RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation – *Webster's New World Dictionary*

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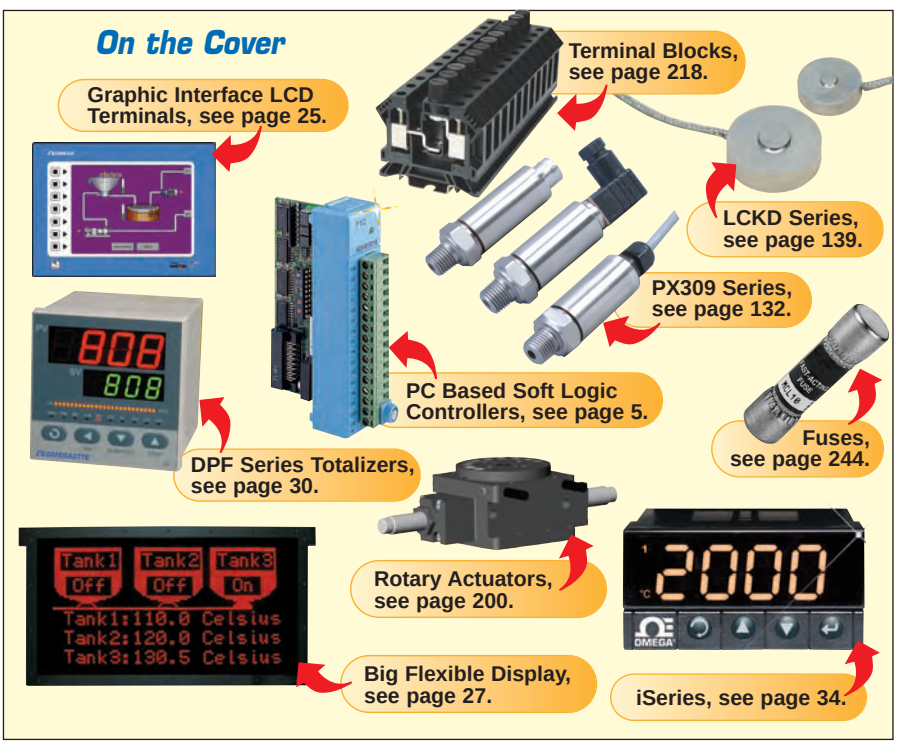
U.S.A.
OMEGA Engineering, Inc.
Worldwide Headquarters
One Omega Drive
P.O. Box 4047
Stamford, CT 06907-0047
For written orders and quotations:
OMEGA Engineering, Inc.
P.O. Box 4047
Stamford, CT 06907-0047
For order confirmations:
OMEGA Engineering, Inc.
P.O. Box 2669
Stamford, CT 06906-0669
For general correspondence:
OMEGA Engineering, Inc.
P.O. Box 2284
Stamford, CT 06906-0284
CANADA
976 Bergar
Laval (Quebec) H7L 5A1

omegamation.com
e-mail: info@omegamation.com

On the Cover



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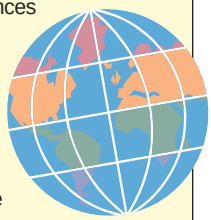
OMEGA offers international sales and distribution headquarters in the United States and Canada, and we service the expanding European marketplace from our UK office in the English countryside. All locations have multilingual sales staff well-versed in worldwide trade. International payment conveniences such as credit cards, wire transfers, and acceptance of local currencies make it easy for customers around the globe to work with OMEGA.



United States
One Omega Drive
P.O. Box 4047
Stamford, CT 06907-0047 USA
Tel: (203) 359-1660
Fax: (203) 359-7700
Toll-Free: 1-888-556-6342
e-mail: info@omegamation.com

Benelux
Managed by the United Kingdom Office
Tel: +31 20 347 21 21
Fax: +31 20 643 46 43
Toll-Free: 0800 099 3344
e-mail: sales@omegaeng.nl

Canada
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Laval (Quebec) H7L 5A1
Canada
Tel: (514) 856-6928
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Toll-Free: 1-800-826-6342
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Czech Republic
Frystatska 184
733 01 Karviná
Czech Republic
Tel: +420-59-6311899
Fax: +420-59-6311114
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France
Managed by the United Kingdom Office
Tel: +33 (0) 161 37 29 00
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Germany/Austria
Daimlerstrasse 26
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Germany
Tel: +49 (0) 7056 9398-0
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United Kingdom
One Omega Drive,
River Bend Technology Centre
Northbank, Irlam, Manchester
M44 5BD United Kingdom
Tel: +44 (0) 161 777-6611
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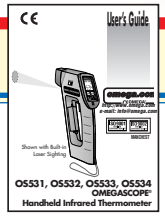

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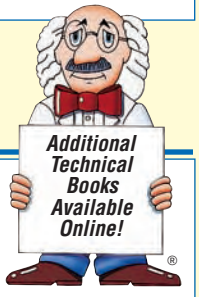

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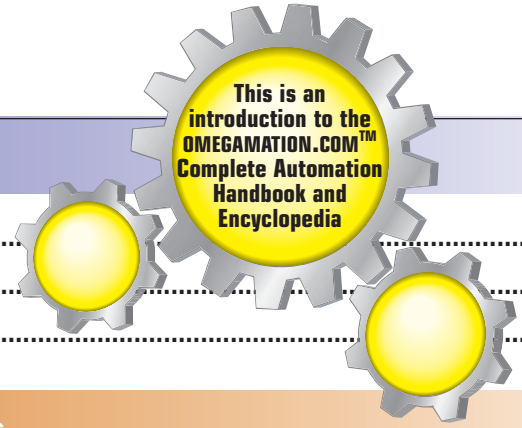

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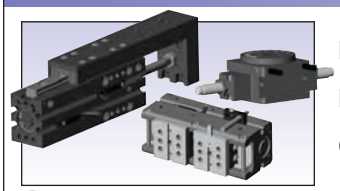

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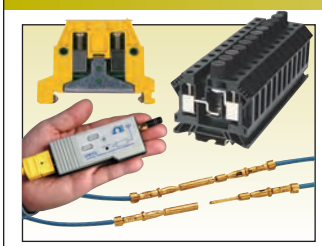

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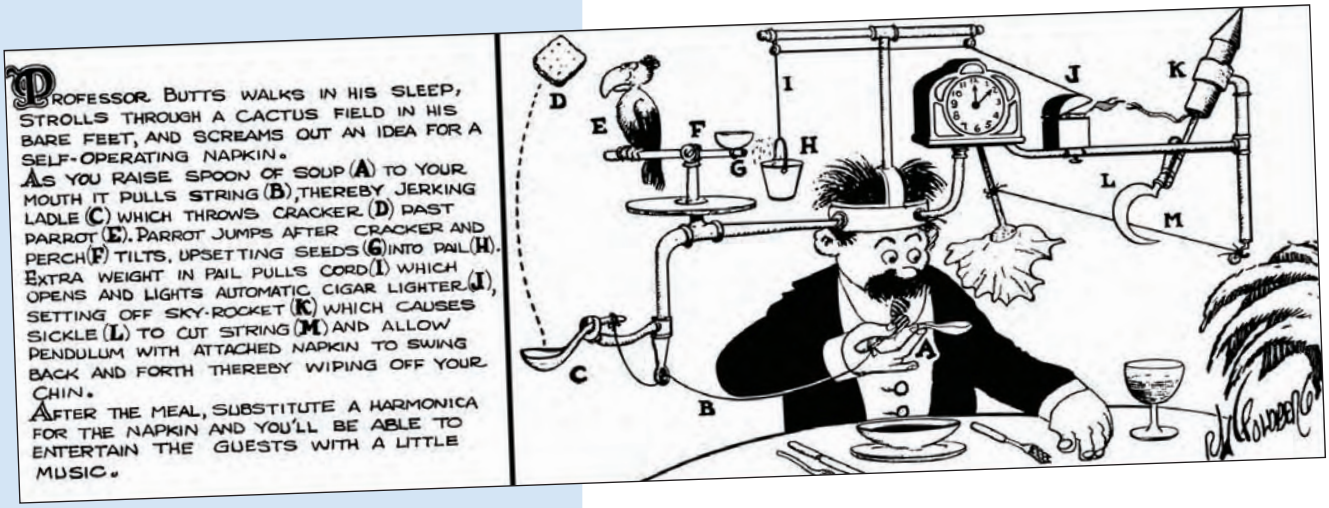
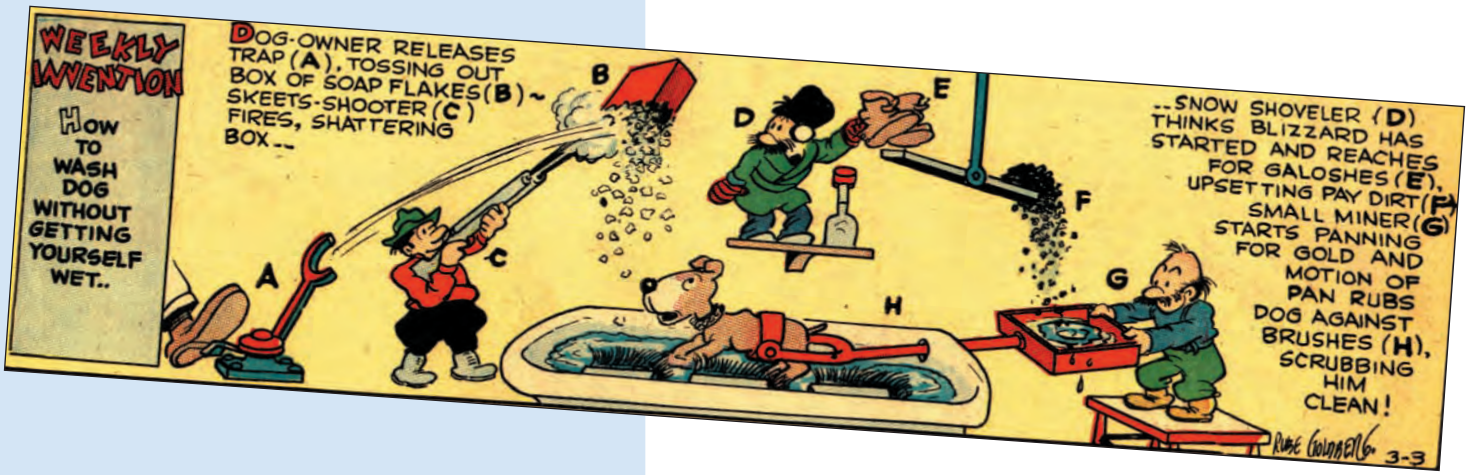




PC-BASED SOFT-LOGIC CONTROLLERS

NEW

ADAM-5510EKW/TCP, $556, shown smaller than actual size.

Basic System* Starts at $1195

2 YEAR WARRANTY

**Basic system consists of 1 controller, 1 module, and software. See ordering examples on page 21.*

- **Modular I/O Design Provides Optimum Flexibility**
- **Controllers Available with 4 or 8 I/O Modules Slots for up to 128 I/O Points**
- **I/O Modules for Analog Signals, RTDs, Thermocouples, Discrete I/O, Counters and Frequency**
- **RS485 and Ethernet Communications Available**
- **Industrial DIN Rail Mount Design**

The ADAM-5510KW series is designed to monitor and control processes through multi-channel I/O modules. Each system is capable of handling up to 4 or 8 I/O modules for channel capacities up to 128 I/O points. Depending on the type and number of I/O points a system can be configured to meet your optimum application requirements.

Configurable I/O

The ADAM-5000 series analog input modules can be configured to accept several ranges of voltage input, current input, thermocouple input or RTD input. Counter/frequency modules can also be configured to up/down, bi-directional and frequency modes. By storing the configuration in a nonvolatile EEPROM, the system is able to retain set parameters even in the event of a power failure.

3-Way Isolation

Electric noise and transients can enter your system through an I/O module, the power supply connection or a communication connection. The ADAM-5000 series has been designed to effectively prevent noise from all possible sources with:

- 3000 Vdc isolation from ADAM-5000 I/O modules
- Isolation for input signals on communication ports
- Isolation for the communication port's power supply

This 3-way isolation design prevents ground loops and reduces the risk of electric noise affecting your system.

Programmability

The ADAM-5510KW feature 5 standard IEC61131-3 programming languages so PLC users can develop control strategies in their familiar programming languages. The strong MULTIPROG software and stable ProConOS make the ADAM-5510KW the best choice for PC-based Soft-logic controllers in the market.

ProConOS, (Programmable Controller Operating System), has over 250,000+ installations, and is a pre-emptive, multi-tasking run-time software providing deterministic operation down to one millisecond and runs applications developed with MULTIPROG, a fully-featured IEC 61131-3 development environment. Also bundled with the ADAM-5510KW is ProConOS run-time software creating a complete SoftLogic Solution.

RS232/RS485 Modbus Communications

The main unit of ADAM-5510KW contains a 1.5 MB flash memory and 640 KB SRAM which includes battery backup RAM up to 32 KB. In addition, 4 COM ports enrich the communication capacity of ADAM-5510EKW and ADAM-5510KW to integrate with remote I/O or other 3rd party devices based on the Modbus/RTU protocol.

For advanced system integration, the ADAM-5510EKW and ADAM-5510KW are built with a Modbus/RTU Server.

Optional Ethernet

The ADAM-5510EKW/TCP is an Ethernet-enabled SoftLogic Controller. In addition to the features of ADAM-5510KW and ADAM-5510EKW, the ADAM-5510EKW/TCP has Ethernet features including Modbus/TCP Server, Modbus/TCP Client and Multiprog via Ethernet functions. Therefore, users can easily and quickly complete their programming based on Ethernet architecture.

For advanced system integration, the ADAM-5510EKW/TCP supports not only Modbus/RTU Master and Slave functions via serial ports, but also the Modbus/TCP Client to retrieve data from remote I/O, and Modbus/TCP Server to send data back to the HMI/SCADA Software via Ethernet port. Furthermore, the ADAM-5510EKW/TCP allows users to remotely maintain multiple ADAM-5510EKW/TCP controllers by running Multiprog programming software via Ethernet.

ADAM-5510KW, $445, shown smaller than actual size.

CONTROLLER SPECIFICATIONS

CONTROL SYSTEM

CPU: 16-bit microprocessor
I/O Capacity: 8 slots (5510EKW-A and 5510EKW/TCP); 4 slots (5510KW)
LED Indicators: Power, CPU, communication

MEMORY

Flash Disk: 512 KB
Flash Memory: 768 KB
Flash ROM: 256 KB
RAM: 640 KB SRAM
Operating System: ROM-DOS
Real-Time Clock: Yes
Watchdog Timer: Yes

COMMUNICATIONS (Ethernet, ADAM-5510EKW/TCP only)

Medium: Cat. 5 cable with RJ-45 connectors
Transmission Speed: 100 Mbps (10/100Base-T)

COMMUNICATIONS (Serial, All Models)

Max. Nodes: 32 (in RS485 daisy-chain network)
Medium: RS485 (2-wire)
Protocols: Modbus/RTU, Modbus/TCP
Transmission Speed: 9600, 19200 and 38400 bps

PROTECTION

Power Input: 3000 Vdc
Communication Line: 2500 Vdc (COM2 only)

ISOLATION

Power Reversal: Yes

PROTECTION

Power Input: 3000 Vdc
Power Consumption: 4 W @ 24 Vdc (not including I/O modules)
Unregulated 10 to 30 V
Power Input: Unregulated 10 to 30 Vdc

GENERAL

Certifications: CE, FCC class A (ADAM-5510 and ADAM-5510EKW-A only)
Connectors:
1 x DB9-M for RS232/485 (COM1)
1 x Screw terminal for RS485 (COM2)
1 x DB9-F for RS232/Programming (COM3)
1 x DB9-M for RS232/485 (COM4)
1 x Screw-terminal for power input
1 x RJ-45 for LAN (ADAM-5510EKW/TCP only)

Dimensions:
4-Slot: 231 x 110 x 75 mm
8-Slot: 355 x 110 x 75 mm
Enclosure: ABS + PC
Mounting: DIN 35 rail, stack, wall
Environment
Humidity: 5 to 95%, non-condensing
Operating Temperature:
-10 to 70° C (14 to 158° F)
Storage Temperature:
-25 to 85° C (-13 to 185° F)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY

MODEL NO.	PRICE	DESCRIPTION
ADAM-5510KW	**$445**	4-slot SoftLogic controller
ADAM-5510EKW	**525**	8-slot PC-based SoftLogic controller
ADAM-5510EKW/TCP	**558**	8-slot Ethernet-based SoftLogic controller

Comes with complete user manual on CD

System Ordering Examples

Example 1

Quantity 1 ADAM-5510KW	*4-slot softlogic contoller*	*$445*
Quantity 1 ADAM-5051S	*16-channel isolated digital input module*	*99*
Quantity 1 ADAM-5080	*4-channel counter/frequency module*	*280*
Quantity 1 ADAM-5069	*8-channel power relay output module*	*120*
Quantity 1 MPROG-BAS33	*KW Multiprog basic development software*	*555*
Quantity 1 PWR-242	*Power supply*	*160*
Quantity 1 1703093000	*Serial cable*	*10*
		Total $1669

Example 2

Quantity 1 ADAM-5510EKW/TCP	*8-slot ethernet based softlogic controller*	*$555*
Quantity 2 ADAM-5018	*7-channel thermocouple input module*	*220 (x2)*
Quantity 2 ADAM-5017H	*8-channel hi speed analog input module*	*285 (x2)*
Quantity 1 ADAM- 5013	*3-channel RTD module*	*250*
Quantity 1 ADAM-5024	*4-channel analog output module*	*285*
Quantity 1 ADAM-5050	*16-channel universal digital I/O module*	*100*
Quantity 1 MPROG-ADV33	*KW Multiprog advanced development software*	*1,110*
Quantity 1 1997000220	*Blank I/O module*	*1*
Quantity 1 PWR-242	*Power supply*	*160*
Quantity 1 1703093000	*Serial cable*	*10*
		Total $3481

Accessories

MODEL NO.	PRICE	DESCRIPTION
PWR-242	**$160**	DIN rail mount power supply, 24vdc, 2.1A
1997000220	**1**	ADAM-5000 blank I/O module
1703093000	**10**	RS232 communication cable

ADAM-5018, 7-channel thermocouple input $220, shown smaller than actual size.

ADAM-5018

7-CHANNEL THERMOCOUPLE INPUT MODULE

Certifications: CE, FM
Connectors: 1 x plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 0.63 W (max)
Thermocouple Input:
Accuracy: ±0.1% or better
Bandwidth: 13.1 Hz @ 50 Hz
15.72 Hz @ 60 Hz
Channels: 7 differential
Input Impedance: 2 MΩ
Input Range: ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V, ±20 mA
Input Type: mV, V, mA, thermocouple
Resolution: 16-bit
Sampling Rate: 10 samples/sec (total)
T/C Type and Temperature Range:
J: 0 to 760° C
K: 0 to 1370° C
T: -100 to 400° C
E: 0 to 1000° C
R: 500 to 1750° C
S: 500 to 1750° C
B: 500 to 1800° C
Protection: Up to ±35 V
Isolation Voltage: 3000 Vdc

ADAM-5013, 3-channel RTD input, $250, shown smaller than actual size.

ADAM-5013

3-CHANNEL RTD INPUT MODULE

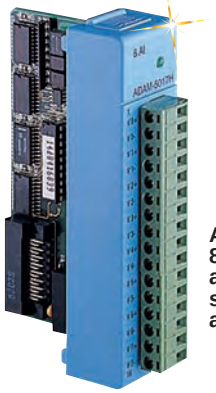
Certifications: CE
Connectors: 1 x plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 1.1 W (max)
RTD Input:
Accuracy: ±0.1% or better
Bandwidth: 13.1 Hz @ 50 Hz
15.72 Hz @ 60 Hz
Channels: 3
Input Connections: 2, 3 or 4 wire
Input Impedance: 2 MΩ
Input Type: PT100 or Ni RTD
Resolution: 16-bit
RTD Types and Temperature Ranges:
IEC RTD 100: Ω
Pt -100 to 100°C a= 0.00385
Pt 0 to 100°C a= 0.00385
Pt 0 to 200°C a= 0.00385
Pt 0 to 600°C a= 0.00385
JIS RTD 100:Ω
Pt -100 to 100°C a= 0.00392
Pt 0 to 100°C a= 0.00392
Pt 0 to 200°C a= 0.00392
Pt 0 to 600°C a= 0.00392
Ni RTD:
Ni -80 to 100°C
Ni 0 to 100°C
Sampling Rate: 10 samples/sec (total)
Isolation Voltage: 3000 Vdc

ADAM-5017, 8-channel analog input, $205, shown smaller than actual size.

ADAM-5017

8-CHANNEL ANALOG INPUT MODULE

Channels: 8 differential
Effective Resolution: 16-bit
Input Type: mV, V, mA
Input Range: ±150 mV, ±500 mV, V, ±5 V, ±10 V; ±20
Sampling Rate: 10 samples/sec (total)
Input Impedance: 2 MΩ
Bandwidth: 13.1 Hz @ 50 Hz, 15.72 Hz @ 60 Hz
Accuracy: ±0.1% or better
Power Consumption: 1 W (typical); 1.25 W (max)
Analog Signal Range: ±15 V max
Note: *The voltage difference between any two pins must not exceed ±15 V*
Isolation Voltage: 3000 Vdc
Protection: Up to ±35 V



ADAM-5017H, 8-channel high speed analog input, $285, shown smaller than actual size.

ADAM-5017H

8-CHANNEL HI SPEED ANALOG INPUT MODULE

Channels: 8 differential
Effective Resolution: 12-bit plus sign bit
Input Type: mV, V, mA
Input Range: ±250 mV, ±500 mV, ±1 V, ±5 V, ±10 V, 0 to +500 mV, 0 to +1 V, 0 to +5 V, 0 to +10 V, 0 to 20 mA, 4 to 20 mA
Isolation Voltage: 3000 Vdc
Sampling Rate Depends on base unit
ADAM-5510KW: Up to 100 samples/sec
Input Impedance: 20 MΩ (voltage inputs) 125Ω (current inputs)
Bandwidth: 1 kHz
Signal Input Bandwidth: 1 kHz for both voltage and current inputs
Accuracy: ±0.1% or better; CMR @ 50/60 Hz 92 dB min
Power Consumption: 1.75 W (typical); 2.2 W (max)
Distinct Range: Settings allowed on each channel
Note*: The voltage difference between any 2 pins must not exceed ±15 V*

To Order ***(Specify Model Number)*** | ***AVAILABLE FOR FAST DELIVERY!***

MODEL NO.	PRICE	DESCRIPTION
ADAM-5018	$220	7-channel thermocouple input module
ADAM-5013	250	3-channel RTD input module
ADAM-5017	205	8-channel analog input module
ADAM-5017H	285	8-channel hi speed analog input module

ADAM-5024, 4-channel analog output, $236, shown smaller than actual size.

ADAM-5024

4-CHANNEL ANALOG OUTPUT MODULE

Certifications: CE, FM
Connectors: 1 x Plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 2.9 W (max)
Analog Output Accuracy: ±0.1% of FSR for current output; ±0.2% of FSR for voltage output
Channels: 4
Current Load Resistor: 0 to 500 (source)
Output: Type mA, V
Output Range: 0 to 20 mA, 4 to 20 mA, 0 to 10 V
Programmable: 0.125 to 128.0 mA/sec
Output Slope: 0.0625 to 64.0 V/sec
Resolution: 12-bit
Resolution: ±0.015% of FSR
Span Temperature: ±25 PPM/°C
Coefficient:
Zero Drift Voltage: ±30 µV/ ° C
Current: ±0.2 µV/ ° C
Protection:
Isolation Voltage: 3000 Vdc

ADAM-5050, $100, shown smaller than actual size.

ADAM-5050

16-CHANNEL UNIVERSAL DIGITAL I/O MODULE

Certifications: CE, FM
Connectors: 1 x Plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 1.2 W (max)
Digital I/O
Channels: 16
Channel I/O Type: Bit-wise selectable by DIP switch Digital Input
Dry Contact:
Logic Level 0: Close to GND
Logic level 1: Open
Wet Contact:
Logic level 0: 2 V max
Logic level 1: 4 to 30 V
Digital Output: Open collector to 30 V, 100 mA and 450 mW max load
Power Dissipation: 300 mW for each channel

ADAM-5051S, 16-channel isolated digital input module, $99, shown smaller than actual size.

ADAM-5051S

16-CHANNEL ISOLATED DIGITAL INPUT MODULE (ROHS)

Certifications: CE
Connectors: 1 x Plug-in screw terminal (# 14 to 28 AWG)
LED Indicators:
On: Active
Off: Inactive
Power Consumption: 0.8 W (max)
Digital Input
Channels: 16
Input Voltage: 50 Vmax
Logic Level:
Logic level 0: 3 V max
Logic level 1: 10 to 50 V
Protection:
Optical Isolation: 2500 Vdc
Overvoltage Protection: 70 Vdc

ADAM-5052, 8-channel isolated digital input module, $85, shown smaller than actual size.

ADAM-5052

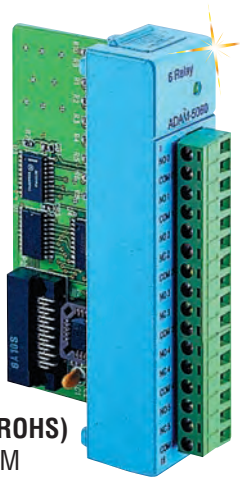
8-CHANNEL ISOLATED DIGITAL INPUT MODULE (ROHS)

Certifications: CE, FM
Connectors: 1 x Plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 0.27 W (max)
Digital Input
Channels: 8
Input Resistance: 3 KΩ/0.5 W
Logic Level:
Logic level 0: 1 Vmax
Logic level 1: 3.5 to 30 V
Protection:
Isolation Voltage: 5000 VRMS

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
ADAM-5024	$285	4-channel analog output module
ADAM-5050	100	16-channel universal digital I/O module
ADAM-5051S	99	16-channel isolated digital input module (RoHS)
ADAM-5052	85	8-channel isolated digital input module (RoHS)



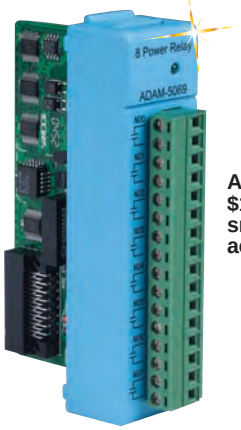
ADAM-5060, $95, shown smaller than actual size.

ADAM-5060
6 CHANNEL RELAY OUTPUT MODULE (ROHS)

Certifications: CE; FM (ADAM-5060 only)
Connectors: 1 x plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 1.8 W (max)
Relay Output:
- **Breakdown Voltage:** 500 Vac (50/60 Hz)

Channels: 2 x form A , 4 x form C
Contact Rating:
- **AC:** 125 V @ 0.6 A; 250 V @ 0.3 A
- **DC:** 30 V @ 2 A; 110 V @ 0.6 A

Insulation Resistance: 1 GΩ min @ 500 Vdc
Relay Off Time: (typical) 2 ms
Relay On Time: (typical) 3 ms
Total Switching Time: 10 ms



ADAM-5069, $145, shown smaller than actual size.

ADAM-5069-AE
8 CHANNEL POWER RELAY OUTPUT MODULE (ROHS)

Certifications: CE, FCC class A
Connectors: 1 x plug-in screw terminal (# 14 to 22 AWG)
LED Indicator:
- **On:** Active
- **Off:** Non-active

Power Consumption: 2.2 W (max)
Relay Output:
- **Breakdown Voltage:** 750 Vac (50/60 Hz)

Channels: 8 x form A
Contact Rating:
- **AC:** 250 V @ 5 A
- **DC:** 30 V @ 5 A

Insulation Resistance: 1 GΩ@ 500 Vdc
Relay On Time: 5 ms
Relay Off Time: 5.6 ms

ADAM-5056S, $115, shown smaller than actual size.

ADAM-5056SO/S
16-CHANNEL SOURCE/SINK TYPE ISOLATED DIGITAL OUTPUT MODULE (ROHS)

Certifications: CE
Connectors: 1 x plug-in screw terminal (# 14 to 28 AWG)
LED Indicator:
- **On:** Active
- **Off:** Inactive

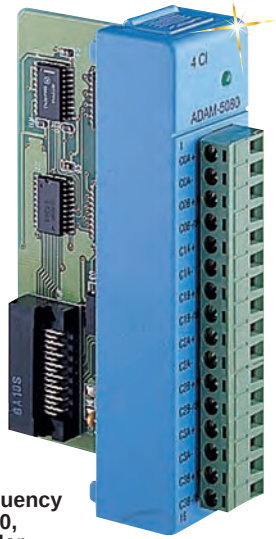
Power Consumption: 0.6 W (max)
Digital Output
Channels: 16
Digital Output: Open collector to 40V, 200 mA max load
- ADAM-5056SO-AE: Source output
- ADAM-5056S-AE: Sink output

Optical Isolation: 2500 Vdc
Overvoltage Protection: 70 Vdc

ADAM-5080
4-CHANNELCOUNTER/ FREQUENCY MODULE

Certifications: CE, FM
Connectors: 1 x plug-in screw terminal (# 14 to 22 AWG)
Power Consumption: 1.5 W (max)
Counter/Frequency
Counter Aux. Function: Initial preset, hi-low alarm setting, alarm, digital output mapping, overflag
Channels: 4
Input Frequency: 0.3 to 1000 Hz max (frequency mode); 5000 Hz max (counter mode) TTL only
Input Level: Isolated or TTL level
Isolation Input Level:
- **Logic Level 0:** 1 Vmax
- **Logic Level 1:** 3.5 to 30 V

Isolation Voltage: 1000 VRMS
Maximum Count: 4, 294, 967, 295 (32 bits)
Minimum Input Current: 2 mA (isolated)



ADAM-5080, 4-channel counter/frequency module, $280, shown smaller

Minimum Pulse Width: 500 ms (frequency mode); 100 ms (counter mode)
Modes Counter: (up/down, bi-direction) frequency
Programmable Digital Filter:
1 to 65000 µsec (noise filter function)
TTL Input Level:
- **Logic level 0:** 0 to 0.8 V
- **Logic level 1:** 2.3 to 5 V

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

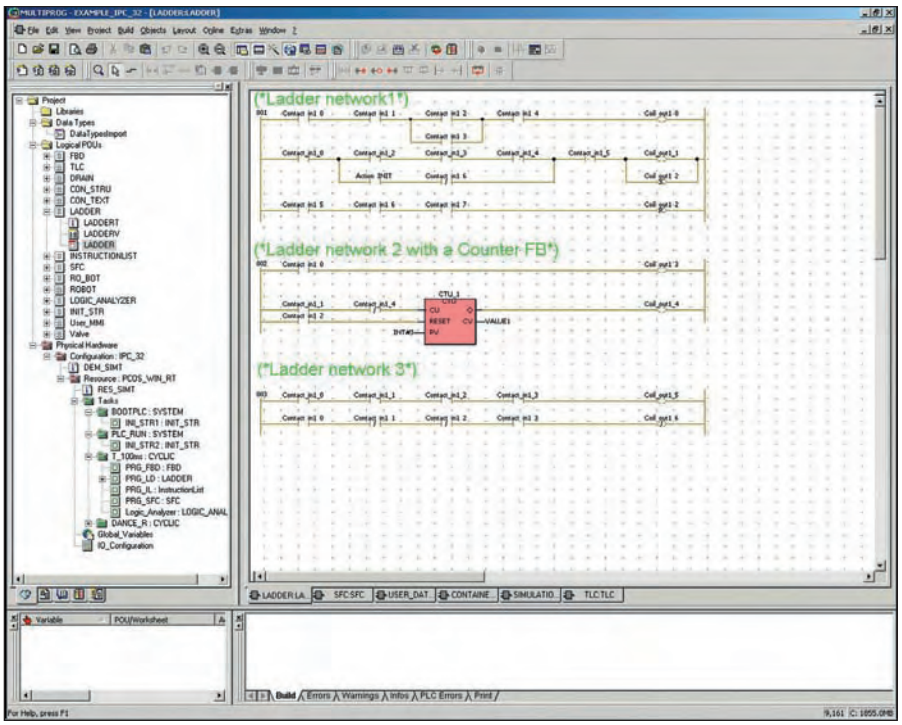
MODEL NO.	PRICE	DESCRIPTION
ADAM-5056SO	$115	16-channel source/sink type isolated digital output module (RoHS)
ADAM-5056S	115	16-channel sink type isolated digital output module (RoHS)
ADAM-5060	95	6-Channel relay output module (RoHS)
ADAM-5069	145	8-Channel power relay output module (RoHS)
ADAM-5080	280	4-channel counter/frequency module (RoHS)

KW MULTIPROG®

IEC-61131-3 DEVELOPMENT SOFTWARE FOR THE ADAM 5510

Starts at $555

- IEC 61131-3 Programming Languages
- Intuitive Programming With a Clear Project Structure
- Cross-Compiling: FBD, LD and IL Can be Cross-Compiled to Each Other
- Multi User Functionality Shortens Programming Time
- Management of Distributed Controls
- Network Variables: Easy and Powerful Configuration of Distributed Communication
- Powerful Debugging Tools: Online Changes, PLC Simulation, Overwriting and Forcing, Breakpoints, Watch Windows and Recipes, Logic Analyzer, and Cross Reference



KW Multiprog development environment.

Minimum System Requirements

DEVICE	MINIMUM	RECOMMENDED
IBM compatible PC with Pentium Processor	200 MHz	350 MHz
System RAM	64 MB	128 MB
Hard Disk	60 MB free memory space	
VGA Monitor Color Settings Resolution	256 colors 800 x 600	True color 1024 x 768

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
MPROG-ADV33	**$1110**	KW Multiprog Advanced Development Software (unlimited I/O)
MPROG-BAS33	**555**	KW Multiprog Basic Development Software (128 byte I/O limitation*)

** When calculating I/O count, 1 byte is used for every 8 channels of discrete I/O and 4 bytes are used for every 1 analog channel.*

Introduction

MULTIPROG® is a program development environment for the AD5510 series programmable automation controllers. MULTIPROG® supports all IEC 61131-3 programming languages. Depending on the task to be handled, your experience and company standards, you may choose one of the five standardized programming languages. The use of MULTIPROG® offers you many advantages. Our long-term experience in the automation industry guarantees you a sophisticated software product. The open architecture of MULTIPROG® provides a new direction in the creation of automation software. MULTIPROG® Automation Interface guarantees consistent data. Via the automation interface, MULTIPROG® opens its data for other tools. MULTIPROG® allows external creation and modification of its project data. Furthermore, specific attributes can be added. As all essential data can be displayed in MULTIPROG®, frequent switching between different tools during PLC programming and commissioning is no longer necessary. Observers guarantee data consistence with other tools, thus the engineering effort for the programming of PLCs is reduced.

IEC 61131-3 Programming Languages (all supported)

Instruction List (IL)

Structured Text (ST)

Function Block Diagram (FBD)

Ladder Diagram (LD)

Sequential Function Chart (SFC)

All programming languages can be mixed within one project

ENHANCED MODULAR CONTROLLER SERIES MASTER

NEW

Starts at $899

MADE IN USA

- Provides Enhanced Features For Data Acquisition Or Multi-Zone Pid Control Applications
- Webserver Provides Worldwide Access to Data Logs And Virtual HMI
- Virtual HMI Offers Built-In PC-Based SCADA Functionality
- Performs Hierarchical Control of Other Modules in the Modular Controller Series
- Stores Module Configuration Information, and Automatically Reprograms Replaced Modules
- Extensive Built-In Driver List Allows Easy Data Mapping to PLCs, PCs, and SCADA Systems
- Independent Serial Ports Provide Virtually Unlimited Integration Methods
- 10 Base-T/100 Base-Tx Ethernet Connection Provides Networking Capability
- Supports up to 16 Modular Controller Series Modules
- Compactflash® Slot Allows Process Data to be Logged Directly to CSV Files

CSMSTRSX, $899, shown smaller than actual size.

The Model CSMSTR is a communications and control platform designed for use with Modular Controller Series slave modules. The CSMSTR uses a proprietary high speed serial protocol to communicate, via backplane connection, with up to 16 slave modules. Through the same connection, the Master also provides power to the modules.

When powered up, the CSMSTR automatically identifies and addresses connected slave modules. By storing the configuration information of all of the modules, the CSMSTR is able to automatically configure modules if they are replaced.

The Master provides high-speed RS232/422/485 communication ports and an Ethernet port for connection to PCs, PLCs, and SCADA systems. An extensive list of master and slave protocol drivers are available to allow the CSMSTR to share and exchange variable data with external devices. The 10 Base-T/100 Base-TX Ethernet port can also be used to connect and share data with other devices at high speeds. The virtual HMI feature allows you to create and control an HMI from any networked PC. An onboard CompactFlash slot provides storage for the Master's built-in data logger.

The design of the Modular Controller Series high density packaging and DIN rail mounting saves time and panel space. The controller snaps easily onto standard top hat (T) profile DIN rail.

The CSMSTR is programmed with Crimson 2.0 software for Windows® 2000 or later platforms. The software is an easy to use, graphical interface which provides a means of communication configuration, as well as commissioning and calibration of new systems.

SPECIFICATIONS

Power: 24 Vdc ± 10% 400 mA min. (1 module) 3.5 Amps max. (16 modules + Expansion Card)
Must use Class 2 or SELV rated power supply

Communications:

USB/PG Port: Adheres to USB specification 1.1 (Device only using Type B connection)
Serial Ports: Format and Baud Rates for each port are individually software programmable up to 115,200 baud
RS232/PG Port: RS232 port via RJ12
COMMS Ports: RS422/485 port via RJ45, and RS232 port via RJ12
DH485 TXEN: Transmit enable; open collector, VOH=15 Vcd, VOL=0.5 V @ 25 mA max
Ethernet Port: 10 BASE-T / 100 BASE-TX RJ45 jack is wired as a NIC (Network Interface Card)

LEDs:

STS: Status LED indicates condition of master
TX/RX: Transmit/Receive LEDs show serial activity
Ethernet: Link and activity LEDs
CF: CompactFlash LED indicates card status and read/write activity

Memory:

On-Board User Memory: 4MB of non-volatile flash memory
On-Board SDRAM: CSMSTRSX=2MB; CSMSTRGT=8MB
Memory Card: Compactflash type II slot for type I and type II cards

Real-Time Clock: Typical accuracy is less than one minute per month drift. Crimson 2.0's SNTP facility allows synchronization with external servers

Battery: Lithium coin cell (included). Typical lifetime of 10 years at 25 ºC (77°F) A "battery low" system variable is available so that the programmer can choose specific action(s) to occur when the battery voltage drops below its nominal voltage.

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F)

Storage Temperature Range: -30 to +70°C (-22 to 158°F)

Operating and Storage Humidity: 80% max relative humidity, non-condensing, from 0 to 50°C (32 to 122°F)

Vibration According to IEC 68-2-6: 5 to 150 Hz, in X, Y, Z direction for 1.5 hours, 2 g's

Shock According to IEC 68-2-27: Operational 25 g, 11 msec in 3 directions

Altitude: Up to 2000 meters

Construction: Case body is burgundy high impact plastic and stainless steel. Installation category I, pollution degree 2

Power Connection: Removable wire clamp screw terminal block

Wire Gage Capacity: 24 AWG to 12 AWG

Torque: 4.45 to 5.34 in/lb (0.5 to 0.6 N-m)

Mounting: Snaps onto standard DIN style top hat (T) profile mounting rails according to EN50022 -35 x 7.5 and -35 x 15

Certifications and Compliances:

Safety: UL Listed, File #E302106, UL508, CSA 22.2 No. 14-M05 Listed by Und. Lab. Inc. to U.S. and Canadian safety standards

IEC 61010-1, EN 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use, part 1

Electromagnetic Compatability:

Emissions and Immunity to EN 61326: Electrical equipment for measurement, control and laboratory use

Immunity to Industrial Locations*:
Electrostatic discharge
EN 61000-4-2 Criterion A2; 4 kV contact discharge; 8 kV air discharge;
Electromagnetic RF fields
EN 61000-4-3 criterion A 10 V/m;
Fast transients (burst) EN 61000-4-4 Criterion A; 2 kV power; 2 kV signal;
Surge EN 61000-4-5 Criterion A; 1kV L-L,2 kV L&N-E power; RF conducted interference EN 61000-4-6 Criterion A; 3 V/rms

Emissions: Emissions EN 55011 class A

Weight: 456.4 g (15.1 oz)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	MASTER MODULE DESCRIPTION
CSMSTRSX	**$899**	Modular controller master with multiple protocol converter, data logger, web server , virtual HMI up to QVGA (320X240) size and expansion slot.
CSMSTRGT	**1199**	Modular controller master with multiple protocol conversion, data logger, web server, full VGA virtual HMI (640X480) size and expansion slot with increased DRAM
SFCRM2MC	**62**	Modular controller crimson programming software, manual and download cable
ACCESSORIES		
MODEL NO.	**PRICE**	**DESCRIPTION**
G3CF064M	**$90**	64 MB compact flash card (industrial grade 2 million write cycles)
G3CF256M	**235**	256 MB compact flash card (industrial grade 2 million write cycles)
G3CF512M	**368**	512 MB compact flash card (industrial grade 2 million write cycles)
CBLPROG0	**41**	Programming cable for CS, G3, and paradigm
CBLUSB00	**26**	USB programming cable for G3, DSP and modular controller, type A-B
PSDR0100	**129**	Mini power supply 1A
PSDR0200	**159**	Mini power supply 2A
PSDR0400	**199**	Mini power supply 4A
RSRSTP00	**5**	Rail stops (qty 2)
CSTERM00	**10**	Replacement termination plug
CSBASE00	**31**	Replacement base
CSTERM00	**10**	Replacement termination plug
MODULES		
MODEL NO.	**PRICE**	**MODULE DESCRIPTION**
CSDIO14R	**$247**	8-inputs 6 relay outputs
CSDIO14S	**247**	8-inputs 6 solid state outputs
CSINV800	**536**	8-channel ±10 V input module
CSINI800	**536**	8-channel 0(4) to 20 mA input module
CSOUT400	**280**	4-channel analog output
CSPID1R0	**227**	Single loop module, relay outputs
CSPID1RA	**247**	Single loop module, relay outputs, analog output
CSPID1RM	**247**	Single loop module, relay outputs, heater current input
CSPID1S0	**227**	Single loop module, solid state outputs
CSPID1SA	**247**	Single loop module, solid state out. Analog output
CSPID1SM	**247**	Single loop module, solid state, heater current input
CSPID1TA	**247**	Single loop module, triac outputs, analog output
CSPID2R0	**340**	Dual loop module, relay outputs
CSPID2RM	**371**	Dual loop module, relay outputs, heater current input
CSPID2S0	**340**	Dual loop module, solid state outputs
CSPID2SM	**371**	Dual loop module, solid state outputs, heater current input
CSPID2T0	**340**	Dual loop module, triac outputs
CSPID2TM	**371**	Dual loop module, triac outputs, heater current input
CSRTD600	**402**	6-channel input, RTD
CSSG10RA	**320**	Single loop, 1 strain gage input, relay outputs, analog out
CSSG10SA	**320**	Single loop, 1 strain gage input, solid state out, analog out
CSSG11RA	**400**	Single loop, 2 strain gage input, relay outputs, analog out
CSSG11SA	**400**	Single loop, 2 strain gage input, solid state out, analog out
CSTC8000	**536**	8-channel thermocouple module

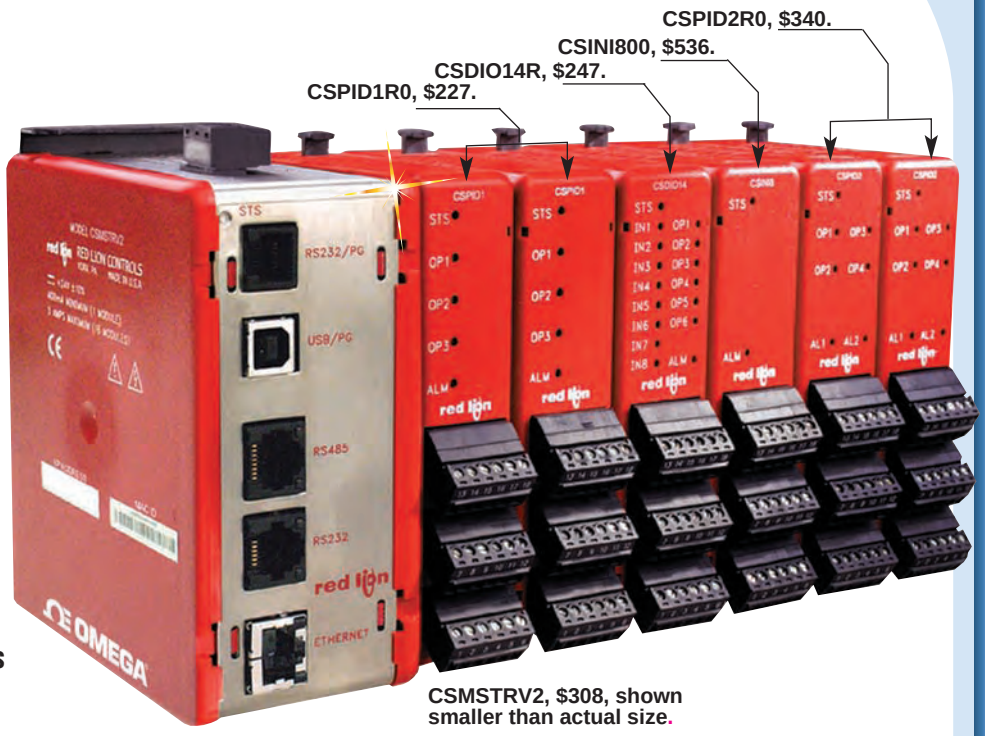
Comes with termination plug, terminal power block and complete operator's manual.
Ordering Example: CSMSTRSX,** controller, **SFCRM2MC,** software, **G3CF512M,** 512 MB flash card, **PSDR0100,** power supply, **CSDI014R,** module, $899 + 99 + 368 + 129 + 247 =* ***$1742.

Notes:
1. *Criterion A: Normal operation within specified limits.*
2. *This device was designed for installation in an enclosure. To avoid electrostatic discharge to the unit in environments with static levels above 4 kV, precautions should be taken when the device is mounted outside an enclosure. When working in an enclosure (ex. making adjustments, setting jumpers etc.), typical anti-static precautions should be observed before touching the unit.*

CONTROL MODULES

NEW

Modules Start at $247



CSMSTRV2, $308, shown smaller than actual size.

Model CSPID / CSPID2

Single and Dual Loop PID Control Modules

- Performs Heat (Reverse), Cool (Direct), or Heat/Cool (Reverse/Direct)
- Universal Inputs Accept B, C, E, J, K, R, N, S, and T Type Thermocouples, 100 Ω 385/392 and 120 Ω 672 Type RTDs 0 to 10V and 0/4 to 20mA Signals
- Hot-Swappable Replacement Reduces Downtime
- Auto Addressing Minimizes Configuration Time
- Fully Isolated Design Provides Reliable Operation
- PID Control with Reduced Overshoot
- On Demand Auto-Tuning of PID Settings
- Discrete Outputs Available in Relay, Triac, or SSR
- DC Analog Output (Optional, CSPID1 Only)
- Heater Current Input (Optional) Ensures Detection of Heater Circuit Failure

Model CSTC8 / CSRTD6

Dedicated High-Density Temperature Input Modules

- Models Available for Thermocouple or RTD Inputs
- Unused inputs can be disabled to increase overall reading rate
- Programmable slope and offset correction to remove sensor error
- Ideal for Data-Acquisition Applications
- Auto Addressing Minimizes Configuration Time
- Can be Used in Conjunction With Any CS Series Modules

Model CSINI8 / CSINV8 CSINI8L / CSINV8L

Dedicated High-Density Analog Input Modules

- Accept up to Eight ±10V or 0/4 to 20 mA Inputs per Module
- "L" Series Modules Offer 100 Linearization Points per Input
- Unused Inputs Can be Disabled to Increase Overall Reading Rate
- Ideal for Data-Acquisition Applications
- Auto Addressing Minimizes Configuration Time
- Can be Used in Conjunction With any CS Series Modules

Model CSDIO14

Digital I/O Module with Logic Engine

- 8 Input / 6 Output Digital Module
- Inputs Isolated From Outputs
- Inputs Independently Switch Selectable for Sink or Source Signals
- Inputs Independently Configurable for High or Low Active State
- Inputs Independently Switch Selectable for High or Low Frequency Signals
- Relay or NFET Output Models Available
- Can be Used in Conjunction With any CS Series Modules

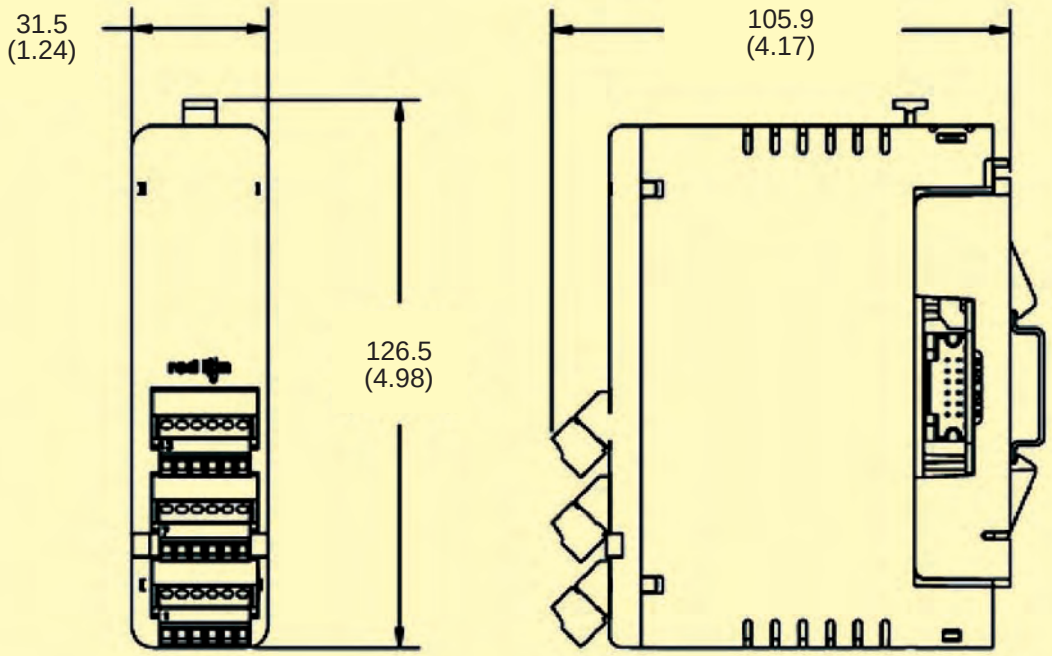
Model CSSG

Strain Gage PID Control Module

- Performs Reverse, Direct, or Reverse/Direct Control
- Input Accepts 20mV, 33mV, or 200mV Strain Gage Signals
- Secondary Input for Calculation of Difference, Sum, Average, etc.
- Selectable 5 or 10V Excitation
- Three Alarm Outputs per Module
- Fully Isolated Design Provides Reliable Operation
- PID Control With Reduced Overshoot
- On Demand Auto-Tuning of PID Settings
- Discrete Outputs Available in Relay or SSR
- DC Analog Output Optional

NEW

Dimensions: mm (inches)



CSPID1R0, $227 and CSPID2R0, $340, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	MODULE DESCRIPTION
CSDIO14R	**$247**	8 inputs 6 relay outputs
CSDIO14S	**247**	8 inputs 6 solid state outputs
CSINV800	**536**	8 channel ±10V input module
CSINI800	**536**	8 channel 0(4) to 20 mA input module
CSOUT400	**280**	4 channel analog output
CSPID1R0	**227**	Single loop module, relay outputs
CSPID1RA	**247**	Single loop module, relay outputs, analog output
CSPID1RM	**247**	Single loop module, relay outputs, heater current input
CSPID1S0	**227**	Single loop module, solid state outputs
CSPID1SA	**247**	Single loop module, solid state out. Analog output
CSPID1SM	**247**	Single loop module, solid state, heater current input
CSPID1TA	**247**	Single loop module, triac outputs, analog output
CSPID2R0	**340**	Dual loop module, relay outputs
CSPID2RM	**371**	Dual loop module, relay outputs, heater current input
CSPID2S0	**340**	Dual loop module, solid state outputs
CSPID2SM	**371**	Dual loop module, solid state outputs, heater current input
CSPID2T0	**340**	Dual loop module, triac outputs
CSPID2TM	**371**	Dual loop module, triac outputs, heater current input
CSRTD600	**402**	6 channel input, RTD
CSSG10RA	**320**	Single loop, 1 strain gage input, relay outputs, analog out
CSSG10SA	**320**	Single loop, 1 strain gage input, relay outputs, analog out
CSSG11RA	**400**	Single loop, 2 strain gage inputs, relay outputs, analog out
CSSG11SA	**400**	Single loop, 2 strain gage inputs, relay outputs, analog out
CSTC8000	**536**	8 channel thermocouple module

Comes with complete operator's manual.

Ordering Example: CSDIO14R,** 8 inputs 6 relay output module, **$247.

PLC product line continues to expand, visit omegamation.com for new details!

MODULAR CONTROLLER SERIES MASTER

NEW

Starts at $308

MADE IN USA

- Performs Hierarchical Control of Other Modules in the Modular Controller Series
- Provides Power and Communications to Modules Through Backplane Connector
- Stores Module Configuration Information, and Automatically Reprograms Replaced Modules
- Extensive Built-In Driver List Allows Easy Data Mapping to PLCs, PCs, and SCADA Systems
- Independent Serial Ports Provide Virtually Unlimited Integration Methods
- 10 Base-T/100 Base-Tx Ethernet Connection Provides Networking Capability
- Supports Up To 16 Modular Controller Series Modules
- Supported By Crimson 2.0 Software

CSMSTRV2, $308, shown smaller than actual size.

The Model CSMSTRV2 is a communications and control platform designed for use with Modular Controller Series slave modules. The CSMSTRV2 uses a proprietary high speed serial protocol to communicate, via backplane connection, with up to 16 slave modules. Through the same connection, the Master also provides power to the modules. When powered up, the CSMSTRV2 automatically identifies and addresses connected slave modules. By storing the configuration information of all of the modules, the CSMSTRV2 is able to automatically configure modules if they are replaced.

The Master provides high-speed RS232/422/485 communication ports and an Ethernet port for connection to PCs, PLCs, and SCADA systems. An extensive list of master and slave protocol drivers are available to allow the CSMSTRV2 to share and exchange variable data with external devices. The 10 Base-T/100 Base-TX Ethernet port can also be used to connect and share data with other devices at high speeds.

The CSMSTRV2 was designed as a direct replacement for the original CSMSTRSE. This new model provides benefits such as support via Crimson 2.0 software, which allows configuration files to be uploaded. To save programming time, files originally created in Crimson 1.0 (.cdb files) may be imported into Crimson 2.0.

The design of the Modular Controller Series high density packaging and DIN rail mounting saves time and panel space. The controller snaps easily onto standard top hat (T) profile DIN rail.

The CSMSTRV2 is programmed with Crimson 2.0 software for Windows® 2000 or later platforms. The software is an easy to use, graphical interface which provides a means of communication configuration, as well as commissioning and calibration of new systems.

SPECIFICATIONS

Power: 24 Vdc ± 10%
400 mA min (1 module)
3 A max (16 modules)
Must use Class 2 or SELV rated power supply

Communications:

USB/PG Port: Adheres to USB specification 1.1. Device only using Type B connection
Serial Ports: Format and Baud Rates for each port are individually software programmable up to 115,200 baud
RS232/PG Port: RS232 port via RJ12
COMMS Ports: RS422/485 port via RJ45, and RS232 port via RJ12
DH485 TXEN: Transmit enable; open collector, VOH = 15 Vdc, VOL = 0.5 V @ 25 mA max
Ethernet Port: 10 BASE-T / 100 BASE-TX
RJ45 jack is wired as a NIC (Network Interface Card)

LEDs:

STS: Status LED indicates condition of master
TX/RX: Transmit/Receive LEDs show serial activity
Ethernet: Link and activity LEDs

Memory:

On-Board User Memory:
4 Mb of non-volatile flash memory.
On-board SDRAM: 2 Mb

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F)
Storage Temperature Range: -30 to 70°C (-22 to 158°F)
Operating and Storage Humidity: 80% max relative humidity, non-condensing, from 0 to 50°C
Vibration According to IEC 68-2-6: 5 to 150 Hz, in X, Y, Z direction for 1.5 hours, 2 g's.
Shock According to IEC 68-2-27: Operational 25g, 11ms in 3 directions
Altitude: Up to 2000 meters

Construction: Case body is burgundy high impact plastic and stainless steel. Installation category I, pollution degree 2
Power Connection: Removable wire clamp screw terminal block
Wire Gage Capacity: 24 AWG to 12 AWG
Torque: 4.45 to 5.34 in/lb (0.5 to 0.6 N-m)
Mounting: Snaps onto standard DIN style top hat (T) profile mounting rails according to EN50022 -35 x 7.5 and -35 x 15.
Certifications and Compliances:
Safety:
UL Listed, File #E302106, UL508, CSA 22.2 No. 14-M05 LISTED by Und. Lab. Inc. to U.S. and Canadian safety standards IEC 61010-1, EN 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use, Part 1
Electromagnetic Compatability:
Emissions and Immunity to EN 61326: Electrical equipment for measurement, control and laboratory use
Immunity to Industrial Locations*:
Electrostatic discharge EN 61000-4-2 Criterion A 2
4 kV contact discharge
8 kV air discharge
Electromagnetic RF fields EN 61000-4-3 Criterion A
10 V/m
Fast transients (burst) EN 61000-4-4 Criterion A
2 kV power
2 kV signal
Surge EN 61000-4-5 Criterion A
1kV L-L,2 kV L&N-E power
RF conducted interference EN 61000-4-6 Criterion A
3 V/rms
Emissions:
Emissions EN 55011 Class A
Weight: 365.7g (12.9oz)

Notes:

1. Criterion A: Normal operation within specified limits.

2. This device was designed for installation in an enclosure. To avoid electrostatic discharge to the unit in environments with static levels above 4 kV, precautions should be taken when the device is mounted outside an enclosure. When working in an enclosure (ex. making adjustments, setting jumpers etc.), typical anti-static precautions should be observed before touching the unit.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	MASTER MODULE DESCRIPTION
CSMSTRV2	**$308**	Modular controller master, multi comms ports and ethernet
SFCRM2MC	**62**	Modular controller crimson programming software, manual and download cable
ACCESSORIES		
MODEL NO.	**PRICE**	**DESCRIPTION**
G3CF064M	**$90**	64 MB compact flash card (industrial grade 2 million write cycles)
G3CF256M	**235**	256 MB compact flash card (industrial grade 2 million write cycles)
G3CF512M	**368**	512 MB compact flash card (industrial grade 2 million write cycles)
CBLPROG0	**41**	Programming cable for CS, G3, and paradigm
CBLUSB00	**26**	USB programming cable for G3, DSP and modular controller, type A-B
PSDR0100	**129**	Mini power supply 1A
PSDR0200	**159**	Mini power supply 2A
PSDR0400	**199**	Mini power supply 4A
RSRSTP00	**5**	Rail stops (qty 2)
CSTERM00	**10**	Replacement termination plug
CSBASE00	**31**	Replacement base
CSTERM00	**10**	Replacement termination plug
MODULES		
MODEL NO.	**PRICE**	**MODULE DESCRIPTION**
CSDIO14R	**$247**	8 inputs 6 relay outputs
CSDIO14S	**247**	8 inputs 6 solid state outputs
CSINV800	**536**	8-channel ±10 V input module
CSINI800	**536**	8-channel 0(4) to 20 mA input module
CSOUT400	**280**	4-channel analog output
CSPID1R0	**227**	Single loop module, relay outputs
CSPID1RA	**247**	Single loop module, relay outputs, analog output
CSPID1RM	**247**	Single loop module, relay outputs, heater current input
CSPID1S0	**227**	Single loop module, solid state outputs
CSPID1SA	**247**	Single loop module, solid state out. Analog output
CSPID1SM	**247**	Single loop module, solid state, heater current input
CSPID1TA	**247**	Single loop module, triac outputs, analog output
CSPID2R0	**340**	Dual loop module, relay outputs
CSPID2RM	**371**	Dual loop module, relay outputs, heater current input
CSPID2S0	**340**	Dual loop module, solid state outputs
CSPID2SM	**371**	Dual loop module, solid state outputs, heater current input
CSPID2T0	**340**	Dual loop module, triac outputs
CSPID2TM	**371**	Dual loop module, triac outputs, heater current input
CSRTD600	**402**	6-channel input, RTD
CSSG10RA	**320**	Single loop, 1 strain gage input, relay outputs, analog out
CSSG10SA	**320**	Single loop, 1 strain gage input, solid state out, analog out
CSSG11RA	**400**	Single loop, 2 strain gage input, relay outputs, analog out
CSSG11SA	**400**	Single loop, 2 strain gage input, solid state out, analog out

Controllers come with termination plug, terminal power block, and complete operator's manual.
Ordering Example: CSMSTRV2,** controller, **SFCRM2MC,** software, **G3CF512M,** 512 MB flash card, **CSDIO14R,** 8 inputs 6 relay output module, **PSDR0100,** power supply, $308 + 99 + 368 + 247 + 129 = **$1742.

ENHANCED MODULAR CONTROLLER SERIES MASTER

NEW

Starts at $499

MADE IN USA

- Adds Multiple Protocol Conversion Functionality to Data Acquisition and Multi-Zone PID Control Applications
- Performs Hierarchical Control of Other Modules in the Modular Controller Series
- Stores Module Configuration Information, and Automatically Reprograms Replaced Modules
- Extensive Built-In Driver List Allows Easy Data Mapping to PLCs, PCs, and SCADA Systems
- Independent Serial Ports Provide Virtually Unlimited Integration Methods
- 10 Base-T/100 Base-TX Ethernet Connection Provides Networking Capability
- Supports up to 16 Modular Controller Series Modules
- Supports up to 9 Protocols Simultaneously (With Expansion Card)

CSMSTRLE, $499, shown smaller than actual size.

The Model CSMSTRLE is a communications and control platform designed for use with Modular Controller Series slave modules. The CSMSTR uses a proprietary high speed serial protocol to communicate, via backplane connection, with up to 16 slave modules. Through the same connection, the Master also provides power to the modules.

When powered up, the CSMSTR automatically identifies and addresses connected slave modules. By storing the configuration information of all of the modules, the CSMSTR is able to automatically configure modules if they are replaced.

The Master provides high-speed RS232/422/485 communication ports and an Ethernet port for connection to PCs, PLCs, and SCADA systems. An extensive list of master and slave protocol drivers are available to allow the CSMSTR to share and exchange variable data with external devices. The 10 Base-T/100Base-TX Ethernet port can also be used to connect and share data with other devices at high speeds.

The design of the Modular Controller Series high density packaging and DIN rail mounting saves time and panel space. The controller snaps easily onto standard top hat (T) profile DIN rail.

The CSMSTR is programmed with Crimson 2.0 software for Windows® 2000 or later platforms. The software is an easy to use, graphical interface which provides a means of communication configuration, as well as commissioning and calibration of new systems.

SPECIFICATIONS

Power: 24 Vdc ± 10% 400 mA min. (1 module)
3.5A max. (16 modules + expansion Card)
must use class 2 or SELV rated power supply.

Communications:

USB/PG Port: Adheres to USB specification 1.1. Device only using Type B connection
Serial Ports: Format and Baud Rates for each port are individually software programmable up to 115,200 baud.
RS232/PG Port: RS232 port via RJ12
COMMS Ports: RS422/485 port via RJ45, and RS232 port via RJ12
DH485 TXEN: Transmit enable; open collector, VOH = 15 VDC, VOL = 0.5 V @ 25 mA max.
Ethernet Port: 10 BASE-T / 100 BASE-TX RJ45 jack is wired as a NIC (Network Interface Card)

LEDs:

STS: Status LED indicates condition of master.
TX/RX: Transmit/Receive LEDs show serial activity.
Ethernet: Link and activity LEDs.
CF: Compactflash LED indicates card status and read/write activity

Memory:

On-Board User Memory: 4 Mbytes of non-volatile flash memory
On-Board SDRAM: 2 Mbytes
Memory Card: Compactflash type II slot for type I and type II cards (Used for optional database storage only)

Real Time Clock: Typical accuracy is less than one minute per month drift

Battery: Lithium coin cell (included). Typical lifetime of 10 years at 25 ºC (77°F)

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F)

Storage Temperature Range: -30 to +70°C (-22 to 158°C)

Operating and Storage Humidity: 80% max relative humidity, non-condensing, from 0 to 50°C (32 to 122°F)

Vibration According to IEC 68-2-6: 5 to 150 Hz, in X, Y, Z direction for 1.5 hours, 2 g's

Shock According to IEC 68-2-27: Operational 25g, 11ms in 3 directions.

Altitude: Up to 2000 meters

Construction: Case body is burgundy high impact plastic and stainless steel. Installation category I, pollution degree 2

Power Connection: Removable wire clamp screw terminal block

Wire Gage Capacity: 24 AWG to 12 AWG

Torque: 4.45 to 5.34 in/lb (0.5 to 0.6 N-m)

Mounting: Snaps onto standard DIN style top hat (T) profile mounting rails according to EN50022 -35 x 7.5 and -35 x 15

Certification and Compliances:

Safety:

UL Listed: File #E302106, UL508, CSA 22.2 No. 14-M05 LISTED by Und. Lab. Inc. to U.S. and Canadian safety standards IEC 61010-1, EN 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use, Part 1

Electromagnetic Compatibility:

Emissions and Immunity to EN 61326: Electrical equipment for measurement, control and laboratory use

Immunity to Industrial Locations*:

Electrostatic discharge EN 61000-4-2 Criterion A 2

4 kV contact discharge

8 kV air discharge

Electromagnetic RF fields EN 61000-4-3 Criterion A 10 V/m

Fast transients (burst) EN 61000-4-4 Criterion A

2 kV power

2 kV signal

Surge EN 61000-4-5 Criterion A

1kV L-L,2 kV L&N-E power

RF conducted interference EN 61000-4-6 Criterion A

3 V/rms

Emissions:

Emissions EN 55011 Class A

Weight: 456.4 g (15.1 oz)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	MASTER MODULE DESCRIPTION
CSMSTRLE	**$499**	Modular controller master, multiple protocol converter (only)
SFCRM2MC	**62**	Modular controller crimson programming software, manual and download cable
ACCESSORIES		
MODEL NO.	**PRICE**	**DESCRIPTION**
G3CF064M	**$90**	64 MB compact flash card (industrial grade 2 million write cycles)
G3CF256M	**235**	256 MB compact flash card (industrial grade 2 million write cycles)
G3CF512M	**368**	512 MB compact flash card (industrial grade 2 million write cycles)
CBLPROG0	**41**	Programming cable for CS, G3, and paradigm
CBLUSB00	**26**	USB programming cable for G3, DSP and modular controller, type A-B
PSDR0100	**129**	Mini power supply 1A
PSDR0200	**159**	Mini power supply 2A
PSDR0400	**199**	Mini power supply 4A
RSRSTP00	**5**	Rail stops (qty 2)
CSTERM00	**10**	Replacement termination plug
CSBASE00	**31**	Replacement base
CSTERM00	**10**	Replacement termination plug
MODULES		
MODEL NO.	**PRICE**	**MODULE DESCRIPTION**
CSDIO14R	**$247**	8-inputs 6 relay outputs
CSDIO14S	**247**	8-inputs 6 solid state outputs
CSINV800	**536**	8-channel ±10 V input module
CSINI800	**536**	8-channel 0(4) to 20 mA input module
CSOUT400	**280**	4-channel analog output
CSPID1R0	**227**	Single loop module, relay outputs
CSPID1RA	**247**	Single loop module, relay outputs, analog output
CSPID1RM	**247**	Single loop module, relay outputs, heater current input
CSPID1S0	**227**	Single loop module, solid state outputs
CSPID1SA	**247**	Single loop module, solid state out. Analog output
CSPID1SM	**247**	Single loop module, solid state, heater current input
CSPID1TA	**247**	Single loop module, triac outputs, analog output
CSPID2R0	**340**	Dual loop module, relay outputs
CSPID2RM	**371**	Dual loop module, relay outputs, heater current input
CSPID2S0	**340**	Dual loop module, solid state outputs
CSPID2SM	**371**	Dual loop module, solid state outputs, heater current input
CSPID2T0	**340**	Dual loop module, triac outputs
CSPID2TM	**371**	Dual loop module, triac outputs, heater current input
CSRTD600	**402**	6-channel input, RTD
CSSG10RA	**320**	Single loop, 1 strain gage input, relay outputs, analog out
CSSG10SA	**320**	Single loop, 1 strain gage input, solid state out, analog out
CSSG11RA	**400**	Single loop, 2 strain gage input, relay outputs, analog out
CSSG11SA	**400**	Single loop, 2 strain gage input, solid state out, analog out
CSTC8000	**536**	8-channel thermocouple module

Controllers come with termination plug, terminal power block, and complete operator's manual.
***Ordering Example: CSMSTRLE,** controller, **SFCRM2MC,** software, **G3CF512M,** 512 MB flash card, **CSDIO14R,** 8 inputs 6 relay output module, PSDR0100, power supply,*
*$499 + 99 + 368 + 247 + 129 = **$1342.***

***Notes:**

1. Criterion A: Normal operation within specified limits.
2. This device was designed for installation in an enclosure. To avoid electrostatic discharge to the unit in environments with static levels above 4 kV, precautions should be taken when the device is mounted outside an enclosure. When working in an enclosure (ex. making adjustments, setting jumpers etc.), typical anti-static precautions should be observed before touching the unit.

WEB-ENABLED GRAPHIC OPERATOR INTERFACE TERMINALS G3 SERIES HMI

NEW

Visit omegamation.com for our complete line of HMIs

Starts at $599

G3 Series HMI, starts at $599, shown smaller than actual size.

- Remote Monitoring and Operation
- The Most On-Board Comms Ports
- Built-In Ethernet
- Protocol Converter
- Affordable Price

Now you can make complete integration of your machine a reality. The G3 HMI Series features the most on-board communications ports of any HMI available, and lets you web- and network-enable many different types of hardware using integrated Ethernet. Control multiple devices including PLCs, PCs, drives, PID controllers and more—at speeds up to 115 kBaud. Three serial ports are standard, and with an inexpensive expansion card, the G3 HMI integrated protocol converter can communicate with as many as five different device types. No HMI offers that kind of connectivity at any price. And the best news is, the G3 HMIs actually cost LESS than many HMIs with far fewer features.

A Variety of Affordable Models Deliver the Most Value of Any HMI

G3 HMIs are available in a variety of models and sizes to meet your machine requirements. Each model combines unique capabilities normally expected from high-end units, yet at a very affordable price. One RS422/485 port and two RS232 ports are standard, and each port is format and Baud rate programmable up to 115,200 Baud. One each RS232 and RS422/485 ports are available with an option card, providing up to five comms ports per G3 HMI.

The Easiest and Most Flexible Software; and It's Free

Red Lion's remarkable Crimson 2 software is a powerful programming platform that gives the G3 Series a number of exclusive functions. Its sophistication also makes all the complex capability of the G3 manageable, with user friendly drag and drop data mapping. Crimson is universal to all Red Lion HMIs. And unlike competitive HMIs that charge you extra for what is often very cumbersome and difficult proprietary software, the initial set up of Crimson is very easy and virtually self-explanatory. Crimson includes an extensive library of device drivers to quickly establish communications between the G3 and virtually any device. Once communication is established, anything the G3 can communicate with is now Ethernet-enabled via the built-in gateway and protocol converter. This capability is unavailable in any other HMI Panel. Best of all, Crimson is free. As are software updates, support, cabling instructions and communication drivers. In fact, if a specific device driver does not exist, Red Lion will write one for you. Try finding this level of support and value with any other HMI!

Integrated Protocol Converter Has Them All Talking

Crimson features a built in gateway that converts any attached device's serial protocol to 10 Base T/100 Base-TX Ethernet and automatically web-enables the device. Disparate serial devices now speak the same language, and unlike other HMIs that require you to purchase a protocol converter for up to $1,000 additional— on the G3 Series, it's standard.

Built-In Web Server Offers Remote Access and Control

The Crimson web server is capable of providing remote access to the G3 via a

Lower Manpower and Travel Costs

Why check up on equipment performance manually when you can have the process notify you of pending failure?

The G3 series can connect via Ethernet, landline modems, or even cellular modems to reach you anywhere in the world. With built-in email and text messaging functions, the G3 allows you to focus only on the areas of concern.

number of mechanisms. First, you can use Crimson to automatically generate web pages that contain lists of tags—each formatted according to the tag's properties. You can also create a custom web site, using a third party HTML editor such as Microsoft FrontPage, with code that instructs Crimson to insert live tag values for realtime monitoring. And finally, you can enable Crimson's Virtual Panel, a unique remote access and control feature, which allows a web browser to not only view the G3's display in realtime, but control its keypad and operate any of its Ethernet-enabled devices remotely. This feature is only available in the G3 HMI Series.

Multi-Device Data Logging Capabilities

Crimson allows users to quickly set up any number of devices in a control application, collect performance data, display it, store it for evaluation, or trigger PLC functions with one panel—either live or remotely. Data may be recorded as quickly as once per second and can be acquired from one or all connected devices. Values are stored in CSV (comma separated variable) files that can easily be imported into applications such as Microsoft Excel. Unique to the G3 HMI, Crimson's web server can be used to expose various data via the G3 panel's Ethernet port, allowing remote access to diagnostic information, or to the values recorded by the data logger.

Virtually Unlimited Data Storage with CompactFlash

An integrated CompactFlash slot accommodates inexpensive and readily available Type I and II CompactFlash cards that lets you collect, retain and transfer data easily. If you need to update the database within a machine that is already installed at a customer's site, Crimson allows you to save a copy of the database to a CompactFlash card, ship that card to your customer, and have the G3 load the database from that card.

Faster Data Transfer and Downloading with USB

The G3 HMI Series features a convenient USB port for fast downloads of configuration files from a PC as well as trending and data logging uploads to your PC for analysis.

Powerful Processing

The G3 HMI Series features an onboard 32-bit processor for unmatched computing capability. The full-featured Crimson software contains a built in "C" compiler to create custom programs for complex applications, recipe handling, realtime scheduling, math expression evaluation and much more.

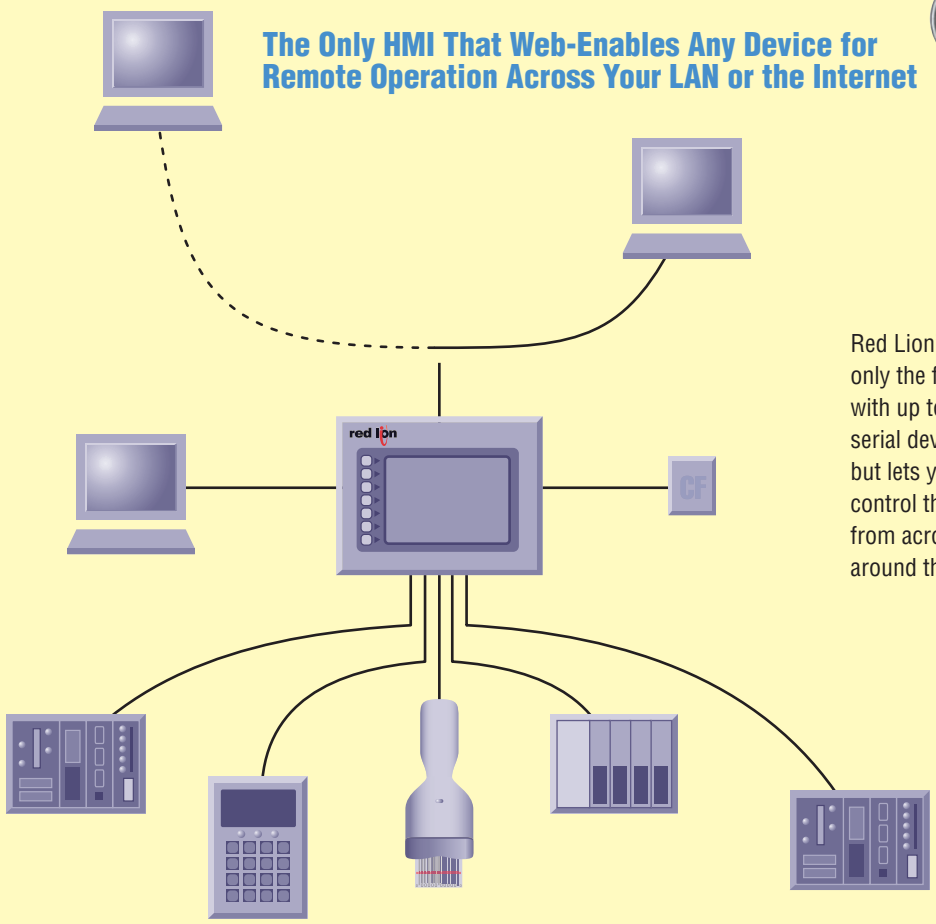
Faster Configuration and Programming

Crimson 2 is a powerful set of icon-based, configuration, display, control and data logging tools designed specifically to take full advantage of the G3 HMI Series architecture. The majority of simple applications can be quickly set up using a step-by-step process to configure communications protocols, define the data tags to be accessed, and create the user interface. A full set of drag and drop graphical items makes creation of the interface easy while yielding professional results. More advanced features, such as programming, data logging and configuring the G3's web server, are intuitive and easily enabled.

The Lowest Priced, Full-Featured HMIs

For less than many stripped-down HMIs, you can add the powerful capabilities and ease of use found only in the G3 HMI Series. The G3 Series HMIs start as low as $599, and come standard with three serial comms, Ethernet, protocol converter, USB, and CompactFlash slot. And at no extra charge, you get full-featured Crimson 2 software with drag and drop configuration and data tagging, easy-to-use interface tools, flexible programming environment, powerful data logging, and our exclusive Virtual Panel and web server capabilities for remote access and control.

The Only HMI That Web-Enables Any Device for Remote Operation Across Your LAN or the Internet



Red Lion's G3 HMI Series is not only the first to communicate with up to five different types of serial devices simultaneously, but lets you access, monitor and control these devices remotely—from across your network, or around the globe.

Accessory Cables

The following cables may be used to connect the G3 HMI, Data Station Plus or Red Lion Modular Controller Master to the listed device.

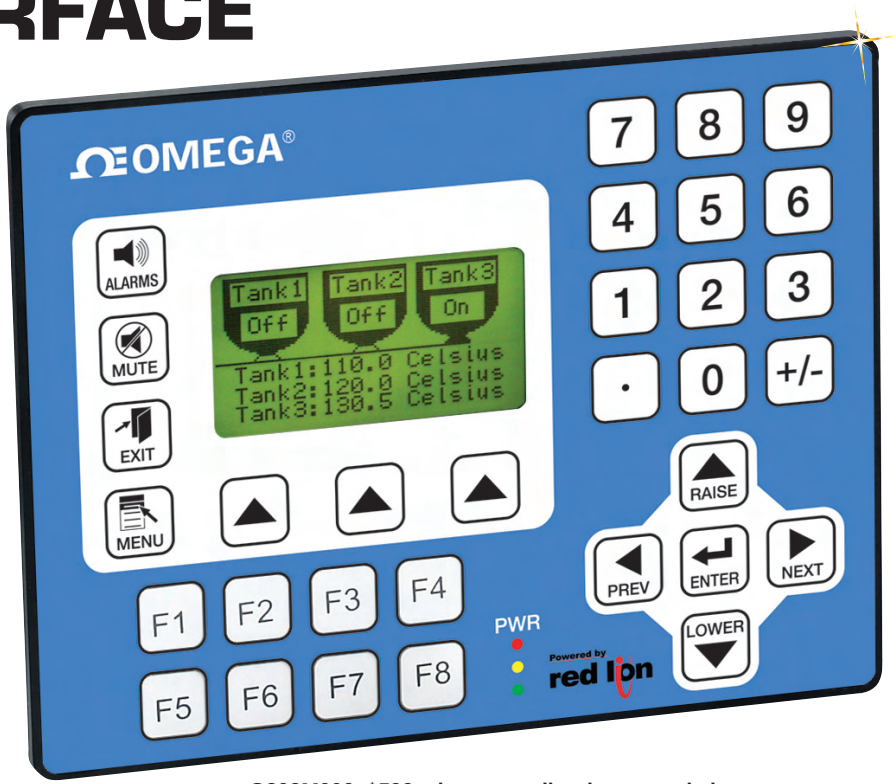
MODEL NO.	PRICE	DESCRIPTION	MODEL NO.	PRICE	DESCRIPTION
CBLAB001	$41	Allen Bradley SLC-503 V DF 1	CBLOMR03	$41	Omron C-SERIES RS422
CBLAB002	41	Allen Bradley PLC-5 V CHNL 0	CBLPROG0	41	RJ-11 PROG. Lead 10FT
CBLAB003	41	Allen Bradley DH48	CBLRLC00	31	485 G3 RJ45 - RL RJ11
CBLAB004	41	Allen Bradley PNLVW VIA DF1	CBLRLC01	21	RJ12-RJ12 1' Crossed
CBLGEF01	41	Ge Fanuc 90S V SNP	CBLRLC02	21	RJ12-RJ12 10' Crossed
CBLGEN01	41	RS232 TO MALE 9-PIN	CBLRLC03	21	RJ45-RJ45 1' Straight
CBLGEN02	41	RS232 Bare Wires	CBLRLC04	21	RJ45-RJ45 10' Straight
CBLGEN03	41	RS422/485 Bare Wires	CBLRLC05	31	RS485 Jumpered
CBLIDE01	41	Idec Micro 3	CBLRLC06	31	MC TO RED LION RJ11 RS485
CBLIDE02	41	Idec Micro 3C	CBLRLC07	31	RJ45-RJ45 6" Straight
CBLIDE03	41	Idec Micro Smart	CBLRLCS2	21	RJ12-RJ12 10' Straight
CBLKEY01	41	Keyence KV Series Cable	CBLSIE01	41	Siemens S7 PPI
CBLKOY00	41	Koyo Model 2xx	CBLSIE02	41	Siemens MPI with out Adaptor
CBLMAT01	41	Matsushita FP	CBLSIE03	308	Siemens MPI with Adaptor
CBLMAT02	41	Matsushita FP0	CBLSIE04	41	TI 545 on Port 1
CBLMDM00	41	Modem 9Pin Male	CBLSIE05	41	Siemens 545/555 RS232
CBLMDM01	41	Modem 25Pin Male	CBLSIE06	41	Siemens 545/555 - RS422
CBLMIT01	41	Misubushi FX	CBLSIE07	41	TI 500 Series
CBLMIT02	41	MITS FX0 and FX0N	CBLSIE08	41	Siemens-CP525 Comm Card
CBLMIT03	41	MIT A/Q	CBLSIE09	440	Siemens-S5 with Adaptor
CBLMOD01	41	Modicon (RS232)	CBLTEL00	57	G3 Telemechanique RS485
CBLOMR01	41	Omron (RS232)	CBLTEL01	57	G3 Telemechanique SLV 485
CBLOMR02	41	Omron SYS C200H-LK210	CBLYAS01	41	Yaskawa SMC3010

NEW THE G303 OPERATOR INTERFACE

Starts at $599

2 YEAR WARRANTY | MADE IN USA | CE | c UL US LISTED

- Up To 5 RS232/422/485 Communications Ports (2 RS232 and 1 RS422/485 On Board, 1 RS232 and 1 RS422/485 On Optional Communications Card)
- 10 Base T/100 Base-TX Ethernet Port To Network Units and Host Web Pages
- USB Port To Download The Unit's Configuration from a PC Or for Data Transfers To a PC
- Unit's Configuration Is Stored In Non-Volatile Memory (4 MB Flash)
- CompactFlash® Socket To Increase Memory Capacity
- 3.2" 128 x 64 Pixel LCD With Yellow Led Backlight, Able To Support Text and Simple Graphics
- Outdoor Unit With UV Rated Overlay Available
- 32 Button Keypad With User Identifiable Keys, Navigational Keys, Numeric Keys, Keys for On-Screen Menus, and Other Various Keys
- Three Front Panel LEDs
- Power Unit From 24 Vdc ±20% Supply
- For Use in Hazardous Locations: Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; Class III, Division 2



G303M000, $599, shown smaller than actual size.

The G303 Operator Interface Terminal combines unique capabilities normally expected from high-end units with a very affordable price. The G303 is able to communicate with many different types of hardware using high-speed RS232/422/485 communications ports and Ethernet 10 Base T/100 Base-TX communications. In addition, the G303 features USB for fast downloads of configuration files and access to trending and data logging. A CompactFlash socket is provided so that Flash cards can be used to collect your trending and data logging information as well as to store larger configuration files. In addition to accessing and controlling of external resources, the G303 allows a user to easily view and enter information. The unit uses a Liquid Crystal Display (LCD) module, which is easily readable in both indoor and outdoor applications. Users can enter data through the front panel 32-button keypad that has user identifiable keys.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
G303M000	$599	3.2" operator interface, LCD 128 x 64 pixel, indoor use
G303S000	649	3.2" operator Interface, LCD 128 x 64 pixel, outdoor use
G3CF064M	90	64 MB compact flash card (industrial grade)
G3CF256M	235	256 MB compact flash card (industrial grade)
G3CF512M	368	512 MB compact flash card (industrial grade)
SFCRM200	62	Crimson programming software, manual and USB cable
PSDR0100	129	DIN rail power supply, 24 Vdc, 1 A
CBLPROG0	41	RS232 programming cable
CBLUSB00	26	USB programming cable (included with SFCRM200)
G3FILM10	45	Pack of 10 protective films for G303
G3RS0000	131	2 Port RS232/485 (isolated) option card
G3PBDP00	395	Profibus option card
G3DN0000	395	DeviceNet option card
G3CN0000	135	CANopen option card

Comes with panel gasket, 2 user legendable key sheets, template for panel cutout, hardware packet for mounting unit into panel, terminal block for connecting power and operator's manual. ***Ordering Example: G303M000,*** *operator interface,* ***SFCRM200,*** *crimson programming software, manual and USB cable.* ***PSDR0100,*** *power supply, $599 + 52 + 129 =* ***$780.***

PLC product line continues to expand, visit omegamation.com for new details!

G306 6" GRAPHIC COLOR LCD OPERATOR INTERFACE TERMINAL

WITH QVGA DISPLAY AND TOUCHSCREEN

NEW

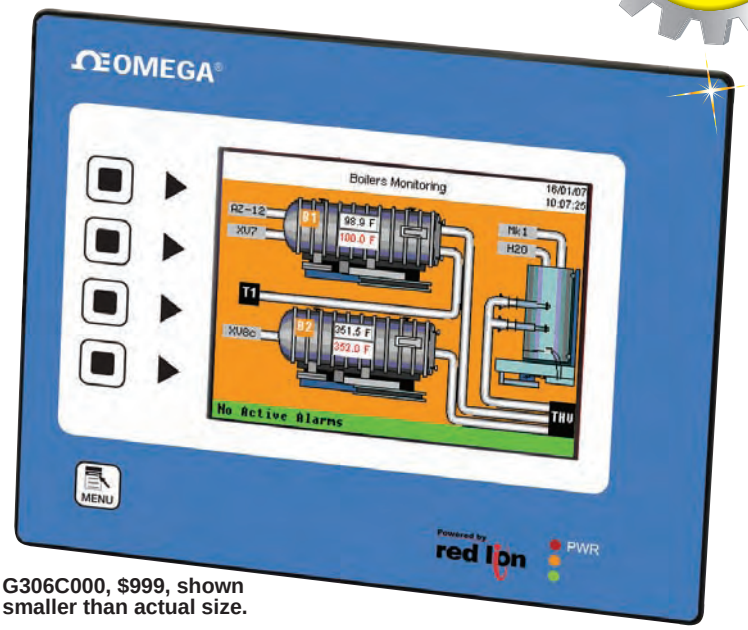
Visit omegamation.com for our complete line of HMIs

Starts at $999

2 YEAR WARRANTY · MADE IN USA · CE · c UL US LISTED

- Up To 5 RS232/422/485 Communications Ports (2 RS232 and 1 RS422/485 On Board, 1 RS232 and 1 RS422/485 On Optional Communications Card)
- 10 Base T/100 Base-TX Ethernet Port To Network Units and Host Web Pages
- USB Port To Download The Unit's Configuration from a PC or for Data Transfers To a PC
- Unit's Configuration Is Stored In Non-Volatile Memory (4 MB Flash)
- CompactFlash® Socket To Increase Memory Capacity
- 5-Button Keypad For On-Screen Menus
- Three Front Panel LED Indicators
- Power Unit From 24 Vdc ±20% Supply
- Resistive Analog Touchscreen
- For Use in Hazardous Locations: Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; Class III, Division 2*

** UL and Hazzardous location certifications apply to the G306C000 but are pending on the G306A00. If these are necessary requirements please check with our sales department at time of ordering .*



G306C000, $999, shown smaller than actual size.

The G306 Operator Interface Terminal combines unique capabilities normally expected from high-end units with a very affordable price. The G306 is able to communicate with many different types of hardware using high-speed RS232/422/485 communications ports and Ethernet 10 Base T/100 Base-TX communications. In addition, the G306 features USB for fast downloads of configuration files and access to trending and data logging. A CompactFlash socket is provided so that Flash cards can be used to collect your trending and data logging information as well as to store larger configuration files. In addition to accessing and controlling of external resources, the G306 allows a user to easily view and enter information. Users can enter data through the touchscreen and/or front panel 5-button keypad.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
G306A000	$1299	5.7" operator interface LCD, TFT, indoor, QVGA, 5 button keypad
G306C000	999	5.7" operator interface LCD, DSTN, indoor, 5 button keypad
G3CF064M	90	64 MB compact flash card (industrial grade)
G3CF256M	235	256 MB compact flash card (industrial grade)
G3CF512M	368	512 MB compact flash card (industrial grade)
SFCRM200	62	Crimson programming software, manual and USB cable
PSDR0100	129	DIN rail power supply, 24 Vdc, 1 A
CBLPROG0	41	RS232 programming cable
CBLUSB00	26	USB programming cable (included with SFCRM200)
G3FILM06	45	Pack of ten protective films for G306
G3RS0000	131	Two port RS232/485 (isolated) option card
G3PBDP00	395	Profibus option card
G3DN0000	395	DeviceNet option card
G3CN0000	135	CANopen option card

Comes with panel gasket, template for panel cutout, hardware packet for mounting unit into panel, terminal block for connecting power and operator's manual.
Ordering Example: G306A000,** operator interface, **SFCRM200,** crimson programming software, manual and USB cable, **PSDR0100,** power supply, $1299 + 52 + 129 = **$1480.

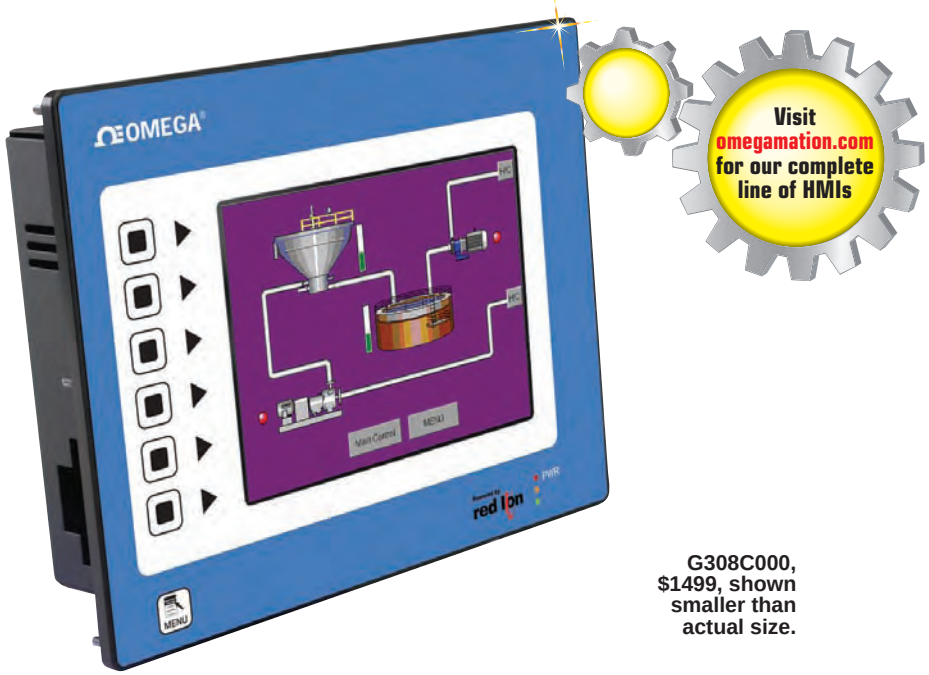
NEW

G308 8" GRAPHIC LCD OPERATOR INTERFACE TERMINAL

WITH VGA DISPLAY AND TOUCHSCREEN

Starts at $1499

2 YEAR WARRANTY MADE IN USA CE c UL US LISTED



G308C000, $1499, shown smaller than actual size.

- Up to 5 RS232/422/485 Communications Ports (2 RS232 and 1 RS422/485 On Board, 1 RS232 and 1 RS422/485 On Optional Communications Card)
- 10 Base T/100 Base-TX Ethernet Port to Network Units and Host Web Pages
- USB Port to Download the Unit's Configuration from a PC or for Data Transfers to a PC
- Unit's Configuration is Stored in Non-Volatile Memory (8 MB Flash)
- CompactFlash® Socket to Increase Memory Capacity
- 7-Button Keypad for On-Screen Menus
- Three Front Panel LEDs
- Power Unit from 24 Vdc ±20% Supply
- Resistive Analog Touchscreen
- For Use in Hazardous Locations: Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; Class III, Division 2

The G308 Operator Interface Terminal combines unique capabilities normally expected from high-end units with a very affordable price. The G308 is able to communicate with many different types of hardware using high-speed RS232/422/485 communications ports and Ethernet 10 Base T/100 Base-TX communications. In addition, the G308 features USB for fast downloads of configuration files and access to trending and data logging. A CompactFlash socket is provided so that Flash cards can be used to collect your trending and data logging information as well as to store larger configuration files. In addition to accessing and controlling of external resources, the G308 allows a user to easily view and enter information. Users can enter data through the touchscreen or front panel 7-button keypad.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
G308A000	$1999	8.4" operator interface LCD, TFT, 640 x 480, indoor, 7 button keypad
G308C000	1499	7.7" operator interface LCD, DSTN, 640 x 480, indoor, 7 button keypad
G3CF064M	90	64 MB compact flash card (industrial grade)
G3CF256M	235	256 MB compact flash card (industrial grade)
G3CF512M	368	512 MB compact flash card (industrial grade)
SFCRM200	62	Crimson programming software, manual and USB cable
PSDR0200	159	DIN rail power supply, 24 Vdc, 2 A
CBLPROG0	41	RS232 programming cable
CBLUSB00	26	USB programming cable (included with SFCRM200)
G3FILM08	45	Pack of ten protective films for G308 or G308A
G3RS0000	131	Two port RS232/485 (isolated) option card
G3PBDP00	395	Profibus option card
G3DN0000	395	DeviceNet option card
G3CN0000	135	CANopen option card

Comes with panel gasket, template for panel cutout, hardware packet for mounting unit into panel, terminal block for connecting power and operator's manual.
Ordering Example: G308A000,** operator interface, **SFCRM200,** crimson programming software, manual and USB cable, **PSDR0200,** power supply, $1999 + 52 + 159 = **$2210.

PLC product line continues to expand, visit omegamation.com for new details!

G310 10" GRAPHIC LCD OPERATOR INTERFACE TERMINAL

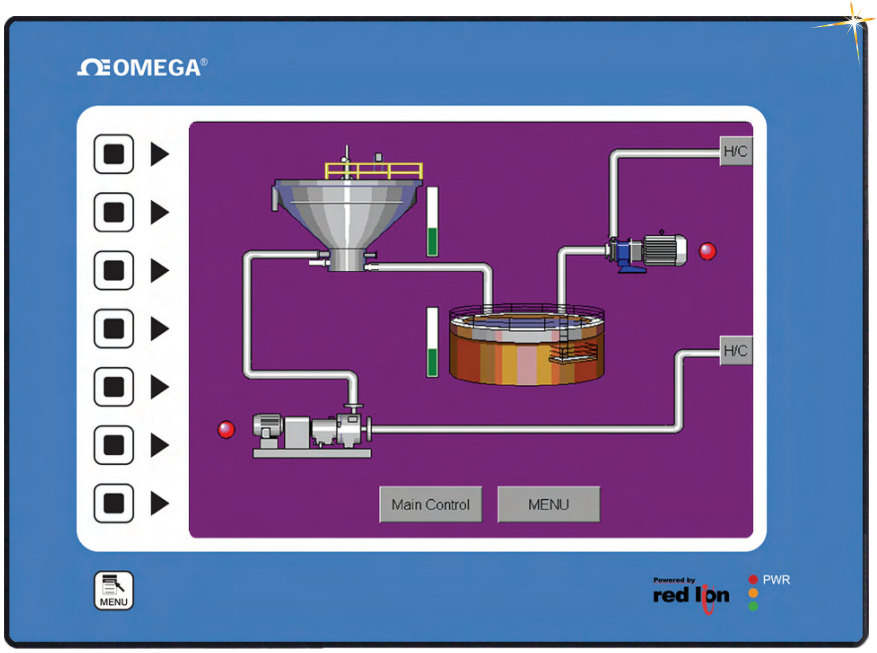
WITH VGA DISPLAY AND TOUCHSCREEN

NEW

G310C000
$2399

2 YEAR WARRANTY · MADE IN USA · CE · c UL US LISTED

- Up To 5 RS232/422/485 Communications Ports (2 RS232 and 1 RS422/485 On Board, 1 RS232 and 1 RS422/485 On Optional Communications Card)
- 10 Base T/100 Base-TX Ethernet Port To Network Units and Host Web Pages
- USB Port To Download The Unit's Configuration from a PC or for Data Transfers To a PC
- Unit's Configuration Is Stored In Non-Volatile Memory (8 MB Flash)
- CompactFlash® Socket To Increase Memory Capacity
- 10.4" TFT 256 Color VGA 640 x 480 Pixel LCD
- 8-Button Keypad for On-Screen Menus
- Three Front Panel LEDs
- Power Unit From 24 Vdc ±20% Supply
- Resistive Analog Touchscreen
- For Use In Hazardous Locations: Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; Class III, Division 2



G310C000, $2399, shown smaller than actual size.

The G310 10 Inch Operator Interface Terminal combines unique capabilities normally expected from high-end units with a very affordable price. The G310 is able to communicate with many different types of hardware using high-speed RS232/422/485 communications ports and Ethernet 10 Base T/100 Base-TX communications. In addition, the G310 features USB for fast downloads of configuration files and access to trending and data logging. A CompactFlash socket is provided so that Flash cards can be used to collect your trending and data logging information as well as to store larger configuration files. In addition to accessing and controlling of external resources, the G310 allows a user to easily view and enter information. Users can enter data through the touchscreen or front panel 8-button keypad.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
G310C000	$2399	10.4" operator interface LCD, TFT, indoor, 8 button keypad
G310S000	2599	10.4" operator interface LCD, TFT, outdoor, 8 button keypad
G3CF064M	90	64 MB compact flash card (industrial grade)
G3CF256M	235	256 MB compact flash card (industrial grade)
G3CF512M	368	512 MB compact flash card (industrial grade)
SFCRM200	62	Crimson programming software, manual and USB cable
PSDR0400	199	DIN rail power supply, 24 Vdc, 4 A
CBLPROG0	41	RS232 programming cable
CBLUSB00	26	USB programming cable (included with SFCRM200)
G3FILM10	65	Pack of ten protective films for G310C or G310S
G3RS0000	131	Two port RS232/485 (isolated) option card
G3PBDP00	395	Profibus option card
G3DN0000	395	DeviceNet option card
G3CN0000	135	CANopen option card

Comes with panel gasket, template for panel cutout, hardware packet for mounting unit into panel, terminal block for connecting power and operator's manual.
Ordering Example: G10C000,** operator interface, **SFCRM200,** crimson programming software, manual and USB cable, **PSDR0400,** power supply, $2399 + 52 + 199 = **$2650.

NEW DSP DATA STATION PLUS

Starts at $499

2 YEAR WARRANTY MADE IN USA CE c UL US LISTED

- Converts Numerous Protocols Simultaneously
- Extensive Built-In Driver List Allows Easy Data Mapping To PLCs, PCs, and SCADA Systems
- 10 Base-T/100base-TX Ethernet Port Supports 4 Simultaneous Protocols
- Independent Serial Ports Provide Virtually Unlimited Integration Methods

DSPLE000, $499, shown smaller than actual size.

The Data Station Plus was designed to provide all of the features of the G3 series HMIs, without a display. Now features such as data logging, protocol conversion and remote machine monitoring and control can be added to any equipment. The Data Station Plus acts as a nexus for industrial data collection and management. With three built-in serial ports and a 10 Base-T/100 Base-TX Ethernet port, the unit performs protocol conversion, allowing disparate devices to communicate seamlessly with one another. The Ethernet port supports up to four protocols simultaneously so even Ethernet to Ethernet conversion may be performed. The CompactFlash card allows new configuration files to be loaded into the Data Station Plus. The USB port may be used for blazing fast file downloads, or to mount the Data Station's CompactFlash card as an external drive to your PC. The Data Station's DIN rail mounting saves time and panel space and snaps easily onto standard top hat (T) profile DIN rail.

The DSPSX000 and DSPGT000 offers several additional features beynd those offered by the DSPLE000. The CompactFlash card allows data to be collected and stored for later review. The files are stored in simple CSV file format allowing common applications, such as Microsoft Excel and Access, to view and manage the data. The free Websync utility provides a means to synchronize the files with a PCs hard drive for permanent storage.

The built-in Web server allows log files to be retrieved manually, and also provides access to the unique "virtual HMI". The virtual HMI is programmed just like Red Lion's G3 Series of HMI. Any standard Web browser such as Internet Explorer or Netscape may be used to monitor or control the HMI from a PC anywhere in the world.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
DSPLE000	**$499**	Data station plus, multiple protocol converter (only)
DSPSX000	**899**	Data station plus with multiple protocol converter, data logger, web server, virtual HMI up to QVGA (320 x 240) size and expansion slot
DSPGT000	**1199**	Data station plus with multiple protocol conversion, data logger, web server, virtual HMI (640 x 480) size and expansion slot with increased DRAM
G3CF064M	**90**	64 MB compact flash card (industrial grade)
G3CF256M	**235**	256 MB compact flash card (industrial grade)
G3CF512M	**368**	512 MB compact flash card (industrial grade)
SFCRM200	**52**	Crimson programming software, manual and USB cable
PSDR0100	**129**	DIN rail power supply, 24 Vdc, 1 A
CBLPROG0	**41**	RS232 programming cable
CBLUSB00	**26**	USB programming cable (included with SFCRM200)
CB(*)	**41**	Communication cables (see page 21 for specific cable model number)

Comes with installation manual.
Ordering Example: DSPSX000,** data station plus with multiple protocol converter, data logger, web server and virtual HMI, **PSDR0100,** DIN rail mount power supply, $899 + 129 = **$958.

