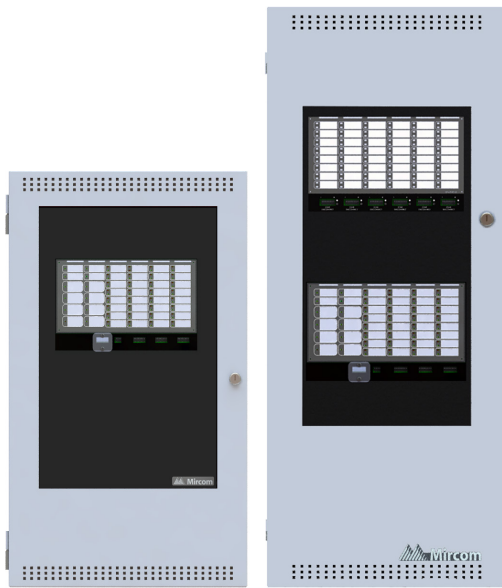
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CAT. 5265  
 Rev. 1



### Description

Mircom's FA-1000 Series Microprocessor Based Fire Alarm Control Panels are Multi-Zone units designed for maximum flexibility and easy installation and operation. Fully configurable from the front panel using push buttons and DIP switches, the FA-1000 Series enables the user to configure the system to meet their specific requirements. With a large capacity of supervised Class A (Style D) or Class B (Style B) Initiating Circuits and supervised Class A (Style Z) or Class B (Style Y) Indicating Circuits, the FA-1000 Series is designed to meet virtually all applications.

The FA-1000 Series consists of a Main Fire Alarm Chassis which houses and controls all other modules. Additional modules may be installed to configure the system to meet any requirements that the user may have. The FA-1000 Series allows for additional Indicating Circuit, Initiating Circuit and Relay modules to be added to the system. In addition it allows for optional modules such as the UDACT-300A Digital Communicator and the PR-300 Polarity Reversal/City Tie Module.

Equipped with Configuration DIP Switches on the Main Display Module the FA-1000 Series Fire Alarm Control Panels are configured through a combination of DIP switch and button settings. Through this configuration method the user can define the system as a Single Stage or Two Stage operation as well as perform various functions such as a One Man Walk Test.

### Features

- Listed to UL 864, 9th edition
- Large system capacity
- Modular design
- Each Indicating Circuit can be configured as Silenceable or Non-Silenceable
- Audibles may be configured as Steady, Temporal Code, California Code or March Time
- Each Initiating Circuit can be configured as Alarm, Supervisory, Waterflow or Trouble
- Two LEDs per Initiating circuit; one for Trouble and one for Status
- Initiating and Indicating Circuits may be individually disconnected by a DIP switch
- Configurable Signal Silence Inhibit, Auto Signal Silence, Two-Stage Operation and One Man Walk Test
- Subsequent Alarm, Supervisory and Trouble operation
- Two outputs for 4 wire resettable smoke power supply (200 mA Max. each)
- Auxiliary relay contacts for Common Alarm and Common Supervisory as well as a Common Trouble Relay (Each relay contact Form C, 28 VDC @ 1 Amp (resistive))
- RS-485 Interface for RA-1000 Remote Multiplex Annunciators
- Interface for Remote Trouble Indicator
- Easy configuration via push buttons and DIP switches on the front panel
- Fully site or field programmable Indicating Circuits and Auxiliary Relays
- Extensive Transient Protection
- Slide-in labels for zone identification
- 6 Amp or 12 Amp power supplies available
- Removable door for easy installation and servicing
- Removable terminal blocks for easy wiring and servicing

### Optional Modules

- UDACT-300A Digital Communicator Module
- Polarity Reversal and City Tie Module



**CATALOG NUMBER 5620**

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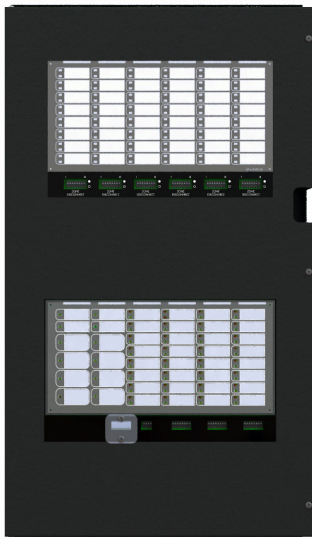
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## System Components



### MCC-1024-6ADS/MCC-1024-12ADS

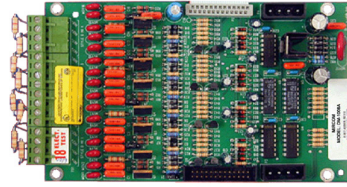
The MCC-1024-6ADS Main Control Unit comes complete with 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits, 4 Class A/B (Style Z/Y) Indicating circuits, a common control and zone identification display board for up to 24 points and a 6 Amp Power Supply which charges 10-24 AH batteries. The MCC-1024-12ADS is equipped with a 12 Amp Power Supply which charges 17-40 AH batteries. Both models are expandable with up to two adder modules of any type plus one of a UDACT-300A Digital Communicator or PR-300 Polarity Reversal/City Tie Module. Both models mount in a UB-1024DS(R) backbox.



### MCC-1024-12XTDS

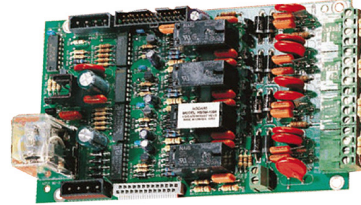
The MCC-1024-12XTDS Main Control Unit comes complete with 8 Class B (Style B) or 4 Class A (Style D) Initiating Circuits, 4 Class A/B (Style Z/Y) Indicating circuits, a common control and zone identification display board for up to 72 points and a 12 Amp Power Supply which charges 17-40 AH batteries. It is expandable with up to eight adder modules of any type plus one of a UDACT-300A Digital Communicator or PR-300 Polarity Reversal/City Tie Module. The MCC-1024-12XTDS mounts in a BBX-1024XT(R) enclosure.

## Adder Hardware Modules



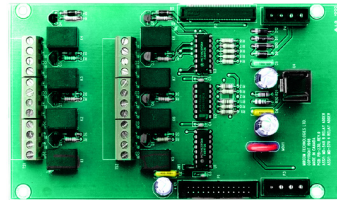
### DM-1008A Eight Initiating Circuit Module

The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot.



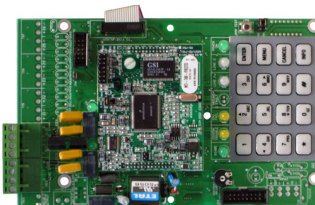
### SGM-1004A Four Notification Appliance Circuit Module

The SGM-1004A provides 4 Style Z/Y (Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot.



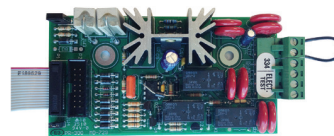
### RM-1008A Eight Relay Circuit Module

The RM-1008A provides the FX-2003-12NXTDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot.



### UDACT-300A Digital Alarm Communicator Module

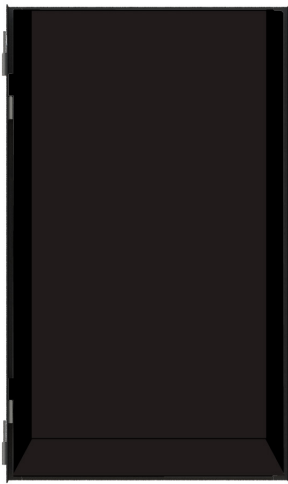
The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NXTDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot.