PLC product line continues to expand, visit omegamation.com for new details!

BIG FLEXIBLE DISPLAY

NEW

G3BFDM00, $6000, shown smaller than actual size.

BFD $6000

2 YEAR WARRANTY MADE IN USA

- **Large 977.9 x 482.6 mm (19 x 38.5") Red Led Display with 0.2" Diameter Pixels; 128 x 64 Dot Resolution**
- **Displays The Information from Any G3 To The Plant Floor**
- **Connects Directly To The RS485 Port of a G3**
- **Field Replaceable Display Boards**
- **Replaceable Fan Filter**
- **Flexible 4 Eyebolt Mounting**
- **Universal AC Power (100 to 240 Vac, 50/60 Hz)**
- **Optional NEMA 4 Cooling Kit Available**

The BFD is a large 977.9 x 482.6 mm (38.5 x 19") LED display (128 x 64 pixel resolution) which is driven from the RS485 port of a G3. The BFD is built using 32 display boards in an 8 column by 4 row configuration. When used with a G303, the BFD will display the contents of the current G3 page. When used with larger G3s, the desired information is selected by using a "display primitive" on the current G3 page. Multiple BFDs can be driven from a single G3 (see Using Multiple BFDs with a single G3). The exact number is dependent upon the lengths of the individual wiring runs. Contact Omega's Tech Support for more info. The display is housed in a welded steel enclosure and the display window (0.118" thick red acrylic) is sealed to the enclosure using a gasket and bezel strips. The gasketed rear panel is bolted to the enclosure. The ventilation slots and internal fan are designed to provide adequate cooling in a normal industrial environment. The enclosure is designed to hang from an overhead support. The BFD enclosure can be easily converted for indoor NEMA 4 operation using the optional BFD NEMA 4 conversion kit. The kit includes a sealed cover plate (to plug the vent hole), an external "cabinet cooler" (to replace the internal fan) and a DIN-rail mounted power supply to operate the "cabinet cooler". Power to the BFD is provided by a universal AC input power supply. The AC power and the G3 RS485 cable enter the enclosure through separate conduit fittings. AC power connects to the power supply via a removable 3 position terminal block. The RS485 signal connects to the communication board via either an RJ45 modular plug or a removable 2 position terminal block.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
G3BFDM00	$6000	Big flexible display
G3BFDNEM	1800	Big flexible display NEMA 4 option
CBLRLC04	21	10' RS485 cable for communications between G3 and G3BFD
SFCRM200	52	Crimson programming software, manual and USB cable

Comes with mounting kit and operator's manual.
Ordering Example: G3BFDM00,** big flexible display, **$6000.

NEW

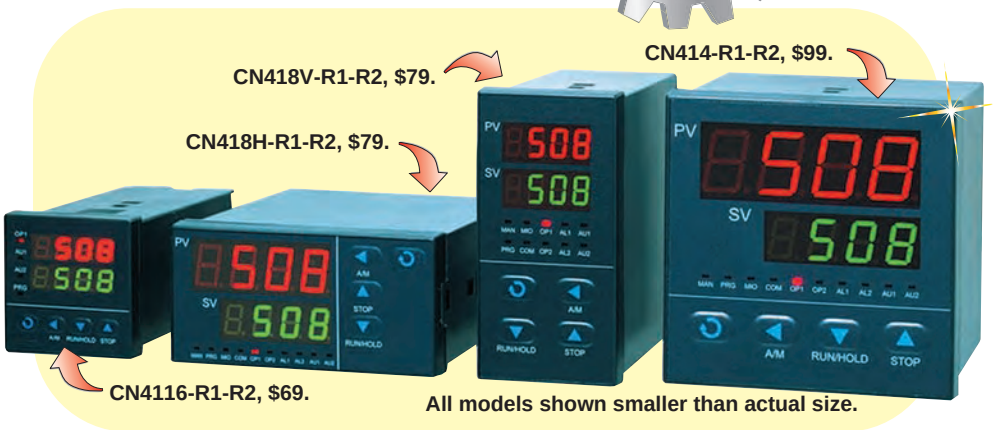
1/16, 1/8, AND 1/4 DIN TEMPERATURE/PROCESS CONTROLLERS

WITH FUZZY LOGIC

Visit omega.com for our complete line of controllers

CN4000 Series Starts at $69

2 YEAR WARRANTY CE



- Dual Display
- Front Panel Programmability
- Fuzzy Logic
- Autotune
- Dual 4-Digit LED Display and Indicators for Output and Alarm Status
- Alarms
- Universal Power Supply
- Isolated Analog Output (Selected Models)
- 10 Segments of Ramp/Soak (Selected Models)

The CN4000 Series temperature/process controllers set a new standard for ease-of-use and value. Units feature dedicated input models with thermocouple and RTD inputs, and models with universal inputs for both temperature and process inputs. Standard features include autoune, fuzzy logic, fully adjustable PID or on/off control. Selected thermocouple and RTD input models can show whole or tenth of degree display resolution. Outputs include relay, dc pulse, or an isolated analog 0 to 20 mA output.

SPECIFICATIONS

Selectable Inputs: Thermocouple, RTD, DC voltage, DC current, resistance (dependent on model)
Display: Two 4-digit, 7 segment, LED (red PV, green SV)
Resolution: 1.0, 0.1 (dependent on model)
Accuracy: ±0.3% FS (thermocouple and RTD dedicated models), ±0.2% FS (universal input models)
Supply Voltage: 100 to 240 Vac (-15%, +10%) ; 50 to 60Hz or Optional 24 Vdc
Power Consumption: 3 W (thermocouple and RTD dedicated models), 6 W (universal input models)
Operating Temperature: -10 to 60°C (14 to140°F)
Humidity: 0 to 90 RH%
Control Output Ratings:
Relay: SPDT, 30VDC/1A, 250VAC/1A,
Proportional Current (Isolated): 0 to 20 mA DC,
DC Pulse: 12 Vdc/30 mA

Inputs

Dedicated Thermocouple/RTD Models

Input Type	THERMOCOUPLE						RTD
	K	S	R	E	J	N	PT100
Range	0 to1300°C	0 to1700°C	0 to1600°C	0 to1000°C	0 to1200°C	0 to1300°C	-200 to 800°C

Universal Input Models

	K	S	R	E	J	N
T/C	0 to1300°C 32 to 2372°F	0 to1700°C 32 to 3092°F	0 to1700°C 32 to 3092°F	0 to 1000°C 32 to 1832°F	0 to1200°C 32 to 2192°F	0 to1300°C 32 to 2372°F
RTD	PT100	Cu50				
	-200 to 800°C -328 to 1472°F	-50 to 150°C -58 to 302°F				
Current	0 to 20 mA	4 to 20 mA				
Voltage	0 to 20 mV 1 to 5 V	0 to 100 mV 0 to 5 V	0 to 60 mV 0 to 10 V	0 to 500 mV 2 to 10 V	100 to 500 mV 0 to 20 V	
Resistor	0 to 80 Ω	0 to 400 Ω				

Process product line continues to expand, visit omegamation.com for new details!

Dimensions

SIZE	FRONT PANEL W x H mm (inches)	CUT OUT W x H mm (inches)	DEPTH BEHIND MOUNTING SURFACE mm (inches)
1/16 DIN	48 x 48 (1.89 x 1.89)	45 x 45 (1.77 x 1.77)	95 (3.74)
1/8 DIN Vertical	48 x 96 (1.89 x 3.77)	45 x 92 (1.77 x 3.62)	100 (3.94)
1/8 DIN Horizontal	96 x 48 (3.77 x 1.89)	92 x 45 (3.62 x 1.77)	100 (3.94)
1/4 DIN	96 x 6 (3.77 x 0.23)	92 x 92 (3.62 x 3.62)	100 (3.94)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION	INPUT TYPE/RESOLUTION
1/16 DIN MODELS			
CN4116-R1-R2	**$69**	Relay/relay	T/C, RTD/1.0
CN4116-R1-R2-LV	**75**	Relay/relay, low voltage	T/C, RTD/1.0
CN4116-DC1-R2	**69**	DC pulse/relay	T/C, RTD/1.0
CN4116-DC1-DC2	**69**	DC pulse/DC pulse	T/C, RTD/1.0
CN4216-R1-R2	**69**	Relay/relay	T/C, RTD/0.1
CN4216-R1-R2-LV	**75**	Relay/relay, low voltage	T/C, RTD/0.1
CN4216-DC1-R2	**69**	DC pulse/relay	T/C, RTD/0.1
CN4216-DC1-DC2	**69**	DC pulse/DC pulse	T/C, RTD/0.1
CN4316-R1-R2	**69**	Relay/relay	Universal/0.1
CN4316-R1-R2-LV	**75**	Relay/relay, low voltage	Universal/0.1
CN4316-DC1-R2	**69**	DC pulse/relay	Universal/0.1
CN4316-DC1-DC2	**69**	DC pulse/DC pulse	Universal/0.1
CN4316-F1-R2	**69**	0 to 20 mA/relay	Universal/0.1
CN4416-R1-R2	**128**	Ramp and soak, relay/relay	Universal/0.1
CN4416-R1-R2-LV	**134**	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN4416-DC1-R2	**127**	Ramp and soak, DC pulse/relay	Universal/0.1
CN4416-DC1-DC2	**126**	Ramp and soak, DC pulse/DC pulse	Universal/0.1
CN4416-F1-R2	**134**	Ramp and soak, 0 to 20 mA/relay	Universal/0.1
1/4 DIN HORIZONTAL MODELS			
CN414-R1-R2	**$99**	relay/relay	T/C, RTD/1.0
CN414-R1-R2-LV	**105**	relay/relay, low voltage	T/C, RTD/1.0
CN414-DC1-R2	**99**	dc pulse/relay	T/C, RTD/1.0
CN414-DC1-DC2	**99**	dc pulse/dc pulse	T/C, RTD/1.0
CN424-R1-R2	**99**	relay/relay	T/C, RTD/0.1
CN424-R1-R2-LV	**99**	relay/relay, low voltage	T/C, RTD/0.1
CN424-DC1-R2	**99**	dc pulse/relay	T/C, RTD/0.1
CN424-DC1-DC2	**99**	dc pulse/dc pulse	T/C, RTD/0.1
CN434-R1-R2	**99**	relay/relay	Universal/0.1
CN434-R1-R2-LV	**105**	relay/relay, low voltage	Universal/0.1
CN434-DC1-R2	**99**	dc pulse/relay	Universal/0.1
CN434-DC1-DC2	**99**	dc pulse/dc pulse	Universal/0.1
CN434-F1-R2	**99**	0 to 20 mA/relay	Universal/0.1
CN444-R1-R2	**149**	Ramp and soak, relay/relay	Universal/0.1
CN444-R1-R2-LV	**155**	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN444-DC1-R2	**149**	Ramp and soak, dc pulse/relay	Universal/0.1
CN444-DC1-DC2	**149**	Ramp and soak, dc pulse/dc pulse	Universal/0.1
CN444-F1-R2	**155**	Ramp and soak, 0 and 20 mA/relay	Universal/0.1

NEW MULTIFUNCTION TOTALIZERS
WITH BATCH CONTROL

DPF708/DPF808 Series Starts at $209

2 YEAR WARRANTY CE

- **Modularized Construction**
- **Dual 4-Digit LED**
- **Output and Alarm Status Indicators**
- **Temperature or Pressure Compensation on DPF800 Series**

The DPF708/808 series flow totalizers can accumulate the mass, volume or length of an object, and can provide batch control over the accumulation. The DPF708 series has a single input available in frequency, voltage or current input models. The DPF808 series has an additional input that is available in voltage, current or direct temperature sensor input versions. Abundant functions such as retransmission, high/low alarm of momentary flow and abnormal signal detecting. The DPF808 series also has the ability to trigger alarms for pressure or temperature. Square root function is selectable, 8-digits of accumulation value and 4-digits momentary process value, small signal cut-out can be set at any range.

The DPF808 series has temperature and pressure compensation used for general gas, saturated steam, superheated steam or liquids. The compensation calculation is done with standard look-up tables for high accuracy in steam measurement applications. Advanced computation algorithms insure accuracy in flow measurements. Used as a batch controller, it has 4-bit accumulator for control and a separate 12-bit accumulator for total sum. With high precision current input models, the totalizer can provide retransmission with 14 bit output resolution and 0.2%FS output precision.

DPF828-R1-R2, $319, shown close to actual size.

TECHNICAL SPECIFICATION

Frequency Input: 0 to 3200 Hz
Temperature (DPF808 series): J, K or E thermocouple, 1 to 5, 0 to 5 Vdc or 4 to 20 mA
Pressure (DPF808 Series): 1 to 5, 0 to 5 Vdc or 4 to 20 mA
Accumulation Time: Fixed at 1 hour for flow accumulation, and the unit can be freely set for batch control.
Frequency Input Models: 0 to 3200Hz, the low level signal is 0 to 1V, the high level signal is 3 to 24V
Voltage Input Models: 1 to 5 V, 0 to 5 V, providing 24 Vdc/24 mA power output
Current Input Models: 4 to 20 mA, 0 to 20 mA, 0 to 10 mA
Temperature Input (DPF808 Series): K (0 to 999°C), E (0 to 800°C), J (0 to 999°C) RTD Pt100 (-200 to 600°C)
Pressure Input (DPF808): 1 to 5 Vdc, 0 to 5 Vdc
Current Input (DPF808): 4 to 20 mA, 04 to 20 mA
Current Output: 4 to 20 mA
Measurement Accuracy: ±0.2% FS, for temperature, pressure, frequency, and momentary flow without temperature or pressure compensation.

Temperature/Pressure Compensation Method (DPF808 Series):
General Gas: Temperature-pressure compensation (calculated with ideal gas equation)
Saturated Steam: Temperature or pressure compensation (calculated with steam tables)
Calculation Accuracy for Temperature-Pressure Compensation: The calculation error is <0.3% FS, and after compensation, the overall error is <0.5% FS
Accumulation Accuracy: The error is <0.01% FS
Power Supply: 100 to 240 Vac, -15%, +10%/50 to 60Hz; or 24 Vdc/Vac, -15% (optional)
Power Consumption: 5 W
Operating Ambient: Temperature -10 to 60 C; humidity 90% RH

SIZE	FRONT PANEL		CUT OUT		DEPTH BEHIND MOUNTING SURFACE (mm)
	WIDTH (mm)	HEIGHT (mm)	WIDTH (mm)	HEIGHT (mm)	
⅛ DIN Vertical	48	96	45	92	100
⅛ DIN Horizontal	96	48	92	45	100
¼ DIN	96	96	92	92	100

NEW

DPF738-DC1-DC2, $209, shown smaller than actual size.

DPF828-DC1-DC2, $319, shown smaller than actual size.

Visit omega.com for our complete line of Totalizers

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	PRICE	DESCRIPTION
DPF708 SERIES		
DPF718*-DC1-DC2	**$209**	¼ DIN totalizer, 2 DC pulse outputs
DPF718*-DC1-R2	**209**	¼ DIN totalizer, DC pulse and relay outputs
DPF718*-R1-R2	**209**	¼ DIN totalizer, 2 relay outputs
DPF728*-DC1-DC2	**219**	¼ DIN totalizer, 2 DC pulse outputs with bar graph
DPF728*-DC1-R2	**219**	¼ DIN totalizer, DC pulse and relay outputs with bar graph
DPF728*-R1-R2	**219**	¼ DIN totalizer, 2 relay outputs with bar graph
DPF738*-DC1-DC2	**209**	⅛ DIN vertical totalizer, 2 DC pulse outputs
DPF738*-DC1-R2	**209**	⅛ DIN vertical totalizer, DC pulse and relay outputs
DPF738*-R1-R2	**209**	⅛ DIN vertical totalizer, 2 relay outputs
DPF748*-DC1-DC2	**209**	⅛ DIN horizontal totalizer, 2 DC pulse outputs
DPF748*-DC1-R2	**209**	⅛ DIN horizontal totalizer, DC pulse and relay outputs
DPF748*-R1-R2	**209**	⅛ DIN horizontal totalizer, 2 relay outputs
DPF808 SERIES		
DPF818-DC1-DC2**	**$299**	Dual input ¼ DIN totalizer, 2 DC pulse outputs
DPF818-DC1-R2**	**299**	Dual input ¼ DIN totalizer, DC pulse and relay outputs
DPF818-R1-R2**	**299**	Dual input ¼ DIN totalizer, 2 relay outputs
DPF828-DC1-DC2**	**319**	Dual input ¼ DIN totalizer, 2 DC pulse outputs with bar graph
DPF828-DC1-R2**	**319**	Dual input ¼ DIN totalizer, DC pulse and relay outputs with bar graph
DPF828-R1-R2**	**319**	Dual input ¼ DIN totalizer, 2 relay outputs with bar graph
DPF838-DC1-DC2**	**299**	Dual input ⅛ DIN vertical totalizer, 2 DC pulse outputs
DPF838-DC1-R2**	**299**	Dual input ⅛ DIN vertical totalizer, DC pulse and relay outputs
DPF838-R1-R2**	**299**	Dual input ⅛ DIN vertical totalizer, 2 relay outputs
DPF848-DC1-DC2**	**299**	Dual input ⅛ DIN horizontal totalizer, 2 DC pulse outputs
DPF848-DC1-R2**	**299**	Dual input ⅛ DIN horizontal totalizer, DC pulse and relay outputs
DPF848-R1-R2**	**299**	Dual input ⅛ DIN horizontal totalizer, 2 relay outputs

Comes with mounting hardware and user's manual.
Ordering Example: DPF718F-R1-R2,** batch controller with frequency input and 2 relay outputs, **$209.

** Insert input code: **"F"** (frequency), **"V"** (voltage) or **"C"** (current).*
*** Insert dual input code: **"FT"** (frequency/temperature), **"FC"** (frequency/current), **"VT"** (voltage/temperature), **"VC"** (voltage/current), **"CT"** (current/temperature) or **"CC"** (current/current).*
*For models with 24 Vdc power add **"-24V"** to the model number and **$10** to the price.*

NEW 1/32 DIN RAMP/SOAK CONTROLLERS

CN7500 Series
All Models
$89

1 YEAR WARRANTY

CN7533, $89, shown larger

- **Dual 4-Digit LED Display**
- **8 Ramp/Soak Programs, 8 Segments Each**
- **Universal Inputs**
- **Autotune**
- **Dual Control Outputs**
- **RS485 Communications Standard**
- **Alarm Functions**
- **Free Software**

The CN7500 Series temperature/process controller's advanced control features can handle the most demanding temperature or process applications. Enclosed in a compact 1⁄32 DIN housing, the CN7500 has dual, 4-digit LED displays for local indication of process value and setpoint. Control methods include on/off, PID, autotune, and manual tune. PID control is supported with 64 temperature and time (ramp/soak) control actions. The dual-loop output control allows simultaneous heating and cooling. The second output can be configured as an alarm mode using one of the 13 built-in alarm functions.

RS485 communications is standard. Up to 2
47 communication addresses are available, with transmission speeds of 2400 to 38,400 bps. Other features include universal inputs, selectable temperature units (°C/°F), selectable resolution, quick sampling rate, and security protection.

SPECIFICATIONS

Inputs: Thermocouple, RTD, DC voltage or DC current
Display: Two 4-digit, 7 segment 6.35 mm H (25") LEDs; PV: red, SV: green
Accuracy: ±0.25% span, ±1 least significant digit
Supply Voltage: 100 to 240 Vac, 50/60 Hz
Power Consumption: 5 VA max
Operating Temperature: 0 to 50°C (32 to 122°F)
Memory Backup: Non-volatile memory
Control Output Ratings:
Relay: SPST, 5A @ 250 Vac resistive
Voltage Pulse: 14 V, 10 to -20% (max 40 mA)
Current: 4 to 20 mA
Communication: RS485 MODBUS® A-5-11/RTU communication protocol
Weight: 114 g (4 oz)
Panel Cut-Out: 48 x 24 mm (1.890 x 0.938")
Maximum Panel Thickness: 3.40 mm (0.14")
Panel Depth: 99.80 mm (3.86")

Inputs

INPUT TYPES	RANGE
K Thermocouple	-200 to 2500°F (-129 to 1371°C)
J Thermocouple	-100 to 1600°F (-73 to 871°C)
T Thermocouple	-350 to 750°F (-212 to 398°C)
E Thermocouple	-100 to 1800°F (-73 to 982°C)
W Thermocouple	-200 to 1300°C (-328 to 2372°F)
R Thermocouple	0 to 3200°F (-17 to 1760°C)
S Thermocouple	0 to 3200°F (-17 to 1760°C)
B Thermocouple	75 to 3308°F (24 to 1820°C)
L Thermocouple	-100 to 1600°F (-73 to 871°C)
U Thermocouple	-200 to 500°C (-328 to 932°F)
Pt100 RTD	-200 to 600°C (-328 to 1112°F)
0 to 50 mV	-999 to 9999
0 to 5 V	-999 to 9999
0 to 10 V	-999 to 9999
0 to 20 mA*	-999 to 9999
4 to 20 mA*	-999 to 9999

** Requires external 250 Ω precision shunt resistor,* ***OMX-R250*** *(sold separately).*

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
CN7523	$89	Dual output, DC pulse/relay, RS485*
CN7533	89	Dual output, relay/relay, RS485*
CN7553	89	Dual output, 4 to 20 mA/relay, RS485*

Comes with complete operator's manual.
** Free CN7-B software download available at* ***omega.com.***
Ordering Example: CN7523, *dual-output controller, DC pulse and a mechanical relay output, RS485 communications,* ***$89.***

Accessories (Field Installable)

MODEL NO.	PRICE	DESCRIPTION
CNQUENCHARC	$8	Noise suppression kit, 110 to 230 Vac
OMX-R250	1	250 Ω precision resistor

Process product line continues to expand, visit omegamation.com for new details!

1/16 DIN RAMP/SOAK CONTROLLERS

CN7833, $99, shown larger than than actual size.

CN7800 Series All Models $99

1 YEAR WARRANTY

- **Dual Display**
- **Autotune**
- **Universal Input**
- **8 Ramp/Soak Programs, 8 Segments Each**
- **Programmable Repeat and Linking Features**
- **RS485 Communications**
- **Free Software**
- **2 Alarm Standard**

Monitor and control temperature or process applications with precision using the CN7800 Series controllers. The CN7800 Series provides dual LED displays for local indication of process value and setpoint value. Control methods include on/off, PID, auto-tune and manual-tune. PID control is supported with 64 ramp/soak control actions. Two additional alarm outputs are standard on the CN7800 Series. The alarm outputs can be quickly configured by using the 13 built-in alarm functions. The controller communicates easily with the built-in RS485 interface.

Inputs

INPUT TYPES	RANGE
K Thermocouple	-200 to 2500°F (-129 to 1371°C)
J Thermocouple	-100 to 1600°F (-73 to 871°C)
T Thermocouple	-350 to 750°F (-212 to 398°C)
E Thermocouple	-100 to 1800°F (-73 to 982°C)
W Thermocouple	-200 to 1300°C (-328 to 2372°F)
R Thermocouple	0 to 3200°F (-17 to 1760°C)
S Thermocouple	0 to 3200°F (-17 to 1760°C)
B Thermocouple	75 to 3308°F (24 to 1820°C)
L Thermocouple	-100 to 1600°F (-73 to 871°C)
U Thermocouple	-200 to 500°C (-328 to 932°F)
Pt100 RTD	-200 to 600°C (-328 to 1112°F)
0 to 50 mV	-999 to 9999
0 to 5 V	-999 to 9999
0 to 10 V	-999 to 9999
0 to 20 mA*	-999 to 9999
4 to 20 mA*	-999 to 9999

** Requires external 250 Ω precision shunt resistor,* ***OMX-R250*** *(sold separately).*

SPECIFICATIONS

Inputs: Thermocouple, RTD, DC voltage or DC current
Display: Two 4-digit, 7 segment 6.35 mm H (25") LEDs (PV: red, SV: green)
Resolution: 1.0, 0.1 for thermocouples (except Types R, S and B)
Accuracy: ±0.25% span, ±1 least significant digit
Supply Voltage: 100 to 240 Vac, 50/60 Hz
Power Consumption: 5 VA max
Operating Temperature: 0 to 50°C (32 to 122°F)
Memory Backup: Non-volatile memory
Control Output Ratings:
Relay: SPST, 5 A @ 250 Vac resistive
Voltage Pulse: 14 V, 10 to -20% (max 40 mA)
Current: 4 to 20 mA
Alarms: SPST, 3 A @ 250 Vac resistive
Communication: RS485 MODBUS® A-5-11/RTU communication protocol
Weight: 114 g (4 oz)
Panel Cut-Out: 48 mm square (1.89" square)
Maximum Panel Thickness: 9.50 mm (0.375")
Panel Depth: 80 mm (3.15")

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
CN7833	**$99**	Dual output, relay/relay, 2 alarms, RS485*
CN7823	**99**	Dual output, DC pulse/relay, 2 alarms, RS485*
CN7853	**99**	Dual output, 4 to 20 mA/relay, 2 alarms, RS485*

Comes with complete operator's manual.
** Free CN7-B software download available on* ***omega.com.***
Ordering Example: CN7823, *dual-output controller, DC pulse, mechanical relay output, and RS485 communications,* ***$99.***

Accessories (Field Installable)

MODEL NO.	PRICE	DESCRIPTION
CNQUENCHARC	**$8**	Noise suppression kit, 110 to 230 Vac
OMX-R250	**1**	250 Ω precision resistor

iSeries TEMPERATURE, PROCESS AND STRAIN PID CONTOLLERS

CNi Series Starts at $195

MADE IN USA

MONOGRAM®

CNi32 CNi16 CNi8

- **User Friendly, Simple to Configure**
- **High Quality**
- **Extended 5-Year Warranty**
- **Powerful Features**
- **Free Software, Active X Controls**
- **Full Autotune PID Control**
- **Totally Programmable Color Displays, Standard**
- **High Accuracy ±0.5°C (0.9°F), 0.03% Reading**
- **Temperature Stability ±0.04°C/°C RTD and ±0.05°C/°C TC @ 25°C (77°F)**
- **Both RS232 and RS485 MODBUS on 1 Instrument Selectable from Menu (Optional)**
- **Universal Inputs: RTD Thermocouple, Process, Voltage/Current, Strain**
- **Built-In Excitation (Standard)**
- **2 Control or Alarm Outputs: DC Pulse, Solid State Relays, Mechanical Relays, Analog Voltage and Current**
- **Embedded Internet Connectivity**

The innovative OMEGA® iSeries devices feature state-of-the-art technology, uncompromising accuracy, and quality backed by an extended 5-year warranty.

The iSeries family includes extremely accurate digital panel meters and single loop PID controllers that are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

Embedded Internet and Serial Communications

Featuring optional "embedded Internet" (specify EI option) the iSeries are the first instruments of their kind that connect directly to an Ethernet network and transmit data in standard TCP/IP packets, or even serve Web pages over a LAN or the Internet. The iSeries are also available with serial communications. With the C24 option, the user can select from the push-button menu between RS232, RS422, and RS485, with straightforward ASCII commands or MODBUS.

iSeries Family

The OMEGA® iSeries is a family of microprocessor-based instruments offered in 3, true DIN sizes with NEMA 4 (IP65) rated front bezels. All of the instruments share a similar set-up and configuration menu and method of operation, which is a tremendous time saver for integration of a large system.

Programmable Color Display

The OMEGA® iSeries are the first complete series of ⅛, 1/16 and ¼ DIN process control instruments with totally programmable color displays. The display can be programmed to change color at any set point or alarm point. For example, the instrument can be programmed to display the process value in **GREEN** during warm-up, switching to **AMBER** to signal the normal operating range, and in **RED** to signal an alarm condition. The changes in color are quickly seen from a distance, and machine operators can intuitively react to changing conditions. The colors can be programmed to change back when the value drops back below the alarm point or to "latch" on until being reset by the operator.

The instrument can also be programmed to display only 1 unchanging color: **GREEN, AMBER,** or **RED.** This is a useful way to let an operator identify, at a glance, process values in 3 separate locations, or to display 3 different measurements such as temperature, pressure, and flow.

Quality and Technology

Designed and manufactured in the USA, the innovative OMEGA® iSeries of meters and controllers features an extended 5-year warranty at no extra charge. The iSeries packs a wealth of power and features into the smallest of packages, utilizing COB and SMT assembly techniques and automation. Every iSeries instrument is thoroughly calibrated and tested at several stages throughout production. The iSeries offers the highest accuracy for industrial instrumentation at 0.03% of reading. The analog-to-digital

iSeries change color at any setpoint

PATENTED

Totally Programmable Color Displays

The OMEGA® **i**/8, **i**/16, and **i**/32 are the first complete series of ⅛, 1/16 and 1/32 DIN process control instruments with totally programmable color displays. The display can be programmed to change color at any setpoint or alarm point.

conversion utilizes a proprietary 20-bit ASIC (application specific integrated circuit) patented algorithms and smart filtering.

Universal Inputs

The innovative iSeries offers the broadest selection of signal inputs available on one industrial instrument. The choices are easily selected from the menu with four front panel pushbuttons, or by serial or ethernet communications.

10 Thermocouple Types

The iSeries handles 10 thermocouple types: K, J, T, E, R, S, B, C, N, and J DIN. The patented thermocouple linearization algorithms employed in the iSeries produce the highest standard of accuracy. The MIL standard nickel RTD with MIL-T-7990B curve is available as a Factory Setup.

Most Accurate RTD Measurements

The iSeries works with the widest selection of RTD's and produces the most accurate RTD measurements. Handles both Pt 0.00385 and 0.00392 curves, and 100 Ω, 500 Ω and 1000 Ω. A choice of 2-, 3- and 4-wire RTD connections ensures the absolute highest degree of accuracy.

Process Voltage and Current

The OMEGA® iSeries measures process voltage: 0 to 100 millivolt, 0 to 1 Volt, 0 to 10 Volt ranges, and process current: 0 to 20 mA.

Strain Gage

The strain/processmeters and controllers measure inputs from load cells, pressure transducers, and most any strain gage sensor. Input ranges include 0 to 100 mVdc, -100 mVdc to 1 Vdc and 0 to 10 Vdc in addition to 0 to 20 mA. Excitation for transducers of 5 V and 10 V is standard. Strain/process meters and controllers are available in all iSeries models.

Analog Output

The optional analog output can be programmed within a range of 0 to 10 Vdc or 0 to 20 mA. It is selectable as either a control output or as a calibrated retransmission of the process value — a unique feature among controllers.

Built-in Excitation Standard

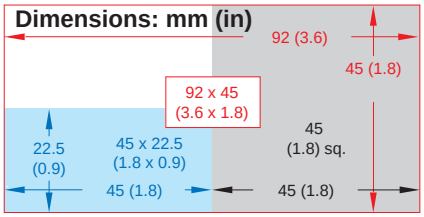
The temperature/process instrument (model "i") comes standard with built-in excitation (24 Vdc @ 25 mA). Any excitation voltage between 5 and 24 Vdc is available by special order. This means the same instrument can handle thermocouple, standard RTDs or 4 to 20 mA transmitters with the meter's built-in excitation. The strain/process model (model "is") comes standard with built-in excitation (10 V @ 60 mA), 5 V excitation is user selectable. (Built-in exciatation is not available with optional RS232/RS485 serial communications or DC power option.)

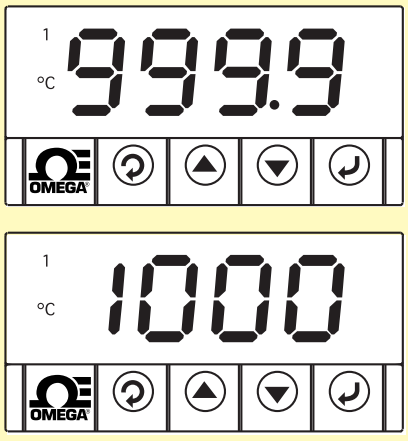
Control Functions

The iSeries can control simple manual operation to on/off and full autotune PID control (selectable preset tune, adaptive tune, PID, PI, PD control modes). The dual control outputs can be configured for a variety of independent control and alarm applications such as heat/heat, heat/cool, heat/alarm, cool/cool, cool/alarm or alarm/alarm. The ramp-to-setpoint feature allows the user to define the rate of rise to setpoint, minimizing thermal shock to the load during start-up. Maximum ramp time: 99.59 (HH.MM); soak, 00.00 to 99.59 (HH.MM); damping, 1 to 8 in unit steps.

Embedded Internet Connectivity!

CNi16D33, shown smaller than actual size. See page 42 for details.



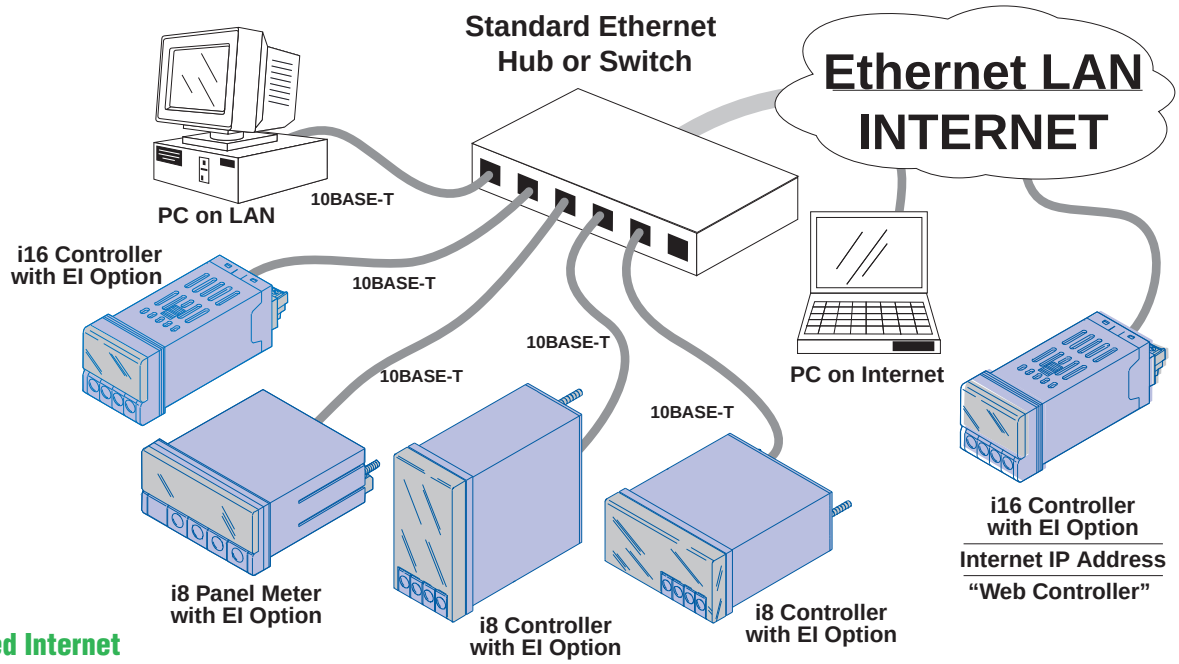


Autoscaling automatically shifts the decimal point right or left depending on the process value of the meter. Autoscaling is only active for temperature reading.

i® Series is a trademark of Newport Electronics, Inc.

iSeries EMBEDDED INTERNET

ISERIES METERS AND CONTROLLERS - DIRECT CONNECTION TO ETHERNET (EACH DEVICE HAS OWN IP ADDRESS)



Embedded Internet

The OMEGA® iSeries devices can connect directly to an ethernet network with a standard RJ-45 connector and can send and receive data in standard TCP/IP packets. (Please specify EI or C4EI option.)

The iSeries devices can serve Web pages over an ethernet LAN or even over the Internet making it possible to monitor and control a process through a web browser (such as Microsoft Internet Explorer) from anywhere in the facility or anywhere in the world.

Remote Control

For example, using an iSeries 1⁄16 DIN temperature controller to control a heater, an engineer can monitor the temperature, change set points or alarm points, turn the heater on and off, or make other modifications from anywhere on the local network, or anywhere on the Internet. The web pages are easily customized and secure password protected access to the devices is easily controlled. And it requires absolutely no special software on the engineer's computer to view the data and "supervise" the controller—nothing other than a Web browser.

Email and Alarm

In fact, the iSeries controller can even send an email to the engineer (or anyone they choose) alerting them to an alarm condition or updating the status. Leveraging the technology of the Internet, the engineer could receive a message from the iSeries controller on an Internet enabled pager or cell phone.

Most remarkable is that all this can be accomplished without a computer. The OMEGA® iSeries device (meter or controller) connects directly to the ethernet network — not to the serial port of a computer functioning as a "server" and "master" to "slave" instruments connected through serial communications. The iSeries devices are also available with RS232, RS422, RS485 and MODBUS serial communications (specify the C24 option). In fact, the iSeries are the first instruments of this type which include all these serial protocols on one device, selectable from a menu.

Internet Appliances

With the EI option, these small 1⁄8 DIN and 1⁄16 DIN instruments are stand-alone Web servers. The ethernet and Web server capability is actually embedded in the device. (The smallest 1⁄32 DIN size device must be connected to an external iServer.)

The OMEGA® iSeries device is assigned an IP address on the network and can also be assigned an easily remembered name such as "Heater1". In fact, the device could be assigned an authorized Internet IP address from an Internet service provider and function as a World Wide Web server delivering whatever specific information is called for. (For an example, please see www.newportUS.com/iserver)

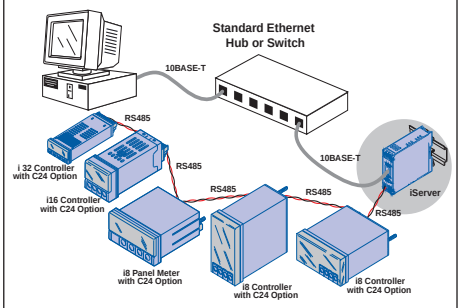
The iSeries devices work well with conventional industrial automation, data acquisition and control programs as well as Microsoft Visual Basic and Excel. OMEGA® provides free software and demos which makes it fast and easy to get up and running with many applications.

MONOGRAM®

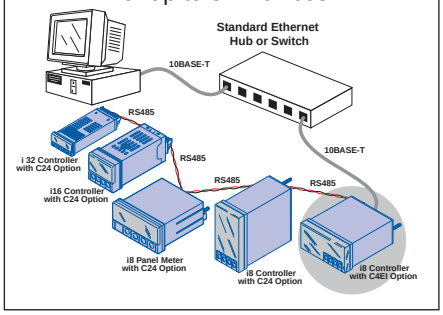
$225
1⁄16 DIN
Controller

Rear Terminal Connections

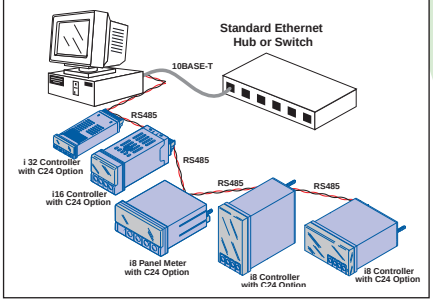
Using iServer as HUB/Server for up to 32 Devices

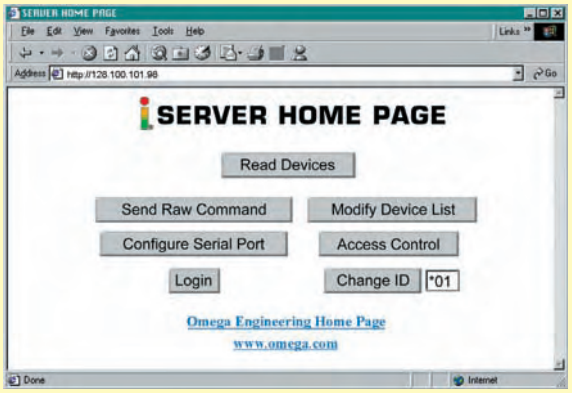


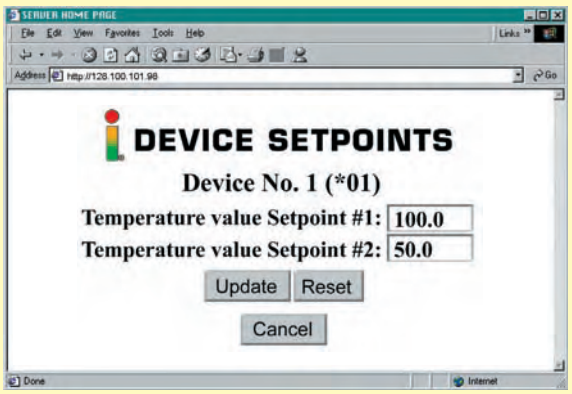
Using OMEGA® ⅛ DIN iSeries controller with C4EI option as HUB for up to 32 Devices

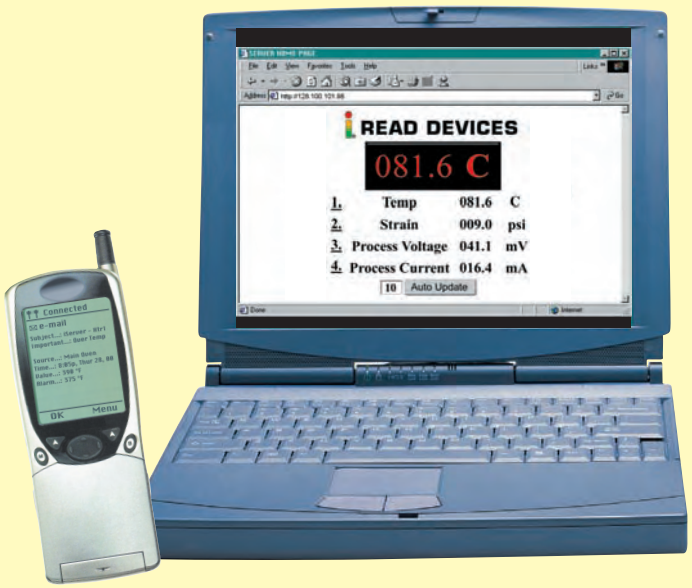


Conventional Serial Communication connections using PC with RS-485 Serial Communication









GET INTERNET E-MAIL NOTIFICATION OF ALARM STATUS ON YOUR WEB-ENABLED PHONE OR PDA.

iServer®

EIS-2B

$195

- **A Web Server and an Ethernet Bridge**
- **Serves up to 32 Devices**

The "iServer" is a DIN rail device which can be a hub connecting up to 32 instruments to the Ethernet and Internet. The "iServer" is both a Web Server and an Ethernet-Serial bridge.To connect to the iServer, iSeries devices must feature the "C24" Serial Communications option. The OMEGA iServer is also compatible with the MICROMEGA® family of ultra high performance digital panel meters and the OMEGA iDRX family of signal conditioners. The iServer can also connect almost any RS232 or RS485 serial device to Ethernet.

The iServer is an alternate way to connect iSeries devices to an Ethernet LAN or Internet. Instead of connecting each iSeries device directly to the Ethernet network, with individual IP addresses for each device, the iServer can be a HUB/server for up to 32 devices.

To Order *(Specify Model Number)*

MODEL NO.	PRICE	DESCRIPTION
EIS-2B	**$195***	iServer industrial MicroServer™, serves 32 devices
OPTIONS		
iDRN-PS-1000	**$150**	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 1 A (powers 10 units)

iSeries ⅛ DIN TEMPERATURE, PROCESS, AND STRAIN PID CONTROLLERS

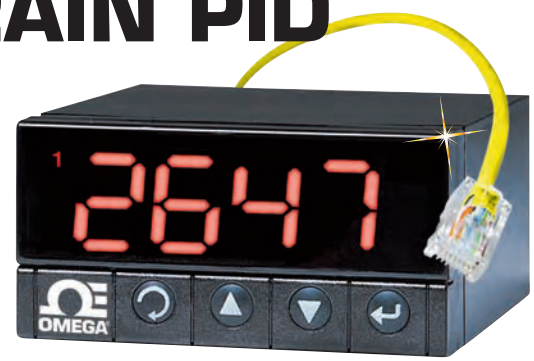
CNi8 Series Starts at $310

MONOGRAM®

MADE IN USA

CE cULus

Embedded Internet Connectivity!



- **High Quality**
- **5-Year Warranty**
- **High Accuracy ±0.5°C (±0.9°F), 0.03% Reading**
- **User-Friendly, Simple to Configure**
- **Free Software**
- **Full Autotune PID Control**
- **Universal Inputs: RTD, Thermocouple, Process Voltage/Current, Strain**
- **Totally Programmable Color Displays (Standard)**
- **Built-InExcitation (Standard)**
- **2 Control or Alarm Outputs: DC Pulse, Mechanical Relays, Analog Voltage and Current**
- **Embedded Internet Connectivity**

The OMEGA® CNi8 is a ⅛ DIN size [96 x 48 mm (3.7 x 1.9")] digital panel meter featuring the big iSeries color-changing display. The digits are twice the size of typical ⅛ DIN panel meters. The iSeries meters feature the only LED displays that can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point. The "CNi8" model is available as an extremely accurate programmable digital panel meter with no outputs or with dual outputs for controlling or alarming functions. Other options include isolated programmable analog output, serial communications, Modbus and Ethernet. The user can easily program the CNi8 for any control or alarming requirement from simple on/off to full autotune PID with a choice of form C SPDT relays, solid state relays, DC pulse, and analog (voltage and current) outputs.

Fully isolated analog output for retransmission of the process value is available in addition to the control and alarm relays (specify model CNi8A33).

The CNi8 covers a broad selection of transducer and transmitter inputs with 2 input models: The universal temperature and process instrument (model "i") handles 10 common types of thermocouples, multiple RTD's, and several process (DC) voltage and current ranges. This model also features built-in excitation, 24 Vdc @ 25 mA. With its wide choice of signal inputs, this model is an excellent choice for measuring or controlling temperature with a thermocouple, RTD, or 4 to 20 mA transmitter.

The strain and process instrument (model "iS") measures inputs from load cells, pressure transducers, and most any strain gage sensor as well as process voltage and current ranges. The "iS" has built-in 5 or 10 Vdc excitation for bridge transducers, 5 Vdc @ 40 mA or 10 Vdc @ 60 mA. (Any excitation voltage between 5 and 24 Vdc is available by special order.) This "iS" model supports 4- and 6-wire bridge configurations, ratiometric and non-ratiometric measurements. The "iS" features fast and easy "in process" calibration/scaling of the signal inputs to any engineering units. This model also features 10-point linearization which allows the user to linearize the signal input from extremely nonlinear transducers of all kinds.

INPUT TYPE		RANGE	ACCURACY
UNIVERSAL PROCESS			
Process Voltage		0 to 100 mV, 0 to 1 V, 0 to 10 Vdc	0.03% rdg
Process Current		0 to 20 mA (4 to 20 mA)	0.03% rdg
Excitation		24 V @ 25 mA	—
UNIVERSAL STRAIN/PROCESS			
Process Voltage		0 to 100 mV, -100 to 1 V, 0 to 10 Vdc	0.03% rdg
Process Current		0 to 20 mA (4 to 20 mA)	0.03% rdg
Excitation		5 V @ 40 mA, 10 V @ 60 mV	—
NICKEL RTD INPUT (FS REQUIRED)			
RTD-1N (Nickel MIL-T-7990B)		0 to 200°C (32 to 392°F)	0.1°C (0.2 °F)
RTD-2N (Nickel MIL-T-7990B)		-40 to 300°C (-40 to 572°F)	0.3°C (0.5 °F)
TEMPERATURE			
J	Iron-Constantan	-210 to 760°C (-346 to 1400°F)	0.4°C (0.7°F)
K	CHROMEGA®-ALOMEGA®	-270 to -160°C/-160 to 1372°C (-454 to -256°F/-256 to 2502°F)	1.0°C/0.4°C (1.8°F/0.7°F)
T	Copper-Constantan	-270 to -190°C/-190 to 400°C (-454 to -310°F/-310 to 752°F)	1.0°C/0.4°C (1.8°F/0.7°F)
E	CHROMEGA®-Constantan	-270 to -220°C/-220 to 1000°C (-454 to -364°F/-364 to 1832°F)	1.0°C/0.4°C (1.8°F/0.7°F)
R	Pt/13%Rh-Pt	-50 to 40°C/40 to 1768°C (-58 to 104°F/104 to 3214°F)	1.0°C/0.5°C (1.8°F/0.9°F)
S	Pt/10%Rh-Pt	-50 to 100°C/100 to 1768°C (-58 to 212°F/212 to 3214°F)	1.0°C/0.5°C (1.8°F/0.9°F)
B	30%Rh-Pt/6%Rh-Pt	100 to 640°C/640 to 1820°C (212 to 1184°F/1184 to 3308°F)	1.0°C/0.5°C (1.8°F/0.9°F)
C	5%Re-W/26%Re-W	0 to 2320°C (32 to 4208°F)	0.4°C (0.7°F)
N	Nicrosil-nisil	-250 to -100°C/-100 to 1300°C (-418 to -148°F/-148 to 2372°F)	1.0°C/0.4°C (1.8°F/0.7°F)
L	J DIN	-200 to 900°C (-328 to 1652°F)	0.4°C (0.7°F)
RTD	Pt, 0.00385, 100, 500, 1000	-200 to 900°C (-328 to 1652°F)	0.4°C (0.7°F)
RTD	Pt, 0.00392, 100, 500, 1000	-200 to 850°C (-328 to 1562°F)	0.4°C (0.7°F)

i Series change color

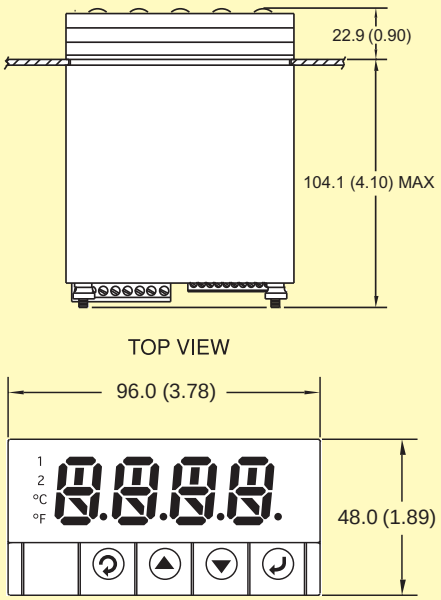
PATENTED

at any setpoint

Totally Programmable Color Displays

The OMEGA® i/8, i/16, and i/32 are the first complete series of ⅛, 1/16 and 1/32 DIN process control instruments with totally programmable color displays. The display can be programmed to change color at any setpoint or alarm point.

Dimensions: mm (in)



Options

ORDERING SUFFIX	ADD'L PRICE	DESCRIPTION
-AL	**N/C**	Limit alarm version (simplified menu, alarms only, no PID control)*3*4
-SM	**N/C**	Simplified menu (on/off control or alarms, no PID)*6
NETWORK OPTIONS		
-EI	**$55**	Ethernet with embedded Web server
-C24	**60**	Isolated RS232 and RS485/422, 300 to 19.2 Kb*2
-C4EI	**115**	Ethernet with embedded Web server + isolated RS485/422 hub for up to 31 devices*1
POWER SUPPLY		
-DC	**$25**	12 to 36 Vac/dc, 24 Vac*2*5
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	**N/C**	Factory setup and configuration
-FS(RTD-1N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input,-40 to 300°C (-40 to 572°F)
SOFTWARE (REQUIRES NETWORK OPTION)		
OPC-SERVER LICENSE	**$295**	OPC server/driver software license

*1 Ethernet options are not availabe for the i8A controller.
*2 ***"-DC", "-C24",*** and ***"-C4EI"*** not available with excitation.
*3 Analog output is not available with ***"-AL"*** units.
*4 ***CNi8A-AL*** contains 1 alarm and 1 analog retransmission
*5 20 to 36 Vdc for CNi8A.
*6 ***"-SM"*** option not avaialbe on CNiS strain models.

To Order (Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT 1	OUTPUT 2
2 CONTROL OUTPUTS			
CNi833	**$310**	Relay	Relay
CNi844	**310**	DC pulse	DC pulse
CNi843	**310**	DC pulse	Relay
CNi842	**310**	DC pulse	0.5 A SSR
CNi822	**310**	0.5 A SSR	0.5 A SSR
CNi823	**310**	0.5 A SSR	Relay
CNi824	**310**	0.5 A SSR	DC pulse
CNi853	**310**	Analog	Relay
CNi854	**310**	Analog	DC pulse
CNi852	**310**	Analog	0.5 A SSR
2 CONTROL OUTPUTS WITH ISOLATED ANALOG OUTPUT			
CNi8A33	**$365**	Relay	Relay
CNi8A44	**365**	DC pulse	DC pulse
CNi8A43	**365**	DC pulse	Relay
CNi8A42	**365**	DC pulse	0.5 A SSR
CNi8A22	**365**	0.5 A SSR	0.5 A SSR
CNi8A23	**365**	0.5 A SSR	Relay
CNi8A24	**365**	0.5 A SSR	DC pulse
STRAIN/PROCESS INPUT WITH 2 CONTROL OUTPUTS			
CNiS833	**$370**	Relay	Relay
CNiS834	**370**	Relay	DC pulse
CNiS844	**370**	DC pulse	DC pulse
CNiS843	**370**	DC pulse	Relay
CNiS842	**370**	DC pulse	0.5 A SSR
CNiS822	**370**	0.5 A SSR	0.5 A SSR
CNiS823	**370**	0.5 A SSR	Relay
CNiS824	**370**	0.5 A SSR	DC pulse
CNiS853	**370**	Analog	Relay
CNiS854	**370**	Analog	DC pulse
CNiS852	**370**	Analog	0.5 A SSR

Comes with complete operator's manual.
Ordering Examples: CNi8A22*, ⅛ DIN temp/process controller with isolated analog output and 2 SSR outputs,* ***$365.***
CNiS833*, ⅛ DIN strain/process controller with 2-relay outputs,* ***$370.***

iSeries ⅛ DIN DUAL DISPLAY TEMPERATURE, PROCESS AND STRAIN PID CONTROLLERS

CNi8D Series Starts at $340

MONOGRAM®

CNi8DH33, $340, shown smaller than actual size.

CNiS8DV33, $400, shown smaller than actual size.

- First ⅛ DIN Controller with Embedded Ethernet Connectivity (Optional)
- Dual Display with Bright Color-Changing Feature
- Programmable Digital Filter
- 2 Control or Alarm Outputs (Choice of DC Pulse, Solid State Relays, Mechanical Relays, Analog Voltage and Current)
- Full Autotune PID Control
- Built-In Excitation Standard
- Front Removable

The OMEGA® CNi8DH and CNi8DV are high-quality, highly accurate single loop autotune PID temperature and process controllers for ⅛ DIN (96 x 48 mm) horizontal or vertical panel cutouts. Both devices feature the same state-of-the-art technology, uncompromising accuracy, and quality backed by an extended 5-year warranty.

The CNi8DH and CNi8DV are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

The CNi8DH and CNi8DV come standard with your choice of 2 control or alarm outputs in almost any combination: solid state relays rated at 0.5 A @ 120/240 Vac; Form "C" SPDT relays rated at 3 A @ 120/240 Vac; pulsed 10 Vdc output for use with an external SSR; or analog output (0 to 10 Vdc or 0 to 20 mA) selectable for control or retransmission of the process value.

The universal temperature and process instrument (model "i") offers a selection of 10 thermocouple types as well as 2-, 3- or 4-wire RTDs, process voltage and current. The CNi8DH and CNi8DV are ideal controllers for use with transmitters and amplified transducers. Built-in excitation is standard (24 Vdc@ 25 mA). The devices handles 0 to 20 mA process current and process voltage in 3 scales: 0 to 100 mV, 0 to 1 V, and 0 to 10 V.

As with all iSeries devices, the process value display can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point. The LED's displaying the process value on the CNi8DH (horizontal ⅛ DIN) are the largest digits of any ⅛ DIN controller.

The strain/process instrument (model "iS") meters and controllers measure inputs from load cells, pressure transducers, and most any strain gage sensor. Input ranges include 0 to 100 mVdc; -100 mVdc to 1 Vdc; 0 to 10 Vdc in addition to 0 to 20 mA. Excitation for transducers of 5 V and 10 V is standard.

The highly recommended networking and communications options include direct Ethernet LAN connectivity with an embedded Web server, and serial communications. The C24 serial communications option includes both RS232 and RS485 which can be selected from the menu as well as both a straightforward ASCII protocol or MODBUS. The C4EI option includes both Ethernet and RS485 ASCII/MODBUS on 1 device.

The iSeries, with the network options, are designed for easy integration with popular industrial automation and control programs as well as Microsoft Visual Basic and Excel. OMEGA® provides free configuration software which makes it fast and easy to get up and running with many applications. Available on CD-ROM and for download off the Internet.

iSeries

change color

at any setpoint

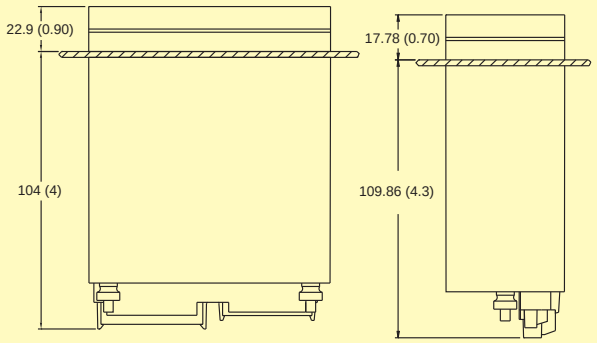
Totally Programmable Color Displays

PATENTED

Process product line continues to expand, visit omegamation.com for new details!

The i/8 Series controllers feature plug/removable connectors and a sturdy panel mounting sleeve with adjustable thumb nuts for easy secure installation.

Dimensions: mm (in)



Options

ORDERING SUFFIX	ADD'L PRICE	DESCRIPTION
-AL	**N/C**	Limit alarm version (simplified menu, alarms only, no PID control)*2
-SM	**N/C**	Simplified menu (on/off control or alarms, no PID)*3
NETWORK OPTIONS		
-EI	**$55**	Ethernet with embedded Web server
-C24	**60**	Isolated RS232 and RS485/422, 300 to 19.2 Kb*1
-C4EI	**115**	Ethernet with embedded Web server + isolated RS485/422 hub for up to 31 devices*1
POWER SUPPLY		
	N/C	Standard power input: 90 to 240 Vac/dc, 50 to 400 Hz (no entry required)
-DC	**$25**	20 to 36 Vac/dc, 24 Vac*1
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	**N/C**	Factory setup and configuration (requires **"-C24"** serial communication option)
SOFTWARE (REQUIRES NETWORK OPTION)		
OPC-SERVER LICENSE	**$295**	OPC server/driver software license

*1 ***"-DC", "-C24",*** *and* ***"-C4EI"*** *not available with excitation.*
2 Analog output is not available with ***"-AL"*** *units.*
3 ***"-SM"*** *option not available on CNiS strain models.*

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT 1	OUTPUT 2
DUAL DISPLAY HORIZONTAL WITH 2 CONTROL OUTPUTS			
CNi8DH33	**$340**	Relay	Relay
CNi8DH34	**340**	Relay	DC pulse
CNi8DH44	**340**	DC pulse	DC pulse
CNi8DH43	**340**	DC pulse	Relay
CNi8DH42	**340**	DC pulse	0.5 A SSR
CNi8DH22	**340**	0.5 A SSR	0.5 A SSR
CNi8DH23	**340**	0.5 A SSR	Relay
CNi8DH24	**340**	0.5 A SSR	DC pulse
CNi8DH53	**340**	Analog	Relay
CNi8DH54	**340**	Analog	DC pulse
CNi8DH52	**340**	Analog	0.5 A SSR
DUAL DISPLAY VERTICAL WITH 2 CONTROL OUTPUTS			
CNi8DV33	**$340**	Relay	Relay
CNi8DV34	**340**	Relay	DC pulse
CNi8DV44	**340**	DC pulse	DC pulse
CNi8DV43	**340**	DC pulse	Relay
CNi8DV42	**340**	DC pulse	0.5 A SSR
CNi8DV22	**340**	0.5 A SSR	0.5 A SSR
CNi8DV23	**340**	0.5 A SSR	Relay
CNi8DV24	**340**	0.5 A SSR	DC pulse
CNi8DV53	**340**	Analog	Relay
CNi8DV54	**340**	Analog	DC pulse
CNi8DV52	**340**	Analog	0.5 A SSR
STRAIN/PROCESS INPUT, DUAL DISPLAY HORIZONTAL WITH 2 CONTROL OUTPUTS			
CNiS8DH33	**$400**	Relay	Relay
CNiS8DH44	**400**	DC pulse	DC pulse
CNiS8DH43	**400**	DC pulse	Relay
CNiS8DH42	**400**	DC pulse	0.5 A SSR
CNiS8DH22	**400**	0.5 A SSR	0.5 A SSR
CNiS8DH23	**400**	0.5 A SSR	Relay
CNiS8DH24	**400**	0.5 A SSR	DC pulse
CNiS8DH53	**400**	Analog	Relay
CNiS8DH54	**400**	Analog	DC pulse
CNiS8DH52	**400**	Analog	0.5 A SSR
STRAIN/PROCESS INPUT, DUAL DISPLAY VERTICAL WITH 2 CONTROL OUTPUTS			
CNiS8DV33	**$400**	Relay	Relay
CNiS8DV44	**400**	DC pulse	DC pulse
CNiS8DV43	**400**	DC pulse	Relay
CNiS8DV42	**400**	DC pulse	0.5 A SSR
CNiS8DV22	**400**	0.5 A SSR	0.5 A SSR
CNiS8DV23	**400**	0.5 A SSR	Relay
CNiS8DV24	**400**	0.5 A SSR	DC pulse
CNiS8DV53	**400**	Analog	Relay
CNiS8DV54	**400**	Analog	DC pulse
CNiS8DV52	**400**	Analog	0.5 A SSR

Comes with complete operator's manual.

Ordering Examples: CNi8DH43*, horizontal ⅛ DIN dual display with pulse control and relay,* ***$340****.* ***CNi8DV53****, ⅛ DIN dual display vertical controller with analog output and relay,* ***$340****.* ***CNiS8DH22****, ⅛ DIN dual display horizontal controller with 2 SSR outputs,* ***$400****.*

iSeries 1/16 DIN TEMPERATURE, PROCESS AND STRAIN PID CONTROLLERS

MONOGRAM®

CNi16 Series Starts at $225

MADE IN USA

CE c UL us

- High Quality
- 5-Year Warranty
- High Accuracy ±0.5°C (±0.9°F), 0.03% Reading
- First 1/16 DIN Controller with Totally Programmable Color Displays (Standard)
- User-Friendly, Simple to Configure
- Free Software
- Full Autotune PID Control
- Universal Inputs: Thermocouple, RTD, Process Voltage/ Current, Strain
- Embedded Ethernet Connectivity
- First 1/16 DIN Controller Offering Both RS232 and RS485 Serial Communications in 1 Instrument (Optional)
- First 1/16 DIN Controller with Built-in Excitation, 24 Vdc (Standard)
- First 1/16 DIN Instrument with Analog Output Selectable as a Control Output or as a Calibrated Retransmission of Process Variable
- NEMA 4 (IP65) Front Bezel
- 2 Control or Alarm Outputs (Optional): DC Pulse, Solid State Relays, Mechanical Relays, Analog Voltage and Current Temperature Stability
- ±0.04°C/°C RTD and ±0.05°C/°C Thermocouple @ 25°C (77°F)
- Front Removable and Plug Connectors

CNi1633, $225, shown larger than actual size.

CNi16D33, $245, shown larger than actual size.

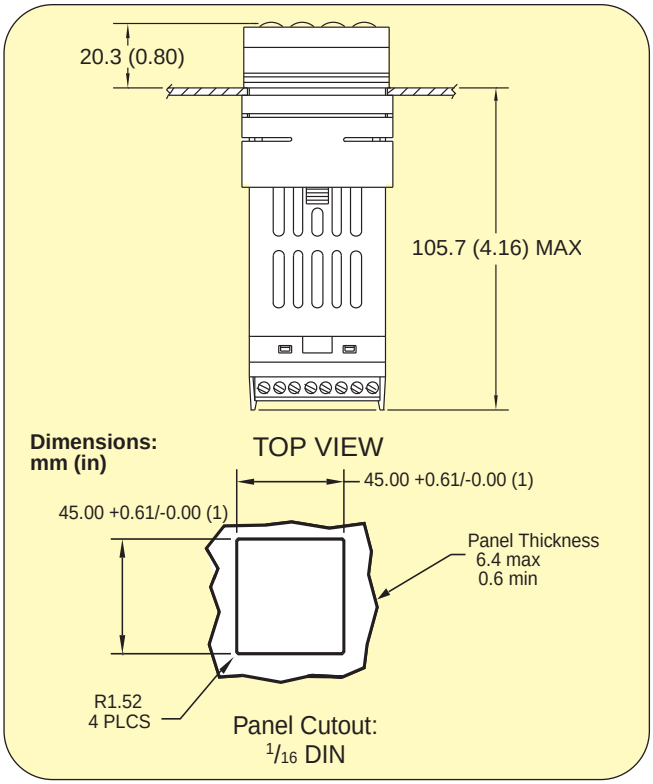
The OMEGA® CNi16 is the popular 1/16 DIN size (48 mm²) controller. It is available with a single (model CNi16) or dual display (model CNi16D) that displays a setpoint along with the process value. The CNi16 display can be programmed to change color between GREEN, AMBER, and RED at any setpoint or alarm point. The CNi16 is the first 1/16 DIN controller with the option of both RS232 and RS485 in 1 instrument with both MODBUS serial protocol and the straightforward OMEGA® ASCII protocol. And of course the CNi16 is the first 1/16 DIN controller that can connect directly to an Ethernet network and features an embedded Web server. OMEGA® provides free configuration and data acquisition software for the iSeries on CD-ROM and for download off of the Web.

The CNi16 enclosure has a NEMA 4 (IP65) rated front bezel. The electronics are removable from the front panel.

ACCESS VITAL INFORMATION ANYTIME, ANYWHERE, ON THE WORLD WIDE WEB!

1/16 DIN controller with embedded Web server, dual control outputs, dual display.

Process product line continues to expand, visit omegamation.com for new details!



Options

ORDERING SUFFIX	ADD'L PRICE	DESCRIPTION
-AL	**N/C**	Limit alarm version (simplified menu, alarms only, no PID control)*2*3
-SM	**N/C**	Simplified menu (on/off control or alarms, no PID)*5
NETWORK OPTIONS		
-EI	**$55**	Ethernet with embedded Web server*1
-C24	**60**	Isolated RS232 and RS485/422, 300 to 19.2 Kb*2
-C4EI	**110**	Ethernet with embedded Web server + isolated RS485/422 hub for up to 31 devices*1*2
POWER SUPPLY		
-DC	**$25**	12 to 36 Vac/dc, 24 Vac*2*4
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	**N/C**	Factory setup and configuration
-FS(RTD-1N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input,-40 to 300°C (-40 to 572°F)
SOFTWARE (REQUIRES NETWORK OPTION)		
OPC-SERVER LICENSE	**$295**	OPC server/driver software license

*1 Ethernet options are available for the i16D and iS16D controllers only.
*2 ***"-DC", "-C24",*** and ***"-C4EI"*** not available with excitation.
*3 Analog output is not available with ***"-AL"*** units.
*4 20 to 36 Vdc for CNi16D.
*5 ***"-SM"*** option not avaialbe on CNiS16 strain models.

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT 1	OUTPUT 2
SINGLE DISPLAY WITH 2 CONTROL OUTPUTS			
CNi1633	**$225**	Relay	Relay
CNi1644	**225**	DC pulse	DC pulse
CNi1643	**225**	DC pulse	Relay
CNi1642	**225**	DC pulse	0.5 A SSR
CNi1622	**225**	0.5 A SSR	0.5 A SSR
CNi1623	**225**	0.5 A SSR	Relay
CNi1624	**225**	0.5 A SSR	DC pulse
CNi1653	**225**	Analog	Relay
CNi1654	**225**	Analog	DC pulse
CNi1652	**225**	Analog	0.5 A SSR
DUAL DISPLAY WITH 2 CONTROL OUTPUTS			
CNi16D33	**$245**	Relay	Relay
CNi16D44	**245**	DC pulse	DC pulse
CNi16D43	**245**	DC pulse	Relay
CNi16D42	**245**	DC pulse	0.5 A SSR
CNi16D22	**245**	0.5 A SSR	0.5 A SSR
CNi16D23	**245**	0.5 A SSR	Relay
CNi16D24	**245**	0.5 A SSR	DC pulse
CNi16D53	**245**	Analog	Relay
CNi16D54	**245**	Analog	DC pulse
CNi16D52	**245**	Analog	0.5 A SSR
SINGLE DISPLAY STRAIN/PROCESS INPUT WITH 2 CONTROL OUTPUTS			
CNiS1633	**$275**	Relay	Relay
CNiS1644	**275**	DC pulse	DC pulse
CNiS1643	**275**	DC pulse	Relay
CNiS1642	**275**	DC pulse	0.5 A SSR
CNiS1622	**275**	0.5 A SSR	0.5 A SSR
CNiS1623	**275**	0.5 A SSR	Relay
CNiS1624	**275**	0.5 A SSR	DC pulse
CNiS1653	**275**	Analog	Relay
CNiS1654	**275**	Analog	DC pulse
CNiS1652	**275**	Analog	0.5 A SSR
DUAL DISPLAY STRAIN/PROCESS INPUT WITH 2 CONTROL OUTPUTS			
CNiS16D33	**$295**	Relay	Relay
CNiS16D44	**295**	DC pulse	DC pulse
CNiS16D43	**295**	DC pulse	Relay
CNiS16D42	**295**	DC pulse	0.5 A SSR
CNiS16D22	**295**	0.5 A SSR	0.5 A SSR
CNiS16D23	**295**	0.5 A SSR	Relay
CNiS16D24	**295**	0.5 A SSR	DC pulse
CNiS16D53	**295**	Analog	Relay
CNiS16D54	**295**	Analog	DC pulse
CNiS16D52	**295**	Analog	0.5 A SSR

Comes with complete operator's manual.
Ordering Examples: CNi1633, *output 1 relay, output 2 relay single display controller with 2 control outputs,* ***$225.***
CNiS1643, *output 1 DC pulse, output 2 relay single display strain/process input controller with 2 control outputs,* ***$275.***

iSeries 1/32 DIN TEMPERATURE, PROCESS, AND STRAIN PID CONTROLLERS

MONOGRAM®

CNi32 Series Starts at $195

CNI3233, $195, shown smaller than actual size.

MADE IN USA

- High Quality
- 5-Year Warranty
- High Accuracy ±0.5°C (±0.9°F), 0.03% Reading
- First 1/32 DIN Instrument with Totally Programmable Color Displays (Standard)
- User-Friendly, Simple to Configure
- Free Software, Active X Controls
- Full Autotune PID Control
- Universal Inputs: Thermocouple RTD, Process Voltage/ Current, Strain
- First 1/32 DIN Instrument Offering Both RS232 and RS485 Serial Communications in 1 Instrument (Optional)
- First 1/32 DIN Instrument with Built-in Excitation, 24 Vdc, Standard Temperature Stability
- ±0.04°C/°C RTD and ±0.05°C/°C TC @ 25°C (77°F)
- NEMA 4 (IP65) Front Bezel
- First 1/32 DIN Instrument with Analog Output Selectable as a Control Output or as Retransmission of Process Variable
- 2 Control or Alarm Outputs (Optional): DC Pulse, Solid State Relays, Mechanical Relays, Analog Voltage and Current
- Front Removable and Plug Connectors

The OMEGA® CNi32 is the iSeries controller in the extremely compact and increasingly popular 1/32 DIN size. The CNi32 is the most sophisticated and accurate instrument available in the small 1/32 DIN package, yet is still easy to configure.

The CNi32 handles more thermocouple, RTD, process voltage and current inputs than any other 1/32 DIN controller.

The CNi32 is the first 1/32 DIN controller with built-in excitation for transmitters or other devices, 24 Vdc @ 25 mA.

The CNiS32 has built-in excitation for bridge transducers, 5 Vdc @ 40mA or 10 Vdc @ 60mA. When communications options are installed, external excitation may be used and ratiometric operation maintained by connecting the external excitation to the sense leads. Both 4- or 6-wire bridge configurations are supported for internal or external excitation. Non-ratiometric operation is supported for voltage and current transducers and is also valuable in measuring offset and millivolt output of bridge devices during manufacturing and calibration. This model also features 10-point linearization which allows the user to linearize the signal input from extremely nonlinear transducers of all kinds.

The CNi32 introduces a number of unique features not yet found on any other 1/32 DIN instrument. The CNi32 is the first 1/32 DIN controller with a totally programmable display that can change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point.The unique 9-segment LED characters greatly improves alphanumeric representations.

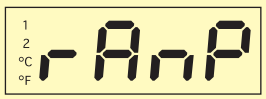
The CNi32 is the first 1/32 DIN controller offering 2 SPDT Form C relays, instead of the single throw relays on typical 1/32 DIN controllers.

The CNi32 is the first to offer both RS232 and RS422/485 serial communications in 1 instrument (C24 option). Both ASCII protocol and modbus protocol are selectable from the menu.

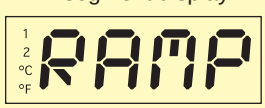
The iSeries displays feature unique 9-segment LED characters, which greatly improves alphanumeric representations. The 7-segment LED characters found on most instruments are adequate for presenting numbers, but not letters.

Words are easier to read with the unique 9-segment LED characters on the iSeries, which makes operating and programming simpler and easier.

9-segment LED



7-segment display



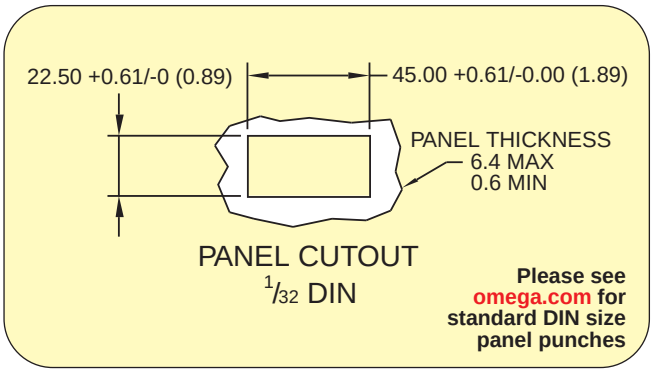
9-segment display

Process product line continues to expand, visit omegamation.com for new details!

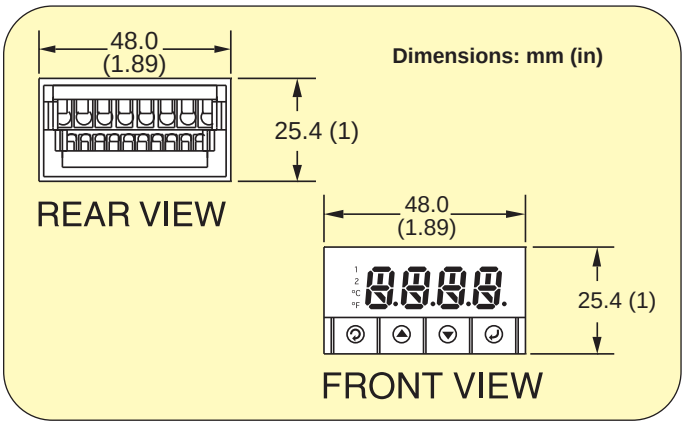
CNI3233, $195, shown larger than actual size.

CNI3244, $195, shown larger than actual size.

DPi32-B-COVER supplied with each unit, standard.



Please see omega.com for standard DIN size panel punches



Dimensions: mm (in)

Options

ORDERING SUFFIX	ADD'L PRICE	DESCRIPTION
-AL	**N/C**	Limit alarm version (simplified menu, alarms only, no PID control)*2
-SM	**N/C**	Simplified menu (on/off control or alarms, no PID)*3
NETWORK OPTIONS		
-C24	**$60**	Isolated RS232 and RS485/422, 300 to 19.2 Kb*1
-EIS-2B	**195**	Industrial iServer Microserver™, serves 32 devices
POWER SUPPLY		
	N/C	Standard power input: 90 to 240 Vac/dc, 50 to 400 Hz (no entry required)
-DC	**$25**	20 to 36 Vac/dc, 24 Vac*1
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	**N/C**	Factory setup and configuration
-FS(RTD-1N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	**N/C**	Factory scaled for MIL-T-7990B nickel RTD input,-40 to 300°C (-40 to 572°F)
SOFTWARE (REQUIRES NETWORK OPTION)		
OPC-SERVER LICENSE	**$295**	OPC server/driver software license

*1 ***"-DC", "-C24",*** *and* ***"-C4EI"*** *not available with excitation.*
2 Analog output is not available with ***"-AL"*** *units.*
3 ***"-SM"*** *option not avaialbe on CNiS strain models.*

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT 1	OUTPUT 2
2 CONTROL OUTPUTS			
CNi3233	**$195**	Relay	Relay
CNi3244	**195**	DC pulse	DC pulse
CNi3243	**195**	DC pulse	Relay
CNi3242	**195**	DC pulse	0.5 A SSR
CNi3222	**195**	0.5 A SSR	0.5 A SSR
CNi3223	**195**	0.5 A SSR	Relay
CNi3224	**195**	0.5 A SSR	DC pulse
CNi3253	**195**	Analog	Relay
CNi3254	**195**	Analog	DC pulse
CNi3252	**195**	Analog	0.5 A SSR
STRAIN/PROCESS INPUT WITH 2 CONTROL OUTPUTS			
CNiS3233	**$240**	Relay	Relay
CNiS3234	**240**	Relay	DC pulse
CNiS3242	**240**	DC pulse	0.5 A SSR
CNiS3244	**240**	DC pulse	DC pulse
CNiS3243	**240**	DC pulse	Relay
CNiS3222	**240**	0.5 A SSR	0.5 A SSR
CNiS3223	**240**	0.5 A SSR	Relay
CNiS3224	**240**	0.5 A SSR	DC pulse
CNiS3253	**240**	Analog	Relay
CNiS3254	**240**	Analog	DC pulse
CNiS3252	**240**	Analog	0.5 A SSR

Comes with DPi32-B-COVER and complete operator's manual.

Ordering Examples: CNi3222-C24, *½ DIN PID controller with 2 solid-state relays for PID control and serial communications, both RS232 and RS485, $195 + 60 =* ***$255.***

CNiS322-AL, *½ DIN strain/process controller, limit alarm version with SSR output,* ***$240.***

iSeries ⅛ DIN ULTRA COMPACT CASE TEMPERATURE, PROCESS AND STRAIN PID CONTROLLERS

MONOGRAM®

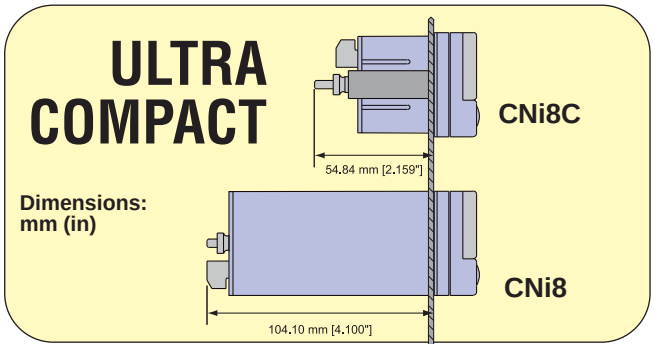
CNi8C Series Starts at $355

CNi8C33, $355, shown smaller than actual size.

MADE IN USA

- Ultra Compact ⅛ DIN Controller
- Built-in Excitation
- NEMA 4 (IP65) Bezel
- RS232, RS422/485 or Modbus Communication, Menu Selectable

The ultra-compact CNi8C and CNi8SC controllers are similar to the full size CNi8 in an ultra-compact enclosure. Only 51 mm (2") behind the panel.



Options

ORDERING SUFFIX	ADD'L PRICE	DESCRIPTION
-AL	N/C	Limit alarm version (simplified menu, alarms only, no PID control)*2
-SM	N/C	Simplified menu (on/off control or alarms, no PID)*3
NETWORK OPTIONS		
-C24	$60	Isolated RS232 and RS485/422, 300 to 19.2 Kb*1
POWER SUPPLY		
	N/C	Standard power input: 90 to 240 Vac/dc, 50 to 400 Hz (no entry required)
-DC	$25	12 to 36 Vac/dc, 24 Vac*1
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	N/C	Factory setup and configuration
-FS(RTD-1N)	N/C	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	N/C	Factory scaled for MIL-T-7990B nickel RTD input,-40 to 300°C (-40 to 572°F)
SOFTWARE (REQUIRES NETWORK OPTION)		
OPC-SERVER LICENSE	$295	OPC server/driver software license

*1 *"-DC", "-C24",* and *"-C4EI"* not available with excitation.
*2 Analog output is not available with *"-AL"* units.
*3 *"-SM"* option not avaialbe on CNiS strain models.

To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT 1	OUTPUT 2
⅛ DIN COMPACT CASE WITH 2 CONTROL OUTPUTS			
CNi8C33	$355	Relay	Relay
CNi8C34	355	Relay	DC pulse
CNi8C44	355	DC pulse	DC pulse
CNi8C22	355	0.5 A SSR	0.5 A SSR
CNi8C23	355	0.5 A SSR	Relay
CNi8C24	355	0.5 A SSR	DC pulse
CNi8C53	355	Analog	Relay
CNi8C54	355	Analog	DC pulse
CNi8C52	355	Analog	0.5 A SSR
⅛ DIN COMPACT CASE STRAIN/PROCESS INPUT WITH 2 CONTROL OUTPUTS			
CNiS8C33	$415	Relay	Relay
CNiS8C44	415	DC pulse	DC pulse
CNiS8C43	415	DC pulse	Relay
CNiS8C42	415	DC pulse	0.5 A SSR
CNiS8C22	415	0.5 A SSR	0.5 A SSR
CNiS8C23	415	0.5 A SSR	Relay
CNiS8C24	415	0.5 A SSR	DC pulse
CNiS8C53	415	Analog	Relay
CNiS8C54	415	Analog	DC pulse
CNiS8C52	415	Analog	0.5 A SSR

Comes with complete operator's manual.
Ordering Examples: CNi8C33, *⅛ DIN compact universal*

iSeries COMMON SPECIFICATIONS (ALL i/8, i/16, i/32 DIN)

UNIVERSAL TEMPERATURE AND PROCESS INPUT (MODEL "I")

Accuracy: ±0.5°C temp; 0.03% reading
Resolution: 1°/0.1°; 10 µV process
Temperature Stability:
RTD: 0.04°C/°C
TC @ 25°C (77°F): 0.05°C/°C
Cold Junction Compensation
Process: 50 ppm/°C
NMRR: 60 dB
CMRR: 120 dB
A/D Conversion: Dual slope
Reading Rate: 3 samples/s
Digital Filter: Programmable
Display: 4-digit 9-segment LED 10.2 mm (0.40"); i32, i16, i16D, i8DV 21 mm (0.83"); i8 10.2 mm (0.40") and 21 mm (0.83"); i8DH **RED**, **GREEN**, and **AMBER** programmable colors for process variable, setpoint and temperature units
Input Types: Thermocouple, RTD, analog voltage, analog current
Thermocouple Lead Resistance: 100 Ω max
Thermocouple Types (ITS 90): J, K, T, E, R, S, B, C, N, L
RTD Input (ITS 68): 100/500/1000 Ω Pt sensor, 2-, 3- or 4-wire; 0.00385 or 0.00392 curve
Voltage Input: 0 to 100 mV, 0 to 1 V, 0 to 10 Vdc
Input Impedance: 10 MΩ for 100 mV 1 MΩ for 1 or 10 Vdc
Current Input: 0 to 20 mA (5 Ω load)
Configuration: Single-ended
Polarity: Unipolar
Step Response: 0.7 sec for 99.9%
Decimal Selection:
Temperature: None, 0.1
Process: None, 0.1, 0.01 or 0.001
Setpoint Adjustment: -1999 to 9999 counts
Span Adjustment: 0.001 to 9999 counts
Offset Adjustment: -1999 to 9999
Excitation (Not Included with Communication): 24 Vdc @ 25 mA (not available for low-power option)

UNIVERSAL STRAIN AND PROCESS INPUT (MODEL "IS")

Accuracy: 0.03% reading
Resolution: 10/1µV
Temperature Stability: 50 ppm/°C
NMRR: 60 dB
CMRR: 120 dB
A/D Conversion: Dual slope
Reading Rate: 3 samples/s
Digital Filter: Programmable
Input Types: Analog voltage and current
Voltage Input: 0 to 100 mVdc, -100 mVdc to 1 Vdc, 0 to 10 Vdc
Input Impedance: 10 MΩ for 100 mV; 1 MΩ for 1 V or 10 Vdc
Current Input: 0 to 20 mA (5 Ω load)
Linearization Points: Up to 10
Configuration: Single-ended
Polarity: Unipolar
Step Response: 0.7 sec for 99.9%
Decimal Selection: None, 0.1, 0.01 or 0.001
Setpoint Adjustment: -1999 to 9999 counts
Span Adjustment: 0.001 to 9999 counts
Offset Adjustment: -1999 to 9999
Excitation (Optional In Place Of Communication): 5 Vdc @ 40 mA; 10 Vdc @ 60 mA

CONTROL

Action: Reverse (heat) or direct (cool)
Modes: Time and amplitude proportional control; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative and anti-reset windup, and on/off
Rate: 0 to 399.9 s
Reset: 0 to 3999 s
Cycle Time: 1 to 199 s; set to 0 for on/off
Gain: 0.5 to 100% of span; setpoints 1 or 2
Damping: 0000 to 0008
Soak: 00.00 to 99.59 (HH:MM), or OFF
Ramp to Setpoint: 00.00 to 99.59 (HH:MM), or OFF
Auto Tune: Operator initiated from front panel

CONTROL OUTPUT 1 AND 2

Relay: 250 Vac or 30 Vdc @ 3 A (resistive load); configurable for on/off, PID and ramp and soak
Output 1: SPDT, can be configured as alarm 1 output
Output 2: SPDT, can be configured as alarm 2 output
SSR: 20 to 265 Vac @ 0.05 to 0.5 A (resistive load); continuous
DC Pulse: Non-isolated; 10 Vdc @ 20 mA
Analog Output (Output 1 Only): Non-isolated, proportional 0 to 10 Vdc or 0 to 20 mA; 500 Ω max

NETWORK AND COMMUNICATIONS

Ethernet: Standards compliance IEEE 802.3 10 Base-T
Supported Protocols: TCP/IP, ARP, HTTPGET
RS232/RS422/RS485: Selectable from menu; both ASCII and Modbus protocol selectable from menu; programmable 300 to 19.2 Kb; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status
RS485: Addressable from 0 to 199
Connection: Screw terminals

ALARM 1 AND 2 (PROGRAMMABLE)

Type: Same as output 1 and 2
Operation: High/low, above/below, band, latch/unlatch, normally open/normally closed and process/deviation; front panel configurations
Analog Output (Programmable): Non-isolated, retransmission 0 to 10 Vdc or 0 to 20 mA, 500 Ω max (output 1 only); accuracy is ± 1% of FS when following conditions are satisfied: input is not scaled below 1% of input FS, analog output is not scaled below 3% of output FS

GENERAL

Power: 90 to 240 Vac ±10%, 50 to 400 Hz*, 110 to 375 Vdc, equivalent voltage
Low Voltage Power Option: 24 Vac**, 12 to 36 Vdc for i/8, i/16. 1/32; 20 to 36 Vdc for CNi8DH, CNi8DV, CNi16D from qualified safety approved source

ISOLATION

Power to Input/Output: 2300 Vac per 1 minute test
For Low Voltage Power Option: 1500 Vac per 1 minute test
Power to Relay/SSR Output: 2300 Vac per 1 minute test
Relay/SSR to Relay/SSR Output: 2300 Vac per 1 minute test
RS232/485 to Input/Output: 500 Vac per 1 minute test
Environmental Conditions:
All Models: 0 to 55°C (32 to 131°F) 90% RH non-condensing
CNi8DV, CNi8DH, CNi16D: 0 to 50°C (32 to 122°F), 90% RH non-condensing (for UL only)
Protection:
CNi32, CNi16, CNi8C: NEMA 4X/ Type 4 (IP65) front bezel
CNi8, CNi8DH, CNi8DV: NEMA 1/ Type 1 front bezel
Approvals: UL, C-UL, CE per EN61010- 1:2001
Dimensions:
i/8 Series: 48 H x 96 W x 127 mm D (1.89 x 3.78 x 5")
i/16 Series: 48 H x 48 W x 127 mm D (1.89 x 1.89 x 5")
i/32 Series: 25.4 H x 48 W x 127 mm D (1.0 x 1.89 x 5")
Panel Cutout:
i/8 Series: 45 H x 92 mm W (1.772" x 3.622"), ⅛ DIN
i/16 Series: 45 mm (1.772") square, ¹⁄₁₆ DIN
i/32 Series: 22.5 H x 45 mm W (0.886" x 1.772"), ¹⁄₃₂ DIN
Weight:
i/8 Series: 295 g (0.65 lb)
i/16 Series: 159 g (0.35 lb)
i/32 Series: 127 g (0.28 lb)

** No CE compliance above 60 Hz.*
*** Units can be powered safely with 24 Vac power, but no certification for CE/UL are claimed.*

⅛ DIN ULTRA HIGH BEYOND INFINITY® PERFORMANCE METER

DP41-B
$595

MADE IN USA CE

- Universal Inputs: DC Voltage/ Current, T/C, RTD, and Strain
- Accuracy: ±0.005% Rdg
- 6-Digit Color-Changing LED Display
- Up to 166 Readings per Second
- 10-Point Linearization
- 4 Isolated Open-Collector Outputs
- Isolated Analog Output (Optional)
- 4 Relays (Optional)
- Optional Ethernet or RS232/RS485 Communications
- In-Line Calibration
- NEMA 4 (IP65) Front Bezel

DP41-B, $595, shown actual size.

OMEGA® goes BEYOND INFINITY® with the all-new DP41-B. The OMEGA INFINITY® set the world standard for accuracy, performance, and quality in digital panel meters. The DP41-B raises the bar even higher with an accuracy rating of up to ±0.005% of reading, and up to 166 readings per second.

It is also extremely versatile, handing a broad spectrum of DC voltage and current ranges, 9 thermocouple types, multiple RTDs, and signals from strain gage transducers such as load cells and pressure transducers, as well as potentiometric inputs. And it features user-programmable 10-point linearization of input signals.

Other standard features include built-in excitation to power virtually any sensor or transmitter, and 4 isolated open-collector outputs for control or alarms. The big, bright, 6-digit patented LED display can be programmed to change color between **RED**, **AMBER**, and **GREEN** at any setpoint. The digits are 58% bigger than those in typical displays. Output options include isolated programmable analog voltage or current and 4 relays.

Embedded Internet and Serial Communications

With the "Embedded Internet" feature (specify "EI" option), the DP41-B connects directly to an Ethernet network and transmits data in standard TCP/IP packets.
It even serve Web pages over a LAN or the Internet. The DP41-B is also available with serial communications. With the "C24" option, the user can select from the pushbutton menu between RS232, RS422, and RS485, with straightforward ASCII commands or MODBUS.

Programmable Color Display

The DP41-B has totally programmable color displays. The display can be programmed to change color at any setpoint or alarm point.

change color
At Any Setpoint

Totally Programmable Color Displays

The new BEYOND INFINITY® DP41-B meter has totally programmable color displays.

The display can be programmed to change color at any setpoint or alarm point.

Process product line continues to expand, visit omegamation.com for new details!

HOTLINE TO AUTOMATION PRODUCTS 1-888-55-66342™ 1-888-55-OMEGA

For example, one could use **GREEN** during warm-up, switch to **AMBER** for the normal operating range, and choose **RED** to signal an alarm condition. The changes in color are visible from a distance, allowing the user to react to changing conditions. The colors can be programmed to change back when the value drops back below the alarm point or to "latch" on until being reset by the operator.

The instrument can also display only 1 unchanging color: **GREEN, AMBER,** or **RED.** This lets an operator identify process values in 3 separate locations or display 3 different measurements, such as temperature, pressure, and flow.

QUALITY and TECHNOLOGY

The innovative OMEGA® DP41-B meters are backed by a 5-year warranty. Using COB (chip-on-board) and SMT (surface mount technology) assembly techniques and automation, the DP41-B packs a wealth of power and features into a compact package. Every instrument is thoroughly calibrated and tested at several stages throughout production. The DP41-B has very high accuracy: 0.005% of reading. The analog-to-digital conversion uses patented algorithms and smart filtering.

Universal Inputs

The DP41-B offers a broad selection of signal inputs, selectable from the front-panel pushbutton menu or by serial or Ethernet communications.

Nine Thermocouple Types

The DP41-B handles 9 thermocouple types: K, J, T, E, R, S, B, N, and J DIN. The patented thermocouple linearization algorithms produce very high accuracy.

Most Accurate RTD Measurements

The DP41-B works with a wide selection of RTDs. It handles Pt 0.00385 and 0.00392 curves, any 6 to 6000 Ω NIST or DIN Pt, and any linear RTD (10 Ω Cu, etc.). A choice of 2-, 3-, or 4-wire RTD connections ensures high accuracy.

Process Voltage and Current

The OMEGA® DP41-B measures process voltage in ranges of 0 to 100 mV, 0 to 1 V, 0 to 10 V, 0 to 100 V (unipolar), ±50 mV, ±500 mV, ±5 V, ±50 V (bipolar), and process current from 0 to 20 mA or 4 to 20 mA

Strain Gage

The DP41-B measures inputs from load cells, pressure transducers, and most strain gage sensors. Input can be linearized over 10 points on ranges 0 to 100 mV, 0 to 1 V, 0 to 10 V, 0 to 100 V (unipolar), ±50 mV, ±500 mV, ±5 V, and ±50 V (bipolar), in addition to 0 to 20 mA. Excitation for transducers of 10 and 24 V is standard.

DP41-B rear view, $595, shown smaller than actual size.

Analog Output

The optional analog output covers a range of 0 to 10 Vdc or 0 to 20 mA, selectable as a calibrated retransmission of the process value.

Built-In Excitation

The DP41-B features built-in excitation. The user can capture and display peak and valley levels of input signals, useful in such applications as destructive and pressure testing. Five different excitation levels are available for sensors such as transmitters (24 Vdc @ 25 mA), strain gages (1.5 to 10 Vdc @ up to 60 mA max), and slide-wire potentiometers (1.25 Vdc @ 30 mA).

Free Software

The OMEGA® DP41-B comes with free software for easy setup, configuration, and data acquisition.

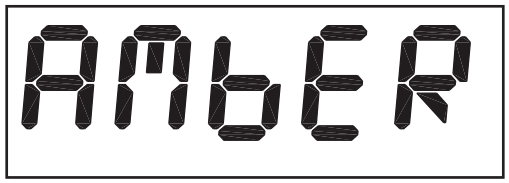
Free ActiveX Controls

Free ActiveX Controls make it easy to integrate the DP41-B with information systems that use "ActiveX Containers", such as Microsoft Visual Basic and Microsoft Excel, as well as with popular OLE- and OPC-compliant data acquisition, process-control, and industrial automation software from OMEGA®, GE Fanuc, Intellution, Rockwell Automation, Object Automation, iconics, and Wonderware, among others.

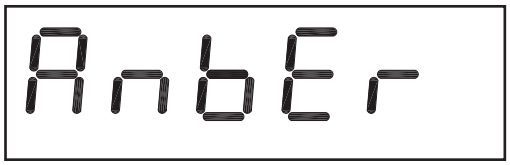
Free Factory Setup and Configuration

DP41-B meters/controllers can be preconfigured by the factory at no extra charge. The user specifies the input types,

The DP41-B has a unique 9-segment LED display, which makes alphanumeric representations much clearer. The 7-segment LED characters found on most instruments are adequate for presenting numbers, but not letters. Words are easier to read with the unique 9-segment LED characters on the DP41-B, which makes operating and programming easier.



9-Segment Display (Bigger)



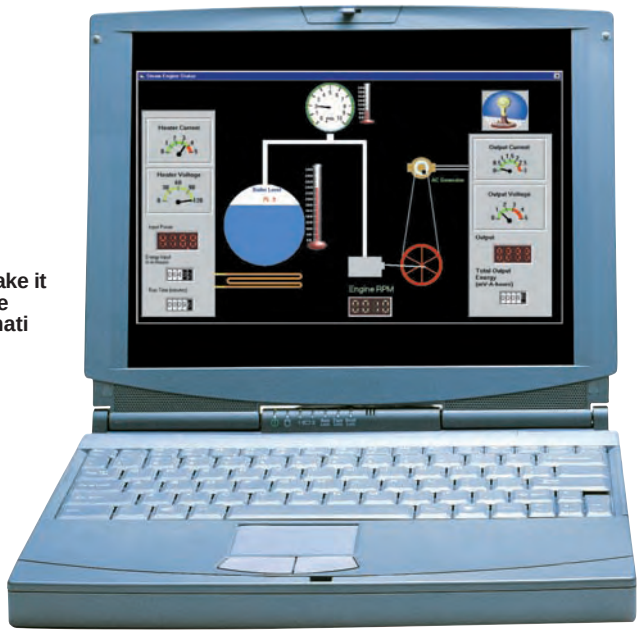
7-Segment Display (Smaller)

INFINITY® is a registered trademark of NEWPORT ELECTRONICS, INC.

scaling if applicable, setpoints, alarm points, etc., and we will program the instruments in our calibration lab before shipment. For a checklist of factory setup parameters, please consult the OMEGA® engineers. The factory setup and configuration option requires the serial communications "-C24" option.

Custom Configurations

Custom-color bezels and enclosures are available for original equipment manufacturers (OEMs); consult the OMEGA® OEM Group. DP41-B LED displays are considerably bigger and brighter than displays for conventional instruments with the same DIN size.



ActiveX controls make it easy to integrate the DP41-B with informati on systems.

SPECIFICATIONS

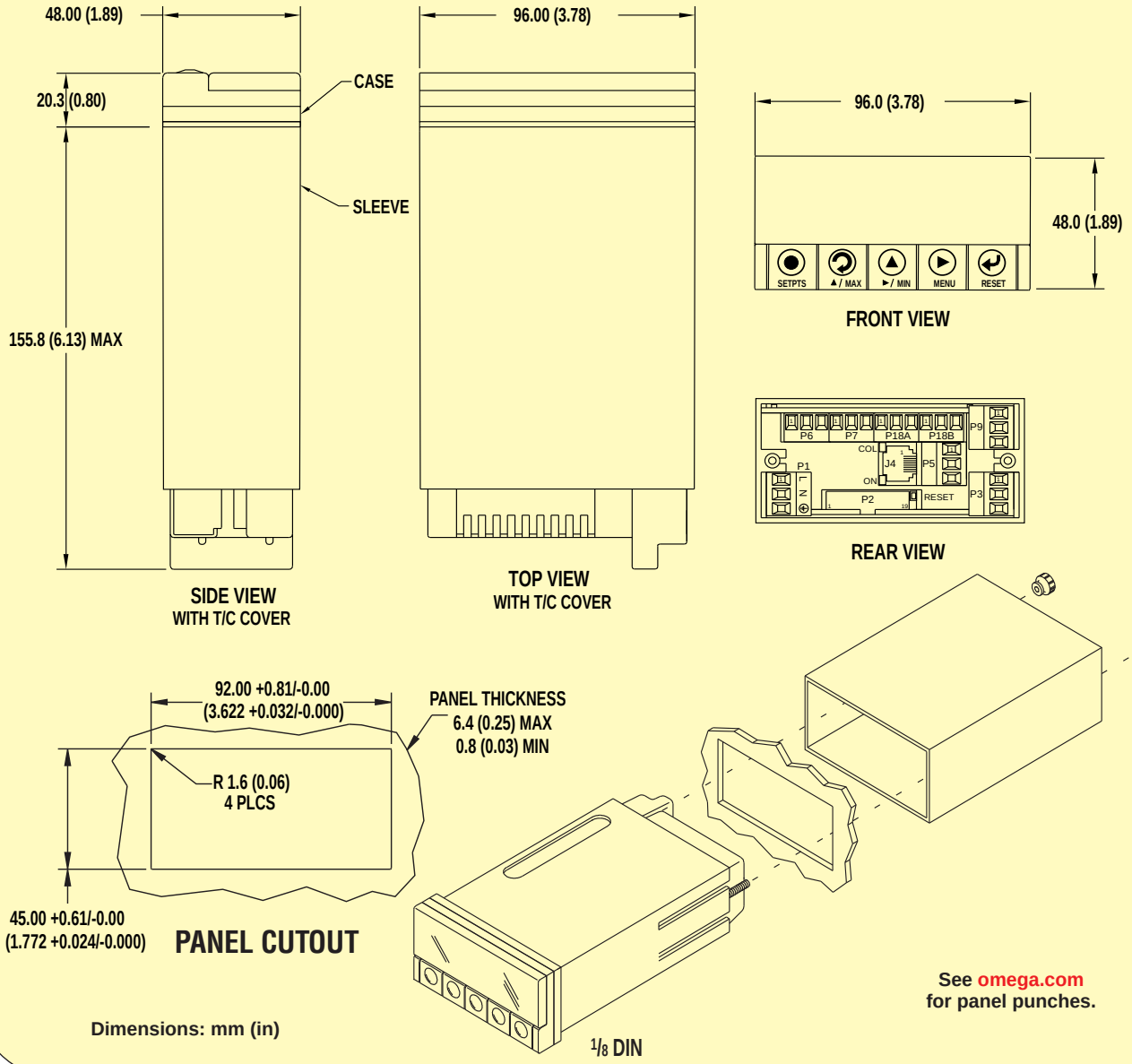
Accuracy: ±0.005% rdg
Span Temperature Coefficient: ±20 ppm
Power: 90 to 240 Vac
Normal-Mode Rejection: 60 dB
Common-Mode Rejection: 120 dB
Common-Mode Voltage: 1500 Vp per Hv test
Resolution: 24-bit
Reading Rate: 7 to 166 samples per second
Display: RED/AMBER/GREEN 6-digit, 9-segment; 17.3 H x 10.2 mm W (0.68 x 0.40"); 4 alarm indicators; °C, °F, and K
Panel Cutout: 45 H x 92 mm W (1.8 x 3.6"); ⅛ DIN
Setpoint Outputs: 4, isolated open collector; rated 150 mA at 1 V sink, 30 V open
4-Relay Option: Two 5 A and two 3 A relays; form "C", SPDT
Analog Output: 0 to 5 V/1 to 5 V/ 0 to 10 V/0 to 20 mA/4 to 20 mA, user selectable; 354 Vp isolation; 14-bit resolution; 0.1% accuracy; 6 ms step response
Ethernet: Standards compliance IEEE 802.3 10 Base-T
Protocols: TCP/IP, ARP, HTTPGET RS232/RS422/RS485/telnet simulation/tunneling
MODBUS: Selectable from menu
Voltage Input Ranges: 0 to 100 mV, 0 to 1 V, 0 to 10 V, 0 to 100 V, ±50 mV, ±500 mV, ±5 V, ±50 V
Current Input Ranges: 0 to 20 mA, 4 to 20 mA
Polarity: Unipolar/bipolar, programmable
Thermocouple Input Types: J, K, T, E, R, S, B, N, J DIN
RTD Input: Any 6 Ω to 6 kΩ NIST or DIN platinum and any linear RTD
RTD Connection: 2-, 3- or 4-wire
Sensor Excitation: 10 V at 30 mA; 24 V at 25 mA

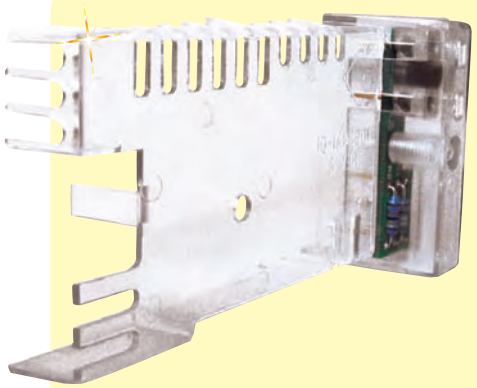
Input Types

SENSOR TYPE	RANGE	ACCURACY*
J Iron–Constantan	-210 to 760°C -346 to 1400°F 63.2 to 1673.2 K	0.2°C 0.3°F 0.2 K
K Chromel–Alumel	-250 to 1250°C -418 to 2282°F 23 to 977.2 K	0.2°C 0.3°F 0.2 K
T Copper-Constantan	-270 to 400°C -454 to 752°F 3.2 to 673.2 K	0.2°C 0.3°F 0.2 K
E Chromel-Constantan	-270 to 1000°C -454 to 1832°F 3.2 to 1273.2 K	0.2°C 0.3°F 0.2 K
R Pt/13%Rh–platinum	-50 to 1768°C -58 to 3214°F 223.2 to 2041.2 K	0.2°C 0.3°F 0.2 K
S Pt/10%Rh–platinum	-50 to 1768°C -58 to 3214°F 223.2 to 2041.2 K	0.2°C 0.3°F 0.2 K
B Pt/30%Rh–Pt/6%Rh	+100 to 1820°C +212 to 3300°F 373.2 to 2093.2 K	0.3°C 0.5°F 0.3 K
N OMEGALLOY*1 nicrosil–nisil	-270 to 1300°C -454 to 2372°F 3.2 to 1573.2 K	0.2°C 0.3°F 0.2 K
J DIN Iron-Constantan	-200 to 900°C -328 to 1652°F 73.2 to 1173.2 K	0.6°C 1.0°F 0.6 K

SENSOR TYPE	RANGE	ACCURACY*
RTD 1 10 Ω Copper	-200 to 200°C -328 to 392°F 73.2 to 473.2 K	1.0°C 2.0°F 1.0 K
RTD 2 100 Ω Pt 0.00385	-200 to 900°C -328 to 1652°F 73.2 to 1173.2 K	0.2°C 0.3°F 0.2 K
RTD 3 100 Ω Pt 0.00392	-200 to 850°C -328 to 1562°F 73.2 to 1123.2 K	0.2°C 0.3°F 0.2 K

** Includes (all ±) maximum linearization error.*





DP40B-TC field installable thermocouple temperature compensation connector kit, $25.