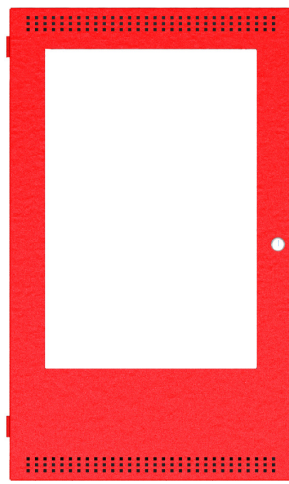
### PR-300 Polarity Reversal/City Tie Module

The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie and Polarity Reversal connection. The PR-300 occupies one module slot.

## FA-1000 Series Enclosures



UB-1024DS



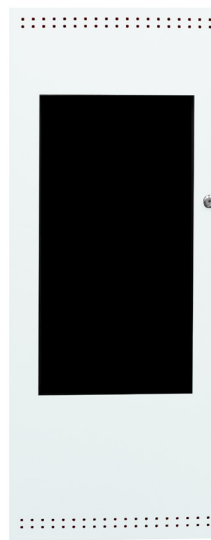
DOX-1024DSR

### UB-1024DS Universal Backbox

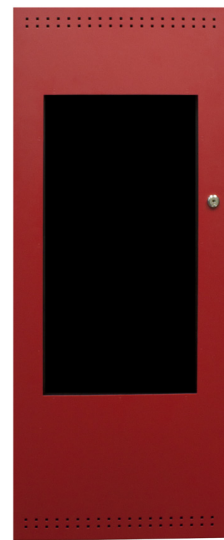
The UB-1024DS Universal backbox houses the MCC-1024-6ADS/12ADS and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately. **Dimensions** (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

### DOX-1024DS(R) Door

The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).



BBX-1024XT



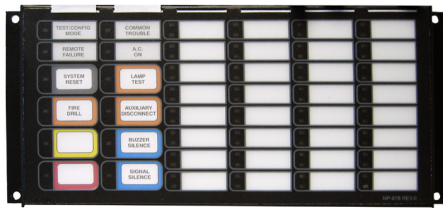
BBX-1024XTR

### BBX-1024XT(R) Enclosure

The BBX-1024XT enclosure supports one MCC-1024-12XTDS and up to 18 AH Batteries. The enclosure features the universal CAT-30 lock and a removable door for easy installation and servicing. The enclosure is available in a white (BBX-1024XT) or red exterior (BBX-1024XTR). The FA-XT-TRB Semi-Flush Trim Ring is required for semi-flush mounting.

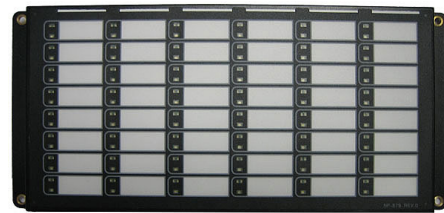
**BBX-1024XT(R) Dimensions:** 35 1/2"H x 14 1/2"W x 5 1/4"D

## RA-1000 Series Remote Multiplex Annunciators



### RAM-1032TZDS Main Remote LED Annunciator

The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.



### RAX-1048TZDS Programmable LED Annunciator Module

The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main unit or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NXTDS, BB-1000 or BB-5000 Series enclosures.



### RAM-1016TZDS Main Remote LED Annunciator

The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation as well as 16 trouble LEDs. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1016TZDS mounts in a BB-1000 series enclosure.

### Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

## Electrical Ratings

### MCC-1024-6ADS

<b>AC Line Voltage</b>	120V 60Hz / 240V 50 Hz, 2A / 1A primary	
<b>Power Supply Ratings</b>	6 Amps. max. (secondary)	
<b>For Indicating Circuits</b>	24VDC unfiltered, 5 Amps maximum	
<b>Charging Capability</b>	10-24 AH batteries	
<b>Current Consumption</b>	Standby	200 mA
	Alarm	350 mA

### MCC-1024-12ADS/MCC-1024-12XTDS

<b>AC Line Voltage</b>	120V 60Hz / 240V 50 Hz, 4A / 2A primary	
<b>Power Supply Ratings</b>	6 Amps. max. (secondary)	
<b>For Indicating Circuits</b>	24VDC unfiltered, 10 Amps maximum	
<b>Charging Capability</b>	17-40 AH batteries	
<b>Current Consumption</b>	Standby	200 mA
	Alarm	350 mA

## Ordering Information

Model	Description
<b>Main Control Unit</b>	
MCC-1024-6ADS	Main Control Unit, 6 Amps. Mounts in UB-1024DS.
MCC-1024-12ADS	Main Control Unit, 12 Amps. Mounts in UB-1024DS.
MCC-1024-12XTDS	Main Control Unit, 12 Amps. Mounts in BBX-1024DS(R)
<b>Adder Modules</b>	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
<b>Auxiliary Modules</b>	
UDACT-300A	Digital Alarm Communication Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
<b>Enclosures</b>	
UB-1024DS	Universal black backbox. Requires DOX-1024DS(R) door.
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
BBX-1024XT	Enclosure for MCC-1024-12XTDS c/w removable white door, black backbox and CAT-30 lock and key.
BBX-1024XTR	Enclosure for MCC-1024-12XTDS c/w removable red door, black backbox and CAT-30 lock and key.
FA-XT-TRB	Black Semi-Flush Trim Ring for BBX-1024XT(R) enclosure
<b>Remote Annunciators</b>	
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs and 32 Trouble LEDs
RAM-1016TZDS	Main Remote LED Annunciator c/w 16 Bi-Colored LEDs and 16 Trouble LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.

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CAT. 5620  
Rev. 6





### Description

The RRS-MOD reversing relay/synchronization module enhances the operation of 2 and 4-wire i3 series detectors equipped with a sounder.

### Installation Ease

The RRS-MOD includes a Velcro attachment for easy installation into the fire alarm control panel cabinet. A quick-connect harness and color-coded wires simplify connections.

### Intelligence

The RRS-MOD's design is flexible to accommodate virtually any application. The RRS-MOD is compatible with both 2 and 4-wire i3 series detectors operating over 12V and 24V systems. The module can be used with either bell/alarm, alarm relay, or NAC outputs, and its field-selectable switch accommodates both coded and continuous alarm signals.

### Instant Inspection

To meet fire alarm requirements, the RRS-MOD activates all i3 sounders on a loop when one alarms. Additionally, the RRS-MOD synchronizes the output of the i3 sounders, regardless of whether the panel's alarm signal is continuous or coded, to ensure a clear alarm signal.

### Features

- Compatible with 2- and 4-wire i3 detectors equipped with a sounder
- Activates all i3 sounders on a loop when one alarms
- Synchronizes all i3 sounders on the loop for a clear alarm signal
- Can be used with bell/alarm, alarm relay, or NAC outputs
- Includes a field-selectable switch to accommodate both coded and continuous alarm signals
- Allows i3 detector silencing from the panel or keypad
- Operates on 12 and 24-volt systems
- Quick-connect harness and color coded wires facilitate connections

### Engineering Specifications

Reversing relay/synchronization module shall be a an i3 Series model number RRS-MOD, listed to Underwriters Laboratories as a smoke detector accessory. The module shall allow all 2-wire and 4-wire i3 Series detectors equipped with a sounder on a loop to sound when one alarms. The module shall provide a switch to toggle between coded mode and continuous mode. When in coded mode, the module shall synchronize the i3 sounders on the loop to mirror the input signal. When in continuous mode, the module shall synchronize the i3 sounders on the loop to the ANSI S3.41 temporal coded pattern. In either coded or continuous modes, the RRS-MOD module shall permit sounders to be silenced at the panel. The RRS-MOD module shall operate between 8.5 and 35 VDC, and shall provide 18 AWG stranded, tinned conductors connected to a quick-connect harness.



## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V  
 Min: 8.5 V  
 Max: 35 V

### Avg. Operating Current

25 mA

### Relay Contact Rating

2 A @ 35 VDC

## Physical Specifications

### Operating Temperature Range

32°F–131°F (0°C–55°C)

### Operating Humidity Range

5 to 85% non-condensing

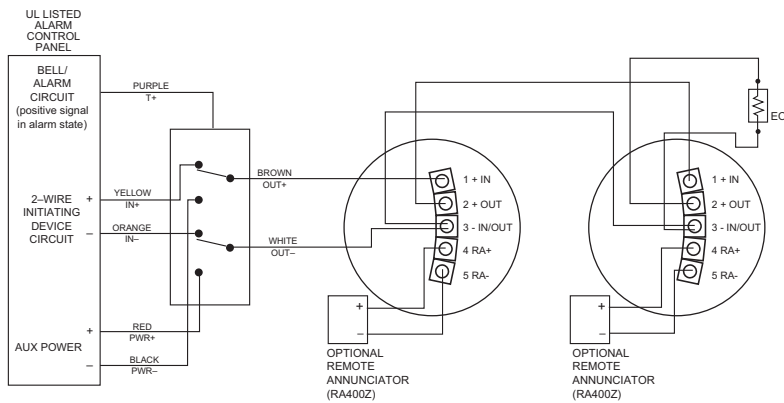
### Wire Connections

18 AWG stranded, tinned, 16" long

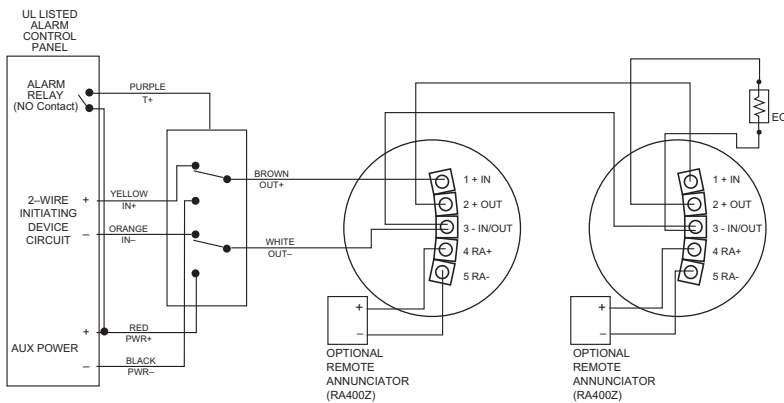
### Dimensions

Height: 2.5 inches (63 mm)  
 Width: 2.5 inches (63 mm)  
 Depth: 1 inch (25 mm)

### 2-Wire System Triggered from Alarm/Bell Circuit:



### 2-Wire System Triggered from Alarm Relay Contact:



### NOTE:

These diagrams represent two common wiring methods.

Refer to the RRS-MOD installation manual for additional wiring configurations.

## Ordering Information

### Model Number

RRS-MOD

### Description

Reversing relay/synchronization module for i3 series smoke detectors

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5149  
 Rev. 1



### Description

The CRRS-MODA reversing relay/synchronization module enhances the operation of 2 and 4-wire i3 series detectors equipped with a sounder.

### Installation Ease

The module includes a Velcro attachment for easy installation into the fire alarm control panel cabinet. A quick-connect harness and colour-coded wires simplify connections.

### Intelligence

The module's design is flexible to accommodate virtually any application. The CRRS-MODA is compatible with both 2 and 4-wire i3 series detectors operating over 12V and 24V systems. The module can be used with either bell/alarm, alarm relay, or NAC outputs, and its field-selectable switch accommodates both coded and continuous alarm signals.

### Instant Inspection

To meet fire alarm requirements, the CRRS-MODA activates all i3 sounders on a loop when one alarms. Additionally, the module synchronizes the output of the i3 sounders, regardless of whether the panel's alarm signal is continuous or coded, to ensure a clear alarm signal.

### Features

- Compatible with 2- and 4-wire i3 detectors equipped with a sounder
- Activates all i3 sounders on a loop when one alarms
- Synchronizes all i3 sounders on the loop for a clear alarm signal
- Can be used with bell/alarm, alarm relay, or NAC outputs
- Includes a field-selectable switch to accommodate both coded and continuous alarm signals
- Allows i3 detector silencing from the panel or keypad
- Operates on 12- and 24-volt systems
- Quick-connect harness and color coded wires facilitate connections

### Engineering Specifications

Reversing relay/synchronization module shall be an i3 Series model number CRRS-MODA, listed to Underwriters Laboratories as a smoke detector accessory. The module shall allow all 2-wire and 4-wire i3 Series detectors equipped with a sounder on a loop to sound when one alarms. The module shall provide a switch to toggle between coded mode and continuous mode. When in coded mode, the module shall synchronize the i3 sounders on the loop to mirror the input signal. When in continuous mode, the module shall synchronize the i3 sounders on the loop to the ANSI S3.41 temporal coded pattern. In either coded or continuous modes, the module shall permit sounders to be silenced at the panel. The module shall operate between 8.5 and 35 VDC, and shall provide 18 AWG stranded, tinned conductors connected to a quick-connect harness.



**CATALOG NUMBER 5151**

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## Electrical Specifications

### Operating Voltage

Nominal: 12/24 V  
 Min: 8.5 V  
 Max: 35 V

### Avg. Operating Current

25 mA

### Relay Contact Rating

2 A @ 35 VDC

## Physical Specifications

### Operating Temperature Range

32°F–131°F (0°C–55°C)

### Operating Humidity Range

5 to 85% non-condensing

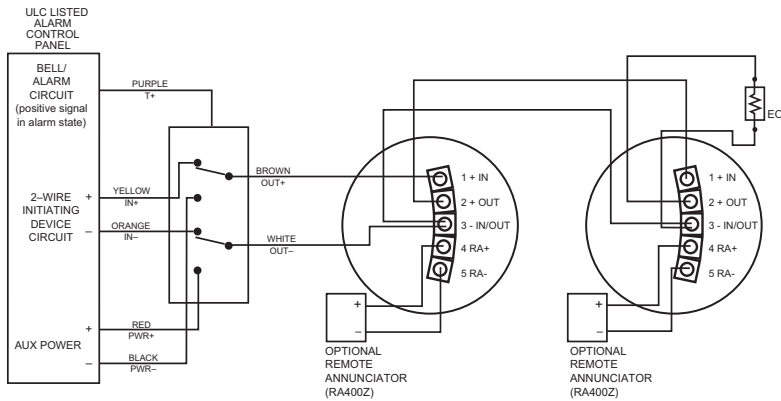
### Wire Connections

18 AWG stranded, tinned, 16" long

### Dimensions

Height: 2.5 inches (63 mm)  
 Width: 2.5 inches (63 mm)  
 Depth: 1 inch (25 mm)

### 2-Wire System Triggered from Alarm/Bell Circuit:



### NOTE:

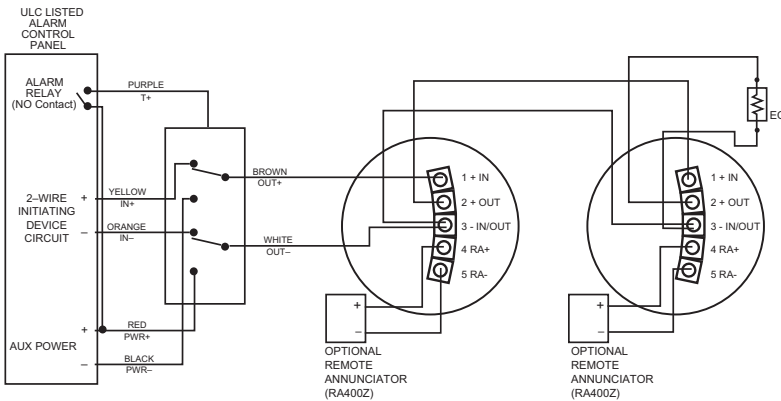
These diagrams represent two common wiring methods.