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
DP41-B	$595	Universal digital meter ("**-TC**" suffix required for thermocouple input)

Options and Accessories

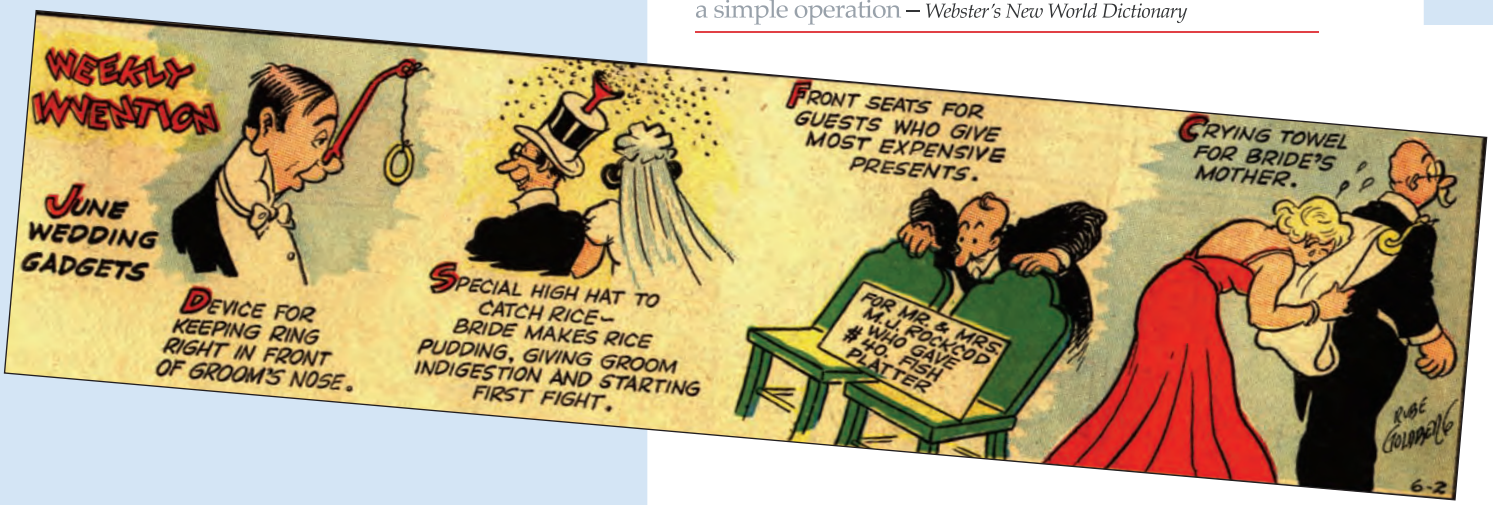
MODEL NO.	PRICE	DESCRIPTION
-TC	$25	Thermocouple temperature compensation connector kit
-4R	100	4-relay form "C" SPDT output board
-A	100	Isolated 14-bit analog output board
-C24	100	Serial communications, RS232 + RS485 + MODBUS*
-DC	50	Low voltage power option 10 to 32 Vdc
-EI	100	Ethernet/Internet*

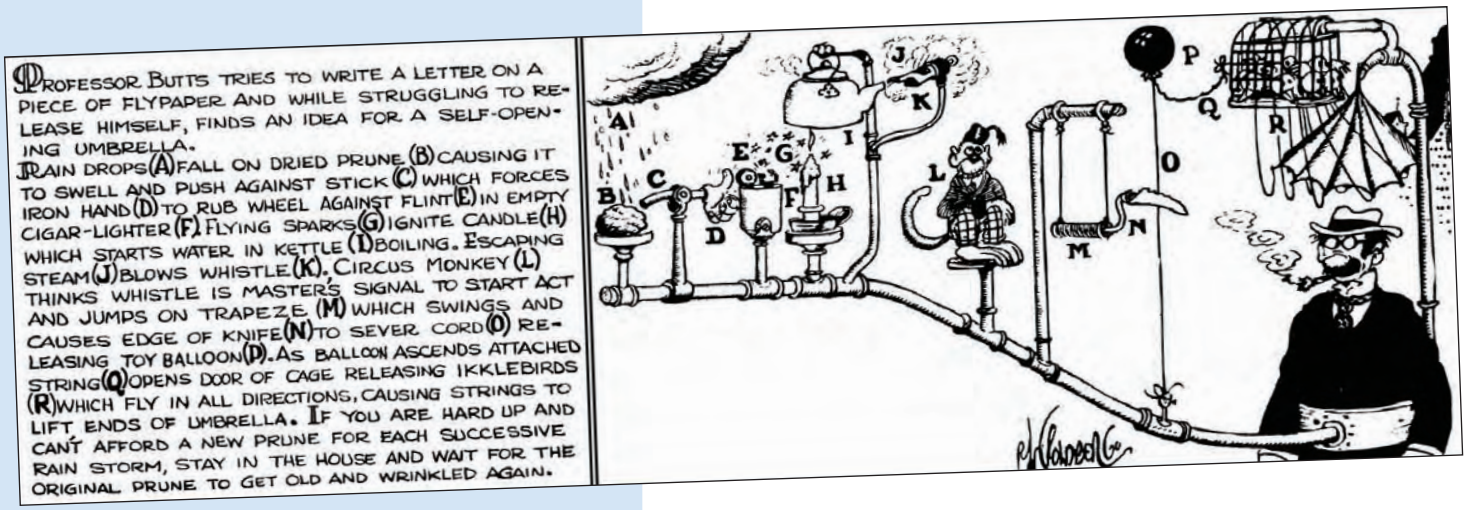
Comes with complete operator's manual.
Ordering Example: DP41-B-TC-4R-A,** universal digital meter with optional thermocouple input module, 4-relay output board and analog output board, $595 + 25 +100 + 100 =* ***$820.
** Mutually exclusive; can order 1 communication/Ethernet option per unit.*
All output options are on printed circuit boards that can be installed at the factory or in the field.

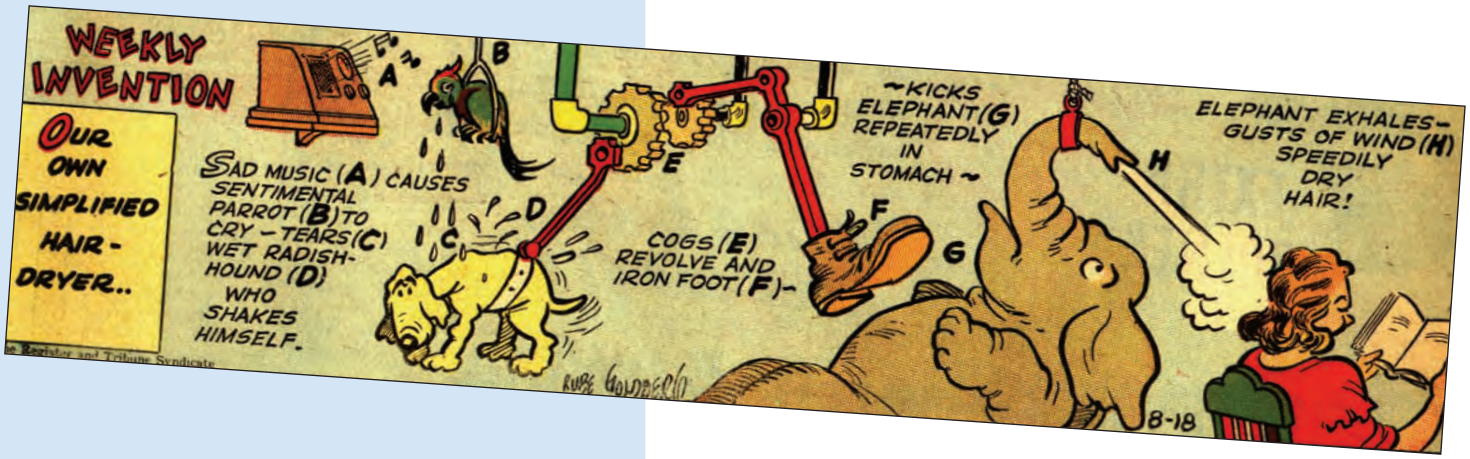
Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*







MULTI-FUNCTION METER FOR BATCH CONTROL, RATE INDICATION AND TOTALIZATION

DPF5100 Starts at $380

MADE IN USA

GET IT FIXED, GET A FREE LOANER!

- 5-Year Warranty
- Frequency Ratemeter
- Up or Down Totalizer/ Batch Controller
- RS232C and HI, LO, and GO Open-Collector Outputs
- Analog Output for Rate or Total (Optional)
- NEMA 4 Front Bezel

The DPF5100 Series microprocessor-based, 6-digit, ⅛ DIN panel meters can be configured by front-panel keys or via a PC as a frequency meter/tachometer, frequency-ratio meter, period/period-average meter, time-interval/time-interval-average meter, reset stopwatch, cumulative timer or totalizer/ 1-stage batch controller.

Five Operating Modes

In the frequency meter, the minimum display update rate is equal to 1 period of the frequency input. Thus, very low frequency measurements are displayed and updated faster than on most conventional frequency meters. Only 2 sensors are required to measure the rate of a moving object. The DPF5100 can be set up as a frequency-ratio meter, ideal for monitoring flow ratios.

The DPF5100 can also function as an up or down totalizer/1-stage batch controller at rates up to 7 MHz. The display capacity is -99,999 to 999,999 counts, with exponential format up to 9.99 E9. The latest reading is automatically saved in non-volatile RAM and is restored on power-up.

SPECIFICATIONS

TTL INPUT

Protection Levels (Jumper-Selectable): 7 MHz, 0 to 5 V; 100 kHz, -20 to 25 V; 3 kHz, -20 to 25 V

ISOLATED INPUT

Sensitivity (Square-Wave Input): ±10 mV, 0 to 1 kHz; ±25 mV, 0 to 1 kHz; ±50 mV, 100 kHz (DPF5300)

NPN or PNP Open-Collector Sensor Excitation Output: 12.4 V @ 20 mA

DPF5200, $445, shown with FP7000 Series paddlewheel flow sensor, $200, sold separately. Visit omega.com for details.

Shown smaller than actual size.

COMMON SPECIFICATIONS ALL INPUT TYPES

Number of Inputs: 1 or 2 (2 inputs for frequency ratio and time interval only)

Update Rate: 60 ms to 99.99 s; field programmable

OPERATION MODES

Frequency/Tachometer Mode

Frequency Range: 10-6 Hz to 7 MHz

Accuracy at 25°C (77ºF) (Square Wave): ±0.0002% (2 ppm)

Totalizer Display–Offset (Preset): -99,999 to 999,999

ISOLATED ANALOG INPUT

Accuracy: Better than 99.9%

Non-Linearity: 0.05% FS

Isolation: 350 Vdc between output and input

Power: 115 Vac ±10%, 47 to 400 Hz; optional 230 Vac, 10 to 32 Vdc

AC Frequency: 49 to 440 Hz

Power Consumption, Typical: 3 W

Battery Backup: User-supplied 6 to 12 Vdc; 60 mA to maintain operation, 400 mA with display

Dimensions: 48 H x 96 W x 150 mm D (1.9 x 3.8 x 5.9")

Cutout: 45 H x 92 mm W (1.8 x 3.6")

ON/OFF CONTROL AND ALARM OUTPUTS

Standard: 3 open-collector transistors, rated 150 mA sink, 30 V

Relay (Optional): 2 form "C" relays (SPDT) rated 6 A, 30 Vdc, or 240 Vac, resistive load (for rate alarm or batch control)

Analog Output (Optional): Isolated, scalable, internally powered and field selectable for 0 to 10 V, 4 to 20 mA or 0 to 20 mA; rangeable over 4 leftmost or rightmost digits; suitable for rate or total display

Min Impedance for 10 V: 500 Ω

Max External Impedance for 20 mA: 600 Ω

OMEGA MONOGRAM® SERIES

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
DPF5100	$380	Meter for 2 TTL/CMOS inputs
DPF5200	445	Same as DPF5100, with sensor excitation for 1 channel
DPF5300	475	Meter with conditioner for 1 low-level and 1 TTL/CMOS input
DPF5400	490	Meter with conditioner for 2 channels
DPF5500	515	Meter for analog mA and voltage inputs (1 channel)

Comes with complete operator's manual.
Ordering Example: DPF5100-A,** meter with analog output, $380 + 155 = **$535.

Power and Output Options

ORDER SUFFIX	ADD'L PRICE	DESCRIPTION
-A*	$155	Analog output
-BCD*	110	BCD output
-R*	80	6 A dual relays
-10/32VDC	80	10 to 32 Vdc power
-230VAC	N/C	230 Vac power

** Options are mutually exclusive.*

Accessories

MODEL NO.	PRICE	DESCRIPTION
DPF6D	$28	PC-compatible, menu-driven setup program for RS232C output

VERY-HIGH-PERFORMANCE PROCESS TIMER/CONTROLLER

MONOGRAM® SERIES

PTC41
$395

MADE IN USA

- 6-Digit Alphanumeric Display
- Configurable Via Front-Panel Pushbuttons or RS232/RS485 Communications
- 8 Built-In Time Bases
- Resolution to 0.01 Second
- Count Up or Down Modes
- 4 Isolated Open-Collector Outputs
- 5 Controller Output Modes
- Time or Day Clock
- Battery Backup—Optional
- NEMA 4 Front Bezel

PTC41, $395, shown smaller than actual size.

The PTC41 multipurpose panel meter functions as a clock/timer controller or stopwatch. The unit features 8 different time bases along with a built-in date function. Five controller output modes enable the user to program the unit for virtually any timer control application.

The PTC41 is perfectly suited for life cycle testing, turning 4 loads on and off based on timing cycle. The clock time base is derived from the 50 or 60 Hz power line and from the internal crystal oscillator.

Front-panel pushbuttons allow configuration and access to the meter's many features. These features can also be accessed through RS232 or RS485 serial communications. The front panel displays values and messages with six 14-segment LEDs.

SPECIFICATIONS

Accuracy: Max error, ±50 ppm over full temp range; warm-up to rated accuracy, 55 min
Display: 6-digit, 14-segment LED, 14.2 mm H (0.56"); 4 LED outputs to indicate ON or ACTIVE mode
Display Modes: 12-hour clock, 24-hour clock, 99-day, 99-hour, 99-minute, 999999-hour, 9999.99-hour, 9999.99-minute, 9999.99-second
TTL Outputs: 4, standard; rated 150 mA at 1 V sink: 30 V open
Relay Outputs (Optional): Dual relays, form "C", 7 A at 30 Vdc or 230 Vac
Four-Relay Board: Dual 7 A plus dual 1 A form "C" relays
Power: 115 or optional 230 Vac ±10%, 49 to 440 Hz (to 440 Hz with 110 or 220 V min)
Power Consumption: 3 to 10 W max

GENERAL

Input Threshold: 1 to 3.5 V
Protection Level: 24 Vdc
Connection: Two 3-socket input plugs
Input Resistance: 30 kΩ pull-up resistor to 5 V
Operating Temp Range: 0 to 50°C (32 to 122°F)
Relative Humidity: 90% at 40°C (104°F), non-condensing
Dimensions: 48 H x 96 W x 156 mm D (1.89 x 3.78 x 6.13")
Panel Cutout: 45 H x 96 mm W (1.772 x 3.622"); ⅛ DIN
Weight: 574 g (1.27 lb)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
PTC41	$395	Programmable timer

Accessories

MODEL NO.	PRICE	DESCRIPTION
DP40-R	$75	Dual 7 A mechanical relays
DP40-R4	175	Dual 7 A and dual 1 A relays
DP40-S24	110	Isolated RS232C/RS485 communications
PTC41-BATTBKUP	85	Battery backup

Ordering Example: PTC41-BB1, *programmable timer with battery backup,* ***DP40-S24,*** *RS232C communications, $395 + 85 + 110 =* ***$590.***

Battery Backup and Power Options

ORDER SUFFIX	PRICE	DESCRIPTION
-BB1	$85	Battery backup
-230	N/C	230 Vac power

PROGRAMMABLE TIMER

PTC-12
$135

1 YEAR WARRANTY

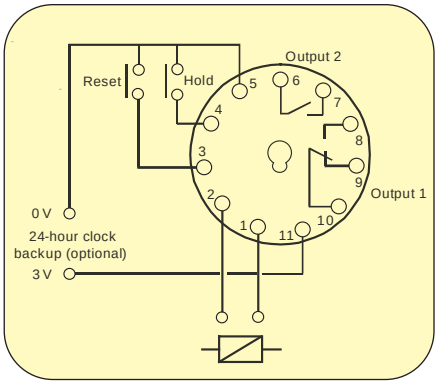
- 9 Programmable Modes
- 6 Timing Ranges
- Security Code
- 2- or 1-Timed plus 1 Instantaneous Contact
- Programmable Reset Function
- External Hold and Reset
- LED Status and Timing Indicators

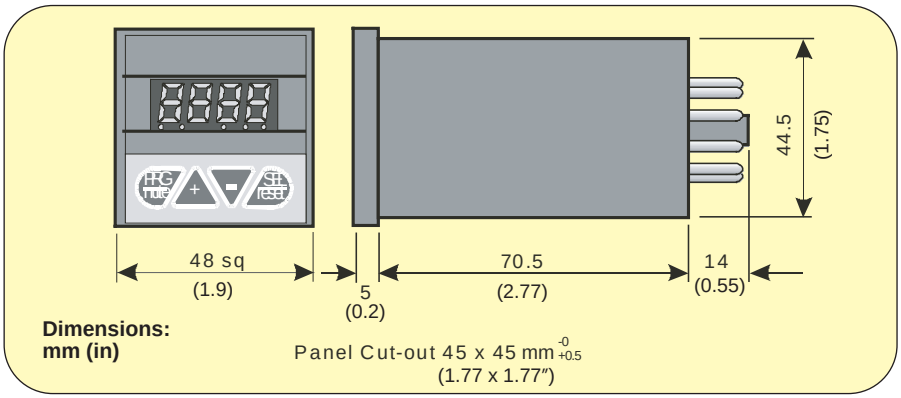
PTC-12, $135, shown larger than actual size

The PTC-12 programmable timer, packaged in a standard ⅛ DIN 48 x 48 mm (1.9 x 1.9") housing, is an extremely versatile product offering nine operating modes applied to two timed output relay contacts. When only one of the timers is being used, the other output acts as a set of instantaneous changeover contacts. The single model provides timing from 0.1 seconds to 100 hours.

SPECIFICATIONS

Timing Ranges: 0 to 999.9 sec, 0 to 9999 sec,0 to 9999 min, 0 to 99 min 59 sec, 0 to 99 hr 59 min, 23:59 in 24 hr clock mode
Timing Modes: DE, DDE, DP, CCT, DE-2, IT-2, DE-IT, DD-2, 24-hour clock
Supply Voltage: 12 to 24 Vac/Vdc
Supply Variation: ±10% of supply voltage
Battery Backup: External 3 Vdc to retain clock on 24 hr mode only at loss of supply voltage
Power Drain: 3 Va max
Contact Ratings:
OP1: 8 A @ 240 Vac, SPDT
OP2: 5 A @ 240 Vac resistive, SPST
Reset Time: 100 msec max
Ambient Conditions:
Working Temp: 0 to 50°C (32 to 122°F)
Storage Temp: 0 to 70°C (32 to 158°F)
Approvals: Complies with CE directives EN50081-1 and EN50082-1 for EMC and EN61010-1 for low voltage
Weight: 150 g (5.3 oz)





To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
PTC-12	$135	Programmable timer

Comes with complete operator's manual.
***Ordering Example: PTC-12,** programmable timer, **$135**.*

NEW PANEL MOUNT PROGRAMMABLE TIMER

PTC-13
$202

1 YEAR WARRANTY | CE | OMEGACARE Extended Warranty Program

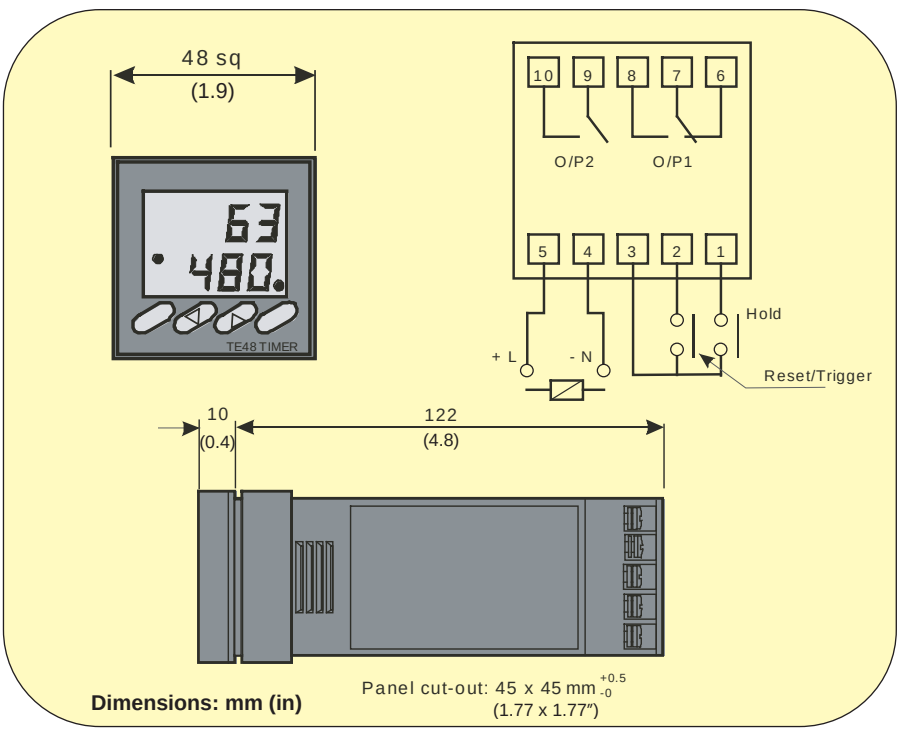
- 11 Programmable Modes
- 4 Timing Ranges
- Security Code
- 2- or 1-Time Plus 1 Instantaneous Contact
- Selectable Up/Down Timing
- Programmable Reset Function
- External Hold and Reset
- IP65 Water and Dust Protection
- Dual LED Displays

PTC-13, $202, shown larger than actual size.

The PTC-13 is a panel-mount programmable timer, packaged in a 1/16 DIN IP65 rated housing. It is an extremely versatile product offering 11 operating modes applied to two timed output relay contacts. When only one of the timers is being used, the other output acts as a set of instantaneous changeover contacts. A single model provides timing from 0.1 seconds to 100 hours.

SPECIFICATIONS

Timing Ranges: 0 to 999.9 sec, 0 to 999.9 min, 0 to 99 min 59 sec, 0 to 99 hr, 59 min
Timing Modes: DE, INT, DD, DE-2, IT-2, DD-2, DDE, DEIT, DP, CCT, SEQ, MON
Supply Voltage: 90 to 264 Vac @ 50/60 Hz or 12 to 24 Vac/Vdc
Supply Variation: ±10% of supply voltage
Power Drain: 8 Va max
Contact Ratings:
OP1: 8 A @ 240 Vac, SPDT
OP2: 5 A @ 240 Vac resistive, SPST
Reset Time: 100 msec max
Ambient Conditions:
Working Temp: 0 to 50°C (32 to 122°F)
Storage Temp: 0 to 70°C (32 to 158°F)
Approvals: Complies with CE directives EN50081-1 and EN50082-1 for EMC and EN61010-1 for low voltage
Weight: 250 g (9 oz)



Dimensions: mm (in)

Panel cut-out: 45 x 45 mm $^{+0.5}_{-0}$ (1.77 x 1.77")

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
PTC-13	$202	Programmable timer, AC voltage
PTC-13-LV	202	Programmable timer, DC voltage

Ordering Example: PTC-13,** programmable timer, AC voltage, **$202.

Process product line continues to expand, visit omegamation.com for new details!

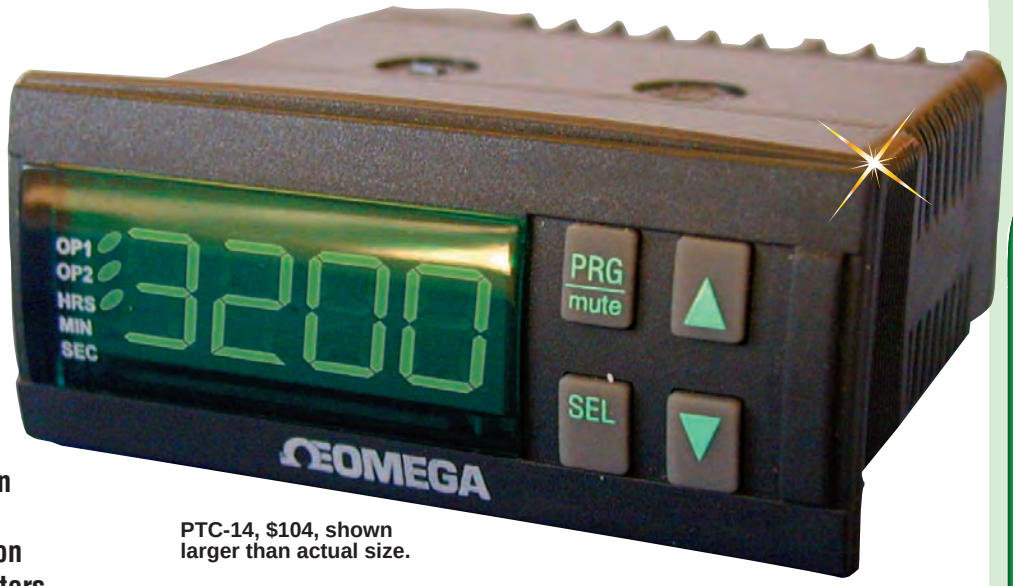
PROGRAMMABLE TIMER

NEW

PTC-14
$104

1 YEAR WARRANTY

OMEGACARE Extended Warranty Program



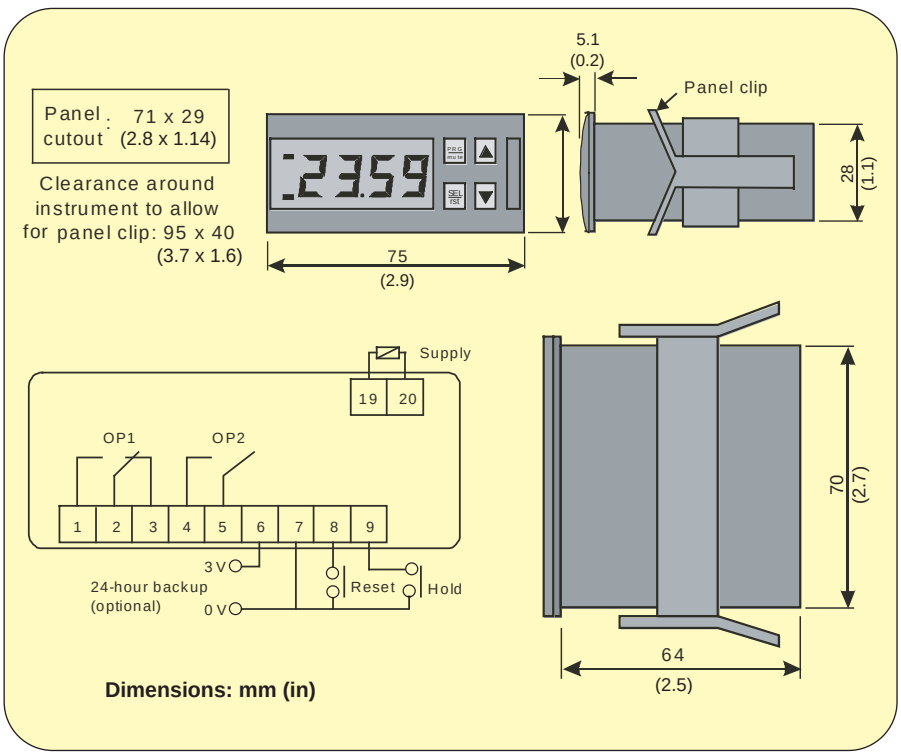
PTC-14, $104, shown larger than actual size.

- 9 Programmable Modes
- 6 Timing Ranges
- Security Code
- 2- or 1-Time plus 1 Instantaneous Contact
- Programmable Reset Function
- External Hold and Reset
- IP65 Water and Dust Protection
- LED Status and Timing Indicators

The PTC-14 programmable timer, packaged in a compact 75 x 33 x 69 mm (2.9 x 1.3 x 2.7") housing, is an extremely versatile product offering nine operating modes applied to two timed output relay contacts. When only one of the timers is being used, the other output acts as a set of instantaneous changeover contacts. The single model provides timing from 0.1 seconds to 100 hours.

SPECIFICATIONS

Timing Ranges: 0 to 999.9 sec, 0 to 9999 sec, 0 to 9999 min, 0 to 99 min 59 sec, 0 to 99 hr 59 min, 23:59 in 24 hr clock mode
Timing Modes: DE, DDE, DP, CCT, DE-2, IT-2, DE-IT, DD-2, 24-hour clock
Supply Voltage: 12 to 24 Vac/Vdc
Supply Variation: ±10% of supply voltage
Battery Backup: External 3 Vdc to retain clock on 24 hr mode only at loss of supply voltage
Power Drain: 3 Va max
Contact Ratings:
OP1: 8 A @ 240 Vac, SPDT
OP2: 5 A @ 240 Vac resistive, SPST
Reset Time: 100 msec max
Ambient Conditions:
Working Temp: 0 to 50°C (32 to 122°F)
Storage Temp: 0 to 70°C (32 to 158°F)
Approvals: Complies with CE directives EN50081-1 and EN50082-1 for EMC and EN61010-1 for low voltage
Weight: 140 g (5 oz)



Dimensions: mm (in)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
PTC-14	$104	Programmable timer, low voltage

Comes with complete operator's manual.
***Ordering Example: PTC-14**, programmable timer, low voltage, **$104**.*

NEW PROGRAMMABLE DIGITAL TIMER

PTC-15
$160

1 YEAR WARRANTY | CE | OMEGACARE Extended Warranty Program

- 5 Independent Timers or Relays
- 5 Programmable Timer Modes
- 3 Timing Ranges
- External Start or Reset
- Large Clear LED Display with Status Indicators
- Security Coded Program Access

PTC-15, $160, shown larger than actual size.

The PTC-15 timer is a programmable digital timer with five relay outputs, each of which has five selectable operating modes and an external start/reset function. Each output can be programmed either in timed or instantaneous mode, making it a particularly flexible unit for in-panel machine control applications that do not warrant the cost or complexity of an industrial PLC.

The PTC-15 is an economic alternative to individual DIN rail mounted timers or relays, reducing installation costs by keeping wiring to an absolute minimum.

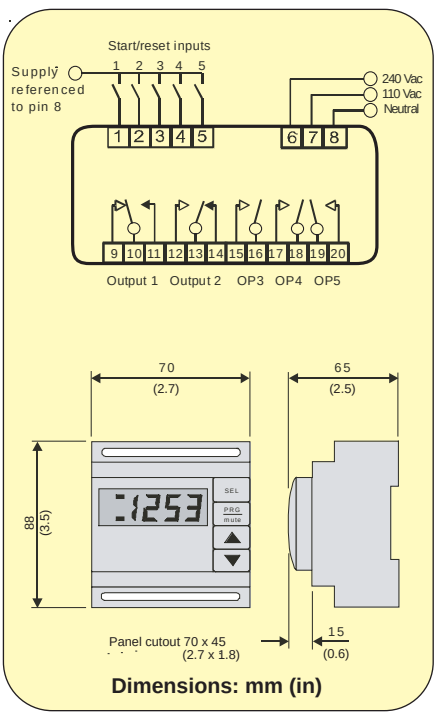
Simple programming, a large bright LED display, and a standard DIN rail mounting package only 70 mm (2.75") wide make the unit particularly attractive in applications where space is at a premium.

The PTC-15 covers time ranges from 0.1 seconds to 100 hours in one model and is available in 12/24 Vac/Vdc or 110 Vac and 230 Vac power supply versions. The programming routines are password protected for security.

SPECIFICATIONS

Timing Ranges: 0 to 999.9 sec, 0 to 99 min 59 sec, 0 to 99 hr 59 min
Timing Modes:
DE: Delay on energize
INT: Interval
DD: Delay on de-energize
CCT: Cycle timer with cycle limiter
DODO: Delay on/delay off
RLY: Externally activated relay

Supply Voltage: 110 Vac and 240 Vac or 12 to 24 Vac/Vdc
Supply Variation: ±10% of supply voltage
Power Drain: 3 Va max
Output Ratings:
OP1 and 2: SPDT relay
5 A @ 240 Vac resistive
OP 3 to 5: SPST relay
5 A @ 240 Vac resistive
Reset Time: 100 msec max
Ambient Conditions:
Working Temp: 0 to 50°C (32 to 122°F)
Storage Temp: 0 to 70°C (32 to 158°F)
Approvals: Complies with CE directives EN50081-1 and EN50082-1 for EMC and EN61010-1 for low voltage
Weight: 290 g (10.2 oz)



Dimensions: mm (in)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
PTC-15	$160	Programmable timer, AC voltage
PTC-15-LV	160	Programmable timer, low voltage

Comes with complete operator's manual.
***Ordering Example: PTC-15**, programmable timer, AC voltage, **$160**.*

Process product line continues to expand, visit omegamation.com for new details!

PROGRAMMABLE TIMER

NEW

PTC-16
$133

1 YEAR WARRANTY

OMEGACARE Extended Warranty Program

PTC-16, $133, shown larger than actual size.

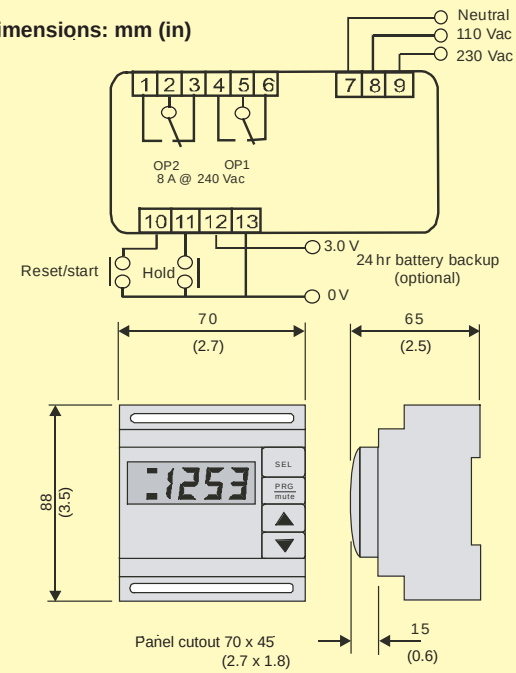
- 9 Programmable Modes
- 6 Timing Ranges
- Security Code
- 2- or 1-Timed plus 1 Instantaneous Contact
- CE EMC and Low-Voltage Compatible
- Programmable Reset Function
- External Hold and Reset
- Selectable Up/Down Timing
- LED Status and Timing Indicators

The PTC-16 timer has all of the features of the PTC-14 panel-mount timer in a DIN rail mounting package. The PTC-16 covers time ranges from 0.1 seconds to 100 hours in a single model and has 9 operating modes, 2 power supply options, and 2 timed relay outputs. When only one timed output is being used, the other output acts as a set of instantaneous changeover contacts.

SPECIFICATIONS

Timing Ranges: 0 to 999.9 sec, 0 to 9999 sec, 0 to 9999 min, 0 to 99 min 59 sec, 0 to 99 hr 59 min, 23:59 in 24 hr clock mode
Timing Modes:
DE, DDE, DP, CCT, DE-2, IT-2, DE-IT, DD-2, 24HR
Supply Voltage: 110 Vac and 230 Vac 50/60 Hz or 12 to 24 Vac/Vdc
Supply Variation: ±10% of supply voltage
Battery Backup: External 3 Vdc to retain clock on 24 hr mode only at loss of supply voltage
Power Drain: 3 Va max
Contact Ratings:
OP1: 8 A @ 240 Vac, SPDT
OP2: 5 A @ 240 Vac resistive, SPST
Reset Time: 100 msec max
Ambient Conditions:
Working Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: 0 to 70°C (32 to 158°F)
Approvals: Complies with CE directives EN50081-1 and EN50082-1 for EMC and EN61010-1 for low voltage
Weight: 240 g (8.5 oz)

Dimensions: mm (in)



To Order
(Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
PTC-16	**$133**	Programmable timer, AC voltage
PTC-16-LV	**133**	Programmable timer, low voltage

Comes with complete operator's manual.
***Ordering Example: PTC-16-LV**, programmable timer, low voltage, **$133**.*

NEW MULTI-PROGRAMMABLE TIMERS

PTC-20 Series Starts at $142

1 YEAR WARRANTY · MADE IN USA · c UL us · CE

- 1/16 DIN Cutout
- 3 Different Models: Standard, High-Performance, and Repeat Cycle
- 4-Digit Dual-Line Display Indicates Set Value and Time Value
- All Models Offer Multiple Field-Programmable Modes For Operation and Time Ranges
- NEMA 4 (IP65) Rated for Use in Washdown Conditions
- Universal AC Supply Voltage (90 to 264 Vac) or Optional 24 Vac/Vdc Models
- 5 A Relay Output or Open-Collector Output
- Industry-Standard 11-Pin Socket Connection

If you are looking to outfit your control panel with timers that have an attractive LED display, consider the new PTC-20 Series, which delivers functionality at competitive prices.

Designed to fit the correct timer to your application, the PTC-20 Series comprises 3 models. The PTC-21 base unit offers 5 field-selectable operating modes and time ranges as well as a host of other convenient features. The high-performance PTC-23 offers advanced functions, such as dual setpoints and 1 ms resolution. The PTC-22 provides a repeat cycle (batch stop, batch continue) and interval modes specifically tailored for cyclical operations.

GENERAL SPECIFICATIONS

Supply Voltage: 90 to 240 Vac, 50/60 Hz, or 24 Vac/Vdc
Power Consumption: <10 VA
Resolution: Settable for XXXX or XX.XX for hours/minutes/seconds ranges
Inputs Start and Reset: NPN or dry contact
Activation Time: 4 ms (24 Vac/Vdc units), 21 ms (85 to 264 Vac powered units)
Impedance: 10 kΩ
Front-Panel Rating: IEC IP65
Operating Temperature: 0 to 55°C (32 to 131°F)
Storage Temperature: -40 to 90°C (-40 to 194°F)
Humidity: 5 to 95% RH, non-condensing
Memory: Non-volatile

OPERATION

Time Ranges: Hours, minutes, seconds; hours, minutes; minutes, seconds
Repeat Accuracy: ±0.01%

PHYSICAL

Dimensions: 48 H x 48 W x 85 mm D (1.89 x 1.89 x 3.35")
Display: Dual-line, 4-digit, 7-segment LED, 8 mm (0.31") H
Mounting: Panel-mount 45 x 45 mm (1.77 x 1.77"), cutout or DIN rail
Wiring Connection: Screw terminals on an 11-pin socket
Weight: 100 g (3.5 oz)

PTC-21 BASE MODEL

Output: Timed relay, DPDT (5 A)
Operating Modes (Shown): On-delay, off-delay, on-delay (interval), interval and repeat cycle

PTC-22 REPEAT CYCLE

Inhibit: NPN or dry contact
Outputs:
Relay: 2 SPDT (5 A), 15 ms latency
Transistor: NPN
Open Collector: 30 Vdc, 30 mA max
Operating Mode (Shown):
Repeat Cycle: Batch stop, batch continue and interval

PTC-23 HIGH PERFORMANCE

Inhibit: NPN or dry contact
Outputs:
Relay: 2 SPDT (5 A), 15 ms max latency
Transistor:
NPN Open Collector: 30 Vdc, 30 mA max opto isolated
Operating Modes: 17 different operating modes available (popular modes shown)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
PTC-21	$142	Standard timer
PTC-22	171	Repeat-cycle timer
PTC-23	171	High-performance timer

Comes with complete operator's manual.

Ordering Example:* PTC-23-OC,** *high-performance timer with 24 Vac/Vdc power and NPN open-collector output,* ***$171.

Options

ORDERING SUFFIX	PRICE	DESCRIPTION
- OC	N/C	Open-collector output

PANEL-MOUNT PROGRAMMABLE TIMER AND REAL-TIME CLOCK

NEW

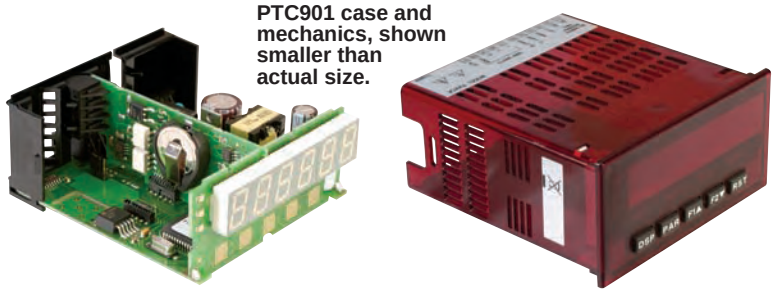
PTC900/ PTC901 Series Starts at $169

PTC901, $211, shown smaller than actual size.

2 YEAR WARRANTY · MADE IN USA · CE · c UL us

- ⅛ DIN (50 mm x 97 mm)
- 6-Digit, 14.2 mm (0.56") LED Display
- Green Display or Red, Sunlight-Readable Display
- Elapsed Timer with Preset Capability
- Counter with Preset Capability
- Cycle Counting Capability
- Programmable Function Keys and User Inputs
- 4 Setpoint Alarm Outputs
- Communications and Bus Capabilities
- PC Software Available for Meter Configuration
- NEMA 4X (IP65)

PTC901 case and mechanics, shown smaller than actual size.



The PTC900 timer and PTC901 clock/timer offer many features and performance capabilities that suit a wide range of industrial applications. Both can function as an elapsed timer or preset timer, while the PTC901 also offers real-time clock with date capability. The Plug-in option cards allow the user to configure the meter for the present application, while providing easy upgrades for future needs. Both models can function as an elapsed- time indicator. By using 2 separate signal inputs and 23 selectable timer ranges, the meters can be programmed to meet most any timing application. With the addition of a plug-in setpoint output card, they can easily become a dual or quad output preset timer. The PTC901 can also operate as a real-time clock with the real-time clock card already installed.

The meters are capable of displaying time in 12- or 24-hour time formats. The 12-hour format can be displayed in hours and minutes, with or without an am/pm indication or in hours, minutes, and seconds. The 24-hour format can be displayed in hours and minutes or in hours, minutes, and seconds.

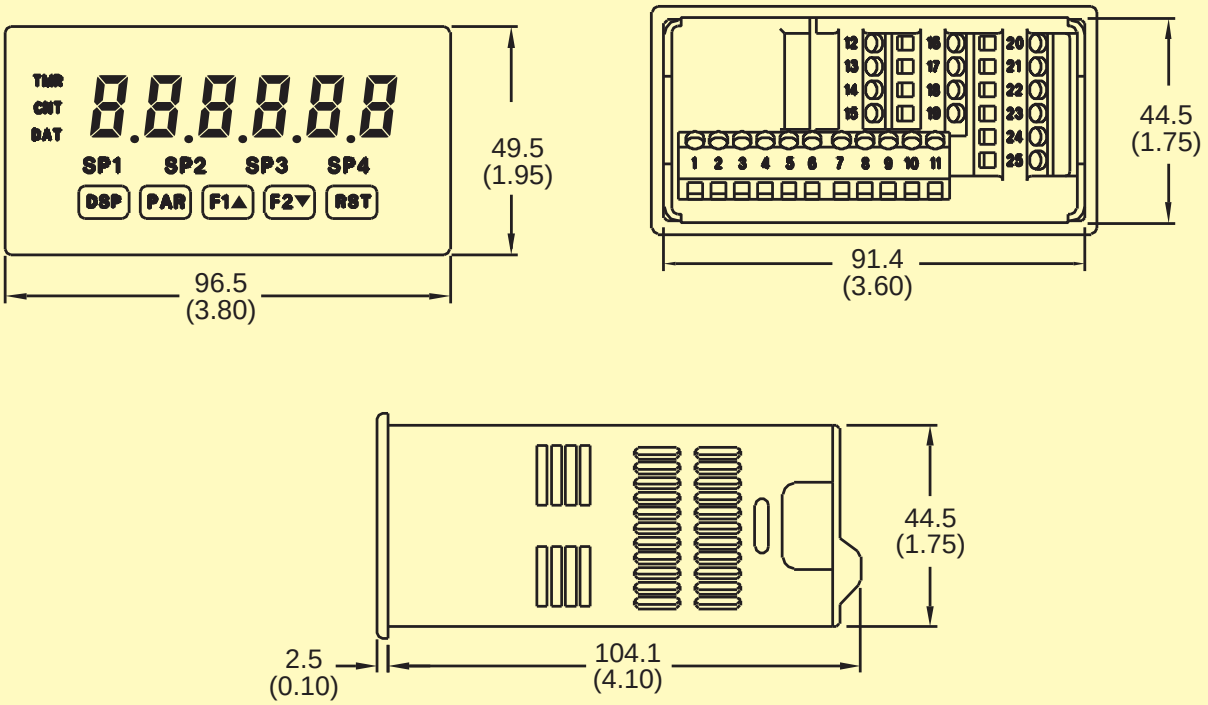
The PTC901 also has a calendar display in which the day, month and/or year can be displayed. The meter will recognize leap years, and can automatically adjust for Daylight Savings time. If the application calls simultaneously for a preset timer and a real-time clock, the PTC901 can handle this requirement as well. A battery-backed real-time clock plug-in card is provided with the PTC901. This card, which includes a lithium coin-cell battery, will maintain the time and date when main power is removed.

The meters accept inputs from a variety of sources, including switch contacts and outputs from CMOS or TTL circuits. The input can be configured to trigger on the edge or level of the incoming pulse. Internal jumpers are available for selecting sinking inputs (active-low) or sourcing inputs (active-high). The front panel keys and three user inputs are programmable to perform various meter functions. The meters can have up to 4 setpoint outputs, determined by the optional plug-in cards. The setpoint plug-in cards provide dual form "C" relays (5A), quad form "A" relays (3A) or either quad-sinking or quad-sourcing open collector logic outputs. The outputs can be assigned to the timer, counter, RTC date, and RTC time. The outputs can also be independently configured to suit a variety of control and alarm requirements.

Plug-in cards can also provide serial communications. These include RS232, RS485 and Modbus. Display values, setpoint alarm values and setpoint states can be controlled through serial communications. Once the meters have been initially configured, the parameter list may be locked out from further modification entirely, or the setpoint, timer start/stop values, counter start/stop values, RTC time "set", and display intensity can be made accessible. Lockouts are activated through a security code or user input.

NEW

Dimensions: mm (in)



SPECIFICATIONS

Display: 6-digit, 14.2 mm (0.56") red sunlight-readable or standard green LED

Power:

AC Versions:

AC Power: 85 to 250 Vac, 50/60 Hz, 18 VA

Isolation: 2300 Vrms for 1 min to all inputs and outputs; 300 V working

DC Versions:

DC Power: 11 to 36 Vdc, 14 W (derate operating temperature to 40°C (104°F) if operating <15 Vdc and 3 plug-in cards are installed)

AC Power: 24 Vac, ±10%, 50/60 Hz, 15 VA

Isolation: 500 Vrms for 1 min to all inputs and outputs (50 V working)

Sensor Power: 12 Vdc, ±10%, 100 mA max; short circuit protected

Keypad: 3 programmable function keys, 5 keys total

TIMER DISPLAY

Timer Range: 23 selectable ranges

Timing Accuracy: ± 0.01%

Minimum Digit Resolution: 0.001 s

Maximum Least Significant Digit Resolution: 1 hr

Maximum Display: 999999

Cycle Counter Display:

Counter Range: 0 to 999999

Digit Resolution: 1 cycle

Maximum Count Rate: 50 Hz

Real-Time/Date Display (PTC901):

Real-Time Display: 5 display formats—hr/min/second (12 or 24 hr format), hr/min (24 hr), hr/min (12 hr with or without AM/PM indication)

Date Display: 7 display formats—month/day or day/month (numeric or 3-letter month format), month/day/year or day/month/year (all numeric), day of week/day (3-letter day of week format)

Real-Time Clock Card: Field-replaceable plug-in card

Time Accuracy: ± 5 s/month (1 min/year) with end-user calibration

Battery: Lithium 2025 coin cell

Battery Life Expectancy: 10 years, typical

Synchronization Interface: 2-wire multi-drop network (RS485 hardware), 32 units max, operates up to 4000'

Isolation To Timer and User Input Commons: 500 Vrms for 1 min

Working Voltage: 50 V, not isolated from all other commons.

TIMER INPUTS A AND B

Type: Logic inputs configurable as current-sinking (active-low) or current-sourcing (active-high) via a single plug jumper

Current Sinking (Active-Low): Vil = 0.9 V max, 22 KW pull-up to 12 Vdc

Current-Sourcing (Active-High): Vih = 3.6 V min, 22 KW pull-down, max

Continuous Input: 30 Vdc

Timer Input Pulse Width: 1 ms minimum

Timer Start/Stop Response Time: 1 ms max

Filter: Software filtering provided for switch contact debounce; filter enabled or disabled through programming; if enabled, filter results in 50 ms start/stop response time for successive pulses on the same input terminal

USER INPUTS

Type: 3 programmable user inputs; logic inputs configurable as current-sinking (active-low) or current-sourcing (active-high) through a single plug jumper

Current Sinking (Active-Low): Vil = 0.9 V max., 22 KΩ pull-up to 12 Vdc

Current-Sourcing (Active-High): Vih = 3.6 V min, 22 KΩ pull-down, max

Continuous Input: 30 Vdc

Isolation To Timer Input Common: Not isolated

Response Time: 10 ms

Memory: Non-volatile E2PROM retains all programming parameters and display values

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F) [0 to 45°C (32 to 113°F) with all 3 plug-in cards installed]

Storage Temperature Range: -40 to 60°C (-40 to 140°F)

Operating and Storage Humidity: 0 to 85% max RH non-condensing

Altitude: Up to 2000 meters
Connections: High-compression, cage-clamp terminal block
Construction: This unit is rated for NEMA 4X (IP65) outdoor use, IP20 touch-safe, Installation Category II, Pollution Degree 2, 1-piece bezel/case, flame-resistant, synthetic rubber keypad—panel gasket and mounting clip included
Weight: 286 g (10.1 oz)
Output Modules: For complete specifications, see LDP63100 Series, at omega.com

PTC901, $211.

PTC901-LV, $239.

PTC900, $169.

All models shown smaller than actual size.

PTC901, $169.

PTC901-LV, $239.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
PTC900	**$169**	Timer, red display, 85 to 250 Vac, 50/60 Hz
PTC900-LV	**197**	Timer, red display, 11 to 36 Vdc, 24 Vac
PTC900-GN	**186**	Timer, green display, 85 to 250 Vac, 50/60 Hz
PTC900-GN-LV	**213**	Timer, green display, 11 to 36 Vdc, 24 Vac
PTC901	**211**	Timer/real-time clock, red display, 85 to 250 Vac, 50/60 Hz
PTC901-LV	**239**	Timer/real-time clock, red display, 11 to 36 Vdc, 24 Vac
PTC901-GN	**227**	Timer/real-time clock, green display, 85 to 250 Vac, 50/60 Hz
PTC901-GN-LV	**255**	Timer/real-time clock, green display, 11 to 36 Vdc, 24 Vac

Optional Plug-in Output Cards (Field Installable)

MODEL NO.	PRICE	DESCRIPTION
Setpoint Alarms (Only 1 Alarm Card Can Be Installed Into Base Meter)		
LDP6-CDS10	**$37**	Dual setpoint relay output card
LDP6-CDS20	**48**	Quad setpoint relay output card
LDP6-CDS30	**37**	Quad setpoint sinking open collector output card
LDP6-CDS40	**37**	Quad setpoint sourcing open collector output card
Communications (Only 1 Communications Card Can Be Installed Into Base Meter)*		
LDP6-CDC10	**$48**	RS485 serial communications output card with terminal block
LDP6-CDC1C	**48**	Extended RS485 serial communications output card with dual RJ11 connector
LDP6-CDC20	**48**	RS232 serial communications output card with terminal block
LDP6-CDC2C	**48**	Extended RS232 serial communications output card with 9-pin D connector
LDP6-CDC40	**58**	MODBUS communications card
LDP6-CDC4C	**58**	Extended MODBUS communications card with dual RJ11 connector

***** *Software is free. Download from omega.com*
Comes with complete operator's manual.

Note: *Adding option cards—meters can be fitted with up to 2 optional plug-in cards, however, only 1 card from each function type can be installed at a time. The function types include setpoint alarms and communications. The cards can be installed initially or at a later date. Each optional plug-in card is shipped with installation and programming instructions.*

Ordering Example: PTC901-GN-LV, *timer/real-time clock, green display, 11 to 36 Vdc, 24 Vac,* ***LDP6-CDS10,*** *dual setpoint, relay output card, $235 + 37 =* ***$292.***

Accessories (Field Installable)

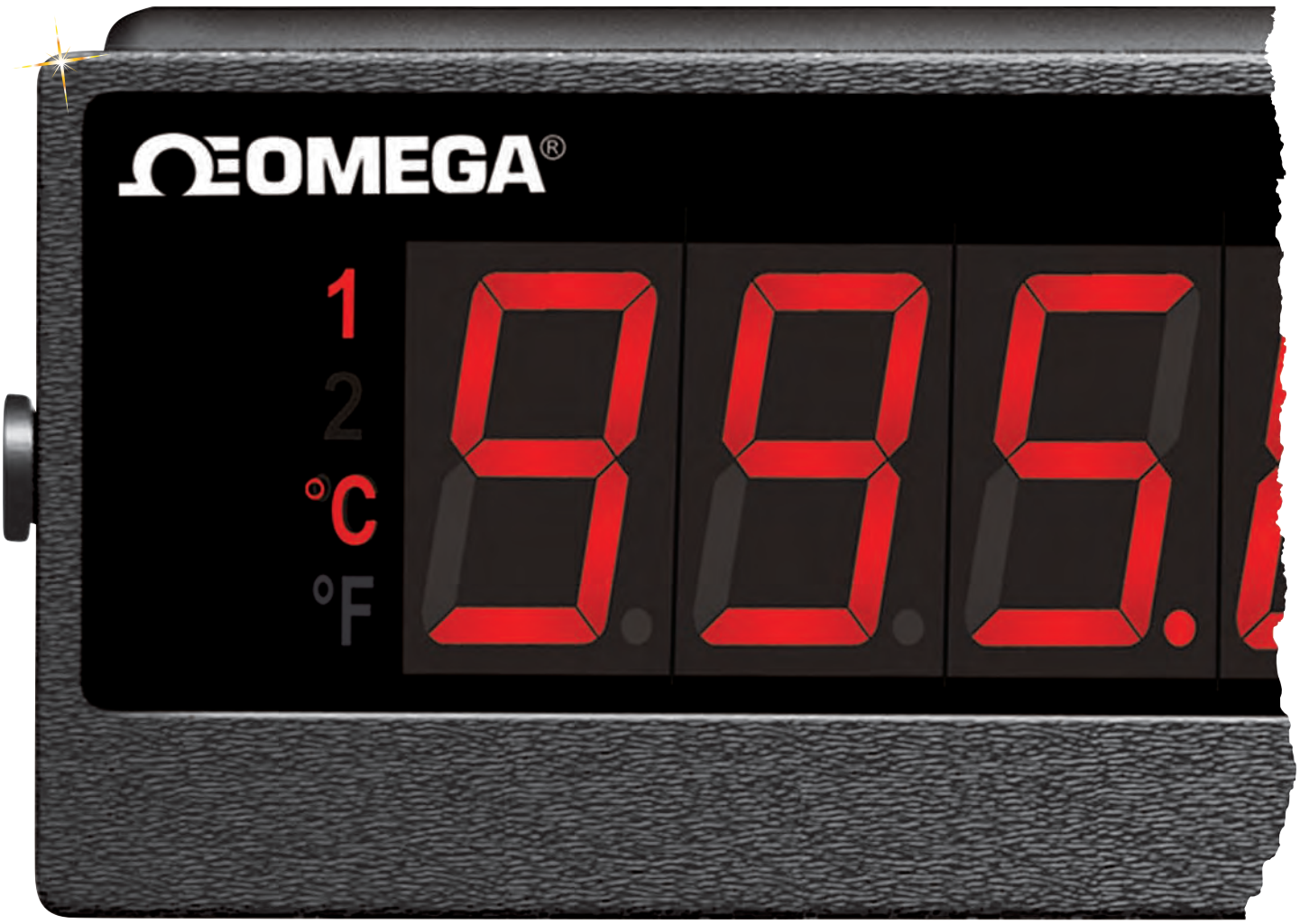
MODEL NO.	PRICE	DESCRIPTION
PTC9-RTC00	**$42**	Real-Time clock card (replacement)

iSeries iLD Big Display

BRIGHT 57 MM (2.25") DIGIT DISPLAY AVAILABLE WITH A 4- OR 6-DIGIT LED DISPLAY

Display Shown Actual Size!

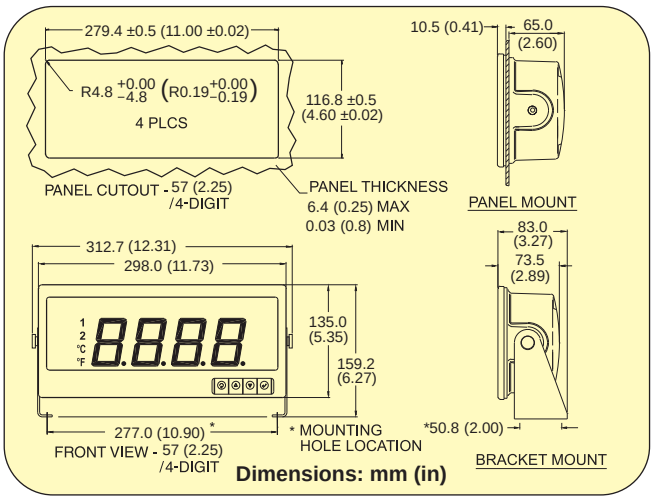
CE



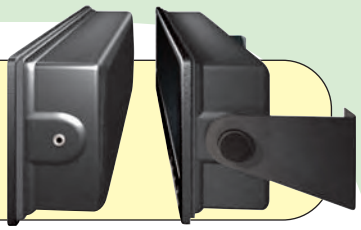
Totally Programmable Color Display!

Changes in color between **RED**, **AMBER**, and **GREEN**, at any set point or alarm point can be quickly seen from a distance, and equipment operators can intuitively react to changing conditions!

Process product line continues to expand, visit omegamation.com for new details!



Mounts in panel or on surface with included bracket.



	ORDERING MATRIX—OPTIONAL OUTPUTS			
	METER	2 RELAYS	SERIAL OUTPUT	ETHERNET
T+P	X	X	X	X
S+P	X	X	X	X
FP	X		X	X
ACC	X		X	X
ACV	X		X	X
EI	X			

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
UNIVERSAL TEMPERATURE THERMOCOUPLE, RTD AND PROCESS INPUT		
iLD24-UTP	**$795**	57 mm (2.25") 4-digit display, universal temperature/process, monitor/controller
iLD44-UTP	**995**	101 mm (4") 4-digit display, universal temperature/process, monitor/controller
STRAIN GAGE AND PROCESS INPUT		
iLD24-SP	**$795**	57 mm (2.25") 4-digit display, strain gage/process, monitor/controller
iLD44-SP	**995**	101 mm (4") 4-digit display, strain gage/process, monitor/controller
CONTROL OUTPUTS FOR UTP AND SP INSTRUMENTS		
-33	**$100**	2 relays—form "C" SPDT 3 A @ 120/240 Vac (available on UTP and SP models only)
NETWORK OPTIONS FOR UTP AND SP INSTRUMENTS*		
-C24	**$100**	Output: isolated RS232 and RS485/422 with baud rate from 300 to 19.2 kB
-C4EI	**150**	Output: ethernet with embedded Web server + RS485/422 hub for up to 31 devices
-FS	**N/C**	Factory scaling
FREQUENCY/PULSE/RATE/TOTAL INPUT		
iLD24-FP	**$795**	57 mm (2.25") 4-digit display with frequency/pulse totalize input, RS485 output
iLD26-FP	**995**	57 mm (2.25") 6-digit display with frequency/pulse totalize input, RS485 output
iLD44-FP	**995**	101 mm (4") 4-digit display with frequency/pulse totalize input, RS485 output
iLD46-FP	**1195**	101 mm (4") 6-digit display with frequency/pulse totalize input, RS485 output
AC CURRENT AND VOLTAGE INPUT		
iLD24-ACC	**$795**	57 mm (2.25") 4-digit display with AC current input, RS485 output
iLD44-ACC	**995**	101 mm (4") 4-digit display with AC current input, RS485 output
iLD24-ACV	**795**	57 mm (2.25") 4-digit display with AC voltage input, RS485 output
iLD44-ACV	**995**	101 mm (4") 4-digit display with AC voltage input, RS485 output
NETWORK OPTIONS FOR FP AND AC INSTRUMENTS*		
-C2A	**$100**	RS232 and isolated analog output (replaces standard RS485)
-EI	**100**	Ethernet, RS232, RS485/422 output
-FS	**N/C**	Factory scaling
REMOTE DISPLAYS		
iLD24-C2	**$795**	57 mm (2.25") 4-digit display with RS232 input
iLD44-C2	**995**	101 mm (4") 4-digit display with RS232 input
iLD26-C2	**995**	57 mm (2.25") 6-digit display with RS232 input
iLD46-C2	**1195**	101 mm (4") 6-digit display with RS232 input
iLD24-EI	**795**	57 mm (2.25") 4-digit display with Ethernet, RS485/422 input
iLD44-EI	**995**	101 mm (4") 4-digit display with Ethernet, RS485/422 input
iLD26-EI	**995**	57 mm (2.25") 6-digit display with Ethernet, RS485/422 input
iLD46-EI	**1195**	101 mm (4") 6-digit display with Ethernet, RS485/422 input
SOFTWARE (REQUIRES NETWORK OPTION)		
-C2A	**$295**	OPC server/driver software license

Ordering Examples: iLD24-UTP, *large 57.2 mm (2.25") 4-digit display, universal temperature/process monitor,* ***$795.***
iLD44-SP*, large 101 mm (4") 4-digit display, strain/process monitor/controller,* ***$995****.*
iLD46-FP*, large 101 mm (4") 6-digit display with frequency/pulse totalize input* ***$1195****.*

**Network Options cannot be combined.*
Contact Sales for Custom Control or Alarm Outputs.

HIGH ACCURACY FREQUENCY OR ANALOG INPUT FLOW INDICATOR

FOR FLOWRATE, TOTAL OR BATCH CONTROL

DPF401 Starts at $395

MADE IN USA

DPF401, $395, shown actual size

PATENTED

Covered by U.S and International patents and pending applications

- **Easy to Read Alphanumeric 6-Digit Display**
- **UL Listed**
- **Versions Available to Accept Low-Level Frequency Input Directly**
- **Analog Input for Linear or Square Root Input Optional**
- **5 Open Collector Outputs Standard**
- **Optional Scalable Analog, BCD, RS-232 or RS-485 Outputs**
- **Optional Dual 7A Relays**

The DPF400 Series is a complete line of flowrate indicators offering exceptional performance at an economical price. Individual models are available for flowrate and totalization (with or without square root extraction) batch control.

The DPF400 is front panel programmable to scale any input range to display in desired engineering units. Independent scale factors for rate and total allow rate indication and totalization in different units, such as GPM rate and total barrels. If the optional RS-232 or RS-485 communications are installed, the unit may also be programmed by remote computer.

The DPF400 is available with 4 input types, including TTL/open collector pulse, low level frequency, analog voltage or analog current. The unit can be user-configured for one of three functions:

1) a ratemeter/totalizer/batcher

2) a ratemeter/totalizer/batcher with square root extraction (for differential pressure flow measurement)

3) a batch controller only with multibatch counting, auto/manual batch recycle, and remote or local STOP/CONTINUE control (START control can be obtained with a user supplied switch in series with the control relay)

Options to the DPF400 include analog and BCD outputs, alarm/control outputs, and RS-232 or RS-485 communications.

The RS-232 or RS-485 communications options are bi-directional, allowing the user to configure the DPF400 as well as read current values.

While each DPF400 comes standard with 5 open collector outputs, the optional DP40-R board provides dual 7A mechanical relays which replace two of the open collector alarms, for a total of two 7A relay and three open collector alarms.

SPECIFICATIONS

TTL Level Inputs (DPF401): 0.7 to 2.0 V threshold; 0.2 Hz to 20 kHz frequency; 24 V protection, positive trigger slope; 16 to 30 V unregulated 75 mA sensor excitation

Isolated Pulse Input with Excitation (DPF402): 60 Vrms with protection to 240 V max signal

	Excitation	Hysteresis	Sensitivity
DPF402	5 V	13 mV	30 mV
Low	8.2 V	22 mV	50 mV
Level	2.4 V	35 mV	60 mV

NPN Open Collector Input (DPF402): 3-wire connection; 12 V regulated excitation

NAMUR Input (DPF402): 2-wire connection; 8.2 V excitation; 1 kohm impedance; <1 mA activated, >3 mA deactivated

Contact Closure Input (DPF402): 2-wire connection; 12 V regulated sensor excitation, 10 on/off per second frequency range

Analog Input (DPF403): 0 to 5 V, 1 to 5 V, or 4 to 20 mA range; 0 to 10 V, or 0 to 1 mA inputs optionally available; 354 Vp isolation; programmable low-level shutoff; 0.02% FS non-linearity; 0.05% FS accuracy; accuracy, 50 ppm/°C temperature coefficient, max

Display: 6-digit, 14-segment LED, red or green; 13.8 mm H (0.54"); indicator lights for alarms and status modes

Display Update: 0.04 to 3 seconds, programmable

FP9001 Sensor, $225 shown with FP9P-T interface, $155, sold separately. See omega.com for more information


NEMA 4X (IP166) splashproof panel


DPF400 supplied with gray BUMPER BAND® protective guard. Other colors available, $5 each. See omega.com for details.

DP41 models are also available with mV, V, mA and frequency input, for measuring pressure, flow, pH and other processes. Call OMEGA for details.

Min Input Frequency: 0.2 Hz
Power: 115 standard, 230 Vac optional 50/60 Hz; 10 W max
Accuracy:
Frequency: 0.01% of reading
Analog: 0.05% of full scale
Step Response:
Analog: 50 msec for 10 to 90% FS
Frequency: Equal to selected gate time
Operating Ambient Range: 0 to 50°C (32 to 122°F), 95% RH, non-condensing
Storage Temperature: -40 to 85°C (-40 to 185°F)
RS-232 Communications (Optional): Front panel programmable for 300/1200/2400/4800/9600/19.2k baud; RJ11 4-wire connection; complete program setup and message display capability; programmable to transmit all measured values, alarm status, actual measured input value (not scaled) and status on programmable intervals from 1 to 60,000 seconds
RS-485 Communications (Optional): 300/1200/2400/4800/9600/19.2k baud; RJ11 6-wire connection; addressable from 0 to 199
Open Collector Outputs: Five 150 mA @ 1 Vdc sink; 30 V open
BCD Output (Optional): Isolated; 3- or 6-digit addressing; TTL level output; 5 Vdc external power supply required for isolated output
Mechanical Relays (Optional): Dual, form C; 7A at 230 Vac/30 Vdc
Analog Outputs (Optional): 0 to 5 V/ 1 to 5 V/0 to 10 V/0 to 20 mA/4 to 20 mA all field selectable; all internally powered (sourcing); 600 Ω max loop impedance for 20 mA outputs; min 500 Ω input impedance for voltage outputs; 354 Vp isolation; 15-bit resolution; 0.1% of reading accuracy; 50 ms step response; fully adjustable zero and span adjustments
Dimensions: 48 H x 96 W x 149 mm D (1.89 x 3.78 x 5.86")
Panel Cutout: 45 H x 92 mm W (1.772 x 3.622"); ⅛ DIN
Weight: 574 g (1.27 lb)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
DPF401	$395	TTL/open collector/contact closure input meter includes 16 V @ 70 mA output power
DPF402	470	Low level pulse input meter includes 12 V @ 70 mA output power or 8.2 V with 1 Kohm source impedance
DPF403*	590	4 to 20 mA/0 to 5 Vdc/1 to 5 Vdc (field-selectable) input meter includes nominal 24 V @ 25 mA output power

**** Note:** 0 to 10 Vdc and 0 to 1 mA inputs optionally available for DPF403, add suffix "**-10VINP**" or "**-1MA**", no additional charge.*

Display and Power Options

ORDER SUFFIX	PRICE	DESCRIPTION
-GR	N/C	Green display
-230V	N/C	230 Vac power

Output Boards and Communications Options

MODEL NO.	PRICE	DESCRIPTION
DPF400-A3	$110	Analog output board
DP40-B*	110	Isolated BCD output board
DP40-R*	75	Dual 7A mechanical relays
DPF400-S2†	110	Isolated RS-232 communications
DPF400-S4†	110	Isolated RS-485 communications

** Both options are not available in one unit.*
*† Both options are not available in one unit. **DPF400-S2** and **DPF400-S4** options come with both 3.5" and 5.25" setup/programming disks, and 6' communications cable which plugs into the rear of the **DPF400** and terminates with a phone plug. For proper termination to a computer, a 9-pin and 25-pin connector which mates with the phone plug, are offered below.*

Options

MODEL. NO.	PRICE	DESCRIPTION
DP40-9SC2	$30	9-pin serial connector for RS-232
DP40-9SC4	30	9-pin serial connector for RS-485
DP40-25SC2	30	25-pin serial connector for RS-232
DP40-25SC4	30	25-pin serial connector for RS-485

Ordering Examples: DPF401-230V**, **DPF400-S2** and **DP40-9SC2** options: **DPF401** unit for TTL level input, with 230 Vac power, analog output, RS-232 communications and 9-pin serial connector, $395 + 110 +110 + 30 = **$645. DPF402**, low level pulse input meter, **$470.

LEGAL-FOR-TRADE WEIGH SCALE PANEL METERS

NTEP APPROVED PER HB44

DP41-W, $595, with LC101 load cell, see page 147, shown larger than actual size.

DP41-W Starts at $595

MADE IN USA NIST

COC #92-152

- 5-Year Warranty
- NTEP Approved for Class III and IIIL/Up to 10,000 Divisions
- 5-Point Linearization
- Scales in Any Engineering Unit (lb, kg, oz, etc.)
- Display Shows Units Measure
- Min, Max, and Tare Functions
- 6-Wire Bridge Connection
- Net/Gross Button
- Zero Error Correction
- Fixed Tare Capability

The DP41-W is a highly accurate, stable weighmeter with a NEMA 4 (IP65) splashproof keypad. With its adjustable filtering feature, this powerful meter achieves rock-solid readings in critical applications. Self-contained in a traditional 1⁄8 DIN case design, it can be used as a weighmeter, a standard 2-point scalable meter, or a 5-point scalable meter. Possible applications for the 5-point scalable meter include measuring liquid levels of tanks and improving non-linear sensor characteristics.

SPECIFICATIONS

Accuracy: 0.005% rdg, ± 1 count
Input: ±50 mV, ±500 mV, ±5 V, ±50 V, 100 mV, 1 V, 10 V, 100 V, 4 to 20 mA, 0 to 20 mA
Excitation:
AC-Powered Models:
Adj 1.5 to 11 Vdc (5 Vdc @ 60 mA, 10 Vdc @ 30 mA or 24 Vdc @ 25 mA)
DC-Powered Models:
Adj 1.5 to 11 Vdc (5 Vdc @ 60 mA, 10 Vdc @ 120 mA or 24 Vdc @ 30 mA)
NTEP Approvals: COC #92-152 Class III and IIIL—to 10,000 divisions max
Operating Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Temp Coefficient: 20 ppm/°C
Relative Humidity: 95% @ 40°C (104ºF), non-condensing
Display: 6-digit, red LED, 13.8 mm (0.54") high
Display Range: -199999 to 999999
Connections: Input screw terminals; remote-contact pin terminals

MDS41-W, benchtop version of DP41-W, $770, see omega.com, shown with LSC6400-1818-1K benchtop platform scale, $645, see omega.com

External Features: Tare, reset tare, display hold
Outputs: 4 open collectors; 150 mA @ 1 V sink, 30 V max
Step Response: 36 ms for 63%, 145 ms for 98%, 218 ms for 99.8%
Filtering: Adj to 13 Hz
RS232 Communications (Optional): 300/1200/2400/4800/9600/19.2K baud; RJ11 4-wire connection; complete program setup and message display capability; programmable to transmit current display, alarm status, min/max, actual measured input value (not scaled) and status

RS485 Communications (Optional): 300/1200/2400/4800/9600/19.2K baud; RJ12 6-wire connection; addressable from 0 to 199
Analog Output (Optional): Selectable 0 to 5 Vdc, 1 to 5 Vdc, 0 to 10 Vdc, 0 to 20 mA, 4 to 20 mA; voltages @ 20 mA, current @ 12 Vdc

POWER REQUIREMENTS
Voltage: 115 Vac @ 50 to 60 Hz (230 Vac optional)
Power Consumption: 10 W max

MECHANICAL SPECIFICATIONS
Dimensions: 48 H x 96 W x 156 mm D (1.89 x 3.78 x 6.13")
Panel Cutout: ⅛ DIN, 45 mm H x 92 W (1.77 x 3.62")
Weight: 600 g (1.316 lb)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
DP41-W	$595	Weigh meter with red display
DP41-W-GN	595	Weigh meter with green display

SUFFIX	MODEL NO.	PRICE	DESCRIPTION
-A3	DP40-A3	$110	Scalable current or voltage analog output
-R	DP40-R	75	Dual SPDT mechanical relays
-S2	DP40-S24	110	Isolated RS232 communications, RJ11 termination
-S4	DP40-S24	110	Isolated RS485 communications, RJ12 termination

ACCESSORIES FOR COMPUTER COMMUNICATIONS

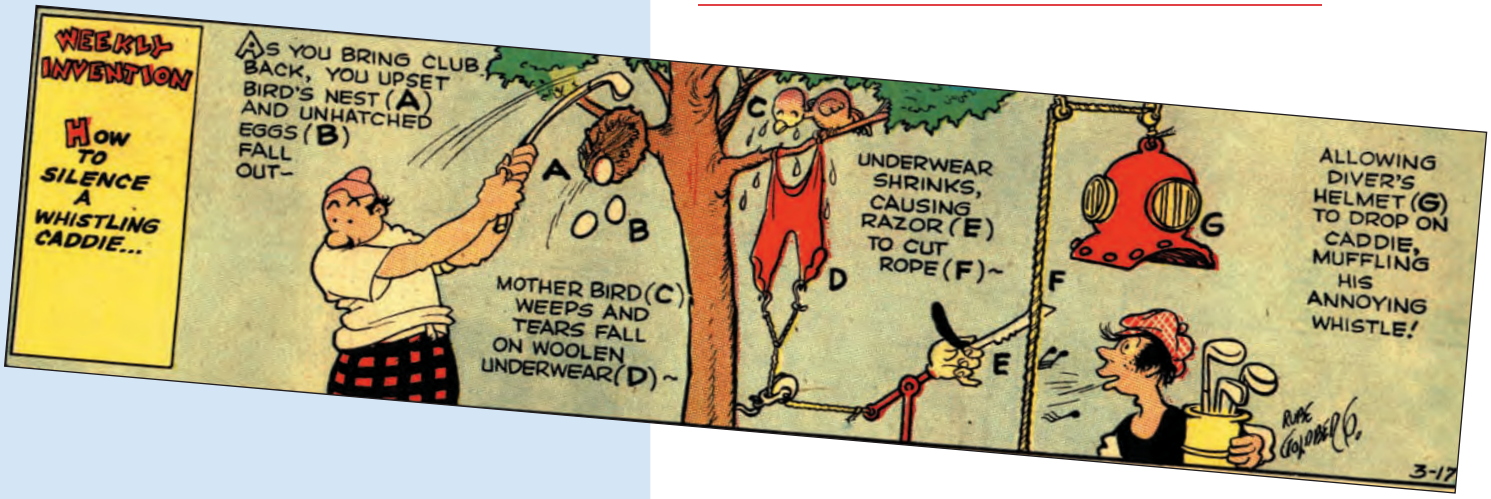
MODEL NO.	PRICE	DESCRIPTION
DP40-9SC2	$30	RS232 9 D pin converter from RJ11 phone jack
DP40-25SC2	30	RS232 25 D pin converter from RJ11 phone jack
DP40-9SC4	30	RS485 9 D pin converter from RJ12 phone jack
DP40-25SC4	30	RS485 25 D pin converter from RJ12 phone jack

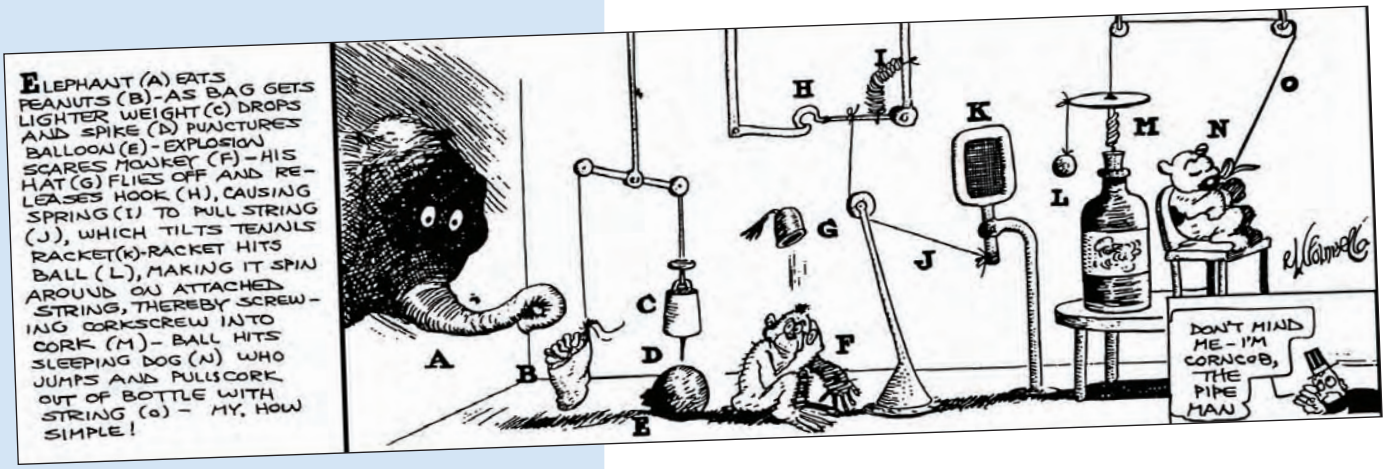
Note: *Order either **"-S2"** or **"-S4"** option. Use an accessory for proper termination to a computer.*
Comes with complete operator's manual.
*To order 230 Vac power option, add suffix **"-230"** to model number, no extra charge.*
Ordering Example: DP41-W-S2,** weigh meter with RS232 computer communications, **DP40-25SC2,** 25 D pin connector, $595 + 110 + 30 = **$735.

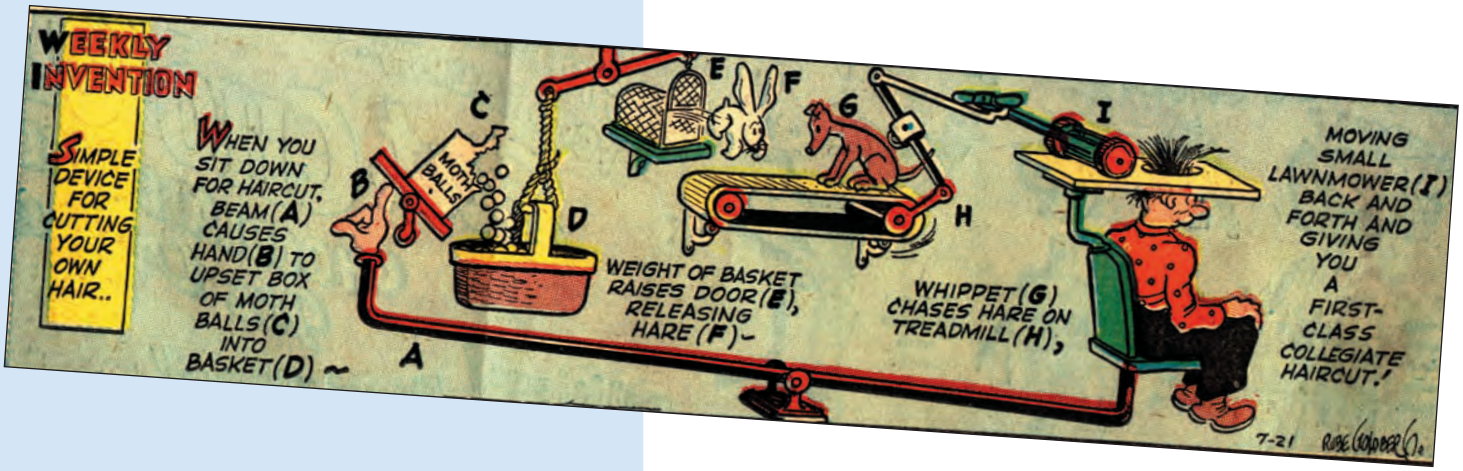
Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*







HANDHELD DMMs
VERSATILE HIGH-PERFORMANCE

1 YEAR WARRANTY

- GS-Mark EN61010-1 Approval, Over-Voltage Category II 600 Vdc/Vac; Pollution Degree II
- HHM26 and HHM28 Have RS232 Interface
- Safety Input Jacks
- Logic Probe Tester: HHM15, HHM20, HHM23
- Temperature Measurement Models: HHM19, HHM21
- Accuracy: Stated Accuracy at 23 ± 5°C < 75% RH
- Battery Life: 200 Hours
- Dimensions: 192 H x 91 W x 52.5 mm D (7.6 x 3.6 x 2.1")

Thermocouple Included!

Temperature models include a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). **Order a Spare! Model No. SC-GG-K-30-36, $15.**

Extra Set HHM-TL general use test lead set. High quality design, $5.

HHM17
$120

HHM17 Auto-Ranging Multimeter
3999 counts resolution
Provides: MEM, READ, REL, HOLD, MAX/MIN
DC Volt: accuracy ±0.25%
Resistance: ±0.3%
Frequency: ±0.05%

Capacitance Meter.

HHM18
$75

HHM18 Capacitance Meter
1999 counts resolution
Zero adjustment
Resistance: ±0.3%
Capacitance: ±0.5%
Frequency: 0.1%
HHM18-TL Test leads for HHM18

HHM22
$88

HHM22 Auto-Ranging Multimeter
3200 counts resolution
Reading of Data-Hold function
DC Volt: accuracy ±0.3%
Resistance: ±0.3%

HHM23
$78

HHM23 Rugged Multimeter
1999 counts resolution
Reading of Max/Data-Hold function
DC Volt: accuracy ±0.35%
Resistance: ±0.4%; Frequency: ±0.1%

HHM24
$75

HHM24 Rugged Multimeter
1999 counts resolution
Reading of Max/Data-Hold function
DC Volt: accuracy ±0.35%
Resistance: ±0.4%
Capacitance: ±2%; Frequency: ±0.1%

Comes with protective rubber boot with tilt stand, set of safety test leads, 9 V alkaline battery, Type K beaded wire thermocouple (temperature models only) and complete operator's manual.

Measures Temperature.

HHM19C for ºC
HHM19F for ºF
$95

HHM19 Rugged Multimeter
1999 counts resolution
Reading of Max/Data Hold function
DC Volt Accuracy: ± 0.35%
Resistance: ± 0.4%
Frequency: 0.1%
Comes with Type K beaded thermocouple

HHM20
$100

HHM20 Auto-Ranging Multimeter
4300 counts circulating record for Max/Min/Avg and normal
Provides: AUTO-HOLD, Relative and Relative Set
Auto power-off to conserve battery life
DC Volt: Accuracy ± 0.25%
Resistance: ± 0.3%

Measures Temperature

HHM21
$105

HHM21 Auto-Ranging Multimeter
4300 counts circulating record for Max/Min/Avg and normal
Provides: AUTO-HOLD, Relative and Relative Set
Auto power-off to conserve battery life
DC Volt: Accuracy ± 0.25%
Resistance: ± 0.3%
Comes with Type K beaded thermocouple

With RS232 Interface, Software, and Cable.

HHM26
$113

HHM26 Auto-Ranging Multimeter
2500 Counts Backlit LCD Display
RS232C Interface with microprocessor-based DMM
DCV basic accuracy up to ± 0.25%
ACV basic accuracy up to ± 0.75%

HHM27
$113

HHM27 Auto-Ranging Multimeter
2500 Counts Backlit LCD Display
Resistance accuracy up to ± 0.3%
with microprocessor-based DMM
Frequency resolution up to 0.001 Hz
Frequency accuracy up to ± 0.05%
DCV basic accuracy up to ± 0.25%
ACV basic accuracy up to ± 0.75%

With RS232 Interface, Software, and Cable.

HHM28
$138

HHM28 Auto-Ranging Multimeter
2500 counts, Backlit LCD Display
RS-232C Interface with microprocessor-based DMM
Frequency resolution up to 0.001 Hz
Frequency accuracy up to ± 0.05%
DCV basic accuracy up to ± 0.25%
ACV basic accuracy up to ± 0.75%

Comes with protective rubber boot with tilt stand, set of safety test leads, 9 V alkaline battery, Type K beaded wire thermocouple (temperature models only) and complete operator's manual.

Process product line continues to expand, visit omegamation.com for new details!

EVERY TYPE OF HANDHELD DMMs

HHM30
$120 CE

HHM30 LCR Multimeter
3½ digits 1999 counts
Resistance: 20 Ω/200 Ω/
2 kΩ/20 kΩ/200 kΩ/2 MΩ/20 MΩ
Accuracy:
20 Ω: ± (1.0% rdg + 10 digits)
200 Ω: ± (0.3% rdg + 3 digits)
2 kΩ to 2 MΩ: ± (0.3% rdg + 1 digit)
20 MΩ: ± (2.0% rdg + 2 digits)
Capacitance:
200 pF/2 nF/20 nF/
200 nF/2 µF/20 µF/
200 µF/2000 µF
Accuracy:
200 pF to 200 nF:
± (1.0% rdg + 3 digits)
2 µF to 200 µF:
± (2.0% rdg + 3 digits)
2000 µF to ≤ 1000 µF:
± (3.0% rdg + 3 digits)
> 1000 µF:
± (5.0% rdg + 5 digits)
Inductance:
200 µH/ 2 mH/20 mH/
200 mH/2 H/20 H/200 H
Accuracy:
200 µH to 200 mH:
± (3.0% rdg + 3 digits)
2 H to 200 H:
± (5.0% rdg + 10 digits)

To Order *(Specify Model Number)*

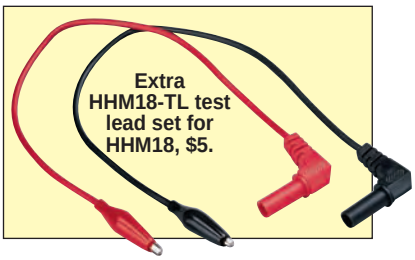
MOST POPULAR MODELS HIGHLIGHTED!

	MODEL NO.	HHM11	HHM12	HHM13	HHM26	HHM27	HHM28	HHM17	HHM18
	PRICE	$79	$89	$49	$113	$113	$138	$120	$75
FEATURE	Display Counts	1999	1999	3200	2500	2500	2500	3999	1999
	Range Auto/Manual	M	M	A	A	A	A	A	M
	Input Impedance MΩ	1	10	10	10	10	10	10	
	Analog bargraph			•				•	
	Relative				•	•	•	•	
	Logic Test								
	Temperature		C/F						
	Data/Hold				•	•	•	•	•
	Max/Min Record							•	
	Max/Hold								•
	Capacitance		•	•		•	•	•	•
	Frequency		•			•	•	•	•
	Continuity		•	•	•	•	•	•	•
	Diode test	•	•	•	•	•	•	•	•
	Transistor gain (hFE)	•						•	
	RS232C				•		•		
DCV	Basic Accuracy, %	1.2	1.2	.8	0.25	0.25	0.25	0.25	
	Max Resolution, µV	1000	1000	100	100	10	10	100	
ACV	Basic Accuracy, %	2	2	2	0.75	0.75	0.75	0.75	
	Max Resolution, µV	100	100	100	100	100	100	100	
	Frequency Response, Hz	50 to 500	50 to 500	50 to 500	50 to 500	50 to 500	50 to 500	50 to 20 K	
DCA	Basic Accuracy, %	2.5			0.75	0.75	0.75	0.5	
	Max Resolution, µA	1000			0.1	0.1	0.1	0.1	
ACA	Basic Accuracy, %				1.5	1.5	1.5	1.0	
	Max Resolution, µA				0.1	0.1	0.1	0.1	
	Frequency Response				50 to 500	50 to 500	50 to 500	50 to 500	
CX	Basic Accuracy, %		4.0	5		3	3	2	0.5
	Max Resolution, pF			.01		1	1	1	0.1
	Max Cap, µF		2 K	32 m		25	25	40	20 m
LX	Basic Accuracy, %				0.3	0.3	0.3	0.3	0.3
	Max Resolution, µH								
	Max H				25	25	25	40	20
V	Basic Accuracy, %	1.5	1.5	1.5	0.3	0.3	0.3	0.3	0.3
	Max Resolution, mΩ	100	100	100	100	100	100	100	10
	Max mΩ	2	2000	32	25	25	25	40	20
Hz	Basic Accuracy, %		.5	1.5		0.05	0.05	0.05	0.1
	Max Resolution, Hz		1.0			0.001	0.001	0.01	10
	Max Frequency, MHz		100 K			5	5	700 K	15
C°/F°	Basic Accuracy, %		2						
	Max Resolution		1°C/°F						
	Range °C		-20~400						
	Range °F		-4~752						

Ordering Example:* HHM16,** *DMM with Type K beaded wire thermocouple,* ***$98.

Accessories for Multimeters

MODEL NO.	PRICE	DESCRIPTION
HHM-TL	$5	Extra general test lead set
HHM18-TL	5	Extra test lead set for HHM18
SC-GG-K-30-36	15	Extra Type K beaded wire thermocouple
MN1604	3	Extra 9V alkaline battery



WHERE VERSATILITY AND PERFORMANCE COUNT!

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

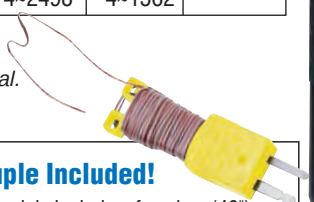
HHM22	HHM23	HHM19C	HHM19F	HHM24	HHM20	HHM21	HHM15	HHM14	HHM29	HHM16	HHM30
$88	**$78**	**$95**	**$95**	**$75**	**$100**	**$105**	**$113**	**$136**	**$138**	**$98**	**$120**
3200	1999	1999	1999	1999	4300	4300	3999	19999	4300	4300	1999
A	M	M	M	M	A	A	M	M	A	A	A
10	10	10	10	10	10	10	10	10	10	10	
•											
					•	•			•	•	
	•				•		•		•		
		°C	°F			°C/°F			°C/°F	°C/°F	
•	•	•	•	•	A-H	A-H			A-H	A-H	•
					•	•			•	•	
	•	•	•	•			•		•		•
•	•	•	•	•			•		•		•
	•	•	•	•			•		•		
•	•	•	•	•	•	•	•	•	•	•	
•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•			•	•			
0.25	0.35	0.35	0.35	0.35	0.25	0.25	0.5	0.05	0.25	0.25	
100	100	100	100	100 mV	100	100	100	10	100	100	
1	1	1.5	1.5	1.5	0.75	0.75	1.5	1.0	0.75	0.75	
100	100	100	100	100	100	100	100	10	100	100	
50 to 400	50 to 500	50 to 500	50 to 500	50 to 500	50 to 2 K	50 to 2 K	50 to 500	20 K	50 to 2 K	50 to 2	
0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	0.5	2.0	0.5	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.01	0.1	0.1	
1.5	1.2				1	1	2.0	2.5	2.5	1.0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.01	0.1	0.1	
50 to 400	50 to 500	50 to 500	50 to 500	50 to 500	50 to 1 K	50 to 1 K	50 to 500	50 to 500	50 to 500	50 to 1 K	
3	2	2	2	2			5		5		2
10	10	10	10	10			10		1.0		0.1
32	20	20	20	20			400		43		2000
							5		5		3
							1		1		0.1
							40		43		200
0.3	0.4	0.4	0.4	0.4	0.3	0.3	1.0	0.2	0.3	0.3	0.3
100	100	100	100	100	100	100	100	1	100	100	10
32	20	20	20	20	43	43	4000	20	43	43	20
	0.1	0.1	0.1	0.1			0.5		1.0		
	10	10	10	10			1.0		0.1		
	15	15	15	15			1		430K		
		2	2			2			2	0.5	
		1°C	1°F			1°C/°F			1°C/°F	1°C/°F	
		-20~750				-20~1370			-20~1370	-20~850	
			-4~1400			-4~2498			-4~2498	-4~1562	

HHM14,$136.

HHM15, $113.

HHM29, $138.

Ordering Example: HHM21, *auto-ranging DMM with Type K thermocouple,* ***$105.***
Comes with protective rubber boot with tilt stand, set of safety test leads, 9 V alkaline battery, Type K beaded wire thermocouple (temperature models only) and complete operator's manual.



Too many to list!

For a selection of thermocouples visit omega.com

Thermocouple Included!

Temperature models include a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). **Order a Spare! Model No. SC-GG-K-30-36, $15.**

Process product line continues to expand, visit omegamation.com for new details!

CLAMP-ON DIGITAL MULTIMETERS

1 YEAR WARRANTY

- GS-Mark EN61010-1 Approval Voltage Category III 600 V, Pollution Degree II
- AC/DC Current Clamp
- Highly Accurate 1999, 2500, 3999, 4300 Counts Resolution
- MAX, Data Hold, PEAK, ZERO Functions
- Model HHM592, HHM592D, HHM596, HHM596C, HHM599 with Auto-Ranging Operation
- Battery Life: 200 Hours
- Dimensions: 250 H x 100 W x 46 mm D (9.9 x 3.9 x 1.8")
- Weight: Approx 320 g (10.8 oz)

All clamp-on meters come with high quality deisgn HHM-TL general use test lead set.

HHM590
$75

HHM590 Clamp-On Multimeter
1999 counts resolution
AC current measurement
up to 700 A

HHM591
$114

HHM591 Clamp-On Multimeter
1999 counts resolution
AC current up to 700 A
DC current up to 700 A

HHM591T
$137

HHM591T Clamp-On Multimeter
1999 counts resolution
AC current up to 700 A
DC current up to 700 A
with EL panel LCD

HHM592
$120

HHM592 Clamp-On Multimeter
2500 counts resolution
Microprocessor-based DMM
AC current up to 700 A
DCV accuracy up to 0.25%
with EL panel LCD

HHM592D
$144

HHM592D Clamp-On Multimeter
2500 counts resolution
Microprocessor-based DMM
AC current up to 700 A
DC current up to 700 A
DCV accuracy up to 0.25%
with EL panel LCD

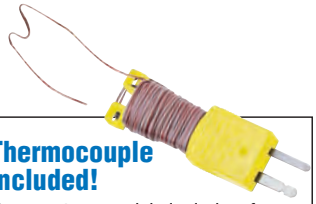
Measures Temperature.

HHM596C
Available with ºC/ºF Switchable Type K Thermocouple

HHM596
(No temperature measurement)
$137

HHM59C
$148

HHM596/HHM596C AC/DC Clamp-On Multimeter
4300 counts resolution
AC current up to 700 A
DC current up to 700 A
Vac basic accuracy ±1.2%
DC current basic accuracy ±1.5%
HHM596C with °C/°F switchable Type K thermocouple



Thermocouple Included!
Temperature models include a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel).
Order a Spare!
Model No. SC-GG-K-30-36, $15.

All clamp-on meters come with a set of safety test leads, 9 V alkaline battery, Type K beaded wire thermocouple (temperature models only) and complete operator's manual.

HHM598
$76

HHM598 Clamp-On Multimeter
1999 counts resolution
AC current measurement
up to 700 A
AC current basic accuracy ±1.5%

Measures Temperature.

2 Models Available for ºC/ºF

HHM598C
$92

HHM598F
$92

HHM598C/HHM598F Multimeter
1999 counts resolution
AC current measurement
up to 700 A
Basic accuracy ± 1.5%

HHM598T
$89

HHM598T AC True-RMS Clampmeter
1999 counts resolution
AC current measurement
up to 700 A
Basic accuracy ± 1.5%

HHM599
$169

HHM599 AC/DC True-RMS Clampmeter
3¾ digit 3999 counts
AC current up to 700 A
DC current up to 700 A
DC current accuracy ± 1.5%
Resistance accuracy ± 0.3%

CLAMP-ON METERS SELECTION GUIDE

HHM590, $75.

HHM592, $120.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

	MODELS		HHM590	HHM591	HHM591T	HHM592	HHM592D
	PRICE		$75	$114	$137	$120	$144
FEATURES	Number of Digits		1999	1999	1999	2500	2500
	Range Auto Manual		M	M	M	A	A
	Input Impedance MΩ		10	10	10	10	10
	Analog Bargraph						
	Relative					•	•
	Backlit EL Panel LCD				•	•	•
	Temperature						
	Peak/Hold						
	Data/Hold		•	•	•	•	•
	MAX/MIN						
	MAX/HOLD			•	•		
	Capacitance					•	•
	Frequency			•	•	•	•
	Continuity		•	•	•	•	•
	Diode Test		•	•	•	•	
DCV	True-RMS				•		
	Basic Accuracy,%		0.5	0.5	0.5	0.25	0.25
	Max Resolution, m V		1 mV	1 V	1 V	100	100
ACV	Basic Accuracy, %		1.2	1.2	1.2	0.75	0.75
	Max Resolution, m V		100 mV	100 mV	100 mV	100	100
	Frequency Response, Hz		50 to 500	50 to 500	50 to 500	50 to 500	50 to 500
DCA	Accuracy	Basic 1.5%		0~700 A	0~700 A		0~700 A
		Basic 2.0%		700~1200 A	700~1200 A		700~1200 A
	Max/Resolution, m A			0.1	0.1		0.1
ACA	Accuracy	50 to 60Hz 1.5%	0~700 A	0~700 A	0~700 A	0~700 A	0~700 A
		40 to 500Hz 3.5%	0~700 A	0~700 A	0~700 A	0~700 A	0~700 A
		50 to 60Hz 2%, A	700 A	700 A	700 A	700 A	700 A
	MAX Resolution, A		0.01	0.01	0.1	0.01	0.1
	Basic Accuracy, %					1.75	1.75
CX	MAX Resolution, m F					1.0	1.0
	MAX Cap mF					25	25
	Basic Accuracy, %					3	3
Ω	MAX Resolution, Ω		100 Ω	1 Ω	1 Ω	100 m	100 m
	MAX Resistance, MΩ		200 KΩ	200 KΩ	200 KΩ	25 M	25 M
	Basic Accuracy, %		1.2	1.2	1.2	0.3	0.3
Hz	MAX Resolution, Hz			1.0	1.0	0.001	0.001
	MAX Frequency, MHz			20 K	20 K	5 M	5 M
	Basic Accuracy		0.1	0.1	0.1	0.05	0.05

Ordering Example: HHM596C, *clamp-on meter,* ***$148.***

Comes with a set of safety test leads, 9 V alkaline battery, Type K beaded wire thermocouple (temperature models only) and complete operator's manual.

All clamp-on meters come with HHM-TL General use test lead set. High quality design.

Order a spare set, $5.

Accessories for Clamp-On Meters

MODEL NO.	PRICE	DESCRIPTION
HHM-TL	$5	Extra set of test leads
MN1604	3	Extra 9 V alkaline battery

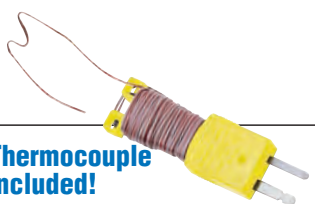
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

HHM596	HHM596C	HHM598	HHM598C/F	HHM598T	HHM599	HHM58	HHM59
$137	**$148**	**$76**	**$92**	**$89**	**$169**	**$195**	**$129**
4300	4300	1999	1999	1999	3999	3999	1999
A	A	M	M	M	A	M	M
10	10	10	10	10	10	10	10
					•	•	
•	•				•		
	°C/°F		°C/°F				°C/°F
•	•	•	•	•	•	•	•
A-H	A-H	•	•	•	•	•	•
•	•				•	•	
		•	•	•		•	
					•	•	
•	•	•	•	•	•	•	
•	•	•	•	•	•	•	
•	•	•	•	•	•	•	
				•	•	•	
0.25	0.25	0.5	0.5	0.5	0.25	0.5	0.5
100	100	1V	1V	1V	100	100 µV	100
1.2	1.2	1.2	1.2	1.2	0.75	1.5	1.2
100	100	100 mV	100 mV	100 mV	100	100 µV	100
50 to 500	50 to 500	50 to 500	50 to 500	50 to 500	50 to 500	50 to 500	50 to 500
0~700 A	0~700 A				0~700 A	0~1000 A	
700~1200 A	0~700~1200 A				0~700~1200 A		
0.1	0.1				0.1	100	
0~700 A	0~700 A	0~700 A	0~700 A	0~700 A	0~700 A	1000 A	
0~700 A	0~700 A	0~700 A	0~700 A	0~700 A	0~700 A	<800 A	
700 A	700 A	700 A	700 A	700 A	700 A	800~1000 A	0~1000 A
0.1	0.1	0.01	0.01	0.01	0.1	0.1	0.1
					2	1.5	2.0%
					1.0	1.0	
					40	40 µF	
		1.2	1.2	1.2	0.3	1.5	
100	100	1	1	1	100	0.1 Ω	0.1 Ω
43	43	200	200	200	40	40	2 M
0.1	0.1	0.1	0.1	0.1	0.1	1.0	1.0
0.1	0.1	1.0	1.0	1.0	0.01	0.01	
4.3 K	4.3 K	20 K	20 K	20 K	500 K	400 K	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

HHM596C, $148.

HHM598, $76.



Thermocouple Included!

Temperature models include a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). **Order a Spare! Model No. SC-GG-K-30-36, $15.**

HHM59, $129.

HHM58, $195.

Process product line continues to expand, visit omegamation.com for new details!

SUPERMETER®

WITH PATENTED LASER SIGHTING NON-CONTACT TEMPERATURE MEASUREMENT

3 METERS IN 1

HHM290
$245

True RMS Measurement!

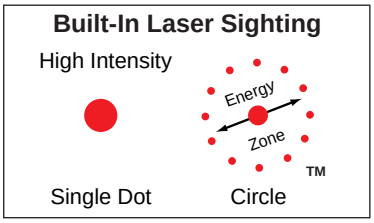
1 YEAR WARRANTY | CE | EMC SERVICES | NIST

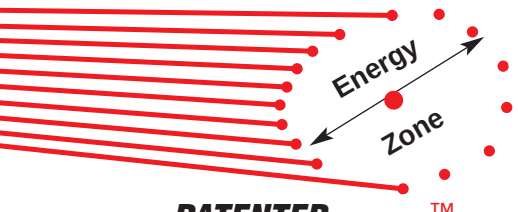
Optional

UNIQUE FEATURES!

- Built-In Infrared Pyrometer with Switchable Laser Dot/Circle Sighting
- Adjustable Emissivity with 10:1 Field of View
- Full-Function Auto-Ranging Digital Multimeter
- Measures Capacitance, Inductance, and Frequency
- Dual Thermocouple Input (Non-Isolated) with Differential Temperature Function
- Powered by 6 "AA" Batteries or DC Adaptor
- Built-In Tripod Mount
- Monitors Min, Max, Avg Readings
- Rugged Housing with Removable Boot

Laser Circle to Dot Switchable™





PATENTED

Covered by U.S. and International patents and pending applications

6 "AA" batteries included.

CAUTION! – This product is not intended for medical use or use on humans

See top view on page 82.

True RMS Measurement!

Shock-Resistant, Removable Boot

SUPERMETER® 3 METERS IN 1!

Includes:

- Test Lead Set
- 2 Type K Beaded Wire
- Thermocouples with Spool Caps
- 6 "AA" Batteries
- Rubber Boot
- Tilt Stand
- Spare Fuse
- Operator's Manual
- Built-In Non-Contact Infrared Pyrometer
- Full-Function Multimeter Featuring Min, Max, and Average Readings
- Dual Type K Thermocouple Inputs (Non-Isolated) and Selectable Temperature Display (T1 and T2) as well as Differential Temperature (T1-T2)

Everything Included!

Technology Breakthrough!

"It's a technician's dream come true!" Omega's new, patented, "all-in-one" The HHM290 SUPERMETER® combines the functions of a true RMS full-function multimeter, a non-contact infrared pyrometer with laser sighting and a dual-input Type K (non-isolated) thermocouple meter with a differential measurement feature into one power-packed handheld instrument. The multimeter measures DC/AC voltage, current, resistance, frequency, and capacitance, and features a built-in logic and diode tester. The infrared pyrometer offers adjustable emissivity, a wide temperature range, a 10:1 field of view, and a laser sighting selector switch. With this switch, the user can select between "a single laser dot" for hot spot locating and "a laser circle pattern" that outlines the optical field of view for average area measurement. The large backlit LCD shows simultaneous readings in both digital and analog bar graph format with settings for min/max and average readings. Features include auto power-off, fused multimeter inputs, and battery or AC wall adaptor power. The HHM290 comes with safety test leads, dual Type K temperature probes, rubber protective boot, batteries, spare fuse, and operator's manual. Units are CE marked.

SPECIFICATIONS

GENERAL

Operating Temperature:
0 to 40°C (32 to 104°F)
Power: 6 "AA" batteries (included) or optional DC adaptor, 9 Vdc @ 200 mA
Display: Dual backlit LCD with digital readout of 43,000 counts and analog bar graph of 40 counts
Display Resolution:

RANGE	DISPLAY RESOLUTION
0 to 4.3	0.0001
0 to 43	0.001
0 to 430	0.01
0 to 4300	0.1

Low Battery Indicator:
Icon on LCD
Battery Life: 100 hours normal usage without laser or LCD backlight
Tripod Mount: ¼" to 20 UNC
Dimensions: 203 H x 101 W x 51 mm D (8 x 4 x 2")
Weight: 640 g (1.42 lb)

MULTIMETER

DC Voltage
Range: 430 mV to 1000 V
Accuracy: 0.25% rdg + 10 digits
AC Voltage
Range: 430 mVac to 750 Vac
Accuracy: 1% rdg + 20 digits
DC Current
Range: 430 µA to 10 A
Accuracy:
0.5% rdg + 10 digits (up to 43 mA)
2% rdg + 10 digits (up to 10 A)
AC Current
Range: 430 µA to 10 A
Accuracy:
1% rdg + 20 digits (up to 430 mA)
2.5% rdg + 20 digits (up to 10 A)
Resistance
Range: Up to 41 MΩ
Accuracy: 0.3% rdg + 20 digits (Up to 4.3 MΩ)
Frequency
Range: Up to 1 MHz
Accuracy: 0.1% rdg + 3 digits
Capacitance
Range: 4.3 nF to 430 µF
Accuracy: 5% rdg + 100 digits

TEMPERATURE MEASUREMENT

Thermocouple Type:
Dual Type K (non-isolated)
Display: T1, T2, or T1-T2
Accuracy: 2% rdg or 2°C
Measurement Range: -200 to 1372°C (-328 to 1999°F)

INFRARED MEASUREMENT

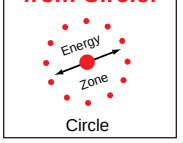
Measurement Range: -20 to 550°C (-4 to 1022°F)
Accuracy @ 22°C: 2% rdg or 1.7°C, whichever is greater
Resolution: 1°C or °F
Optical Field of View: 10:1
Spectral Response:
8 to 14 microns
Emissivity:
0.1 to 1 adjustable
Response Time:
≤1.5 seconds

LASER SIGHTING

Wavelength (Color): 630 to 670 nm (red)
Operating Distance:
Laser Dot: Up to 12 m (40')
Laser Circle: Up to 4.5 m (15')
Maximum Optical Power Output:
<1 mW Class II laser product
Laser Indicator: Laser icon on the display

Differential Temperature Sensors Included.

Switch from Circle!



Circle

Switch from High Intensity Dot!

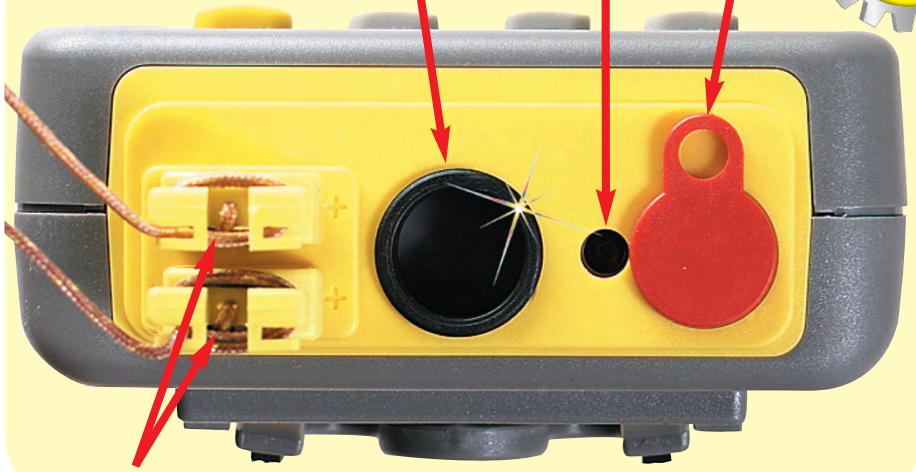
Shown with Tilt Stand and Rubber Boot (Included).

Tripod Mountable.

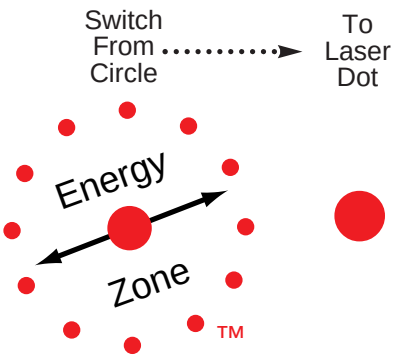
Optional AC Adaptor (See "To Order" on Next Page).

SUPERMETER® 3 METERS IN 1!

Immediate Delivery Available



Patented Laser Sighting Circle or Dot Switchable

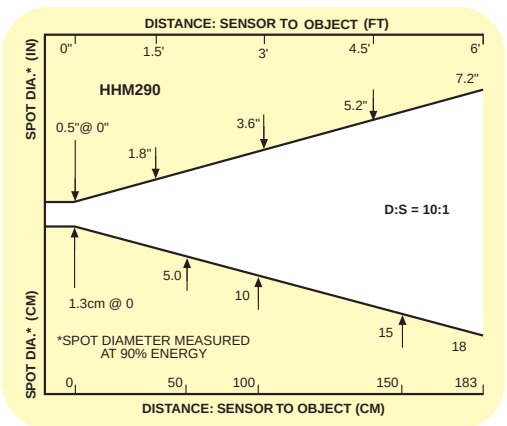


PATENTED

Covered by U.S and International patents and pending applications

- **Built-In Non-Contact Infrared Pyrometer**
- **Full-Function Multimeter Featuring Min, Max, and Average Readings**
- **Dual Type K Thermocouple Input (Non-Isolated) and Temperature Display (T1 and T2) as well as Differential Temperature (T1-T2)**
- **Built-In Patented Laser Circle Sighting for Infrared Measurement**
- **Digital Emissivity Adjustment from 0.1 to 1.00 in 0.01 Steps**
- **Optical Field of View of 10:1 (Distance to Spot Size)**
- **High-Performance, Rugged Design with Large Backlit LCD**
- **Measures Voltage, Current, Resistance, Capacitance, Inductance, and Frequency**
- **Built-In Diode and Logic Test**
- **Battery as well as Optional AC Power**
- **Auto Power-Off**
- **Tripod Mount and Built-In Rubber Boot**

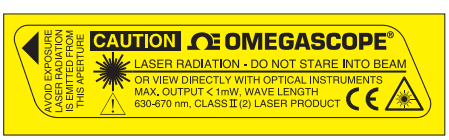
10:1 Field of View



To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
HHM290	**$245**	Digital multimeter/infrared thermometer with laser sighting dot/circle switch
OPTIONS AND ACCESSORIES		
HHM290-SC	**$15**	Soft carrying case
HHM-TL	**5**	Replacement test leads (1 set)
OS520-Adaptor-110V	**25**	110 Vac adaptor
OS520-Adaptor-220V	**25**	220 Vac adaptor
KTSS-HH	**29**	General purpose immersion probe, Type K
88001K	**110**	General purpose surface probe, Type K
CAL-3-IR†	**125**	NIST-traceable calibration
TRIPOD	**45**	Lightweight tripod with soft carrying case



† *Consult Sales for prices on additional calibration services*
Comes with rubber boot, 2 Type K beaded wire thermocouples, 6 "AA" alkaline batteries, test leads and operator's manual.
Ordering Example: HHM290, *Digital multimeter/infrared thermometer with laser sighting,* ***HHM290-SC,*** *soft carrying case,* ***KTSS-HH,*** *general purpose immersion probe,* ***CAL-3-IR,*** *NIST-traceable calibration, and* ***TRIPOD,*** *$245 + 15 + 29 + 125 + 45 =* ***$459****.*

Process product line continues to expand, visit omegamation.com for new details!

INFRARED THERMOMETER
WITH CIRCLE/DOT LASER SIGHTING

NEW

OSXL450
$59

1 YEAR WARRANTY

TM

- **Measurement Range -20 to 320ºC (-4 to 608ºF)**
- **Fixed 0.95 Emissivity**
- **6:1 Field of View**
- **Auto Power-Off**
- **Backlit Display for Night Use**
- **Laser Circle/Dot Sight**
- **ºC/ºF Selectable**

The OSXL450 is an economical, non-contact thermometer that is simple to operate. Its patented laser sighting system defines the target for point and shoot measurement of temperatures from -20 to 320ºC (-4 to 608ºF). Reads surface temperatures in less than a second. Includes handy wrist strap and batteries.

SPECIFICATIONS

Temperature Range: -20 to 320ºC (-4 to 608ºF)
Accuracy: ±2ºC (±3ºF) or 2% of reading, whichever is greater
Repeatability: 2% or 3ºF
Response Time: 500 msec, 95%
Spectral Response: 7 to 18 µm
Emissivity: 0.95
Laser Power Output: Less than 1 mW
Ambient Operating Range: 0 to 40ºC (32 to 105ºF)
Relative Humidity: 10 to 95% non-condensing, at up to 30ºC (86ºF)
Storage Temp: -20 to 65ºC (-4 to 150ºF) without battery
Dimensions: 160 x 90 x 43 mm (6.3 x 3.54 x 1.7")
Weight: 150 g (0.33 lb)
Power: 9 V (included)
Battery Life: 12 hr, with laser on
Distance to Spot Ratio: 6:1

PATENTED
Covered by U.S. and International Patents and pending applications

EXCLUSIVELY FROM OMEGA!

OSXL450, $59, shown smaller than actual size.

Laser Circle to Dot Switchable™

CAUTION! – This product is not intended for medical use or use on humans

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
OSXL450	**$59**	Economical IR thermometer with circle/dot laser

Comes with 9 V battery, wrist strap, and operator's manual.
Ordering Example: OSXL450,** infrared thermometer, **$59.

NEW THERMOCOUPLE VIRTUAL CHART RECORDER

$295 All Models

iTCX

MADE IN USA CE FCC-B

- Virtual Chart Recorder
- 2 Thermocouple Channels
- Web Server
- 10 Popular T/C Types
- Accurate
- Email Alarms
- Data Logging
- No Special Software Required

iTCX-D, DIN rail iServer.

iTCX-W and two 5SRTC miniature connectors with strain relief (included), $295, shown smaller than actual size

View Temperature from One or Two Thermocouples with a Web Browser

The OMEGA® iTCX transmitter lets the user monitor temperature from two independent thermocouple channels over an Ethernet network or the Internet with no special software except a Web browser.

This virtual chart recorder serves active Web pages to display real-time readings and temperature charts. It logs data in standard formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

The virtual chart viewed on the Web page is a JAVA™ Applet that plots a chart over the LAN or Internet in real time. With the OMEGA iTCX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

The Omega® iTCX is available in an industrial DIN rail package (iTCX-D) that is powered by 10 to 32 Vdc, and in a benchtop or wall-mount package (iTCX-W) with a universal (100 to 240 Vac) power adaptor included.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month, or one year. Temperature can be charted across the full span or within any narrow range such as 20 to 30°C.

You can chart temperature from one thermocouple, two thermocouples, and/or the differential between the two.

The iTCX transmitters can take thermocouple Types J, K, T, E, R, S, B, C, N, and L, measuring temperatures up to 1820°C (3308°F). They can display and chart absolute measurements in two locations and a differential measurement between the two locations.

Award-Winning Technology

The OMEGA® iTCX is simple to install and use, and features OMEGA®'s award-winning iServer technology that requires no special software except a Web browser.

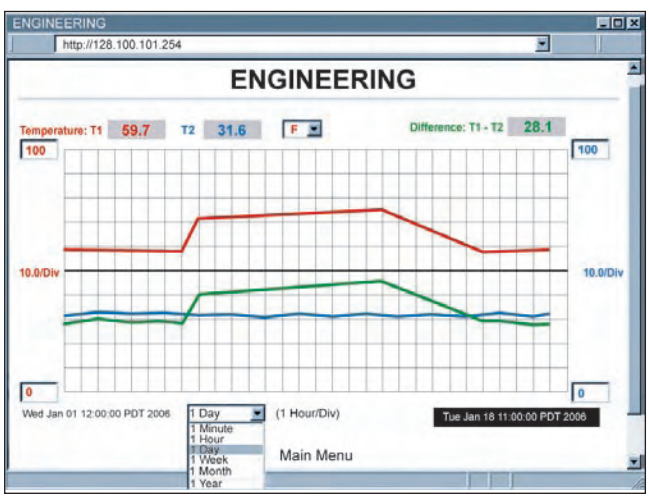
The iTCX connects to an Ethernet network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types an IP address or an easy to remember name in any Web browser, and the iTCX serves a Web page with the current readings.

Email Alarms

The iTCX can send an email or text messages over the Internet, reporting the status or an alarm condition to any individual or distribution list.

OMEGA iServer products are designed and manufactured in the U.S.A.



Adjustable Chart Web Page.

iServer MicroServer™

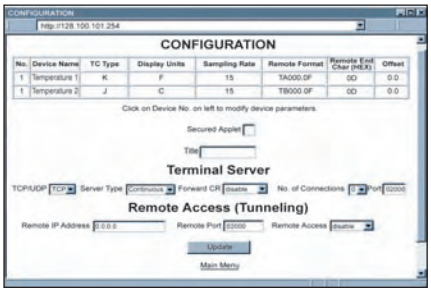
NEW

SPECIFICATIONS

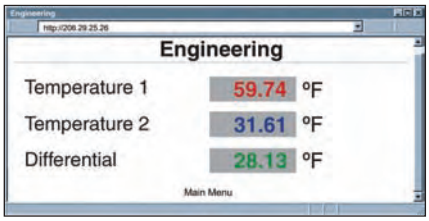
Thermocouple Input Temperature Range: Refer to thermocouple chart
Temperature Accuracy: Refer to thermocouple chart
Resolution: 1º/0.1º
Temperature Stability: 0.08ºC/ºC
Thermocouple Cold End Tracking: 0.05ºC/ºC
Thermocouple Lead Resistance: 100Ω max
Thermocouple Type (ITS 90):
J, K, T, E, R, S, B, C, N, L

iSERVER SPECIFICATIONS

Interfaces:
Ethernet: 10Base-T (RJ45)
Supported Protocols:
TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP and Telnet



Indicators (LEDs):
Network activity, network link, transmit and receive/diagnostics
Memory: 512 KB flash, 16 KB SRAM
Management: Device configuration and monitoring through embedded Web server
Software: Firmware upgradable. Includes an Excel program for automatic data logging within definable time intervals, compatible with all Windows operating systems



Embedded Web Server:
Serves Web pages containing real-time data and live updated charts within definable time intervals

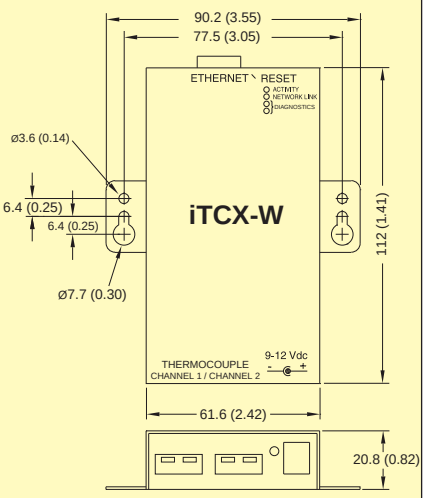
ENVIRONMENTAL

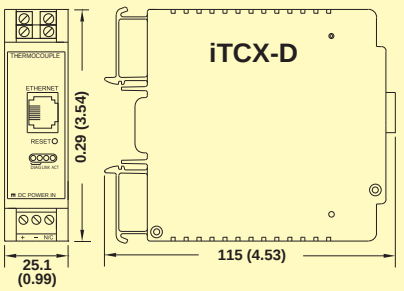
Operating Temperature: 0 to 70°C (32 to 158°F)
Storage Temperature: -40 to 125°C (-40 to 257°F)

Power Input
iTCX-W: 9 to 12 Vdc
iTCX-D: 10 to 32 Vdc
Safety Qualified AC Power Adaptor—
Nominal Output: 9 Vdc @ 0.5 A (included for iTCX-W)
Input: 100 to 240 Vac, 50/60 Hz; switching power supply (sold separately for iTCX-D)
Consumption: 2.5 W max
Packaging Material: Metal case with flange mount for iTCX-W; polycarbonate case with DIN rail mount for iTCX-D

MECHANICAL SPECIFICATIONS

Dimensions: mm (in)





INPUT TYPE		RANGE	ACCURACY
J	Iron - Constantan	-210 to 760°C / -346 to 1400°F	0.4°C / 0.7°F
K	CHROMEGA®- ALOMEGA®	-270 to -160°C / -160 to 1372°C -454 to -256°F / -256 to 2502°F	1.0°C / 0.4°C 1.8°F / 0.7°F
T	Copper - Constantan	-270 to -190°C / -190 to 400°C -454 to -310°F / -310 to 752°F	1.0°C / 0.4°C 1.8°F / 0.7°F
E	CHROMEGA®- Constantan	-270 to -220°C / -220 to 1000°C -454 to -364°F / -364 to 1832°F	1.0°C / 0.4°C 1.8°F / 0.7°F
R	Pt / 13% Rh-Pt	-50 to 40°C / 40 to 1768°C -58 to 104°F / 104 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
S	Pt / 10% Rh-Pt	-50 to 100°C / 100 to 1768°C -58 to 212°F / 212 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
B	30% Rh-Pt / 6% Rh-Pt	100 to 640°C / 640 to 1820°C 212 to 1184°F / 1184 to 3308°F	1.0°C / 0.5°C 1.8°F / 0.9°F
C	5% Re-W / 26% Re-W	0 to 2320°C / 32 to 4208°F	0.4°C / 0.7°F
N	Nicrosil - Nisil	-250 to -100°C / -100 to 1300°C -418 to -148°F / -148 to 2372°F	1.0°C / 0.4°C 1.8°F / 0.7°F
L	J DIN	-200 to 900°C / -328 to 1652°F	0.4°C / 0.7°F

To Order *(Specify Model Number)*

MODEL NO.	PRICE	DESCRIPTION
iTCX-W	**$295**	iServer MicroServer™ for dual thermocouple input, includes 2 Type K thermocouples with 1 m (36") of 24 AWG Teflon® insulated wire and a molded mini-connector with snap-on strain relief and universal (100 to 240 Vac) power adaptor
iTCX-D	**295**	DIN rail iServer industrial MicroServer™ for dual thermocouple input
ACCESSORIES		
iDRN-PS-1000	**$150**	DIN rail power supply (switching), 95 to 240 Vac input, 24 Vdc out @ 850 mA (power up to 7 units)

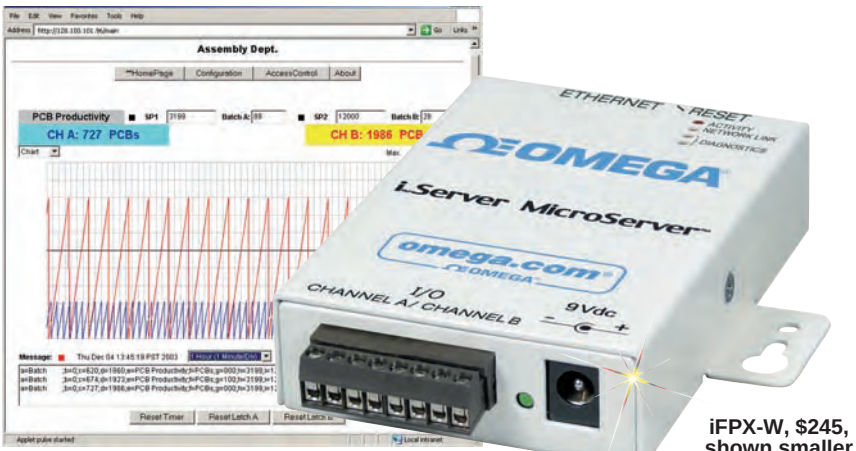
NEW INTERNET COUNTER ISERVER

iServer MicroServer™

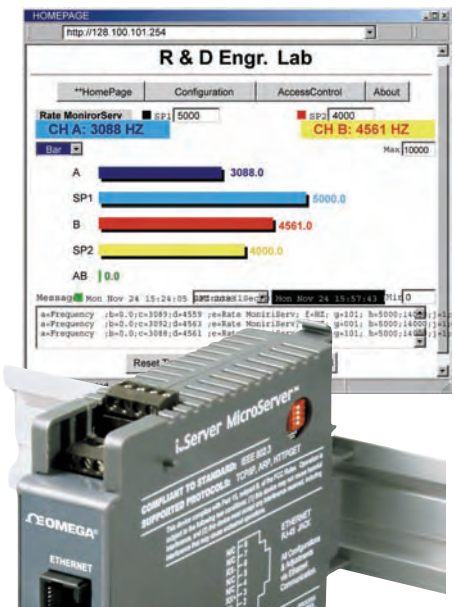
iFPX-W Starts at $245

MADE IN USA CE FCC-B c UL us

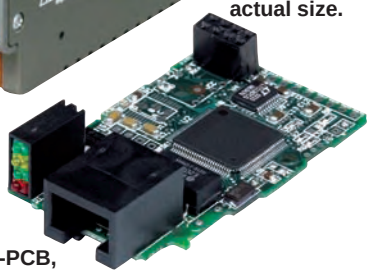
- **Displays Rate, Frequency, Pulse, Total, Batch, and Quadrature over Ethernet and Internet**
- **Web-Based Interface**
- **No Special Software Needed**
- **Up to 500 kHz Input**
- **Chart, Bar Graph, and X/Y Displays**
- **2 Channel Input/Output**
- **Custom Firmware and Private Labeling for OEMs**



iFPX-W, $245, shown smaller than actual size.



iFPX-D, $245, with DIN rail case, shown smaller than actual size.



iFPX-PCB, shown smaller than actual size.

The Omega iFPX Internet counter puts "dumb" data on the World Wide Web. This revolutionary technology transmits virtually any conventional counting application up to 500 kHz over an Ethernet network or the Internet.

The Omega iFPX (Internet Frequency Pulse Transmitter)
can count contacts from the simplest button or switch, as well as count pulses from almost any conventional transducer, such as a proximity sensor or quadrature encoder. The iFPX converts raw data to intelligent information.

The iFPX can be configured as
a virtual version of almost any rate/frequency meter, totalizer, or batch controller. It is a node on an Ethernet network with a unique IP address and serves the data to any authorized computer on a LAN, WAN or the Internet.
Setpoints can be programmed to trigger an alarm and even send email automatically to a Web-enabled cell phone.

No special software or drivers are required. A user can type the unit's IP address (or assigned name) on the address line of a Web browser such as Internet Explorer.
The device then serves actual JAVA-based active Web pages that present the information numerically and graphically.

The iFPX supports the common Ethernet/Internet protocols: TCP, UDP, ARP, Telnet, DHCP, DNS, and HTTP. The device integrates seamlessly with data acquisition and industrial automation programs. The iFPX offers password protection for security.

The iFPX provides 2 discrete input/output channels. For applications that use 2 inputs, it can perform calculations with the data from channels A and B that can be presented numerically or graphically, such as charting position on an XY graph.

The Omega iFPX is offered as a PC board for OEM applications, and as a stand-alone device suitable for industrial or commercial applications.

SPECIFICATIONS

INPUT TYPE

Dual Input A and B:
Min low level signal input (magnetic pickups): 120 mV
Open Collector NPN:
Max current source: 1.66 mA
Open Collector PNP:
Max current sink: 5 mA
TTL/CMOS Input:
Low ≤0.8 V, high ≥3.5 V
(for input: 1 Hz to 30 kHz)
Low ≤0.8 V, high ≥10 V
(for input: 1 Hz to 60 kHz)

OPERATING MODES

Frequency:
Range: 1 Hz to 100 kHz
Max Input Frequency:
Input level 0 to 5 V: 50 kHz
Input level 0 to 12 V: 100 kHz
Frequency Resolution:
1 Hz to 100 kHz/0.0000000001 Hz
Totalizer:
Range = 0 to 999999999*
Totalizer Accuracy: 0.3%
** Resolution is 1 count.*

A/B Totalize/Frequency (A Input Used with B Input): Could be A + B, A - B, A x B, A/B
Range = -999999999 to 999999999*
Batch: Similar to totalize except the batch = 0 to 65,535
Quadrature: Range = -999999999 to 999999999; resolution is 1 count
Output A and B: Open-collector transistors, rated 150 mA sink, 30 V. For external supply.
Embedded Web Server: Serves dynamic Web pages and Java applets (256 KB capacity)

NETWORK INTERFACE

Interface: Ethernet 10Base-T
Connector: RJ45
Protocols: TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP, Telnet
Indicators (LEDs): Power, network activity, network link and diagnostics
Memory: 512 KB flash, 16 KB SRAM
Management: Embedded Web server, Telnet login, serial login

GENERAL

Input Impedance: 1 MΩ to +EXC 5 V
Excitation: 5 V at 25 mA (per channel)
Debounce Time: Programmable
Gate Time: Programmable
Isolation: Dielectric strength per 1 minute test based on EN 61010
iFPX-W: Pwr to Ethernet: 1500 Vrms; pwr to input/output: none; input/output to Ethernet: 1500 Vrms
iFPX-D: Pwr to Ethernet: 1500 Vrms; pwr to input/output: 1500 Vrms; input/output to Ethernet: 1500 Vrms

IFPX-W PACKAGING

Material: Metal case with flange mount
Dimensions: 20.8 H x 61.6 W x 90.3 mm D (0.83 x 2.93 x 3.56")
Weight: 180 g (0.4 lb)

IFPX-D PACKAGING

Material: Polycarbonate case with DIN rail mount
Dimensions: 90.2 H x 25.1 W x 115.0 mm D (3.54 x 0.99 x 4.53")
Weight: 113 g (0.25 lb)

IFPX-PCB PACKAGING

Material: FR-4
Board Surface Area: Approximately 76 sq mm (3 sq in)
Weight: 23 g (0.05 lb)

IFPX-W POWER INPUT

Input: 9 Vdc @ 200 mA; safety qualified AC/DC power adapter with 9 Vdc @ 0.5 A min (included)

IFPX-D POWER INPUT

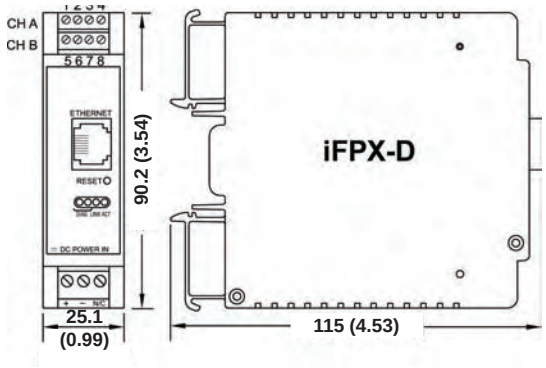
Input: 10 to 32 Vdc
Consumption: 2 W max (DC power supply sold separately)

IFPX-PCB POWER INPUT

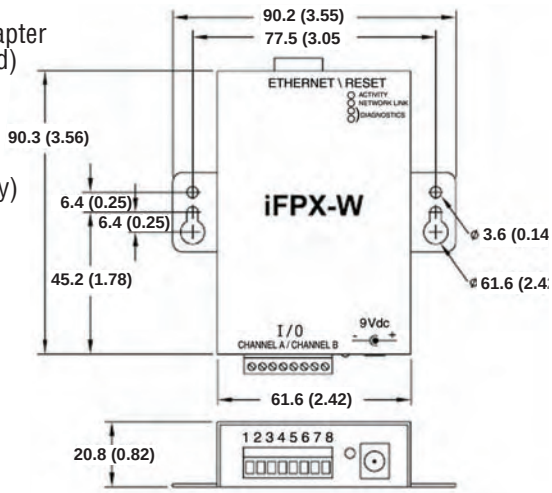
Input: 5 Vdc @ 150 mA

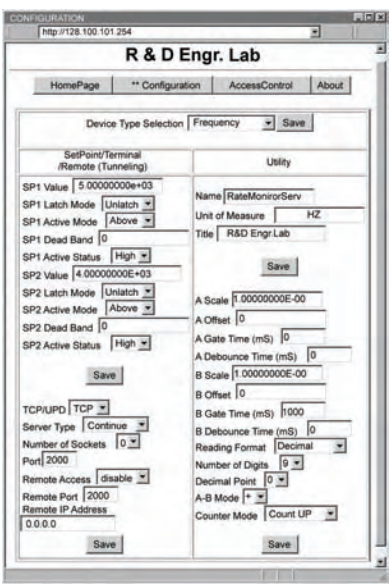
ENVIRONMENTAL

Operating Temp: 0 to 70°C (32 to 158°F)
Storage Temperature: -40 to 125°C (-40 to 257°F)
Relative Humidity: 90% @ 40°C non-condensing



Dimensions: mm (in)





To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
iFPX-W	$245	iServer MicroServer™ for frequency pulse applications (up to 100 KHz input with EMC filtering), with AC power adaptor
iFPX-D	245	Industrial iServer MicroServer™ for frequency pulse applications (up to 100 kHz input with EMC filtering)
iFPX-PCB	**	Embedded iServer MicroServer™ for frequency pulse applications (up to 100 kHz input with EMC filtering) TTL serial interface
iFPX-W5	270	iServer MicroServer™ for frequency pulse applications (up to 500 kHz input without EMC filtering), with AC power adaptor
iFPX-D5	270	Industrial iServer MicroServer™ for frequency pulse applications (up to 500 kHz input without EMC filtering)
iFPX-PCB5	**	Embedded iServer MicroServer™ for frequency pulse applications (up to 500 kHz input without EMC filtering) TTL serial interface

Accessory

MODEL NO.	PRICE	DESCRIPTION
iDRN-PS-1000	$150	Power Supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units)

** Volume discounts are available. ** Consult OMEGA for application assistance and quantity pricing. iFPX-W and iFPX-W5 comes with an AC adaptor.*

Ordering Example: iFPX-W** iServer MicroServer™ for frequency pulse applications with an AC adaptor, **$245.

NEW

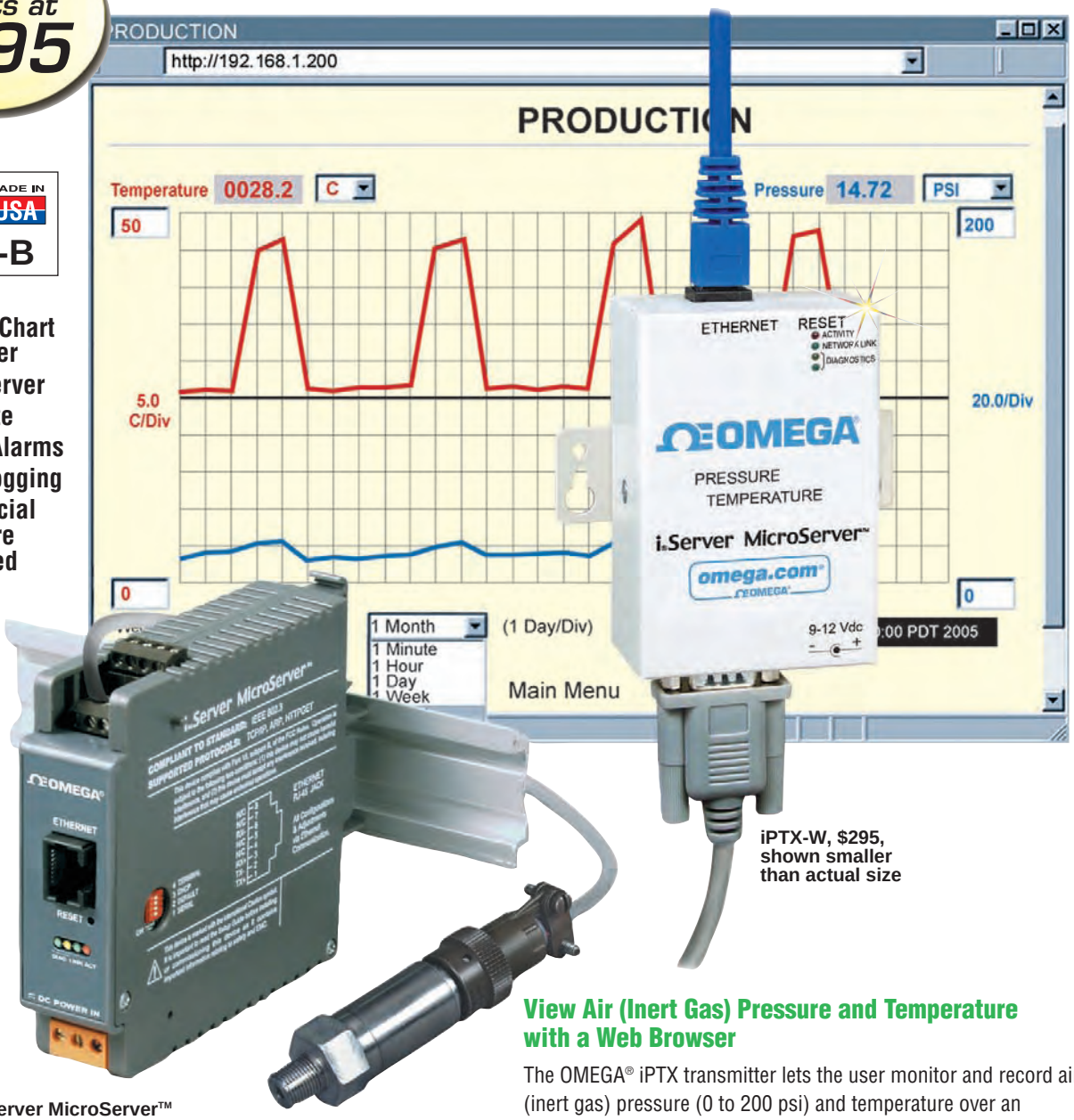
VIRTUAL CHART RECORDER PRESSURE + TEMPERATURE

iServer MicroServer™

iPTX-D Starts at $295

CE MADE IN USA FCC-B

- Virtual Chart Recorder
- Web Server
- Accurate
- Email Alarms
- Data Logging
- No Special Software Required



iPTX-W, $295, shown smaller than actual size

iPTX-D iServer MicroServer™ with pressure transducer (included), $295, shown smaller than actual size

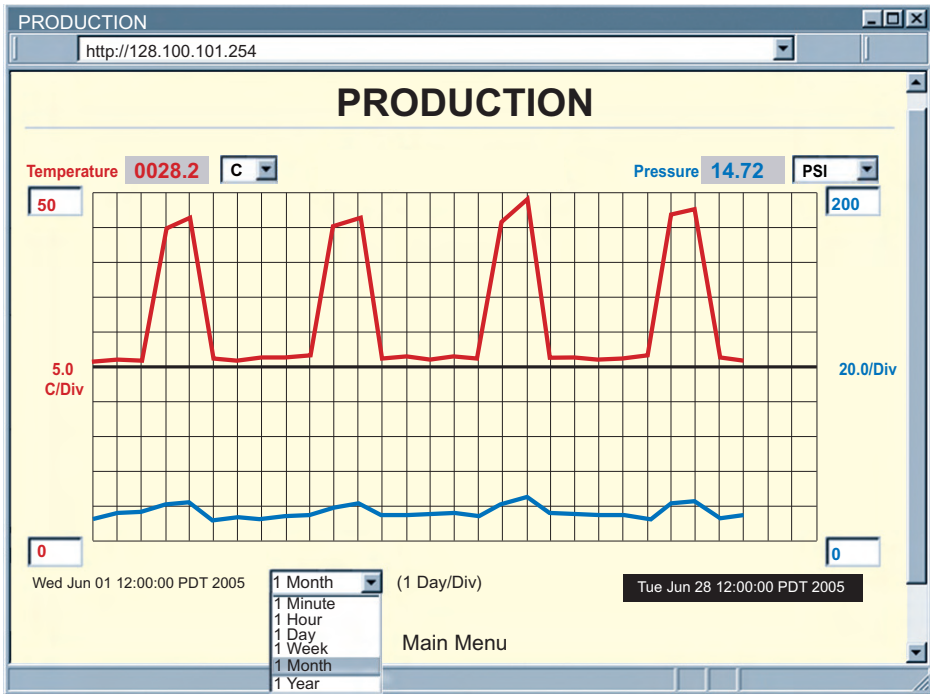
iPTX

All iPTX models include a 304 SS, ⅛-27 NPT pressure transducer with twist lock connector!

View Air (Inert Gas) Pressure and Temperature with a Web Browser

The OMEGA® iPTX transmitter lets the user monitor and record air (inert gas) pressure (0 to 200 psi) and temperature over an Ethernet network or the Internet with no special software except a Web browser. The OMEGA iPTX serves active Web pages to display real-time readings, display charts of air pressure and temperature, or log data in standard formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

The virtual chart viewed on the web page is a JAVA™ applet that records a chart over the LAN or Internet in real time. With the OMEGA® iPTX, there is no need to invest time and money learning a proprietary software program to log or chart the data.



NIST-Traceable Calibration Certificate available. In compliance with ISO9001:2000, ISO10012-1.1992(E), ANSI/NCSL Z540-1.1994 and MIL-STD-45662A.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year.

Temperature can be charted across the full span (0 to 70°C) or within any narrow range (such as 20-30°C).

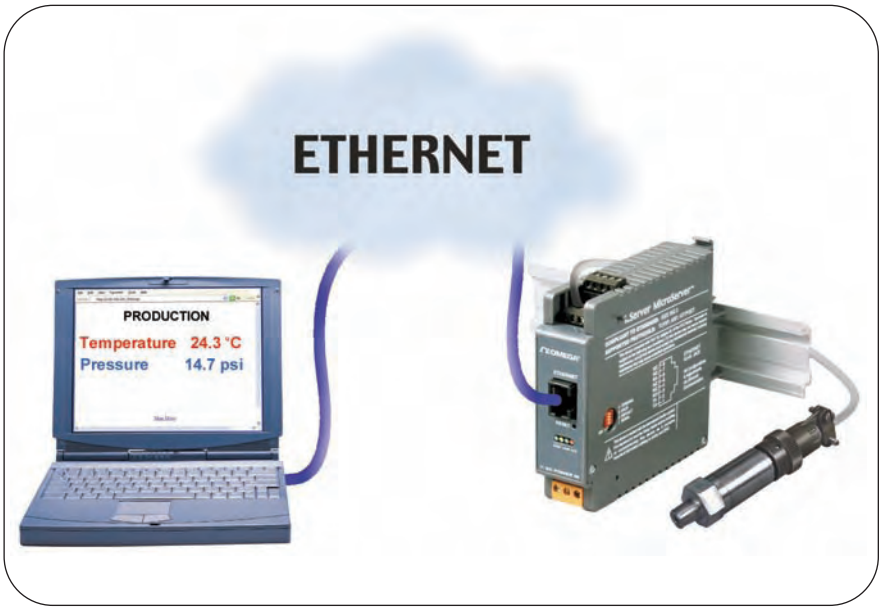
Air (inert gas) Pressure can be displayed in kilopascals (kPa), pounds per square inch (psi) or kilograms per square centimeter (Kg/cm2).

Display and Chart Measurements

The iPTX transmitters come complete with a air pressure / temperature probe for measurement of a single location.

Award-winning Technology

The OMEGA iPTX is simple to install and use, and features OMEGA's award-winning iServer technology that requires no special software except a Web Browser.



View Air Pressure and Temperature over an Ethernet or the Internet.

The iPTX connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a Web Browser and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom 5" or "Midwest Server Room" in any Web Browser, and the iPTX serves a Web Page with the current readings.

Typical Applications

The OMEGA iPTX is great for monitoring air (inert gas) pressure and temperature in applications such as: HVAC systems, pharmaceutical and food processing and storage, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, manufacturing, greenhouses, farm animal shelters, and many more.

Email Alarms

The OMEGA iPTX models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including an Internet enabled pager or cell phone.

OMEGA iServer products are designed and manufactured in the U.S.A.

SENSOR SPECIFICATIONS

AIR (INERT GAS) PRESSURE (P)

Accuracy/Range: 0 to 200 psi ±2.4 (0 to 14 bar ±.0.2)
Resolution: 0.006 psi (0.4 mbar)
Maximum safe pressure:
250 psi absolute (17 bar abs.)

TEMPERATURE (T)

Accuracy*: ±2°C (±3.6°F)
Range: 0 to 70°C (32 to 158°F)
Response Time: 5 seconds
Resolution: 0.01°C, 14 bit

PROBE PHYSICAL DIMENSIONS

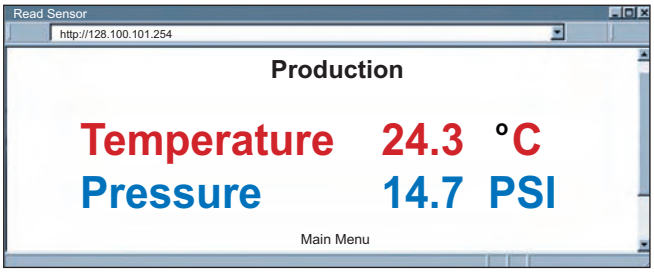
Probe: 99 mm L x 19 mm dia (3.9 x 0.75") assembled
Pressure Port: 304 SST, 1⁄8-27 NPT
Twist Lock Type Connector: PTIH-10-6P and PT06F-10-6S
Cable with DB9 or Stripped Leads: 6.1 m (20') long
Cable Operating Temperature: 0 to 105°C (32 to 221°F)

iSERVER SPECIFICATIONS

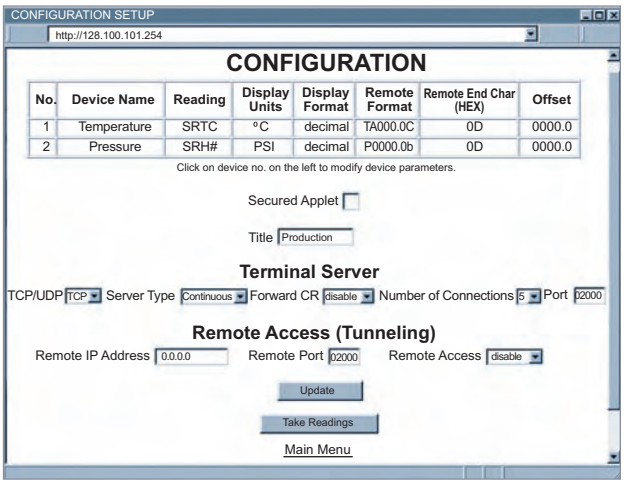
Interfaces
Ethernet: 10Base-T (RJ45)
Supported Protocols: TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP and Telnet
Indicators (LEDs): Network activity, network link, transmit and receive/diagnostics
Memory: 512 KB flash, 16 KB SRAM
Management: Device configuration and monitoring through embedded Web server
Software: Firmware upgradable. Includes an Excel program for automatic data logging within definable time intervals, compatible with all Windows operating systems.
Embedded Web Server: Serves Web pages containing real-time data and live updated charts within definable time intervals
Power Input:
iPTX-W: 9 to 12 Vdc
iPTX-D: 10 to 32 Vdc
Safety Qualified AC Power Adaptor:
Nominal Output: 9 Vdc @ 0.5 A
Input: 100 to 240 Vac, 50/60 Hz (included for iPTX-W)
Switching power supply sold separately for iPTX-D
Consumption: 2.5 W max

ENVIRONMENTAL

Operating Temperature: 0 to 70°C (32 to 158°F)

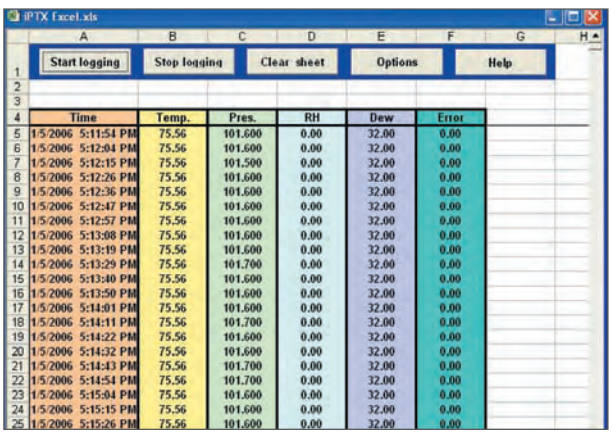


Reading Sensor Web Page.



iPTX-W and iPTX-D Device Configuration Web Page.

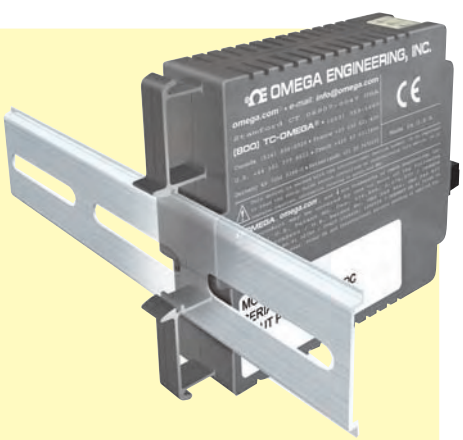
Data Logging Spreadsheet.



PACKAGING

Material: Metal case with flange mount for iPTX-W; polycarbonate case with DIN rail mount for iPTX-D
Weight:
iPTX-D: 272 g (0.60 lb)
iPTX-W: 363 g (0.80 lb)
Dimensions: Refer to Mechanical Specifications page

- **24Vdc Supply**
- **Switching Power Supply powers up to 7 units**



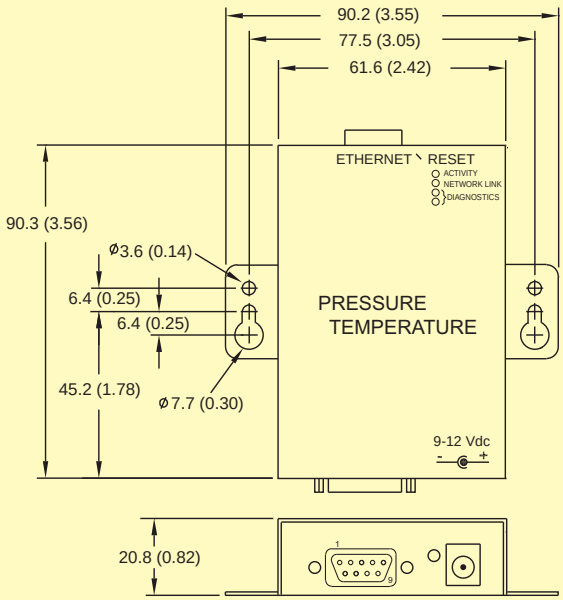
Mounts to 35 mm DIN rails.

Process product line continues to expand, visit omegamation.com for new details!

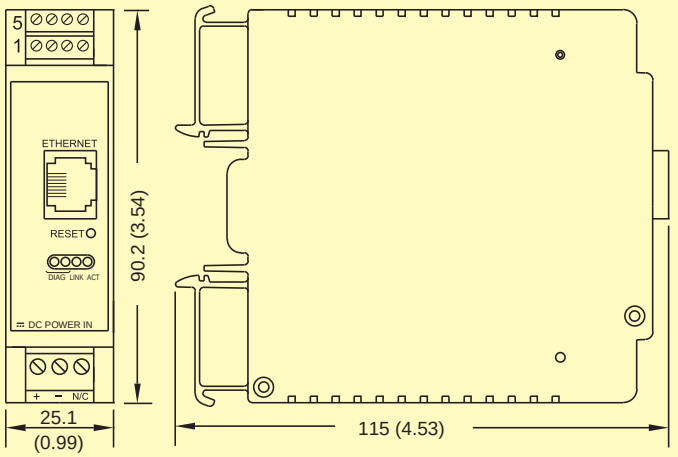
MECHANICAL SPECIFICATIONS

Dimensions: mm (in)

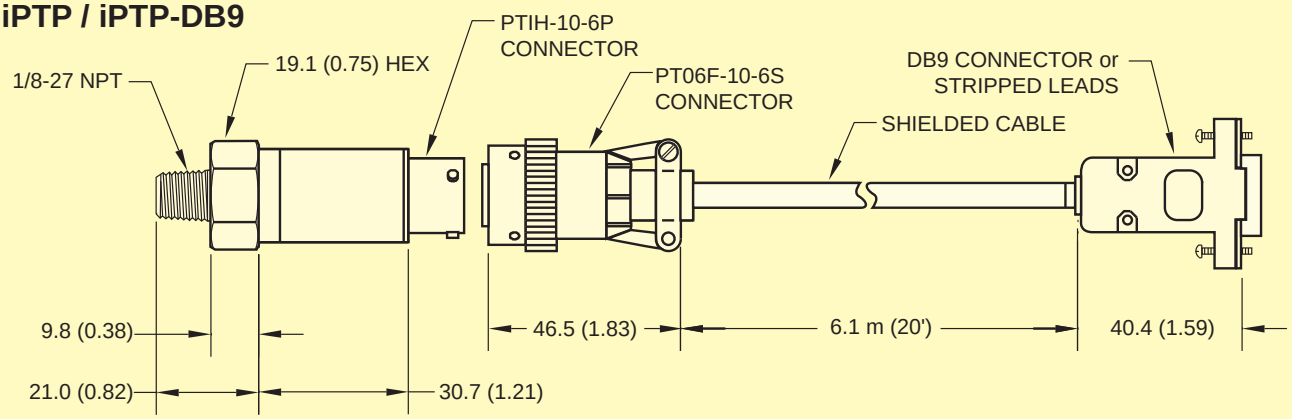
iPTX-W



iPTX-D



iPTP / iPTP-DB9



To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
iPTX-D	**$295**	DIN rail iServer industrial MicroServer™ for air (inert gas) pressure (0 to 200 psi) and temperature [includes probe with 6.1 m (20') cable, stripped wire leads]
iPTX-W	**295**	iServer MicroServer™ for air (inert gas) pressure (0 to 200 psi) and temperature [includes probe with 6.1 m (20') cable, DB9 connector and universal (100 to 240 Vac) power adaptor]
ACCESSORIES		
iPTP	**$100**	Replacement probe with 6.1 m (20') cable, stripped wire leads (for iPTX-D)
iPTP-DB9	**125**	Replacement probe with 6.1 m (20') cable, DB9 connector (for iPTX-W)
iDRN-PS-1000	**150**	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA, powers up to 7 units (for iPTX-D)
CAL-3-A	**125**	NIST-traceable calibration certificate, 3 pressure points, temp 25°C (for new units)

Comes with air pressure/temperature probe with 6.1 m (20') cable.

Ordering Example: iPTX-D** iServer MicroServer™ with industrial air pressure/temperature probe with 6.1 m (20') cable, **$295.

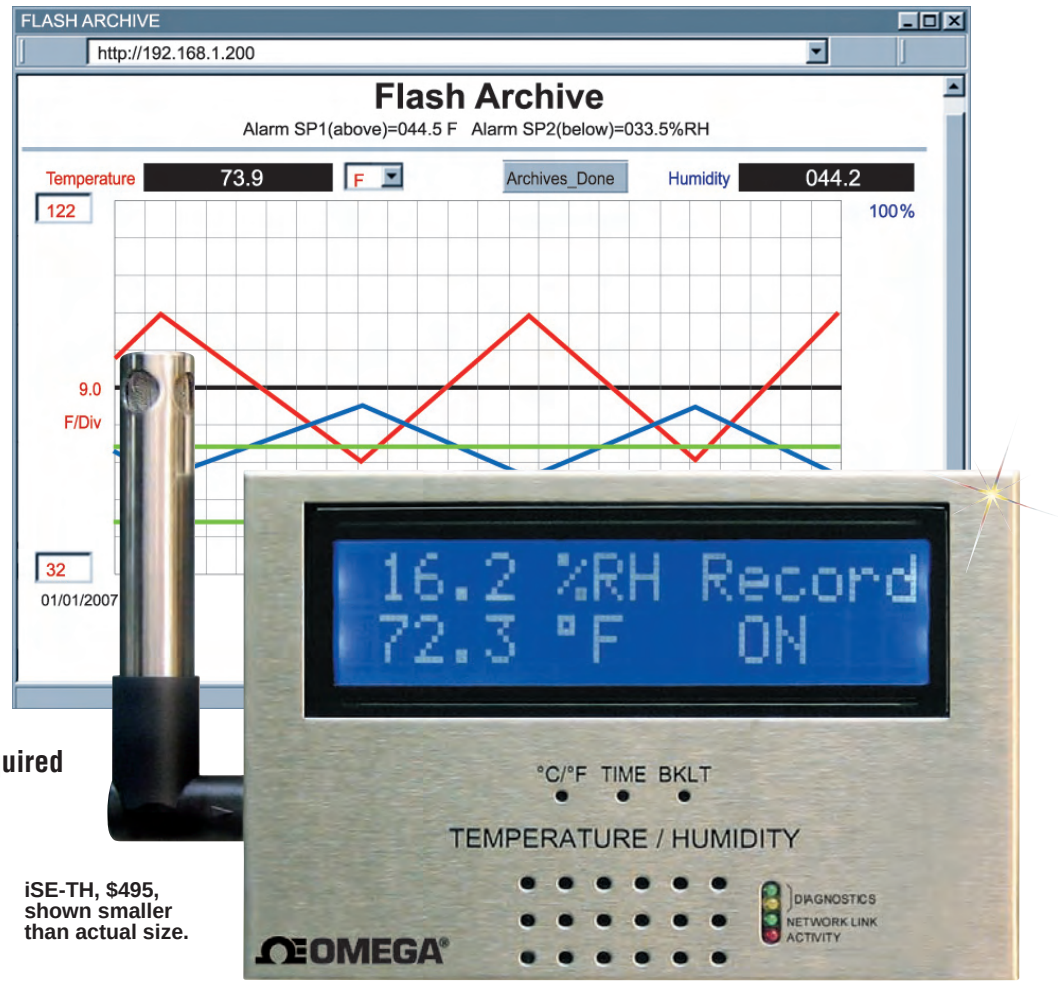
NEW ENVIRONMENTAL SURVEILLANCE OVER THE INTERNET WEB-BASED REMOTE SURVEILLANCE OF TEMPERATURE + HUMIDITY

iSE

iSE Series Starts at $495

1 YEAR WARRANTY | MADE IN USA | FCC-B

- Email Alarms
- Virtual Chart Recorder
- Web Server
- Accurate Readings
- Data Logging
- No Special Software Required



iSE-TH, $495, shown smaller than actual size.

The OMEGA® iSE environmental monitor provides Web-based remote surveillance of environmental conditions in critical HVAC applications such as computer server rooms, clean rooms, laboratories, museums, warehouses, or any remote facility.

View and record Temperature, Relative Humidity and Dew Point over an Ethernet network or the Internet with no special software—just a Web browser.

Email Alarms

The device can trigger an alarm if temperature or humidity goes above or below a set point that you determine. Your alarm can be sent by email to a single user or to a group distribution list, including text messages to Internet enabled cell phones and PDAs.

The OMEGA iSE includes screw terminals for two contact closures that work with common alarm sensors. You can instruct the iSE monitor to send an alarm if a door is opened, a window is broken, or a fire sprinkler goes off.

Power Failure

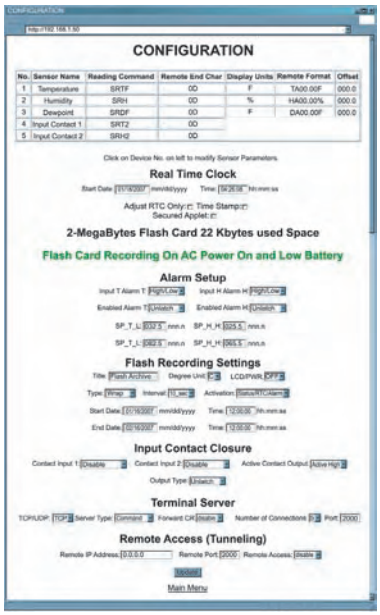
The iSE monitor can trigger an alarm if the AC power fails. The iSE monitor will continue to collect data for ten days powered by a standard 9 Volt alkaline battery (included). The data is stored in nonvolatile flash memory and can later be downloaded over the Ethernet.

Also available: the **iSE-TC** environmental monitor with two independant thermocouple channels provides Web-based remote surveillance of temperature conditions in any remote facility.

Process product line continues to expand, visit omegamation.com for new details!

Local Alarms

The OMEGA iSE monitor includes two 1.5 Amp output relays that are controlled by the alarm conditions you select. The relays can trigger flashing lights and a siren for example to alert personnel near the scene.



With the easy Web-based setup page, the two relays can be programmed for any combination of temperature or humidity, and high or low set points, as well as alarm conditions triggered by contact closures. The relays can also be programmed to turn off when conditions return to normal, or programmed to remain latched and require a manual reset.

View Charts and Graphs on the Web

The OMEGA iSE serves Active Web Pages to display real time readings, display charts of temperature and humidity, or log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

The virtual chart viewed on the web page is a JAVA™ Applet that

records a chart over the LAN or Internet in real time. With the OMEGA iSE, there is no need to invest time and money learning a proprietary software program to log or chart the data.

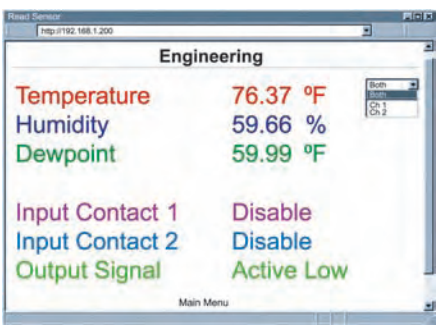
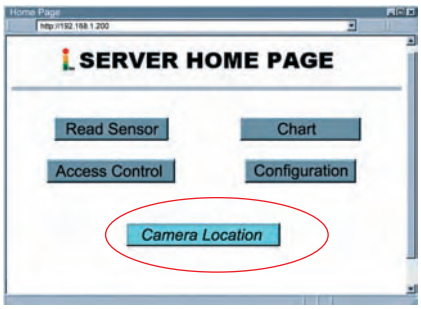


Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span (-40 to 124°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C).



Link to Web CAM or IP Camera

The Web page includes a link to a "Web Cam" or "IP camera" (not included). If you get a message about an alarm condition, you can quickly click on the link to view the actual scene over the Internet.

Flash Memory

The OMEGA iSE records data on a removable 2-MByte Flash Memory card (included) that can store one full year of readings taken at one-minute intervals (or two months of readings taken at ten second intervals).

Up to 4 years of temperature + humidity readings can be stored on the optional 8 MByte card. Even if the Ethernet network fails, data will continuously record on the built-in nonvolatile flash memory.

The iSE monitors come complete with a plug-in temperature and humidity probe that mounts on the instrument or separately with the 6' extension cable (included).

The temperature/ humidity sensors are interchangeable and do not require routine calibration. And if a replacement sensor is ever needed, the instrument does not require calibration.

Installation and operation of the OMEGA iSE monitor requires no special training, tools, or software. The device connects to any Ethernet network with standard cable and plugs and is powered by any AC outlet supplying 110 to 230 Vac.

Award-Winning Technology

The OMEGA iSE is simple to install and use, and features award-winning iServer technology that requires no special software except a Web Browser.

The iSE connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a Web Browser and can be password protected. From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom 5" or "Midwest Server Room" in any Web Browser, and the iSE serves a Web Page with the current readings.

Typical Applications

The OMEGA iSE is great for monitoring temperature + humidity in applications such as: clean rooms, computer rooms, HVAC systems, pharmaceutical and food processing and storage, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, museums, manufacturing, greenhouses, farm animal shelters, and many more.

NEW

iSE

SPECIFICATIONS

RELATIVE HUMIDITY SENSOR

Accuracy/Range: ±2% for 10 to 90% ±3% for 0 to 10% and 90 to 100%
Non-Linearity: ±3%
Hysteresis: ±1%RH
Response Time: 4 seconds (63% slowly moving air)
Repeatability: ±0.1%
Resolution: 0.03%, 12 bit

Temperature Sensor

Accuracy/Range*:
Standard Probe: ±0.5ºC (±1ºF) for 0 to 70ºC (32 to 158ºF)
Industrial Probe: ±0.5ºC (±1ºF) for 0 to 80ºC (32 to 176ºF)
±1ºC (±2ºF) for -40 to 0ºC and 80 to 124ºC (-40 to 32ºF and 176 and 254ºF)
Note: Extended temperature range is for probe only, the iServer's operating temperature is 0 to 60°C
Response Time: 5 seconds (63% slowly moving air)
Repeatability: ±0.1°C
Resolution: 0.01°C, 14bit

PROBE

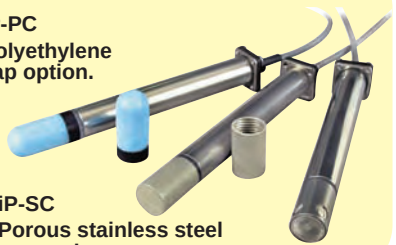
Standard Probe Dimensions: Ø13 x 83.8 mm L (Ø 0.5 x 3.3" L)
Industrial Probe Dimensions: Ø16 x 137 mm L (Ø 0.63 x 5" L); cable: 6.1 m (20') L, operating temp: 0 to 105ºC (32 to 221ºF)
Housing Material: 316 SS

Interfaces

Ethernet: 10Base-T (RJ45)
Supported Protocols: TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet
Indicators (LED's): Network Activity, Network Link, Transmit and Receive/ Diagnostics
LCD Display: 32 Digits 4.8 x 9.7 mm (0.19 x 0.38")
Memory: 512 Kbytes flash, 16 Kbytes SRAM
Memory Data Flash Card:
2 M bytes: 2 months of data storage at 10 second logging intervals or 1 year at 1 minute intervals
Relay Outputs: Two relays 1.5A @ 30 Vdc
Alarm I/O: Two contact outputs, one open collector output 150 mA @ 30 Vdc
Management: Device configuration and monitoring through embedded WEB server

Optional Caps for Industrial Probes

iP-PC
Polyethylene cap option.



iP-SC
Porous stainless steel cap option.

Software: Firmware upgradeable, including an Excel program for automatic data logging within definable time intervals, compatible with all Windows operating systems
Embedded WEB Server: Serves WEB pages containing real-time data and live updated charts within definable time intervals

POWER

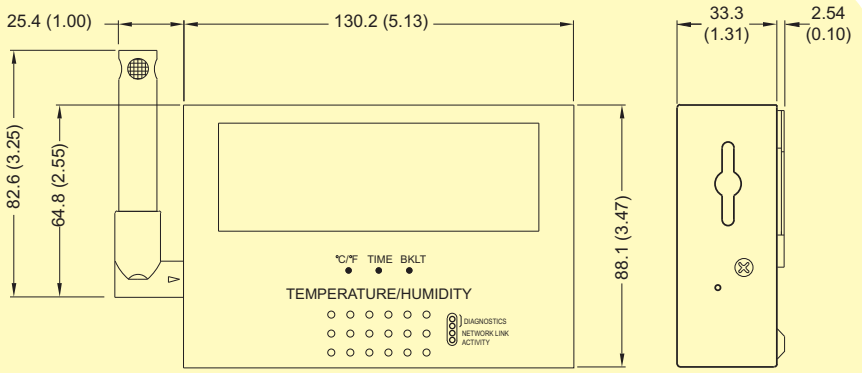
Input: 9 to 12 Vdc
Safety Qualified ac Power Adaptor:
Input: 100 to 240 Vac, 50/60Hz
Nominal Output: 9 Vdc @ 0.5 A included
Consumption: 2.5 W max
Battery: 9 Vdc, Alkaline (included)

ENVIRONMENTAL

Operating Temperature: 0 to 60°C (32 to 140°F)
Storage Temperature: -40 to 125°C (-40 to 257°F)

PACKAGING

Material: 304 SS case with wall mount bracket



Dimensions: mm (in)

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

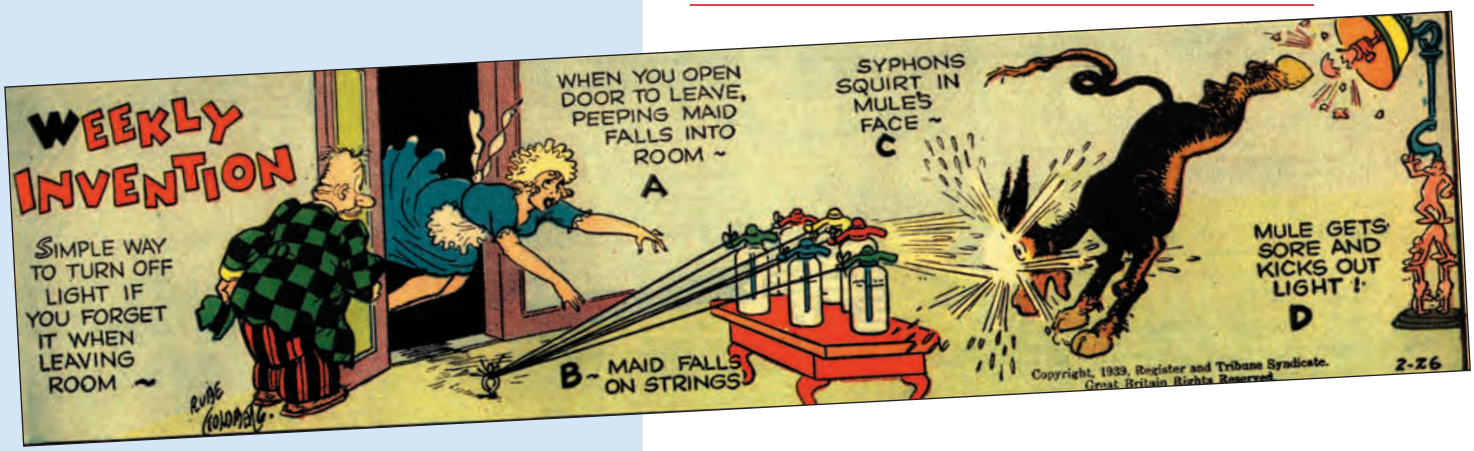
MODEL NO.	PRICE	DESCRIPTION
iSE-TH	**$495**	iSE monitor for temperature + humidity, standard probe, 6' extension cable
iSE-TH-5	**520**	iSE monitor for temperature + RH, industrial probe with 20' cable
iSE-iTH-MC2	**10**	Memory data flash card, 2 Mbyte/1 year @ 1 minute intervals
iSE-iTH-MC4	**20**	Memory data flash card, 4 Mbyte/2 years @ 1 minutei intervals
iSE-iTH-MC8	**30**	Memory data flash card, 8 Mbyte/4 years @ 1 minute intervals
UNIV-AC-100/240	**25**	Replacement universal ac power adaptor
CAL-3-HU	**125**	NIST traceable calibration certificate [3 humidity points: 25%, 50%, 75%. Temp 25°C (for new iSE-TH)]
CT485B-CAL-KIT	**75**	Calibration kit, 33% and 75% RH standards (for iSE-TH)

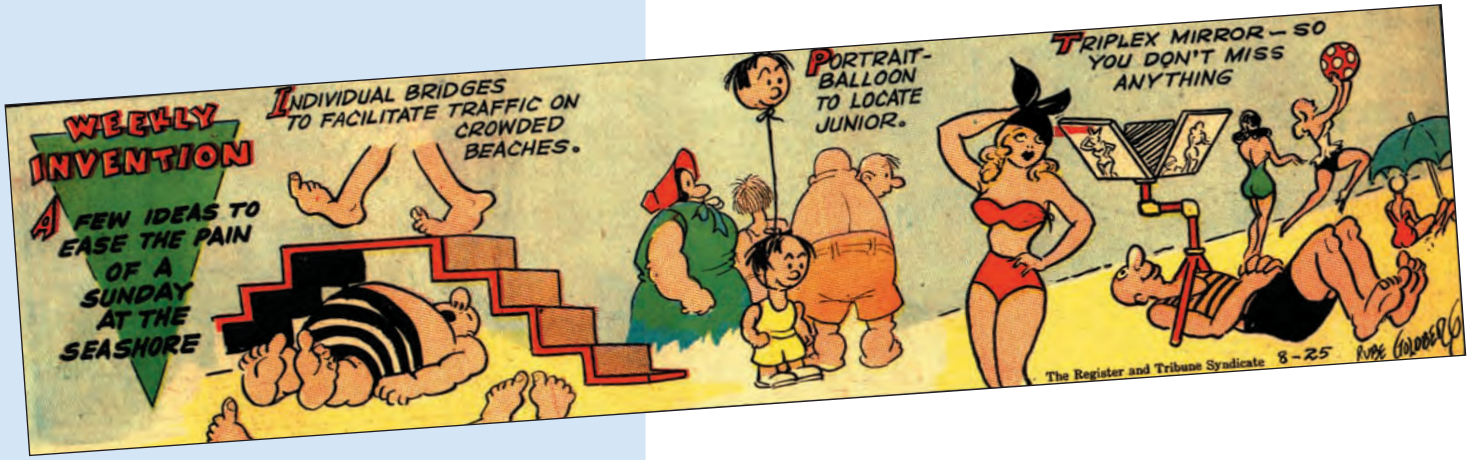
Comes with LCD display, 2 Mbytes flash memory card, 2 relay alarms, battery back-up, universal (100 to 240 Vac) power adapter and X m (6') extension cable.

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

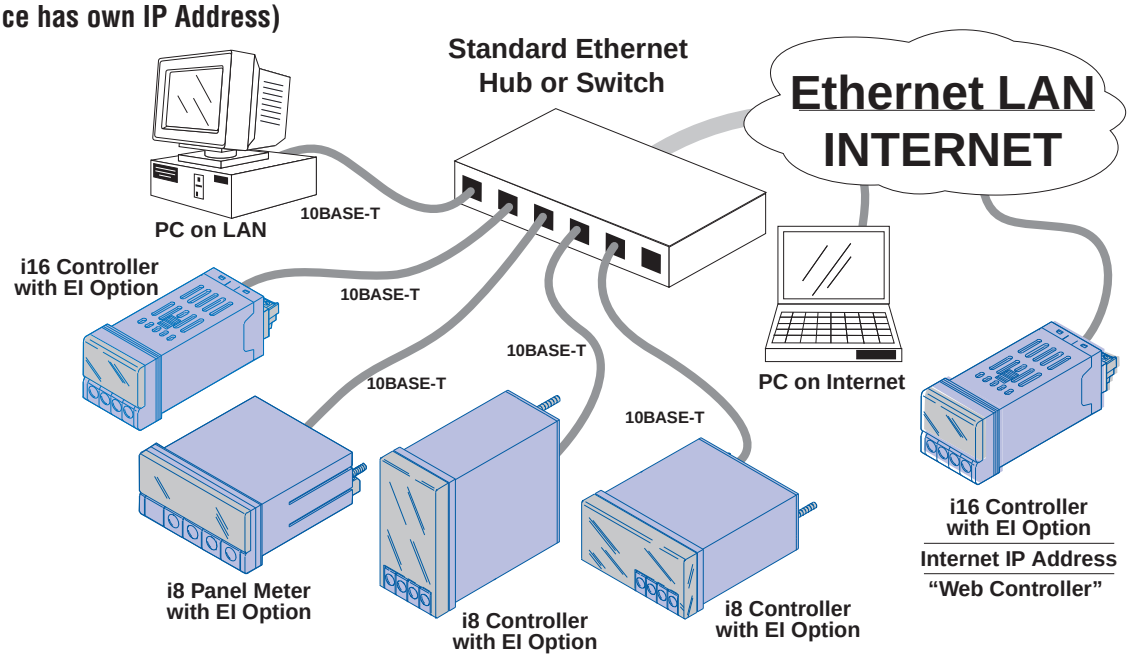
Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*





NEW iSeries EMBEDDED INTERNET

iSeries Meters and Controllers - Direct Connection to Ethernet
(Each device has own IP Address)



Embedded Internet

The OMEGA® iSeries devices can connect directly to an ethernet network with a standard RJ-45 connector and can send and receive data in standard TCP/IP packets. (Please specify EI or C4EI option.)

The iSeries devices can serve Web pages over an ethernet LAN or even over the Internet making it possible to monitor and control a process through a web browser (such as Microsoft Internet Explorer) from anywhere in the facility or anywhere in the world.

Remote Control

For example, using an iSeries 1/16 DIN temperature controller to control a heater, an engineer can monitor the temperature, change set points or alarm points, turn the heater on and off, or make other modifications from anywhere on the local network, or anywhere on the Internet. The web pages are easily customized and secure password protected access to the devices is easily controlled. And it requires absolutely no special software on the engineer's computer to view the data and "supervise" the controller—nothing other than a Web browser.

Email and Alarm

In fact, the iSeries controller can even send an email to the engineer (or anyone they choose) alerting them to an alarm condition or updating the status. Leveraging the technology of the Internet, the engineer could receive a message from the iSeries controller on an Internet enabled pager or cell phone.

Most remarkable is that all this can be accomplished without a computer. The OMEGA® iSeries device (meter or controller) connects directly to the ethernet network — not to the serial port of a computer functioning as a "server" and "master" to "slave" instruments connected through serial communications. The iSeries devices are also available with RS232, RS422, RS485 and MODBUS serial communications (specify the C24 option). In fact, the iSeries are the first instruments of this type which include all these serial protocols on one device, selectable from a menu.

Internet Appliances

With the EI option, these small 1/8 DIN and 1/16 DIN instruments are stand-alone Web servers. The ethernet and Web server capability is actually embedded in the device. (The smallest 1/32 DIN size device must be connected to an external iServer.)

The OMEGA® iSeries device is assigned an IP address on the network and can also be assigned an easily remembered name such as "Heater1". In fact, the device could be assigned an authorized Internet IP address from an Internet service provider and function as a World Wide Web server delivering whatever specific information is called for. (For an example, please see www.newportUS.com/iserver)

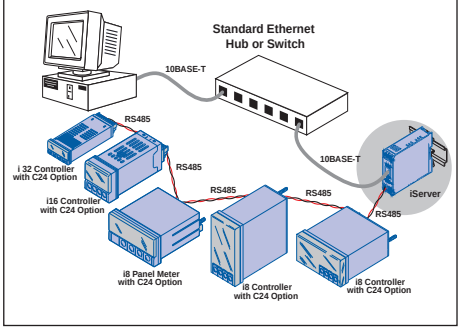
The iSeries devices work well with conventional industrial automation, data acquisition and control programs as well as Microsoft Visual Basic and Excel. OMEGA® provides free software and demos which makes it fast and easy to get up and running with many applications.

MONOGRAM®

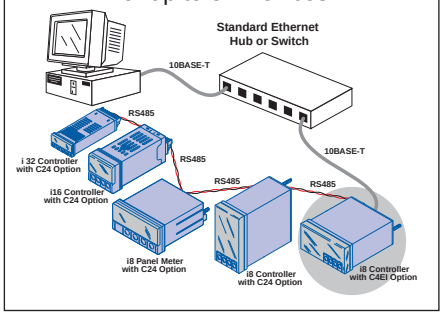
Process product line continues to expand, visit omegamation.com for new details!

NEW

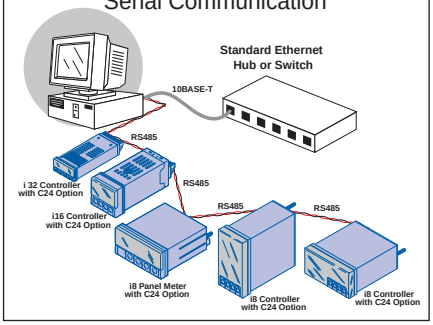
Using iServer as HUB/Server for up to 32 Devices

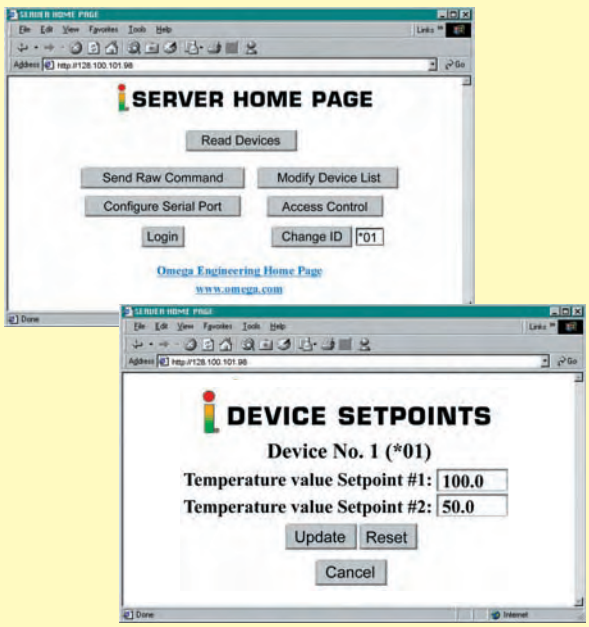


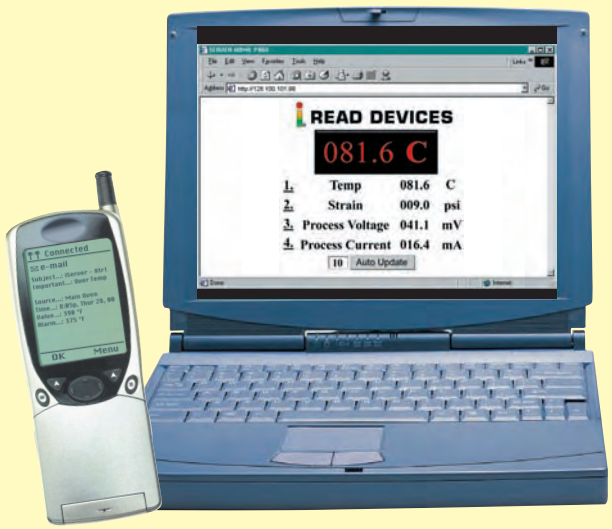
Using OMEGA® ⅛ DIN iSeries controller with C4EI option as HUB for up to 32 Devices



Conventional Serial Communication connections using PC with RS-485 Serial Communication







Get Internet E-mail Notification of Alarm Status on Your Web-Enabled Phone or PDA.

iServer®

EIS-2B
$195

- **A Web Server and an Ethernet Bridge**
- **Serves up to 32 Devices**

The "iServer" is a DIN rail device which can be a hub connecting up to 32 instruments to the Ethernet and Internet. The "iServer" is both a Web Server and an Ethernet-Serial bridge.

To connect to the iServer, iSeries devices must feature the "C24" Serial Communications option. The OMEGA iServer is also compatible with the MICROMEGA® family of ultra high performance digital panel meters and the OMEGA iDRX family of signal conditioners. The iServer can also connect almost any RS232 or RS485 serial device to Ethernet.

The iServer is an alternate way to connect iSeries devices to an Ethernet LAN or Internet. Instead of connecting each iSeries device directly to the Ethernet network, with individual IP addresses for each device, the iServer can be a HUB/server for up to 32 devices.

To Order
(Specify Model Number)

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
EIS-2B	**$195***	iServer industrial MicroServer™, serves 32 devices
OPTIONS		
iDRN-PS-1000	**$150**	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 1 A (powers 10 units)

ANALOG & DIGITAL OUTPUT SIGNAL CONDITIONERS/ TRANSMITTERS

iDRN/iDRX Series Starts at $250

MADE IN USA

CE

- **Analog or Digital Output**
- **Models Available for: Thermocouple, RTD, Process Voltage & Current, Strain, Frequency/Pulse, AC Voltage and Current**
- **Up to 1800 Vdc Isolation**
- **iDRN Series Provide 0 to 10 Vdc, 4 to 20 mA or 0 to 20 mA Output**
- **iDRX Series Provide RS-485 Output (ASCII Serial Protocol and MODBUS Serial Protocol)**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output Models)**

The new iD Series signal conditioners combine the accuracy of laboratory instrumentation with the performance required by demanding industrial applications. The iD Series signal conditioners are ideal for those applications in Data Acquisition, Test & Measurement, Process Control, and Industrial Automation where accuracy, performance, and reliability are critically important.

The iD Series signal conditioners mount on a 35mm DIN rail, and operate on any voltage between 10 to 32 DC power. (A matching 24 Vdc 850 mA switching power supply is also available.) The devices feature three-way isolation of up to 1800 Vdc between the signal inputs, outputs, and power supply.

The iD series feature seven (7) models designed for each of the most widely measured signal inputs: Process (DC) Voltage and Current; Strain Gage; Thermocouples; RTDs; AC Voltage; AC Current; Frequency/Pulse.

The iD series devices are designed to work directly with a variety of sensors and transducers; no other components are necessary. For sensors such as RTDs, strain gages, and some process transducers, precise stable excitation is provided directly from the iD module.

The iD series are available with two different types of signal outputs: Analog or Digital. The iDRN series provides a totally scalable analog output in DC voltage or current. The iDRX series provide a digital RS-485 output. Both iD Series signal conditioners are intelligent microprocessor based instruments that can be scaled and programmed by computer via serial communications, or over an Ethernet network.

iDRN Series Analog Output

PATENTED

The iDRN series feature a 0 to 10 Vdc, or 0 to 20 mA (including 4 to 20 mA) analog output signal that is typically scaled to be directly proportional to the input signal. It is an ideal component in a system with PLCs or PCs with analog data acquisition boards.

The iDRN series are an excellent choice for applications that demand an extra measure of accuracy and performance that is not possible with conventional “analog” signal conditioners or transmitters. Unlike conventional analog devices that are scaled by adjusting zero and span “pots”, the programmable, micro-processor based iDRN instruments are scaled precisely on a PC with free and simple Windows software. The iDRN modules connect directly to a PCs RS-232 Serial Communications port for programming and scaling.

Once the module is configured, the parameters are saved in non-volatile memory. The device can be disconnected from the PC, or the RS-232 output from the module can be used for continuous data acquisition in addition to the analog output.

Alternatively, the iDRN signal conditioner can be connected to a PCs Ethernet port or an Ethernet network using the EIS-2B module as a Serial/Ethernet bridge.

Free Setup and Configuration

- **Analog or Digital Output**
- **Models Available for: Thermocouple, RTD, Process Voltage & Current, Strain, Frequency/Pulse, AC Voltage and Current**
- **Up to 1800 Vdc Isolation**
- **iDRN Series Provide 0 to 10 Vdc, 4 to 20 mA or 0 to 20 mA Output**
- **iDRX Series Provide RS-485 Output (ASCII Serial Protocol and MODBUS Serial Protocol)**
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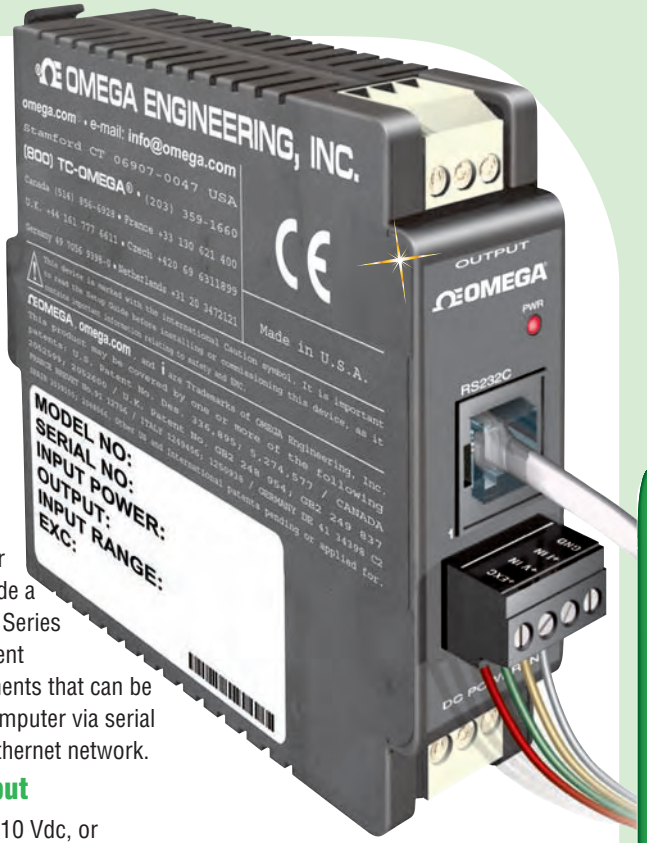
The iD series devices are designed to work directly with a variety of sensors and transducers; no other components are necessary. For sensors such as RTDs, strain gages, and some process transducers, precise stable excitation is provided directly from the iD module.

The iD series are available with two different types of signal outputs: Analog or Digital. The iDRN series provides a totally scalable analog output in DC voltage or current. The iDRX series provide a digital RS-485 output. Both iD Series signal conditioners are intelligent microprocessor based instruments that can be scaled and programmed by computer via serial communications, or over an Ethernet network.



iDRN Series Analog Output

The iDRN series feature a 0 to 10 Vdc, or 0 to 20 mA (including 4 to 20 mA) analog output signal that is typically scaled to be directly proportional to the input signal. It is an ideal component in a system with PLCs or PCs with analog data acquisition boards.

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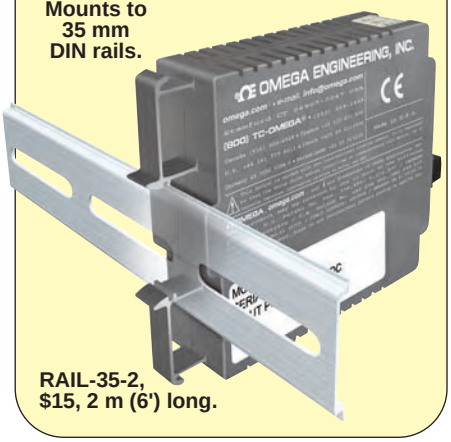
PATENTED

Mounts to 35 mm DIN rails.



RAIL-35-2, $15, 2 m (6') long.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

INPUT	THERMOCOUPLE	RTD	AC VOLTAGE	AC CURRENT	PROCESS	STRAIN/BRIDGE	FREQUENCY PULSE
MODEL NO.	iDRN/iDRX-TC	iDRN/iDRX-RTD	iDRN/iDRX-ACV	iDRN/iDRX-ACC	iDRN/iDRX-PR	iDRN/iDRX-ST	iDRN/iDRX-FP
Input Type	Thermocouple temperature sensor	RTD Temperature sensor Pt100, 500, 1000Ω	ac Voltage	ac Current	dc Millivolt, Volt and Current	Millivolt	NAMUR Contact closure low level open collector
Input Range	J, K, T, E, R, S, B, N, J DIN thermocouple full range	α = 385, 392 Full range of RTD 2, 3 or 4-wire	Full Scale Range: 400 mV to 400 V	Full Scale Range: 10 mA to 5 A	Full Scale Range: ±400 mV to ±10 V 0 to 20 mA	0 to 30 mV 0 to 100 mV ±100 mV	Full Scale Range 20k to 200 M pulses 0 to 50 kHz
Accuracy	±1°C	±0.5°C	0.2%	0.2%	0.1% FS	0.2% FS	0.1% FS
Resolution	0.1°C	0.1°C	10 to 14 Bit	10 to 14 Bit	12 to 15 Bit	13 to 15 Bit	15 to 19 Bit
Output	iDRX Series: 2-wire (half duplex) RS-485/iDRN Series: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA						
Excitation	N/A	N/A	N/A	N/A	14 Vdc @ 25 mA	10 V @ 30 mA	5, 8.2 and 12.5 Vdc @ 25 mA
iDRN RS-232 ANALOG	**$325**	**$355**	**$345**	**$345**	**$325**	**$345**	**$295**
iDRX RS-485	**$250**	**$250**	**$270**	**$270**	**$275**	**$300**	**$250**

A/IN

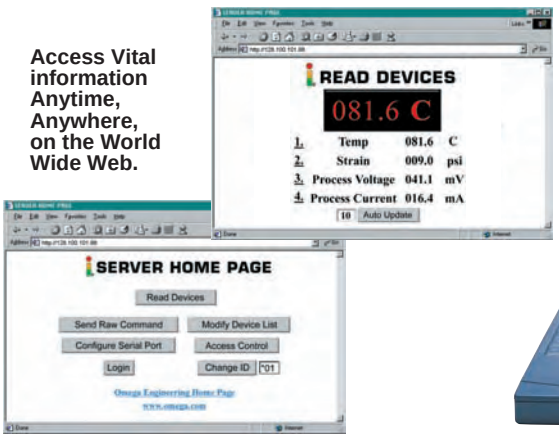
SERIAL I/O

DI/O

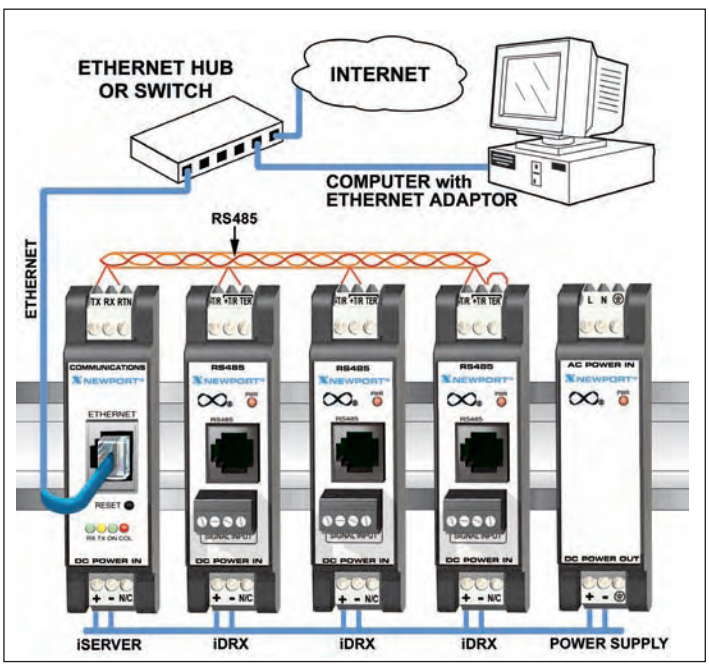
Ethernet and Internet

The iDRX signal conditioner can also be connected to an Ethernet network using the EIS-2B module as a Serial/Ethernet bridge. One EIS-2B module can be a hub for up to 32 iDRX modules. The EIS-2B module packages the ASCII serial communications in standard TCP/IP Protocol for transmission over standard Ethernet networks and the Internet. Unlike some manufacturer's products this system uses totally open, non-proprietary standards and protocols for Ethernet and Internet. The user can integrate these devices with any commercial or industrial grade networking components that also comply with the popular international standards.

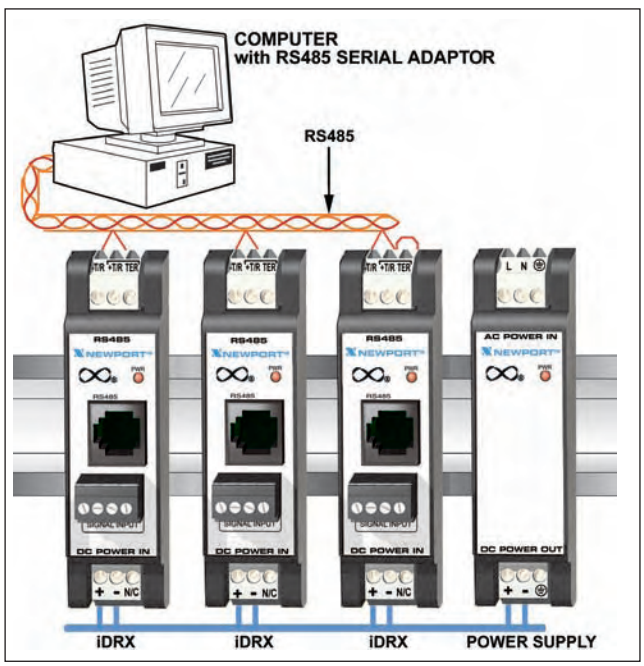
Access Vital information Anytime, Anywhere, on the World Wide Web.



Get Internet E-mail Notification of Alarm Status on your web enabled phone or PDA.



Digital Output iDRX modules connected to Ethernet



iDRX modules on RS485 Serial Bus

iServer

- **Web Server and an Ethernet/Serial Bridge**
- **Serves up to 32 devices**

iServer EIS-B
$195

PATENTED

Covered by U.S. and International patents and pending applications.

The OMEGA® EIS-2B "iServer" is a DIN rail device which can connect up to 32 iDRX RS-485 instruments to an Ethernet network and the Internet using standard TCP/IP protocol. It can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet. (RS-232 Serial Communications are limited to a single connection between two devices, such as one computer and one signal conditioner. RS-485 is limited to 32 devices on a communications bus per hub or repeater.)

The "iServer" is a Web Server as well as an Ethernet-Serial bridge and Hub for up to 32 RS-485 devices. The OMEGA® iServer is also compatible with the OMEGA® iSeries Controller and Meters, the DP41 family of ultra high performance digital panel meters, and the MICROMEGA® series of Temperature and Process controllers.

Each "iServer" is assigned an IP address on the Ethernet network and can also be assigned an easily remembered name. In fact, the device could be assigned an authorized Internet IP address from an Internet Service Provider and function as a World Wide Web Server delivering whatever specific information is called for.

iDRN-PS-1000
$150

Switching Power Supply

- **24 Vdc Supply for iDRN/iDRX Modules**
- **iDRN-PS-1000 Switching Supply Powers up to 7 Units**

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
EIS-2B-S	**$195**	Serial to Ethernet iServer industrial Microserver™ with screw terminal serial port, serves 32 devices
iDRN-PS-1000	**150**	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (power 7 units)
SOFTWARE		
OPC-SERVER LICENSE	**$295**	OPC server for signal conditioners
iDRX-RS485-SW	**Free**	Active X controls and configuration software/iDRX Windows 95/98/NT/XP; free sample visual basic app source code
iDRN-RS232-SW	**Free**	Active X controls and configuration software/iDRN Windows 95/98/NT; free sample visual basic app source code
ACCESSORIES		
CAT-285	**$148**	Bi-directional RS-232-R3-485 converter for iDRX series
DB9-RJ12	**30**	DB9 to RJ12 connector adaptor, includes 2 m (7') RJ12 cord
DB25-RJ12	**30**	DB25 to RJ12 connector adaptor, includes 2 m (7') RJ12 cord
RJ12T	**15**	RJ12 "T" split connector for RS-485 instruments, includes 2 m (7') RJ12 cord
RAIL-35-2	**15**	35 mm x 2 m long DIN rail

Ordering Example: EIS-2B-S, *serial to Ethernet industrial Microserver™,* ***iDRN-PS-1000,*** *power supply,* ***iDRX-TC,*** *thermocouple conditioner,* ***iDRX-RTD,*** *RTD conditioner,* ***RAIL-35-2,*** *DIN rail,* ***DB9-RJ12,*** *connector adaptor, $195 + 150 + 250 + 250 + 15 + 30 =* ***$890.***

THERMOCOUPLE SIGNAL CONDITIONERS

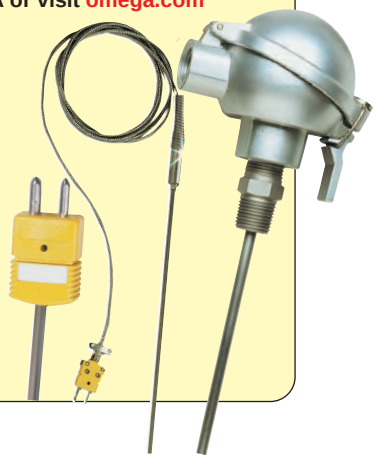
iDRX-TC Starts at $250

MADE IN USA

CE

- **T/C Types J, K, T, E, R, S, B, N, J DIN**
- **0.1°C Resolution**
- **±1°C Accuracy**
- **1800 Vdc Isolation**
- **250 V/1 Min. Input Overvoltage Protection**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output Models)**

OMEGA manufactures thousands of thermocouple probes. Please see Section A or visit omega.com



PATENTED

Covered by U.S. and International patents and pending applications.

The iDRN-TC and iDRX-TC signal conditioners provide highly accurate, stable, isolated measurement of thermocouple sensors. Thermocouple types are selected and the outputs are scaled with the free configuration software, or can be done at the factory for no additional charge. The T/C Signal Conditioners can accept 9 different thermocouple types: J, K, T, E, R, S, B, N, and J DIN.

2 Models (Analog or Digital Outputs)

iDRN-TC provides an analog output that is proportional to the input signal. The iDRX-TC uses a digital RS-485 communication link.

Analog Output Model

The output of iDRN-TC can be user set for 0 to 10 V, 4 to 20 mA or 0 to 20 mA. Input scaling and configuration of other operating parameters is accomplished by connecting to a standard RS-232 port of a personal computer and using the free Windows-based setup software. Once configured the settings may be stored in non-volatile memory and the unit disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output Model)

Please Specify:

Thermocouple Type

Temperature High & Low

Output Value High & Low

Example: Type J, 0°C = 4 mA, 100°C = 20 mA

Digital Output Model

The iDRX-TC is a digital signal conditioner which communicates over an RS-485 communication link using either a simple, straightforward ASCII® Serial Protocol or MODBUS Serial Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000') without repeaters.

Ethernet Connection

The Optional EIS-2B iServer module can connect up to thirty-two (32) iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.

SPECIFICATIONS

Accuracy at 25°C: ±1°C
Resolution: 0.1°C
Power Consumption: 2 W (84 mA @ 24 Vdc)
Input Types: J, K, T, E, R, S, B, N, J DIN
Input Ranges: See range chart
iDRX Output: 2-wire (half duplex) RS-485 (Omega® serial protocol and MODBUS serial protocol)
iDRN Output: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA, 10 V compliance
Thermocouple Default settings iDRN: Input Type K, Range 0 to 1000°F; Output 4 to 20 mA (custom settings available at no charge)

INPUT TYPE	RANGE, °C	RANGE, °F
J	-210 to 760	-346 to 1400
K	-270 to 1372	-454 to 2500
T	-270 to 400	-454 to 752
E	-270 to 1000	-454 to 1832
R S	-50 to 1768	-58 to 3214
B	100 to 1820	212 to 3300
N	-270 to 1300	-454 to 2372
J DIN	-200 to 900	-328 to 1652

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
iDRX-TC	**$250**	Digital signal conditioner with RS-485 output for Thermocouple sensors
iDRN-TC	**325**	Signal conditioner with analog output for thermocouple sensors
-FS	**Free**	Factory setup and scaling

Comes with complete operator's manual.