Refer to the CRRS-MODA

installation manual for additional

wiring configurations.

### 2-Wire System Triggered from Alarm Relay Contact:



## Ordering Information

### Model Number

CRRS-MODA

### Description

Reversing relay/synchronization module for i3 series smoke detectors

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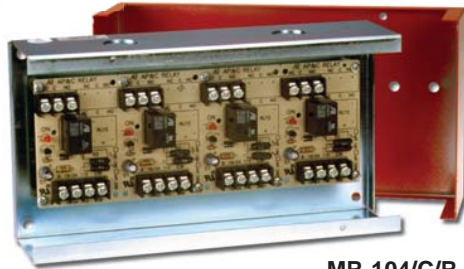
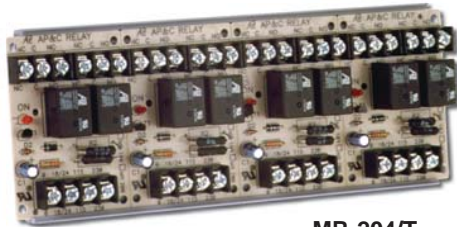
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CAT. 5151  
 Rev. 1


**MR-101/C/R**

**MR-104/C/R**

**MR-204/T**

### Description

The MR Series Multivoltage Control Relays offer SPDT or DPDT 10 Amp resistive contacts which may be operated by one of four input control voltages. A single relay may be energized from a voltage source of 24VDC, 24VAC, 120VAC or 230VAC by wiring to appropriate input terminals.

Each relay position contains a red LED which indicates the relay coil is energized. Relays may be "snapped apart" from a standard 4 module assembly and used independently.

These Devices are Ideal for applications where local contacts are required for system status, remote contacts for control of electrical loads and general purpose switching. They are suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management and Lighting Control Systems.

### Features

- Relays may be energized from a voltage source of 18 to 35VDC or VAC, 120VAC or 230VAC
- Each relay position contains a red LED, which illuminates when the coil is energized. This provides a time saving device when checking an installed system – no metering is required
- Single, dual or triple relay modules may be "snapped apart" from standard 4-position master
- DC control inputs are polarized
- For continuous duty use at 24VAC, 24VDC or 120VAC (NOTE: Not intended for continuous duty use @ 230VAC)
- Available in dust resistant enclosures with LED viewing port(s)
- "C" versions mounted in enclosures
- "C/R" versions with red covers for NYC and other uses
- "T" versions come complete with track mounting hardware which facilitates installation in standard cabinets
- UL recognized relays rated at 10,000,000 mechanical operations
- UL listed as Control Unit Accessory

### Electrical Specifications

Coil Voltage	
<b>MR-100</b>	24(18-35)VDC, 24(18-35)VAC, 120VAC, 230VAC
<b>MR-200</b>	24(18-35)VDC, 24VAC, 120VAC, 230VAC
(Pull In Voltage: 75% of nominal max. @ 25°C; Drop Out Voltage: 25% of nominal min. @ 25°C)	
<b>Ambient Temperature</b>	-58°F to 185°F (-50°C to 85°C) @ 85% RH, NON-Condensing
<b>Wiring</b>	#14 to #22 AWG terminals
<b>Current Requirement</b>	Per Module Position: MR-100 Series = 18mA / MR-200 Series = 40mA
<b>Contact Ratings</b>	7A @ 28VDC / 10A (NO:1/6HP, NC:1/8HP) @ 120VAC / 7A @ 230VAC
<b>Contact Construction</b>	Dry Form "C"

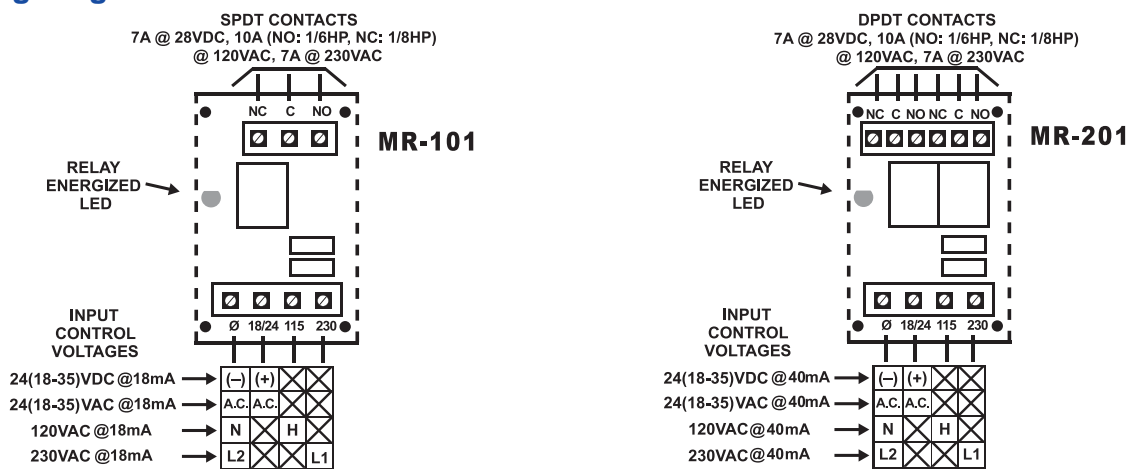

**RECOGNIZED COMPONENT**
**MEA approved**
**CATALOG NUMBER 5308**
**NOT TO BE USED FOR INSTALLATION PURPOSES.**

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## Specifications

Model Number	Module Position	Contacts	Track Mounted (HxWxD)	Enclosure Mounted (HxWxD)	Cover Material
MR-101/T	1	SPDT	3.25" (82.6mm) x 2.125" (54mm) x 1.5" (38.1mm)		
MR-101/C	1	SPDT		5.125" (130.2mm) x 3.125" (79.4mm) x 2.5" (63.5 mm)	Grey ABS-94VO Plastic
MR-101/C/R	1	SPDT			Red ABS-94VO Plastic
MR-104/C	4	SPDT		5.125" (130mm) x 9.50" (241mm) x 2.50" (63mm)	Plated 18GA CRS
MR-201/T	1	DPDT	3.25" (82.6mm) x 2.125" (54mm) x 1.5" (38.1mm)		
MR-201/C	1	DPDT		5.125" (130.2mm) x 3.125" (79.4mm) x 2.5" (63.5 mm)	Grey ABS-94VO Plastic
MR-201/C/R	1	DPDT			Red ABS-94VO Plastic
MR-204/T	4	DPDT	3.25" (82mm) x 8.5" (215mm) x 1.50" (38mm)		
MR-204/C	4	DPDT		5.125" (130mm) x 9.50" (241mm) x 2.50" (63mm)	Plated 18GA CRS
MR-204/C/R	4	DPDT			Red 18GA CRS

## Wiring Diagrams



## Ordering Information

Model Number	Description
MR-101/T	Single SPDT Relay with LED, Track Mounted
MR-101/C	Single SPDT Relay with LED, Enclosure Mounted (Grey)
MR-101/C/R	Single SPDT Relay with LED, Enclosure Mounted (Red)
MR-104/C	Four SPDT Relay with LED, Enclosure Mounted (Grey)
MR-201/T	Single DPDT Relay with LED, Track Mounted
MR-201/C	Single DPDT Relay with LED, Enclosure Mounted (Grey)
MR-201/C/R	Single DPDT Relay with LED, Enclosure Mounted (Red)
MR-204/T	4-Position DPDT Relay with LED, Track Mounted
MR-204/C	4-Position DPDT Relay with LED, Enclosure Mounted (Grey)
MR-204/C/R	4-Position DPDT Relay with LED, Enclosure Mounted (Red)

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CAT. 5308  
Rev. 3

## PAM SERIES MULTI-VOLTAGE CONTROL RELAYS



### Features

- Multi-voltage operation
- Activation LEDs to indicate when the relay coil is energized
- Easy installation
- Ideal for applications where remote relays are required for control or status feedback
- Suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management, Lighting Control Systems and Building Automation Systems

### Description

The PAM Series Relays are encapsulated multi-voltage devices with “flying” leads that offer versatile, reliable performance in a convenient package. Several of the versions contain a red LED which indicates when the relay coil is energized. The PAM Series Relays are packaged with a self-tapping screw and a piece of double sided tape for easy installation almost anywhere. The relays are also packaged with wire-nuts to aid installation.