Ordering Example: iDRN-TC,** signal conditioner, and **DB9-RJ12,** connector adaptor, 325 + 30 = **$355.

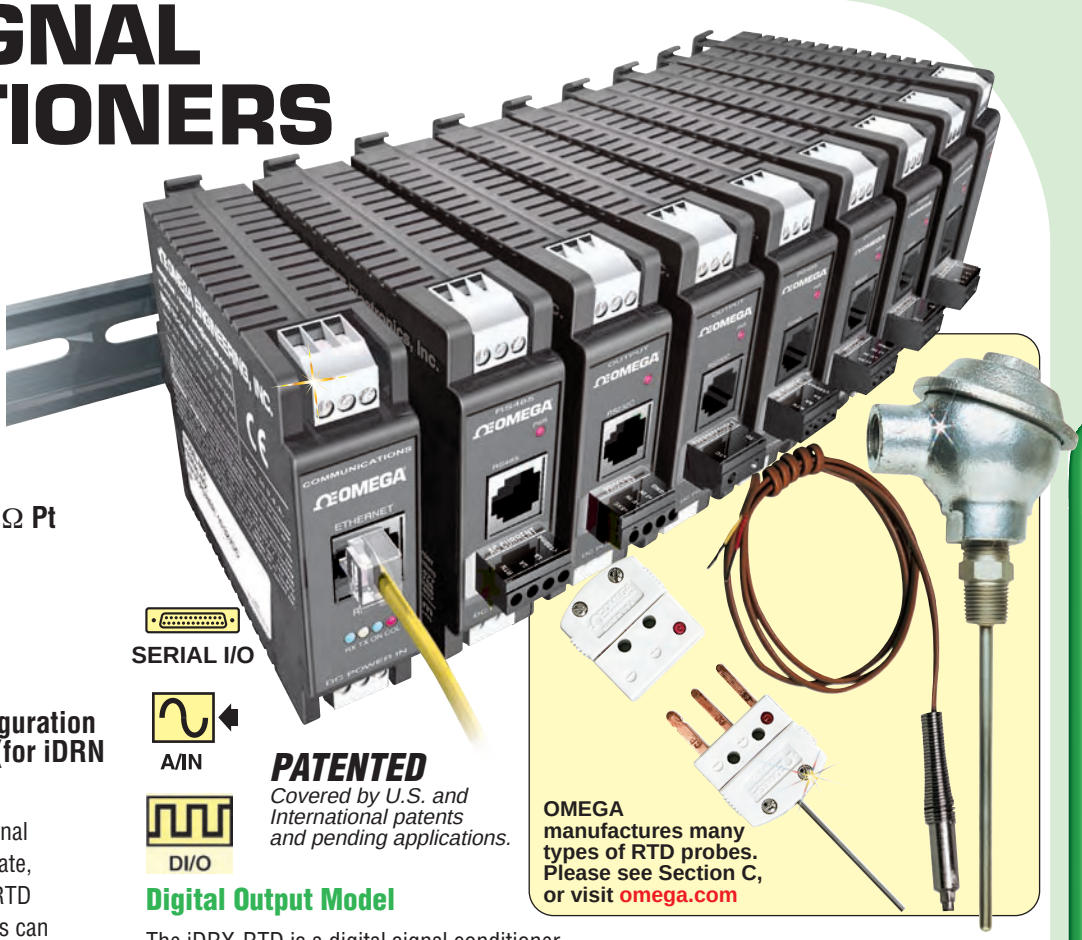
For iDRN/iDRX accessories and power supplies, please see page 101.

RTD SIGNAL CONDITIONERS

iDRX-RTD Starts at **$250**

MADE IN USA

- **100Ω Pt, 500Ω Pt, 1000Ω Pt**
- **0.1°C Resolution**
- **±0.5°C Accuracy**
- **1800 Vdc Isolation**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output models)**



PATENTED
Covered by U.S. and International patents and pending applications.

The iDRN-RTD and iDRX-RTD signal conditioners provide highly accurate, stable, isolated measurement of RTD temperature sensors. Both models can accept 2, 3, or 4 wire 100Ω PT, 500Ω PT and 1000Ω PT RTDs.

2 Models (Analog or Digital Outputs)

The iDRN-RTD provides a fully scalable analog output that is proportional to the input signal. The iDRX-RTD uses digital RS-485 communications.

Analog Digital Output

The output of the iDRN-RTD can be user set for 0 to10 V, 4 to 20 mA or 0 to 20 mA. Input scaling and configuration of other operating parameters is accomplished by connecting to a standard RS-232 port of a personal computer and using the Windows-based setup software. Once configured the settings may be stored in non-volatile memory and the unit disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output Model) Please Specify:

Type and resistance

Temperature high and low

Output Value high and low

Example: Type Pt100; 0.00385; 4-wire; 0°C = 4 mA, 100°C = 20 mA

Digital Output Model

The iDRX-RTD is a digital signal conditioner which communicates over an RS-485 communication link using either a simple, straightforward ASCII Serial Protocol or MODBUS Serial Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000') without repeaters.

Ethernet Connection

The Optional EIS-2B iServer module can connect up to thirty-two (32) iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.

SPECIFICATIONS

Accuracy at 25°C: ±0.5°C
Input Types: Platinum RTD, 100Ω, 500Ω or 1000Ω element (2, 3 or 4 wire, 385 or 392 curve)
Resolution: 0.1˚C
Power Consumption: 2.4 W (100 mA @ 24Vdc)
Input Range: -200 to 850°C (-328 to 1562°F)
iDRX Output: 2-wire (half duplex) RS-485 (OMEGA® Serial Protocol and MODBUS Serial Protocol)
iDRN Output: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA, 10 V compliance
RTD Default Settings iDRN: Input PT100, 0.00385, 3-wire, range 0 to 1000°F; Output 4 to 20 mA (custom settings available at no charge)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
iDRX-RTD	**$250**	Digital signal conditioner with RS-485 output for RTD temperature sensors
iDRN-RTD	**355**	Signal conditioner with analog output for RTD temperature sensors
-FS	**Free**	Factory setup and scaling

Comes with complete operator's manual.
Ordering Example: iDRN-RTD,** digital signal conditioner, and **DB9-RJ12,** connector adaptor, $355 + 30 = **$385.
For iDRN/iDRX accessories and power supplies, please see page 101.

STRAIN GAGE/BRIDGE TRANSDUCER-SIGNAL CONDITIONERS

PATENTED
Covered by U.S. and International patents and pending applications.

MADE IN USA

- **Unipolar/Bipolar 30 mV to 100 mV**
- **13-Bit Resolution**
- **10 Vdc Excitation**
- **0.2% FS Accuracy**
- **1800 Vdc Isolation**
- **250 Vac/1 Min Input Overvoltage Protection**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output models)**

The iDRN-ST and iDRX-ST signal conditioners provide highly accurate, stable, isolated measurement for strain gage transducers such as load cells, torque transducers, non-amplified pressure transducers, and other bridge based transducers. Both models can accept signals from 30 to 100 mV full scale and provide 10 Vdc reference voltage which may be used for transducer excitation.

2 Models (Analog or Digital Outputs)

The iDRN-ST provides an analog output that is proportional to the input signal and the iDRX-ST uses RS-485 Serial Communications.

Analog Output Model

The output of iDRN-ST can be user set for 0 to10 V, 4 to 20 mA or 0 to 20 mA. Input scaling and configuration of other operating parameters is accomplished by connecting to a standard RS-232 port of a personal computer and using the free Windows-based setup software. Once configured the settings may be stored in non-volatile memory and the unit disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output and RS-232 signal conditioners) Please Specify:

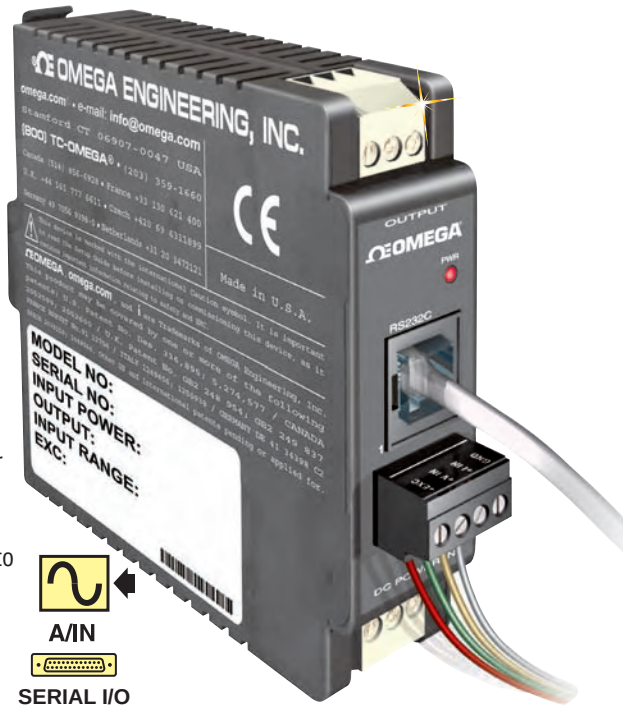
Input value high and low
Output value high and low
Excitation: 10 or 14 Vdc
Ratiometric or non-ratiometric
Example: 0 V = 4 mA, 100 mV = 20 mA, excitation 10 V, ratiometric

Digital Output Model

The iDRX-ST is a digital signal conditioner which communicates over RS-485 communication link using either a simple ASCII Protocol or MODBUS Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000') without repeaters.

Ethernet Connection

The Optional EIS-2B iServer module can connect up to 32 iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.



SPECIFICATIONS

Accuracy at 25°C: ±0.2% FS
Resolution: 13 to 15 bit
Excitation: 10 V @ 30 mA
Power Consumption: 2 W without excitation (84 mA @ 24 Vdc), 3 W with excitation (125 mA @ 24 Vdc)
Input Ranges: 0 to 30 to 0 to 100 mV FS
iDRX Output: 2-wire (half duplex) RS-485 (Omega® serial protocol and MODBUS Serial Protocol)
iDRN Output: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA, 10 V compliance

OMEGA manufactures many types of Load Cells. Please request The OMEGA Complete Pressure, Strain and Force Measurement Handbook and Encyclopedia®, or visit omega.com

Strain Default Settings iDRN: Input range 0 to 30 mV; output 4 to 20 mA excitation 10 V ratiometric (custom settings available at no charge)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

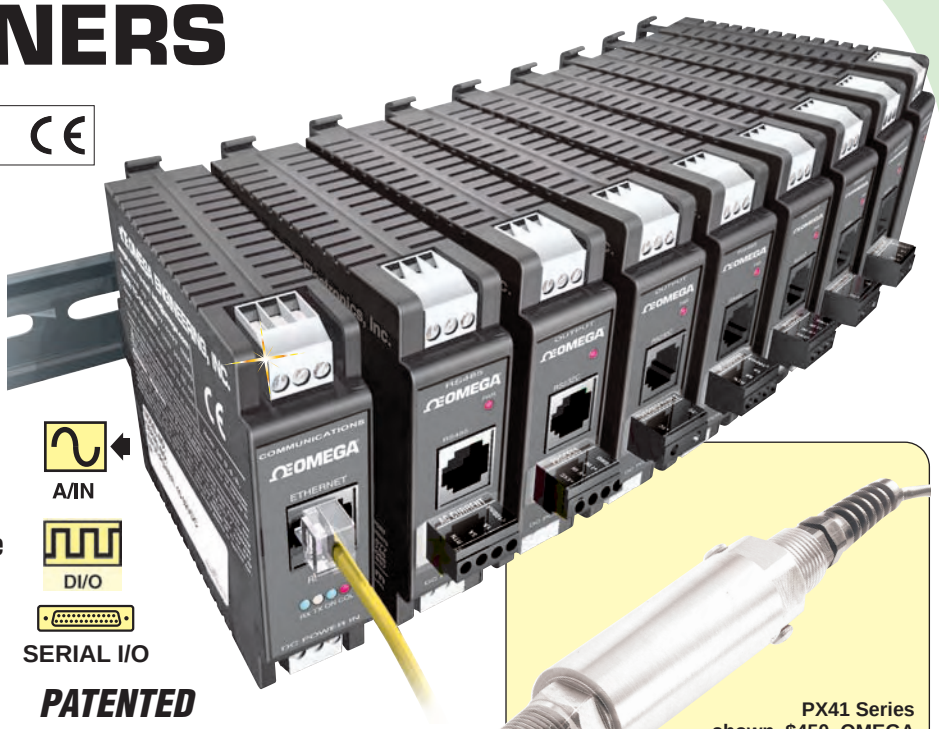
MODEL NO.	PRICE	DESCRIPTION
iDRX-ST	**$300**	Digital signal conditioner for strain gages and bridge transducers with RS-485 output
iDRN-ST	**345**	Signal conditioner for strain gages and bridge transducers with analog output
-FS	**Free**	Factory setup and scaling

Comes with complete operator's manual.
Ordering Example: iDRX-ST,** digital signal conditioner for strain gages and bridge transducers with RS-485 output, **CAT-285,** bi-directional RS-232-RS-485 converter for iDRX series, $300 + 148 = **$448.
For iDRN/iDRX accessories and power supplies, please see page 101.

PROCESS INPUTS SIGNAL CONDITIONERS

iDRX-PR
$275

MADE IN USA



PX41 Series shown, $450. OMEGA manufactures many types of pressure transducers. Please request The OMEGA Complete Pressure, Strain and Force Measurement Handbook and Encyclopedia®, and view Section B, or visit omega.com

- Unipolar/Bipolar 400 mV to 10 Vdc, 0 to 20 mA dc
- 11 to 14-Bit Resolution
- ±0.1% FS Accuracy
- 14 Vdc Excitation
- 1800 Vdc Isolation
- 250 Vac/1 Min. Input Overvoltage Protection (Voltage Input Only)
- Free Setup and Configuration Software
- Factory Setup and Configuration Available at No Charge (for iDRN Analog Output models)

The iDRN-PR and iDRX-PR signal conditioners provide highly accurate, stable, isolated measurement of process signals. Both models can accept unipolar and bipolar signals from 400 mV to 10 Vdc full scale, as well as 0 to 20 mA current range. The Signal Conditioners also provide a 10 Vdc or 14 Vdc reference voltage which can be used for transducer excitation.

2 Models (Analog or Digital Outputs)

The iDRN-PR provides a programmable analog output that is proportional to the input signal. The iDRX-PR uses a digital RS-485 Serial Communications.

Analog Output Model

The output of iDRN-PR can be user set for 0 to 10 V, 4 to 20 mA, or 0 to 20 mA. Scaling and configuration is done with the free software on a PC using either the standard RS-232 port, or an Ethernet connection with the optional EIS-2B module. Once configured the settings are stored in non-volatile memory and the unit disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output model) Please Specify:

Input value high and low
Output value high and low
Excitation: 10 or 14 Vdc
Ratiometric or non-ratiometric

PATENTED

Covered by U.S. and International patents and pending applications.

Example: 0 V = 4 mA, 10 V = 20 mA, Excitation 10 V, non-ratiometric

Digital Output Model

The iDRX-PR is a digital signal conditioner which communicates over an RS-485 communication link using either a simple straightforward ASCII Serial Protocol or MODBUS Serial Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000') without repeaters.

Ethernet Connection

The optional EIS-2B iServer module can connect up to 32 iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.

SPECIFICATIONS

Accuracy at 25°C: ±0.1% FS
Excitation: 14 Vdc @ 25 mA
Resolution: 11 to 14-bit
Power Consumption: 2 W (84 mA @ 24 Vdc) without excitation, 3 W (125 mA @ 24 Vdc) with excitation
Input Ranges: Uni/bipolar, 400 mV to 10 Vdc; 0 to 20 mA
iDRX Output: 2-wire (half duplex) RS-485 (Omega® Serial Protocol and MODBUS Serial Protocol)
iDRN Output: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA, 10 V compliance
Process Default Settings DRN: Input Range 0 to 20 mA; Output 4 to 20 mA. Excitation 14 V (custom settings available at no charge)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
iDRX-PR	$275	Digital signal conditioner with RS-485 output for process signals
iDRN-PR	325	Signal conditioner with analog output for process signals
-FS	Free	Factory setup and scaling

Comes with complete operator's manual.

Ordering Example: iDRX-PR,** digital signal conditioner with RS-485 output for process signals, **iDRN-PS-1000,** power supply, 95 to 240 Vac input, 24 Vdc output @ 850 mA, $275 + 150 = **$425.

FREQUENCY/PULSE DIGITAL SIGNAL CONDITIONERS

PATENTED
Covered by U.S. and International patents and pending applications.

iDRX-FP
$250

MADE IN USA

- **Software Selectable Input Type**
- **0 to 50 KHz Frequency Input 2 Million Pulse Capacity**
- **Proximity, Switch, Magnetic, Pickup, NAMUR, Contact Closure and Open Collector Input Types**
- **RS-485 Output**
- **1800 Vdc Isolation**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output models)**

The iDRN-FP and iDRX-FP signal conditioners provide accurate, stable, isolated measurement of frequency and pulse signals. Both models measure frequency signals up to 50 KHz and can count up to two million pulses. The iDRX-FP and iDRN-FP are compatible with a wide variety of transducers including proximity, switch, magnetic pickup, NAMUR, contact closure and open collector transducers.

2 Models (Analog or Digital Outputs)

The iDRN-FP provides an analog output that is proportional to the input signal. The iDRX-FP uses digital RS-485 Serial Communication.

Analog Output Model

The output of iDRN-PR can be user set for 0 to 10 V, 4 to 20 mA or 0 to 20 mA. Scaling and configuration is done with the free software on a PC using either the standard RS-232 port, or an Ethernet connection with the optional EIS-2B module. Once configured the settings are stored in non-volatile memory and the unit disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output signal conditioners) Please Specify:

Input signal or sensor type
Input frequency high and low
Output value high and low
Excitation: 10 or 14 Vdc
Magnetic pickup (2-wire)
Example: 0 Hz = 4 mA,
1000 Hz = 20 mA, excitation N/A

Digital Output Model

The iDRX-FP is a digital signal conditioner which communicates over an RS-485 communication link using either a simple straightforward ASCII Serial Protocol or MODBUS Serial Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000') without repeaters.

Ethernet Connection

The Optional EIS-2B iServer module can connect up to 32 iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.

Compatible with the flow sensor shown below. Please visit omega.com

SPECIFICATIONS

Accuracy at 25°C: ±0.01% FS
Resolution: 15 to 19-bit
Power Consumption: 2.4 W (100 mA @ 24 Vdc) without excitation, 3 W (125 mA @ 24 Vdc) with excitation
Input Ranges: Frequency from 200 Hz to 50 KHz pulse from 20,000 to 200,000,000 pulses full scale
iDRX Output: 2-wire (half duplex) RS-485 (Omega® Serial Protocol and MODBUS Serial Protocol)
iDRN Output: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA
FP Default Settings iDRN: Input 0 to 20 KHz; Output 4 to 20 mA (custom settings available at no charge)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
iDRX-FP	**$250**	Digital signal conditioner with RS-485 output for Frequency/Pulse inputs
iDRN-FP	**295**	Signal conditioner with analog output for Frequency/Pulse inputs
-FS	**Free**	Factory setup and scaling

Comes with complete operator's manual.
***Ordering Example: iDRN-FP,** signal conditioner, and **DB9-RJ12,** connector adaptor, $250 + 30 = **$280**.*

For iDRN/iDRX accessories and power supplies, please see page 101.

Process product line continues to expand, visit omegamation.com for new details!

AC VOLTAGE/CURRENT SIGNAL CONDITIONERS

PATENTED
Covered by U.S. and International patents and pending applications.

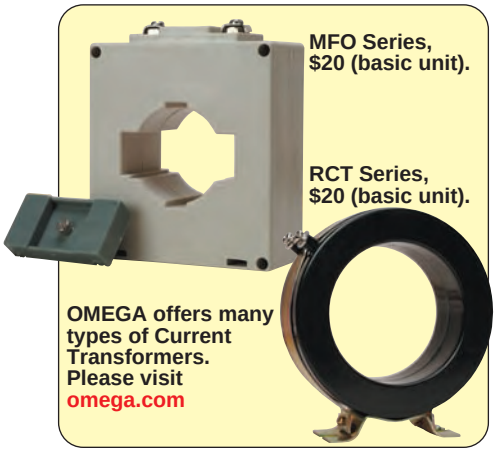
MADE IN USA CE

- **Software Selectable Input Ranges iDRX-ACV: 0 to 400 mV to 0 to 400 Vac iDRX-ACC: 0 to 10 mA to 0 to 5 A ac**
- **14-Bit Resolution (max)**
- **0.2% FS Accuracy**
- **1800 Vdc Isolation**
- **Free Setup and Configuration Software**
- **Factory Setup and Configuration Available at No Charge (for iDRN Analog Output models)**

The iDRN and iDRX Series signal conditioners provide highly accurate, stable and isolated measurement of AC voltage and current signals across extremely wide ranges: AC Current ranges from 0 to 10 mA through 0 to 5 A ac; AC Voltage ranges from 0 to 400 mV to 0 to 400 Vac.

Analog or Digital Outputs

The iDRN-ACV and iDRN-ACC accept ac voltage and ac current respectively and provide an analog output which is proportional to the input. The iDRX-ACV and iDRX-ACC accept ac voltage and AC current respectively and transmit via RS-485 Serial Communications.



Analog Output Model

The analog output models can be configured for outputs of 0 to 10 Vdc, 4 to 20 mA or 0 to 20 mA with the free configuration software. The modules connect to a PC with RS-232 Serial Communications, or by Ethernet with the optional EIS-2B module. Once configured the settings are stored in non-volatile memory and the unit can be disconnected from the PC.

Factory Setup and Configuration at No Extra Charge (iDRN Analog Output Modules) Please Specify:

iDRN-ACV: Input value high and low; output value high and low

Example: 0 volts = 4 mA, 400Vac = 20 mA

iDRN-ACC: Input value high and low; output value high and low

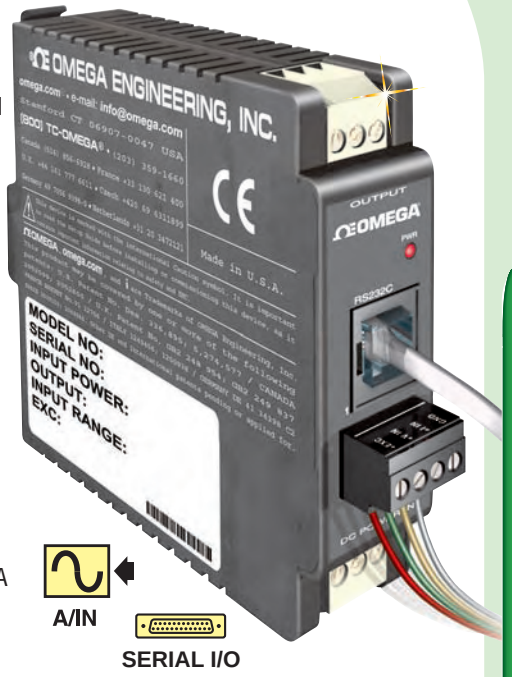
Example: 0 A = 4 mA, 5 A = 20 mA

Digital Output Model

The iDRX-ACC (Current) and iDRX-ACV (Voltage) communicate via RS-485 Serial Communications using either simple ASCII Commands or the popular MODBUS Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 1200 m (4000'), more with RS-485 repeaters.

Ethernet Connection

The optional EIS-2B iServer module can connect up to 32 iDRX RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single iDRN RS-232 device to an Ethernet network and the Internet.



SPECIFICATIONS

Accuracy at 25°C: ±0.2% FS
Resolution: 10 to 14-bit
Power Consumption: 2.4 W; (100 mA @ 24 Vdc)

MODEL IDRX-ACV/IDRN-ACV

Input Ranges: 0 to 400 mV to 0 to 400 Vac full scale
Interface: RS-485; RJ-12 or screw terminal connector

MODEL IDRX-ACC/ACC

Input Ranges: 0 to 10 mA to 0 to 5 A ac full scale
iDRX Output: 2-wire (half duplex) RS-485 (Omega® Serial Protocol and MODBUS Serial Protocol)
iDRN Output: 0 to 10 V@10 mA max; 0 to 20 mA or 4 to 20 mA
ACC Default Settings iDRN: Input 0 to 5 Amp; Output 4 to 20 mA (custom settings available at no charge)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
iDRX-ACC	**$270**	Digital signal conditioner with RS-485 output for AC current input
iDRX-ACV	**270**	Digital signal conditioner with RS-485 output for AC voltage input
iDRN-ACC	**345**	Signal conditioner with analog output for AC current inputs
iDRN-ACV	**345**	Signal conditioner with analog output for AC voltage inputs
-FS	**Free**	Factory setup and scaling

Comes with complete operator's manual.
Ordering Example: iDRN-ACV,** signal conditioner, and **DB9-RJ12,** connector adaptor, $345 + 30 = **$375.

NEW TWO-WIRE, PROCESS-LOOP INDICATOR IN NEMA 4X HOUSING

TX83A Series Starts at $325

1 YEAR WARRANTY · MADE IN USA · CE · OMEGACARE Extended Warranty Program · FM APPROVED

- FM Intrinsic Safety Certification
- Powered by 1 to 5, 4 to 20 or 10 to 50 mA Signal
- 2.5 V Max Voltage Drop
- 8.9 mm (0.35") LCD
- 2,000-Count Zero Suppression or Elevation
- 100 to 2,000 Count Span Adjust
- Selectable Dummy Right-Hand Zero
- -40 to 85°C Operation
- Compact, 2.9" Diameter Diecast Housing
- Waterproof to 35 kPa (5 psi)
- Shock Resistant to 55 g

Options

- ½ EMT Conduit Fitting
- ½ NPT Pipe Fitting
- Relay-Track Mounting Adapters
- External Explosion-Proof Housing
- Relay-Track Mounting

The TX83A is a 2-wire current-loop indicator that is powered directly by a 1 to 5 mA, 4 to 20 mA or 10 to 50 mA process loop signal, with a maximum voltage drop of 2.5 V. No separate power supply connections are required. This reduces overall hardware and field wiring costs and provides immunity from most electrical noise encountered in process control environments. The electronics are isolated from the case.

TX83A, $325, with NEMA 4 enclosure, $144, shown smaller than actual size.

TX83A, $325, shown smaller than actual size.

Readout of Process Variables

The TX83A provides extensive zero and span adjustment capability, so that it can read out directly in percent or in engineering units for process variables such as pressure, flow, temperature, or level. Its liquid crystal display provides 3½ active digits, a selectable dummy right-hand zero, and 4 programmable decimal points. By changing 2 internal jumpers, the normal positive slope response of the TX83A can be reversed, so that increasing the input decreases the reading.

Easy to Configure and Calibrate

Both span and zero are fine-tuned with precision multi-turn potentiometers. These are accessible through holes in the diecast cover, which are normally sealed with fluorosilicone plugs. Coarse zero and span steps are selected by removing the cover with attached electronics and changing plug-in jumpers.

Designed for Harsh Environments

All versions of the TX83A are rated for operation from -40 to 85°C (-40 to 185°F) with specified accuracy. The case is made of diecast metal and is waterproof to 35 kPa (5 psi). The electronics are firmly connected to the case top, so that the meter can withstand high vibration and shock. Mounting options include a male ½ EMT conduit fitting and a male ½ NPT pipe fitting in lieu of the normal rail or surface mount. These fittings eliminate the external screw terminals and provide a NEMA 4X rating.

Intrinsic Safety Certification

FM intrinsic safety certification is standard. Intrinsic safety certification allows the TX83A to be used in worst-case hazardous environments with no need for an explosion-proof housing, provided that an intrinsic safety barrier is used to limit the voltage and current that may be introduced in the hazardous environment. FM certification (USA) is for class I, II, III, division 1, groups A, B, C, D, E, F, G. The FM certification number is 5X2AO.AX (3610).

Explosion-Proof Housing Options

Two external NEMA-7 explosion-proof and NEMA 4 waterproof, sand-cast, copper-free aluminum enclosures with corrosion resistance "safety-blue" polyester powder-coating for use in hazardous locations. FM, UL, cUL certification: class I, groups B, C, D; class II, groups E, F, G; and class III, Type 4X.

Option EPW3 is a single-height enclosure for one TX83A loop-powered indicator. Option EPW2 is a double-height enclosure for a TX83A loop-powered indicator on top and a TX1500 series isolated 2-wire 4 to 20 mA transmitter on the bottom for indicating transmitter applications. Available with 2 female ½ NPT pipe fittings, all required internal mounting hardware, and mounting flanges for a wall or bulkhead.

SPECIFICATIONS

Input Signal: 1 to 5 mA, 4 to 20 mA or 10 to 50 mA (jumper-selectable)
Linear Range: 0.3 to 50 mA
Protection: 200 mA forward, 1000 mA reverse
Forward Voltage Drop, Max: 2.5 V up to 50 mA
Input Resistance: 50 Ω at 1 to 5 mA, 12.5 Ω at 4 to 20 mA, 5 Ω at 10 to 50 mA
Zero Adjust: –2000 to 2000 counts (4 jumper- selectable ranges plus fine adjustment)
Span Adjust: 0 to 2000 counts (with fine adjustment)
NMR: 46 dB, 50/60 Hz
CMR (Meter to Case): 120 dB, DC to 60 Hz
CMV (Meter to Case): 700 Vp
RFI Susceptibility: Less than ±0.5% of span with conduit fitting or external explosion-proof housing in 10V/m field strength at 27 or 440 MHz Accuracy at 25°C
Maximum Error: ±0.1% of span ±1 count 00 zero tempco ±0.1 count/°C typical, ±0.2 count/°C max
Span Tempco: ±0.005% of span/°C typical, ±0.015% of span/°C max
Analog-to-Digital Conversion Technique: Dual-slope, average-value
Polarity: Automatic
Integration Period: 100 ms
Read Rate: 2.5/s

DISPLAY

Type: 7-segment LCD
Height: 8.9 mm (0.35")
Symbols: -1.8.8.8.0 (3½ active digits plus jumper-selectable dummy right-hand zero)
Decimal Points: 4 positions, jumper-selectable
Overrange: 3 least-significant active digits blank

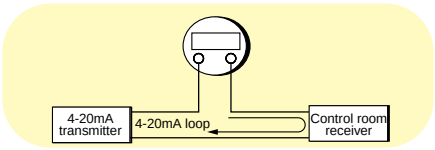
ENVIRONMENTAL

Operating Temperature: -40 to 85°C (-40 to 185°F)
Vibration: 1.52 mm (0.06") double-amplitude cycled at 10 to 80 Hz
Shock: 55 g half-sine, 9 to 13 ms duration
Waterproof Pressure: 35 kPa max (5 psi)
Mechanical
Weight: 14 oz (400 g)
Diameter: 74 mm (2.9")
Height, Including Barrier: 48 mm (1.9")
Electrical Connections:
TX83A: 3-terminal barrier strip with #6 screws
TX84: ½" NPT male pipe fitting with two 0.3 meter #18 stranded wires
TX84-2: ½" EMT male conduit fitting with two 0.3 meter #18 stranded wires

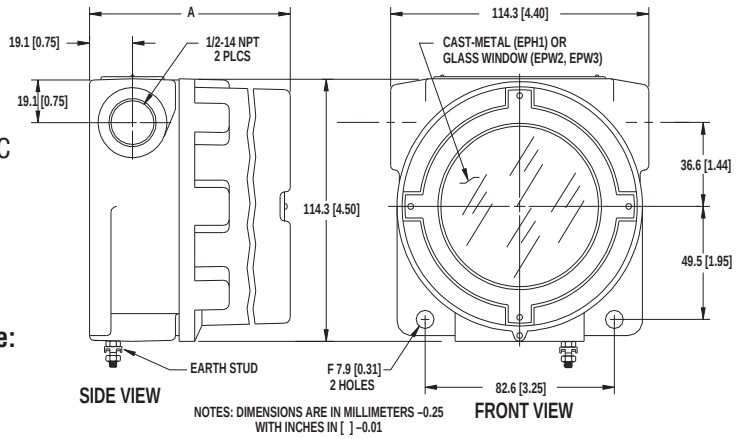
MOUNTING METHODS

TX83A:
- Surface mount with 4 #6 rear-entry screws from backside of bulkhead
- Snap mount into 63.5 mm (2.50") relay track
- Surface mount with two #8 front-entry screws requires MAT1 adapter plate
- Snap mount into 69.9 mm (2.75") or 76.2 mm (3.00") relay track requires MAT1 adapter plate.
- Snap mount into DIN relay track Requires MDT1 rail clamp
- Push mount into explosion proof housing EPW3-ATEX

TX84-2: ½" EMT male conduit fitting
TX84: ½" NPT male pipe fitting



The TX83A process-loop indicator may be added to an existing 4 to 20 mA or 10 to 50 mA installation. No additional wiring is required, since the meter is powered directly by the current loop.



To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	CONFIGURATION
TX83A	$325	Flat surface or relay track mounting
TX84-2	345	EMT conduit mounting
TX84	345	NPT pipe mounting

Mounting Options (TX83A Only)

ORDER SUFFIX	ADD'L. PRICE	DESCRIPTION
-MAT1	$10	Adaptor plate for surface mount or 69.9 mm relay track
-MDT1	10	Rail clamp for DIN relay track

Options

ORDER SUFFIX	ADD'L. PRICE	DESCRIPTION
-FS	$25	Custom configuration and

Accessories

MODEL NO.	PRICE	DESCRIPTION
MXS1	$12	Spring retainers for TX83A in explosion proof housing EPW3
MXS2	12	Spring retainers for TX83A in explosion proof housing EPW2
EPW3-ATEX	144	NEMA 4 and NEMA 7 rated environmental enclosure with window, single height; includes MXS1 hardware (supplied with Demko/ATEX certificate)
EPW2-ATEX	159	NEMA 4 and NEMA 7 rated environmental enclosure with window, double height for TX83A and TX1500 series transmitter; includes MXS1 and MXS2 hardware (supplied with Demko/ATEX certificate)

Comes with complete operator's manual.
***Ordering Examples: TX84** current loop-indicator with NPT pipe mounting, **$345**.*
OCW-3** OMEGACARE℠ extends standard 1-year warranty to a total of 4 years ($86), $345 + 86 = **$431.

NEW ISOLATED 4 TO 20 MA TRANSMITTERS

FOR DEMANDING APPLICATIONS THERMOCOUPLES, RTD OR OHMS, MILLIVOLTS, MILLIAMPS, VOLTS

TX1500 Series Starts at $325

MADE IN USA

TX1502A-K, $325, shown smaller than actual size.

Custom Scaling Available! Specify Input Signals Corresponding to 4 and 20 mA. Please Contact Engineering for Details at 1-800-TC-OMEGA®

- Isolated to 1500 Vrms
- 2-Wire 4 to 20 mA Operation
- 9 to 50 V Compliance
- Turndown Ratio to 10:1
- NMV Protection to 120 Vac
- -40 to 85°C (-40 to 185°F) Operation
- Shock Resistance to 55 g
- NEMA 4X (IP66) Metal Case
- Field Scalable

Unmatched Electrical Performance 2-Wire Operation

Power is obtained directly from the 4 to 20 mA loop, with no need for separate power input. This simplifies field wiring and prevents noise pickup from power lines.

Isolation to 1500 Vrms (2100 Vp)

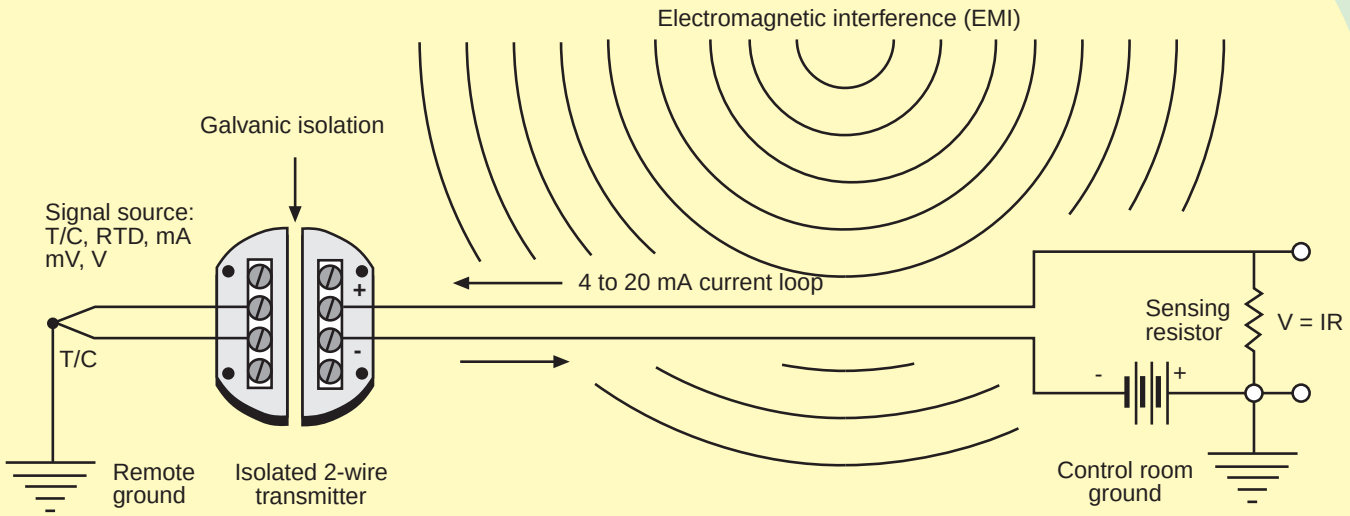
This exceptionally high CMV rating from the input to the case or output eliminates electrical ground loops between the signal source and the receiver. It also provides a high degree of protection for the receiver against electrical hazards, such as accidental contact between the signal source and an AC power line.

9 to 50 V Compliance

The loop voltage driving the transmitters can be from 9 to 50 V without loss of accuracy. The exceptionally low 9 V limit allows the transmitters to be used with low loop supply voltages, and it maximizes the voltage drop allowed in the current loop for intrinsic safety barriers and load resistance. For example, at the full 20 mA output of the transmitter, a 750 Ω load can be used with a 24 Vdc source and a 150 Ω load can be used with a 12 Vdc source. In either case, there will still be enough voltage left to power the transmitter, namely 9 Vdc.

10:1 Turndown Ratio

Turndown ratio is defined as zero suppression divided by span. The exceptionally high 10:1 turndown ratio possible with the TX1500 Series indicates that wide zero offset can be combined with narrow signal span for closed loop control at high gain. The signal span can also be wide for control of batch operations, where a wide range of signal levels may be encountered over the entire batch cycle.



Classic Application of a TX1500 Series 2-Wire Isolated Transmitter

The transmitter amplifies a low-level voltage signal to a 4 to 20 mA current signal, which is immune to voltage noise pickup. The voltage detected in the control room is V = IR, where I is the loop current and R is the dropping resistor of the receiving equipment. The isolation provided by the transmitter protects the receiving equipment and prevents ground loops between the remote signal ground and the ground of the control room.

High Overvoltage Protection

Overvoltage of 120 Vac may be applied across the input or output leads for 1 minute for all models with voltage or thermocouple inputs. Reverse polarity of 400 Vp may be applied across the output leads indefinitely. These exceptionally high NMV overvoltage ratings provide further protection against possible electrical faults and wiring errors.

Designed for Harsh Environments

Extreme operating temperatures. The operating temperature can range from -40 to 85°C (-40 to 185°F) while meeting published performance specifications. This allows the TX1500 Series to be used near furnaces or outdoors in the winter. The exceptionally wide operating temperature range is made possible by a proprietary electrical circuit and by extensive use of computer-graded and computer-matched electrical components.

Resistance to shock and vibration. The shock rating is 55 g (1.9 oz), which includes a 1.8 m (6') drop onto concrete. This is made possible by a compact die-cast metal case, which is only 74 mm (2.9") in diameter, and by rugged mounting of the electronics. The circuit board assembly is in the shape of a rigid box and is firmly soldered to the top of the transmitter case.

Waterproof Case

The case is made of diecast zinc alloy. It is waterproof to 35 kPa (5 psi) and meets NEMA 4X (IP66) standards. The top of the case is sealed against the bottom with a fluorosilicone gasket, and the openings in the top of the case for the zero and span adjustment, are sealed with fluorosilicone plugs.

Explosion-Proof Housing Options

Three external NEMA 7 explosion-proof and NEMA 4 (IP65) waterproof, sand-cast, copper-free aluminum enclosures with corrosion-resistant “safety-blue” polyester powder-coating for use in hazardous locations. FM, UL, cUL Certification: Class I, Groups B, C, D; Class II, Groups E, F, G; and Class III, Type 4X. Demko/ATEX Certification: EX II 2 G D EEx d IIC.

Option EPH1-ATEX is a single-height, all-metal housing for a single TX1500 Series transmitter.

Option EPW2-ATEX is a double-height metal enclosure with a glass window for a TX1500 Series transmitter on the bottom and a TX83A loop-powered indicator on top. The TX83A augments the transmitter with an LCD digital readout scaled in engineering units and only adds a 2.5 V drop to the current loop.

Option EPW3-ATEX is a single-height enclosure for one TX83A loop-powered indicator. This option includes 2 female 1/2 NPT pipe fittings, all required internal mounting hardware, and mounting flanges for a wall or bulkhead.

Easy to Calibrate and Install

There is no need to specify different models for different ranges of the same signal type. Zero and span are each set by push-on jumpers
for coarse range selection and by a 15-turn precision potentiometer for fine adjustment. The 2 potentiometers are accessible outside the case through openings that are normally sealed by fluorosilicone plugs. To assist in calibration, 2 test terminals provide a 10 mV/mA output (200 mV full scale). The scaling procedure is explained in a comprehensive user’s manual, which is shipped with every unit.

NEW

TX1501, $335, shown smaller than actual size.

Quick Selection Guide by Input Type. **See Page 116 to Order.**

MODEL NO.	SIGNAL TYPE	ZERO SUPPRESSION FOR 4 MA OUTPUT	MAXIMUM SIGNAL FOR 20 MA OUTPUT	SIGNAL SPAN FOR 4 TO 20 MA OUTPUT	INPUT IMPEDANCE
TX1501	RTD Pt100 Ω	-200 to 750°C -328 to 1382°1 0 to 365 Ω	850°C 562°F 400 Ω	100 to 1050°C 180 to 1890°F 35 to 400 Ω	N/A
TX1502A-J	Type J T/C iron-constantan	-50 to 660°C -58 to1220°F	760°C 1400°F	100 to 810°C 180 to 1458°F	5 MΩ
TX1502A-K	Type K T/C chromel-alumel	-50 to 1272°C -58 to 2322°F	1372°C 2502°F	100 to1422°C 180 to 2560°F	5 MΩ
TX1502A-T	Type T T/C copper-constantan	-50 to 350°C -58 to 662°F	400°C 752°F	50 to 450°C 90 to 810°F	5 MΩ
TX1502A-E	Type E T/C chromel-constantan	-50 to 900°C -58 to1652°F	1000°C 1832°F	100 to 1050°C 180 to 1890°F	5 MΩ
TX1504	Millivolts	-30 to 60 mV	160 mV	5 to 100 mV	100 MΩ
TX1505	Milliamps	-30 to 60 mA	160 mA	5 to 100 mA	1 Ω
TX1506-1	Low volts	-3.5 to 6.0 V	11 V	0.5 to 5 V	1 MΩ
TX1506-2	High volts	-35 to 60 V	110 V	5 to 50 V	1 MΩ

COMMON SPECIFICATIONS

SIGNAL OUTPUT

Connection: 2-wire
Linear Range: 4 to 20 mA
Maximum Output: 35 mA
Voltage Compliance: 9 to 50 Vdc
Power Supply Rejection: 0.01% of span/V
Input/Output Protection:
- **CMV, Input to Case or Output:** 2100 Vp per HV test, 354 Vp per IEC spacing
- **CMR, Input to Case or Output:** 120 dB, DC to 60 Hz
- **NMV Across Output Leads:** 120 Vac for 1 min
- **Reverse Polarity Across Output Leads:** 400 Vp

Accuracy: -40 to 85°C (-40 to 185°F)
Hysteresis and Repeatability: ±0.1% of span
6-month Stability Error: ±0.2% of zero suppression
Error Due to 50°C Change in Transmitter Temperature:
- **Zero Error:** ±0.2% of zero suppression
- **Span Error:** ±0.2% of span

ENVIRONMENTAL

Operating Temperature: -40 to 85°C (-40 to 185°F)
Storage Temperature: -55 to 125°C (-67 to 257°F)
Relative Humidity: 0 to 100% (sealed case)
Watertight Proof Pressure: 35 kPa (5 psi)
Shock: 55 g, half sine, 9 to 13 ms duration
Vibration: 1.52 mm (0.06") double amplitude, 10 to 80 Hz cycled

MECHANICAL

Case Material: Zamak zinc alloy
Gasket Material: Fluorosilicone
Diameter: 74 mm (2.9")
Height, Including Barriers: 53 mm (2.1")
Weight: 380 g (13 oz)
Electrical Connection: #6 screws with wire clamps
Terminal Protection:
- **Standard:** Screw terminal barriers plus barrier strip cover
- CPB1 (Optional): Plastic cover for case top (protects T/C screw terminals from air currents)

NON-COMMON SPECIFICATIONS

RTD INPUT
MODEL TX1501

Signal Source: Pt100 RTD
Span for 4 to 20 mA Output:
100 to 1050°C (180 to 1890°F)
Zero Suppression:
-200 to 750°C (-328 to 1382°F)
Source Connection: 2- or 3-wire
Excitation Current: 200 µA
Lead Resistance, Max: 100 Ω
Bandwidth: DC-60 Hz

OHMS INPUT
MODEL TX1501

Signal Source: 0 to 400 Ω
Span for 4 to 20 mA Output:
35 to 400 Ω
Zero Suppression: 0 to 365 Ω
Source Connection: 2- or 3-wire
Excitation Current: 200 µA
Lead Resistance, Max: 100 Ω
Bandwidth: DC-60 Hz

THERMOCOUPLE INPUT
MODEL TX1502A

Span and Zero Suppression:
See input table
Input Resistance (Open T/C Detector Resistance): 5 MΩ
Bias Current, Max: 50 nA
NMV Across Input Leads:
120 Vac for 1 min
NMR Across Input Leads:
40 dB, 50/60 Hz, 100 mV input
Thermocouple Lead Resistance:
For specified performance: 100 Ω
Maximum: 10 kΩ
Step Response, Type: 400 ms

Millivolt Input
Model TX1504

Span for 4 to 20 mA Output:
5 to 100 mV
Zero Suppression: -30 to 60 mV
Input Resistance: 100 MΩ
Bias Current, Max: 50 nA
NMV Across Input Leads:
120 Vac for 1 min
NMR Across Input Leads: 40 dB, 50/60 Hz, 100 mV input
Step Response, Type: 400 ms

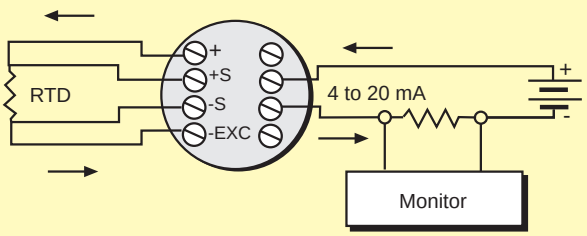
Milliamp Input

MODEL TX1505

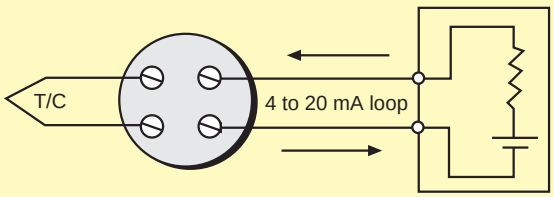
Span for 4 to 20 mA Output:
5 to 100 mA
Zero Suppression: -30 to 60 mA
Input Resistance: 1 Ω
Step Response, Type: 400 ms

VOLT INPUT
MODEL TX1506

Span for 4 to 20 mA Output:
0.5 to 5 V (TX506-1); 5 to 50 V (TX506-2)
Zero Suppression:
-3.5 to 6.0 V (TX506-1); -35 to 60 V (TX506-2)
Input Resistance: 1 MΩ
Bias Current, Max: 1 nA
NMV Across Input Leads:
120 Vac for 1 min
NMR Across Input Leads:
40 dB, 50/60 Hz, 100 mV input
Step Response, Type: 400 ms



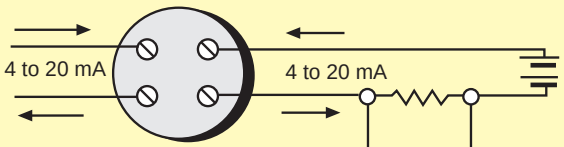
The TX1501 transmitter is designed for 3-wire RTD operation that compensates for lead resistance. The +S terminal is not connected internally. Shorting the -S and -EXC terminals provides 2-wire operation.



Model TX1502A 2-wire 4 to 20 mA transmitter

Power supply and receiver

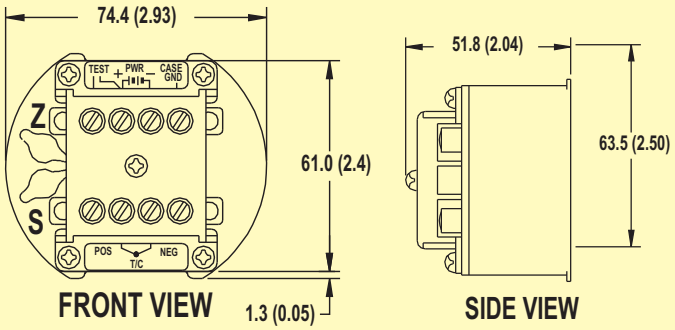
The TX1502A uses the power-supply leads as signal leads. This simplifies field wiring by eliminating separate power and signal leads.

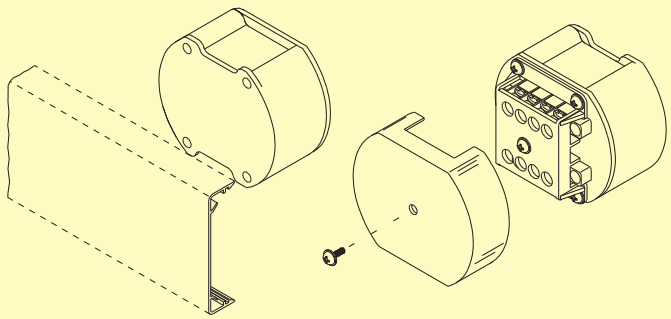


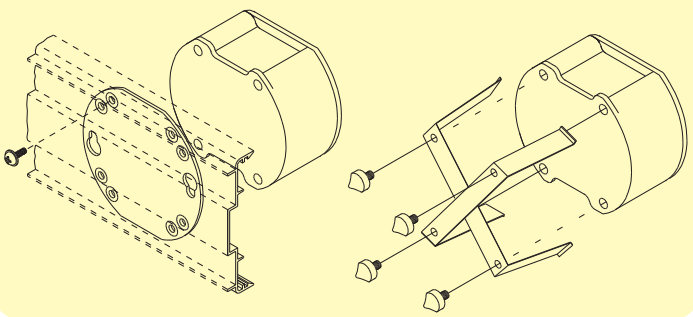
Model TX1505
4 to 20 mA loop isolator

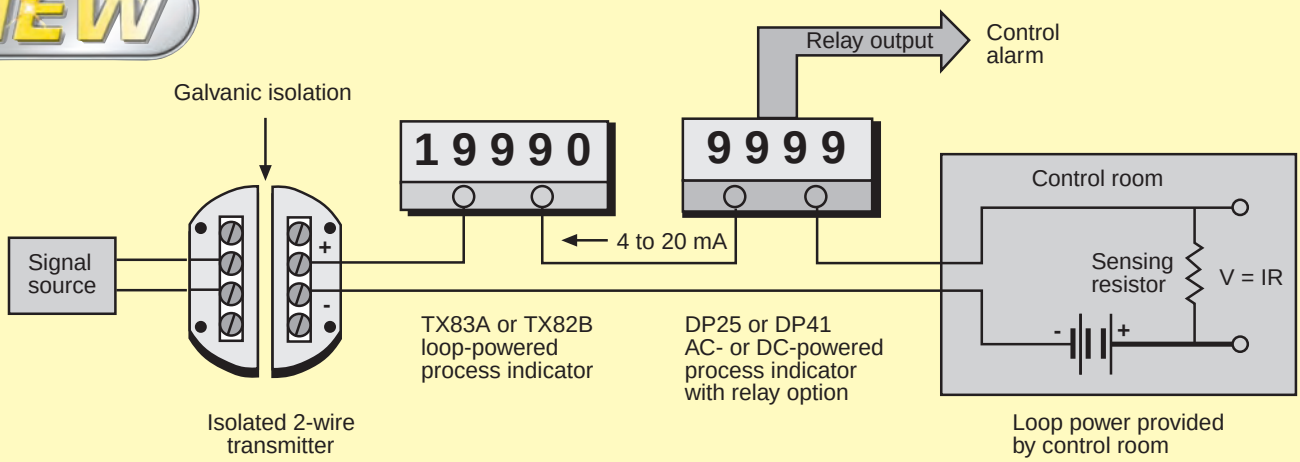
The TX1505 can be used as a 4 to 20 mA current loop isolator. The input and output loops are each powered by their own supply.

Dimensions: mm (in)



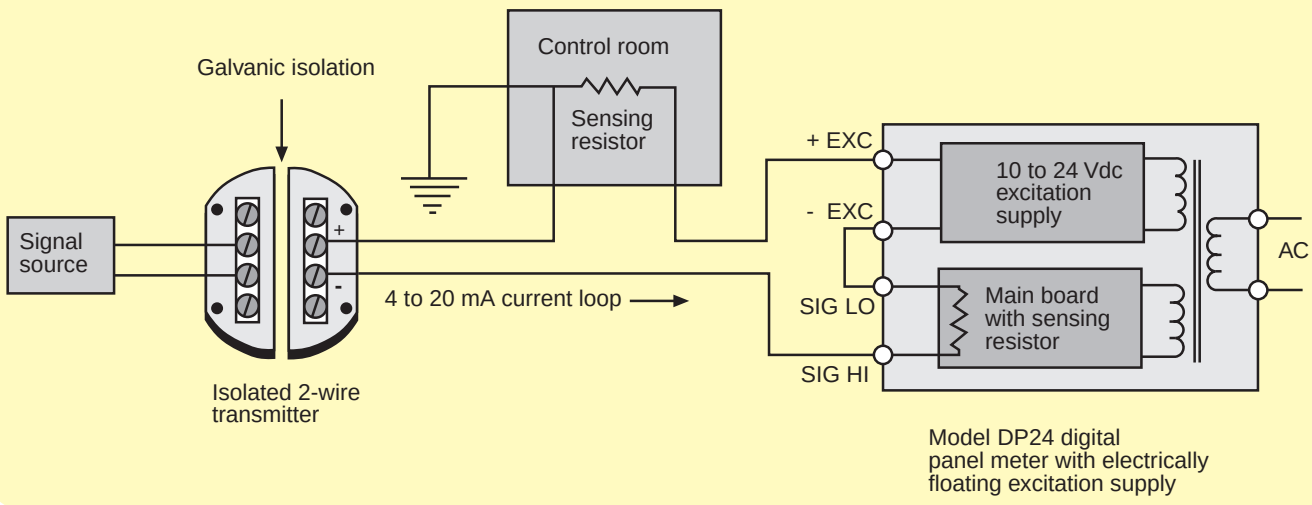






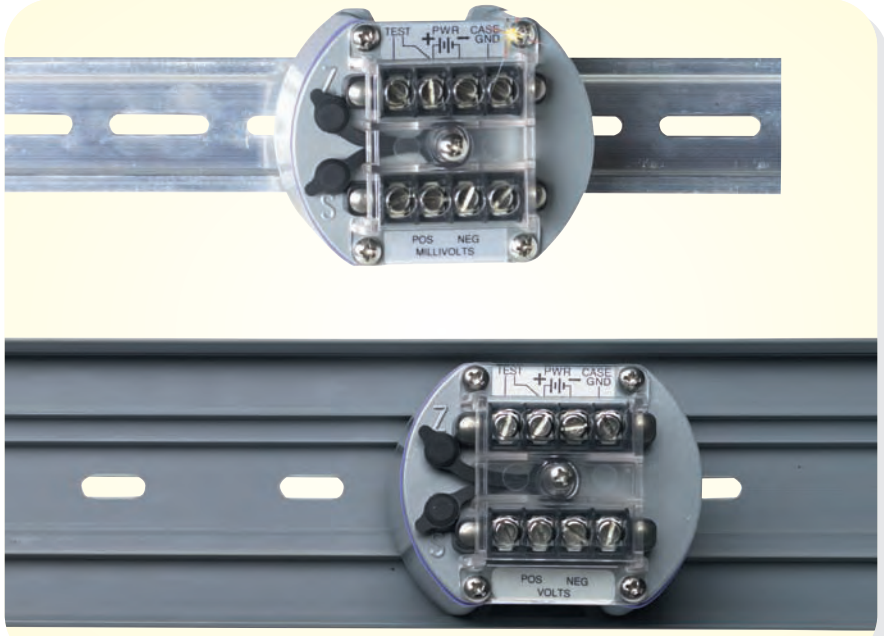
Adding Digital Panel Meters to a 4 to 20 mA Loop

One or more digital panel meters may be added to a 4 to 20 mA loop for local readout in percent or engineering units, without degrading the accuracy of the 4 to 20 mA signal. OMEGA's TX83A and TX82B loop-powered indicators derive all operating power from the loop itself, with a maximum loop drop of 2.5 V. The use of such indicators simplifies field wiring. OMEGA's DP41 meters insert a loop resistance of only 15 Ω for a maximum loop drop of 0.1 V at 20 mA. DP41 meters are available with dual or quad relay output for control or alarm.



A DP24, DP25 or DP41 panel meter may be used to power the 4 to 20 mA loop, including the isolated 2-wire transmitter. One or more loads may be added to the loop, including receiving equipment in the control room. The excitation supply is electronically floating; thus, the current loop may be grounded anywhere. In addition to powering the loop, the panel meter provides a local display scaled in percent or in engineering units.

TX1502A-J, $325, shown smaller than actual size.



Rail Mounting of TX1500 Series Transmitters

Top: Transmitter is clamped to DIN relay track. An MDT1 adaptor is required.

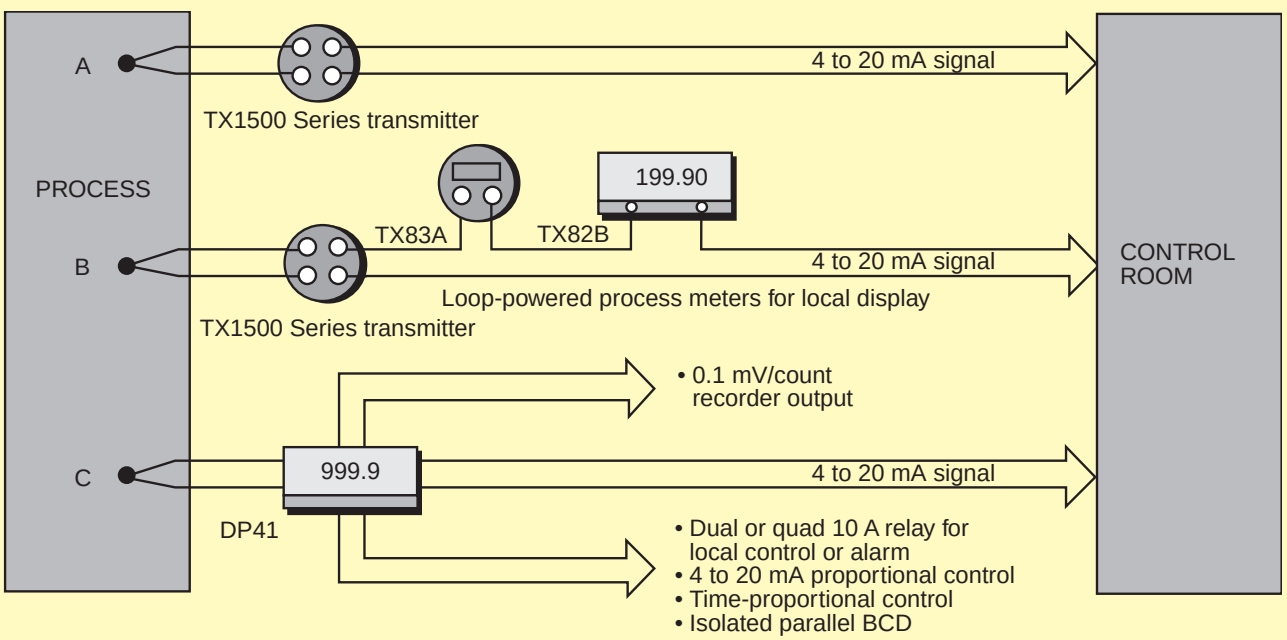
Lower: Transmitter is clamped to snap track. The standard housing fits 63.5 mm (2.50") width. An MAT1 adaptor is required for 69.9 mm (2.75") or 76.2 mm (3.00") width.

NEW

Mounting Methods

See Mechanical Section for mounting drawings.

1. Surface mount with four #6 rear-entry screws. Tapped holes are located in back of case. Screws are inserted from backside of bulkhead.
2. Snap mount into 63.5 mm (2.50") relay track.
3. Surface mount with two #8 front-entry screws. Requires optional MAT1 adaptor plate.
4. Snap mount into 69.9 mm (2.75") or 76.2 mm (3.00") relay track. Requires optional MAT1 adaptor plate.
5. Snap mount into DIN relay track. Requires optional MDT1 rail clamp, fits both 69.9 mm (2.75") and 76.2 mm (3.00") DIN rails.
6. Push mount into optional external waterproof or explosion-proof housings EPH1-ATEX or EPW2-ATEX. Includes MXS1 spring retainers.

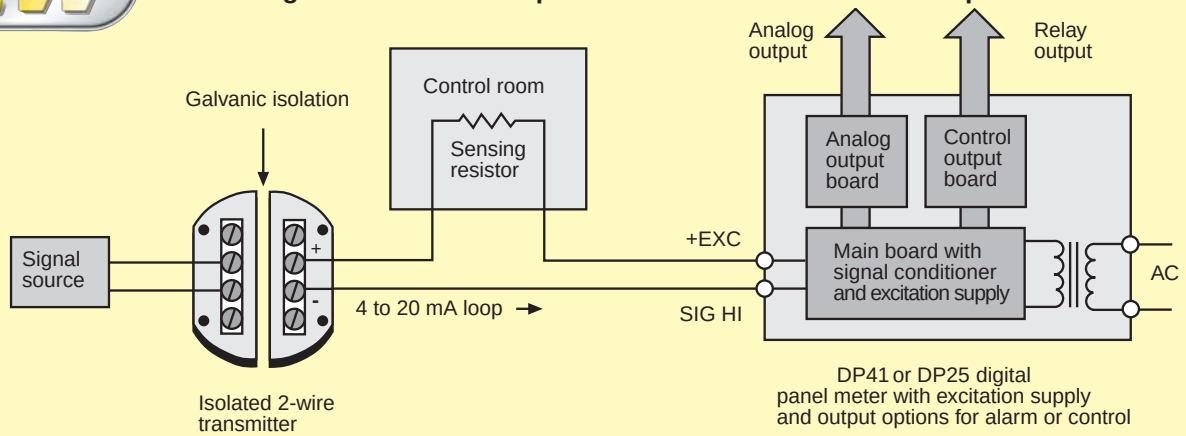


3 Transmitter Strategies

A. The 4 to 20 mA signal is transmitted directly to the control room, without local readout or alarm.
B. Local readout is provided by process indicators in series with the 4 to 20 mA current loop. The 2 models shown are loop powered, with no need for external power. Local readout, alarm and control could also have been provided by an DP41 meter/controller in series with the 4 to 20 mA loop.
C. The 4 to 20 mA transmitter signal as well as local readout, alarm and control are provided by DP41 with no need for a separate transmitter.

NEW

Powering the 4 to 20 mA loop and the transmitter with a DP41 panel meter/controller.



TX1504, $325, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
TX1501	**$335**	RTD (Pt100) or Ω (default cal 0 to 850°C)
TX1502A-J	**325**	Type J thermocouple (default cal 0 to 500°C)
TX1502A-K	**325**	Type K thermocouple (default cal 0 to 800°C)
TX1502A-T	**325**	Type T thermocouple (default cal 0 to 400°C)
TX1502A-E	**325**	Type E thermocouple (default cal 0 to 500°C)
TX1504	**325**	Millivolt input 5 to 100 mV span (scalable)
TX1505	**325**	Current input (scalable) loop isolator
TX1506-1	**325**	500 mV to 5 Vdc input span (default calibration 0 to 5 Vdc)
TX1506-2	**325**	5 V to 50 Vdc input span (default calibration 0 to 5 Vdc)

Options

OPTION	PRICE	DESCRIPTION
-FS	**$25**	Custom scaling option; specify input signals corresponding to 4 and 20 mA

Accessories

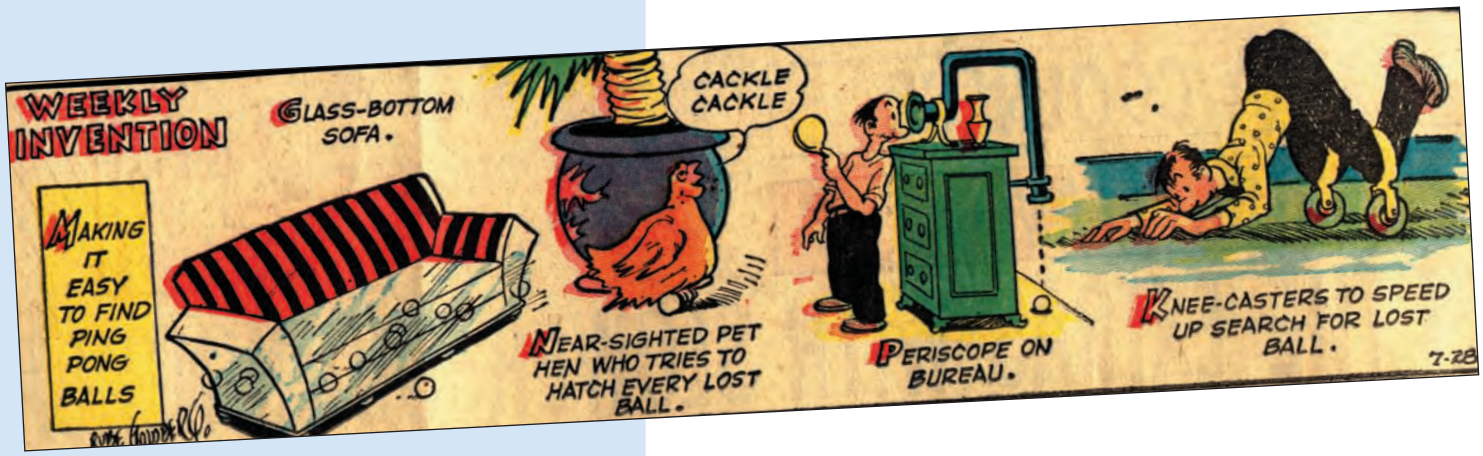
OPTION	PRICE	DESCRIPTION
DS	**$10**	Down-scale overrange (under 4 mA) (for TX1502A Series only)
CBP1	**10**	Plastic cover for screw-terminal barrier strip
MAT1	**10**	Adaptor plate, surface or 69.9 mm (2.75") relay track
MDT1	**15**	DIN rail clamp
EPH1-ATEX	**108**	External single-height environmental enclosure, NEMA 7 and NEMA 4 (IP65) rated; includes MXS1 spring retainers (supplied with Demko/ATEX certificate).
EPW2-ATEX	**159**	External double-height environmental enclosure, with window for TX1500 Series transmitter on bottom and one TX83A loop-powered indicator on top; NEMA 7 and NEMA 4 (IP65) rated; includes MXS2 spring retainers (supplied with Demko/ATEX certificate)
MXS1	**12**	Replacement spring retainers for EPH1-ATEX or customer-supplied explosion-proof housing
MXS2	**12**	Replacement spring retainers for EPW2-ATEX or customer-supplied explosion-proof housing
PSR-24S	**60**	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	**60**	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	**60**	Regulated power supply, 24 Vdc, 400 mA, stripped leads, 230 Vac input, CE
PSU-93	**40**	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal

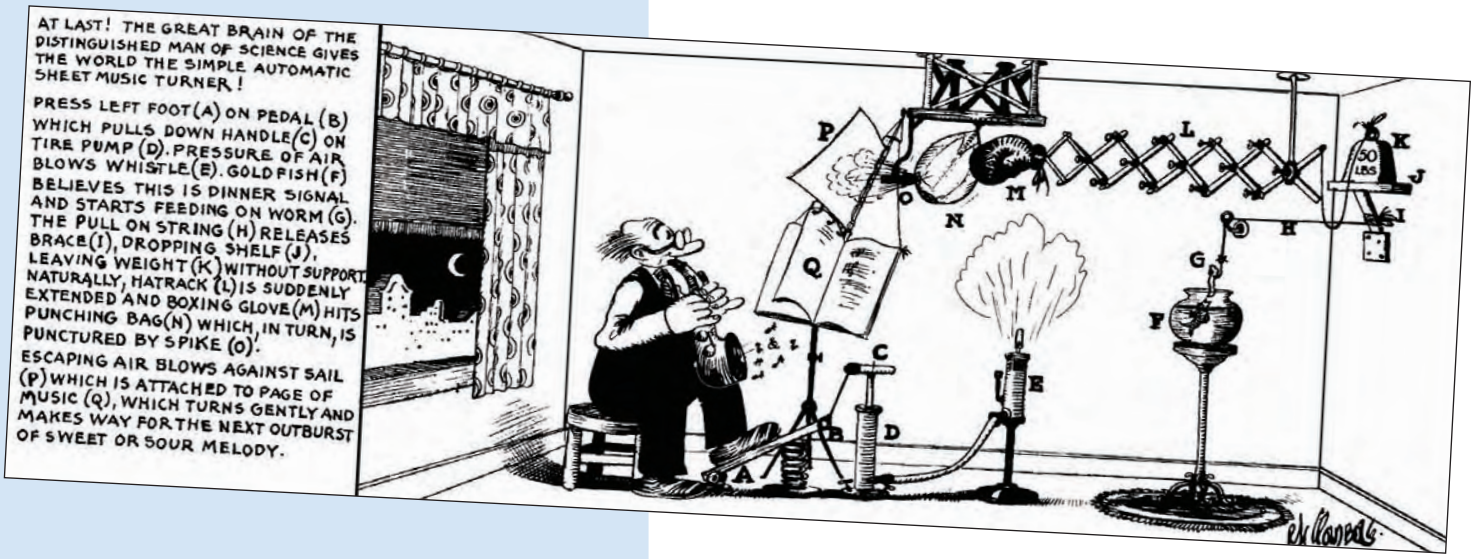
Ordering Examples: ***TX1504-FS*** *(-1 to 30 mV = 4 to 20 mA), $325 + 25 =* ***$350.***
TX1504 *(customer will calibrate for 0 to 50 mVdc = 4 to 20 mA),* ***$325.***
TX1502A-K-FS *(0 to 100°C = 4 to 20 mA), $325 + 25 =* ***$350.***
TX1505-FS *(5 to 12 mA = 4 to 20 mA), $325 + 25 =* ***$350.***

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*





NEW UNIVERSAL INPUTS

iDR
Starts at
$240

MADE IN USA

iSeries

- Thermocouple
- RTD
- Process Voltage
- Process Current
- Strain

AMAZING OUTPUTS!

- Ethernet TCP/IP
- Serial RS232/RS485
- Autotune PID Control
- 2 Form "C" Relays
- 2 Solid State Relays
- 2 DC Pulse
- Programmable: Scalable Analog Voltage, 0 to 10 Vdc; Analog Current, 0 to 20 mA

The DIN rail iSeries is a family of microprocessor-based instruments in 3 sizes.

iDRP optional remote programmer display, $150, shown smaller than actual size.

Process product line continues to expand, visit omegamation.com for new details!

HOTLINE TO AUTOMATION PRODUCTS 1-888-55-66342™ 1-888-55-OMEGA

PID CONTROLLERS AND SIGNAL CONDITIONERS

The 3 sizes of iSeries controllers and signal conditioners operate similarly and have similar setup and configuration menus.

- High Quality
- 5-Year Warranty
- High Accuracy: ±0.5°C (0.9°F), 0.03% Rdg
- Full Autotune PID Control (Optional)
- User Friendly, Simple to Configure
- Embedded Ethernet
- OPC Server
- Universal Inputs: Thermocouple, RTD, Process Voltage/ Current, Strain
- 2 Control or Alarm Outputs (Optional): DC Pulse, Solid State Relays (SSRs), Mechanical Relays, Analog Voltage, and Current
- Built-In Excitation
- Plug Connectors
- Free Software

NEW Controllers and Signal Conditioners with Embedded Internet

OMEGA® introduces a family of extremely accurate instruments for DIN rail mounting. The compact iDR Series signal conditioners and PID controllers are available with OMEGA's award-winning "embedded Internet" technology. With the Ethernet option, the instruments connect directly to a LAN and can even serve Web pages over the Internet. The devices are easily configured with a handheld programmer iDRP, or from a computer with an Ethernet, RS232, or RS485 connection.

The universal signal input covers 10 thermocouple types; 100 and 1000 Ω RTDs with 2-, 3-, or 4-wire connections; and process (DC) voltage, current, and strain gage inputs. Optional outputs include form "C" SPDT relays, SSRs, DC pulse, programmable isolated or non-isolated analog voltage, and current.

The innovative OMEGA® DIN rail iSeries devices feature state-of-the-art technology, uncompromising accuracy, and quality backed by a 5-year warranty. The DIN rail iSeries family includes extremely accurate signal conditioners and single-loop PID controllers that are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

Embedded Internet and Serial Communications

Featuring optional "embedded Internet" (specify "-EI" option), the iSeries devices connect directly to an Ethernet network and transmit data in standard TCP/IP packets. They even serve Web pages over a LAN or the Internet. The iSeries also features serial communications. With the "-C24" option, the user can select from the optional remote programmer menu between RS232, RS422, and RS485, with straightforward ASCII commands or MODBUS.

iSeries Family

The OMEGA® DIN rail iSeries is a family of microprocessor-based instruments offered in 3 sizes. The instruments have a similar setup and configuration menu and method of operation, which is a tremendous time saver for integration of a large system.

Quality and Technology

Designed and manufactured in the USA, the innovative OMEGA® DIN rail iSeries features an extended 5-year warranty at no extra charge. The iSeries packs a wealth of power and features into the smallest of packages, employing COB (chip-on-board) and SMT (surface mount technology) assembly techniques and automation. Every iSeries instrument is thoroughly calibrated and tested at several stages during production. The iSeries offers very high accuracy for industrial instrumentation: 0.03% of reading. The analog-to-digital conversion uses a proprietary 20-bit ASIC (application-specific integrated circuit), patented algorithms, and smart filtering.

Universal Inputs

The iSeries instruments offer a broad selection of signal inputs. The choices are easily selected from the remote programmer menu with 4 front-panel pushbuttons, or by serial or Ethernet communications.

Ten Thermocouple Types

The iSeries handles 10 thermocouple types: K, J, T, E, R, S, B, C, N, and J DIN. The patented thermocouple linearization algorithms employed in the iSeries uphold the highest standards of accuracy.

Most Accurate RTD Measurements

The iSeries works with a wide selection of RTDs and produces the most accurate RTD measurements. It handles both Pt 0.00385 and 0.00392 curves; and 100 Ω, 500 Ω, and 1000 Ω. A choice of 2-, 3-, and 4-wire RTD connections ensures a high degree of accuracy.

Process Voltage and Current

The iSeries measures process voltage: 0 to 100 mVdc, 0 to 1 Vdc, 0 to 10 Vdc ranges, and process current: 0 to 20 mA.

Strain Gage

The strain/process (iSDR) instruments measure inputs from load cells, pressure transducers, and most strain gage sensors, as well as process voltage and current ranges. Input ranges include 0 to 100 mVdc, -100 mVdc to 1 Vdc, and 0 to 10 Vdc, in addition to 0 to 20 mA. The iSDR supports 4- and 6-wire bridge configurations, and ratiometric and non-ratiometric measurements. The iSDR features fast and easy "in process" calibration/scaling of the signal inputs to any engineering units.

It also features 10-point linearization, which allows the user to linearize the signal input from extremely non-linear transducers of all kinds.

Built-In Excitation Standard

The temperature/process models (iDR and iDRA) come with built-in excitation (24 Vdc @ 25 mA). Any excitation voltage between 5 and 24 Vdc is available by special order. With built-in excitation the same instrument can handle thermocouples, standard RTDs, or 4 to 20 mA transmitters.

The strain/process model (iSDR) comes with a built-in excitation, of 10 Vdc @ 60 mA; 5 Vdc @ 40 mA excitation is user selectable.

Built-in excitation is not available with the RS232/RS485 serial communications or DC power options.

Control Functions

The iSeries offers either simple manual on/off operation or full autotune PID control (selectable preset tune, adaptive tune, PID, PI, PD control modes). The dual control outputs can be configured for a variety of independent control and alarm applications, such as heat/heat, heat/cool, heat/alarm, cool/cool, cool/alarm, or alarm/alarm. The ramp-to-setpoint feature allows the user to define the rate of rise to setpoint, minimizing thermal shock to the load is during start-up. Maximum ramp time is 99.59 (HH.MM); soak, 00.00 to 99.59 (HH.MM); and damping, 1 to 8 in unit steps. For those who only need simplified menus and no PID control, a limit alarm (-AL) option is available.

Control or Alarm Outputs

Users have a choice of 2 control or alarm outputs in almost any combination: solid state relays (SSRs) rated at 0.5 A @ 120/240 Vac; form "C" SPDT (single pole, double throw) relays rated at 3 A @ 120/240 Vac; and pulsed 10 Vdc output for use with an external SSR.

Analog Output

The optional analog output can be programmed within a range of 0 to 10 Vdc or 0 to 20 mA. It is selectable as either a control output or as a calibrated retransmission of the process value—a unique feature among controllers.

Optional Remote Programmer/ Color Display

The remote programmer/display can be programmed to change color at any setpoint or alarm point. For example, the instrument can be programmed to display the process value in **GREEN** during warm-up, in **AMBER** to signal the normal operating range, and in **RED** to signal an alarm condition.

The changes in color are easily seen from a distance, and machine operators can react quickly to changing conditions. The colors can be programmed to change back when the value drops back below the alarm point or to "latch" on until being reset by the operator.

The instrument can also be programmed to display only one unchanging color: **GREEN, AMBER,** or **RED.** This is a useful way to let an operator identify, at a glance, process values in 3 separate locations, or to display 3 different measurements, such as temperature, pressure, and flow.

Remote Display change color

At Any Setpoint*

iSeries U.S.Patent #6,243,021

Totally Programmable Color Displays

The optional remote programmer display can be programmed to change color at any setpoint or alarm point.

SPECIFICATIONS

UNIVERSAL TEMPERATURE AND PROCESS INPUT MODEL (IDR)

Accuracy: ±0.5°C temp; 0.03% rdg process
Resolution: 1°/0.1°; 10 µV process
Temperature Stability:
RTD: 0.04°C/°C
T/C @ 25°C (77°F): 0.05°C/°C cold-junction compensation
Process: 50 ppm/°C
NMRR: 60 dB
CMRR: 120 dB
A/D Conversion: Dual-slope
Reading Rate: 3 samples per second
Digital Filter: Programmable
Input Types: Thermocouple, RTD, analog voltage, analog current
Thermocouple Lead Resistance: 100 Ω max
Thermocouple Type (ITS 90): J, K, T, E, R, S, B, C, N, L
RTD Input (ITS 68): 100/500/1000 Ω Pt sensor; 2-, 3- or 4-wire; 0.00385 or 0.00392 curve
Voltage Input: 0 to 100 mV, 0 to 1 V, 0 to 10 Vdc
Input Impedance: 10 MΩ for 100 mV, 1 MΩ for 1 or 10 Vdc

Current Input: 0 to 20 mA (5 Ω load)
Configuration: Single-ended
Polarity: Unipolar
Step Response: 0.7 s for 99.9%
Decimal Selection: None, 0.1 for temperature; none, 0.1, 0.01 or 0.001 for process
Setpoint Adjustment: -1999 to 9999 counts
Span Adjustment: 0.001 to 9999 counts
Offset Adjustment: -1999 to 9999
Excitation: 24 Vdc @ 25 mA (not available with "-DC", "-C24" or "-C4EI" option)

UNIVERSAL STRAIN AND PROCESS INPUT MODEL (ISDR)

Accuracy: 0.03% rdg
Resolution: 10/1 µV
Temperature Stability: 50 ppm/°C
NMRR: 60 dB
CMRR: 120 dB
A/D Conversion: Dual-slope
Reading Rate: 3 samples per second
Digital Filter: Programmable
Input Types: Analog voltage, analog current
Voltage Input: 0 to 100 mVdc, -100 mVdc to 1 Vdc, 0 to 10 Vdc
Input Impedance: 10 MΩ for 100 mV; 1 MΩ for 1 or 10 Vdc
Current Input: 0 to 20 mA (5 Ω load)
Linearization Points: Up to 10
Configuration: Single-ended
Polarity: Unipolar
Step Response: 0.7 s for 99.9%
Decimal Selection: None, 0.1, 0.01 or 0.001
Setpoint Adjustment: -1999 to 9999 counts
Span Adjustment: 0.001 to 9999 counts
Offset Adjustment: -1999 to 9999
Excitation: 5 Vdc @ 40 mA; 10 Vdc @ 60 mA (not available with "-DC", "-C24" or "-C4EI" option

CONTROL

Action: Reverse (heat) or direct (cool)
Modes: Time and amplitude proportional control modes; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative with anti-reset windup and on/off
Rate: 0 to 399.9 seconds
Reset: 0 to 3999 seconds
Cycle Time: 1 to 199 seconds; set to 0 for on/off operation
Gain: 0.5 to 100% of span; setpoints 1 or 2
Damping: 0000 to 0008
Soak: 00.00 to 99.59 (HH:MM), or off
Ramp to Setpoint: 00.00 to 99.59 (HH:MM), or off
Autotune: Operator-initiated from front panel
Control Output 1 and 2 Relay: 250 Vac or 30 Vdc @ 3 A (resistive load); configurable for on/off, PID and ramp and soak
Output 1: SPDT type, can be configured as alarm 1 output
Output 2: SPDT type, can be configured as alarm 2 output
SSR: 20 to 265 Vac @ 0.05 to 0.5 A (resistive load); continuous
DC Pulse: Non-isolated; 10 Vdc @ 20 mA
Analog Output (Output 1 Only): Non-isolated, proportional 0 to 10 Vdc or 0 to 20 mA; 500 Ω max
Analog Output (Optional Output 3): Isolated, retransmission, 0 to 10 Vdc or 0 to 20 mA, 500 Ω max; accuracy is 1% of FS, for scaling gain from 0.03 to 100 mV per count. Isolation is 1000 Vdc; linearity is 0.2%

NETWORK AND COMMUNICATIONS OPTIONS (-C24, -C4EI, -EI)

Ethernet: Standards compliance IEEE 802.3 10 Base-T
Supported Protocols: TCP/IP, ARP, HTTPGET
RS232/RS422/RS485/MODBUS: Selectable from menu; both ASCII and Modbus protocol selectable from menu; programmable 300 to 19.2K baud; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status
RS485: Addressable from 0 to 199
Connection: Screw terminals

ALARM 1 AND 2 (PROGRAMMABLE)

Type: Same as output 1 and 2
Operation: High/low, above/below, band, latch/unlatch, normally open/normally closed and process/deviation
Analog Output (Programmable): Non-isolated, retransmission, 0 to 10 Vdc or 0 to 20 mA, 500 Ω max (output 1 only); accuracy is ±1% of FS when the following conditions are satisfied:

1. Input is not scaled below 1% of input FS
2. Analog output is not scaled below 3% of output FS

GENERAL

Line Voltage/Power: 90 to 240 Vac ±10%, 50 to 400 Hz*, 110 to 375 Vdc, equivalent voltage; no CE compliance above 60 Hz
Low-Voltage/Power Option: 24 Vac**, 12 to 36 Vdc, external power source must meet safety agency approvals
*** Units can be powered safely with 24 Vac power, but no certification for CE/UL is claimed.*

INSULATION

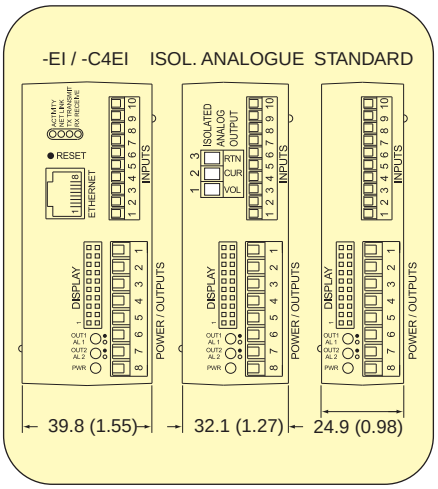
Power to Input/Output:
2300 Vac per 1-minute test
1500 Vac per 1-minute test (for low-voltage power option)
Power to Relays/SSR Outputs:
2300 Vac per 1-minute test
Relays/SSR to Relay/SSR Outputs:
2300 Vac per 1-minute test
RS232/485 to Input/Outputs:
500 Vac per 1-minute test
Environmental Conditions:
0 to 55°C (32 to 131°F) (0 to 50°C for UL), 90% RH (non-condensing)
Approvals: UL, C-UL, CE per EN61010-1:2001

	INPUT TYPE	RANGE	ACCURACY
J	Iron-constantan	-210 to 760°C / -346 to 1400°F	0.4°C / 0.7°F
K	CHROMEGA®-ALOMEGA®	-270 to -160°C / -160 to 1372°C -454 to -256°F / -256 to 2502°F	1.0°C / 0.4°C 1.8°F / 0.7°F
T	Copper-constantan	-270 to -190°C / -190 to 400°C -454 to -310°F / -310 to 752°F	1.0°C / 0.4°C 1.8°F / 0.7°F
E	CHROMEGA®-constantan	-270 to -220°C / -220 to 1000°C -454 to -364°F / -364 to 1832°F	1.0°C / 0.4°C 1.8°F / 0.7°F
R	Pt / 13% Rh-Pt	-50 to 40°C / 40 to 1768°C -58 to 104°F / 104 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
S	Pt / 10% Rh-Pt	-50 to 100°C / 100 to 1768°C -58 to 212°F / 212 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
B	30% Rh-Pt / 6% Rh-Pt	100 to 640°C / 640 to 1820°C 212 to 1184°F / 1184 to 3308°F	1.0°C / 0.5°C 1.8°F / 0.9°F
C	5% Re-W / 26% Re-W	0 to 2320°C / 32 to 4208°F	0.4°C / 0.7°F
N	Nicrosil-nisil	-250 to -100°C / -100 to 1300°C -418 to -148°F / -148 to 2372°F	1.0°C / 0.4°C 1.8°F / 0.7°F
L	J DIN	-200 to 900°C / -328 to 1652°F	0.4°C / 0.7°F
RTD	Pt, 0.00385, 100, 500, 1000 Ω	-200 to 900°C / -328 to 1652°F	0.4°C / 0.7°F
	Pt, 0.00392, 100, 500, 1000 Ω	-200 to 850°C / -328 to 1562°F	0.4°C / 0.7°F

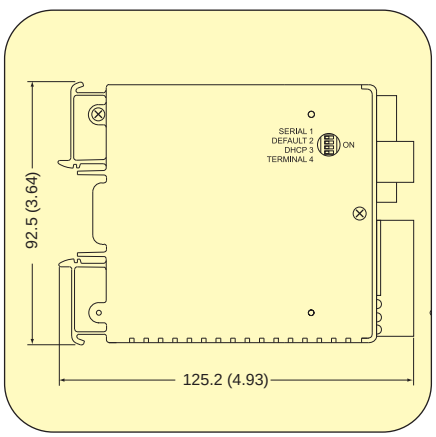
NEW

Temp/Process and Isolated Analog Output

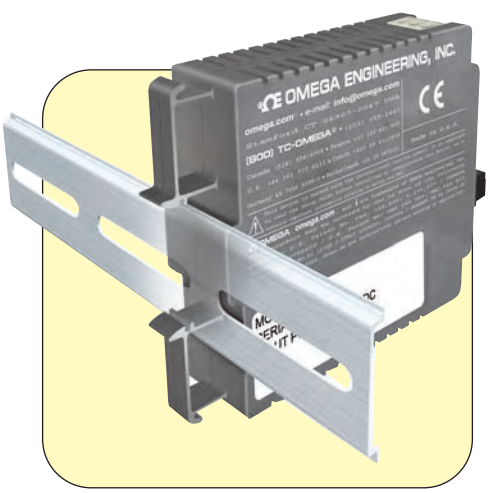
MECHANICAL
Dimensions: mm (in)



FRONT VIEWS



SIDE VIEW



iDR Mounts to 35 mm DIN Rails

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.			DESCRIPTION	PRICE
iDR			Temperature/process (no outputs)	$240
CONTROL OUTPUTS #1 AND 2 DIRECT (COOL) OR REVERSE (HEAT) ACTING				
iDR	(*)	(*)	Temperature/process with 2 control outputs	$310
	2	2	2 solid state relays (SSRs): 0.5 A @ 120/240 Vac continuous	
	2	3	SSR and relay: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	2	4	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)	
	3	3	2 relays: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	2	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR	
	4	3	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	4	2 pulsed 10 Vdc @ 20 mA (for use with external SSR)	
	5	2	Analog output selectable as either control or retransmission of process value; 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and SSR	
	5	3	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and relay	
	5	4	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and pulse 10 Vdc	
			-AL Limit alarm version (alarm menu; no PID control)*2	

MODEL NO.			ISOLATED ANALOG OUTPUT (MEDIUM CASE)	PRICE
iDRA			Temp/process (no outputs) w/ isolated analog output *3	$295
CONTROL OUTPUTS #1 AND 2 DIRECT (COOL) OR REVERSE (HEAT) ACTING				
iDRA	(*)	(*)	Temp/process w/isolated analog output and 2 outputs *3	$365
	2	2	2 solid state relays (SSRs): 0.5 A @ 120/240 Vac continuous	
	2	3	SSR and relay: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	2	4	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)	
	3	3	2 Relays: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	2	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR	
	4	3	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	4	2 pulsed 10 Vdc @ 20 mA (for use with external SSR)	
LIMIT ALARM (*SELECT ONE COMBINATION)				
iDRA	(0)	(*)	**-AL** Temp/process with 1 output for isolated analog output, 1 output for limit alarm (alarm menu; no PID control)*3,*4	$365
		2	Solid state relays (SSRs): 0.5 A @ 120/240 Vac continuous	
		3	Relay: form “C” SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
		4	Pulsed 10 Vdc @ 20 mA (for use with external SSR)	

NETWORK OPTIONS (ONE OPTION MAX)		PRICE
-EI	Ethernet with embedded Internet (wide case)*3	$55
-C24	Isolated RS232 and RS485, 300 to 19.2K baud and MODBUS*1	60
-C4EI	Ethernet with embedded Web server, isolated RS485/422 hub for up to 31 devices and MODBUS (wide case)*1, *3	115
POWER SUPPLY (SELECT ONE)		
*	Standard power input: 90 to 240 Vac/Vdc, 50 to 400 Hz (no entry required)	N/C
-DC	12 to 36 Vdc (20 to 36 Vdc for iDRA), 24 Vac*1	N/C
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	Factory setup and configuration	N/C

ACCESSORIES		PRICE
iDRP	Remote programmer/display	$95

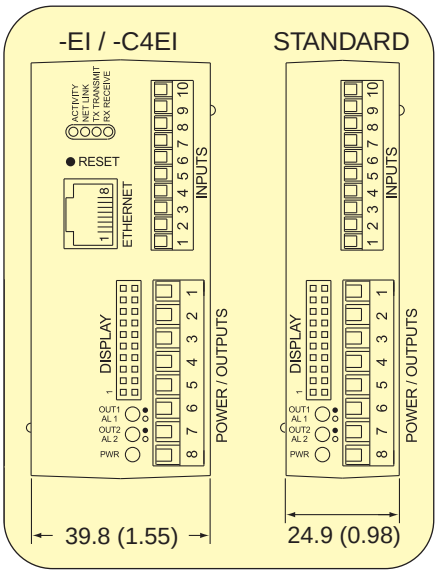
SOFTWARE (REQUIRES NETWORK OPTION)		PRICE
OPC-SERVER LICENSE	OPC server/driver software license	$295

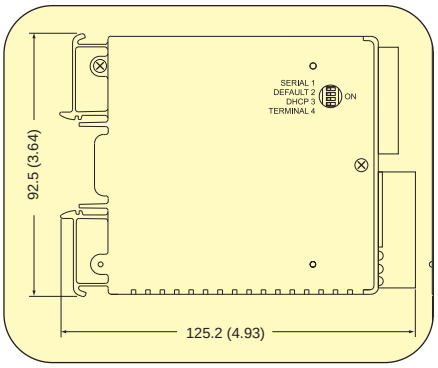
1 **“-DC”, “-C24” or **“-C4EI”** not available with excitation.*
**2 Analog output (option 5) is not available with -AL units.*
**3 Ethernet options are not available for the iDRA controller.*
4 **“iDRA0*-AL”: 1 analog retransmission and 1 alarm.*
Ordering Examples: iDR33-EI,** controller with 2 form “C” relays and Ethernet, **$365.** **iDRA03-C24**, limit alarm meter with isolated analog output, form “C” relay and serial communications, **$425.

Process product line continues to expand, visit omegamation.com for new details!

iSDR Strain/Process

MECHANICAL
Dimensions: mm (in)





PANEL MOUNT

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.			DESCRIPTION	PRICE
iSDR			Strain/process (no outputs)	**$300**
CONTROL OUTPUTS #1 AND 2 DIRECT (COOL) OR REVERSE (HEAT) ACTING				
iSDR	(*)	(*)	Strain/process with 2 control outputs	**$370**
	2	**2**	2 solid state relays (SSRs): 0.5 A @ 120/240 Vac continuous	
	2	**3**	SSR and relay: form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	2	**4**	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)	
	3	**3**	2 Relays: form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	**2**	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR	
	4	**3**	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay: form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac	
	4	**4**	2 pulsed 10 Vdc @ 20 mA (for use with external SSR)	
	5	**2**	Analog output selectable as either control or retransmission of process value; 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and SSR	
	5	**3**	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and relay	
	5	**4**	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max and pulse 10 Vdc	
			-AL Limit alarm version (alarm menu; no PID control)*1	

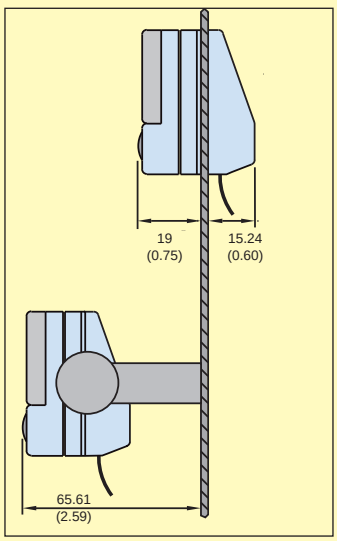
NETWORK OPTIONS (ONE OPTION MAX)		PRICE
-EI	Ethernet with embedded Internet (wide case)	**$55**
-C24	Isolated RS232 and RS485, 300 to 19.2K baud and MODBUS*2	**60**
-C4EI	Ethernet with embedded Web Server and isolated RS485/422 hub for up to 31 devices and MODBUS (wide case)*2	**115**
POWER SUPPLY (SELECT ONE)		
*	Standard power input: 90 to 240 Vac/dc, 50 to 400 Hz (no entry required)	**N/C**
-DC	12 to 36 Vdc, 24 Vac*2	**N/C**
FACTORY SETUP (REQUIRES NETWORK OPTION)		
-FS	Factory setup and configuration	**N/C**

ACCESSORIES		PRICE
iDRP	Remote programmer/display	**$95**

SOFTWARE (REQUIRES NETWORK OPTION)		PRICE
OPC-SERVER LICENSE	OPC server/driver software license	**$295**

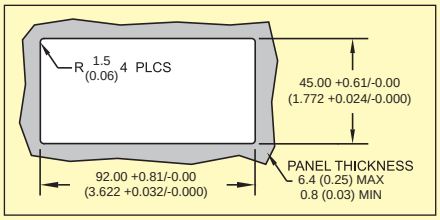
1 Analog output (option 5) is not available with **"-AL" units.*
2 "-DC**", "**-C24**", or "**-C4EI**" not available with excitation.*
Ordering Example: iSDR33-EI,** with 2 form "C" relays and Ethernet, **$425.

iDRP Remote Programmer/Display

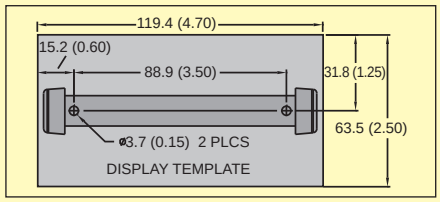


SIDE VIEWS

MECHANICAL
Dimensions: mm (in)

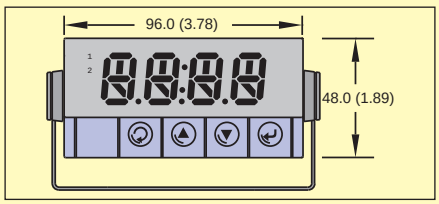


PANEL CUTOUT



BAIL MOUNT

Mounts on a panel or surface with included bail bracket



MODEL NO.	PRICE	DESCRIPTION
iDRP	**$95**	Remote programmer/display, 4-digit, 9-segment LED 21 mm (0.83")

SHIELDED INDUCTIVE PROXIMITY SENSORS
8, 12, AND 18 MM BODIES

PRX102-8N, $85.

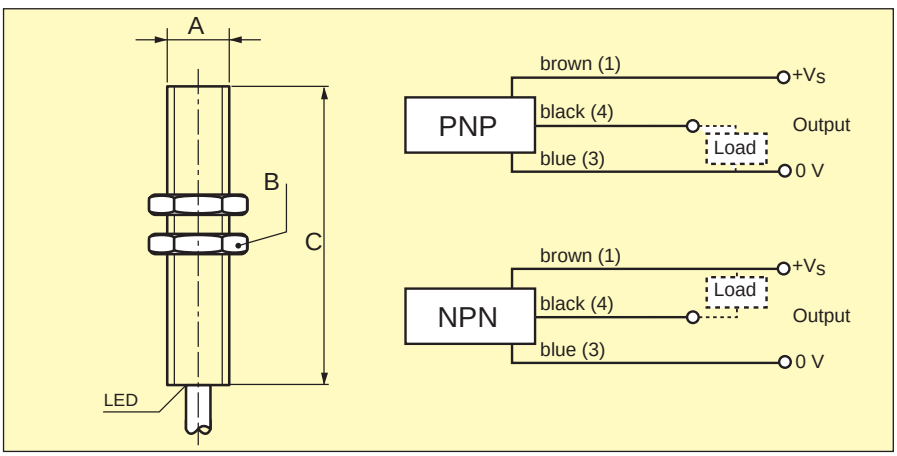
PRX102-12N, $85.

PRX102-18N, $115.

All models shown larger than actual size.

PRX102 Series Starts at $85

1 YEAR WARRANTY



- **Normally Open Industrial Proximity Sensors—3-Wire Configuration**
- **Rugged Construction for Dirty, Humid, Oily, and Dusty Applications**
- **Color-Coded Sensing Faces: Red-NPN and Green-PNP for Easy Identification**
- **IP67 Protection Rating**

Reliability and ease of use make the PRX102 Series inductive proximity sensors the number one choice for numerous automation and robotics applications. These switches can detect any metal, and they are highly insensitive to contaminants such as dirt, dust, humidity, and oil. An LED indicator alerts the user to whether the sensor is working. The open collector can be either NPN or PNP.

SPECIFICATIONS

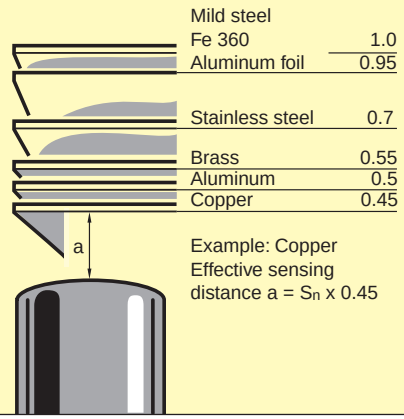
Switch: Open collector, 3-wire, normally open, reverse polarity protected
Operating Temperature: -25 to 75°C (-13 to 167°F)
Electrical Connection: 1.8 m (6'), 3-conductor, 22 AWG, PVC insulated, pigtail leads; 26 AWG for 8 mm
Target: Metals (areas < sensing area decrease sensing distance)
Case Material: 8 mm (0.3") 303 SS; 12 mm (0.5") and 18 mm (0.7") nickel-plated brass; rolled threads

SHIELDED INDUCTIVE PROXIMITY SENSORS

PRX102-8N, proximity sensor, $85, shown with MBL-8/12, mounting bracket, $10, and DPF75, rate and total meter, $278. See omega.com

- **Short Circuit Protected**
- **Reverse Polarity Protected**
- **Red LED Switching Indication**

Correction factor for sensing distance of alternative materials.