PAM Relays are ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management, Lighting Control Systems and Building Automation Systems.

#### PAM-1

The PAM-1 Relay provides 10.0 A form “C” contacts. The relay may be energized by one of three input voltages: 24VDC, 24VAC, or 120VAC. The input voltages are polarity-sensitive and diode-protected. PAM-1 Relays contain a red LED which indicates when the relay coil is energized. This relay may not be suitable for continuous duty use at 120VAC for extended periods of time. For these applications, please refer to our RIC-Series products.

#### PAM-2

The PAM-2 Relay provides 7.0 A form “C” contacts. The relay may be energized by one of two input voltages: 12VDC or 24VDC. The input voltages are polarity-sensitive and diode-protected. PAM-2 Relays contain a red LED which indicates when the relay coil is energized.

#### PAM-3

The PAM-3 Relay provides a 3.0 A form “A” contact. The relay may be energized across a wide voltage range from 9VDC to 40VDC, making it ideal for 12VDC and 24VDC EOL circuits. The 19.3 mA operating current is constant across the operating range. The input voltage is polarity-sensitive and diode-protected.

#### PAM-4

The PAM-4 Relay provides 10.0 A form “C” contacts. The relay may be energized across a wide voltage range from 9VDC to 40VDC, making it ideal for 12VDC and 24VDC EOL circuits. The 15mA operating current is constant across the operating



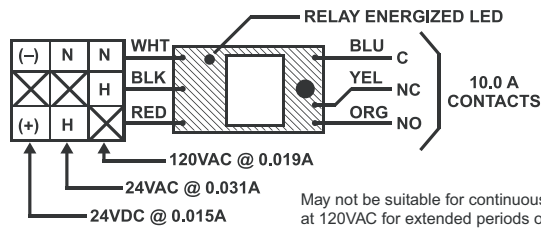
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CATALOG NUMBER **5317**

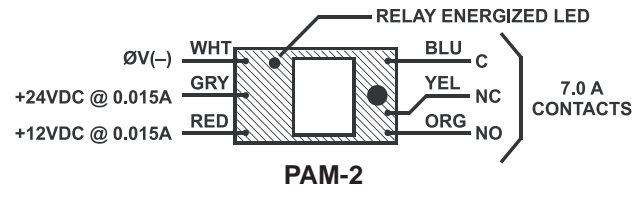
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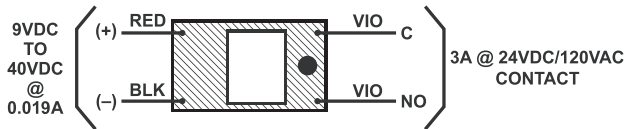
## Wiring Diagrams



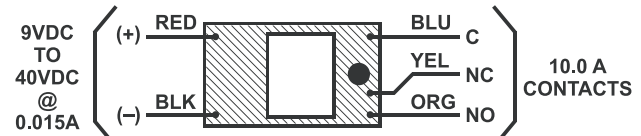
**PAM-1**



**PAM-2**



**PAM-3**



**PAM-4**

## Specifications

Model Number	PAM-1	PAM-2	PAM-3	PAM-4
<b>Coil Voltage</b>	24VAC/24VDC/120VAC	12VDC/24VDC	9 to 40VDC	9 to 40VDC
<b>Polarized</b>	Yes	Yes	Yes	Yes
<b>Energized Led Indicator</b>	Yes	Yes	No	No
<b>Current Requirement</b>				
@12VDC	-	15mA	19.3mA	15mA
@24VDC	15mA	15mA	19.3mA	15mA
@24VAC	31mA	-	-	-
@120VAC	19mA	-	-	-
<b>Contact Configuration</b>	(1) SPDT dry form "C"	(1) SPDT dry form "C"	(1) SPST dry form "A"	(1) SPDT dry form "C"
<b>Contact Ratings (contact rating / power factor)</b>				
@5VDC	250µA / .35 PF	250µA / .35 PF	-	250µA
@24VDC	7A / .35 PF	7A / .35 PF	3A / .35 PF	7A
@120VAC	10A	7A / .35 PF	3A / .35 PF	10A
<b>Wire Leads</b>	6 "flying" leads 12" / 18 AWG Wire-nuts provided	6 "flying" leads 12" / 18 AWG Wire-nuts provided	4 "flying" leads 12" / 18 AWG Wire-nuts provided	5 "flying" leads 12" / 18 AWG Wire-nuts provided
<b>Ambient Temperature (@100% RH, condensing)</b>	32°F to 120°F (0°C to 49°C)	32°F to 120°F (0°C to 49°C)	32°F to 120°F (0°C to 49°C)	32°F to 120°F (0°C to 49°C)
<b>Construction</b>	100% potted (sealed) with "flying" leads			
<b>Mounting</b>	Pre-drilled mounting screw hole and self tapping screw provided. Double sided tape provided.			
<b>Dimensions</b>	1.50" (38mm) H x 1.00" (25mm) W x 0.80" (20mm)	1.50" (38mm) H x 1.00" (25mm)Wx0.90"(23mm)D	1.50" (38mm) H x 1.00" (25mm)Wx0.90"(23mm)D	1.50" (38mm) H x 1.00" (25mm)Wx0.90"(23mm)D

## Ordering Information

Model Number	Description
PAM-1	Encapsulated relay, Single SPDT, 10.0 A form "C" contact
PAM-2	Encapsulated relay, Single SPDT, 7.0 A form "C" contact
PAM-3	End-Of-Line Relay, 3.0 A form "A" contact
PAM-4	Encapsulated relay, Single SPDT, 10.0 A form "C" contact

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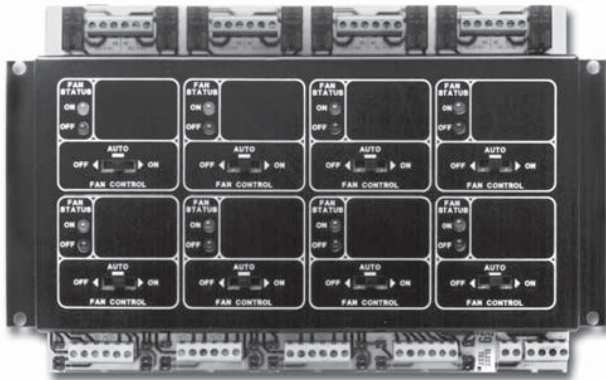
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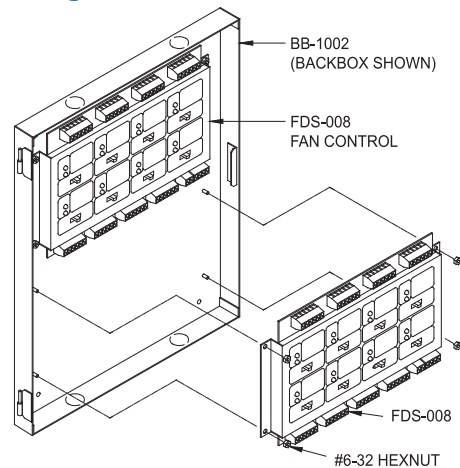
### Description

Mircom's universal FDS-008 Fan Damper Control module is a stand alone unit designed to handle up to 8 fan control circuits. Each circuit comes with a Form 'C' relay contact and indicator for Fan Status. The indicators are comprised of a green LED for "ON" and a red LED for "OFF". In addition, each circuit is provided with a three position slide switch to independently set the fan to either "OFF", "AUTO" or "ON". In "AUTO" mode setting, each circuit can be wired in parallel so that all the fans connected to it activate at the same time whenever the Fire Alarm unit is active or in "alarm". Any of the circuits can be configured as "Normally On" for building air circulation which automatically shuts-off whenever an "alarm" condition occurs to avoid the spreading of smoke. In addition the circuits can be configured as "Normally Off" which activates only when an "alarm" condition occurs to pressurize the stairway areas. The Fan Damper Control module also has input terminals for each circuit to monitor the status of the fan, thus providing a true fan status. The module can be powered with a 24 VDC, 300mA external DC power source or by using Mircom's standard PS-24 power transformer. The PS-24 power transformer can power two FDS-008 modules. The Fan Damper Control module mounts in any Series 1000 Enclosure.

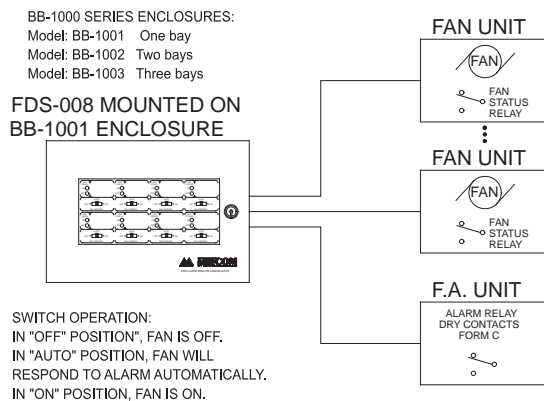
### Features

- Universal stand alone unit
- Handles up to 8 fan control circuits
- Circuits come equipped with Form 'C' relay contacts and indicators for fan status
- Each circuit is provided with a three position slide switch to independently set the fan to either "OFF", "AUTO" or "ON"
- Circuits can be configured as "Normally On" or "Normally Off"
- An input terminal is provided per circuit to monitor the status of the fan
- Can be powered with 24VDC, 300 mA external DC power source
- Mounts in any Series 1000 Enclosure

### Mounting



### Typical Application

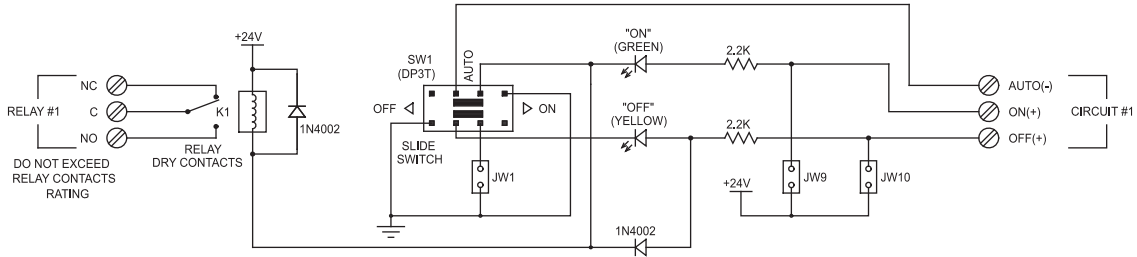


**CATALOG NUMBER 5610**

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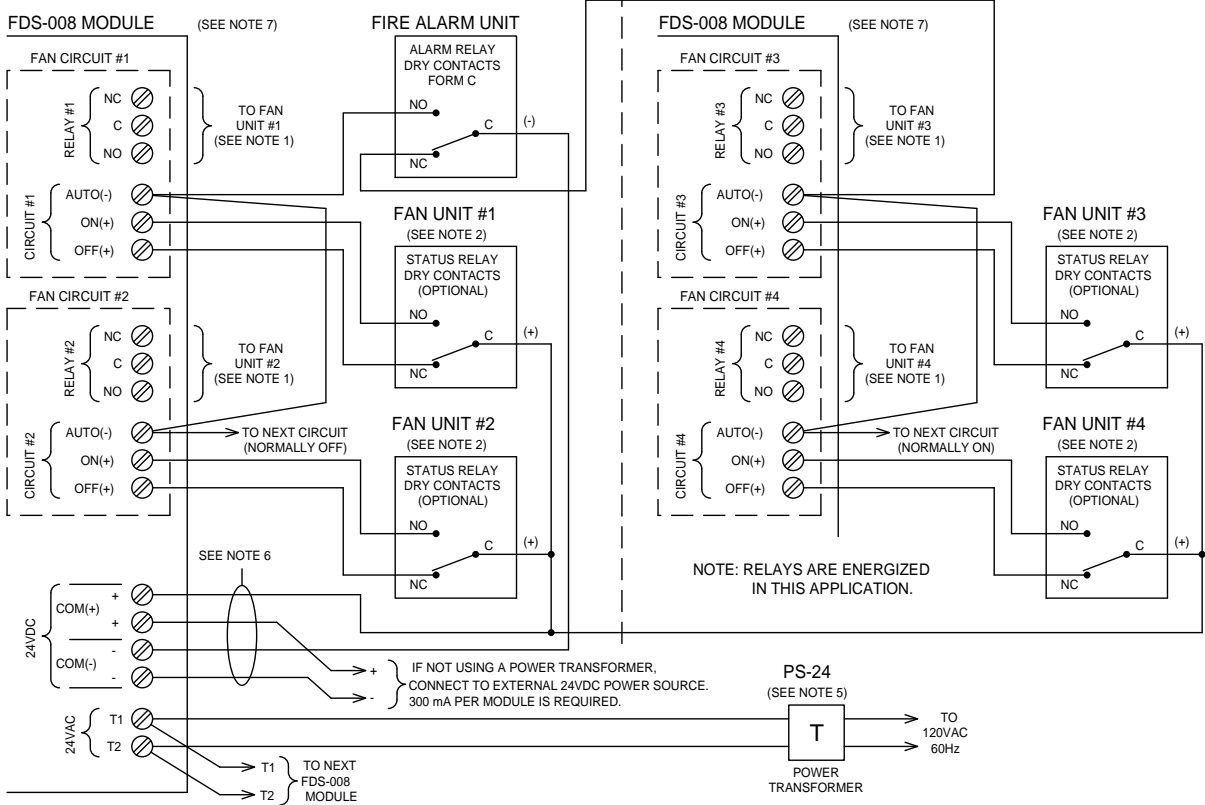
# Typical FDS-008 Internal Circuitry



# Typical Wiring Diagram

1. WIRING FOR STAIRWAY PRESSURIZATION FAN.  
FAN IS NORMALLY "OFF" AND WOULD ACTIVATE ONLY WHENEVER AN "ALARM" OCCUR.

2. WIRING FOR BUILDING AIR CIRCULATION FAN.  
FAN IS NORMALLY "ON" AND WOULD SHUT-OFF WHENEVER AN "ALARM" OCCUR.



## Ordering Information

Model	Description
FDS-008	Fan Damper Control Module c/w 8 "ON", "AUTO" & "OFF" Slide Switches, 8 Green "ON" LEDs, 8 Red "OFF" LEDs ( <i>Mounts in a Series 1000 Enclosure</i> )
<b>Enclosures</b>	
BB-1001	Semi-Flush Backbox (Houses 1 module)
BB-1002	Semi-Flush Backbox (Houses 2 modules)
BB-1003	Semi-Flush Backbox (Houses 3 modules)
<b>Optional</b>	
PS-24	Transformer, 24VAC, 40VA

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CAT. 5610 Rev. 5



### Description

Mircom's FA-300 Series fire alarm control panels consist of eight and twelve zone models which are equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The FA-300 Series family also includes remote LED and LCD annunciators as well as remote relay modules.