Dimensions: mm (in)

PRX102	THREAD A	NUT B	C
8N/8P	M8 x 1	SW13	45 (1.77)
12N/12P	M12 x 1	SW17	40 (1.57)
18N/18P	M18 x 1	SW24	40 (1.57)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

NPN OUTPUT MODEL NO.	PRX102-8N	PRX102-12N	PRX102-18N
PNP OUTPUT MODEL NO.	PRX102-8P	PRX102-12P	PRX102-18P
PRICE	$85	$85	$115
SENSING DISTANCE mm (in)	2 (0.08)	4 (0.16)	8 (0.31)
OUTER DIAMETER mm (in)	8 (0.31)	12 (0.47)	18 (0.71)
SUPPLY VOLTAGE	10 to 30 Vdc	10 to 30 Vdc	10 to 30 Vdc
MAX SWITCHING	200 mA	250 mA	200 mA
VOLTAGE DROP	<2 Vdc	<2 Vdc	<2 Vdc
CURRENT DRAW	<12 mA	<10 mA	<10 mA
MAX SWITCH FREQUENCY	5 kHz	2 kHz	0.5 kHz
WEIGHT g (oz)	43 (1.5)	85 (3.0)	113 (4.0)

***Note:** Models shown are normally open. For normally closed models add suffix **"-NC"** to model number, no extra charge.*

Accessories

MODEL NO.	PRICE	DESCRIPTION
MBL-8/12	**$10**	L-shaped mounting bracket
DPF75	**278**	Compatible rate, batch, total meter
DPF402	**470**	Compatible rate, batch, total meter
DPF76	**238**	Compatible rate, batch, total meter
DPF701	**260**	Compatible batch, total meter
DPC10-TL*	**116**	Compatible total meter
DPF78	**255**	Compatible rate meter
DPC10-RM	**116**	Compatible rate meter

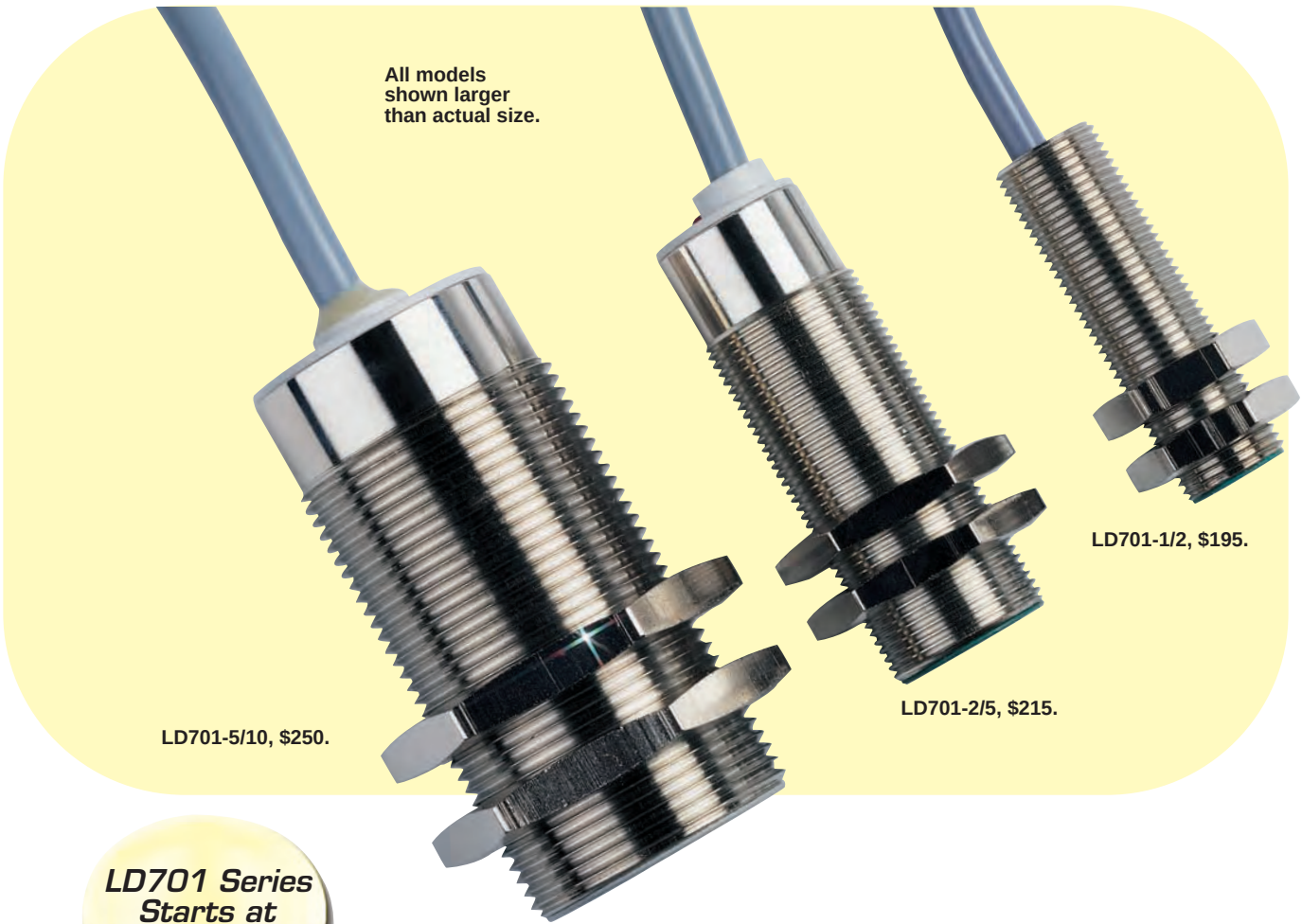
Comes with complete operator's manual.

*Requires external DC power supply, such as **PSS-D12A, $114.***

Ordering Example: PRX102-12P,** proximity sensor with positive/negative/positive output and 4 mm (0.16") sensing distance, **$85.

NON-CONTACT LINEAR DISPLACEMENT SENSORS

12, 18, AND 30 MM HOUSINGS



LD701 Series Starts at **$195**

1 YEAR WARRANTY

- **Inductive Technology for Sensing Metal Targets**
- **Insensitive to Dust, Dirt, and Oils—Ideal for Industrial Applications**
- **Compact Design**
- **IP67 Protection Rating**

Non-contact linear sensors have an analog output that is proportional to the damping target distance. Their compact yet sturdy design makes them suitable for industrial, robotics, and laboratory use.

These sensors use inductive technology, which means they can sense any metal target. The sensing distance, however, is influenced by the metal target. Ranges are calibrated using a standard square target. The target is mild steel (Fe 360), 1 mm (0.04") thick. The side lengths are the larger of either the sensor's face diaphragm or 3 times the sensing distance.

Sensing distances are influenced by metals other than mild steel. The "Correction Factors" chart, shown below, shows the reduction that occurs when brass or other target metals are used. For example, if the target were brass, the LD701-1/2 would sense 0.5 to 1 mm (0.02 to 0.04").

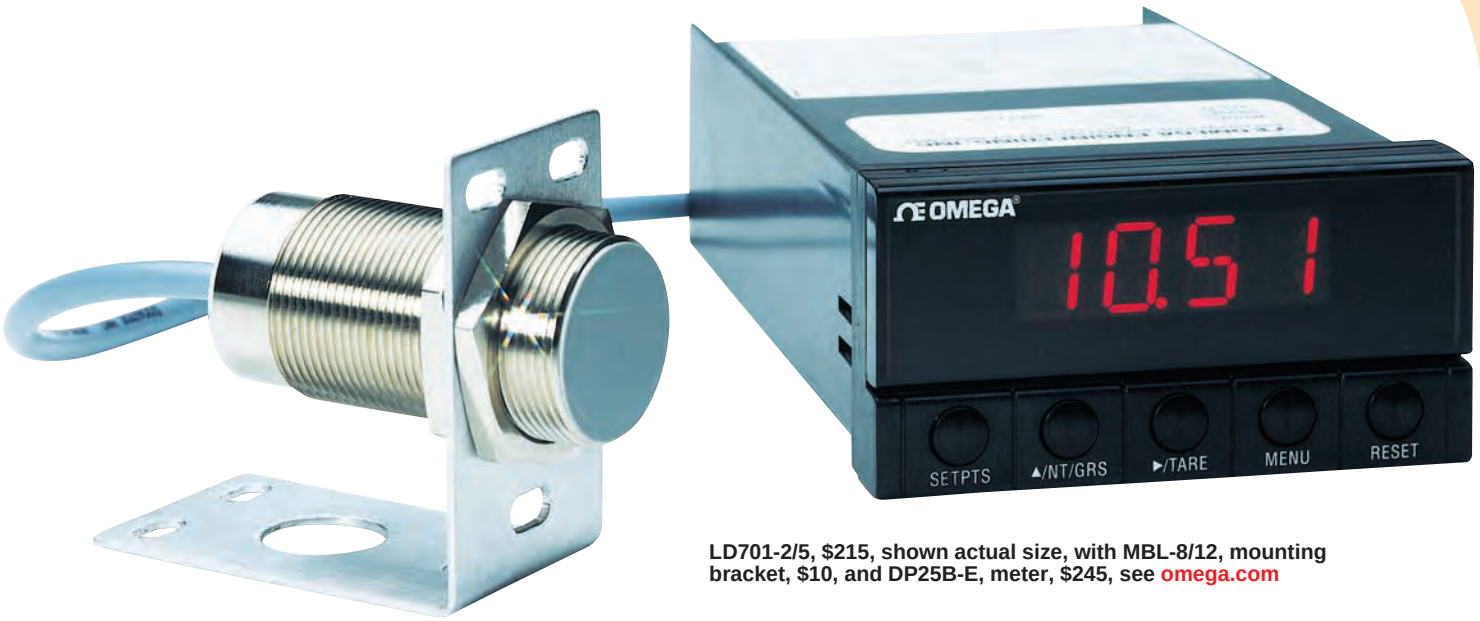
The voltage output generated is directly linear to the distance being measured. The output can be read by panel meters, recorders, computer boards, or data loggers, all of which are available from OMEGA®.

SPECIFICATIONS

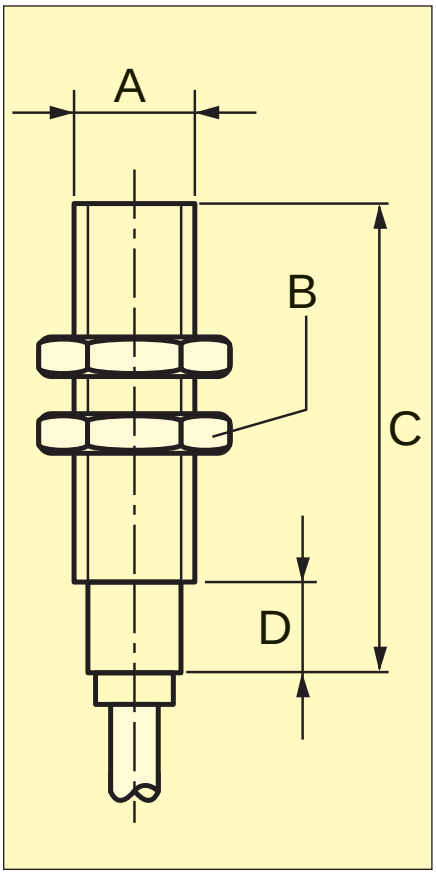
Excitation: 14 to 30 Vdc @ 20 mA; unregulated, reverse polarity and short circuit protected
Output: 1 to 9 Vdc
Output Load: 20 mA max
Repeatability: 0.01 mm (0.0004")
Compensated Temperature: 0 to 60°C (32 to 140°F)
Total Thermal Effects: 1µm/°C/mm
Housing: Nickel-plated brass
Electrical Connection: 1.8 m (6'), 3-conductor, 22 AWG pigtail leads (20 AWG for 30 mm)

CORRECTION FACTORS	
MATERIAL	APPROX.
Mild steel	1.0
Stainless steel	0.75
Brass	0.50
Aluminum	0.40
Copper	0.35

NON-CONTACT LINEAR DISPLACEMENT SENSORS



LD701-2/5, $215, shown actual size, with MBL-8/12, mounting bracket, $10, and DP25B-E, meter, $245, see omega.com



Dimensions: mm (in)

MODEL NO.	THREAD A	NUT B	C	D
LD701-1/2	M12x1	SW17	51 (2.01)	10 (0.39)
LD701-2/5	M18x1	SW24	65 (2.55)	10 (0.39)
LD701-5/10	M30x1.5	SW36	60 (2.36)	10 (0.39)

Wiring: brown +exc; black +out; blue common.

To Order *(Specify Model Number)* — ***MOST POPULAR MODELS HIGHLIGHTED!***

MODEL NO.	LD701-1/2	LD701-2/5	LD701-5/10
PRICE	**$195**	**$215**	**$250**
RANGE mm (in)	1 to 2 (0.04 to 0.08)	2 to 5 (0.08 to 0.19)	5 to 10 (0.19 to 0.39)
REPEATABILITY	±10 µm (0.4 µin)	±10 µm (0.4 µin)	±10 µm (0.4 µin)
LINEARITY	±4%	±2%	±4%
SWITCHING FREQUENCY (-3 dB)	1000 Hz	1000 Hz	500 Hz
HOUSING SIZE	12 mm (0.47")	18 mm (0.71")	30 mm (1.2")
COMPATIBLE METERS*	DP25B-E, DP41-E, DP3002-E, DP24-E		

Comes with complete operator's manual.

** See section D for compatible meters.*

Ordering Example: LD701-2/5, *non-contact displacement sensor with 2 to 5 mm (0.08 to 0.2") range, 0.25 mm (0.01") accuracy and 18 mm (0.71") housing,* ***$215.***

Accessories

MODEL NO.	PRICE	DESCRIPTION
MBL-8/12	**$10**	Mounting bracket for LD701-1/2
MBL-18/30	**10**	Mounting bracket for LD701-2/5 and LD701-5/10

SUBMINIATURE FLUSH DIAPHRAGM PRESSURE TRANSDUCER

WITH ⅜-24 THREAD

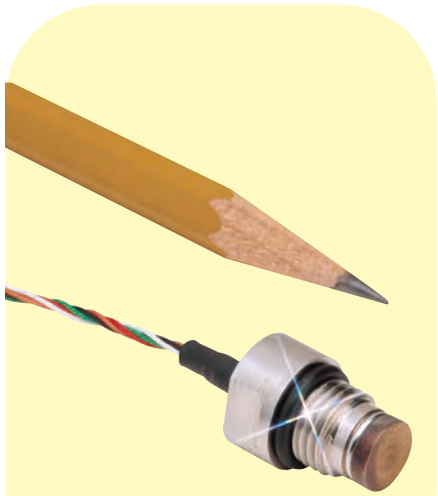
0-200 TO 0-10K PSI
0-13.8 TO 0-689 BAR

PX600 Series
All Ranges
$495

MADE IN USA NIST CE OMEGADYNE

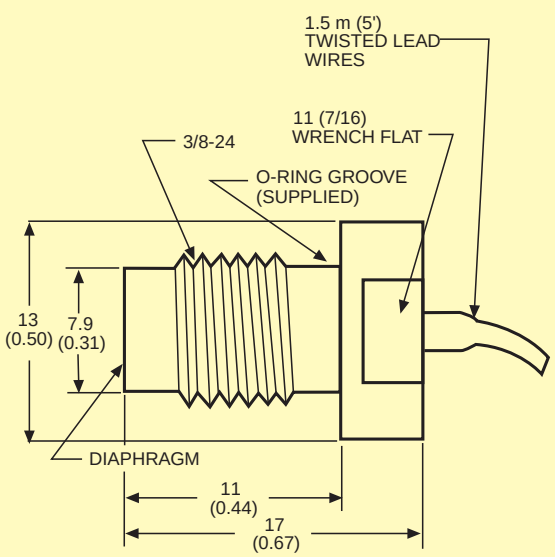
- All Stainless Steel Diaphragm and Threaded Sidewall Construction
- Rugged Stainless Steel Case Protects Components in Industrial Environments
- Uses a Standard 5 Vdc Regulated Power Supply for Maximum Versatility
- Custom Subminiature Design Techniques Provide Small Size and Preserve Accuracy

Burst Pressure: 400% range
Body and Diaphragm Material: 17-4 PH stainless steel
O-Ring: 2-011
Polyvinyl: 2-011-P $15/10 pack
Viton®: 2-011-V $10/10 pack
Electrical Connection: 4-conductor cable
Weight: 14 g (0.5 oz)



PX600-500GV, $495, shown actual size.

Dimensions: mm (in)



SPECIFICATIONS

Excitation: 5 Vdc @15 mA
Output: 10 mV typical @ 5 Vdc
Sensitivity: 2 mV/V nominal
Input Impedance: 350 W min
Output Resistance: 350 W min
Insulation Resistance: 5 MW @ 75 Vdc
Accuracy: ±1% FS (linearity and hysteresis combined)
Repeatability: ±0.1% FS
Zero Balance: ±3% FS
Operating Temperature Range: -54 to 121°C (-65 to 250°F)
Compensated Temperature Range: 16 to 71°C (60 to 160°F)
Thermal Zero Effect: <±0.018% full scale/°C
Thermal Sensitivity Effect: ±0.036% reading/°C
Proof Pressure: 150% range

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

RANGE psig	bar	MODEL NO.	PRICE	COMPATIBLE METERS*
0 to 200	0 to 13.8	**PX600-200GV**	**$495**	DP41-S**, DP25B-S**, DP87**
0 to 500	0 to 34.5	**PX600-500GV**	**495**	DP41-S**, DP25B-S**, DP87**
0 to 1000	0 to 68.9	**PX600-1KGV**	**495**	DP41-S**, DP25B-S**, DP87**
0 to 2000	0 to138	**PX600-2KGV**	**495**	DP41-S**, DP25B-S**, DP87**
0 to 3000	0 to 207	**PX600-3KGV**	**495**	DP41-S**, DP25B-S**, DP87**
0 to 5000	0 to 345	**PX600-5KGV**	**495**	DP41-S**, DP25B-S**, DP87**
0 to 10,000	0 to 689	**PX600-10KGV**	**495**	DP41-S**, DP25B-S**, DP87**

Comes with 5-point calibration.
** See section D for compatible meters.*
*** Meter excitation voltage requires field adjustment by customer to 5 Vdc.*
Ordering Example: PX600-200GV,** 200 psig subminiature transducer, **$495.

MINIATURE FLUSH DIAPHRAGM PRESSURE TRANSDUCER

16-20 UNF THREAD

0-50 TO 0-15K PSI
0-3.4 TO 0-1034 BAR

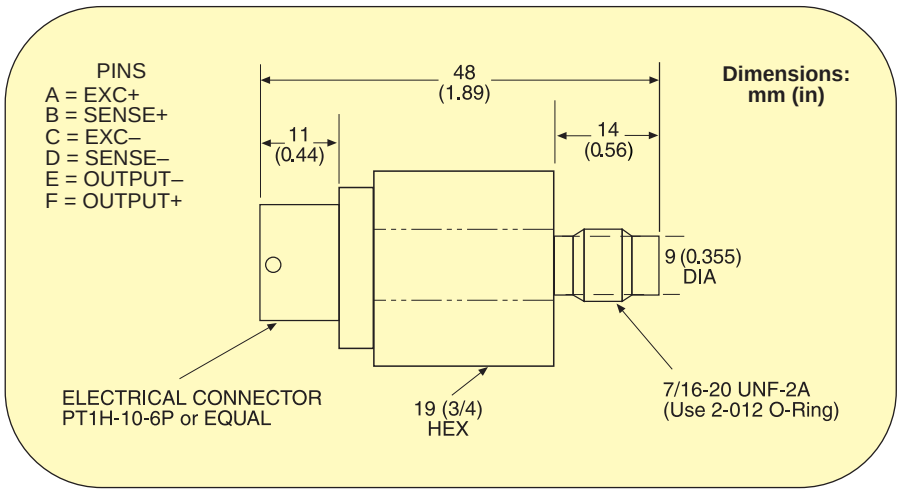
PX610 Series
All Ranges
$515

PX610-100GV, $515, shown actual size.

PT06F-10-6S mating connector and cable, $26.50, sold separately.

O-Ring Size: 2-012
Mating Connector: PT06F-10-6S (not included)
Weight: 45 g (0.5 oz)

- **Stainless Steel Diaphragm for Compatlbility with Most Media**
- **Rugged Stainless Steel Case Protects Components in Industrial Environments**
- **Custom Subminiature Design Techniques Provide Small Size and Preserve Accuracy**
- **7/16" UNF Process Threading for Fast, Easy, and Secure Connections**
- **Connects to a pt06f-10-6s Quick Disconnect Connector for Easy Field Connections**



SPECIFICATIONS

Excitation: 5 Vdc @15 mA
Output: 10 mV (100 psi and above)
Sensitivity: 2 mV/V nominal
Input Impedance: 360 W
Output Resistance: 350 W
Insulation Resistance: >5 MW @ 75 Vdc
Accuracy: 1.0% (linearity and hysteresis combined) ±1% full scale BFSL
Repeatability: ±0.1% FS
Zero Balance: ±3.0%
Operating Temperature Range: -54 to 121°C (-65 to 250°F)
Compensated Temperature Range: 16 to 71°C (60 to 160°F)
Thermal Zero Effect: ±0.01% FS/ºF
Thermal Span Effect: 0.036% FS/ºC (± 0.02% full scale/°F) max
Proof Pressure: 150% range
Burst Pressure: The lesser of 400% range or 30,000 psi max
Body Material: 17-4 PH stainless steel
Diaphragm Material: 17-4 PH stainless steel

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

RANGE psig	bar	MODEL NO.	PRICE	COMPATIBLE METERS*
ABSOLUTE PRESSURE				
0 to 50	0 to 3.4	**PX610-050AV**	**$515**	DP41-S**, DP25B-S**, DP87**
0 to 100	0 to 6.9	**PX610-100AV**	**515**	DP41-S**, DP25B-S**, DP87**
GAGE PRESSURE				
0 to 50	0 to 3.4	**PX610-050GV**	**$515**	DP41-S**, DP25B-S**, DP87**
0 to 100	0 to 6.9	**PX610-100GV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 150	0 to 10	**PX610-150GV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 200	0 to 14	**PX610-200GV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 300	0 to 21	**PX610-300GV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 500	0 to 34	**PX610-500GV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 1000	0 to 69	**PX610-1KGV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 2500	0 to 172	**PX610-2.5KGV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 5000	0 to 345	**PX610-5KGV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 10,000	0 to 689	**PX610-10KGV**	**515**	DP41-S**, DP25B-S**, DP87**
0 to 15,000	0 to 1034	**PX610-15KGV**	**515**	DP41-S**, DP25B-S**, DP87**

Comes with 5-point calibration.
** See section D for compatible meters. ** Meter excitation voltage must be adjusted by user to 5 Vdc.*
Ordering Example: PX610-2KGV,** 2000 psig transducer, **$515. PT06F-10-6S,** mating connector (sold separately), **$26.50.

NEW

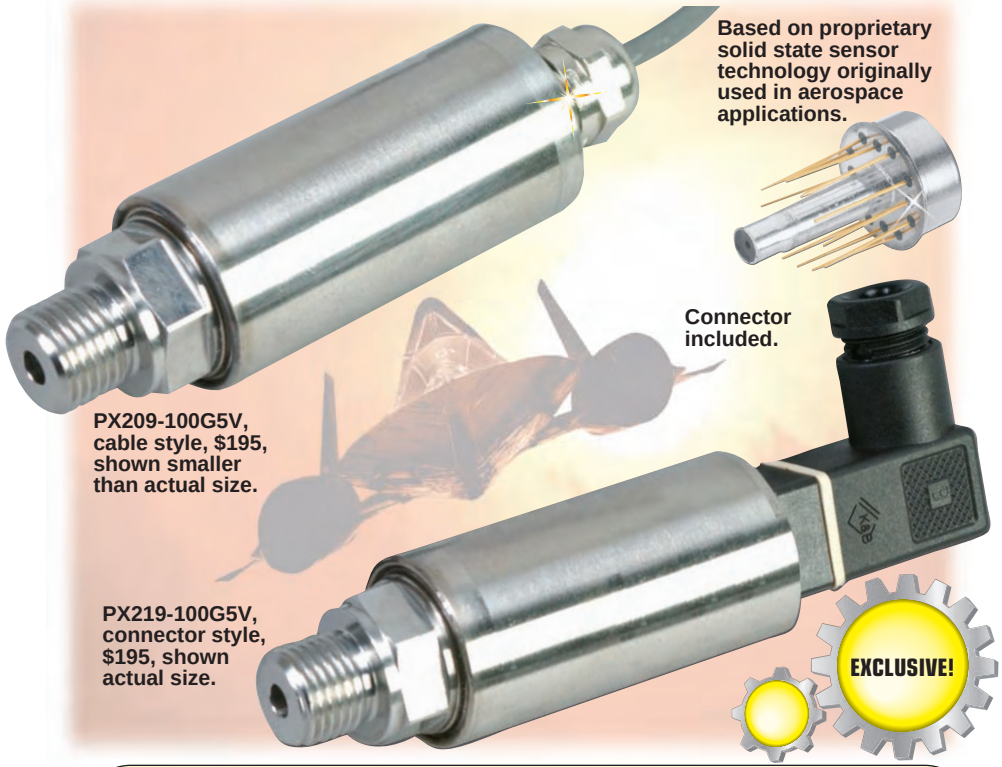
RUGGED SOLID STATE TRANSDUCERS

WITH AMPLIFIED OUTPUTS GAGE, ABSOLUTE, AND COMPOUND PRESSURES

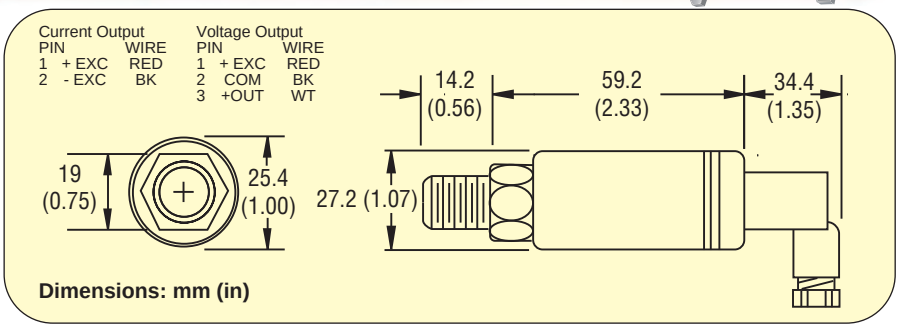
0-15 TO 0-300 PSI
0-1 TO 0-20 BAR

PX209/ PX219 Series Starts at $195

MADE IN USA · NIST · 3 YEAR WARRANTY · CE · OMEGADYNE



- Stainless Steel Fitting and Body
- 5-Point NIST-Traceable Calibration Included
- Solid State Media Isolation (Suitable for Use with Most Industrial Fluids and Oils)
- Broad Temperature-Compensated Range of -20 to 80°C (-4 to 176ºF) Yields High Stability with Changing Temperatures
- Electrical Isolation to 100 MΩ Ensures Long-Term Reliability
- Rugged High Shock and Vibration Design for Tough OEM Applications
- 100,000 Hr MTBF Typical



Based on proprietary sensor technology developed by OMEGA to meet the high reliability and accuracy demanded by aerospace applications, the PX209/219 Series voltage and current output pressure transducer offers superior performance in non-corrosive applications, including: engine/powertrain testing, well monitoring, jet fuel pressure metering, and ground and race water monitoring. The transducer uses a 4-active-arm bridge sensor with a micro-machined diffused silicon diaphragm and proprietary thin-film media, plus dielectric isolation barriers.

This same core sensing element technology, which includes multiple types of signal conditioning and the ability to survive extremes of shock and vibration, provides a modular building block for OMEGA's revolutionary family of pressure-sensing instruments.

SPECIFICATIONS

Voltage Output
Excitation: 24 Vdc @ 15 mA
5 Vdc Output: 7 to 35 Vdc
10 Vdc Output: 12 to 35 Vdc
Output: 0 to 5 Vdc or 0 to 10 Vdc, ±1.5% FSO, 3-wire
Zero Balance: 0 Vdc ±2% FSO
4 to 20 mA Output
Excitation: 24 Vdc (7 to 35 Vdc) reverse polarity protected
Output: 4 to 20 mA (2-wire) ±1% FSO
Zero Balance: 4 mA ±2% FSO
Max Loop Resistance:
50 x (supply voltage - 10) W
Common Specifications
Accuracy: 0.25% FS (including linearity, hysteresis and repeatability)
Operating Temperature:
-54 to 121°C (-65 to 250°F)
Compensated Temperature:
-20 to 80°C (-4 to 176°F)
Thermal Effects:
0.04% FS/°C (0.02% FS /°F)
Proof Pressure: 150%

RUGGED SOLID STATE TRANSDUCERS

PX209-100GI, cable style, $215, shown smaller than actual size.

Burst Pressure: 300% range max
Response Time: 2 ms typical
Vibration Sensitivity: At 20 g peak sinusoidal vibration from 10 Hz to 2000 Hz (1/2" D.A.), the output shall not exceed 0.04% FS/g for 15 psi range to 0.005% FS/g for 100 psi and above
Natural Frequency: >35 kHz for 100 psi range
Gage Type: Diffused silicon strain gages
Wetted Parts: 316 SS, borosilicate glass, silicon nitride, epoxy
Pressure Port: ¼-18 NPT
Electrical Connections:
PX209: 1 m (36") shielded 4-conductor cable
PX219: DIN 43650 plug connector supplied
Weight: 128 g (4.5 oz)

Order a snubber to protect your pressure transducer!

PS-4G, $10, shown actual size.

Accessories

MODEL	PRICE	DESCRIPTION
PS-4G	$10	Pressure snubber for gaseous media
PS-4E	10	Pressure snubber for water and light oils
PS-4D	10	Pressure snubber for dense liquids (motor oil)
TX4-100	28.50	30 m (100') of 4-conductor shielded wire

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

psi	bar	CABLE STYLE	PRICE	CONN. STYLE	PRICE	COMPATIBLE METERS*
GAGE PRESSURE RANGES (psig) WITH 0 TO 5 Vdc OUTPUT						
0 to 15	0 to 1.0	PX209-015G5V	$195	PX219-015G5V	$195	DPi8, DP41-E, DP25B-E
0 to 30	0 to 2.1	PX209-030G5V	195	PX219-030G5V	195	DPi8, DP41-E, DP25B-E
0 to 60	0 to 4.1	PX209-060G5V	195	PX219-060G5V	195	DPi8, DP41-E, DP25B-E
0 to 100	0 to 6.9	PX209-100G5V	195	PX219-100G5V	195	DPi8, DP41-E, DP25B-E
0 to 200	0 to 13.8	PX209-200G5V	195	PX219-200G5V	195	DPi8, DP41-E, DP25B-E
0 to 300	0 to 20.7	PX209-300G5V	195	PX219-300G5V	195	DPi8, DP41-E, DP25B-E
GAGE PRESSURE RANGES (psig) WITH 4 TO 20 mA OUTPUT						
0 to 15	0 to 1.0	PX209-015GI	$215	PX219-015GI	$215	DPi8, DP41-E, DP25B-E
0 to 30	0 to 2.1	PX209-030GI	215	PX219-030GI	215	DPi8, DP41-E, DP25B-E
0 to 60	0 to 4.1	PX209-060GI	215	PX219-060GI	215	DPi8, DP41-E, DP25B-E
0 to 100	0 to 6.9	PX209-100GI	215	PX219-100GI	215	DPi8, DP41-E, DP25B-E
0 to 200	0 to 13.8	PX209-200GI	215	PX219-200GI	215	DPi8, DP41-E, DP25B-E
0 to 300	0 to 20.7	PX209-300GI	215	PX219-300GI	215	DPi8, DP41-E, DP25B-E
ABSOLUTE PRESSURE RANGES (psia) WITH 0 TO 5 Vdc OUTPUT						
0 to 15	0 to 1.0	PX209-015A5V	$195	PX219-015A5V	$195	DPi8, DP41-E, DP25B-E
0 to 30	0 to 2.1	PX209-030A5V	195	PX219-030A5V	195	DPi8, DP41-E, DP25B-E
0 to 60	0 to 4.1	PX209-060A5V	195	PX219-060A5V	195	DPi8, DP41-E, DP25B-E
0 to 100	0 to 6.9	PX209-100A5V	195	PX219-100A5V	195	DPi8, DP41-E, DP25B-E
0 to 200	0 to 13.8	PX209-200A5V	195	PX219-200A5V	195	DPi8, DP41-E, DP25B-E
0 to 300	0 to 20.7	PX209-300A5V	195	PX219-300A5V	195	DPi8, DP41-E, DP25B-E
ABSOLUTE PRESSURE RANGES (psia) WITH 4 TO 20 mA OUTPUT						
0 to 15	0 to 1.0	PX209-015AI	$215	PX219-015AI	$215	DPi8, DP41-E, DP25B-E
0 to 30	0 to 2.1	PX209-030AI	215	PX219-030AI	215	DPi8, DP41-E, DP25B-E
0 to 60	0 to 4.1	PX209-060AI	215	PX219-060AI	215	DPi8, DP41-E, DP25B-E
0 to 100	0 to 6.9	PX209-100AI	215	PX219-100AI	215	DPi8, DP41-E, DP25B-E
0 to 200	0 to 13.8	PX209-200AI	215	PX219-200AI	215	DPi8, DP41-E, DP25B-E
0 to 300	0 to 20.7	PX209-300AI	215	PX219-300AI	215	DPi8, DP41-E, DP25B-E
VACUUM AND COMPOUND RANGES WITH 0 TO 5 Vdc OUTPUT						
-14.7 to 0	-1 to 0	PX209-30VAC5V	$195	PX219-30VAC5V	$195	DPi8, DP41-E, DP25B-E
-14.7 to 15	-1 to 1.0	PX209-30V15G5V	195	PX219-30V15G5V	195	DPi8, DP41-E, DP25B-E
-14.7 to 45	-1 to 3.1	PX209-30V45G5V	195	PX219-30V45G5V	195	DPi8, DP41-E, DP25B-E
-14.7 to 85	-1 to 5.9	PX209-30V85G5V	195	PX219-30V85G5V	195	DPi8, DP41-E, DP25B-E
-14.7 to 135	-1 to 9.3	PX209-30V135G5V	195	PX219-30V135G5V	195	DPi8, DP41-E, DP25B-E
VACUUM AND COMPOUND RANGES WITH 4 TO 20 mA OUTPUT						
-14.7 to 0	-1 to 0	PX209-30VACI	$215	PX219-30VACI	$215	DPi8, DP41-E, DP25B-E
-14.7 to 15	-1 to 1.0	PX209-30V15GI	215	PX219-30V15GI	215	DPi8, DP41-E, DP25B-E
-14.7 to 45	-1 to 3.1	PX209-30V45GI	215	PX219-30V45GI	215	DPi8, DP41-E, DP25B-E
-14.7 to 85	-1 to 5.9	PX209-30V85GI	215	PX219-30V85GI	215	DPi8, DP41-E, DP25B-E
-14.7 to 135	-1 to 9.3	PX209-30V135GI	215	PX219-30V135GI	215	DPi8, DP41-E, DP25B-E

Comes with 5-point calibration. ******* *See section D for compatible meters.*

***Note**: To order 0 to 10 Vdc output, replace "**5V**" suffix with "**10V**" (no extra charge).*

Ordering Example: PX219-015A5V**, 0 to 5 Vdc output transducer for absolute pressure with a 0 to 15 psia range, **PS-4G** snubber and **TX4-100** shielded wire, $195 + 10 + 28.50 = **$233.50.

NEW

ALL STAINLESS STEEL TRANSDUCER MULTIMEDIA COMPATIBILITY

HIGH-PERFORMANCE SILICON TECHNOLOGY

0-1 TO 0-10,000 PSI
0-0.07 TO 0-690 BAR
100 MV, 0 TO 5 V, AND
4 TO 20 MA OUTPUTS

PX309 Series Starts at $175

RoHS CE OMEGADYNE

- New 1, 2 and 5 psi Ranges!
- All Stainless Steel Construction
- Gage or Absolute Pressure
- Rugged Solid State Design
- High Stability, Low Drift
- 0.25% Accuracy Typical
- IP 65 Protection Class

Large Inventory Fast Shipment!

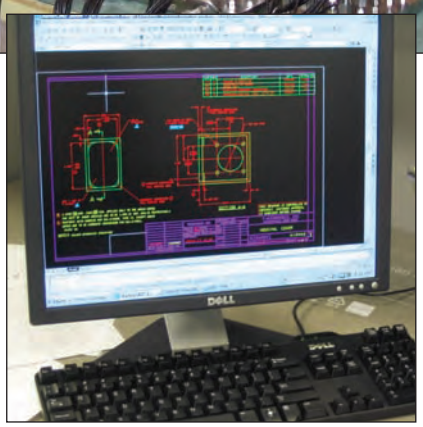
PX319-100GV, $215 with Mini DIN Connector

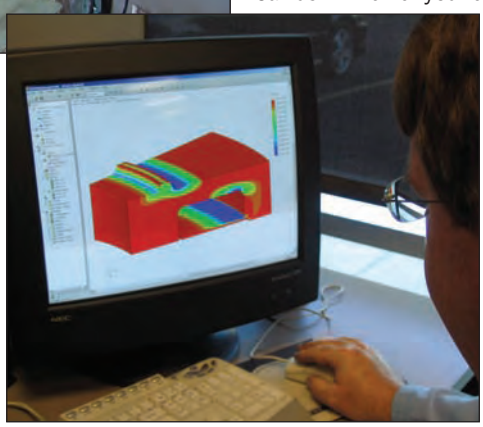
PX309-100GV, $175, with wire leads

PX329-100GV, $235 Twist-Lock Connector

All models shown actual size.

We provide a complete range of services—from product inception, through design and prototypes, to manufacturing and testing. Our application engineers work closely with our customers to **customize, design** or create entirely **new products.** Call us—whether you're an OEM, manufacturer, or end user.





Engineered from 1 to 10,000 psi. New Low Ranges: 1, 2 & 5 psi.

Sensors product line continues to expand, visit omegamation.com for new details!

RUGGED, GENERAL PURPOSE TRANSDUCER

COMMON SPECIFICATIONS

mV Output Wiring

Wiring	Cable	Mini DIN	Twist-Lock
Excitation (+)	Red	Pin 1	Pin A
Output (+)	White	Pin 3	Pin C
Output (-)	Green	Pin 4	Pin D
Excitation (-)	Black	Pin 2	Pin B
Spare			Pin E
Vent			Pin F

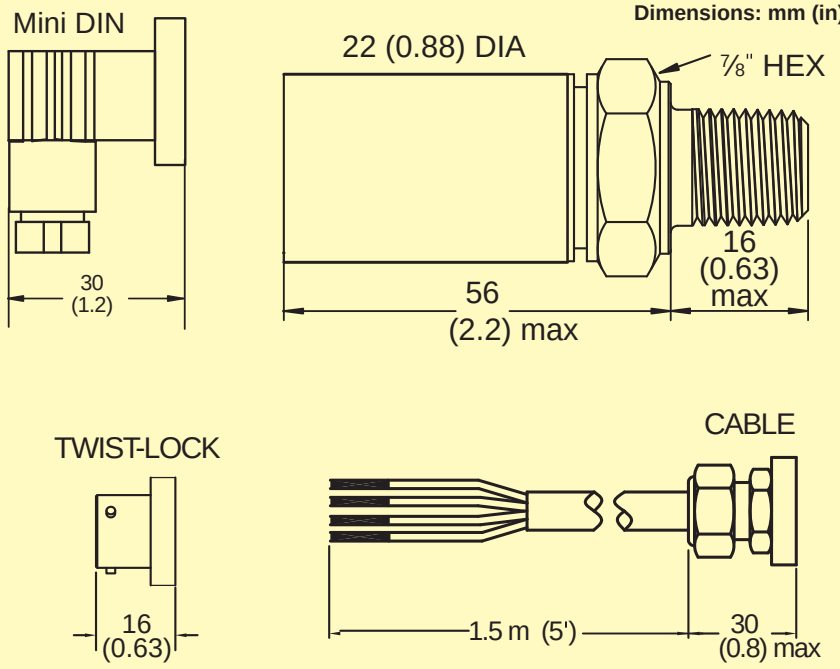
5 Vdc Output Wiring

Wiring	Cable	Mini DIN	Twist-Lock
Excitation (+)	Red	Pin 1	Pin A
Excitation (-)	Black	Pin 2	Pin B
Output (+)	White	Pin 3	Pin C
N/C†		Pin 4	Pin D
Spare			Pin E
Vent			Pin F

mA Output Wiring

Wiring	Cable	Mini DIN	Twist-Lock
Supply (+)	Red	Pin 1	Pin A
Supply (-)	Black	Pin 2	Pin B
N/C†		Pin 3	Pin C
N/C†		Pin 4	Pin D
Spare			Pin E
Vent			Pin F

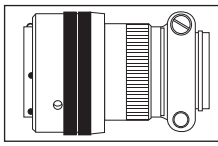
† *N/C: Do not connect any wires to this pin.*



COMMON SPECIFICATIONS

OMEGA's PX309 Series models below 100 psi use a high-accuracy silicon sensor protected by an oil-filled stainless steel diaphragm. Units 100 psi and above use silicon strain gages molecularly bonded to the stainless steel diaphragm.

Long-Term Stability (1 Year): ±0.25% typical
Typical Life: 10 million cycles typical
Operating Temperature: -40 to 85°C (-40 to 185°F)
Proof Pressure:
All psia and ≤50 psig Ranges: 3x capacity or 20 psi, whichever is greater
100 psig Ranges: 2x capacity
Burst Pressure: 500% of capacity or 25 psi, whichever is greater
Response Time: <1 ms
Shock: 50 g, 11 ms half-sine
Vibration: ±20 g
Protection Class: IP 65
Wetted Parts: 316 SS for all psia and 1 to 50 psig ranges; 17-4 PH stainless steel for ranges 100 to 10,000 psig
Pressure Port: ¼-18 MNPT
Electrical Connections:
PX309: 1.5 m (5') 2-, 3-, or 4-conductor cable (mA, 5V, mV outputs, respectively)
PX319: Mini DIN connector with mating connector included
PX329: Twist-lock connector, vented mating connector sold separately (PT06V-10-6S)
Weight:
PX309: 154 g (5.4 oz)
PX319: 100 g (3.5 oz)
PX329: 100 g (3.5 oz)

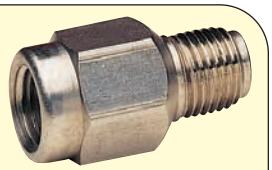


Mating Connector PT06V-10-6S $26.50

Compatible Meters/Controllers for PX309 Series Pressure Transducers

Starting at $195, the iSeries is available in ½, ⅛, and ⅛ DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNi16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel. Ordering Examples: DPiS8, strain/process (monitor only), ⅛ DIN, $300; CNiS8, strain/process controller with 2 control outputs, $370.

Order a snubber to protect your pressure transducer!



PS-4G, $10, shown actual size.

Snubbers protect sensors from fluid hammers/spikes.

NEW HOW TO ORDER PX309 SERIES RUGGED, GENERAL PURPOSE TRANSDUCERS WITH 100 MV OUTPUTS

100 MV OUTPUT
0-1 TO 0-10,000 PSI
0-70 MBAR TO 0-690 BAR

PX319-050GV, $175, mini DIN connector included, shown smaller than actual size.

PX309 Series Starts at $175

CE RoHS OMEGADYNE

- Gage or Absolute Pressure
- Low Pressure to 1 psig
- Rugged Solid State Design
- All Stainless Steel Construction
- High Stability, Low Drift
- 0.25% Accuracy Typical

100 mV OUTPUT SPECIFICATIONS

Excitation:
0 to 50 psig and All psia Ranges: 10 Vdc (ratiometric), (5 to 12 Vdc limits)
100 to 10,000 psig Ranges: 5 Vdc (ratiometric), (3 to 10 Vdc limits)
Output: 0 to 100 mV, except 2 psi = 40 mV and 1 psi = 20 mV
Accuracy: ±0.25% typical; includes linearity, hysteresis and repeatability
Zero Offset: ±2% FSO; ±4% 1 and 2 psi ranges
Span Setting: ±2% FSO; ±4% 1 and 2 psi ranges
Compensated Temperature: 0 to 50°C (-18 to 122°F)
Thermal Zero and Span Effects (Over Compensated Range):
15 to 10,000 psi Ranges: ±2% FSO
5 psi Range: ±3% FSO
2 psi Range: ±4% FSO
1 psi Range: ±5% FSO

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

RANGE bar	RANGE psi	1.5 m CABLE CONNECTION	PRICE	MINI DIN CONNECTION	PRICE	TWIST-LOCK CONNECTION	PRICE
ABSOLUTE PRESSURE							
0 to 0.34	0 to 5	PX309-005AV	$300	PX319-005AV	$300	PX329-005AV	$300
0 to 1	0 to 15	PX309-015AV	195	PX319-015AV	215	PX329-015AV	235
0 to 2.1	0 to 30	PX309-030AV	195	PX319-030AV	215	PX329-030AV	235
0 to 3.4	0 to 50	PX309-050AV	195	PX319-050AV	215	PX329-050AV	235
0 to 6.9	0 to 100	PX309-100AV	195	PX319-100AV	215	PX329-100AV	235
0 to 14	0 to 200	PX309-200AV	195	PX319-200AV	215	PX329-200AV	235
0 to 21	0 to 300	PX309-300AV	195	PX319-300AV	215	PX329-300AV	235
GAGE PRESSURE							
0 to 0.07	0 to 1	PX309-001GV	$300	PX319-001GV	$300	PX329-001GV	$300
0 to 0.14	0 to 2	PX309-002GV	300	PX319-002GV	300	PX329-002GV	300
0 to 0.34	0 to 5	PX309-005GV	300	PX319-005GV	300	PX329-005GV	300
0 to 1	0 to 15	PX309-015GV	175	PX319-015GV	175	PX329-015GV	215
0 to 2.1	0 to 30	PX309-030GV	175	PX319-030GV	175	PX329-030GV	215
0 to 3.4	0 to 50	PX309-050GV	175	PX319-050GV	175	PX329-050GV	215
0 to 6.9	0 to 100	PX309-100GV	175	PX319-100GV	175	PX329-100GV	215
0 to 10	0 to 150	PX309-150GV	175	PX319-150GV	175	PX329-150GV	215
0 to 14	0 to 200	PX309-200GV	175	PX319-200GV	175	PX329-200GV	215
0 to 21	0 to 300	PX309-300GV	175	PX319-300GV	175	PX329-300GV	215
0 to 34	0 to 500	PX309-500GV	175	PX319-500GV	175	PX329-500GV	215
0 to 69	0 to 1000	PX309-1KGV	175	PX319-1KGV	175	PX329-1KGV	215
0 to 138	0 to 2000	PX309-2KGV	175	PX319-2KGV	175	PX329-2KGV	215
0 to 207	0 to 3000	PX309-3KGV	175	PX319-3KGV	175	PX329-3KGV	215
0 to 345	0 to 5000	PX309-5KGV	175	PX319-5KGV	175	PX329-5KGV	215
0 to 517	0 to 7500	PX309-7.5KGV	175	PX319-7.5KGV	175	PX329-7.5KGV	215
0 to 690	0 to 10,000	PX309-10KGV	175	PX319-10KGV	175	PX329-10KGV	215

Comes with certificate of conformance to specifications. ***Notes:*** *1. Units 100 psig and above may be subjected to vacuum on the pressure port without damage. 2. For alternative performance specifications to suit your application, contact Engineering.*

Ordering Examples: PX309-100GV, *100 psi gage pressure transducer with 100 mV output @ 5 Vdc excitation and 1.5 m cable termination,* ***$175. PX319-015AV,*** *15 psi absolute pressure transducer with 100 mV output @ 10 Vdc excitation and Mini DIN termination,* ***$175. PX329-3KGV,*** *3000 psi gage pressure transducer with 100 mV output @ 5 Vdc excitation and twist-lock termination,* ***$215.*** *Mating connector sold separately; order* ***PT06V-10-6S, $26.50.***
Consult Sales for OEM pricing.

Accessories

MODEL NO.	PRICE	DESCRIPTION
-NIST	$75.00	5-point NIST-traceable calibration (must be ordered with new transducer)
CAL-3	150.00	Recalibration: 5-point NIST traceable
PT06V-10-6S	26.50	Mating connector for PX329
CA-39-4PC22-5	90.00	4-conductor mating twist-lock connector with 1.5 m (5') cable for PX329
CX5302	15.00	Extra Mini DIN connector for PX319

HOW TO ORDER PX309 SERIES RUGGED, GENERAL PURPOSE TRANSDUCERS WITH 0 TO 5 VDC OUTPUT

NEW

PX309 Series Starts at $225

CE RoHS OMEGADYNE

0 TO 5 VDC OUTPUT
0-1 TO 0-10,000 PSI
0-70 MBAR TO 0-690 BAR

PX329-015G5V, $275, shown larger than actual size.

- Gage or Absolute Pressure
- Low Pressure to 1 psig
- Rugged Solid State Design
- All Stainless Steel Construction
- High Stability, Low Drift
- 0.25% Accuracy Typical

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

RANGE bar	RANGE psi	1.5 m CABLE CONNECTION	PRICE	MINI DIN CONNECTION	PRICE	TWIST-LOCK CONNECTION	PRICE
ABSOLUTE PRESSURE							
0 to 0.34	0 to 5	PX309-005A5V	$325	PX319-005A5V	$325	PX329-005A5V	$350
0 to 1	0 to 15	PX309-015A5V	245	PX319-015A5V	245	PX329-015A5V	295
0 to 2.1	0 to 30	PX309-030A5V	245	PX319-030A5V	245	PX329-030A5V	295
0 to 3.4	0 to 50	PX309-050A5V	245	PX319-050A5V	245	PX329-050A5V	295
0 to 6.9	0 to 100	PX309-100A5V	245	PX319-100A5V	245	PX329-100A5V	295
0 to 14	0 to 200	PX309-200A5V	245	PX319-200A5V	245	PX329-200A5V	295
0 to 21	0 to 300	PX309-300A5V	245	PX319-300A5V	245	PX329-300A5V	295
GAGE PRESSURE							
0 to 0.07	0 to 1	PX309-001G5V	$345	PX319-001G5V	$345	PX329-001G5V	$370
0 to 0.14	0 to 2	PX309-002G5V	325	PX319-002G5V	325	PX329-002G5V	350
0 to 0.34	0 to 5	PX309-005G5V	300	PX319-005G5V	300	PX329-005G5V	325
0 to 1	0 to 15	PX309-015G5V	225	PX319-015G5V	225	PX329-015G5V	275
0 to 2.1	0 to 30	PX309-030G5V	225	PX319-030G5V	225	PX329-030G5V	275
0 to 3.4	0 to 50	PX309-050G5V	225	PX319-050G5V	225	PX329-050G5V	275
0 to 6.9	0 to 100	PX309-100G5V	225	PX319-100G5V	225	PX329-100G5V	275
0 to 10	0 to 150	PX309-150G5V	225	PX319-150G5V	225	PX329-150G5V	275
0 to 14	0 to 200	PX309-200G5V	225	PX319-200G5V	225	PX329-200G5V	275
0 to 21	0 to 300	PX309-300G5V	225	PX319-300G5V	225	PX329-300G5V	275
0 to 34	0 to 500	PX309-500G5V	225	PX319-500G5V	225	PX329-500G5V	275
0 to 69	0 to 1000	PX309-1KG5V	225	PX319-1KG5V	225	PX329-1KG5V	275
0 to 138	0 to 2000	PX309-2KG5V	225	PX319-2KG5V	225	PX329-2KG5V	275
0 to 207	0 to 3000	PX309-3KG5V	225	PX319-3KG5V	225	PX329-3KG5V	275
0 to 345	0 to 5000	PX309-5KG5V	225	PX319-5KG5V	225	PX329-5KG5V	275
0 to 517	0 to 7500	PX309-7.5KG5V	225	PX319-7.5KG5V	225	PX329-7.5KG5V	275
0 to 690	0 to 10,000	PX309-10KG5V	225	PX319-10KG5V	225	PX329-10KG5V	275

Comes with certificate of conformance to specifications. ***Notes:*** *1. Units 100 psig and above may be subjected to vacuum on the pressure port without damage. 2. For alternative performance specifications to suit your application, contact Engineering.*

Ordering Examples: PX309-100G5V, *100 psi gage pressure transducer with 0 to 5 Vdc output and 1.5 m cable termination,* ***$225. PX319-015A5V,*** *15 psi absolute pressure transducer with 0 to 5 Vdc output and Mini DIN termination,* ***$300. PX329-3KG5V,*** *3000 psi gage pressure transducer with 0 to 5 Vdc output and twist-lock termination,* ***$295.*** *Mating connector sold separately; order* ***PT06V-10-6S, $26.50.*** *Consult Sales for OEM pricing.*

5 V OUTPUT SPECIFICATIONS

Excitation: 9 to 30 Vdc (reverse polarity and overvoltage protected)
Output: 0 to 5 Vdc
Accuracy: ±0.25% typical; includes linearity, hysteresis and repeatability
Zero Offset: ±2% FSO; ±4% 1 and 2 psi ranges
Span Setting: ±2% FSO; ±4% 1 and 2 psi ranges
Compensated Temperature:
>5 psi Range: -20 to 85°C (-4 to 185°F)
≤5 psi Range: 0 to 50°C (-18 to 122°F)
Total Error Band: ±2% FSO; includes linearity, hysteresis, repeatability, thermal hysteresis and thermal errors (except 2 psi = ±3% and 1 psi = ±4.5%)

Accessories

MODEL NO.	PRICE	DESCRIPTION
-NIST	$75.00	5-point NIST-traceable calibration (must be ordered with new transducer)
CAL-3	150.00	Recalibration: 5-point NIST traceable
PT06V-10-6S	26.50	Mating connector for PX329
CA-39-4PC22-5	90.00	4-conductor mating twist-lock connector with 1.5 m (5') cable for PX329
CX5302	15.00	Extra Mini DIN connector for PX319

NEW HOW TO ORDER PX309 SERIES RUGGED GENERAL PURPOSE TRANSDUCERS WITH 4 TO 20 MA OUTPUT

PX309 Series Starts at $225

CE RoHS OMEGADYNE

PX309-030GI, $225, shown larger than actual size.

4 TO 20 MA OUTPUT
0-1 TO 0-10,000 PSI
0-70 MBAR TO 0-690 BAR

- Gage or Absolute Pressure
- Low Pressure to 1 psig
- Rugged Solid State Design
- All Stainless Steel Construction
- High Stability, Low Drift
- 0.25% Accuracy Typical

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

RANGE bar	RANGE psi	1.5 m CABLE CONNECTION	PRICE	MINI DIN CONNECTION	PRICE	TWIST-LOCK CONNECTION	PRICE
ABSOLUTE PRESSURE							
0 to 0.34	0 to 5	PX309-005AI	$325	PX319-005AI	$325	PX329-005AI	$350
0 to 1	0 to 15	PX309-015AI	245	PX319-015AI	245	PX329-015AI	295
0 to 2.1	0 to 30	PX309-030AI	245	PX319-030AI	245	PX329-030AI	295
0 to 3.4	0 to 50	PX309-050AI	245	PX319-050AI	245	PX329-050AI	295
0 to 6.9	0 to 100	PX309-100AI	245	PX319-100AI	245	PX329-100AI	295
0 to 14	0 to 200	PX309-200AI	245	PX319-200AI	245	PX329-200AI	295
0 to 21	0 to 300	PX309-300AI	245	PX319-300AI	245	PX329-300AI	295
GAGE PRESSURE							
0 to 0.07	0 to 1	PX309-001GI	$345	PX319-001GI	$345	PX329-001GI	$370
0 to 0.14	0 to 2	PX309-002GI	325	PX319-002GI	325	PX329-002GI	350
0 to 0.34	0 to 5	PX309-005GI	300	PX319-005GI	300	PX329-005GI	300
0 to 1	0 to 15	PX309-015GI	225	PX319-015GI	225	PX329-015GI	275
0 to 2.1	0 to 30	PX309-030GI	225	PX319-030GI	225	PX329-030GI	275
0 to 3.4	0 to 50	PX309-050GI	225	PX319-050GI	225	PX329-050GI	275
0 to 6.9	0 to 100	PX309-100GI	225	PX319-100GI	225	PX329-100GI	275
0 to 10	0 to 150	PX309-150GI	225	PX319-150GI	225	PX329-150GI	275
0 to 14	0 to 200	PX309-200GI	225	PX319-200GI	225	PX329-200GI	275
0 to 21	0 to 300	PX309-300GI	225	PX319-300GI	225	PX329-300GI	275
0 to 34	0 to 500	PX309-500GI	225	PX319-500GI	225	PX329-500GI	275
0 to 69	0 to 1000	PX309-1KGI	225	PX319-1KGI	225	PX329-1KGI	275
0 to 138	0 to 2000	PX309-2KGI	225	PX319-2KGI	225	PX329-2KGI	275
0 to 207	0 to 3000	PX309-3KGI	225	PX319-3KGI	225	PX329-3KGI	275
0 to 345	0 to 5000	PX309-5KGI	225	PX319-5KGI	225	PX329-5KGI	275
0 to 517	0 to 7500	PX309-7.5KGI	225	PX319-7.5KGI	225	PX329-7.5KGI	275
0 to 690	0 to 10,000	PX309-10KGI	225	PX319-10KGI	225	PX329-10KGI	275

Comes with certificate of conformance to specifications. ***Notes:*** *1. Units 100 psig and above may be subjected to vacuum on the pressure port without damage. 2. For alternative performance specifications to suit your application, contact Engineering.*

Ordering Examples: PX309-100GI, *100 psi gage pressure transducer with 4 to 20 mA output and 1.5 m cable termination,* ***$225. PX319-015AI,*** *15 psi absolute pressure transducer with 4 to 20 mA output and Mini DIN termination,* ***$300. PX329-3KGI,*** *3000 psi gage pressure transducer with 4 to 20 mA output and twist-lock termination,* ***$275.*** *Mating connector sold separately; order* ***PT06V-10-6S, $26.50.*** *Consult Sales for OEM pricing.*

4 TO 20 mA OUTPUT SPECIFICATIONS

Excitation: 9 to 30 Vdc (reverse polarity and overvoltage protected)
Output: 4 to 20 mA
Accuracy: ±0.25% typical; includes linearity, hysteresis and repeatability
Zero Offset: ±2% FSO; ±4% 1 and 2 psi ranges
Span Setting: ±2% FSO; ±4% 1 and 2 psi ranges
Compensated Temperature:
>5 psi Range: -20 to 85°C (-4 to 185°F)
≤5 psi Range: 0 to 50°C (-18 to 122°F)
Total Error Band: ±2% FSO; includes linearity, hysteresis, repeatability, thermal hysteresis and thermal errors (except 2 psi = ±3% and 1 psi = ±4.5%)

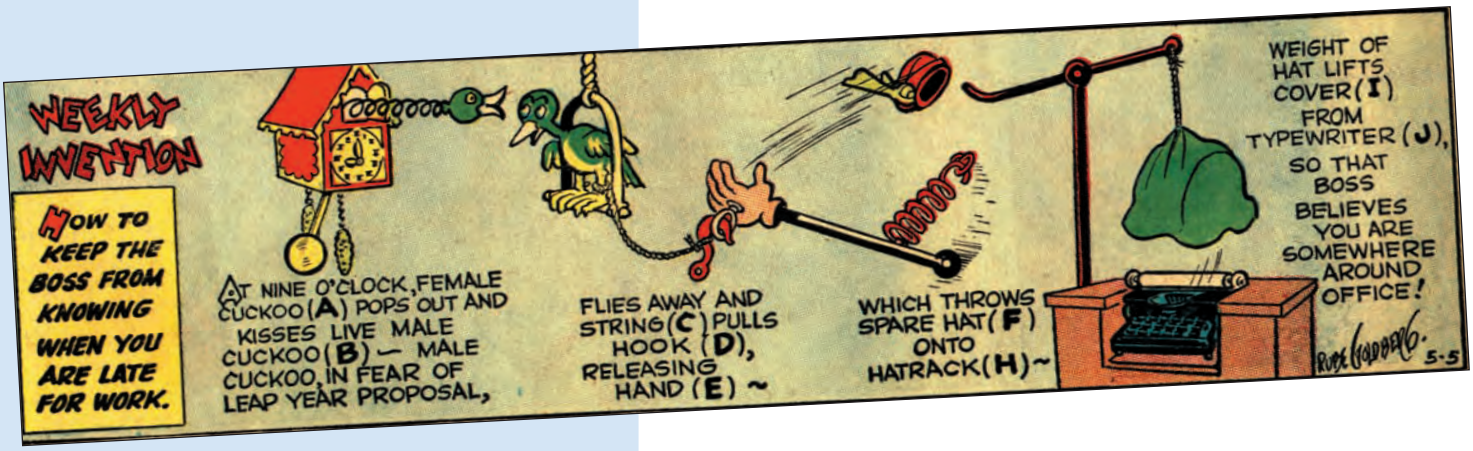
Accessories

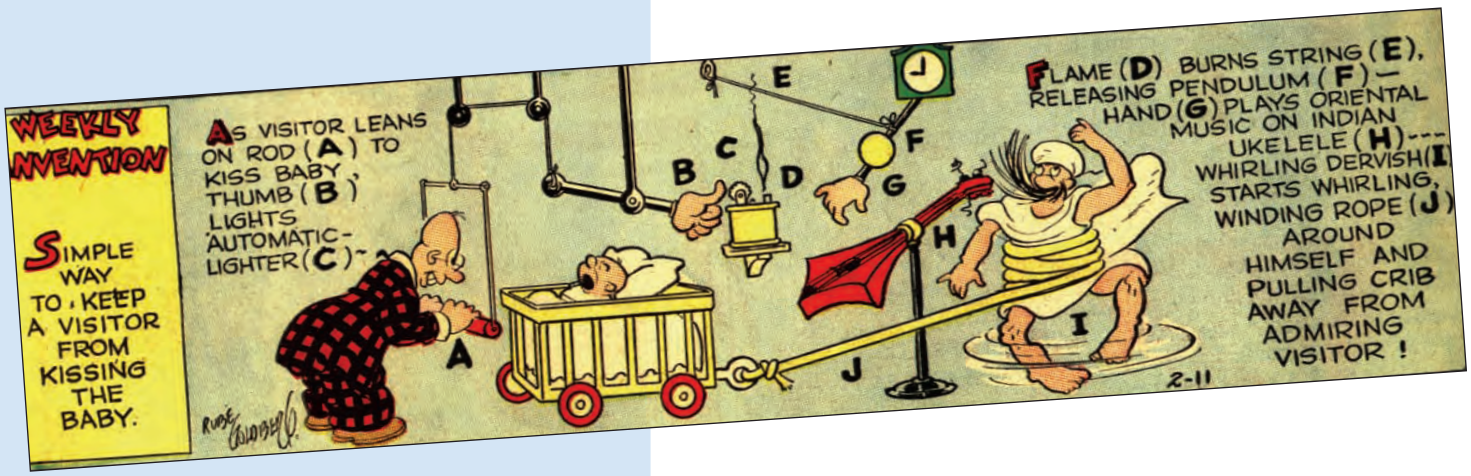
MODEL NO.	PRICE	DESCRIPTION
-NIST	$75.00	5-point NIST-traceable calibration (must be ordered with new transducer)
CAL-3	150.00	Recalibration: 5-point NIST traceable
PT06V-10-6S	26.50	Mating connector for PX329
CA-39-4PC22-5	90.00	4-conductor mating twist-lock connector with 1.5 m (5') cable for PX329
CX5302	15.00	Extra Mini DIN connector for PX319

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*

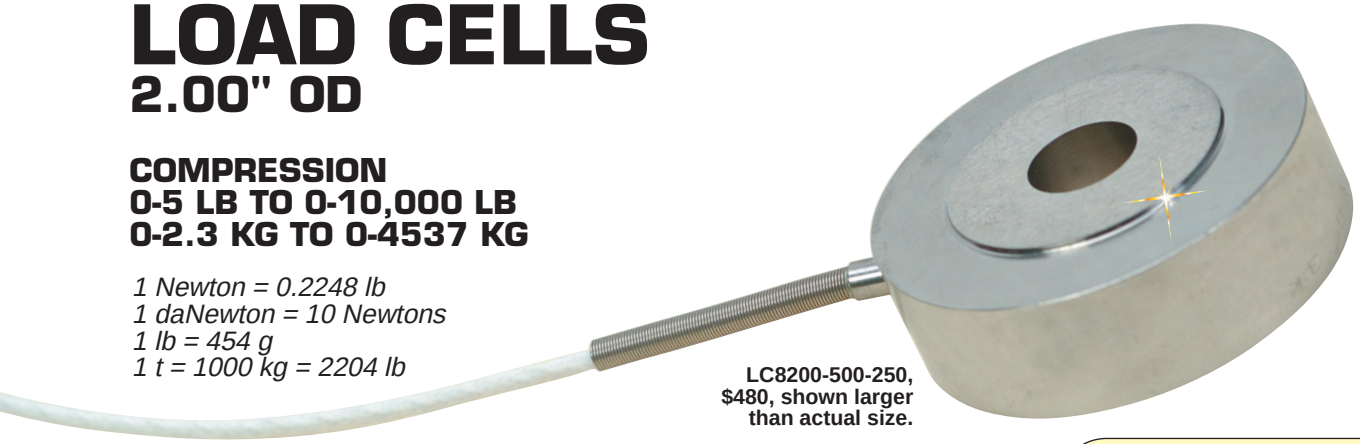




COMPACT THROUGH-HOLE LOAD CELLS
2.00" OD

COMPRESSION
0-5 LB TO 0-10,000 LB
0-2.3 KG TO 0-4537 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kg = 2204 lb



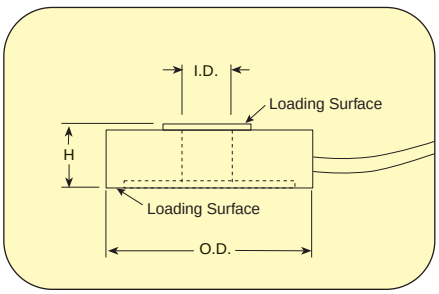
LC8200-500-250, $480, shown larger than actual size.

LC8200 Series Starts at $480

MADE IN USA | NIST | OMEGADYNE | analab

- **Low Profile**
- **All Stainless Steel Construction**
- **Rugged Industrial Design**

WIRE	CONNECTION
GN	+Output
WT	-Output
BK	-Input
RD	+Input



AVAILABLE INSIDE DIAMETERS (ID)									
CAPACITY	0.125"	0.188"	0.250"	0.375"	0.500"	0.625"	0.750"	0.875"	1.00"
5	X	X	X	X	X	X			
10	X	X	X	X	X	X			
25	X	X	X	X	X	X			
50	X	X	X	X	X	X			
100	X	X	X	X	X	X			
250	X	X	X	X	X	X	X	X	
500	X	X	X	X	X	X	X	X	X
1000	X	X	X	X	X	X	X	X	X
2000		X	X	X	X	X	X	X	X
3000			X	X	X	X	X	X	
5000			X	X	X	X	X		
7500				X	X				
10,000				X	X				

SPECIFICATIONS

Output: 2 mV/V nominal
Input: 10 Vdc (15 V max)
Linearity: ±0.5% FSO
Repeatability: ±0.1% FSO
Zero Balance: ±2.0% FSO
Operating Temp Range: -54 to 121°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: ±0.009% FSO/°C
Span: ±0.036% rdg/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±5 Ω
Full Scale Deflection: 0.003" nominal
Construction: 17-4 PH stainless steel
Electrical: 1.5 m (5') 4-conductor shielded cable
Protection Class: IP65

Dimensions: mm (in)

CAPACITY	OD	H
5 to 100 lb	51 (2.00)	9.4 (0.37)
250 to 10K lb	51 (2.00)	16 (0.63)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY		MODEL NO.	PRICE	COMPATIBLE METERS*
Model LC8200 with a 2.00" OD and Selectable ID				
5 lb	2.3 kg	**LC8200-[*]-5**	**$480**	DP41-S, DP25B-S, DPiS
10 lb	4.5 kg	**LC8200-[*]-10**	**480**	DP41-S, DP25B-S, DPiS
25 lb	11 kg	**LC8200-[*]-25**	**480**	DP41-S, DP25B-S, DPiS
50 lb	23 kg	**LC8200-[*]-50**	**480**	DP41-S, DP25B-S, DPiS
100 lb	45 kg	**LC8200-[*]-100**	**480**	DP41-S, DP25B-S, DPiS
250 lb	114 kg	**LC8200-[*]-250**	**480**	DP41-S, DP25B-S, DPiS
500 lb	227 kg	**LC8200-[*]-500**	**480**	DP41-S, DP25B-S, DPiS
1000 lb	455 kg	**LC8200-[*]-1K**	**480**	DP41-S, DP25B-S, DPiS
2000 lb	909 kg	**LC8200-[*]-2K**	**480**	DP41-S, DP25B-S, DPiS
3000 lb	1361 kg	**LC8200-[*]-3K**	**480**	DP41-S, DP25B-S, DPiS
5000 lb	2269 kg	**LC8200-[*]-5K**	**480**	DP41-S, DP25B-S, DPiS
7500 lb	3403 kg	**LC8200-[*]-7.5K**	**480**	DP41-S, DP25B-S, DPiS
10,000 lb	4537 kg	**LC8200-[*]-10K**	**480**	DP41-S, DP25B-S, DPiS

Comes with 5-point NIST-traceable calibration.

** See omega.com for compatible meters.*

***[*]** Select ID from table above to complete model number.*

Ordering Examples: LC8200-125-250,** 250 lb capacity load cell, 2.00" OD and 0.125" ID, **$480. LC8200-250-1K,** 1000 lb capacity load cell with 2.00" OD and 0.250" ID, **$480. LC8200-100-2K,** 2000 lb capacity load cell with 2.00" OD and 1.00" ID, **$480.

SUBMINIATURE INDUSTRIAL COMPRESSION LOAD CELL
VERY LOW PROFILE

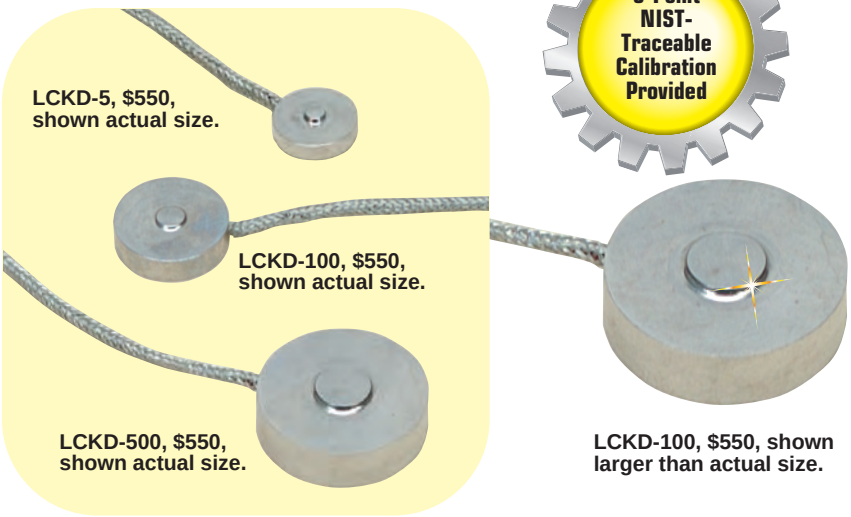
COMPRESSION
0-0.4 LB TO 0-1000 LB
0-1 KG TO 0-455 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 kg
1 t = 1000 kg = 2204 lb

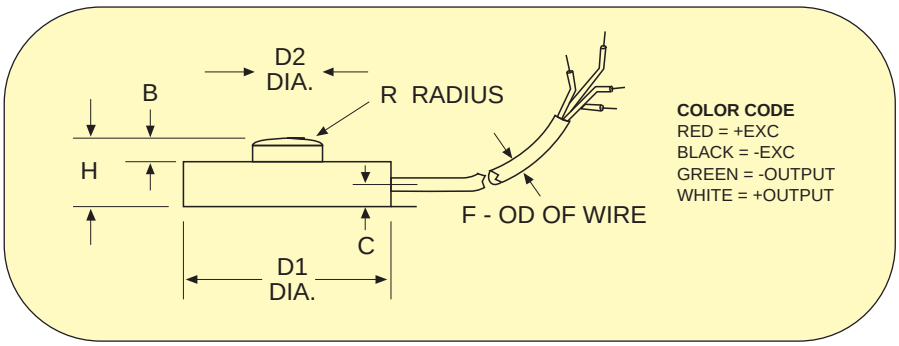
LCKD Series Starts at $550

MADE IN USA | NIST | OMEGADYNE

5-Point NIST-Traceable Calibration Provided



Small in size but not in performance, OMEGA's LCKD Series compression load cells are designed to measure load ranges from 1 kg to 1000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is achieved through a miniature circuit board in the cable. These cells are designed to be mounted on a smooth, flat surface.



SPECIFICATIONS

Excitation: 5 Vdc, 7 Vdc max
Output: 2 mV/V nominal
5-Point Calibration:
0%, 50%, 100%, 50%, 0%
Linearity: ±0.25% FSO
Hysteresis: ±0.25% FSO
Repeatability: ±0.10% FSO
Zero Balance: ±2% FSO
Operating Temp Range:
-54 to 121°C (-65 to 250°F)
Compensated Temp Range:
16 to 71°C (60 to 160°F)
Thermal Effects:
Span: ±0.018% FSO/°C
Zero: ±0.009% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω min
Full Scale Deflection: 0.001 to 0.003"
Electrical Connection: 1.5 m (5')
4-conductor insulated cable with temperature compensation board
Weight: <14 g (<0.5 oz)
Protection Class: IP54

Dimensions: mm (in)

CAPACITY	D1	D2	H	B	C	F	R
1 kg to 50 lb	9.6 (0.38)	2.2 (0.09)	3.0 (0.12)	0.76 (0.03)	1.0 (0.04)	1.3 (0.05)	6.3 (0.25)
100 to 250 lb	13 (0.50)	3.0 (0.12)	3.8 (0.15)	0.51 (0.02)	1.5 (0.06)	1.3 (0.05)	13 (0.5)
500 to 1000 lb	19 (0.75)	6.1 (0.24)	6.4 (0.25)	0.76 (0.03)	2.5 (0.10)	1.3 (0.05)	101 (4)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
2.2	1	**LCKD-1KG**	**$585**	DPiS, DP41-S, DP25B-S
5	2.3	**LCKD-5**	**585**	DPiS, DP41-S, DP25B-S
10	4.5	**LCKD-10**	**585**	DPiS, DP41-S, DP25B-S
25	11	**LCKD-25**	**585**	DPiS, DP41-S, DP25B-S
50	23	**LCKD-50**	**585**	DPiS, DP41-S, DP25B-S
100	45	**LCKD-100**	**550**	DPiS, DP41-S, DP25B-S
250	114	**LCKD-250**	**550**	DPiS, DP41-S, DP25B-S
500	227	**LCKD-500**	**550**	DPiS, DP41-S, DP25B-S
1000	455	**LCKD-1000**	**550**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST-traceable calibration.

** See omega.com for compatible meters.*

Ordering Examples: LCKD-1KG,** 1 kg capacity load cell, **$585. LCKD-25,** 25 lb capacity load cell, **$550.

MINIATURE INDUSTRIAL COMPRESSION LOAD CELL
FOR INDUSTRIAL APPLICATIONS TO 50,000 LB

COMPRESSION
0-25 LB TO 0-50,000 LB
0-11 KG TO 0-22,686 KG

LCGD Series Starts at $460

MADE IN USA NIST OMEGADYNE & analab

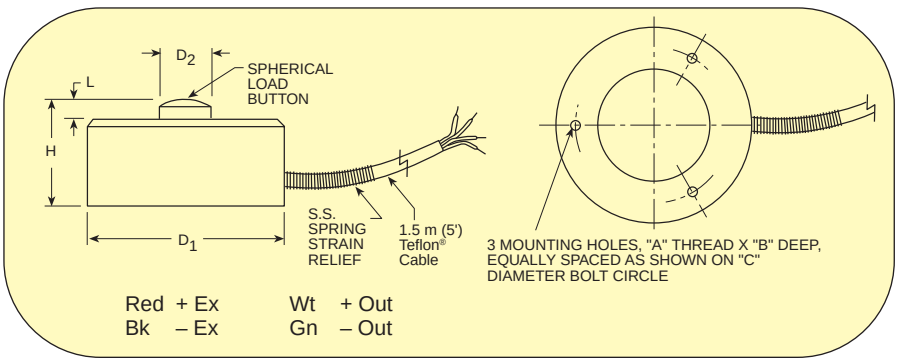
- **5-Point NIST Traceable Calibration**
- **Stainless Steel**
- **High Accuracy**
- **Low Profile**
- **Miniature Size**

The LCGD Series miniature low-profile load cells are compression load cells with excellent long-term stability. An all stainless steel construction ensures reliability in severe industrial environments. These cells are designed to be mounted on a flat surface, and a load button is integral to their basic design.

LCGD-100, $590.

Shown actual size.

LCGD-2K, $460.



Dimensions: mm (in)

CAPACITY	D1	D2	H	L	A	B	C
25 to 100 lb	25 (1.00)	5.3 (0.21)	16 (0.62)	1.3 (0.05)	#4-40 UNC	4.8 (0.19)	19 (0.75)
250 to 2000 lb	32 (1.25)	8.1 (0.32)	10 (0.39)	1.8 (0.07)	#6-32 UNC	6.4 (0.25)	25.4 (1.00)
5000 to 10,000 lb	38 (1.50)	11 (0.43)	16 (0.63)	2.0 (0.08)	#6-32 UNC	6.4 (0.25)	31.8 (1.25)
15,000 to 30,000 lb	51 (2.00)	15 (0.60)	25 (1.00)	3.0 (0.12)	#6-32 UNC	6.4 (0.25)	41.3 (1.63)
50,000 lb	76 (3.00)	20 (0.78)	38 (1.50)	4.6 (0.18)	#6-32 UNC	6.4 (0.25)	60.3 (2.38)

SPECIFICATIONS

Excitation: 10 Vdc
Output: 2 mV/V nominal
5-Point Calibration: 0%, 50% 100%, 50%, 0%
Linearity: ±0.25% FSO
Hysteresis: ±0.20% FSO
Repeatability: ±0.10% FSO
Zero Balance: ±2% FSO
Operating Temp Range: -54 to 121°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Span: ±0.018% rdg/°C
Zero: ±0.009% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω minimum
Deflection: 0.076 mm (0.003")
Construction: Stainless steel
Electrical Connection: 1.5 m (5') shielded cable
Protection Class: IP65

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
25	11	**LCGD-25**	**$590**	DPiS, DP41-S, DP25B-S
50	23	**LCGD-50**	**590**	DPiS, DP41-S, DP25B-S
100	45	**LCGD-100**	**590**	DPiS, DP41-S, DP25B-S
250	114	**LCGD-250**	**490**	DPiS, DP41-S, DP25B-S
500	227	**LCGD-500**	**460**	DPiS, DP41-S, DP25B-S
1000	455	**LCGD-1K**	**460**	DPiS, DP41-S, DP25B-S
2000	909	**LCGD-2K**	**460**	DPiS, DP41-S, DP25B-S
5000	2269	**LCGD-5K**	**525**	DPiS, DP41-S, DP25B-S
10,000	4537	**LCGD-10K**	**525**	DPiS, DP41-S, DP25B-S
15,000	6806	**LCGD-15K**	**625**	DPiS, DP41-S, DP25B-S
20,000	9074	**LCGD-20K**	**625**	DPiS, DP41-S, DP25B-S
30,000	13,612	**LCGD-30K**	**625**	DPiS, DP41-S, DP25B-S
50,000	22,686	**LCGD-50K**	**695**	DPiS, DP41-S, DP25B-S

*Comes with 5-point NIST-traceable calibration. * See omega.com for compatible meters.*

Ordering Examples: LCGD-5K,** 5000 lb capacity load cell, **$525. LCGD-25,** 25 lb capacity load cell, **$590.

MINIATURE INDUSTRIAL COMPRESSION LOAD CELL
WITH THROUGH-BODY MOUNTING HOLES

NEW

COMPRESSION
0-50 LB TO 0-50,000 LB
0-23 KG TO 0-22,000 KG

LCGB Series Starts at $460

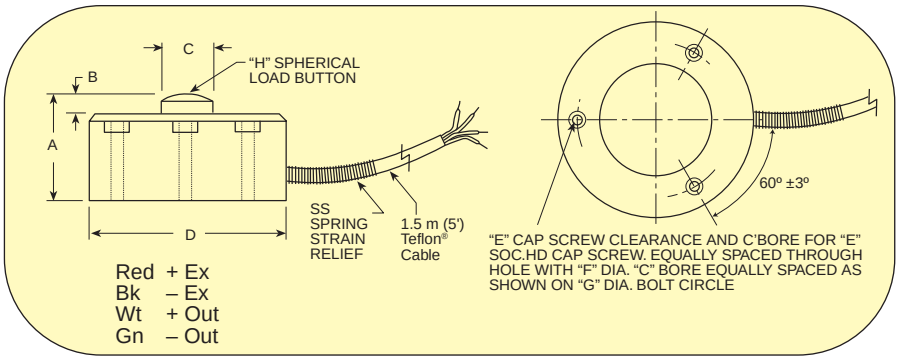
MADE IN USA · NIST · OMEGADYNE · & analab

- Stainless Steel
- High Accuracy
- Low Profile
- Miniature Size

The LCGB Series comprises miniature low-profile compression load cells with excellent long-term stability. An all stainless steel construction ensures reliability in harsh industrial environments. These cells are designed to be mounted on a flat surface using cap screws to secure them to the base. A load button is integral to their basic construction for even force distribution.

Shown actual size.

LCGB-5K, $525.



Dimensions: mm (in)

CAPACITY	D	C	A	B	E	F	G	H
50 to 2000 lb	32 (1.25)	8.1 (0.32)	10 (0.39)	1.8 (0.07)	#2	4.8 (0.19)	25.4 (1.00)	51 (2)
3000 to 10,000 lb	38 (1.50)	11 (0.43)	16 (0.63)	2.0 (0.08)	#4	6.4 (0.25)	31.8 (1.25)	51 (2)
15,000 to 30,000 lb	51 (2.00)	15 (0.60)	25 (1.00)	3.0 (0.12)	#6	7.1 (0.28)	41.3 (1.63)	63.5 (2.5)
50,000 lb	76 (3.00)	20 (0.78)	38 (1.50)	4.6 (0.18)	#6	7.1 (0.28)	60.3 (2.38)	153 (6)

SPECIFICATIONS

Excitation: 10 Vdc
Output: 2 mV/V nominal
5-Point Calibration: 0%, 50% 100%, 50%, 0%; 59K shunt data included
Linearity: ±0.25% FSO
Hysteresis: ±0.20% FSO
Repeatability: ±0.10% FSO
Zero Balance: ±2% FSO
Operating Temp Range: -54 to 121°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Span: ±0.018% rdg/°C
Zero: ±0.009% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω minimum
Deflection: 0.08 mm (0.003")
Construction: Stainless steel
Electrical Connection: 1.5 m (5') 4-conductor cable with strain relief
Protection Rating: IP54

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
50	23	**LCGB-50**	**$590**	DPiS, DP41-S, DP25B-S
100	45	**LCGB-100**	**590**	DPiS, DP41-S, DP25B-S
250	114	**LCGB-250**	**490**	DPiS, DP41-S, DP25B-S
500	227	**LCGB-500**	**460**	DPiS, DP41-S, DP25B-S
750	340	**LCGB-750**	**460**	DPiS, DP41-S, DP25B-S
1000	455	**LCGB-1K**	**460**	DPiS, DP41-S, DP25B-S
2000	909	**LCGB-2K**	**460**	DPiS, DP41-S, DP25B-S
3000	1361	**LCGB-3K**	**525**	DPiS, DP41-S, DP25B-S
5000	2269	**LCGB-5K**	**525**	DPiS, DP41-S, DP25B-S
10,000	4537	**LCGB-10K**	**625**	DPiS, DP41-S, DP25B-S
15,000	6806	**LCGB-15K**	**625**	DPiS, DP41-S, DP25B-S
20,000	9074	**LCGB-20K**	**625**	DPiS, DP41-S, DP25B-S
30,000	13,612	**LCGB-30K**	**625**	DPiS, DP41-S, DP25B-S
50,000	22,686	**LCGB-50K**	**695**	DPiS, DP41-S, DP25B-S

*Comes with 5-point NIST-traceable calibration. * See omega.com for compatible meters.*
Ordering Examples: LCGB-5K,** 5000 lb capacity load cell, **$525. LCGB-50,** 50 lb capacity load cell, **$590.

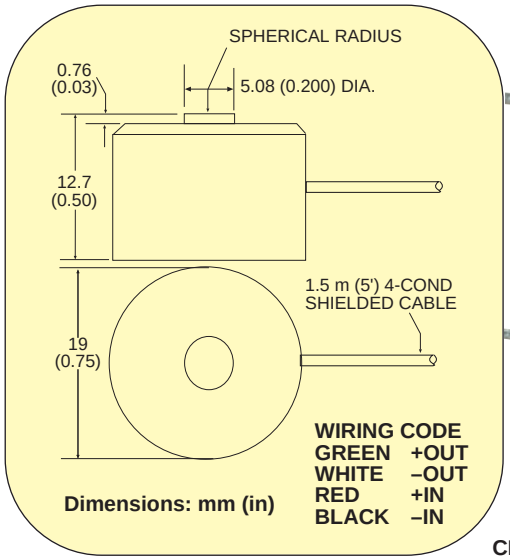
0.75" DIAMETER STAINLESS STEEL COMPRESSION LOAD CELL 0-25 LB TO 0-1000 LB CAPACITIES

COMPRESSION
0-25 LB TO 0-1000 LB
0-11 KG TO 0-455 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kg = 2204 lb

LC302 Series Starts at $295

MADE IN USA NIST OMEGADYNE & analab



LC302-1K, $295, shown actual size.

CNiS8DH strain meter/controller, $400, shown smaller than actual size. See pages omega.com for details.

- **Small 19 mm (0.75") Dia.**
- **Low 13 mm (0.5") Profile**
- **Robotic and Test Bench Applications**
- **Built-In Load Button for Easy Installation**
- **5-Point Traceable Calibration Provided**

The LC302 Series load cells are only 19 mm (¾") in diameter and fit in the smallest places. Their high ±0.5% accuracy and small package solve many industrial force measurement applications. The all stainless steel construction and high-quality strain gage ensure long-term reliability.

SPECIFICATIONS

Excitation: 5 Vdc, 15 Vdc max
Output: 1 mV/V (nominal)
Accuracy: ±0.5% FSO linearity, hysteresis, repeatability combined
5-Point Calibration: 0%, 50%, 100%, 50%, 0%
Zero Balance: ±2% FSO
Operating Temp Range: -54 to 125°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: 0.009% FSO/°F
Span: 0.036% FSO/°F
Safe Overload: 150% of capacity
Protection Class: IP54
Deflection: 0.03 to 0.08 mm

Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω minimum
Construction: Stainless steel

Electrical Connection: 1.5 m (5') 4-conductor insulated cable with temperature compensation board

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
25	11	**LC302-25**	**$295**	DPiS, DP41-S, DP25B-S
50	23	**LC302-50**	**295**	DPiS, DP41-S, DP25B-S
100	45	**LC302-100**	**295**	DPiS, DP41-S, DP25B-S
250	114	**LC302-250**	**295**	DPiS, DP41-S, DP25B-S
500	227	**LC302-500**	**295**	DPiS, DP41-S, DP25B-S
1000	455	**LC302-1K**	**295**	DPiS, DP41-S, DP25B-S

*Comes with 5-point NIST-traceable calibration. * See omega.com for compatible meters.*

Ordering Examples: LC302-25,** 25 lb capacity load cell, **$295. LC302-100,** 100 lb capacity load cell, **$295.

SUBMINIATURE TENSION OR COMPRESSION LOAD CELLS
0.75" DIAMETER

TENSION/COMPRESSION
CALIBRATED IN TENSION
0-25 LB TO 0-300 LB
0-11 KG TO 0-136 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kg = 2204 lb

LC201 Series Starts at $485

MADE IN USA | NIST | OMEGADYNE | & analab

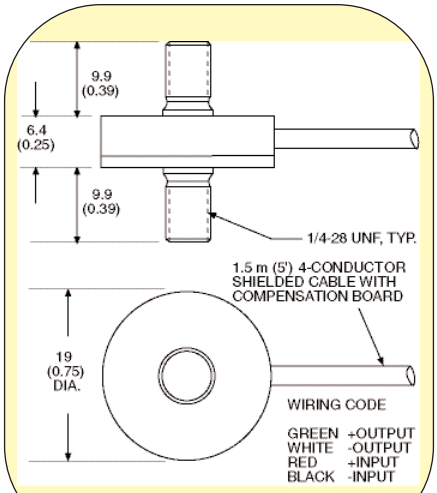
LC201-50, $485, shown larger than actual size.

- **Subminiature Package for Robotic Applications, 19 mm (0.75") Diameter**
- **Dual Mounting Studs for Easy Installation**
- **5-Point Calibration Provided**

OMEGA's LC201 Series subminiature load cells are designed for the demanding environment of industrial automation and robotics. With a diameter of only 19 mm (0.75") and all stainless steel construction, they can fit into small systems. The LC201 delivers high accuracy and long-term reliability in a subminiature package.

SPECIFICATIONS

Excitation: 10 Vdc, 15 Vdc max
Output: 2 mV/V nominal
Accuracy: ±1.0% FSO linearity, hysteresis, repeatability combined
5-Point Calibration (in Tension): 0%, 50%, 100%, 50%, 0%
Zero Balance: ±2% FSO
Operating Temp Range: -54 to 121°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Protection Class: IP54
Thermal Effects:
Zero: 0.018% FSO/°C
Span: 0.018% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±10 Ω
Construction: Stainless steel
Electrical: 1.5 m (5') 4-conductor shielded cable with compensation board



Dimensions: mm (in)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
25	11	**LC201-25**	**$485**	DPiS, DP41-S, DP25B-S
50	23	**LC201-50**	**485**	DPiS, DP41-S, DP25B-S
75	34	**LC201-75**	**485**	DPiS, DP41-S, DP25B-S
100	45	**LC201-100**	**485**	DPiS, DP41-S, DP25B-S
300	136	**LC201-300**	**485**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST traceable calibration.

** See section D for compatible meters. DPiS meter suitable for one direction measurement only.*

Ordering Examples: LC201-25,** 25 lb capacity subminiature universal load cell, **$485.
LC201-100,** 100 lb capacity subminiature universal load cell, **$485.

MINIATURE UNIVERSAL LOAD CELLS

STUD MOUNT STYLE, 1 TO 1.38" DIAMETER

TENSION/COMPRESSION
CALIBRATED IN TENSION
0-25 LB TO 0-10,000 LB
0-11 KG TO 0-4537 KG

LC202 Series
All Models
$560

MADE IN USA NIST OMEGADYNE & analab

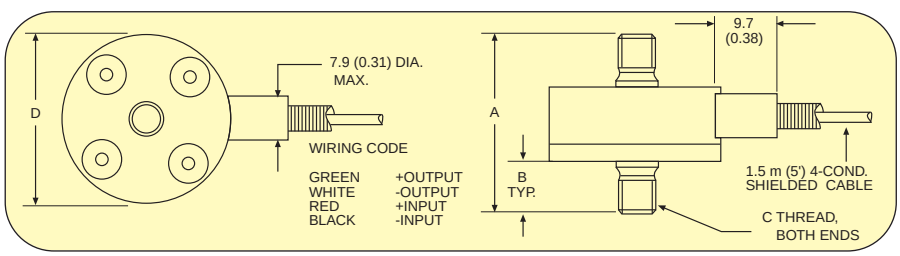
- **Miniature Package for Test Stands and Difficult Locations**
- **Heavy-Duty Construction**
- **Dual Mounting Studs for Easy Installation**
- **5-Point Calibration**

OMEGA's LC202 Series compact load cells have ranges of 25 to 10,000 lb and accuracy of 0.25%. The all stainless steel construction and rugged design ensure long life in industrial and commercial applications.

SPECIFICATIONS

Excitation: 10 Vdc, 15 Vdc max
Output: 2 mV/V nominal
Accuracy: ±0.25% FSO linearity, hysteresis, repeatability combined
5-Point Calibration:
0%, 50%, 100%, 50%, 0%
Zero Balance: ±2% FSO
Operating Temp Range:
-54 to 121°C (-65 to 250°F)
Compensated Temp Range:
16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: 0.009% FSO/°C
Span: 0.009% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±10 Ω
Construction: Stainless steel
Electrical: 1.5 m (5') 4-conductor cable
Protection Class: IP67

Capacity (lb)	A	B	C	D
25 to 500	25 (1.00)	6.3 (0.25)	10-32 UNF-2A	25 (1.00)
1000	33 (1.31)	9.7 (0.38)	¼-28 UNF-2A	25 (1.00)
2000	44 (1.75)	13 (0.50)	⅜-24 UNF-2A	25 (1.00)
3000	44 (1.75)	13 (0.50)	⅜-24 UNF-2A	25 (1.00)
4000	57 (2.23)	16 (0.63)	½-20 UNF-2A	32 (1.25)
5000	57 (2.23)	16 (0.63)	½-20 UNF-2A	32 (1.25)
7500	73 (2.89)	22 (0.88)	¾-16 UNF-2A	35 (1.38)
10,000	73 (2.89)	22 (0.88)	¾-16 UNF-2A	35 (1.38)



To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
25	11	**LC202-25**	**$560**	DPiS, DP41-S, DP25B-S
50	23	**LC202-50**	**560**	DPiS, DP41-S, DP25B-S
100	45	**LC202-100**	**560**	DPiS, DP41-S, DP25B-S
300	136	**LC202-300**	**560**	DPiS, DP41-S, DP25B-S
500	227	**LC202-500**	**560**	DPiS, DP41-S, DP25B-S
1000	455	**LC202-1K**	**560**	DPiS, DP41-S, DP25B-S
2000	909	**LC202-2K**	**560**	DPiS, DP41-S, DP25B-S
3000	1361	**LC202-3K**	**560**	DPiS, DP41-S, DP25B-S
5000	2269	**LC202-5K**	**560**	DPiS, DP41-S, DP25B-S
7500	3403	**LC202-7.5K**	**560**	DPiS, DP41-S, DP25B-S
10,000	4537	**LC202-10K**	**560**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST-traceable calibration.
** See **omega.com** for compatible meters.*
DPiS meter suitable for one direction measurement only.
Ordering Examples: LC202-100,** 25 lb capacity miniature universal load cell, **$560.
LC202-1K,** 1000 lb capacity miniature universal load cell, **$560.

Sensors product line continues to expand, visit omegamation.com for new details!

HIGH-ACCURACY MINIATURE UNIVERSAL LOAD CELLS

SURFACE MOUNT STYLE 2" DIAMETER

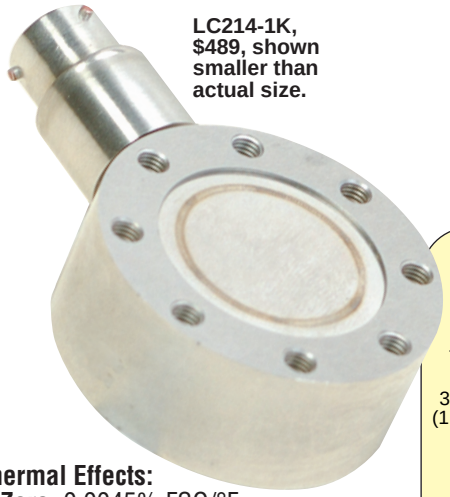
LC204 (CABLE STYLE)
LC214 (CONNECTOR STYLE)
TENSION/COMPRESSION
CALIBRATED IN TENSION
0-25 LB TO 0-10,000 LB
0-11 KG TO 0-4537 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kg = 2204 lb

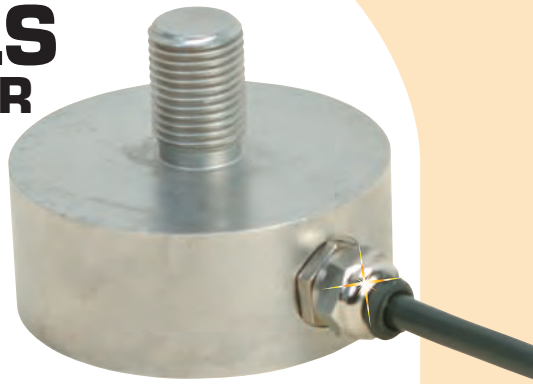
LC204/ LC214 Series All Models $489

- **FM Intrinsically Safe**
- **0.25% Interchangeability for Scale Applications**
- **Miniature Package for Test Stands and Difficult Locations**
- **Designed to be Mounted on a Flat Surface**
- **5-Point Calibration**

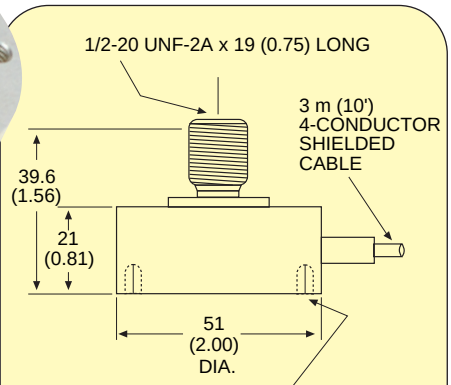
OMEGA's LC204 Series load cells are designed to be surface mounted with the load applied through the mounting stud. The high linearity (0.15%) and all stainless steel construction make them ideal for industrial and commercial weighing and for force measuring applications.



LC214-1K, $489, shown smaller than actual size.



LC204-100, $489, shown actual size.



Wiring Code

Wiring	Pin	Connection
GN	A	+Output
WT	B	–Output
BK	C, E	–Input
RED	D, F	+Input

Dimensions: mm (in)

SPECIFICATIONS

Excitation: 10 Vdc, 15 Vdc max
Output: 2 mV/V ±0.25%
5-Point Calibration (in Tension): 0%, 50%, 100%, 50%, 0%
Linearity: ±0.15% FSO
Hysteresis: ±0.1% FSO
Repeatability: ±0.05% FSO
Agency Approvals: FM IS/I.II.III/1/CDEFG (standard)
Zero Balance: ±2% FSO
Operating Temp Range: -46 to 107°C (-50 to 225°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Protection Class: IP65
Thermal Effects:
Zero: 0.0045% FSO/°F
Span: 0.009% FSO/°F
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±10 Ω
Construction: Stainless steel
Electrical: 3 m (10') 4-conductor shielded cable
LC214 Mating Connector: PT06F10-6S, $26.50 (not included)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO. CABLE	MODEL NO. CONNECTOR	PRICE	COMPATIBLE METERS*
25	11	**LC204-25**	**LC214-25**	**$489**	DPiS, DP41-S, DP25B-S
50	23	**LC204-50**	**LC214-50**	**489**	DPiS, DP41-S, DP25B-S
100	45	**LC204-100**	**LC214-100**	**489**	DPiS, DP41-S, DP25B-S
200	91	**LC204-200**	**LC214-200**	**489**	DPiS, DP41-S, DP25B-S
300	136	**LC204-300**	**LC214-300**	**489**	DPiS, DP41-S, DP25B-S
500	227	**LC204-500**	**LC214-500**	**489**	DPiS, DP41-S, DP25B-S
1000	455	**LC204-1K**	**LC214-1K**	**489**	DPiS, DP41-S, DP25B-S
2000	909	**LC204-2K**	**LC214-2K**	**489**	DPiS, DP41-S, DP25B-S
2500	1134	**LC204-2.5K**	**LC214-2.5K**	**489**	DPiS, DP41-S, DP25B-S
5000	2269	**LC204-5K**	**LC214-5K**	**489**	DPiS, DP41-S, DP25B-S
8000	3630	**LC204-8K**	**LC214-8K**	**489**	DPiS, DP41-S, DP25B-S
10,000	4537	**LC204-10K**	**LC214-10K**	**489**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST-traceable calibration.
** See omega.com for compatible meters.*
DPiS meter suitable for one direction measurement only.
Ordering Examples: LC204-25,** 25 lb capacity surface mount load cell, **$489.
LC204-1K,** 1000 lb capacity surface mount load cell, **$489.

Accessories

MODEL NO.	PRICE	DESCRIPTION
REC-012F	**$45**	Rod end

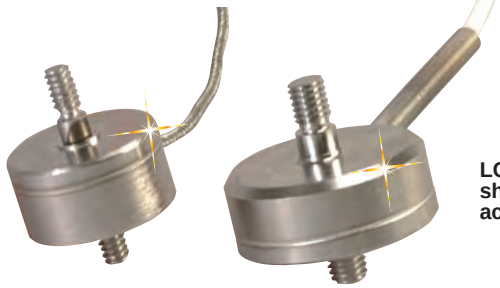
ECONOMICAL MINIATURE TENSION OR COMPRESSION LOAD CELLS 0.75 TO 1" DIAMETER

TENSION/COMPRESSION CALIBRATED IN TENSION 0-2.2 LB TO 0-100 LB 0-1 KG TO 0-45 KG

LCFL Series All Models **$595**

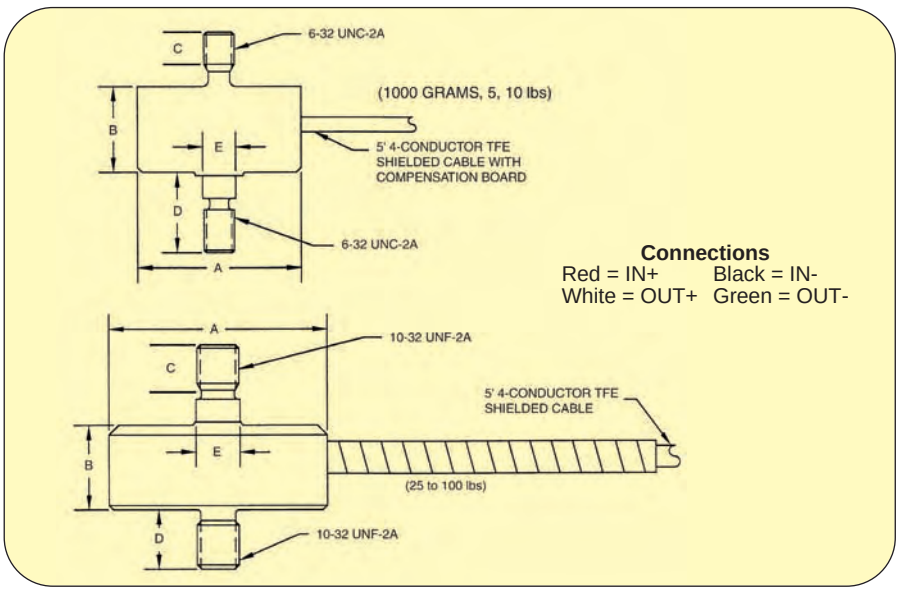
MADE IN USA NIST OMEGADYNE & analab

Small and capable of highly accurate readings, the LCFL subminiature load cells are suitable for precision industrial applications. They are all stainless steel, measure either tension or compression loads, and have male thread studs for load attachment. The exclusive internal design provides superior long-term stability and minimizes the effects of small off-axis loads.



LCFL-10, $595, shown larger than actual size.

LCFL-100, $595, shown larger than actual size.



SPECIFICATIONS

Excitation:
1 kg to 10 lb: 5 Vdc
≥25 lb: 10 Vdc
Output:
1 kg: 1.0 mV/V (nom.)
5 to 100 lb: 2 mV/V (nom.)
Accuracy (Linearity and Hysteresis Combined): ±0.50% FSO
Repeatability: ±0.20% FSO
5-Point Calibration (in Tension): 0%, 50%, 100%, 50%, 0%
Zero Balance: ±2% FSO
Operating Temp Range: -53 to 121°C (-65 to 250°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Span: ≥1 kg: ±0.009% rdg/°C
Zero: ≥1 kg: 0.009% FSO/°C
Deflection FS: 0.03 to 0.08 mm (0.001 to 0.003")
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω minimum
Construction: Stainless steel
Electrical Connection: 1.5 m (5') 4-conductor, shielded TFE cable
Protection Rating: IP54

Dimensions: mm (in)

CAPACITY	A	B	C	D	E
1 kg; 5, 10 lb	19.1 (0.75)	10.1 (0.40)	6.4 (0.25)	9.7 (0.38)	3.8 (0.15)
25 to 100 lb	25.4 (1.00)	9.9 (0.39)	9.7 (0.38)	7.0 (0.26)	5.0 (0.20)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

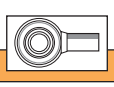
CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
2.2	1	**LCFL-1KG**	**$595**	DPiS, DP41-S, DP25B-S
5	2.3	**LCFL-5**	**595**	DPiS, DP41-S, DP25B-S
10	4.5	**LCFL-10**	**595**	DPiS, DP41-S, DP25B-S
25	11	**LCFL-25**	**595**	DPiS, DP41-S, DP25B-S
50	23	**LCFL-50**	**595**	DPiS, DP41-S, DP25B-S
75	34	**LCFL-75**	**595**	DPiS, DP41-S, DP25B-S
100	45	**LCFL-100**	**595**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST-traceable calibration.

** See section D for compatible meters. DPiS meter suitable for one direction measurement only.*

Ordering Examples: LCFL-1KG,** 1 kg load cell, **$595,** matching rod end, **REC-006F, $10** ea. **LCFL-100,** 100 lb capacity load cell, **$595,** matching rod end, **REC-010F, $10 ea.

Accessories



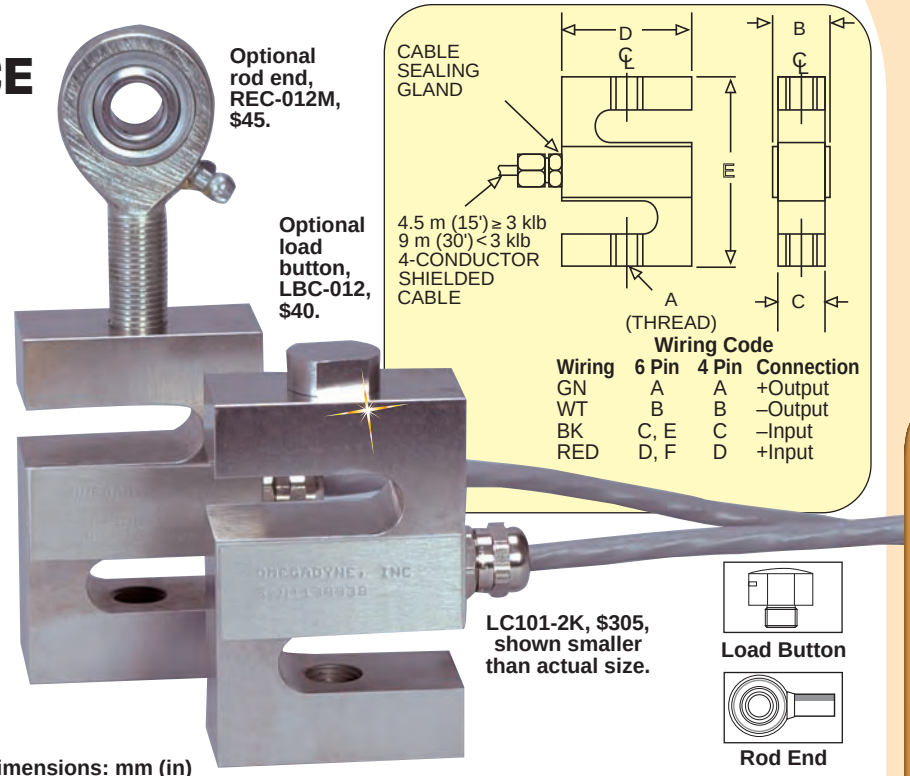
MODEL NO.	PRICE	DESCRIPTION
REC-006F	**$10**	Rod end for LCFL-1KG, LCFL-5, LCFL-10
REC-010F	**10**	Rod end for LCFL-25, LCFL-50, LCFL-75, LCFL-100

ALL STAINLESS STEEL "S" BEAM LOAD CELLS

HIGH ACCURACY, ECONOMICAL PRICE

TENSION/COMPRESSION
LC101 (CABLE STYLE)
LC111 (CONNECTOR STYLE)
0-25 LB TO 0-40,000 LB
0-11 KG TO 0-18,149 KG

LC101/ LC111 Series Starts at **$305**



- **FM Intrinsically Safe**
- **All Stainless Steel for Harsh Industrial Applications**
- **0.25% Interchangeability for Multiple Load Cell Applications**
- **5-Point Calibration Provided (in Tension)**

SPECIFICATIONS

Excitation: 10 Vdc, 15 Vdc max
Output: 3 mV/V ±0.0075 mV/V
Linearity: ±0.03% FSO (0.1% 40 K)
Hysteresis: ±0.02% FSO (0.1% 40 K)
Repeatability: ±0.01% FSO (0.05% 40 K)
Zero Balance: ±1% FSO
Agency Approval: FM Intrinsically Safe IS/I.II.III/1/CDEFG (standard)
Operating Temp Range: -40 to 93°C (-40 to 200°F)
Compensated Temp Range: 17 to 71°C (60 to 160°F)
Thermal Effects:
Zero: 0.002% FSO/°C
Span: 0.002% FSO/°C
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 350 ±10 Ω
Output Resistance: 350 ±10 Ω
Full Scale Deflection: 0.010 to 0.020"
Construction: 17-4 PH stainless steel
Electrical, Model LC101 (4-Conductor Shielded Cable):
<250 lb: 9 m (30') 24 AWG
250 to 2K: 9 m (30') 20 AWG
>2K: 4.5 m (15') 20 AWG
LC111: 4- or 6-pin connector
Mating Connector, Model LC111:
≤200 lb: PT06F-8-4S (not included)
≥250 lb: PT06F-10-6S (not included)

Dimensions: mm (in)

CAPACITY (lb)	A	B	C	D	E	WEIGHT kg (lb)
25 to 200	¼-28	19 (0.75)	13 (0.50)	38 (1.5)	64 (2.5)	0.45 (1.0)
250 to 2K	½-20	32 (1.25)	25 (1.0)	51 (2.0)	76 (3.0)	1.1 (2.5)
3K to 5K	⅝-18	32 (1.25)	25 (1.0)	51 (2.5)	89 (3.5)	1.6 (3.5)
10K to 20K	1-14	44 (1.75)	38 (1.5)	76 (3.0)	108 (4.3)	2.0 (4.5)
25K to 30K	1-14	57 (2.25)	51 (2.0)	102 (4.0)	108 (4.3)	4 (9)
40K	1¼-12	83 (3.25)	76 (3.0)	102 (4.0)	140 (5.5)	6 (13)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO. CABLE	MODEL NO. CONN.	PRICE	COMPATIBLE METERS*	LOAD BUTTON MODEL NO.	LOAD BUTTON PRICE	ROD END MODEL NO.	ROD END PRICE
25	11	LC101-25	LC111-25	$305	DP41-S, DP25B-S	LBC-014	$40	REC-014M	$25
50	23	LC101-50	LC111-50	305	DP41-S, DP25B-S	LBC-014	40	REC-014M	25
100	45	LC101-100	LC111-100	305	DP41-S, DP25B-S	LBC-014	40	REC-014M	25
200	91	LC101-200	LC111-200	305	DP41-S, DP25B-S	LBC-014	40	REC-014M	25
250	114	LC101-250	LC111-250	305	DP41-S, DP25B-S	LBC-012	40	REC-012M	45
500	227	LC101-500	LC111-500	305	DP41-S, DP25B-S	LBC-012	40	REC-012M	45
1000	455	LC101-1K	LC111-1K	305	DP41-S, DP25B-S	LBC-012	40	REC-012M	45
2000	909	LC101-2K	LC111-2K	305	DP41-S, DP25B-S	LBC-012	40	REC-012M	45
3000	1361	LC101-3K	LC111-3K	365	DP41-S, DP25B-S	LBC-058	45	REC-058M	69
5000	2269	LC101-5K	LC111-5K	445	DP41-S, DP25B-S	LBC-058	45	REC-058M	69
10,000	4537	LC101-10K	LC111-10K	465	DP41-S, DP25B-S	LBC-100	55	REC-100M	135
20,000	9074	LC101-20K	LC111-20K	675	DP41-S, DP25B-S	LBC-100	55	REC-100M	135
25,000	11,343	LC101-25K	LC111-25K	825	DP41-S, DP25B-S	LBC-100	55	REC-100M-1	250
30,000	13,612	LC101-30K	LC111-30K	825	DP41-S, DP25B-S	LBC-100	55	REC-100M-1	250
40,000	18,149	LC101-40K	LC111-40K	875	DP41-S, DP25B-S	LBC-114	60	REC-114M	95

*Comes with 5-point NIST-traceable calibration. * See omega.com for compatible meters. To order connector style, change model number to **LC111**, no extra charge. Mating connector not included.*

Ordering Examples: LC111-200,** 200 lb capacity connector-style load cell, **$305.** **PT06F-8-4S,** mating connector, **$26.50 ea.** **REC-014M,** matching rod end, **$25 ea.** **LBC-014,** matching load button, **$40.** **LC101-5K,** 5000 lb capacity cable-style load cell, **$445.** **REC-058M,** matching rod end, **$69 ea.

NEW

HIGH-ACCURACY S-BEAM LOAD CELLS

RUGGED FOR INDUSTRIAL APPLICATIONS

25 TO 10,000 LB CAPACITIES 11 TO 4536 KG CAPACITIES

LCR Series Starts at $270

MADE IN USA NIST OMEGADYNE

- High Accuracy
- 5-Point Calibration Included
- 0.25% Interchangeability for Multiple Load Cell Applications
- Lightweight Aluminum Construction Ranges to 1000 lb
- Rugged Stainless Steel on Upper Ranges

LCR-2K, $280, shown smaller than actual size.

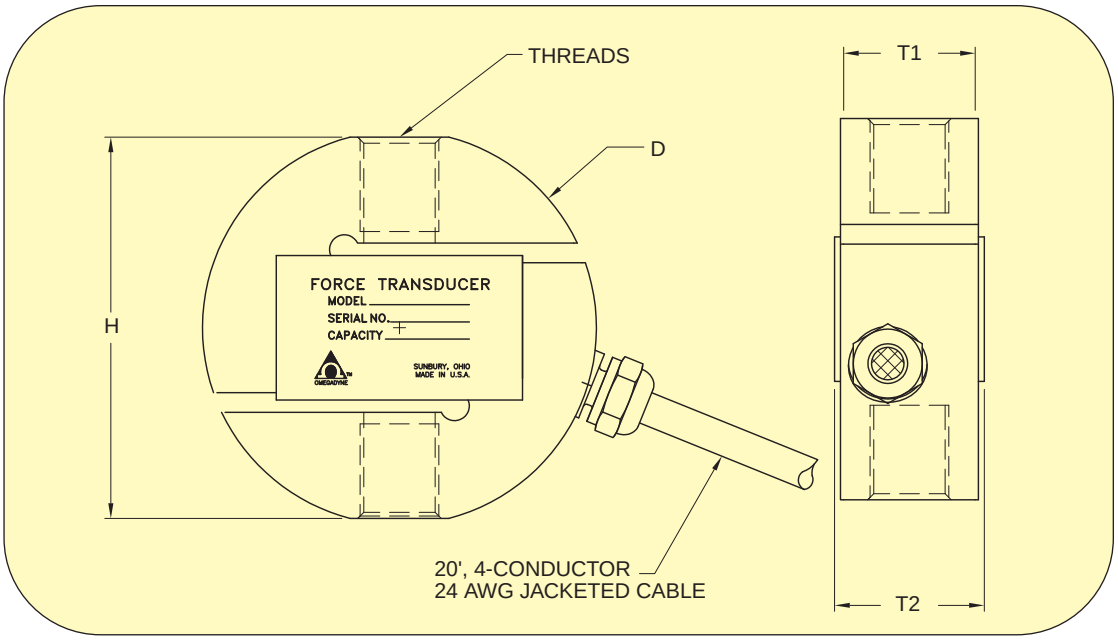
Rod ends, REC012M, $45, sold separately.

LCR-1K, $270, shown smaller than actual size.

SPECIFICATIONS

Excitation: 10 Vdc, 15 V max
Output: 3 mV/V ±0.25%
Calibration: 5 point in tension (0%, 50%, 100%, 50%, 0%)
Linearity: ±0.03%
Hysteresis: ±0.02%
Repeatability: ±0.01%
Creep (20 min): ±0.03%
Operating Temperature: -18 to 71ºC (0 to 150ºF)
Compensated Temperature: 17 to 71ºC (60 to 160ºF)
Thermal Effects:
Zero: ±0.0027% FS/ºC
Span: ±0.0015% rdg/ºC
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Bridge Resistance: 350 Ω nominal
Protection Level: IP55
Material:
≤1000 lb Ranges: Aluminum
>1000 lb Ranges: 17-4 PH SS
Electrical Connection: 6 m (20')
Wiring:
Red: (+) Excitation
Black: (-) Excitation
Green: (+) Output
White: (-) Output

Sensors product line continues to expand, visit omegamation.com for new details!



CAPACITY		THREADS	DIMENSIONS: mm (in)					WEIGHT kg (lb)
lb	kg		H	D	T1	T2	DEFL.	
25	11	1/4-28 UNF-2B	49 (1.94)	51 (2)	14 (0.55)	23 (0.9)	0.28 (0.01)	0.18 (0.4)
50	23	1/4-28 UNF-2B	49 (1.94)	51 (2)	14 (0.55)	23 (0.9)	0.25 (0.01)	0.18 (0.4)
100	45	1/4-28 UNF-2B	49 (1.94)	51 (2)	14 (0.55)	23 (0.9)	0.23 (0.01)	0.18 (0.4)
150	68	1/4-28 UNF-2B	49 (1.94)	51 (2)	14 (0.55)	23 (0.9)	0.23 (0.01)	0.18 (0.4)
200	91	1/4-28 UNF-2B	49 (1.94)	51 (2)	14 (0.55)	23 (0.9)	0.25 (0.01)	0.18 (0.4)
250	113	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	0.36 (0.8)
500	227	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	0.36 (0.8)
750	340	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	0.36 (0.8)
1000	454	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	1.04 (2.3)
2000	907	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	1.04 (2.3)
3000	1361	1/2-20 UNF-2B	61 (2.42)	64 (2.5)	22 (0.88)	30 (1.2)	0.23 (0.01)	1.04 (2.3)
5000	2269	3/4-16 UNF-2B	74 (2.9)	89 (3.5)	32 (1.25)	38 (1.5)	0.28 (0.01)	2.54 (5.6)
10,000	4537	3/4-16 UNF-2B	74 (2.9)	89 (3.5)	32 (1.25)	46 (1.8)	0.36 (0.01)	3.09 (6.8)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY					LOAD BUTTON		ROD END	
lb	kg	MODEL NO.	PRICE	COMPATIBLE METERS*	MODEL NO.	PRICE	MODEL NO.	PRICE
25	11	**LCR-25**	**$270**	DP41-S, DP25B-S, DPi8-S	**LBC-14**	**$40**	**REC-014M**	**$25**
50	23	**LCR-50**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC-14**	**40**	**REC-014M**	**25**
100	45	**LCR-100**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC-14**	**40**	**REC-014M**	**25**
150	68	**LCR-150**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC-14**	**40**	**REC-014M**	**25**
200	91	**LCR-200**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC-14**	**40**	**REC-014M**	**25**
250	113	**LCR-250**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
500	227	**LCR-500**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
750	340	**LCR-750**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
1000	454	**LCR-1K**	**270**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
2000	907	**LCR-2K**	**280**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
3000	1361	**LCR-3K**	**340**	DP41-S, DP25B-S, DPi8-S	**LBC12**	**40**	**REC-012M**	**45**
5000	2269	**LCR-5K**	**420**	DP41-S, DP25B-S, DPi8-S	**LBC34**	**55**	**REC-034M**	**65**
10,000	4537	**LCR-10K**	**440**	DP41-S, DP25B-S, DPi8-S	**LBC34**	**55**	**REC-034M**	**65**

Comes with 5-point NIST-traceable calibration.

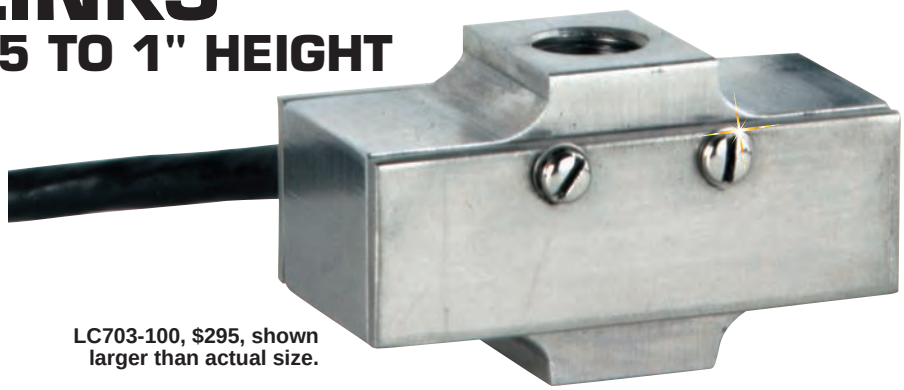
Ordering Examples: LCR-1K,** 1000 lb capacity load cell, **$270.** Two **REC-012M,** rod ends, **$90.

MINIATURE LOW-PROFILE TENSION LINKS

LOW PROFILE 0.75 TO 1" HEIGHT

TENSION/COMPRESSION
CALIBRATED IN TENSION
10 LB TO 1000 LB
4.5 KG TO 455 KG

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kg = 2204 lb



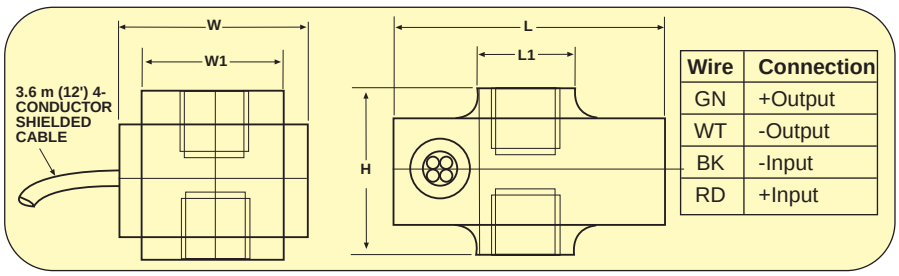
LC703-100, $295, shown larger than actual size.

LC703 Series Starts at $295

MADE IN USA | NIST | OMEGADYNE | & analab

- **Low Profile**
- **High Accuracy**
- **Rugged Industrial Design**

The LC703 Series comprises economical universal (tension/compression) load cells with a low profile. Ranges above 100 lb are stainless steel; ranges below 100 lb are aluminum. The low profile and rugged design make LC703s suitable for many industrial applications, including robotics, automated weighing systems, and batch-process control systems.



Wire	Connection
GN	+Output
WT	-Output
BK	-Input
RD	+Input

Dimensions: mm (in)

Capacity (lb)	L (Max)	L1	W	W1	H	Thread
10	38 (1.50)	14 (0.56)	14 (0.54)	9.5 (0.38)	19 (0.75)	10-32 x 0.20
25 to 100	41 (1.62)	14 (0.56)	17 (0.66)	13 (0.50)	19 (0.75)	¼-28 x 0.23
150 to 1K	44 (1.75)	14 (0.56)	24 (0.93)	19 (0.75)	25 (1.0)	⅜-24 x 0.38

SPECIFICATIONS

Excitation: 10 Vdc (15 V max)
Output: 2 mV/V nominal
5-Point Calibration:
0%, 50%, 100%, 50%, 0%
Linearity:
10 to 100 lb: ±0.15%
>100 lb: ±0.10 FSO
Hysteresis:
10 to 100 lb: ±0.15%
>100 lb: ±0.10 FSO
Repeatability: ±0.05%
Zero Balance: ±1.0% FSO
Operating Temp Range:
-40 to 82°C (-40 to 180°F)
Compensated Temp Range:
16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: ±0.005% FSO/°F
Span: ±0.005%% FSO/°F
Protection Class: IP54

Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Output Resistance: 350 ±10 Ω
Input Resistance: 360 Ω minimum
Full Scale Deflection: 0.003" nominal

Construction:
≤100 lb: Aluminum
>100 lb: 17-4 PH stainless steel
Electrical: 3.6 m (12') shielded 4-conductor PVC cable

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
10	4.5	**LC703-10**	**$295**	DPiS, DP41-S, DP25B-S
25	11	**LC703-25**	**295**	DPiS, DP41-S, DP25B-S
50	23	**LC703-50**	**295**	DPiS, DP41-S, DP25B-S
75	34	**LC703-75**	**295**	DPiS, DP41-S, DP25B-S
100	45	**LC703-100**	**295**	DPiS, DP41-S, DP25B-S
150	68	**LC703-150**	**295**	DPiS, DP41-S, DP25B-S
200	91	**LC703-200**	**295**	DPiS, DP41-S, DP25B-S
300	136	**LC703-300**	**295**	DPiS, DP41-S, DP25B-S
500	227	**LC703-500**	**395**	DPiS, DP41-S, DP25B-S
750	341	**LC703-750**	**395**	DPiS, DP41-S, DP25B-S
1000	455	**LC703-1K**	**395**	DPiS, DP41-S, DP25B-S

*Comes with 5-point NIST-traceable calibration. * See omega.com for compatible meters. DPiS meter suitable for one direction measurement only.*

Ordering Examples: LC703-200,** 200 lb capacity universal link with 3.6 m (12') cable, **$295.** **LC703-500,** 500 lb capacity tension link with 3.6 m (12') cable, **$395.

Accessories

MODEL NO.	PRICE	DESCRIPTION
REC-010M	**$10**	10-32 male rod end
REC-014M	**25**	¼-28 male rod end
REC-038M	**25**	⅜-24 male rod end

LOW-RANGE CONSTANT MOMENT BEAM LOAD CELLS
WITH 4-DIRECTION OVERLOAD STOPS

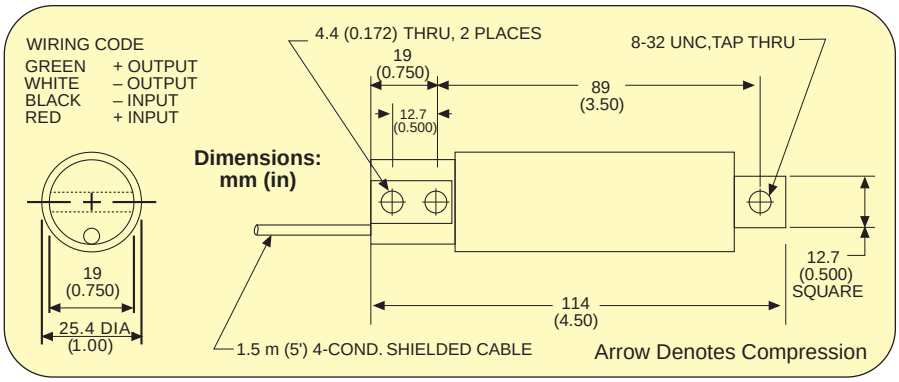
TENSION/COMPRESSION
0-1 LB TO 0-25 LB
0-0.4 KG TO 0-11 KG

LC601 Series Starts at $395

MADE IN USA · NIST · OMEGADYNE · FM APPROVED · & analab

- FM Approved Intrinsically Safe (Standard)
- 4-Direction Overload Stops
- 0.25% Interchangeability
- High-Quality All Stainless Steel Construction
- Rugged Industrial Design
- 5-Point Calibration

LC601-25, $395, shown smaller than actual size.



OMEGA's LC601 Series comprises extremely low-capacity industrial load cells with built-in overload stops in all 4 directions for added durability. They offer high accuracy and rugged construction in a small package and are ideal for small scales and for industrial weighing applications.

SPECIFICATIONS

Excitation: 10 Vdc, 15 V max
Output: 2 mV/V ±0.25%
5-Point Calibration (in Compression): 0%, 50%, 100%, 50%, 0%
Linearity: ±0.03% FSO
Hysteresis: ±0.03% FSO
Repeatability: ±0.02% FSO
Zero Balance: ±1% FSO
Agency Approvals: FM Intrinsically Safe/I.II.III/1/CDEFG
Operating Temperature Range: -34 to 82°C (-30 to 180°F)
Compensated Temperature Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: ±0.0025% FSO/°F
Span: ±0.0010% FSO/°F
Safe Overload: 150% of rated capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±10 Ω

Full Scale Deflection: 0.005 to 0.015" typ
Construction: Stainless steel

Electrical Connections: 1.5 m (5')
4-conductor shielded color-coded cable

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO.	PRICE	COMPATIBLE METERS*
1	0.4	**LC601-1**	**$395**	DPiS, DP41-S, DP25B-S
2	909 g	**LC601-2**	**395**	DPiS, DP41-S, DP25B-S
5	2.3	**LC601-5**	**395**	DPiS, DP41-S, DP25B-S
10	4.5	**LC601-10**	**395**	DPiS, DP41-S, DP25B-S
15	7	**LC601-15**	**395**	DPiS, DP41-S, DP25B-S
25	11	**LC601-25**	**395**	DPiS, DP41-S, DP25B-S

Comes with 5-point NIST-traceable calibration.
** See omega.com for compatible meters.*
DPiS meter suitable for one direction measurement only.
Ordering Examples: LC601-5,** 5 lb capacity load cell, **$395. LC601-10,** 10 lb capacity load cell, **$395.

HIGH-ACCURACY STAINLESS STEEL CANTILEVER BEAMS

SELF-ADJUSTING WEIGH MODULES AVAILABLE

TENSION/COMPRESSION
LC501 (CABLE STYLE)
LC511 (CONNECTOR STYLE)
0-100 LB TO 0-100,000 LB
0-45 KG TO 0-45,372 KG

LC501/ LC511 Series Starts at $340

LC501-20K, $695, shown smaller than actual size.

- **FM Approved Intrinsically Safe Rating**
- **All Stainless Steel Construction for Harsh Industrial Applications**
- **0.25% Interchangeability for Multiple Cell Applications**
- **5-Point Calibration Provided**

IP67 Protection Level

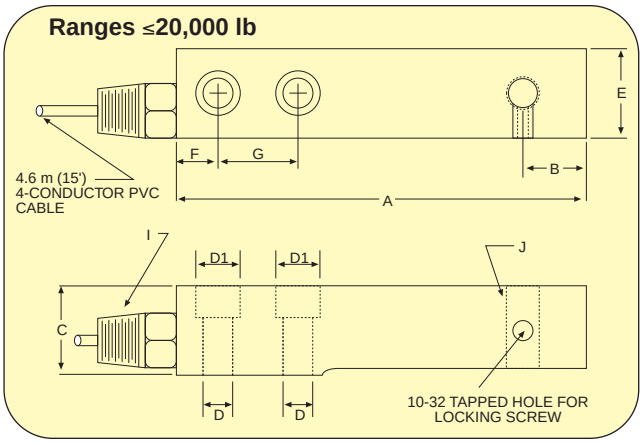
TWA5-750, $560, shown smaller than actual size.

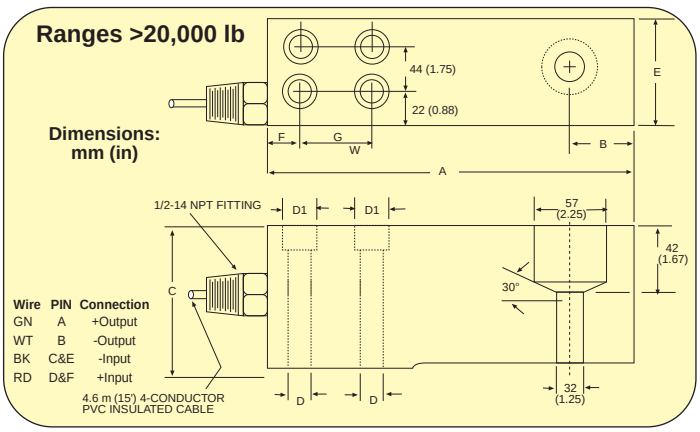
SPECIFICATIONS

Excitation: 10 Vdc, 15 Vdc max
Output: 3 mV/V ±0.25%
5-Point Calibrated (in Compression): 0%, 50%, 100%, 50%, 0%
Linearity: ±0.03% FSO
Hysteresis: ±0.02% FSO
Repeatability: ±0.02% FSO
Zero Balance: ±1% FSO
Agency Approvals: FM Intrinsically Safe IS/I.II.III/1/CDEFG
Operating Temp Range: -34 to 82°C (-30 to 180°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: ±0.001% FSO/ºF
Span: ±0.001% FSO/ºF
Safe Overload: 150% of capacity
Ultimate Overload: 300% of capacity
Input Resistance: 360 Ω minimum
Output Resistance: 350 ±10 Ω
FS Deflection: 0.5 mm (0.02") typical
Construction: 17-4 PH stainless steel, >20,000 lb, high-alloy steel
Electrical: 4-conductor shielded PVC cable
LC501: 4.8 m (15')
Mating connector: PT06F10-6S $26.50 (not included)

Dimensions: mm (in)

CAPACITY (lb)	A	B	C	D	D1	E	F	G	I	J	WEIGHT kg (lb)
100 to 750	121 (4.75)	19 (0.75)	25 (1.0)	9.9 (0.39)	15 (0.59)	25 (1.0)	13 (0.50)	25 (1.0)	⅜-18 UNC	½-20	0.9 (2)
1K to 5K	173 (6.75)	25 (1.0)	38 (1.5)	13 (0.53)	20 (0.77)	38 (1.5)	13 (0.50)	38 (1.5)	½-14 UNC	½-20	1.8 (4)
10K	197 (7.75)	25 (1.0)	38 (1.5)	20 (0.77)	n/a	38 (1.5)	19 (0.75)	51 (2.0)	½-14 UNC	¾-16	2.3 (5)
20K	241 (9.50)	25 (1.0)	64 (2.5)	20 (0.77)	n/a	51 (2.0)	25 (1.00)	57 (2.25)	½-14 UNC	1-12	5 (11)
50K to 100K	330 (13.00)	51 (2.0)	102 (4.0)	26 (1.03)	40 (1.56)	90 (3.5)	32 (1.25)	70 (2.75)	½-14 UNC	n/a	19 (42)





ACCESSORY HARDWARE:

TWA SERIES omega.com
SELF-ADJUSTING WEIGH MODULES:
TWA5: Nickel-plated carbon steel
TWA6: Stainless steel
Models for Loads from:
0-100 lb to 0-20,000 lb
0-45 kg to 0-9000 kg

To Order *(Specify Model Number)*

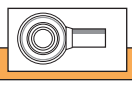
MOST POPULAR MODELS HIGHLIGHTED!

CAPACITY lb	CAPACITY kg	MODEL NO. CABLE STYLE	MODEL NO. CONNECTOR STYLE	PRICE	COMPATIBLE METERS**
100	45	**LC501-100**	**LC511-100**	**$340**	DP41-B, DP41-S, DP25B-S
200	91	**LC501-200**	**LC511-200**	**340**	DP41-B, DP41-S, DP25B-S
500	227	**LC501-500**	**LC511-500**	**340**	DP41-B, DP41-S, DP25B-S
750	341	**LC501-750**	**LC511-750**	**340**	DP41-B, DP41-S, DP25B-S
1000	455	**LC501-1K**	**LC511-1K**	**350**	DP41-B, DP41-S, DP25B-S
2000	909	**LC501-2K**	**LC511-2K**	**350**	DP41-B, DP41-S, DP25B-S
3000	1361	**LC501-3K**	**LC511-3K**	**350**	DP41-B, DP41-S, DP25B-S
5000	2269	**LC501-5K**	**LC511-5K**	**350**	DP41-B, DP41-S, DP25B-S
10,000	4537	**LC501-10K**	**LC511-10K**	**695**	DP41-B, DP41-S, DP25B-S
20,000	9074	**LC501-20K**	**LC511-20K**	**695**	DP41-B, DP41-S, DP25B-S*
30,000	13,612	**LC501-30K**	**LC511-30K**	**695**	DP41-B, DP41-S, DP25B-S*
50,000	22,686	**LC501-50K**	**LC511-50K**	†	DP41-B, DP41-S, DP25B-S*
80,000	36,298	**LC501-80K**	**LC511-80K**	†	DP41-B, DP41-S, DP25B-S*
100,000	45,372	**LC501-100K**	**LC511-100K**	†	DP41-B, DP41-S, DP25B-S*

Comes with 5-point NIST-traceable calibration. ***** *4-digit meter.* ****** *See section D for compatible meters.*
† *Special quote.*
Notes: *Base plates are nickel-plated carbon steel. To order stainless steel base plates, specify* ***BP-10-SS ($70), BP-15-SS ($144), BP-20-SS ($144).*** *To order load cells with a Bendix connector, specify model* ***LC511****, same price.* ***PT06F10-6S,*** *mating connector (not included),* ***$26.50.***

Ordering Examples: LC501-5K, *5000 lb capacity load cell,* ***$350. REC-012M,*** *optional rod end,* ***$45. BP-15,*** *optional base plate,* ***$76. LC501-100,*** *100 lb capacity load cell,* ***$340. REC-012M,*** *optional rod end,* ***$45. BP-10,*** *optional base plate,* ***$44. LC501-20K,*** *20,000 lb capacity load cell,* ***$695. LBC-101,*** *optional load button,* ***$55. BP-20,*** *optional base plate,* ***$80.***

Accessories

MODEL NO.	PRICE	DESCRIPTION	LOAD BUTTON / ROD END
LBC-012	**$40**	Load button for ranges 100 to 5000 lb	
LBC-034	**55**	Load button for LC501/511-10K	
LBC-101	**55**	Load button for LC501/511-20K	
REC-012M	**45**	Rod end for ranges 100 to 5000 lb	
REC-034M	**65**	Rod end for LC501/511-10K	
BP-10	**44**	Base plate for LC501/511-100, LC501/511-200, LC501/511-500, LC501/511-750	
BP-15	**76**	Base plate for LC501/511-1K, LC501/511-2K, LC501/511-3K, LC501/511-5K, LC501/511-10K	
BP-20	**80**	Base plate for LC501/511-20K	

NEW COMPACT, RUGGED, ADJUSTABLE PRESSURE AND VACUUM SWITCHES

PSW21 & PSW22 Series Starts at $28

MADE IN USA

- **Adjustable Setpoint**
- **⅛ NPT or Center Spout for ⅛ ID Tubing**
- **Pressure and Vacuum Models Available**
- **UL Recognized, CSA Certified Up to 25 A**

These compact pressure and vacuum switches are designed and manufactured to exacting standards to meet the needs of OEM manufacturers and instrument makers for a low-cost, stable, repeatable switch. Plastic mechanisms and housings are acetal to minimize moisture absorption and maintain dimensional stability. Plastic welding is accomplished using advanced microprocessor-controlled, ultrasonic welding equipment. All switches are 100% tested at high and low settings and at the proof pressure. Units are delivered with the setpoint at approximately the midpoint of the adjustable range.

SPECIFICATIONS

Approval: UL-recognized, CSA-certified switches; microswitches bear the CE and ENEC mark
Temperature Range: -10 to 70°C (14 to 158°F)
Setpoint Accuracy: ±10% of setting at 21°C (70°F)
Note: Pressure settings may change over the temperature range
Hysteresis (Deadband): 15 to 25% of the setpoint
Electrical: See the table for the switch amp rating, 250 Vac
Terminals: 6.35 mm (0.25") standard "slide-on" male

MATERIALS OF CONSTRUCTION

Body and Mechanism: Acetal
Diaphragm: EPDM (ethylene-propylene diene monomer)
Screws: Stainless or zinc-plated steel
Springs: Stainless steel
Media Compatibility: Air, water and many other fluids and gases that are compatible with EPDM and acetal
Note: Mineral oil and similar fluids are not compatible with EPDM. Request nitrile diaphragm (see "Custom Switches" on next page)
Weight: 50 g (1.8 oz)
Overall Dimensions: Approx 54 x 76 x 45 mm (2.125 x 3 x 1.75")
Setting: The pressure switch is field adjustable using the hex head set screw at the center of the pressure switch (PSW 21/22-WRENCH); the vacuum switch is field adjustable using the Phillips head screw on the switch carrier; dual Pressure Switch: The DPDT (2 switches) will both change state at approximately the same setpoint; on DPDT units, one switch may be set to lead or lag the other (see "Custom Switches" on next page)

PSW21(*)D

Shown larger than actual size.

PSW21(*)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

PRESSURE SWITCHES	PSW21, ⅛ MNPT with 9/16 Threaded Mounting Nut Included			
MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	SPDT SWITCH RATING
PSW21A	**$35**	3 to 7 inH_2O	20 psig	3 A (resistive)
PSW21B	**35**	5 to 35 inH_2O	20 psig	5 A (resistive)
PSW21C	**28**	1 to 6 psig	50 psig	21 A (resistive)
PSW21D	**28**	4 to 11 psig	50 psig	25 A (resistive)
PSW21E	**28**	9 to 18 psig	50 psig	25 A (resistive)
PSW21F	**28**	15 to 28 psig	50 psig	25 A (resistive)
PSW21G	**29**	25 to 40 psig	200 psig	25 A (resistive)
PSW21H	**29**	35 to 65 psig	200 psig	25 A (resistive)
PSW21J	**29**	50 to 100 psig	200 psig	25 A (resistive)
PSW21K	**29**	75 to 120 psig	200 psig	25 A (resistive)

ADJUSTABLE PRESSURE AND VACUUM SWITCHES

PSW22(*)D

PSW22(*)

All products shown smaller than actual size.

ACCESSORIES

PSW21/22-WRENCH

Allen wrench for adjusting pressure switches only, $1; vacuum switch is adjusted with a Phillips head screwdriver

CUSTOM SWITCHES

Custom pressure switches are available–50 piece minimum order; consult Pressure Engineering for price and delivery

Custom Options:
Factory setting available at specified setpoint
Switch Body: Noryl®
Diaphragm: Nitrile
DPDT: Switch can be factory set so that each switch operates at a different pressure setting.

Noryl® is a registered trademark of GE.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

PRESSURE SWITCHES PSW21 ⅛ MNPT with 9⁄16 Threaded Mounting Nut Included

MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	DPDT SWITCH RATING
PSW21BD	**$45**	10 to 35 inH_2O	250 inH_2O	5 A (resistive)
PSW21CD	**45**	1 to 6 psig	50 psig	21 A (resistive)
PSW21DD	**42**	4 to 11 psig	50 psig	25 A (resistive)
PSW21ED	**42**	9 to 18 psig	50 psig	25 A (resistive)
PSW21FD	**42**	15 to 28 psig	50 psig	25 A (resistive)
PSW21GD	**42**	25 to 40 psig	200 psig	25 A (resistive)
PSW21HD	**45**	35 to 65 psig	200 psig	25 A (resistive)
PSW21JD	**45**	50 to 100 psig	200 psig	25 A (resistive)
PSW21KD	**45**	75 to 120 psig	200 psig	25 A (resistive)

PRESSURE SWITCHES PSW22 Center Spout for ⅛ ID tubing with 9⁄16 Threaded Mounting Nut & Tube Lock Nut Included

MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	SPDT SWITCH RATING
PSW22A	**$35**	3 to 7 inH_2O	250 inH_2O	3 A (resistive)
PSW22B	**35**	5 to 35 inH_2O	250 inH_2O	5 A (resistive)
PSW22C	**28**	1 to 6 psig	50 psig	21 A (resistive)
PSW22D	**28**	4 to 11 psig	50 psig	25 A (resistive)
PSW22E	**28**	9 to 18 psig	50 psig	25 A (resistive)
PSW22F	**28**	15 to 28 psig	50 psig	25 A (resistive)

PRESSURE SWITCHES PSW22 Center Spout for ⅛ ID tubing with 9⁄16 Threaded Mounting Nut & Tube Lock Nut Included

MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	DPDT SWITCH RATING
PSW22BD	**$45**	10 to 35 inH_2O	250 inH_2O	5 A (resistive)
PSW22CD	**45**	1 to 6 psig	50 psig	21 A (resistive)
PSW22DD	**45**	4 to 11 psig	50 psig	25 A (resistive)
PSW22ED	**45**	9 to 18 psig	50 psig	25 A (resistive)
PSW22FD	**45**	15 to 28 psig	50 psig	25 A (resistive)

VACUUM SWITCHES PSW21 ⅛ MNPT with 9⁄16 Threaded Mounting Nut Included

MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	SPDT SWITCH RATING
PSW21L	**$39.50**	3 to 7 inWC Vac	350 inWC Vac	3 A (resistive)
PSW21M	**39.50**	6 to 16 inWC Vac	350 inWC Vac	10 A (resistive)
PSW21N	**39.50**	13 to 25 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21P	**39.50**	20 to 40 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21Q	**39.50**	35 to 80 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21R	**39.50**	75 to 150 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21T	**39.50**	145 to 300 inWC Vac	350 inWC Vac	21 A (resistive)

VACUUM SWITCHES PSW21 ⅛ NPT with 9⁄16 Threaded Mounting Nut Included

MODEL NO.	PRICE	ADJUSTABLE RANGE	PROOF PRESSURE	DPDT SWITCH RATING
PSW21MD	**$48**	6 to 16 inWC Vac	350 inWC Vac	10 A (resistive)
PSW21ND	**48**	13 to 25 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21PD	**48**	20 to 40 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21QD	**48**	35 to 80 inWC Vac	350 inWC Vac	21 A (resistive)
PSW21RD	**48**	75 to 150 inWC Vac	350 inWC Vac	21 A (resistive)

Ordering Example: PSW21D, *adjustable pressure switch for setpoints between 4 and 11 psig, with 25 A SPDT switch,* ***$28.***

ECONOMICAL BRASS PRESSURE SWITCHES

10 TO 3000 PSI

See switch accessories on at omega.com for audible alarms and relay modules.

PSW-190 Series Starts at $75

MADE IN USA 1 YEAR WARRANTY UL

PSW-196, $80, shown larger than actual size.

The PSW-190 Series cylindrical pressure switch has an epoxy-sealed electrical termination. This rugged design enables the switch to withstand harsh environments.

SPECIFICATIONS

Switch: SPDT, 5 A at 250 Vac or 30 Vdc gold-clad silver contacts for loads down to 5 mA at 6 Vdc, 2 mA at 12 Vdc and 1 mA at 24 Vdc

Operating Ambient Range: -20 to 75°C (-4 to167°F) with Buna-N construction; -20 to 80°C (-4 to 176°F) with Viton® or EPDM construction
Media Temp: 70°C (158°F) with Buna-N sensor; 120°C (248°F) with Viton® sensor

Wetted Parts: Brass, O-ring and diaphragm

Repeatability:
PSW-191, 192, 195 and 196: ±1%
PSW-193, 194, 197 and 198: ±1.5%

Shock: Setpoint repeats after 50 g 10 ms duration

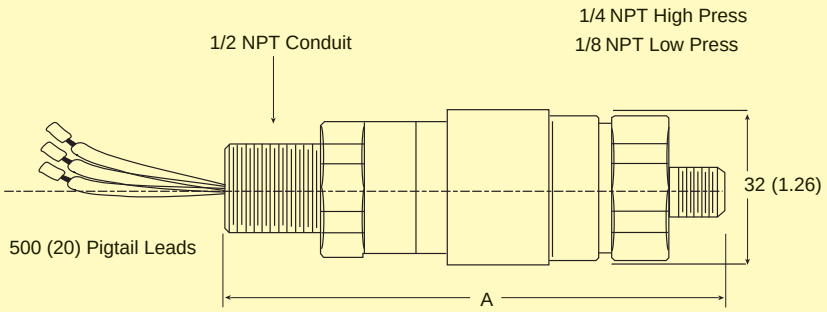
Vibration: Setpoint repeats after 10 g, 5 to 500 cps

Enclosure and Cover: Aluminum with irridite finish rated for 100 hr salt spray; potted and gasketed for outdoor use

Pressure Connection:
PSW-191, 192, 195 and 196: ⅛ NPT
PSW-193, 194, 197 and 198: ¼ NPT

Weight: 128 g (4.5 oz)

Dimensions: mm (in)



WIRE CODE
BLUE = N.O.
BLACK = N.C.
VIOLET = COM.

DIM. A
PSW-191, 192, 195, 196 = 103 (4.06)
PSW-193, 194, 197, 198 = 111 (4.37)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	ADJUSTABLE RANGE	TYPICAL DEADBAND	MAX SYS PRESSURE	PROOF PRESSURE
Models with Buna-N O-Ring and Diaphragm					
PSW-191	**$75**	10 to 150 psi	2 to 10	1500	3000
PSW-192	**75**	30 to 600 psi	8 to 60	2500	3000
PSW-193	**75**	100 to 1500 psi	20 to 220	8000	10,000
PSW-194	**75**	180 to 3000 psi	50 to 400	8000	10,000
Models with Viton® O-Ring and Diaphragm					
PSW-195	**$80**	11 to 150 psi	2.5 to 11.5	1500	3000
PSW-196	**80**	33 to 600 psi	9.5 to 69	2500	3000
PSW-197	**80**	110 to 1500 psi	23 to 253	8000	10,000
PSW-198	**80**	198 to 3000 psi	57.5 to 460	8000	10,000

Comes with complete operator's manual.

Ordering Example: PSW-192,** cylindrical pressure switch with a Buna-N O-ring and diaphragm and an adjustable range of 30 to 600 psi, **$75.

Sensors product line continues to expand, visit omegamation.com for new details!

ECONOMICAL PRESSURE AND VACUUM SWITCHES

VACUUM TO 500 PSI

PSW-620/ PSW-630 Series Starts at $66

MADE IN USA · 3 YEAR WARRANTY

PSW-635, $66, shown larger than actual size.

- **External Pressure Scale and Pointer for Easy Setpoint Adjustment**
- **Silver Switch Contacts Rated for 5 A @ 250 Vac or 3 A @ 28 Vdc**
- **1 A Gold-Plated Contacts for TTL or Dry Contacts**

SPECIFICATIONS

Process Temp: -55 to 105°C (-65 to 221°F); 2% setpoint shift can occur below -23°C (-10°F) or above 52°C (125°F)
Repeatability: ±2% of max system pressure
Cycling: Not to exceed 20 cycles/min
Warranty: 3 year/1 million cycles
Proof Pressure: 150% max pressure
Wetted Parts: 17-7 PH stainless steel, loctite sealing compound #271, ZA8 chromate finish
Enclosure: Zinc alloy, chromate finish
Dimensions: 48 L x 28 mm Dia. (1.9 x 1.1")
Pressure Port: 1/8-27 MNPT
Electrical Connection: 300 mm (12") pigtail leads, 20 AWG, polyvinyl insulated
Wiring Code (Pressure):
Red = N/C
White = N/O
Black = Common
Wiring Code (Vacuum):
Red = N/O
White = N/C
Black = Common
Weight: Approx 57 g (2 oz)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	ADJUSTABLE RANGE DECREASING	ADJUSTABLE RANGE INCREASING	DEADBAND	MAX PRES*	SWITCH
Gage Pressure Switches (Units = psi)						
PSW-621	**$70**	0.8 to 28.5	1.6 to 30	0.8 to 1.3	30	1 A
PSW-622	**70**	2.0 to 38.3	3.0 to 40	1.0 to 1.7	50	1 A
PSW-623	**70**	3.0 to 96.5	4.5 to 100	1.5 to 3.5	100	1 A
PSW-624	**70**	7.5 to 242.5	9.7 to 250	2.2 to 9.0	250	1 A
PSW-625	**70**	15 to 485	20 to 500	5.0 to 21	500	1 A
PSW-631	**66**	0.8 to 28.5	1.6 to 30	0.8 to 1.3	30	5 A
PSW-623	**66**	2.0 to 38.3	3.0 to 40	1.0 to 1.7	50	5 A
PSW-633	**66**	3.0 to 96.5	4.5 to 100	1.5 to 3.5	100	5 A
PSW-634	**66**	7.5 to 242.5	9.7 to 250	2.2 to 9.0	250	5 A
PSW-635	**66**	15 to 485	20 to 500	5.0 to 21	500	5 A
Vacuum Switches (Units = inHg Vacuum)						
PSW-626	**$70**	1.6 to 27.0	2.7 to 28.2	1.3 to 2.7	28.2 inHg vacuum or 0 psig*	1 A
PSW-627	**70**	4.0 to 24.8	5.1 to 28.2	1.5 to 3.2		1 A
PSW-628	**70**	6.0 to 21.5	8.4 to 28.2	2.0 to 7.3		1 A
PSW-636	**66**	1.6 to 27.0	2.7 to 28.2	1.3 to 2.7		5 A
PSW-637	**66**	4.0 to 24.8	5.1 to 28.2	1.5 to 3.2		5 A
PSW-638	**66**	6.0 to 21.5	8.4 to 28.2	2.0 to 7.3		5 A

** Exceeding these values may cause a shift in the setpoint.*
Comes with complete operator's manual.

Ordering Example: PSW-635,** switch for maximum system pressure of 500 psig with 5 A switch contact, **$66.

ECONOMICAL INDUSTRIAL PRESSURE SWITCHES

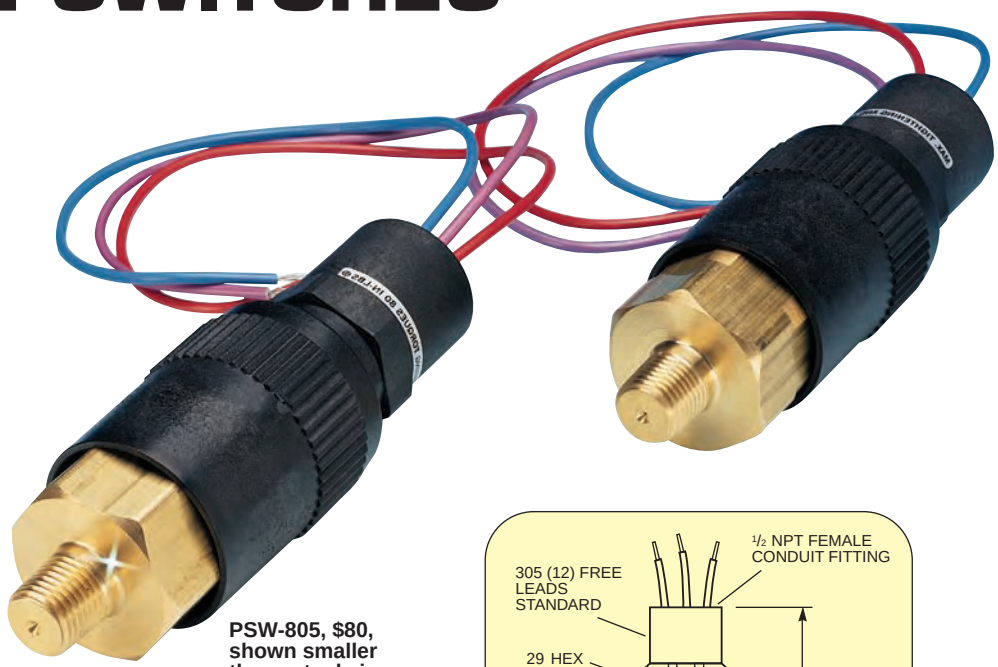
VACUUM TO 7500 PSI

PSW-800 Series All Models $80

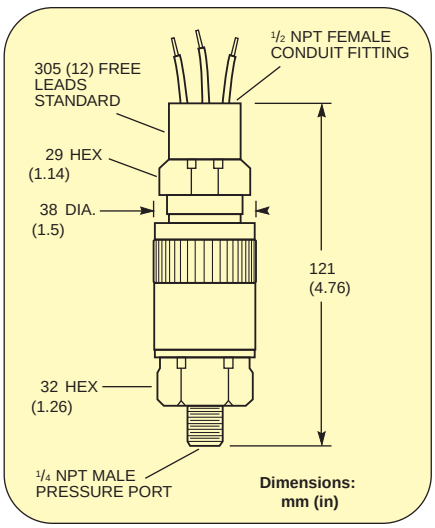
MADE IN USA · 1 YEAR WARRANTY

- **Easy Adjustment with Locking Set Screw**
- **Rugged Industrial Design**
- **Standard ½" Female Conduit Fitting for Electrical Termination**

The PSW-800 Series comprises economical pressure switches that feature an easy-to-adjust setpoint with locking set screw. They have a sealed-piston or diaphragm-piston design, ideal for harsh environments. All models come with 300 mm (12") color-coded leads and a ½" female conduit fitting for electrical connections.



PSW-805, $80, shown smaller than actual size.



WIRE CODE	PRESSURE	VACUUM
Lead	Color	Color
Normally closed	Blue	Red
Common	Purple	Purple
Normally open	Red	Blue

SPECIFICATIONS

Setpoint Repeatability:
Diaphragm Models (PSW-801 to PSW-807): ±1% of span
Piston Models (PSW-808 to PSW-811): ±1.5% of span
Hysteresis/Deadband:
See "To Order" table at right
Contact Rating: 5 A max @ 125/250 Vac, silver serrated contacts 3 A max @ 28 Vdc
Temp Range: -20 to 75°C (-4 to 167°F) (vacuum range); -30 to 75°C (-22 to 167°F) (500 psi and below); -40 to 75°C (-40 to 167° F) (600 psi and above)
Thermal Effects: <1% for 25°C (45°F) change
Proof Pressure: See "To Order" table
Burst Pressure: 2x proof pressure
Sensor Type:
PSW-801 to PSW-807: Diaphragm piston
PSW-808 to PSW-811: Sealed piston
Wetted Parts:
500 psi and Below: Brass, Buna-N
600 psi and Above: Brass, Buna-N and stainless steel
Pressure Port: ¼ MNPT
Electrical Connection: 300 mm (12") free leads with ½" female conduit fitting
Housing: Open-type plastic housing
Weight: 0.4 kg (0.95 lb)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	PRICE	PRESSURE SETTING RANGE DECREASING MIN	DECREASING MAX	INCREASING MIN	INCREASING MAX	DEADBAND RANGE	PROOF PRESSURE
VACUUM MODELS (inHg)							
PSW-801	**$80**	1	28	4	30	1 to 4	30 psi
GAGE PRESSURE MODELS (psig)							
PSW-802	**80**	2.5	12.8	3	15	0.5 to 2.2	1000 psi
PSW-803	**80**	5	31	6	35	1.0 to 4.0	1000 psi
PSW-804	**80**	8.5	44	10	50	1.5 to 6.0	1000 psi
PSW-805	**80**	22.5	112	25	125	2.5 to 13	1000 psi
PSW-806	**80**	70.0	220	50	250	10 to 30	1000 psi
PSW-807	**80**	110	440	130	500	20 to 60	1000 psi
PSW-808	**80**	190	450	250	600	60 to 150	7000 psi
PSW-809	**80**	360	1450	430	1700	70 to 250	7000 psi
PSW-810	**80**	1450	3900	1650	4400	200 to 500	7000 psi
PSW-811	**80**	3650	6700	4000	7500	350 to 800	12,000 psi

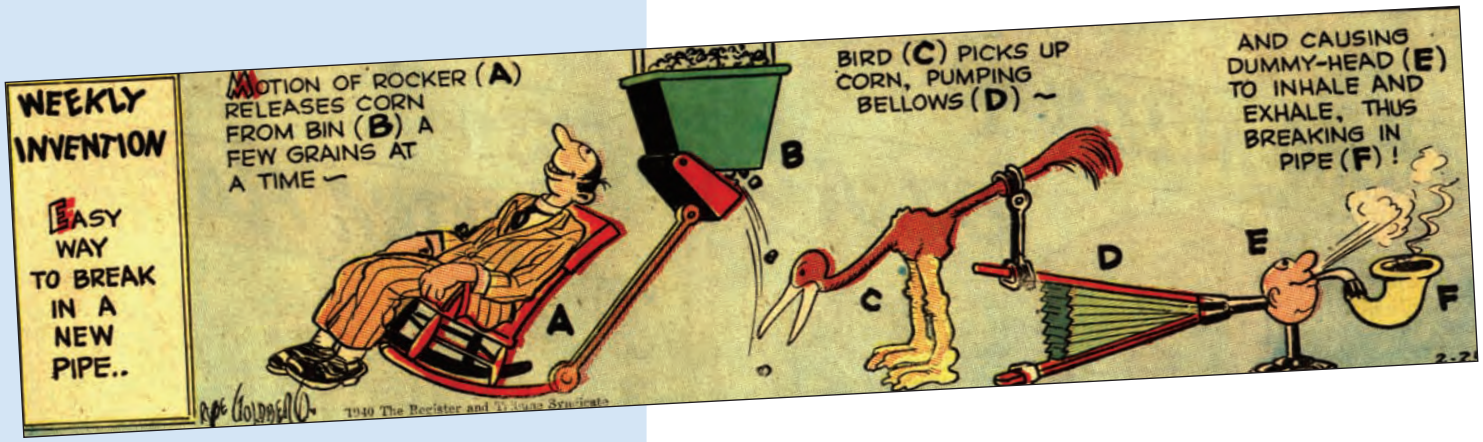
Comes with complete operator's manual.

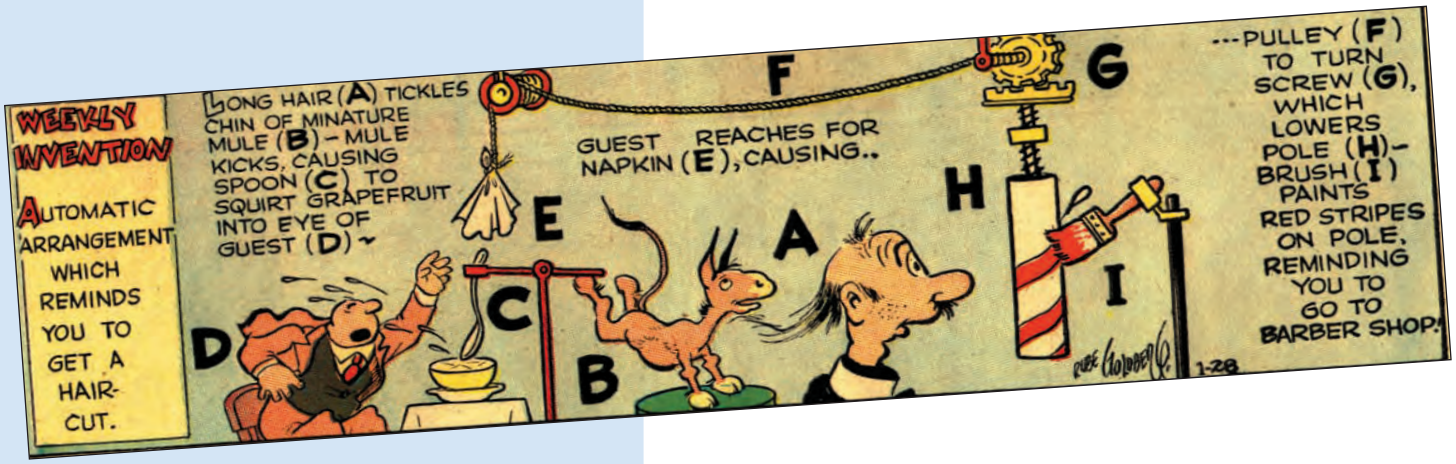
Ordering Example: PSW-804,** 10 to 50 psi pressure switch with 1.5 to 6.0 psi deadband range and 1000 psi proof pressure, **$80.

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (ro͞ob gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*





ANALOG GAGING PROBES

GP911 Series Starts at $335

CE

- Spring- or Pneumatic-Actuated Models
- Exceptional Linearity Across Full Range
- Stainless Steel Body
- NEMA 12 (IP65) Environmental Rating

GP911-5-P, $505, shown larger than actual size.

GP911-2.5-P, $515, shown close to actual size.

The GP911 Series analog gaging probes use proven LVDT technology to provide excellent linearity and repeatability in a compact, reliable unit. All analog probe heads carry a NEMA 12 (IP65) environmental rating that makes them suitable for use in harsh industrial environments.

In an analog gage probe, 2 small transformers share a common magnetic core. As the core moves, the output of one transformer increases and that of the other decreases. The out-of-balance current provides the measure of the core's position. LVDTs operate on an AC energizing voltage and require special signal conditioning.

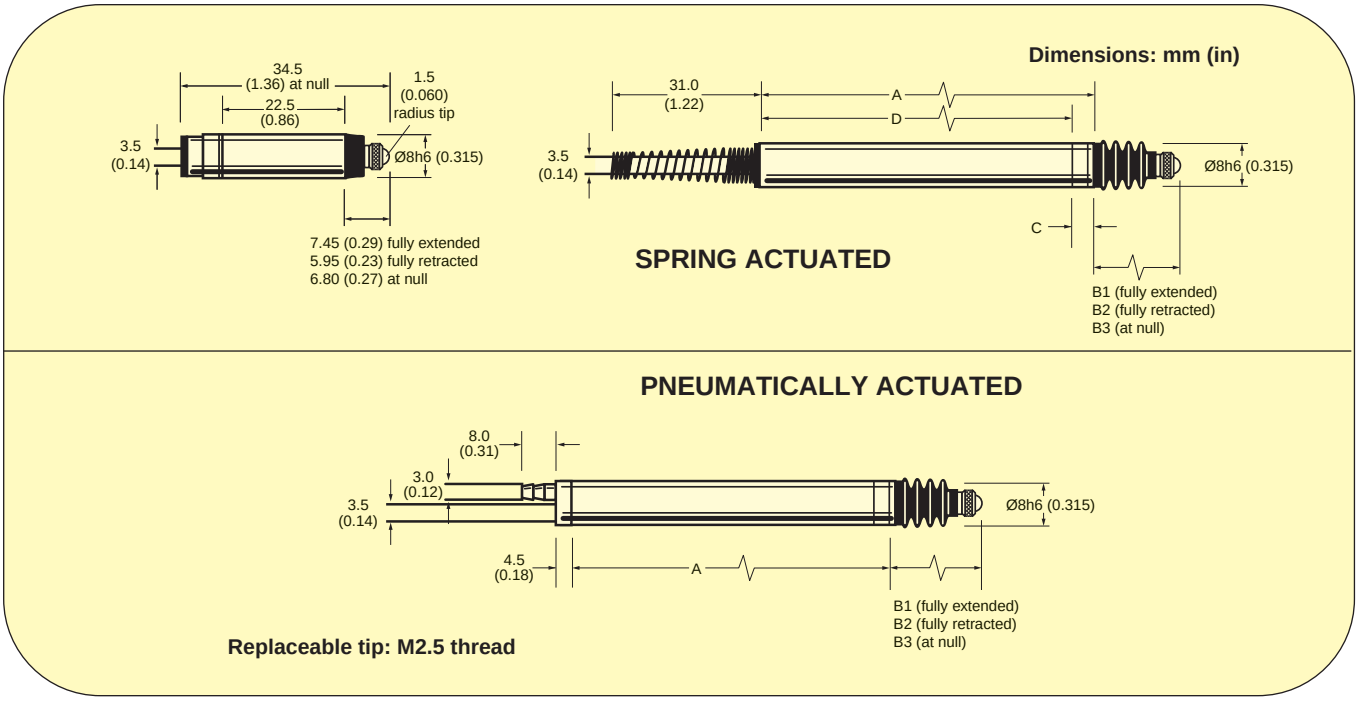
ANALOG GAGING PROBES

SPRING ACTUATED Dimensions: mm (in)

MODEL	GP911-1-S	GP911-2.5-S	GP911-5-S
A	46.0 (1.8)	72.5 (2.8)	91 (3.6)
B1	14.15 (0.56)	17.65 (0.70)	25.65 (1.01)
B2	11.65 (0.46)	11.65 (0.46)	14.65 (0.58)
B3	12.65 (0.50)	14.75 (0.58)	20.25 (0.80)
C	3.5 (0.14)	4.0 (0.16)	4.0 (0.16)
D	42.5 (1.67)	68.5 (2.70)	87.0 (3.43)

PNEUMATICALLY ACTUATED Dimensions: mm (in)

MODEL	GP911-1-P	GP911-2.5-P	GP911-5-P
A	51.0 (2.01)	73.0 (2.88)	98.0 (3.86)
B1	14.05 (0.55)	17.55 (0.69)	25.55 (1.01)
B2	11.05 (0.44)	11.55 (0.45)	14.55 (0.57)
B3	12.75 (0.50)	14.75 (0.58)	20.25 (0.80)



SPECIFICATIONS

Excitation Voltage: 1 to 10 Vrms
Excitation Frequency: 2 to 20 kHz
Linearity: 0.5% rdg or 0.1% FS, whichever is greater
Repeatability: 0.15 microns
Calibration Voltage: 3 Vrms
Calibration Frequency: 5 kHz
Calibration Load: 10 kΩ
Storage Temp: -40 to 100°C (-40 to 212°F)
Operating Temp: -10 to 80°C (14 to 176°F)
Temp Coefficient: 0.01% FS/ºC (0.03% for 0.5 mm model)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	RANGE: mm (in)	ACTUATION
GP911-0.5-S	**$405**	±0.5 (0.02)	Spring loaded
GP911-1-S	**335**	±1 (0.04)	Spring loaded
GP911-2.5-S	**380**	±2.5 (0.10)	Spring loaded
GP911-5-S	**420**	±5 (0.20)	Spring loaded
GP911-1-P	**505**	±1 (0.04)	Pneumatic
GP911-2.5-P	**515**	±2.5 (0.10)	Pneumatic
GP911-5-P	**505**	±5 (0.20)	Pneumatic

Comes with complete operator's manual.

Ordering Example: GP911-5-S,** spring-loaded analog gaging probe with ±5 mm (0.2") stroke, **$420.

ECONOMICAL LVDT DISPLACEMENT TRANSDUCERS

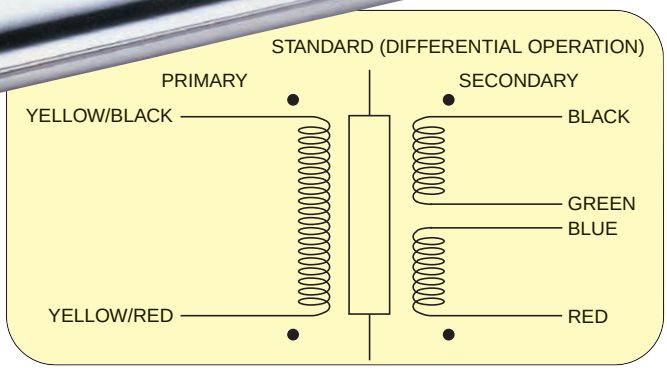
AC POWERED

±1.25 TO ±10.0 MM (±0.050 TO ±0.400")

LD200 Series Starts at **$100**

LD200-7.5, $225, shown smaller than actual size.

LD200-10, $255, shown smaller than actual size.



- **Low Cost—High Linearity**
- **Rugged Construction for Machine Tools and Vehicles**
- **Large Core Clearance for Easy Installation**
- **Compatible with Standard AC LVDT Instruments**
- **Cores are Reversible and Interchangeable**

The LD200 Series AC-powered LVDT displacement transducers are ruggedly constructed, delivering high performance at a low cost. Along with a broad measurement range, from 1.25 to 10 mm (0.05 to 0.40"), these transducers have high resolution and repeatability.

The coils are wound on a rugged bobbin housed in a stainless steel case. Epoxy-bonded construction makes these devices suitable for applications involving wet or oily environments, or high levels of mechanical stress (vibration, shock, etc.). The armature assembly ensures friction-free movement within the sensor because of the large radial clearance of the bore.

These transducers offer excellent linearity, low levels of residual voltage, and good temperature coefficients. They are thus ideal for most industrial or general purpose displacement measurement applications.

SPECIFICATIONS

ELECTRICAL

Linearity: See chart
Sensitivity: See chart (mV/V/mm)
Excitation: 1 to 10 Vrms
Excitation Frequency: 1 to 10 kHz
Energizing Current: <40 mA
Frequency Response:
10% of excitation frequency
Zero Offset: 0.5% FS
Operating Temperature:
-55 to 150°C (-67 to 302°F)
Compensated Temperature:
-55 to 150°C (-67 to 302°F)
Thermal Effects:
Zero: 0.025%/°C
Sensitivity: 0.020%/°F
Electrical Termination:
0.3 m (12") leads
Electrical Connections:
Yellow/Black: Excitation
Yellow/Red: Excitation
Black: + Signal
Red: Signal ground; connect blue and green together

MECHANICAL

Core Mass:
LD200-1.25: 3.7 g (0.13 oz)
LD200-2.5: 6.2 g (0.22 oz)
LD200-5: 9.1 g (0.32 oz)
LD200-7.5: 11.3 g (0.40 oz)
LD200-10: 14.2 g (0.50 oz)
Core Thread: 6-40 UNF
Core Material: NiFe—Radio Metal 50
Radial Core Clearance: 1.6 mm (0.062")
Case Material: 400 Series SS
Case Weight:
LD200-1.25: 33 g (1.16 oz)
LD200-2.5: 43 g (1.52 oz)
LD200-5: 48 g (1.73 oz)
LD200-7.5: 71 g (2.50 oz)
LD200-10: 74 g (2.61 oz)

	Nominal Range		Linearity—Typical 2.5 kHz % of Full Scale				Sensitivity @ 2.5 kHz—Nom.	
MODEL NO.	mm	in	50%	100%	125%	150%	mV/V/mm	mV/V/0.001"
LD200-1.25	±1.55	±0.06	0.10	0.25	0.25	0.50	250	6.35
LD200-2.5	±2.50	±0.10	0.10	0.25	0.25	0.50	180	4.50
LD200-5	±5.00	±0.20	0.10	0.25	0.25	0.50	100	2.54
LD200-7.5	±7.50	±0.30	0.10	0.25	0.25	0.50	57	1.40
LD200-10	±10.0	±0.40	0.10	0.25	0.25	0.40	35	0.90

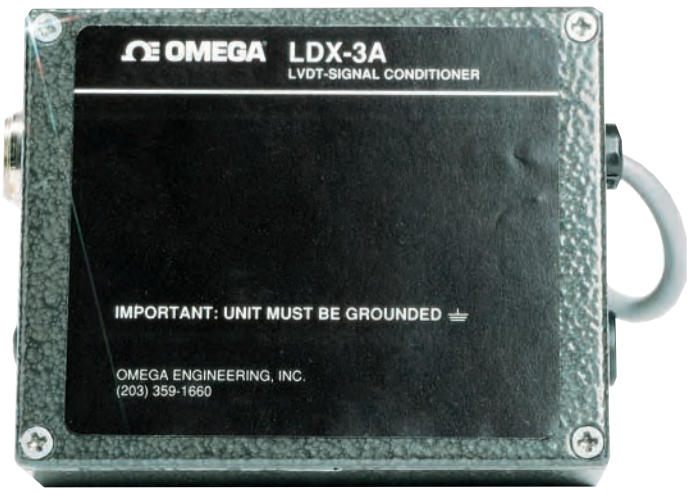
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	COMPATIBLE INSTRUMENTS*
LD200-1.25	$115	DP-LVDT, LDX-2, LDX-3A, LDX-4
LD200-2.5	165	DP-LVDT, LDX-2, LDX-3A, LDX-4
LD200-5	205	DP-LVDT, LDX-2, LDX-3A, LDX-4
LD200-7.5	225	DP-LVDT, LDX-2, LDX-3A, LDX-4
LD200-10	255	DP-LVDT, LDX-2, LDX-3A, LDX-4

** See omega.com for compatible instruments.*
Comes with complete operator's manual.
Ordering Example: LD200-5,** LVDT displacement transducer with a range of ±5 mm (±0.20"), **$205.

AC-POWERED LVDT TRANSDUCERS



LDX-3A signal conditioner, $475, see omega.com

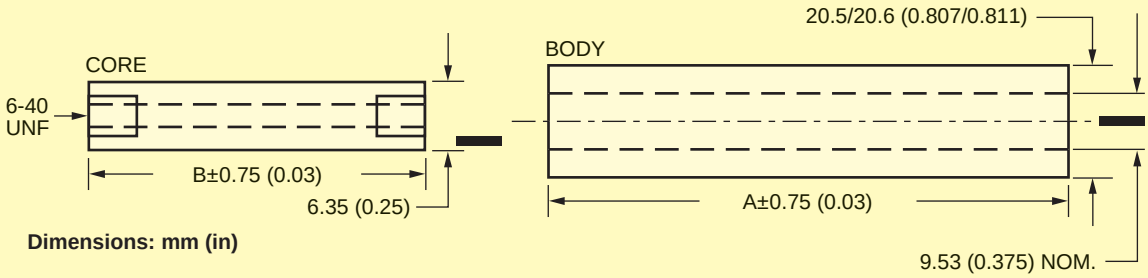
DP41-E meter, $545, see page 48.

LD200-2.5, $165, shown smaller than actual size with LDX-3A signal conditioner, $475, and DP41-E meter, $545, see omega.com

LD200-2.5, $165.

LD200-10, $225, shown smaller than actual size.

LD200-7.5, $196, shown smaller than actual size.



Dimensions: mm (in)

Dimensions: mm (in)

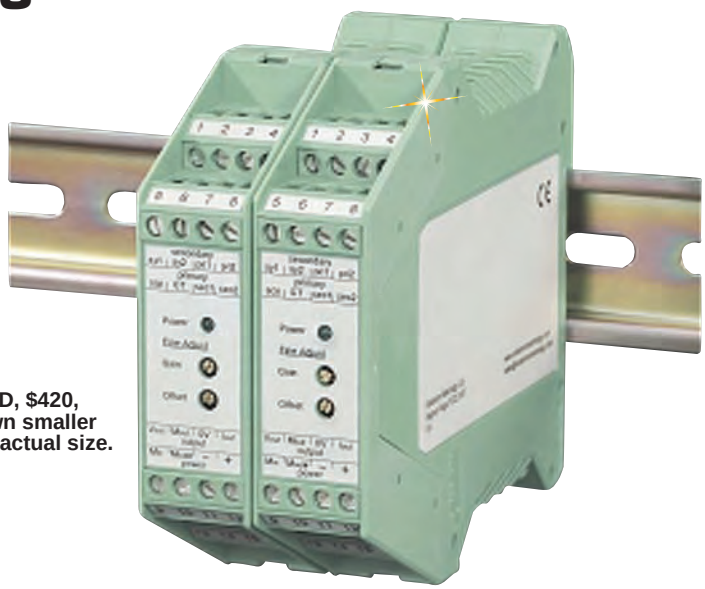
MODEL NO.	LINEAR STROKE ±mm (in)	A	B
LD200-1.25	1.55 (0.06)	28.45 (1.12)	20.00 (0.80)
LD200-2.5	2.50 (0.10)	45.97 (1.81)	28.00 (1.10)
LD200-5	5.00 (0.20)	63.50 (2.50)	47.00 (1.85)
LD200-7.5	7.50 (0.30)	81.00 (3.19)	50.00 (1.97)
LD200-10	10.0 (0.40)	109.60 (4.31)	75.00 (2.95)

NEW

DIN RAIL MOUNT SIGNAL CONDITIONER
FOR AC LVDTS

LDX-D
$420

1 YEAR WARRANTY



LDX-D, $420, shown smaller than actual size.

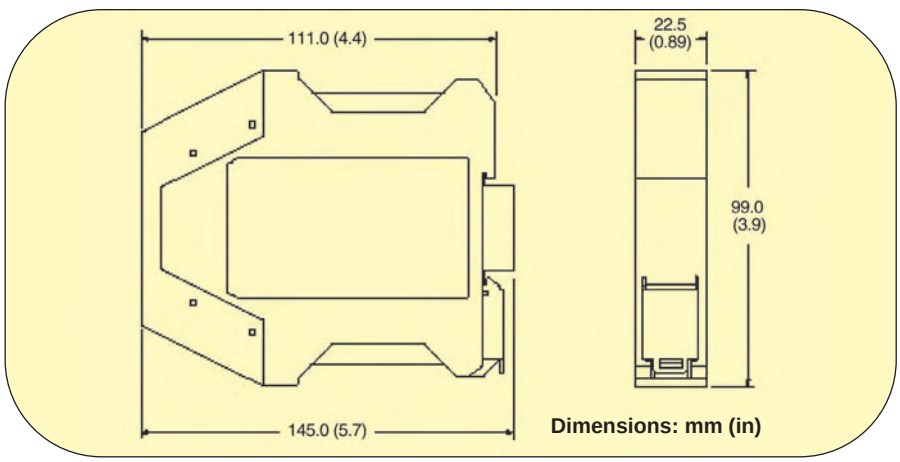
- **Operates on 10 to 30 Vdc**
- **±10 Vdc or 20 mA Selectable Output**
- **Compatible with AC LVDTs**

The LDX-D is a DC-powered conditioning module that can accept a wide range of analog inductive transducer types owing to its wide input gain. The signal polarity, span, and offset are adjustable. Output is selectable: ±10 Vdc voltage or ±20 mA current.

The housing is a standard DIN rail enclosure that can clip directly to a 35 mm top-hat rail (TS35 EN50022).

Transducers are connected via the screw terminals on the front of the LDX-D. Internal links and front-panel fine-adjustment potentiometers facilitate setup.

By linking 2 LDX-D modules, users can perform some analog arithmetic functions, such as A + B, A – B, (A + B)/2 and (A – B)/2.



Dimensions: mm (in)

SPECIFICATIONS

Power Requirement: 10 to 30 Vdc
Supply Current:
Voltage Range: 140 mA @ 10 Vdc, 60 mA @ 30 Vdc
Current Range: 160 mA @ 10 Vdc, 70 mA @ 30 Vdc
Transducer Excitation:
Primary Voltage: 3 Vrms nominal
Primary Frequency (kHz): 5-, 10- or 13-link selectable
Signal Input:
Input Range: 55 to 5000 mV
Input Load Resistance: 100 kΩ
Signal Output:
Voltage Output: Up to ±10 Vdc
Current Output: Up to 20 mA into 150 Ω load
Output Ripple: <1 mVrms
Output Offset: Up to 100%
Temp Coefficient Gain: <0.01% FSO/ºC
Temp Coefficient Offset: <0.01% FSO/ºC
Warm-Up: 15 minutes recommended
Linearity: <0.1% FSO
Bandwidth (-3 dB): 500 Hz or 1 kHz, link selectable

ENVIRONMENTAL
Operating Temp: 0 to 60ºC (32 to 140ºF)
Storage Temp: -20 to 85ºC (-4 to 185ºF)

MECHANICAL
Transducer: Screw terminals
Power Supply: Screw terminals
Output Signal: Screw terminals
Weight: 120 g (4.2 oz)
Case Material: Green polyamide

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
LDX-D	$420	DC-powered signal conditioner for AC LVDT (DIN rail)

Comes with complete operator's manual.
Ordering Example: LDX-D, *DC-powered signal conditioner for AC LVDTs (DIN rail),* ***$420.***

PRECISION DC GAGING TRANSDUCERS

FOR QUALITY CONTROL OR AUTOMATION TOOLING

±1 TO ±5 MM (±0.04 TO ±0.20")

LD500-5, $735, shown smaller than actual size.

LD500-1, $645, shown smaller than actual size.

LD500-1, $645, shown smaller than actual size.

DP41-S, meter, $545, see omega.com for details.

LD500-5, $735, shown smaller than actual size.

LD-500A, tip, included with all models.

LD500-2.5, $695, shown smaller than actual size.

LD500 Series Starts at **$645**

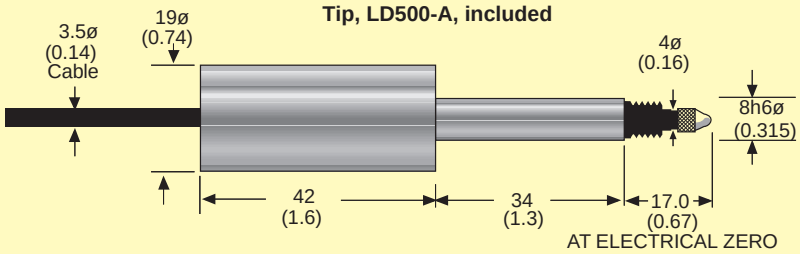
1 YEAR WARRANTY

- **High Accuracy and Repeatability**
- **Rugged Industrial Construction**
- **Replaceable Tips**
- **Repeatability Better Than 0.15 mm**
- **Linear Ball-Bearing Actuator**

These precision-manufactured displacement transducers can be mounted to most production lines to perform automatic gaging for quality, sorting, or go/no-go applications. The hardened steel shaft, O-ring seals, and titanium pushrod can withstand most industrial conditions. The hybrid IC module produces a linear mV/V/mm (or inch) output that will interface with most standard DC input meters, recorders, data interfaces, and industrial controllers.

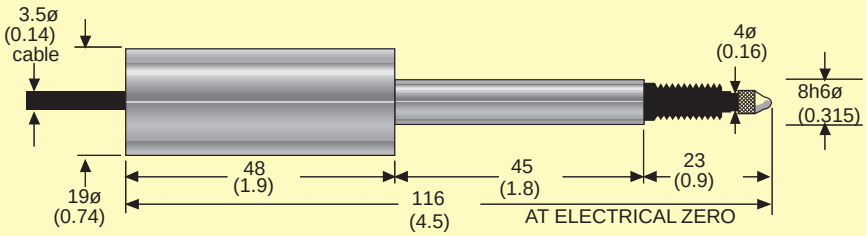
LD500-1 and LD500-2.5

Tip, LD500-A, included

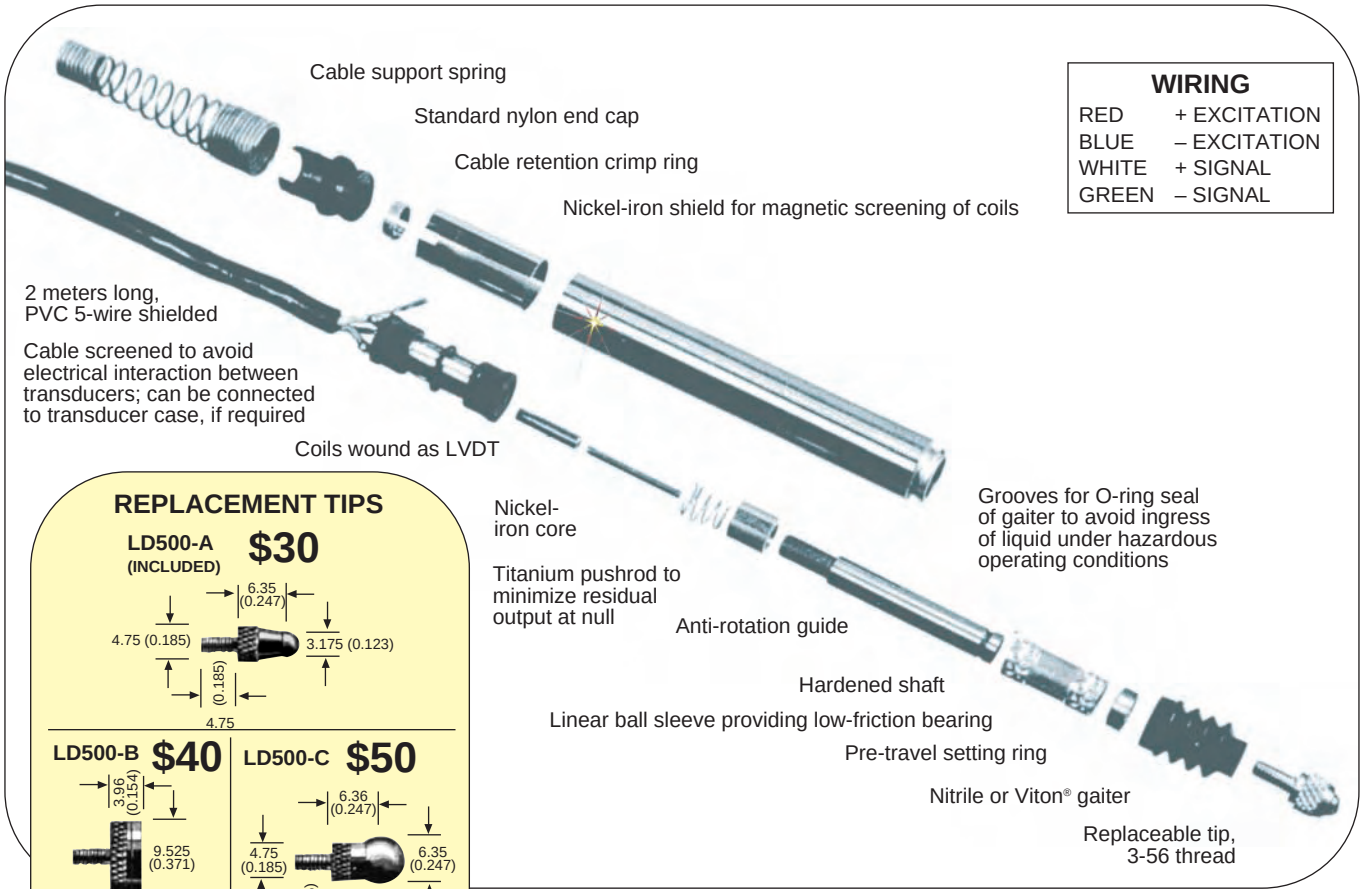


Dimensions: mm (in)

LD500-5



DC GAGING TRANSDUCERS



WIRING

RED	+ EXCITATION
BLUE	– EXCITATION
WHITE	+ SIGNAL
GREEN	– SIGNAL

REPLACEMENT TIPS

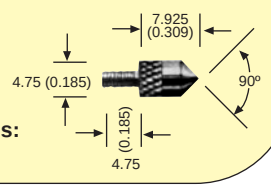
LD500-A (INCLUDED) **$30**

LD500-B $40

LD500-C $50

LD500-D

$32



Dimensions: mm (in)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	STROKE, ±mm (in)	COMPATIBLE METERS*
LD500-1	**$645**	±1.0 (0.04)	DP41-E, DP-87, DP78
LD500-2.5	**695**	±2.5 (0.10)	DP41-E, DP-87, DP78
LD500-5	**735**	±5.0 (0.20)	DP41-E, DP-87, DP78

** See omega.com for compatible meters.*
Ordering Example: LD500-2.5,** DC gaging probe with a range of ±2.5 mm (0.10") and LD500-A tip included, **$695.

Specifications: Mechanical

MODEL NO.	LINEAR STROKE mm (in)*	SPRING RATE	REPEATABILITY	TEMPERATURE RANGE	TEMP COEFFICIENTS ZERO	TEMP COEFFICIENTS SENSITIVITY	LINEARITY
LD500-1	±1.0 (0.04)	13 g/mm	<0.15 µm (6 µin)	-20 to 80°C	<0.01%/°C	<0.01%/°C	0.25%
LD500-2.5	±2.5 (0.10)	13 g/mm	<0.15 µm (6 µin)	-20 to 80°C	<0.005%/°C	<0.01%/°C	0.25%
LD500-5	±5.0 (0.20)	10 g/mm	<0.10 µm (4 µin)	-20 to 80°C	<0.005%/°C	<0.01%/°C	0.25%

** Output nulls in mechanical middle.*

Specifications: Electrical

MODEL NO.	CURRENT	INPUT VOLTAGE	OUTPUT RIPPLE (TYPICAL)	TIME	FREQUENCY RESPONSE	SENSITIVITY*	CABLE
LD500-1	10 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for - 3 dB	78 mV/V/mm (1.98 mV/V/0.001 in)	2 m (6') long, PVC 5-wire shielded
LD500-2.5	10 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for - 3 dB	78 mV/V/mm (1.98 mV/V/0.001 in)	2 m (6') long, PVC 5-wire shielded
LD500-5	13 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for - 3 dB	56 mV/V/mm (1.98 mV/V/0.001 in)	2 m (6') long, PVC 5-wire shielded

** Actual output supplied with each unit.*

MINIATURE DC DISPLACEMENT TRANSDUCERS
WITH DELRIN® BEARINGS

±1 TO ±5 MM (±0.04 TO ±0.20")

LD400 Series Starts at $330

CE

- High-Output Miniature Transducers
- Delrin® Bearings for Precise Motion
- Infinite Resolution
- Rugged, Low-Mass Construction
- Compatible with Standard DC Signal
- Conditioning Modules and Instruments

The LD400 Series miniature DC to DC transducers can measure displacements up to ±5 mm (±0.20") with very high accuracy and infinite resolution. Their free-guided armature incorporates Delrin® bearings, which provide near-frictionless motion to detect the smallest movement the associated instrumentation is capable of identifying.

These transducers use a precision linear variable differential transformer as the measuring source, along with hybrid ICs, including an oscillator, demodulator, and filter. Together, they make up a self-contained unit that accepts DC input and provides DC output relative to armature position. The unit's high linearity and low mass of moving parts are ideal for applications in civil, mechanical, chemical, and production engineering.

SPECIFICATIONS

ELECTRICAL

Linearity: 0.3% FS
Sensitivity: (mV/V/mm) see chart below (actual output supplied with each unit)
Excitation: 10 to 24 Vdc regulated
Energizing Current at 10 Vdc: LD400-1, 10 mA; LD400-25, 10 mA; LD400-5, 13 mA
Response Time: LD400-1 and LD400-2.5 = 5 ms; LD400-5 = 3 ms
Frequency Response: 50 Hz for -3 dB
Ripple: <1% FS
Thermal Effect:
Zero: LD400-1 <0.02% FS/°C; LD400-2.5 and LD400-5 <0.01% FC/°C
Sensitivity: <0.025% FC/°C
Compensated Temperature Range: -20 to 80°C (-4 to 176°F)
Operating Temperature Range: -20 to 80°C (-4 to 176°F)
Electrical Connection: 2.9 m (9') shielded, color-coded cable
Sensitivity and Linearity Data: Provided with a transducer output impedance of 2.4 kΩ into a calibration load of 20 kΩ at 20°C (68°F); variations in these parameters will change performance

MECHANICAL

Threaded Core: M2 thread
Core Material: Ni/Fe—Radio Metal 50
Case Material: 400 Series stainless steel
Weight: See chart, previous page

CONNECTIONS

Electrical Connections:
Red: + Excitation
Blue: – Excitation
White: + Signal*
Green: – Signal
Yellow: No connection

**White and red in phase for positive inward displacement.*

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	STROKE	PRICE	SENSITIVITY	COMPATIBLE METERS*
LD400-1	±1.0 mm (0.06")	**$330**	75 mV/V/mm	DP41-S, DP25B-S, DP3002-P
LD400-2.5	±2.5 mm (0.10")	**355**	75 mV/V/mm	DP41-S, DP25B-S, DP3002-P
LD400-5	±5.0 mm (0.20")	**360**	54 mV/V/mm	DP41-S, DP25B-S, DP3002-P

** See omega.com for compatible meters.*
Ordering Example: LD400-5,** stroke of ±5 mm, **$360.

MINIATURE DC DISPLACEMENT TRANSDUCERS

PXTX-703, $440, see omega.com for details.

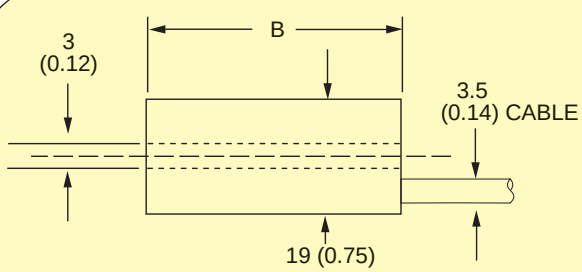
DP41-S, $545, see omega.com for details.

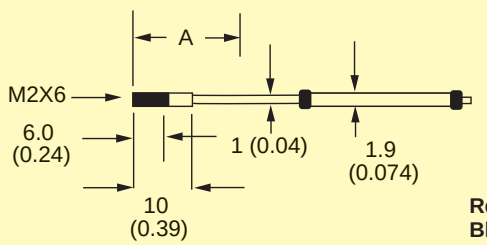
LD400-5, $360, shown smaller than actual size.

Search omega.com for companion meters and transmitters.

Compatible Instruments

CODE	DESCRIPTION	PRICE
A	PXTX-703 two-wire transmitter	$440
B	DP41-S Series digital display	545





Dimensions: mm (in)

Wiring :
Red = + Supply
Blue = - Supply
White = + Signal
Green = - Signal
Yellow = N/A

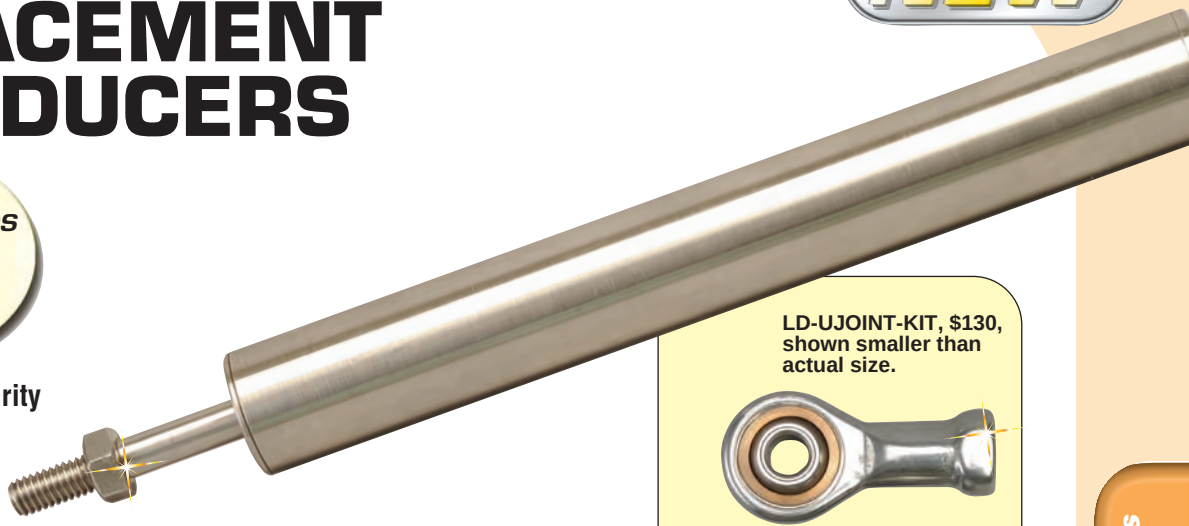
MODEL NO.	LINEAR STROKE mm (in)	DIMENSIONS*: mm (in)		WEIGHT g (oz)	
		A	B	BODY	CORE (GUIDED)
LD400-1	±1.0 (0.04)	21.5 (0.85)	37 (1.46)	26 (1.02)	1.0 (0.04)
LD400-2.5	±2.5 (0.10)	21.5 (0.85)	37 (1.46)	26 (1.02)	1.0 (0.04)
LD400-5	±5.0 (0.20)	20.5 (0.81)	43 (1.69)	30 (1.18)	1.2 (0.04)

** At electrical zero.*

HIGH-ACCURACY DISPLACEMENT TRANSDUCERS

NEW

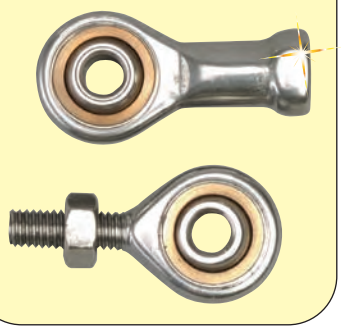
LD620 Series Starts at $385



- **Less Than 0.2% Linearity**
- **5 to 150 mm Travel Lengths Available**
- **Rugged 19 mm Dia. Stainless Steel Body**
- **Rigid Stainless Steel Carriers**
- **Guided Core with Removable Spring**
- **IP67 Environmental Rating**
- **Large Bore-to-Core Clearance**

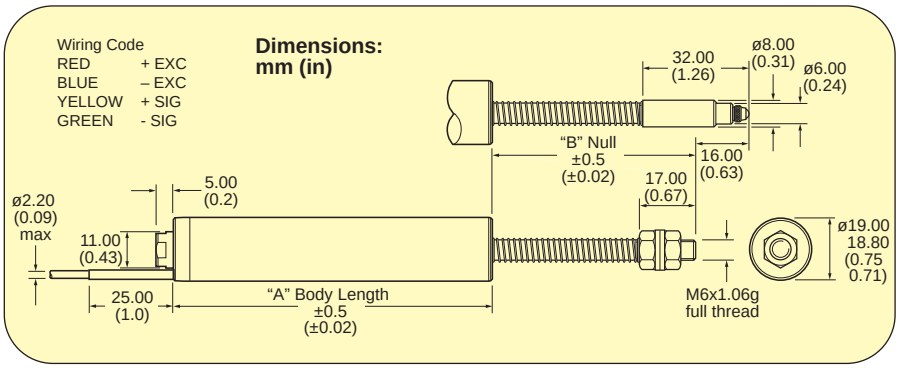
LD620-25, $519, shown smaller than actual size.

LD-UJOINT-KIT, $130, shown smaller than actual size.



The LD620 DC output displacement tranducers have improved IP67-rated sealing, coupled with new polymer guides with rigid carriers. These transducers are accurate and reliable, especially in wet and corrosive conditions.

Output options are either ±5 Vdc (LD620) or 0 to 10 Vdc (LD621). An unusually large bore-to-core clearance is maintained throughout the range. This makes installation easier and helps prevent misalignment.



SPECIFICATIONS

Linearity: <0.2% FSO
Excitation Voltage: 10 to 30 Vdc @ 100 mA
Output: LD620, ±5 Vdc; LD621, 0 to 10 Vdc
Output Ripple: 0.02% FSO
Bandwidth: 500 Hz (-3 dB)
Storage Temp: -20 to 85ºC (-4 to 185ºF)
Operating Temp: 0 to 65ºC (32 to 149ºF)
Sealing: IP67
Vibration (Sinusoidal Frequency):
10 to 50 Hz: Amplitude 1 to 10 g rms linear
50 Hz to 1 kHz: Amplitude 10 g rms linear
Shock:
Drop Testing: 1 m (3') onto hard surface
Topple Testing: 10 times each end onto hard surface
Case Material: 300 SS
Cable: PFA, 2 m (6') long
Core Material: Nickel-iron

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO. ±5 Vdc	RANGE mm (in)	MODEL NO. 0 to 10 Vdc	RANGE mm (in)	PRICE	"A" DIM mm (in)	"B" DIM mm (in)
LD620-2.5	±2.5 (±0.1)	**LD621-5**	0 to 5 (0 to 0.2)	**$385**	94.0 (3.7)	35.3 (1.4)
LD620-5	±5 (±0.2)	**LD621-10**	0 to 10 (0 to 0.4)	**415**	113.5 (4.5)	46.3 (1.8)
LD620-7.5	±7.5 (±0.3)	**LD621-15**	0 to 15 (0 to 0.6)	**435**	120.7 (4.8)	50.3 (2.0)
LD620-10	±10 (±0.4)	**LD621-20**	0 to 20 (0 to 0.8)	**455**	135.0 (5.3)	61.3 (2.4)
LD620-15	±15 (±0.5)	**LD621-30**	0 to 30 (0 to 1.2)	**475**	149.4 (5.9)	79.3 (3.1)
LD620-25	±25 (±1.0)	**LD621-50**	0 to 50 (0 to 2.0)	**519**	170.9 (6.7)	102.3 (4.0)
LD620-50	±50 (±2.0)	**LD621-100**	0 to 100 (0 to 4.0)	**539**	228.5 (9.0)	160.3 (6.3)
LD620-75	±75 (±3.0)	**LD621-150**	0 to 150 (0 to 6.0)	**559**	278.7 (10.0)	231.3 (9.1)

** See omega.com for compatible instrumentation.*

Ordering Example: LD620-2.5,** DC displacement sensor with range of ±2.5 mm (±0.1) with output of ±5 Vdc, **$385.

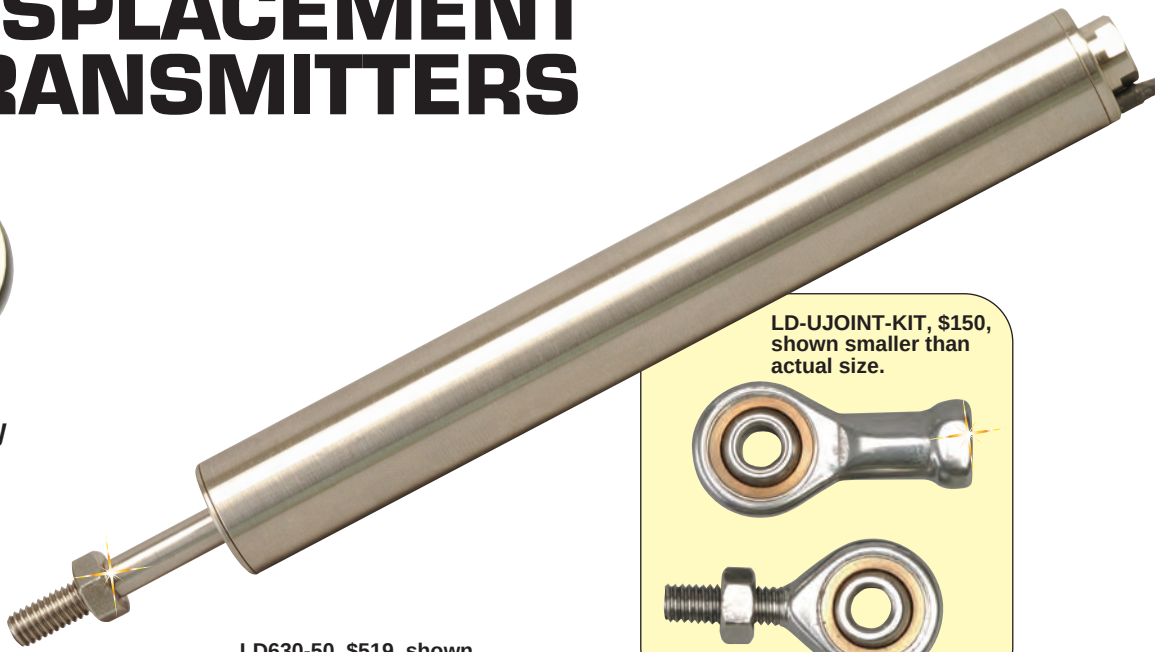
Accessories

MODEL NO.	PRICE	DESCRIPTION
LD-TIP	**$45**	Tip adaptor/ball tip
LD-UJOINT-KIT	**130**	U-joint retro fit kit

NEW

4 TO 20 MA OUTPUT DISPLACEMENT TRANSMITTERS

LD630 Series Starts at $385

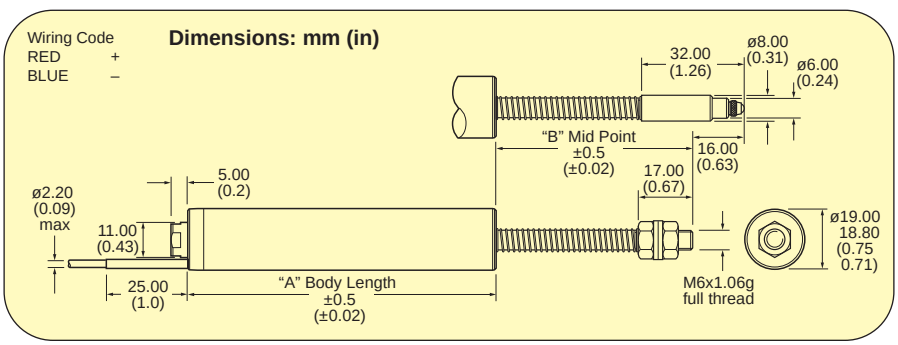


LD630-50, $519, shown smaller than actual size.

LD-UJOINT-KIT, $150, shown smaller than actual size.

- **Less Than 0.2% Linearity**
- **5 to 150 mm Travel Lengths Available**
- **4 to 20 mA or 20 to 4 mA Versions Available**
- **Rugged Stainless Steel Body Construction**
- **Guided Core with Removable Spring**
- **IP67 Environmental Rating**

The LD630 Series current output displacement transmitters have improved IP67-rated sealing, coupled with polymer guides with rigid carriers. These transmitters are accurate and reliable, especially in wet and corrosive conditions. Output options are either direct-acting 4 to 20 mA or reverse-acting 20 to 4 mA. The direct-acting model will have 4 mA output when the guided core is fully out, and the output will increase to 20 mA when fully in.