The FA-300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands.

Mircom's FA-300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FA-300 Series panels enable the installer to configure the system to meet their specific requirements.

All of the FA-300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Relay modules.

The FA-300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. An optional trim ring is available for semi-flush mounting.

### Features

- Listed to UL 864, 9th edition
- Available in eight and twelve zone configurations with an integrated UDACT/Digital Communicator on select models
- Front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Interface for a Remote Trouble Indicator (RTI)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting



**CATALOG NUMBER 5661**

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## Features

### Initiating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an ICAC-306 Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

### i3 Series Protocol

The FA-300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the FA-300 to provide the following status information:

#### *Open circuit trouble*

This trouble indicates that loop is broken.

#### *Communication trouble*

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

#### *Dirty device*

The devices on the i3 zone are dirty.

#### *Out of sensitivity*

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### *Freeze trouble*

The device has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B))

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

### Indicating Circuits

The FA-300 Series panels are equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. The indicating circuits may be configured as Class “A” (Style “Z”) using an OCAC-304 or OCAC-302 Class “A” signal converter adder module. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Sileneceable Strobe

The FA-300 has built-in sync protocols for the following strobe manufacturers; Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock.

### UDACT/Digital Communicator

Select FA-300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the FA-300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The FA-300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

## FA-300 Series LED Version Models



### FA-301-8LR / FA-301-8LDR Eight Zone LED Display Fire Alarm Control Panels

The FA-301-8LR and FA-301-8LDR are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-8LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-8LR and FA-301-8LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-8LR: 26”H x 14.5”W x 4.5”D  
FA-301-8LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W



### FA-301-12LR / FA-301-12LDR Twelve Zone LED Display Fire Alarm Control Panels

The FA-301-12LR and FA-301-12LDR are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The FA-301-12LDR is equipped with a built-in UDACT/ Digital Communicator. Two ICAC-306 Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One OCAC-304 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The FA-301-12LR and FA-301-12LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional FA-UNIV-TRB trim ring.

#### Dimensions

FA-301-12LR: 26”H x 14.5”W x 4.5”D  
FA-301-12LDR: 26”H x 14.5”W x 4.5”D  
FA-UNIV-TRB: 28.5”H x 17”W

## Remote Annunciators



### RAM-300LCDR/RAM-300LCDW Remote LCD Annunciator

The RAM-300LCD provides remote LCD annunciation through a two line by 20 character LCD display. The RAM-300LCD provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD is available in a red (RAM-300LCDR) or white (RAM-300LCDW) enclosure and comes complete with a CAT-30 lock and key.



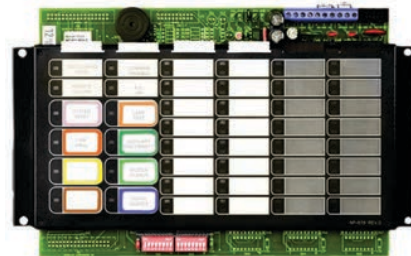
### SRM-312R Smart Relay Module

The SRM-312R provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The SRM-312R is DIP switch configurable and connects to the RS-485 bus. The SRM-312R come complete with a red enclosure and a CAT-30 lock and key.



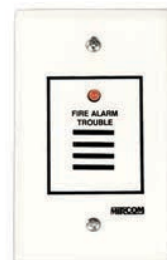
### RAM-208/RAM-216 Remote LED Annunciators

The RAM-208 and RAM-216 provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208 and RAM-216 are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.



### RAM-1016TZDS Remote LED Annunciator

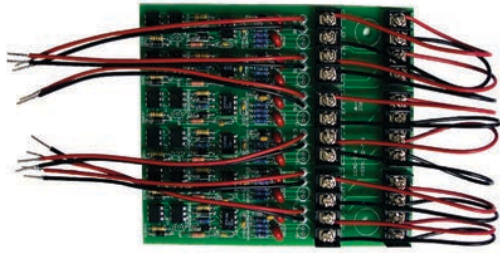
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016 comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. Mounts in a BB-1000 series enclosure.



### RTI-1 Remote Trouble Indicator

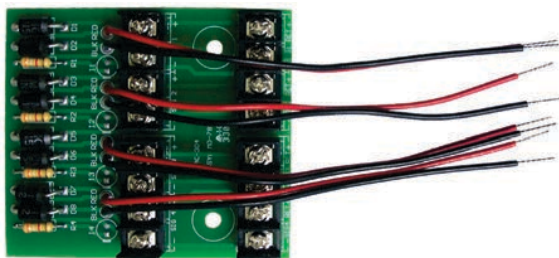
Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The RTI-1 mounts onto a standard single gang electrical box.

## Adder Modules



### ICAC-306 Six Initiating Circuit Class "A" Converter Module

The ICAC-306 converts six Class "B" (Style "B" initiating circuits on the FA-300 main board to Class "A" (Style "D") circuits. The ICAC-306 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "B") initiating circuits. Two ICAC-306 modules are required to convert all twelve initiating circuits on an FA-301-12 series panel.



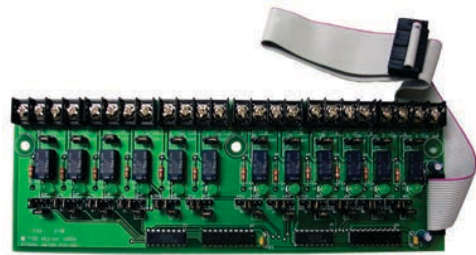
### OCAC-304 Four Indicating Circuit Class "A" Converter Module

The OCAC-304 converts four Class "B" (Style "Y") indicating circuits on the FA-300 main board to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FA-300 main board. It mounts to the right of the main board Class "B" (Style "Y") indicating circuits.



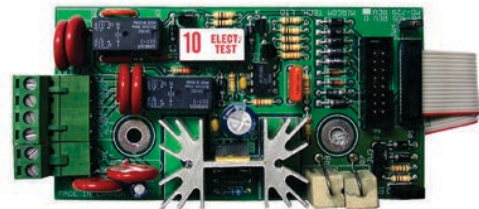
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite front panel programming of the FA-300 Series LED version panels. The CFG-300 plugs into the FA-300 main board to provide a two line by 20 character LCD display. The FA-300 Series LED version panels are configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.



### RM-306/RM-312 Relay Circuit Adder Modules

The RM-306 provides six Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The RM-312 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



### ELRX-300 Active End-of-Line Resistors

The ELRX-300 are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (Please refer to Battery Calculation Chart in manual for more details.) The ELRX-300 can also be used when larger batteries than can fit in the cabinet are required. The ELRX-300 are available with or without a mounting plate.

## Specifications

### AC Input

120VAC @ 60Hz / 240VAC @ 50Hz

### Standby Power

24VDC standby batteries

### Charging Capability

10 AH

### Current Consumption

Model	Standby	Alarm
FA-301-8L(D)	136mA (96 mA*)	366mA (326 mA*)
FA-301-12L(D)	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information.)

### Indicating Circuits

Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.

### Aux supply (non resetable)

Power limited / 22.3VDC regulated / 500mA max

### 4-wire smoke supply (resetable)

Power limited/22.3VDC regulated / 300mA max

### Unfiltered supply (full wave rectified)

Power limited / 24VDC unfiltered / 1.7A max at 49°C

### Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)

FormC / 28VDC / 1A max.

## Ordering Information

Model	Description
<b>Control Panels</b>	
FA-301-8LR	Eight-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-8LDR	Eight-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
FA-301-12LR	Twelve-Zone LED Display Fire Alarm Control Panel (Red door)
FA-301-12LDR	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
<b>Remote Annunciators and modules</b>	
RAM-300LCDR	Remote LCD Annunciator (Red enclosure)
RAM-300LCDW	Remote LCD Annunciator (White enclosure)
RAM-208R	Eight zone Remote LED Annunciator
RAM-216R	Sixteen zone Remote LED Annunciator
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
SRM-312R	Remote Relay Module
RTI-1	Remote Trouble Indicator
BB-1001R	Red Semi-Flush Enclosure for RAM-1016/RAM-1016TZ
BB-1001S	Semi-Flush Stainless Steel Enclosure for RAM-1016/RAM-1016TZ
BB-1001WPR	Red Semi-Flush Weatherproof Enclosure for RAM-1016/RAM-1016TZ
TH-101	Heater Kit for use with BB-1001WPR
<b>Adder Modules</b>	
ICAC-306	Six Initiating Circuit Class "A" Converter Module
OCAC-304	Four Indicating Circuit Class "A" Converter Module
OCAC-302	Two Indicating Circuit Class "A" Converter Module
RM-306	Six Relay Circuit Adder Module
RM-312	Twelve Relay Circuit Adder Module
PR-300	Polarity Reversal/City Tie Module
ELRX-300	Active End-of-Line Resistor
ELRX-300R	Active End-of-Line Resistor with red mounting plate
<b>Accessories</b>	
FA-UNIV-TRB	Black Universal Semi-Flush Trim Ring
UIMA	Universal Programming Tool

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5661  
Rev. 7



# Graphics Software Systems



### Features

- A centralized and integrated graphical interface between operators and monitored buildings
- Customizable for enhanced site representation
- Custom event messaging to complement and enhance site fire alarm plan
- Custom color graphical icons depict up to 500,000 addressable devices / objects
- Extensive event logging up to 500,000 events with status notations for report customization
- Upload/download configuration files without taking the whole system off-line
- Easy controls allow operators to precisely navigate between buildings and floors for rapid surveillance
- Multiple import and export formats are supported

### Description

#### Award-winning Building Management System

Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world.

#### 3D Visualization

OpenGN displays monitored buildings and campuses in both 2D and 3D representations. Mircom's Engineering Services offers customized graphic services for an unrivaled and unique graphical interface. Outdated LED ladder graphics are no longer required, replace with a widescreen monitor and OpenGN for a modern and upscale experience.

#### Flexible, Scalable & Customizable

The modular architecture of OpenGN allows for a flexible, scalable and customized solution. Enterprise level homogenous (Mircom technology) and heterogeneous (3rd party technology) solutions are possible with OpenGN.

#### Leading Edge Reporting

"Take Action" messages provide operators and first responders with specific, real-time information about site events including notes about hazardous materials, vulnerable building occupants, and management contacts. Real-time reports of all events are compiled, exactly as they occur. With these reports and records, operators can reconstruct emergency events after the fact, both to verify that the proper steps were taken, and to improve future responses.

### System Requirements

#### Recommended Computer Specifications

- Intel® Core™ i7-4790Processor
- 16GB RAM 1600 MHz DDR3
- AMD Radeon 2 GB R7 250
- 10/100/1000 Ethernet Port
- Microsoft Windows 7 Professional, 64 bit

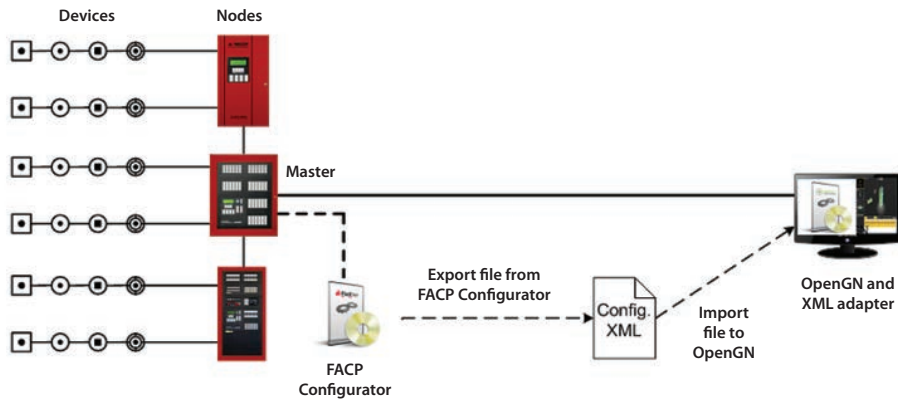
**CATALOG NUMBER** **5323**

NOT TO BE USED FOR INSTALLATION PURPOSES.

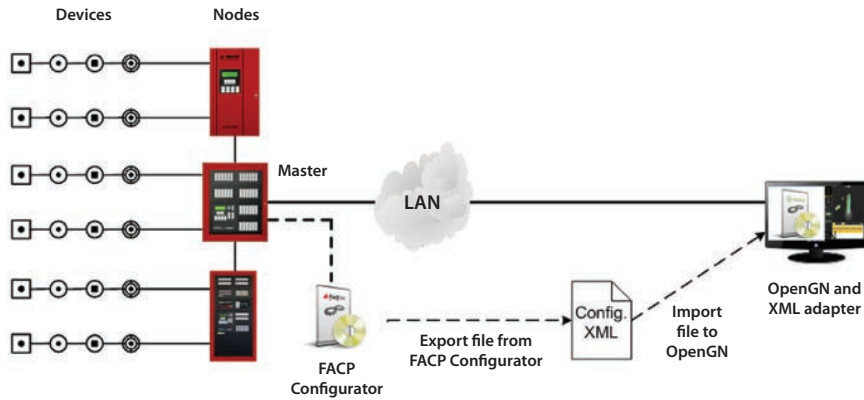
Mircom reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

## Network Diagrams

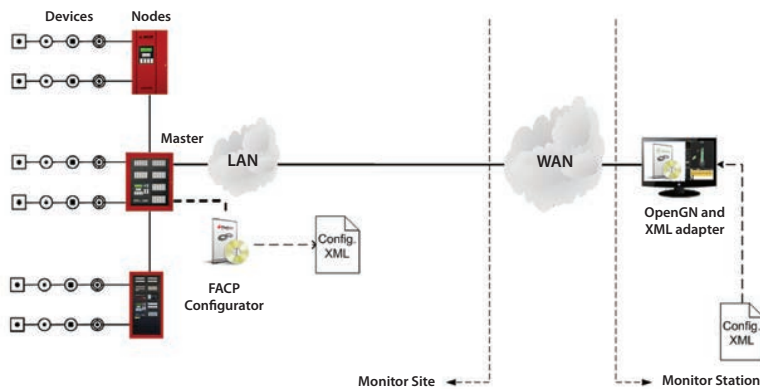
### Direct Connection



### LAN Connection



### WAN Connection



## Ordering Information

Model	Description
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/objects
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects

**Note:** Computer is not supplied with the OPENGN software. For a UL/ULC listed computer contact Comark Corporation ([www.comarkcorp.com](http://www.comarkcorp.com))

NOT TO BE USED FOR INSTALLATION PURPOSES.



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CAT. 5323  
Rev 3

# Mass Notification

# Mass Notification & Emergency Communication