SPECIFICATIONS

Linearity: <0.2% FSO
Excitation Voltage: 10 to 30 Vdc
Output: 4 to 20 mA
Output Ripple: 0.02% FSO
Bandwidth: 500 Hz (-3 dB)
Storage Temp: -20 to 85ºC (-4 to 185ºF)
Operating Temp: 0 to 65ºC (32 to 149ºF)
Vibration (Sinusoidal Frequency):
10 to 50 Hz: Amplitude 1 to 10 g rms linear
50 Hz to 1 kHz: Amplitude 10 g rms linear
Shock:
Drop Testing: 1 m (3') onto hard surface
Topple Testing: 10 times each end onto hard surface
Cable: PFA, 2 m (6') long
Core Material: Nickel-iron

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	RANGE mm (in)	"A" DIM mm (in)	"B" DIM mm (in)
LD630-5	**$385**	0 to 5 (0 to 0.2)	94.0 (3.7)	35.3 (1.4)
LD630-10	**415**	0 to 10 (0 to 0.4)	113.5 (4.5)	46.3 (1.8)
LD630-15	**435**	0 to 15 (0 to 0.6)	120.7 (4.8)	50.3 (2.0)
LD630-20	**455**	0 to 20 (0 to 0.8)	135.0 (5.3)	61.3 (2.4)
LD630-30	**475**	0 to 30 (0 to 1.2)	149.4 (5.9)	79.3 (3.1)
LD630-50	**519**	0 to 50 (0 to 2.0)	170.9 (6.7)	102.3 (4.0)
LD630-100	**539**	0 to 100 (0 to 4.0)	228.5 (9.0)	160.3 (6.3)
LD630-150	**559**	0 to 150 (0 to 6.0)	278.7 (10.0)	231.3 (9.1)

** See omega.com for compatible instrumentation.*

*To order reverse-acting version (20 to 4 mA), add suffix **"-R"** to model number, no additional charge.*

Ordering Example: LD630-10-R,** 0 to 10 mm (0 to 0.4") displacement transmitter with reverse 20 to 4 mA output, **$415.

Accessories

MODEL NO.	PRICE	DESCRIPTION
LD-TIP	**$45**	Tip adaptor/ball tip
LD-UJOINT-KIT	**150**	U-joint retro fit kit

MINIATURE LOW-COST NON-CONTACT INFRARED TEMPERATURE SENSOR/TRANSMITTER

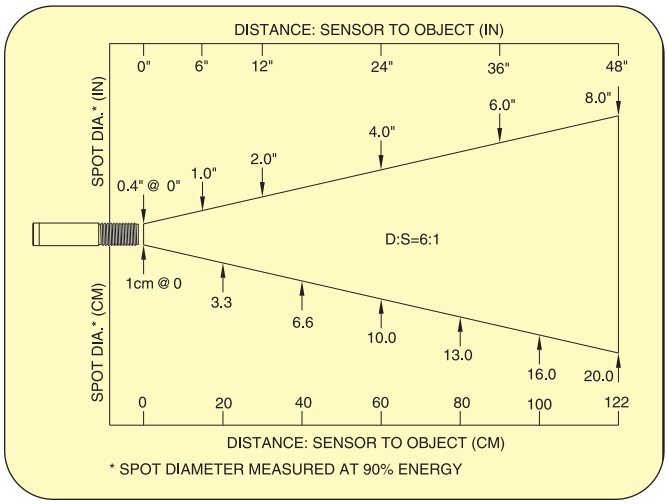
Miniature stainless steel NEMA 4 housing.

OS136 shown actual size.

OS136 Starts at $175

MADE IN USA · 1 YEAR WARRANTY · CE

Each unit includes 2 hex mounting nuts, 1.8 m (6') shielded cable and operator's manual.



- **2 Temperature Ranges Available: OS136-1: -18 to 202°C (0 to 400°F) OS136-2: 149 to 538°C (300 to 1000°F)**
- **Sensor and Transmitter Combined**
- **Packaged into a 19 mm (¾") OD by 89 mm (3.5") Long Stainless Steel Housing**
- **Optical Field of View: 6 to 1**
- **Fixed Emissivity of 0.95**
- **NEMA 4 (IP66) Rated Housing**
- **4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc, Type K Thermocouple, 10 mV/Degree Analog Outputs Available**
- **Makes Fast and Accurate Measurements**

OMEGA's new, miniature, low-cost, high-performance infrared sensor/transmitter model OS136 features a 19 mm (¾") OD by 89 mm (3.5") long stainless steel NEMA 4 (IP66) housing. This mini transmitter is ideal for applications that require measuring temperature in hard-to-reach, confined, or harsh environments. The OS136 comes with a 1.8 m (6') shielded cable for power and output connections. Models feature industry standard outputs that provide easy interfacing directly to all meters, controllers, data loggers, recorders, computer boards, and PLCs. The fixed emissivity of 0.95 allows for quick and easy measurement requiring no adjustment during installation and use.

SPECIFICATIONS

Temperature Range:
OS136-1: -18 to 204°C (0 to 400°F)
OS136-2: 149 to 538°C (300 to 1000°F)
Accuracy @ 22°C (72°F) Ambient:
OS136-1: 3% of rdg or 4.4°C (8°F), whichever is greater
OS136-2: 3% of rdg or 5.5°C (10°F), whichever is greater
From 185 to 510°C (365 to 950°F)
Repeatability: 1% of rdg
Optical Field of View: 6 to 1 (distance to spot size)
Spectral Response: 5 to 14 microns
Response Time: 150 msec, 0 to 63% of final value
Emissivity: Fixed at 0.95

Analog output:
MA: 4 to 20 mA
V1: 0 to 5 Vdc
V2: 0 to 10 Vdc
K: K type thermocouple, compensated
MVC: 10 mV/°C
MVF: 10 mV/°F

Output Load Requirements:
Min Load (0 to 5 Vdc): 1 KΩ
Min Load (0 to 10 Vdc): 2 KΩ
Max Load (4 to 20 mA):
(Power supply – 4) / 20 mA
Min Load (10 mV/Deg): 10 KΩ
Min Load (K T/C): 100 KΩ

Operating Ambient Temperature:
No Water Cooling: 0 to 70°C (32 to 158°F)
With Water Cooling (OS136-WC): 0 to 200°C (32 to 392°F)
With Air Cooling (OS136-WC): 0 to 110°C (32 to 230°F)

Operating Relative Humidity:
Less than 95% RH, non-condensing

Water Flow Rate for OS136-WC:
0.25 GPM, room temperature, minimum

Air Flow Rate for OS136-WC: 5 CFM (2.4 liters/sec)

Warm-Up Period: 1 to 2 minutes

Thermal Shock: About 30 minutes for 25°C abrupt ambient temperature change

Air Flow Rate for Air Purge Collar:
1 CFM (0.5 liters/sec)

Transmitter Housing:
316 SS, NEMA 4 and IP66 rated

Power: 12 to 24 Vdc @ 50 mA

Dimensions: 19 OD x 89 L mm (0.75 x 3.5")

Weight: 181 g (0.40 lb)

LASER SIGHT ACCESSORY SPECIFICATIONS

Laser Wavelength (Color):
630 to 670 nm (red)

Operating Distance: Up to 9.1 m (30')

Max Laser Power Output:
Less than 1 mW @ 22°C ambient

Safety Classification:
Class 2 EN60825-1/11.2001

FDA Classification: Class II laser product; complies with 21 CFR 1040.10

Laser Beam Diameter:
Less than 5 mm (0.2")

Beam Divergence: Less than 2 mrad

Operating Temperature:
0 to 50°C (32 to 122°F)

Operating Relative Humidity:
Less than 95% RH, non-condensing

Power Switch: On/off, slide switch on the battery pack

Power Indicator: Red LED

Power: Battery pack, 3 Vdc (included)

Caution and Certification Label:
Located on the head sight circumference

Identification Label: Located on the head sight circumference

Connect your OS136 to a precision controller CNi8DH, $340, sold separately. Please see page 40 for complete information on this and other iSeries meters and controllers.

CNi8DH shown actual size.

Aperture Label: Located on the head sight circumference

Dimensions:
38Ø x 50.8 mm L (1.5 x 2")

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
OS136-(*)-MV-F	**$175**	Infrared transmitter with 10 mV/°F output
OS136-(*)-MV-C	**175**	Infrared transmitter with 10 mV/°C output
OS136-(*)-MA	**175**	Infrared transmitter with 4 to 20 mA output
OS136-(*)-V1	**175**	Infrared transmitter with 0 to 5 Vdc output
OS136-(*)-V2	**175**	Infrared transmitter with 0 to 10 Vdc output
OS136-(*)-K	**175**	Infrared transmitter with type K T/C output

***** *Insert "**1**" for -18 to 202°C (0 to 400°F); Insert "**2**" for 149 to 538°C (300 to 1000°F).*

***Ordering Examples: OS136-1-MA,** infrared transmitter with temperature range of -18 to 202°C (0 to 400°F) and 4 to 20 mA output, **$175**.*

OS136-1-V1** and **CNi8DH33,** infrared transmitter with temperature range of -18 to 202°C (0 to 400°F), 0 to 5 Vdc output, and ⅛ DIN temperature controller, $175 + 340 = **$515.

Accessories

MODEL NO.	PRICE	DESCRIPTION
OS100-MB	**$20**	Mounting bracket
OS100-AP	**30**	Air purge collar
OS136-WC	**150**	Water/air cool jacket
OS100-LS†	**175**	Laser sighting
TX4W-50	**75**	4-conductor shielded high-temp cable,15 m (50')
TX4-100	**28.50**	4-conductor shielded cable, 30 m (100')
PSR-24S	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	**60**	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93	**40**	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-IR	**125**	NIST-traceable calibration

† ***OS136-LS laser sighting:** 1 unit suitable for aligning multiple heads. Used during installation only.*

Ordering Example: OS100-MB,** mounting bracket, **$20.

COMPACT NON-CONTACT INFRARED TEMPERATURE SENSOR/TRANSMITTER

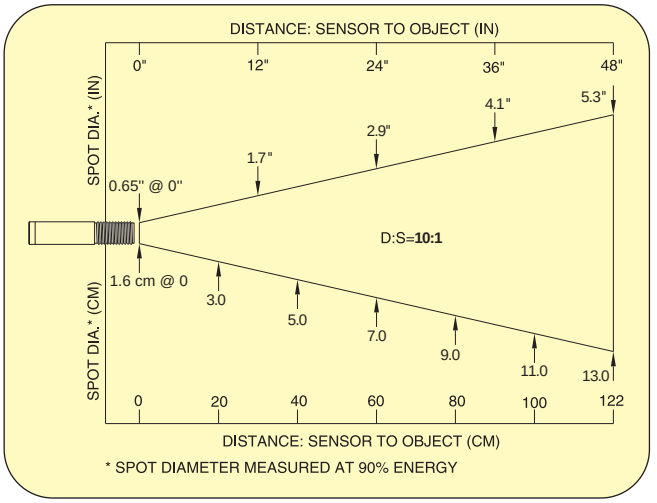
OS137, $345,
shown actual size.

Compact stainless steel
NEMA 4 housing.

OS137 Starts at $345

MADE IN USA · 1 YEAR WARRANTY · CE

Each unit includes 2 hex mounting nuts,
1.8 m (6') shielded cable and operator's manual.



- 3 Temperature Ranges available:
  OS137-1: 0 to 100°C (32 to 212°F)
  OS137-2: -18 to 260°C (0 to 500°F)
  OS137-3: -18 to 538°C (0 to 1000°F)
- Sensor and Transmitter Combined
- Adjustable Emissivity
- Adjustable Alarm Setpoint and Output
- Packaged into a 25 mm (1.0") OD by 127 mm (5.0") Long Stainless Steel NEMA 4 Rated Housing
- 10:1 Optical Field of View
- 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc, 10 mV/Deg, and Type K Thermocouple Outputs Available

Omega's new compact high performance industrial infrared sensor/transmitter model OS137 provides variety of features and options packaged into a small stainless steel housing. The standard features are adjustable emissivity, 10 to 1 optical field of view, adjustable alarm set point and voltage output to drive external relays, and 6 pre-selected analog outputs that can easily be interfaced to all meters, controllers, dataloggers, recorders, computer boards, and PLCs. The unit comes with 2 hex nuts, 1.8 m (6') shielded cable for power and output connections, and complete operator's manual.

SPECIFICATIONS

Temp Range:
- **OS137-1:** 0 to 100°C (32 to 212°F)
- **OS137-2:** -18 to 260°C (0 to 500°F)
- **OS137-3:** -18 to 538°C (0 to 1000°F)

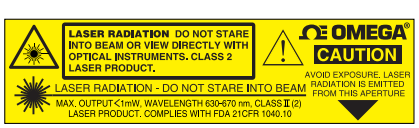
Accuracy: 1.5% rdg or 3.5°F (2°C) whichever is greater
Repeatability: 1% rdg or 2°F (1°C)
Field of View: 10 to 1
Spectral Response: 5 to 14 microns
Emissivity: 0.4 to 1.0, adjustable via a single turn pot
Response Time: 150 msec, 0 to 63% of final value
Outputs:
- **-MA:** 4 to 20 mA
- **-V1:** 0 to 5 Vdc
- **-V2:** 0 to 10 Vdc
- **-K:** K thermocouple
- **-MVF:** 10 mV/°F
- **-MVC:** 10 mV/°C

Alarm Output: Voltage, 100 mA drive
Alarm Set Point: 0 to 100 % adj, set via pot
Power: 12 to 24 Vdc @ 50 mA
Operating Temperature:
- **With No Cooling:** 0 to 70°C
- **With Water Cooling:** 0 to 200°C
- **With Air Cooling:** 0 to 110°C

Operating Relative Humidity: Less than 95% RH, non-condensing
Housing: Stainless steel, Nema 4 and IP65
Dimensions: 25.4 OD x 127 L mm (1 x 5")
Weight: 226 g (0.5 lbs)

LASER SIGHTING

Wavelength (Color): 630-670 nm (red)
Operating Distance: Up to 9.1 m (30')
Max Laser Power Output: Less than 1 mW
European Classification: Class 2, EN60825-1/11.2001
FDA Classification: Class II, complies with 21 CFR 1040.10
Laser Beam Diameter: Less than 5 mm
Beam Divergence: Less than 2 mrad
Power Switch: Slide switch on the battery pack
Power Indicator: Red LED
Caution and Certification Label: Located on the head circumference
Aperture and Identification Label: Located on the head circumference



Connect your OS137 to a precision controller model CNi8DH, $340, sold separately, please see page 40 for complete information on this and other iSeries meters and controllers.

CNi8DH shown actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
OS137-(*)-MV-F	**$345**	Infrared transmitter with 10 mV/°F output
OS137-(*)-MV-C	**345**	Infrared transmitter with 10 mV/°C output
OS137-(*)-MA	**345**	Infrared transmitter with 4 to 20 mA output
OS137-(*)-V1	**345**	Infrared transmitter with 0 to 5 Vdc output
OS137-(*)-V2	**345**	Infrared transmitter with 0 to 10 Vdc output
OS137-(*)-K	**345**	Infrared transmitter with K T/C output

***** *Insert "**1**" for 0 to 100°C (32 to 212°F); Insert "**2**" for -18 to 260°C (0 to 500°F); Insert "**3**" for -18 to 538°C (0 to 1000°F).*

Ordering Examples: OS137-1-MA,** infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 4 to 20 mA output, **$345.

OS137-1-V1** and **CNi8DH33,** infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 0 to 5 Vdc output, and ⅛ DIN temperature controller, $345 + 340 = **$685.

Accessories

MODEL NO.	PRICE	DESCRIPTION
OS137-MB	**$30**	Mounting bracket
OS137-AP	**30**	Air purge collar
OS137-WC	**150**	Water/air cool jacket
OS137-LS	**125**	Laser sighting
PSR-24S	**60**	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	**60**	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	**60**	Regulated power supply, 24 Vdc, 400 mA, 6' cord with stripped leads, 230 Vac input, CE
PSU-93	**40**	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-IR	**125**	NIST-traceable calibration

† ***OS137-LS laser sighting:** 1 unit suitable for aligning multiple heads. Used during installation only.*
Ordering Example: OS137-MB,** mounting bracket, **$30.

MINIATURE INDUSTRIAL, NON-CONTACT IR TEMPERATURE SENSOR/ TRANSMITTERS

WITH BUILT-IN LED DISPLAY OPTION

NEW

1 YEAR WARRANTY · MADE IN USA · CE · EMC SERVICES

- -18 to 538°C (0 to 1000°F) Temperature Range
- Adjustable Emissivity from 0.10 to 1.0
- Fast, Accurate, Repeatable Readings
- Type K Thermocouple, 0 to 5 Vdc, 0 to 10 Vdc, 4 to 20 mA, or 1 mV/Deg Analog Output Models
- Built-In°C/°F-Switchable
- LED Display Model Available
- Rugged, Miniature Industrial Enclosure with Remote Sensor Head
- User-Adjustable High or Low Alarm Output
- PC Interface Standard on All Models
- OS100-SOFT Data Acquisition and Real-Time Temperature Display Software
- NEMA 4 (IP65) Rated Aluminum Housing
- Models with High-Temperature Sensor Head Available (See "To Order" Notes)

OS101E-MV-(*) Starts at $195

Models shown smaller than actual size.

OS102E-MV-(*) Starts at $270

Strain relief port for power and output leads.

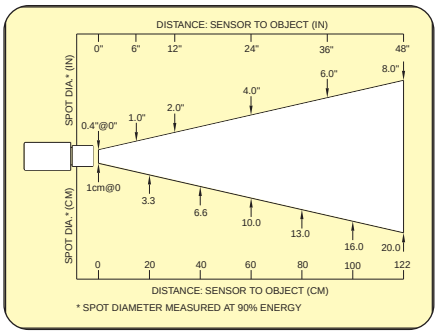
OMEGA's new OS100E Series miniature infrared transmitters measure a temperature range of -18 to 538°C (0 to 1000°F). They consist of a remotely mounted infrared sensor head connected to a high-performance, microprocessor-based signal conditioner. The miniature sensor head is ideal for measuring temperature in confined, hard-to-reach places and harsh environments. The sensor head is connected to the main electronics housing via a 1.8 m (6') shielded cable. The signal conditioner's main electronics are mounted in a rugged NEMA 4 (IP65) rated die-cast aluminum housing. Model OS102E includes a built-in LED display that is switchable between °C and °F. Standard features include adjustable emissivity, field-adjustable alarm output, and RS232 PC interface. The unit has analog outputs such as 4 to 20 mA, 0/5 Vdc, 0/10 Vdc, 1 mV/Deg, and Type K thermocouple.

SPECIFICATIONS

Temperature Range:
-18 to 538°C (0 to 1000°F)
Accuracy @ 22°C (72°F) Ambient Temperature and Emissivity of 0.95 or Greater: ±2% rdg or 2.2°C (4°F), whichever is greater
Optical Field of View:
6:1 (distance/spot size)
Sensor Head Cable Extension:
Up to 15 m (50') total
Repeatability: ±1% rdg
Spectral Response: 5 to 14 microns
Response Time:
100 ms (0 to 63% of final value)
Emissivity Range: 0.1 to 1.00, adjustable
Display Option (102E):
4-digit LED, °C/°F switchable
Operating Temperature:
Main Transmitter:
0 to 50°C (32 to 122°F)
Sensor Head: 0 to 70°C (32 to 158°F)
Sensor Head (-HT Model):
0 to 85°C (32 to 185°F)
Sensor Head with OS100-WC (Water Cooling Jacket):
0 to 200°C (32 to 392°F)
Operating Relative Humidity:
Less than 95% RH, non-condensing
Water Flow Rate for OS100-WC:
0.25 GPM, room temperature
Thermal Shock: About 30 minutes for 25°C (77°F) abrupt ambient temperature change
Warm-Up Period: 3 minutes
Air Flow Rate for OS100-AP:
1 CFM (0.5 L/s)
Power: 12 to 24 Vdc @ 150 mA
PC Communications: Serial RS232, 2-way
Analog Outputs:
MV: 1 mV/Deg
K: K Type thermocouple
MA: 4 to 20 mA
V1: 0 to 5 Vdc
V2: 0 to 10 Vdc

NEW

AVAILABLE ACCESSORIES



Optical Field of View

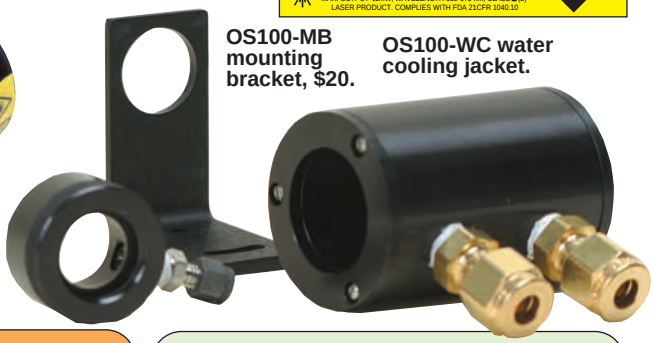
OS100-LS laser sighting, $175.

All models shown smaller than actual size.

OS100-AP air purge collar, $30.

OS100-MB mounting bracket, $20.

OS100-WC water cooling jacket.



Output Load Requirements:
Min Load: 1 kΩ (0 to 5 Vdc), 2 kΩ (0 to 10 Vdc)
Max Load (4 to 20 mA): (supply power - 4)/20 mA
Transmitter Housing: NEMA 4 (IP65), die-cast aluminum
Sensor Head Housing: NEMA 4 (IP65), aluminum
Alarm Output: Open drain, 100 mA
Alarm Setpoint: 0 to 100%, adjustable
Alarm Deadband: 5.5°C (10°F)
Dimensions:
Sensor Head: 25.4 OD x 63.5 mm L (1 x 2.5")
Main Housing: 65.5 W x 30.5 H x 115.3 mm L (2.58 x 1.2 x 4.54")
Weight: 272 g (0.6 lb)

LASER SIGHT ACCESSORY (OS100-LS)
Wavelength (Color): 630 to 670 nm (red)
Operating Distance (Laser Dot): Up to 9.1 m (30')
Max Output Optical Power: Less than 1 mW @ -6°C (22°F) ambient temperature
European Classification: Class 2, EN60825-1/11.2001
Max Operating Current: 45 mA @ 3 Vdc
FDA Classification: Complies with 21 CFR 1040.10, Class II Laser Product
Beam Diameter: 5 mm
Beam Divergence: <2 mrad
Operating Temperature: 0 to 50°C (32 to 122°F)
Operating Relative Humidity: Less than 95% RH, non-condensing
Power Switch: On/off slide switch on the battery pack
Power Indicator: Red LED
Power: Battery pack, 3 Vdc (consists of two 1.5 Vdc "AA" lithium batteries)
Dimensions: 38 Dia. x 50.8 mm L (1.5 x 2")
Software (included): Requires Windows 98 or newer Windows operating system

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
OS101E-MV	**$195**	Transmitter with 1 mV/°C or °F output
OS101E-V1	**195**	Transmitter with 0 to 5 Vdc output
OS101E-V2	**195**	Transmitter with 0 to 10 Vdc output
OS101E-MA	**245**	Transmitter with 4 to 20 mA output
OS101E-K	**195**	Transmitter with Type K T/C output
Models with High-Temperature Sensing Head		
OS101E-MV-HT	**$295**	Transmitter with 1 mV/°C or °F output
OS101E-V1-HT	**295**	Transmitter with 0 to 5 Vdc output
OS101E-V2-HT	**295**	Transmitter with 0 to 10 Vdc output
OS101E-MA-HT	**345**	Transmitter with 4 to 20 mA output
OS101E-K-HT	**295**	Transmitter with Type K T/C output

Models with Built-In LED Display

MODEL NO.	PRICE	DESCRIPTION
OS102E-MV	**$270**	Transmitter with 1 mV/°C or °F output and LED display
OS102E-V1	**270**	Transmitter with 0 to 5 Vdc output and LED display
OS102E-V2	**270**	Transmitter with 0 to 10 Vdc output and LED display
OS102E-MA	**320**	Transmitter with 4 to 20 mA output and LED display
OS102E-K	**270**	Transmitter with Type K output and LED display
Models with High-Temperature Sensing Head		
OS102E-MV-HT	**$370**	Transmitter with 1 mV/°C or °F output and LED display
OS102E-V1-HT	**370**	Transmitter with 0 to 5 Vdc output and LED display
OS102E-V2-HT	**370**	Transmitter with 0 to 10 Vdc output and LED display
OS102E-MA-HT	**420**	Transmitter with 4 to 20 mA output and LED display
OS102E-K-HT	**370**	Transmitter with Type K output and LED display

Each model comes with sensor head and 1.8 m (6') cable, sensor head mounting nut, main electronics housing, user software and operator's manual.
Ordering Example: OS101E-MA + OS100-LS + OS100-CA15FT,** transmitter with 4 to 20 mA output, laser sighting accessory and 4.6 m (15') sensor head extension cable, $245 + 175 + 35 = **$455.

Accessories

MODEL NO.	PRICE	DESCRIPTION
OS100-MB	**$20**	Mounting bracket
OS100-DR	**25**	DIN rail mounting adaptor
OS100-AP	**30**	Air purge collar
OS100-WC	**175**	Water cooling jacket, up to 200°C
OS100-LS	**175**	Laser sighting accessory
OS100-CA15FT	**35**	Sensor head extension cable, 4.6 m (15')
OS100-CA25FT	**45**	Sensor head extension cable, 7.6 m (25')
TX8-100	**45.50**	Power/output cable, 30 m (100')
PSR-24S	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	**60**	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93	**40**	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-IR	**125**	NIST-traceable calibration

Sensors product line continues to expand, visit omegamation.com for new details!

INDUSTRIAL NON-CONTACT INFRARED THERMOMETER/ TRANSMITTER

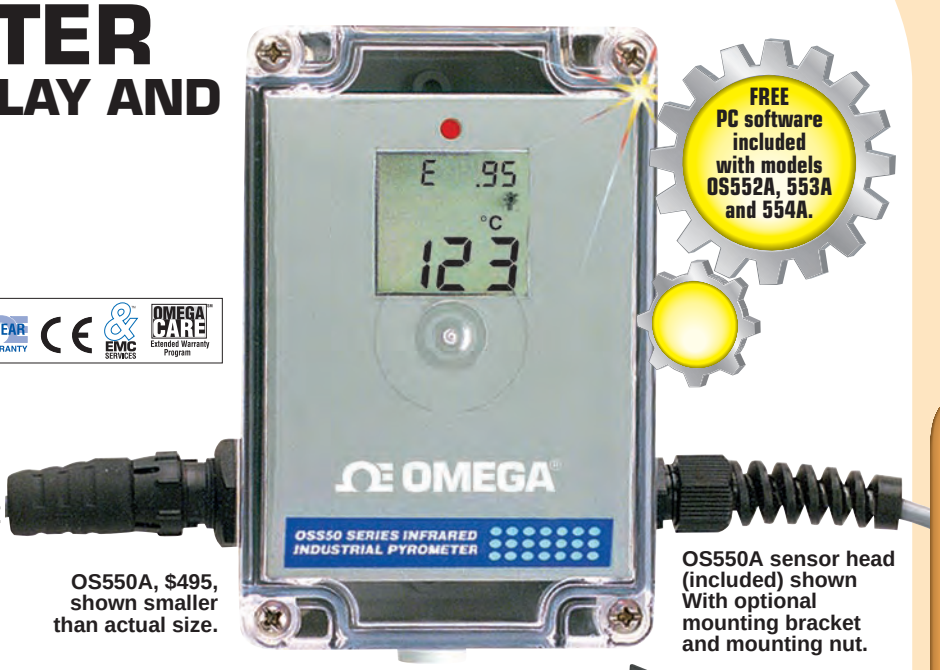
WITH LOCAL DISPLAY AND ANALOG OUTPUT

OS550A Series Starts at $495

MADE IN USA | 2 YEAR WARRANTY | CE | EMC SERVICES | OMEGA CARE Extended Warranty Program

- Accuracy ±1% of Reading
- Models with Temperature Ranges Measuring Up to 1370°C (2500°F)
- Current, Voltage, or Millivolt Output
- Laser Sight Optional
- °C/°F Keypad Selectable
- Local Backlit LCD Display Standard
- Dual Display Indicates Current plus Min, Max, Average, or Differential Temperatures on All Models
- Visual and Audible High and Low Alarms with Red LED Indication
- Voltage Alarm Outputs to Drive External Relays
- Emissivity Adjustable from 0.1 to 1.00 in 0.01 Steps via the Programmable Keypad
- Fast 100 msec Response Time
- Complete NEMA 4 (IP66) System
- Two-Way RS232 Communication Available

FREE PC software included with models OS552A, 553A and 554A.



OS550A, $495, shown smaller than actual size.

OS550A sensor head (included) shown With optional mounting bracket and mounting nut.

Available Accessories

OS550-MF mounting frame, $65.

OS550-MN mounting nut, $15.

OS550-AP air purge collar, $65.

OS550-WC air/water cooling jacket, $195.

OS550-MB mounting bracket, $35.

We make running changes when technical advances allow. Check at time of ordering for additional features.

Omega's OS550A Series industrial, high-performance, economical thermometer/transmitter offers a wide choice of temperature ranges, optical analog fields of view and 3 outputs (1 mV/degree, 4 to 20 mA, and 0 to 5 Vdc) to feed directly into panel meters, recorders, temperature/process controllers, data loggers, data acquisition systems, or other process instrumentation.

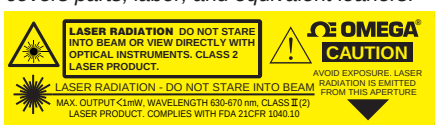
Since the OS550A Series infrared thermometers do not use chopper motors or vibrator mechanisms, they can be mounted in any position and in hostile environments without suffering any loss in performance.

This rugged design coupled with relatively small dimensions makes these sensors ideally suited for a wide variety of applications.

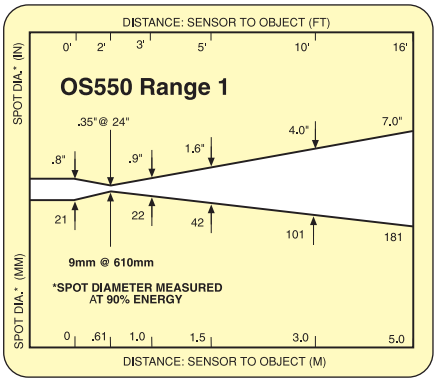
SPECIFICATIONS

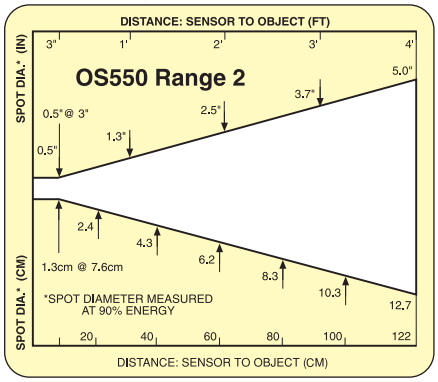
Accuracy: ±1% of reading @ 25°C ambient or 1.7°C (3°F), whichever is greater
Repeatability: ±1% rdg ±1 digit
Spectral Response: 8 to 14 microns
Emissivity Range: 0.10 to 1.00
Field of View (FOV): See diagrams
Display: Backlit LCD
Transmitter Outputs: 1 mV/degree, 0 to 5 Vdc or 4 to 20 mA
Power: 8 to 24 Vdc @ 80 mA
Environmental Ratings: NEMA 4 (IP65) water-tight and dust-tight for sensing head and electronics enclosure
Ambient Operating Range: Sensing head 0 to 50°C (32 to 122°F) with OS550-WC; 0 to 85°C (32 to 185°F)
Response Time: 100 msec; 0 to 63.2% final value
Alarm Output: Voltage, 100 mA drive
RS232: Standard on OS552A, OS553A and OS554A models; two-way communication; PC compatible software included
Connection: 4.5 m (15') sensor head and power output cables included
Dimensions:
Sensing Head: 10.9 x 4.1 cm (4.30 x 1.63"), 1 1/2 to 20 thread
Electronics: 12 x 80 x 50.8 cm (4.75 x 3.15 x 2")
Weight:
Sensing Head: 0.45 kg (12 oz) OS550A Electronics Mounted in NEMA 4 (IP65)
Enclosure: 1.2 kg (43.2 oz)
Max Laser Power Output:
< 1 mW Class II laser product

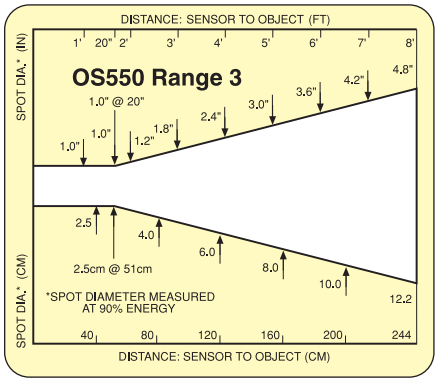
OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor, and equivalent loaners.

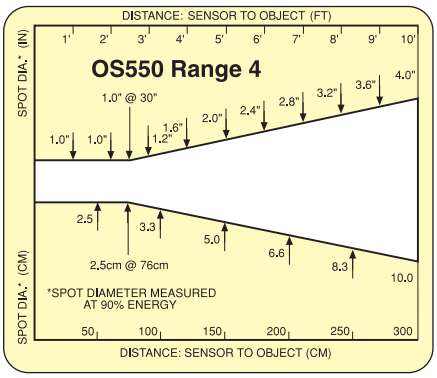


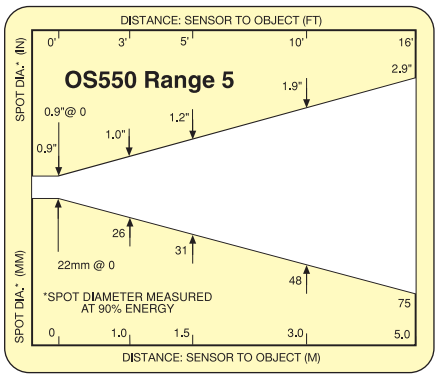
OS550 Series Optical Field of View Diagrams

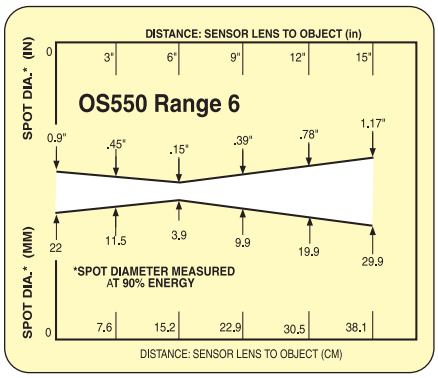












To Order NEMA 4 (IP65) System *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	OUTPUT	TEMPERATURE RANGE	RS232	FREE PC SOFTWARE
OS551A-MV-(*)	**$495**	1 mV/deg	-23 to 400°C (-10 to 750°F)	—	—
OS551A-MA-(*)	**495**	4 to 20 mA	-23 to 400°C (-10 to 750°F)	—	—
OS551A-V1-(*)	**495**	0 to 5 Vdc	-23 to 400°C (-10 to 750°F)	—	—
OS552A-MV-(*)	**550**	1 mV/deg	-23 to 540°C (-10 to 1000°F)	Standard	Standard
OS552A-MA-(*)	**550**	4 to 20 mA	-23 to 540°C (-10 to 1000°F)	Standard	Standard
OS552A-V1-(*)	**550**	0 to 5 Vdc	-23 to 540°C (-10 to 1000°F)	Standard	Standard
OS553A-MV-(*)	**650**	1 mV/deg	-23 to 870°C (-10 to 1600°F)	Standard	Standard
OS553A-MA-(*)	**650**	4 to 20 mA	-23 to 870°C (-10 to 1600°F)	Standard	Standard
OS553A-V1-(*)	**650**	0 to 5 Vdc	-23 to 870°C (-10 to 1600°F)	Standard	Standard
OS554A-MV-(*)	**750**	1 mV/deg	-18 to 1370°C (0 to 2500°F)	Standard	Standard
OS554A-MA-(*)	**750**	4 to 20 mA	-18 to 1370°C (0 to 2500°F)	Standard	Standard
OS554A-V1-(*)	**750**	0 to 5 Vdc	-18 to 1370°C (0 to 2500°F)	Standard	Standard

***** *Insert optics code from table below.*
Note: *Sensor head cable can be extended at the factory at time of purchase to a maximum of 15 m (50'). Add suffix* ***"-(*)FT"*** *to order number and* ***$1.00*** *per 0.3 m (1') over 5 m (15') to price.*
Ordering Examples: OS552A-MA-2, *infrared thermometer with -23 to 538°C (-10 to 1000°F) range, 4 to 20 mA output and spot size 12.7 mm (0.5") at 76 mm (3"),* ***$550. OS551A-MA-2-35FT****, OS551 with current output, 0.5 at 3" FOV, 11 meter sensor head cable, $495 + 20 =* ***$515. OCW-3,*** *OMEGACARE℠ extends standard 2-year warranty to a total of 5 years ($128), $515 + 128 =* ***$643.***

Optical Table*

OPTICAL RANGE CODE	FIELD OF VIEW (FOV)
– 1	Spot size 8.9 @ 609 mm (0.35" @ 24")
– 2	Spot size 12.7 @ 76 mm (0.5" @ 3")
– 3	Spot size 25.4 @ 508 mm (1" @ 20")
– 4	Spot size 25.4 @ 762 mm (1" @ 30")
– 5	Spot size 25.4 @ 1524 mm (1" @ 60")
– 6	Spot size 3.8 @ 152 mm (0.15" @ 6")

Accessories

MODEL NO.	PRICE	DESCRIPTION
OS550-AP	**$65**	Air purge collar
OS550-WC	**195**	Air/water cooling jacket
OS550-MF	**65**	Mounting frame
OS550-MB	**35**	Right-angle mounting bracket
OS550-MN	**15**	Mounting nut
OS550-LS	**195**	Laser sighting*
CAL-3-IR	**125**	NIST calibration certification
CAL-3-IR-X	**175**	NIST calibration for over 1000°F
PSR-24S	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	**60**	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	**60**	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
TX4-100	**45.50**	Power/output extension wire 30 m (100')

***** *1 unit suitable for aligning many heads.*

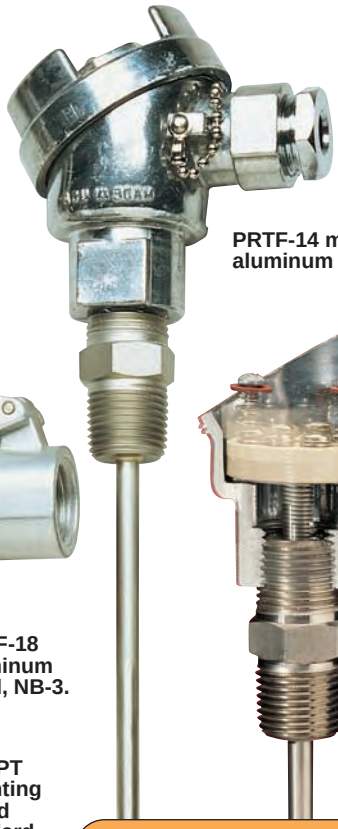
PLATINUM RTD PROBES
SPRING LOADED FOR THERMOWELLS
STANDARD AND METRIC DIMENSIONS

NEW

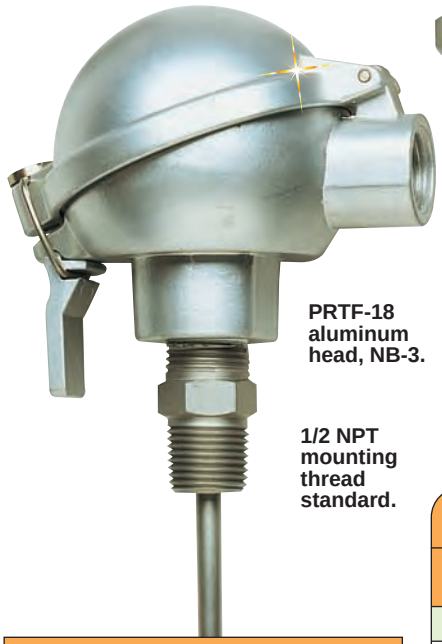
Products shown smaller than actual size.

PRTF-19 sub-miniature aluminum head, NB-4.

PATENTED
Covered by U.S. and International patents and pending applications.



PRTF-14 miniature aluminum head, NB-2.



PRTF-18 aluminum head, NB-3.

1/2 NPT mounting thread standard.

PRTF-12-SL cast iron head, NB-1.

OMEGACAL℠ Factory CAL AVAILABLE
See omega.com

PRTF Series Starts at $81

MADE IN USA

- **Assemblies Include Spring Loaded Probes for Improved Response Time and Vibration Resistance When Used in Thermowells***
- **Standard Probes Supplied with 100 Ω Thin Film Class "B" DIN Platinum Elements in 3-Wire Configurations (2- and 4-Wire Available) with IEC751/ ASTM-E-1137 Color Codes**
- **Multiple Connection Head Options Include Screw Cover and Snap Locking Enclosures with Ceramic Terminal Boards**
- **Full Line of Connection Head Mountable 4 to 20 mA Transmitters are Available for Use with These Sensors**

***Note:** When installed in a thermowell, the thread engagement will equal the spring loading compression length.*

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

STANDARD DIMENSIONS MODEL NO.	LEAD TYPE†	OHMS AT 0°C	SHEATH LENGTH	1/4" OD PRICE	1/8 or 3/16" OD PRICE
PRTF-(**)-2-100-(*)-6-E-SL	2	100	6"	$81	$85
PRTF-(**)-2-100-(*)-9-E-SL	2	100	9"	81	85
PRTF-(**)-2-100-(*)-12-E-SL	2	100	12"	81	85
PRTF-(**)-2-100-(*)-18-E-SL	2	100	18"	87	91
PRTF-(**)-2-100-(*)-24-E-SL	2	100	24"	93	97

** Specify: **1/8**, **3/16** or **1/4** for probe diameter in inches. Other lengths readily available.*
*** Connection head callout: see table.*
Ordering Example: PRTF-12-2-100-1/14-6-E-SL,** industrial RTD probe with cast iron head, 3-wire configuration (style 2), 100 ohm, ¼" diameter, 6" length, European curve (α = 0.00385), **$81.
*† For other lead types please see **omega.com***

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

METRIC DIMENSIONS MODEL NO.	LEAD TYPE†	OHMS AT 0°C	SHEATH LENGTH	6 mm OD PRICE	3 or 4.5 mm OD PRICE
PRTF-(**)-2-100-(*)-150-E-SL	2	100	150 mm	$81	$85
PRTF-(**)-2-100-(*)-225-E-SL	2	100	225 mm	81	85
PRTF-(**)-2-100-(*)-300-E-SL	2	100	300 mm	81	85
PRTF-(**)-2-100-(*)-450-E-SL	2	100	450 mm	87	91
PRTF-(**)-2-100-(*)-600-E-SL	2	100	600 mm	93	97

** Specify: **M30**, **M45** or **M60** for probe diameter in millimeters. Other lengths readily available.*
*** Connection head callout: see table.*
*† For other lead types please see **omega.com***
Ordering Example: PRTF-12-2-100-M60-150-E-SL,** industrial RTD probe with cast iron head, 3-wire configuration (style 2), 100 Ω, 6 mm diameter, 150 mm length, European curve (α = 0.00385), **$81.

TRANSMITTER OPTIONS		
MODEL NO.	DESCRIPTION	PAGE
TX92	Mini transmitter	N-13
TX94	Ultra-low profile	N-14
TX904	Field rangeable	N-15

***Note:** See **omega.com** for range codes.*
Ordering Example:
PRTF-18-2-100-1/4-12-E-SL-TX904,** spring loaded 100 Ω, Class "B" DIN Platinum RTD with snap-locking aluminum head and TX904-2 transmitter, **$81 +173 = 254

Use RTD Extension Wire, *e.g.*, EXTT-3CU Series. Please see omega.com

CONNECTION HEADS		
MODEL NO.	DESCRIPTION	CODE
PR-12	Cast iron	12
PR-14	Mini aluminum	14
PR-18	Aluminum hinge top	18
PR-19	Sub-mini aluminum	19

PRTF-12-2-100-1/4-9-E-SL, $81, Shown smaller than actual size. And with a 3/4-260L-U 4½-304SST Thermowell. see omega.com

These spring loaded RTDs are used with thermowells for applicaions where the sensor needs to be protected from process conditions such as pressure and corrosion. The probe assemblies include a spring loading mechanism that ensures that the sensor is in contact with the bore of the thermowell at all times for optimum performance. When combined with transmitters, indicators, controllers and heaters, they can be assembled into complete monitoring and control system packages.

TX92 miniature transmitter, $188, see omega.com

TX94 ultra-low profile transmitter, $105, see omega.com

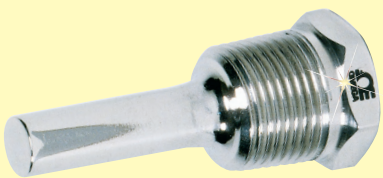
TX904 field rangeable transmitter, $173, see omega.com

When the sensors are used in remote locations, or in environments where electro-magnetic noise is prevalent. Transmitters are a perfect choice. The transmitters shown above will convert the resistance of the RTD to a 4 to 20 mA signal.

OMEGA can supply your thermowell needs, the following are styles available from stock:

260S Series general use thermowell, $22, see omega.com

260L Series lagging extension thermowell, $26.50, see omega.com



260A Series limited space thermowell, $20, see omega.com

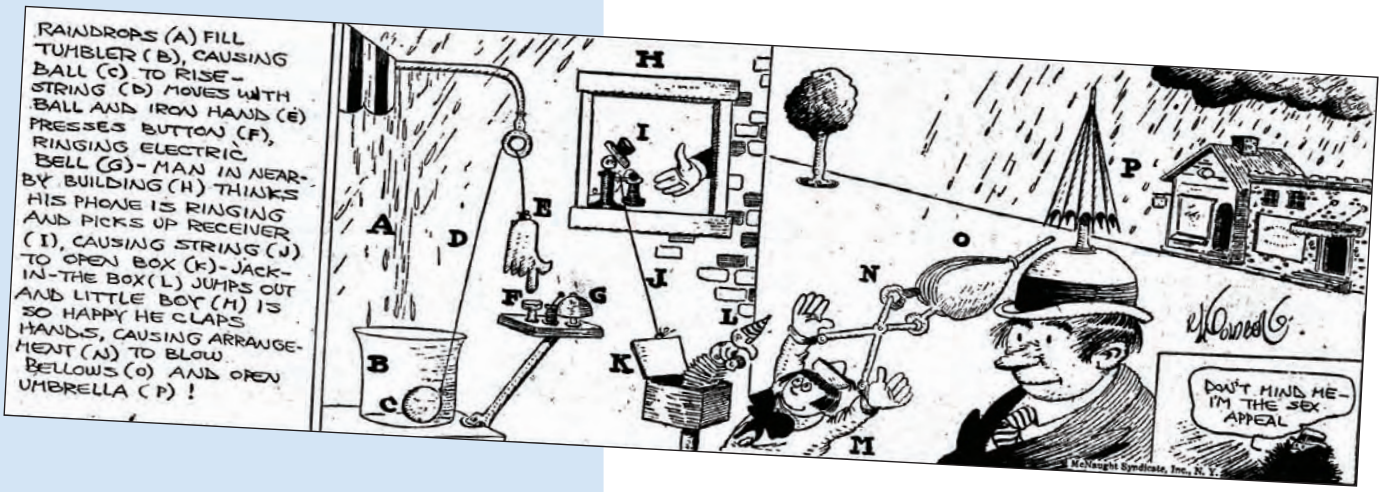
260F Series flanged thermowell, $21, see omega.com

Sensors product line continues to expand, visit omegamation.com for new details!

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

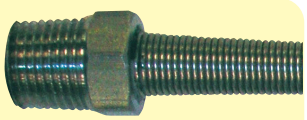
Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*



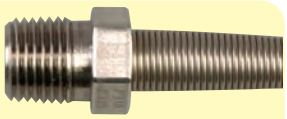
NEW DUAL ELEMENT RTD PIPE PLUG SENSORS

RTD-NPT Series Starts at $115

- Ideal for Use in Pressure Vessel Applications, 172 bar (2500 psi) Max
- PFA Insulated Lead Wires
- High-Accuracy, 100 Ω, Thin Film Class "A" DIN Platinum Elements (European Curve)
- 3-Wire Construction for Connecting to Most Handheld Instruments with Red/Red/White Per IE/ASTM-E-1137

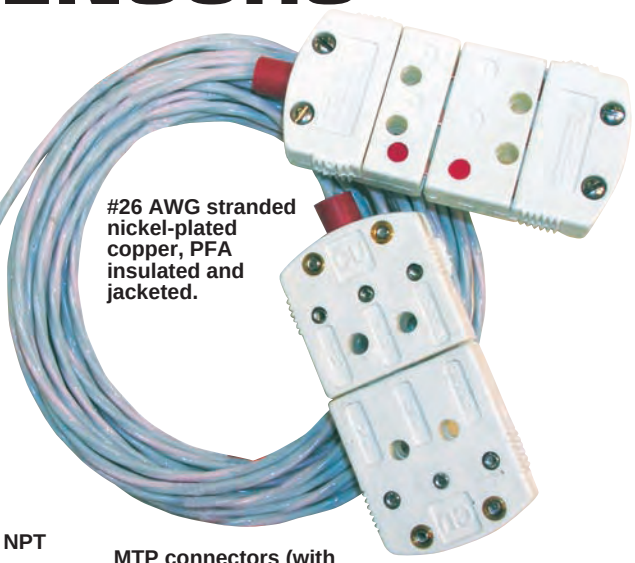


¼ NPT



⅛ NPT

¼ NPT



#26 AWG stranded nickel-plated copper, PFA insulated and jacketed.

MTP connectors (with mating connector).

RTD-NPT-72-E-DUAL-MTP, $115, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	SENSING ELEMENT CABLE	THREAD SIZE	MAX TEMP	PRICE
RTD-NPT-72-E-DUAL-1/8-MTP	100 Ω Class "A" DIN 72" Long PFA insulated	⅛ NPT	230ºC (450ºF)	**$115**
RTD-NPT-72-E-DUAL-MTP	100 Ω Class "A" DIN 72" Long PFA insulated	¼ NPT	230ºC (450ºF)	**115**
RTD-NPT-72-E-DUAL-1/8-MTP-HT	100 Ω Class "A" DIN 72" Long fiberglass insulated	½ NPT	480ºC (896ºF)	**134**
RTD-NPT-72-E-DUAL-MTP-HT-S	100 Ω Class "A" DIN 72" Long fiberglass insulated	¼ NPT	480ºC (896ºF)	**134**

Options Available: *Sensors supplied with MTP connectors, add* ***"-OTP"*** *to model number and* ***$7*** *to price for each heavy-duty connector, add* ***"-TA3F"*** *to model number and* ***$17*** *to price for each audio connector. For steel braided cables add* ***"-S"*** *to model number, no additional charge.*

Ordering Examples: RTD-NPT-72-E-DUAL-MTP, *two 100 Ω Class "A" element, European curve with non-braided cables and MTP connectors,* ***$115.*** ***RTD-NPT-72-E-DUAL-1/8-MPT-HT,*** *dual Class "A" elements, European Curve, with ⅛ NPT mounting thread, 72" long fiberglass insulated cables with SST braid,* ***$134.***

Popular Options Include:

CN1A, $168. Search omega.com

DP461-RTD, Meter, $348. Search omega.com

iDRX/iDRN, Signal Conditioner, $270. See page 98.

DRF-RTD, Signal Conditioner, $180. Search omega.com

How are OMEGA's Model Numbers Constructed?

RTD — NPT — 72 — E — DUAL — 1/4 — OTP — HT — S

- 72: Cable Length: In Inches
- E: Temperature Coefficient: E = European 0.00385 Ω/Ω/°C, A = American 0.00392 Ω/Ω/°C
- 1/4: Number of Elements: Dual = Two Elements, (Blank) = One Element
- OTP: Termination Options: TA3F = Audio Connector, OTP = OTP Connector, (Blank) = MTP Connector
- HT: Temperature Range: (Blank) = 230ºC max, HT = 480ºC max
- S: Cable Options: S = Steel Overbraid, (Blank) = None

Ordering Example: *RTD-NPT-72-E-DUAL-OTP-HT-S, $134 + 7 =* ***$141.***

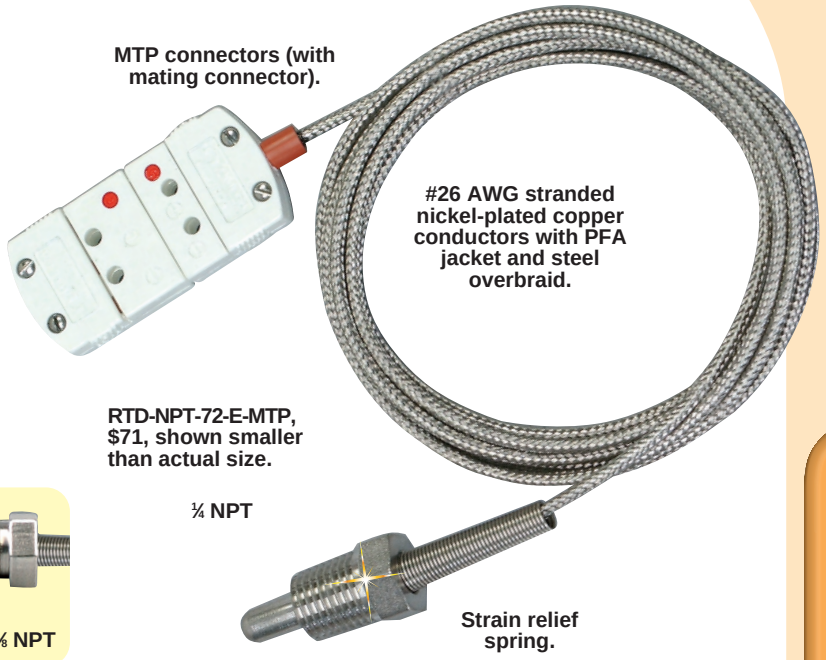
Sensors product line continues to expand, visit omegamation.com for new details!

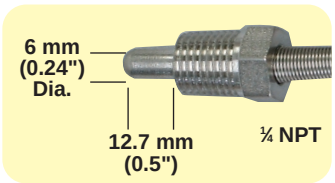
PIPE PLUG RTD SENSOR

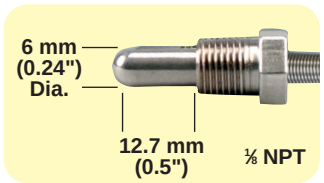
NEW

RTD-NPT Series Starts at $71

- Ideal for Use in Pressure Vessel Applications, 172 bar (2500 psi) Max
- 6 mm (0.24") Diameter, SST Probe
- Steel Braided, PFA Insulated Lead Wires
- High-Accuracy, 100 Ω, Class "A" DIN Platinum Element (European Curve)
- 3-Wire Construction for Connecting to Most Handheld Instruments with Red/Red/White Per IE/ASTM-E-1137







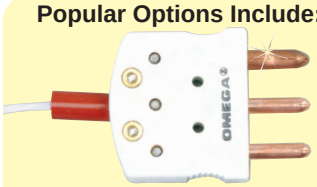
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	SENSING ELEMENT	CABLE	THREAD SIZE	MAX TEMP	PRICE
RTD-NPT-72-E-MTP	100 Ω Class "A" DIN	72" Long PFA insulated	¼ NPT	230ºC (450ºF)	**$71**
RTD-NPT-72-E-1/8-MTP	100 Ω Class "A" DIN	72" Long PFA insulated	⅛ NPT	230ºC (450ºF)	**71**
RTD-NPT-72-E-MTP-HT	100 Ω Class "A" DIN	72" Long fiberglass insulated	¼ NPT	480ºC (896ºF)	**84**
RTD-NPT-72-E-1/8-MTP-HT	100 Ω Class "A" DIN	72" Long fiberglass insulated	⅛ NPT	480ºC (896ºF)	**84**

Ordering Examples: RTD-NPT-72-E-TA3F, *100 Ω Class "A" European curve, single element, 72" long PFA insulated cable with audio connector, $71 + 17 =* ***$88.***
RTD-NPT-72-E-MTP-HT, *100Ω Class "A" European curve, single element, 72" long fiberglass insulated cable with steel overbraid,* ***$84.***
RTD-NPT-72-E-1/8-MTP-HT, *Class "A" element, European Curve, with ⅛ NPT mounting thread, 72" long fiberglass insulated cable with SST braid,* ***$84.***
Options Available: *Sensors supplied with MTP connectors, add* ***"-OTP"*** *to model number and* ***$7*** *to price for each heavy-duty connector, add* ***"-TA3F"*** *to model number and* ***$17*** *to price for each audio connector. For steel braided cables add* ***"-S"*** *to model number, no additional charge.*

Popular Options Include:



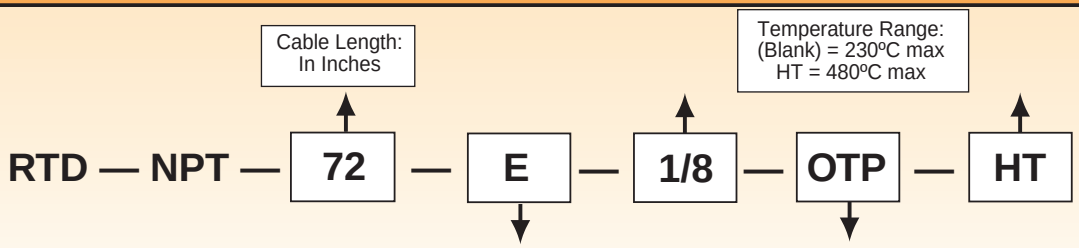
OTP-U-M, Heavy-Duty Connector, $7. Search omega.com

DP461-RTD, Meter, $348. Search omega.com

SPRTX, 4 to 20 mA Transmitter, $75. Search omega.com

TX92, Transmitter, $188. Search omega.com

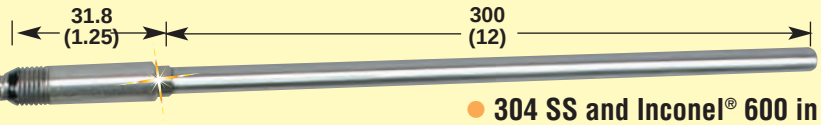
How are OMEGA's Model Numbers Constructed?



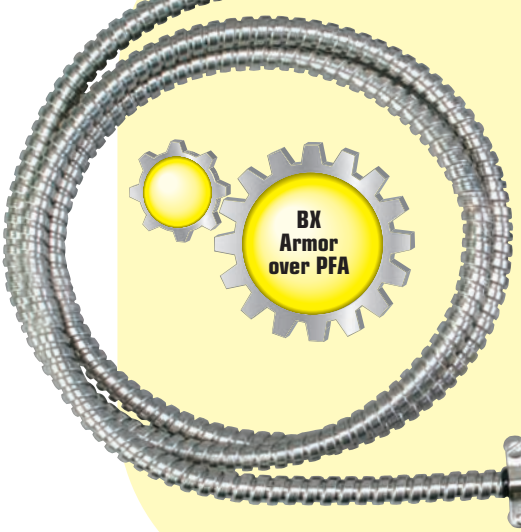
Ordering Example: *RTD-NPT-72-E-OTP-HT-S, $84 + 7 =* ***$91.***

RUGGED TRANSITION JOINT PROBE

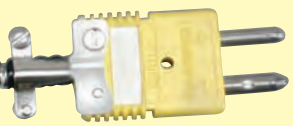
STAINLESS STEEL BX ARMOR CABLE OVER PFA LEAD WIRE WITH ATTACHED MINIATURE MALE CONNECTOR AND CABLE CLAMP



Dimensions: mm (in)



Standard male connector with OMEGA's removable/reversible write-on window feature. Cable clamp attachment designed for durability!



TJ36-CAIN-14U-12-BX-OSTW-M, $47, shown smaller than actual size.

- 304 SS and Inconel® 600 in Stock
- 1 m (40") Lead Length
- Manufactured with Compacted Mineral Insulation Cable for Long-Lasting Performance in Harsh Conditions!

MADE IN USA

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

Available as SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT
See omega.com

Armor Protection

Rigid stainless steel BX armor cable offers pierce and splash protection from tools, solder, molten plastics, and welding slag.

Probe Configurator

For additional cold-end terminations, sheath materials, and lead wires, visit our automated probe configurator at omega.com.

To Order *(Specify Model Number)*

12" Probes Available for the Same Price!

MOST POPULAR MODELS HIGHLIGHTED!

CALIBRATION ANSI CODE	SHEATH MATERIAL	SHEATH DIA. mm (in)	UPPER TEMP GUIDELINES °C (°F) T/C JUNCTION	MODEL NO. *SPECIFY JUNCTION (G)ROUNDED, (E)XPOSED, OR (U)NGROUNDED. **PROBE LENGTH 150 mm (6") 300 mm (12"), 450 mm (18") IN STOCK	PRICE 150 mm (6") and 300 mm (12") G*/E*	PRICE 150 mm (6") and 300 mm (12") U*	PRICE ADD'L 300 mm (12") LEAD WIRE	PRICE ADD'L 300 mm (12") MI CABLE
K CHROMEGA®-ALOMEGA®	304 SS	1.59 (1/16)	899 (1650)	TJ36-CASS-116(*)-(**)-BX-OSTW-M	$38	$40	$2.25	$1.55
	304 SS	3.18 (1/8)	899 (1650)	TJ36-CASS-18(*)-(**)-BX-OSTW-M	38	40		1.85
	304 SS	4.78 (3/16)	899 (1650)	TJ36-CASS-316(*)-(**)-BX-OSTW-M	39	41		3.15
	304 SS	6.35 (1/4)	899 (1650)	TJ36-CASS-14(*)-(**)-BX-OSTW-M	45	47		5.00
	INC 600	1.59 (1/16)	921 (1690)	TJ36-CAIN-116(*)-(**)-BX-OSTW-M	$38	$40	$2.25	$1.55
	INC 600	3.18 (1/8)	1071 (1960)	TJ36-CAIN-18(*)-(**)-BX-OSTW-M	38	40		3.15
	INC 600	4.78 (3/16)	1149 (2100)	TJ36-CAIN-316(*)-(**)-BX-OSTW-M	39	41		4.35
	INC 600	6.35 (1/4)	1149 (2100)	TJ36-CAIN-14(*)-(**)-BX-OSTW-M	45	47		7.50
	XL	1.59 (1/16)	1038 (1900)	TJ36-CAXL-116(*)-(**)-BX-OSTW-M	$41	$43	$2.25	$1.70
	XL	3.18 (1/8)	1149 (2100)	TJ36-CAXL-18(*)-(**)-BX-OSTW-M	41	43		3.50
	XL	4.78 (3/16)	1204 (2200)	TJ36-CAXL-316(*)-(**)-BX-OSTW-M	41	43		4.80
	XL	6.35 (1/4)	1204 (2200)	TJ36-CAXL-14(*)-(**)-BX-OSTW-M	41	43		8.30
J IRON-CONSTANTAN	304 SS	1.59 (1/16)	441 (825)	TJ36-ICSS-116(*)-(**)-BX-OSTW-M	$38	$40	$2.25	$1.55
	304 SS	3.18 (1/8)	521 (970)	TJ36-ICSS-18(*)-(**)-BX-OSTW-M	38	40		1.85
	304 SS	4.78 (3/16)	621 (1150)	TJ36-ICSS-316(*)-(**)-BX-OSTW-M	39	41		3.15
	304 SS	6.35 (1/4)	721 (1330)	TJ36-ICSS-14(*)-(**)-BX-OSTW-M	45	47		5.00
T COPPER-CONSTANTAN	304 SS	1.59 (1/16)	260 (500)	TJ36-CPSS-116(*)-(**)-BX-OSTW-M	$38	$40	$2.25	$1.55
	304 SS	3.18 (1/8)	316 (600)	TJ36-CPSS-18(*)-(**)-BX-OSTW-M	38	40		1.85
	304 SS	4.78 (3/16)	371 (700)	TJ36-CPSS-316(*)-(**)-BX-OSTW-M	39	41		3.15
	304 SS	6.35 (1/4)	371 (700)	TJ36-CPSS-14(*)-(**)-BX-OSTW-M	45	47		5.00

Ordering Example: TJ36-CAIN-14U-12-BX-OSTW-M, *rugged transition joint probe, 1000 mm (40") BX cable over PFA lead, Type K, Inconel® 600 sheath, 3.18 mm (1/8") Dia. probe, ungrounded hot-end thermocouple junction, 300 mm (12") sheath length, standard connector cold-end termination, with robust cable clamp attachment to the lead wire,* ***$47.***

RUGGED PIPE PLUG THERMOCOUPLE PROBE

TC-(*)-NPT Series Starts at $34

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

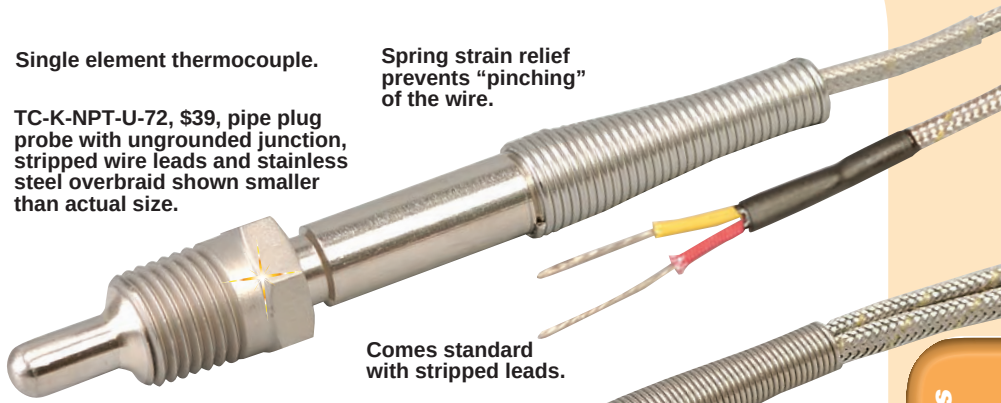
- Rugged 304 SS Design with Strain Relief Spring
- Single and Dual Elements
- Dual Thermocouples Can Provide a Compact Way of Sending the Same Temperature Signal to 2 Separate Pieces of Equipment
- ¼ NPT or ⅛ NPT Mounting Thread
- 2 m (80") Stainless Steel Braid Over Fiberglass Lead Wire
- 20 AWG, Stranded For ¼ NPT 24 AWG, Stranded For ⅛ NPT Stainless Steel Overbraid–Resists Abrasions and Cuts, Yet Remains Flexible
- Withstands Pressures to 2500 psi at Ambient Temperatures
- Grounded and Ungrounded Junction Is Ideal For Vessel Application, Pressurized Chambers and Pipelines
- Exposed Junction Designed For Air Temperature Measurement and Monitoring of Gas Streams
- Stripped Leads Standard SMP Connectors, Optional
- Choice J, K, T or E Thermocouple Types
- Grounded, Ungrounded or Exposed Junctions
- Special Custom Designs Having Different NPT Threads, Tip Diameters or Tip Lengths Are Also Available
- Flush Tip Available, Consult Custom Engineering

Single element thermocouple.

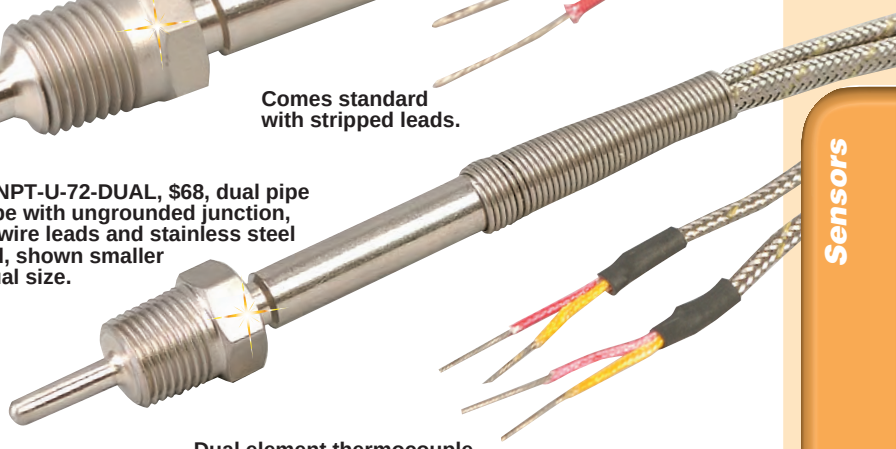
TC-K-NPT-U-72, $39, pipe plug probe with ungrounded junction, stripped wire leads and stainless steel overbraid shown smaller than actual size.

Spring strain relief prevents "pinching" of the wire.

Comes standard with stripped leads.

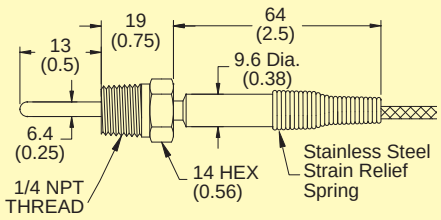


TC-K-1/8NPT-U-72-DUAL, $68, dual pipe plug probe with ungrounded junction, stripped wire leads and stainless steel overbraid, shown smaller than actual size.

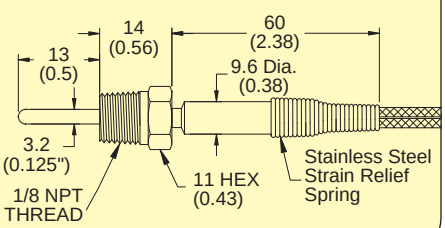


Dual element thermocouple.

¼ NPT Single element thermocouple



⅛ NPT Dual element thermocouple



Dimensions: mm (in)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MOUNTING THREAD	MODEL NO.	PRICE G**/E**	PRICE U**	ADDITIONAL PRICE 300 mm (12") LEAD WIRE
¼	TC-(*)-NPT-(**)-72	$34	$39	$2.25
	TC-(*)-1/4 NPT-(**)-72-DUAL	60	68	4.00
	TC-(*)-1/4 NPT-(**)-72-SMP	39	44	2.25
	TC-(*)-1/4 NPT-(**)-72-SMP-DUAL	68	77	4.00
⅛	TC-(*)-1/8 NPT-(**)-72	$34	$39	$2.25
	TC-(*)-1/8 NPT-(**)-72-DUAL	60	68	4.00
	TC-(*)-1/8 NPT-(**)-72-SMP	39	44	2.25
	TC-(*)-1/8 NPT-(**)-72-SMP-DUAL	68	77	4.00

** Specify calibration: **J, K, T** or **E.***
*** Specify junction type: **G** (Grounded), **E** (Exposed), **U** (Ungrounded).*
For lead wire length over 2m (80"), use additional price per 300 mm (12") increments and modify model number.

INDUSTRIAL THERMOCOUPLES
PROTECTION HEAD DESIGN

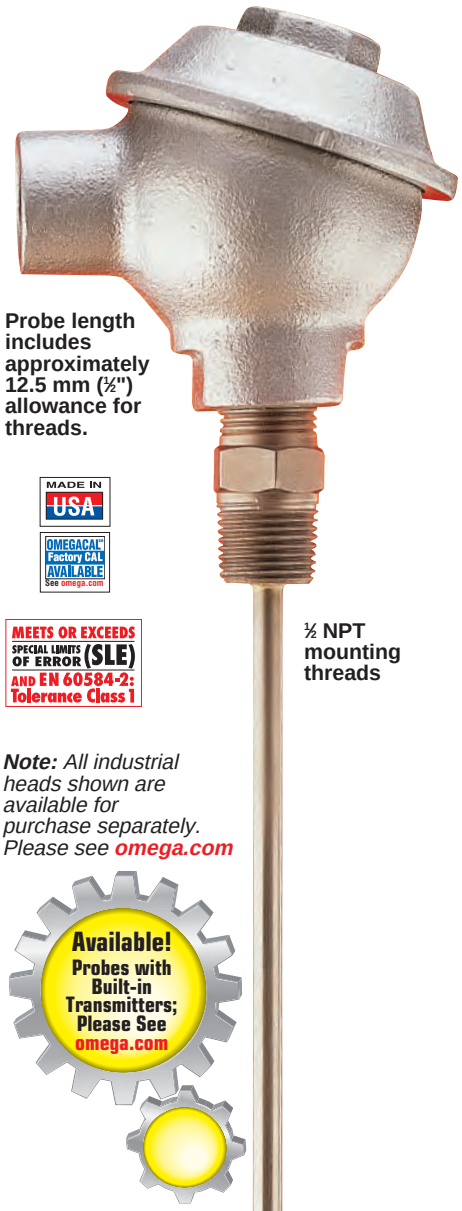
- Sheath Materials: 304SS, 310SS, 316SS, 321SS, Inconel or Super OMEGACLAD® XL
- Probe Length 300 mm (12"), 600 mm (24") Custom Lengths Available, Consult Sales

Available as

SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT

See omega.com

ANSI color code shown | To order IEC color code see omega.com



Probe length includes approximately 12.5 mm (½") allowance for threads.

½ NPT mounting threads

MADE IN USA

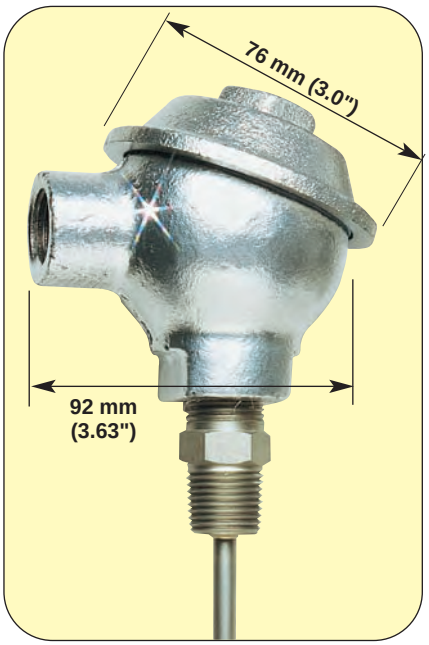
OMEGACAL™ Factory CAL AVAILABLE See omega.com

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

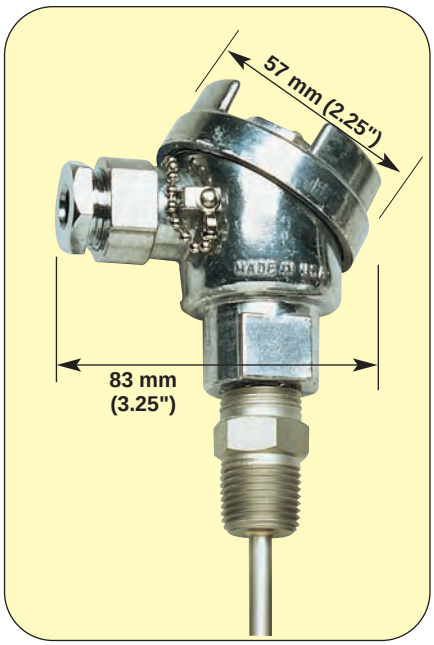
Note: *All industrial heads shown are available for purchase separately. Please see* ***omega.com***

Available! Probes with Built-in Transmitters; Please See omega.com

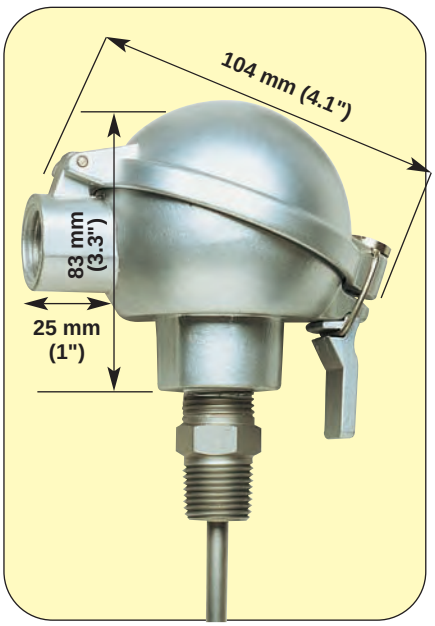
Complete your application with OMEGA's extension wire. Please see omega.com



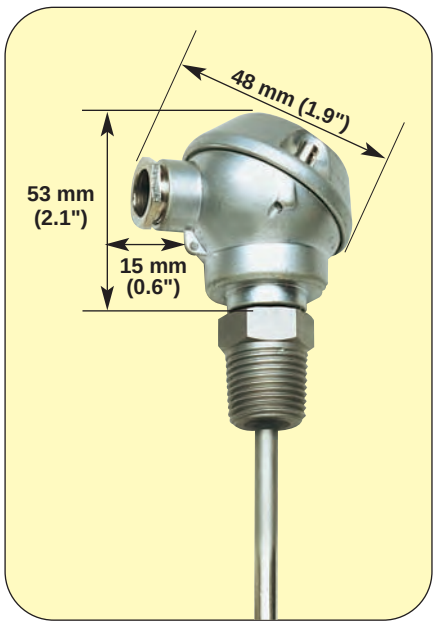
NB1, Cast Iron



NB2, Aluminum



NB3, Aluminum with Snap-Lock

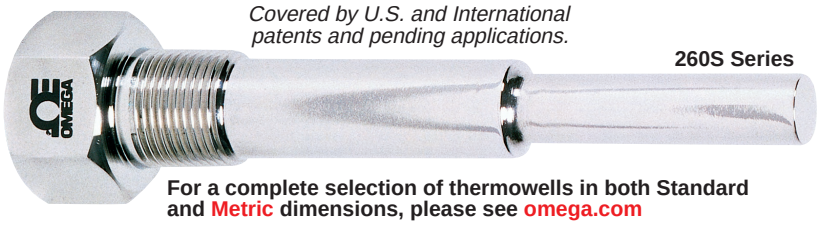


NB4, Sub-Miniature Aluminum

PATENTED

Covered by U.S. and International patents and pending applications.

260S Series



For a complete selection of thermowells in both Standard and Metric dimensions, please see omega.com

260HL Series

Sensors product line continues to expand, visit omegamation.com for new details!

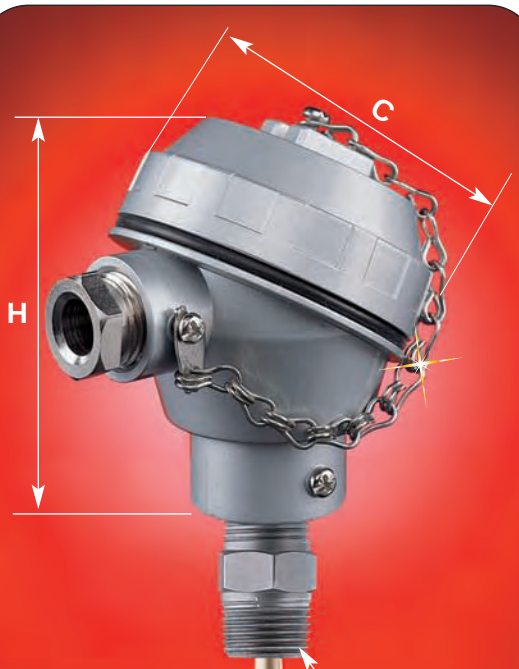
NEW AND IMPROVED PROTECTION HEADS
INDUSTRIAL THERMOCOUPLE PROBES

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

Available as SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT
See omega.com

All Models Start at $42

OMEGACAL™ Factory CAL MADE IN USA
See omega.com



Domed Top

½ NPT mounting threads.

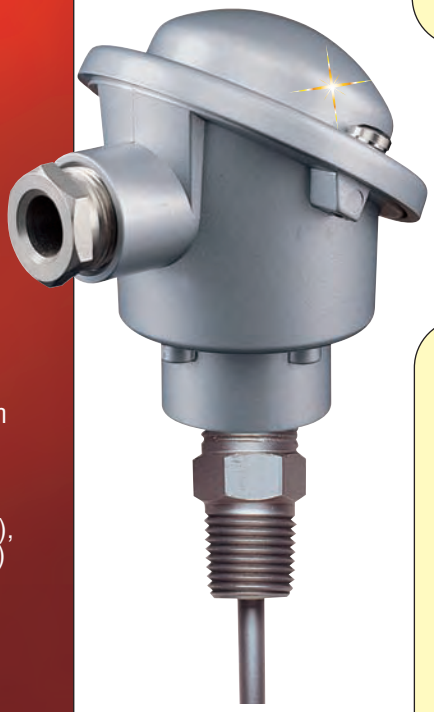
Probe length includes approx ½" allowance for threads.

NB8
Material: Alloy-Aluminum
Weight: 230 g (8 oz)
Dimensions: H=86 mm (3.4"), C=70 mm (2.8")

Ordering Example:
NB8-ICSS-18U-12
is a 300 mm (12") ungrounded ICSS Type J stainless steel thermocouple, 3 mm (⅛") sheath diameter probe with an NB8 protection head, ***$44.***

Available! Probes with Built-in Transmitters; Please See omega.com

Cast Iron
NB5
Material: Cast iron
Weight: 1.6 kg (3.5 lb)
Dimensions: H=95 mm (3.8"), C=86 mm (3.4")



Deep Base
NB6
Material: Alloy-Aluminum
Weight: 250 g (8.8 oz)
Dimensions: H=82 mm (3.2"), C=82 mm (3.2")

FLIP TOP
NB7
Material: Alloy-Aluminum
Weight: 250 g (8.8 oz)
Dimensions: H=93 mm (3.7"), C=76 mm (3")

Sensors

INDUSTRIAL THERMOCOUPLE PROTECTION HEAD PROBE ASSEMBLIES

Low Profile

NB12
Material: Alloy-Aluminum
Weight: 274 g (9.7 oz)
Dimensions:
H=87 mm (3.4"),
C=82 mm (3.2")
IP67 Approval

All Models Start at $42

Nylon and Glass Fiber.

NB9
Material: Nylon & Glass Fiber
Weight: 144 g (5 oz)
Dimensions:
H=87 mm (3.4"),
C=82 mm (3.2")

Miniature Bakelite

NB10
Material: Bakelite
Weight: 82 g (2.9 oz)
Dimensions:
H=68 mm (2.7"),
C=61.5 mm (2.4")
O-Ring Seal

Available as
SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT
See omega.com

OMEGACAL™ Factory CAL AVAILABLE
MADE IN USA
See omega.com

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

Available! Probes with Built-in Transmitters; Please See omega.com

To Order:
Insert the style number into the part numbers shown in the "How To Order" table on page A-139. See ordering examples below and on page A-138.

Ordering Example:
NB9-CASS-18G-12
is a 300 mm (12") grounded CASS Type K stainless steel thermocouple, 3 mm (⅛") sheath diameter probe with an NB9 protection head, ***$42.***

Miniature Aluminum

NB11
Material: Alloy-Aluminum
Weight: 140 g (4.9 oz)
Dimensions:
H=67 mm (2.6"),
C=62 mm (2.4")
IP67 Approval

Sensors product line continues to expand, visit omegamation.com for new details!

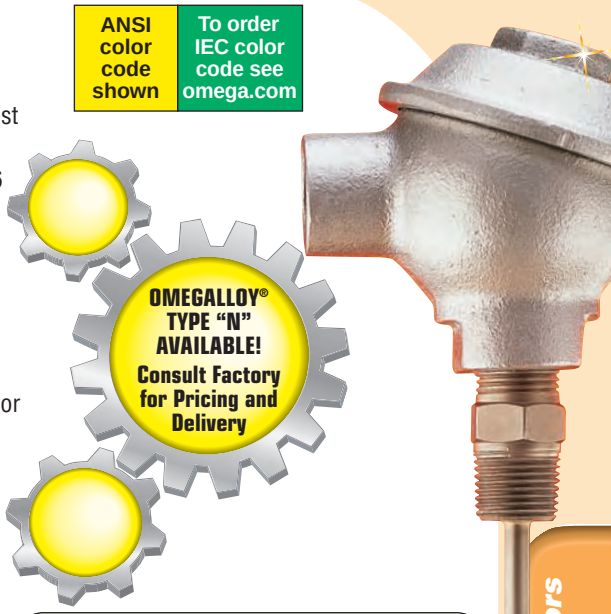
- **NB1 Cast-Iron Protection Head with Internal Terminal Block**
- **NB2 Miniature Aluminum Head with Internal Terminal Block**
- **NB3 Aluminum Head Features Convenient Snap-Lock Design with Internal Terminal Block**
- **NB4 Subminiature Aluminum Head with Internal Terminal Block**
- **½ NPT Mounting Thread**
- **12" Length Standard†**

Discount Schedule	
1 to 10	Net
11 to 24	10%
25 to 49	20%
55 and over	Consult Sales

Standard Dimensions

The industrial-style assemblies offer a variety of protection heads to meet the environmental and size requirements of most applications. They are available in J, K T, E, or N calibrations, with 304 SS, 310 SS, 316 SS, 321 SS, Super OMEGACLAD® XL, or Inconel® sheathing. Standard lengths are 12", including ½" for the pipe thread, with other lengths available. Both the thread on the probe and the extension-wire opening are 1⁄2 NPT. The NB2 and NB4 include a compression fitting nut and rubber ferrule for 1⁄8 to 1⁄4" OD wires or tubing. The internal terminal block is standard on all models. Consult Technical Quotation Department for price and delivery on a wide variety of non-metallic and other specialized heads.

ANSI color code shown | To order IEC color code see omega.com



To Order 12" Lengths *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

ALLOY/ANSI COLOR CODE	SHEATH DIA. (IN)	GROUNDED JUNCTION	PRICE	UNGROUNDED JUNCTION	PRICE	EXPOSED JUNCTION	PRICE	PRICE/ADD'L FOOT
Iron-Constantan Inconel® Sheath J	1⁄16	NB(*)-ICIN-116G-12	$42	NB(*)-ICIN-116U-12	$44	NB(*)-ICIN-116E-12	$42	$1.55
	1⁄8	NB(*)-ICIN-18G-12	42	NB(*)-ICIN-18U-12	44	NB(*)-ICIN-18E-12	42	3.15
	3⁄16	NB(*)-ICIN-316G-12	43	NB(*)-ICIN-316U-12	45	NB(*)-ICIN-316E-12	43	4.35
	1⁄4	NB(*)-ICIN-14G-12	47	NB(*)-ICIN-14U-12	49	NB(*)-ICIN-14E-12	47	7.50
Iron-Constantan 304 SS Sheath J	1⁄16	NB(*)-ICSS-116G-12	$42	NB(*)-ICSS-116U-12	$44	NB(*)-ICSS-116E-12	$42	$1.55
	1⁄8	NB(*)-ICSS-18G-12	42	NB(*)-ICSS-18U-12	44	NB(*)-ICSS-18E-12	42	1.85
	3⁄16	NB(*)-ICSS-316G-12	43	NB(*)-ICSS-316U-12	45	NB(*)-ICSS-316E-12	43	3.15
	1⁄4	NB(*)-ICSS-14G-12	47	NB(*)-ICSS-14U-12	49	NB(*)-ICSS-14E-12	47	5.00
CHROMEGA®- ** ALOMEGA® Inconel® Sheath K	1⁄16	NB(*)-CAIN-116G-12	$42	NB(*)-CAIN-116U-12	$44	NB(*)-CAIN-116E-12	$42	$1.55
	1⁄8	NB(*)-CAIN-18G-12	42	NB(*)-CAIN-18U-12	44	NB(*)-CAIN-18E-12	42	3.15
	3⁄16	NB(*)-CAIN-316G-12	43	NB(*)-CAIN-316U-12	45	NB(*)-CAIN-316E-12	43	4.35
	1⁄4	NB(*)-CAIN-14G-12	47	NB(*)-CAIN-14U-12	49	NB(*)-CAIN-14E-12	47	7.50
CHROMEGA®- ** ALOMEGA® 304 SS Sheath K	1⁄16	NB(*)-CASS-116G-12	$42	NB(*)-CASS-116U-12	$44	NB(*)-CASS-116E-12	$42	$1.55
	1⁄8	NB(*)-CASS-18G-12	42	NB(*)-CASS-18U-12	44	NB(*)-CASS-18E-12	42	1.85
	3⁄16	NB(*)-CASS-316G-12	43	NB(*)-CASS-316U-12	45	NB(*)-CASS-316E-12	43	3.15
	1⁄4	NB(*)-CASS-14G-12	47	NB(*)-CASS-14U-12	49	NB(*)-CASS-14E-12	47	5.00
CHROMEGA®- Constantan Inconel® Sheath E	1⁄16	NB(*)-CXIN-116G-12	$42	NB(*)-CXIN-116U-12	$44	NB(*)-CXIN-116E-12	$42	$1.85
	1⁄8	NB(*)-CXIN-18G-12	42	NB(*)-CXIN-18U-12	44	NB(*)-CXIN-18E-12	42	3.75
	3⁄16	NB(*)-CXIN-316G-12	43	NB(*)-CXIN-316U-12	45	NB(*)-CXIN-316E-12	78	5.00
	1⁄4	NB(*)-CXIN-14G-12	50	NB(*)-CXIN-14U-12	52	NB(*)-CXIN-14E-12	50	7.50
CHROMEGA®- Constantan 304 SS Sheath E	1⁄16	NB(*)-CXSS-116G-12	$42	NB(*)-CXSS-116U-12	$44	NB(*)-CXSS-116E-12	$42	$1.55
	1⁄8	NB(*)-CXSS-18G-12	42	NB(*)-CXSS-18U-12	44	NB(*)-CXSS-18E-12	42	2.50
	3⁄16	NB(*)-CXSS-316G-12	43	NB(*)-CXSS-316U-12	45	NB(*)-CXSS-316E-12	43	3.15
	1⁄4	NB(*)-CXSS-14G-12	47	NB(*)-CXSS-14U-12	49	NB(*)-CXSS-14E-12	47	5.00
Copper-Constantan Inconel® Sheath T	1⁄16	NB(*)-CPIN-116G-12	$42	NB(*)-CPIN-116U-12	$44	NB(*)-CPIN-116E-12	$42	$1.85
	1⁄8	NB(*)-CPIN-18G-12	42	NB(*)-CPIN-18U-12	44	NB(*)-CPIN-18E-12	42	3.75
	3⁄16	NB(*)-CPIN-316G-12	43	NB(*)-CPIN-316U-12	45	NB(*)-CPIN-316E-12	43	5.00
	1⁄4	NB(*)-CPIN-14G-12	50	NB(*)-CPIN-14U-12	52	NB(*)-CPIN-14E-12	50	7.50
Copper-Constantan 304 SS Sheath T	1⁄16	NB(*)-CPSS-116G-12	$42	NB(*)-CPSS-116U-12	$44	NB(*)-CPSS-116E-12	$42	$1.55
	1⁄8	NB(*)-CPSS-18G-12	42	NB(*)-CPSS-18U-12	44	NB(*)-CPSS-18E-12	42	2.50
	3⁄16	NB(*)-CPSS-316G-12	43	NB(*)-CPSS-316U-12	45	NB(*)-CPSS-316E-12	43	3.15
	1⁄4	NB(*)-CPSS-14G-12	47	NB(*)-CPSS-14U-12	49	NB(*)-CPSS-14E-12	47	5.00

Note: *PFA coating is available, 400°F (204°C) Max. †Other lengths available, consult Sales Department.*
***Insert the number "1" through "12" for NB1, NB2, NB3, NB4, NB5, NB6, NB7, NB8, NB9, NB10, NB11 or NB12 heads, respectively.*
***For highest temperature and stability rating, change **"SS"** or **"IN"** to **"XL"** and add **$3** to price.*
*To order probes with lengths other than 12", change the last 2 digits of the model number from "**12**" to the desired length in inches, and add the appropriate price per additional foot from the last column.*
*To order with 310, 316 or 321 SS sheath, change "**SS**" in model number to "**310SS**", "**316SS**" or "**321SS**", respectively, no additional charge. Consult Sales for lengths between 2 and 12", or for lengths over 24".*

Ordering Examples: NB1-CASS-14G-12**, a 12" grounded 304 SS probe, Type K, ¼" sheath diameter, **$47.
NB2-ICSS-14U-12,** a 12" ungrounded 304 SS, Type J, ¼" sheath diameter, **$49.

- **NB1 Cast-Iron Protection Head with Internal Terminal Block**
- **NB2 Miniature Aluminum Head with Internal Terminal Block**
- **NB3 Aluminum Head Features Convenient Snap-Lock Design with Internal Terminal Block**
- **NB4 Subminiature Aluminum Head with Internal Terminal Block**
- **½" BSPT Mounting Thread**
- **300 mm Length Standard†**

Discount Schedule	
1 to 10	Net
11 to 24	10%
25 to 49	20%
55 and over	Consult Sales

Metric Dimensions

The industrial-style assemblies offer a variety of protection heads to meet the environmental and size requirements of most applications. They are available in J, K T, E, or N calibrations, with 304 SS, 310 SS, 316 SS, 321 SS, Super OMEGACLAD® XL, or Inconel® sheathing. Standard lengths are 300 mm, including 12 mm for the pipe thread, with other lengths available. Both the thread on the probe and the extension-wire opening are ½" BSPT. The NB2 and NB4 include a compression fitting nut and rubber ferrule for 3.2 to 6.3 mm OD wires or tubing. The internal terminal block is standard on all models. Consult Technical Quotation Department for price and delivery on a wide variety of non-metallic and other specialized heads.

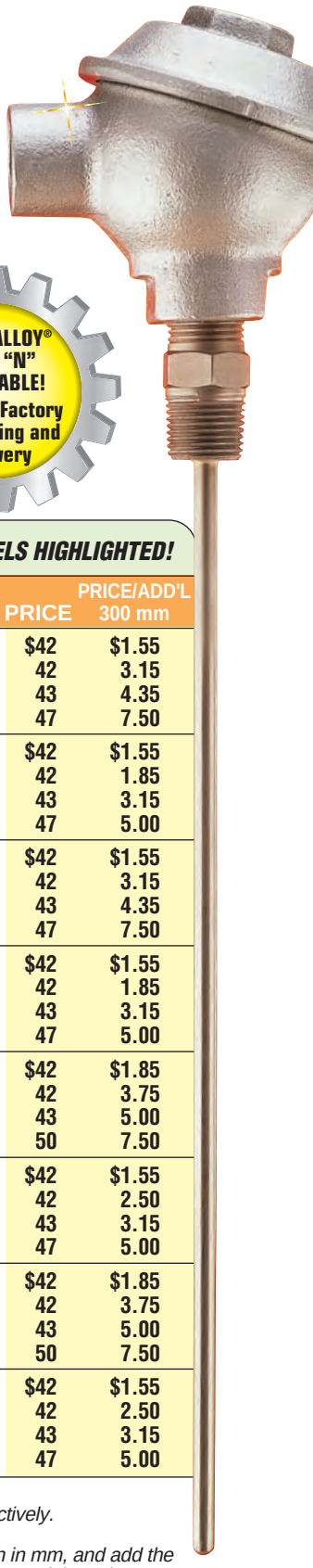
ANSI color code shown

To order IEC color code see omega.com

Available as

SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT
See omega.com

OMEGACAL™ Factory CAL MADE IN USA
See omega.com



OMEGALLOY® TYPE "N" AVAILABLE! Consult Factory for Pricing and Delivery

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

To Order 300 mm Lengths *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

ALLOY/ANSI COLOR CODE	SHEATH DIA. (mm)	GROUNDED JUNCTION	PRICE	UNGROUNDED JUNCTION	PRICE	EXPOSED JUNCTION	PRICE	PRICE/ADD'L 300 mm
Iron-Constantan Inconel® Sheath J	1.5	NB(*)-ICIN-M15G-300	$42	NB(*)-ICIN-M15U-300	$44	NB(*)-ICIN-M15E-300	$42	$1.55
	3.0	NB(*)-ICIN-M30G-300	42	NB(*)-ICIN-M30U-300	44	NB(*)-ICIN-M30E-300	42	3.15
	4.5	NB(*)-ICIN-M45G-300	43	NB(*)-ICIN-M45U-300	45	NB(*)-ICIN-M45E-300	43	4.35
	6.0	NB(*)-ICIN-M60G-300	47	NB(*)-ICIN-M60U-300	49	NB(*)-ICIN-M60E-300	47	7.50
Iron-Constantan 304 SS Sheath J	1.5	NB(*)-ICSS-M15G-300	$42	NB(*)-ICSS-M15U-300	$44	NB(*)-ICSS-M15E-300	$42	$1.55
	3.0	NB(*)-ICSS-M30G-300	42	NB(*)-ICSS-M30U-300	44	NB(*)-ICSS-M30E-300	42	1.85
	4.5	NB(*)-ICSS-M45G-300	43	NB(*)-ICSS-M45U-300	45	NB(*)-ICSS-M45E-300	43	3.15
	6.0	NB(*)-ICSS-M60G-300	47	NB(*)-ICSS-M60U-300	49	NB(*)-ICSS-M60E-300	47	5.00
CHROMEGA®- ** ALOMEGA® Inconel® Sheath K	1.5	NB(*)-CAIN-M15G-300	$42	NB(*)-CAIN-M15U-300	$44	NB(*)-CAIN-M15E-300	$42	$1.55
	3.0	NB(*)-CAIN-M30G-300	42	NB(*)-CAIN-M30U-300	44	NB(*)-CAIN-M30E-300	42	3.15
	4.5	NB(*)-CAIN-M45G-300	43	NB(*)-CAIN-M45U-300	45	NB(*)-CAIN-M45E-300	43	4.35
	6.0	NB(*)-CAIN-M60G-300	47	NB(*)-CAIN-M60U-300	49	NB(*)-CAIN-M60E-300	47	7.50
CHROMEGA®- ** ALOMEGA® 304 SS Sheath K	1.5	NB(*)-CASS-M15G-300	$42	NB(*)-CASS-M15U-300	$44	NB(*)-CASS-M15E-300	$42	$1.55
	3.0	NB(*)-CASS-M30G-300	42	NB(*)-CASS-M30U-300	44	NB(*)-CASS-M30E-300	42	1.85
	4.5	NB(*)-CASS-M45G-300	43	NB(*)-CASS-M45U-300	45	NB(*)-CASS-M45E-300	43	3.15
	6.0	NB(*)-CASS-M60G-300	47	NB(*)-CASS-M60U-300	49	NB(*)-CASS-M60E-300	47	5.00
CHROMEGA®- Constantan Inconel® Sheath E	1.5	NB(*)-CXIN-M15G-300	$42	NB(*)-CXIN-M15U-300	$44	NB(*)-CXIN-M15E-300	$42	$1.85
	3.0	NB(*)-CXIN-M30G-300	42	NB(*)-CXIN-M30U-300	44	NB(*)-CXIN-M30E-300	42	3.75
	4.5	NB(*)-CXIN-M45G-300	43	NB(*)-CXIN-M45U-300	45	NB(*)-CXIN-M45E-300	43	5.00
	6.0	NB(*)-CXIN-M60G-300	50	NB(*)-CXIN-M60U-300	52	NB(*)-CXIN-M60E-300	50	7.50
CHROMEGA®- Constantan 304 SS Sheath E	1.5	NB(*)-CXSS-M15G-300	$42	NB(*)-CXSS-M15U-300	$44	NB(*)-CXSS-M15E-300	$42	$1.55
	3.0	NB(*)-CXSS-M30G-300	42	NB(*)-CXSS-M30U-300	44	NB(*)-CXSS-M30E-300	42	2.50
	4.5	NB(*)-CXSS-M45G-300	43	NB(*)-CXSS-M45U-300	45	NB(*)-CXSS-M45E-300	43	3.15
	6.0	NB(*)-CXSS-M60G-300	47	NB(*)-CXSS-M60U-300	49	NB(*)-CXSS-M60E-300	47	5.00
Copper-Constantan Inconel® Sheath T	1.5	NB(*)-CPIN-M15G-300	$42	NB(*)-CPIN-M15U-300	$44	NB(*)-CPIN-M15E-300	$42	$1.85
	3.0	NB(*)-CPIN-M30G-300	42	NB(*)-CPIN-M30U-300	44	NB(*)-CPIN-M30E-300	42	3.75
	4.5	NB(*)-CPIN-M45G-300	43	NB(*)-CPIN-M45U-300	45	NB(*)-CPIN-M45E-300	43	5.00
	6.0	NB(*)-CPIN-M60G-300	50	NB(*)-CPIN-M60U-300	52	NB(*)-CPIN-M60E-300	50	7.50
Copper-Constantan 304 SS Sheath T	1.5	NB(*)-CPSS-M15G-300	$42	NB(*)-CPSS-M15U-300	$44	NB(*)-CPSS-M15E-300	$42	$1.55
	3.0	NB(*)-CPSS-M30G-300	42	NB(*)-CPSS-M30U-300	44	NB(*)-CPSS-M30E-300	42	2.50
	4.5	NB(*)-CPSS-M45G-300	43	NB(*)-CPSS-M45U-300	45	NB(*)-CPSS-M45E-300	43	3.15
	6.0	NB(*)-CPSS-M60G-300	47	NB(*)-CPSS-M60U-300	49	NB(*)-CPSS-M60E-300	47	5.00

Note: *PFA Coating is available, 204°C (400°F) Max. †Other lengths available, consult Sales Department.*
******* *Insert the number "1" through "12" for NB1, NB2, NB3, NB4, NB5, NB6, NB7, NB8, NB9, NB10, NB11 or NB12 heads, respectively.*
For highest temperature and stability rating, change* ***"SS" *or* ***"IN"*** *to* ***"XL"*** *and add* ***$3*** *to price.*
To order probes with lengths other than 300 mm, change the last 3 digits of the model number from "300" to the desired length in mm, and add the appropriate price per additional 300 mm from the last column. To order with 310 SS, 316 SS or 321 SS sheath, change "SS" in model number to ***"310SS"****,* ***"316SS"*** *or* ***"321SS"****, respectively, no additional charge. Consult Sales for lengths between 50 and 300 mm or for lengths over 600 mm.*
Ordering Examples: NB1-ICSS-M60G-300*, a 300 mm grounded 304 SS probe, Type J, 6.0 mm sheath diameter,* ***$47.***
NB2-CASS-M60U-300*, a 300 mm ungrounded 304 SS, Type K, 6 mm sheath diameter,* ***$49.***

Sensors product line continues to expand, visit omegamation.com for new details!

SPRING-LOADED PROBES INDUSTRIAL PROCESS STYLES

Cut-away of NB2 style to show detail of spring mechanism and terminal block.

Available as

SUPER OMEGACLAD™ XL THERMOCOUPLE PROBES
MAXIMUM PERFORMANCE SHEATHING ELIMINATES HIGH TEMPERATURE DRIFT

See omega.com

- Non-Sealed for Use in Thermowells
- NB1 Cast Iron or NB2 Miniature Aluminum Protection Head
- Approx 13 mm (½") of Travel Length
- 300 mm (12") Standard Length†
- Spring-Loading Provides Tip Contact for Faster Response When Used with Thermowells

MADE IN USA

MEETS OR EXCEEDS SPECIAL LIMITS OF ERROR (SLE) AND EN 60584-2: Tolerance Class 1

OMEGACAL™ Factory CAL AVAILABLE
See omega.com

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

THERMOCOUPLE ALLOY	SHEATH DIA. mm (in)	CAST IRON HEAD	ALUMINUM HEAD	PRICE GROUNDED OR EXPOSED	PRICE UNGROUNDED	PRICE/ADD'L 12"
IRON-CONSTANTAN Inconel Sheath J	1.5 (1/16)	NB1-ICIN-116(*)-12-TBSL	NB2-ICIN-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-ICIN-18(*)-12-TBSL	NB2-ICIN-18(*)-12-TBSL	57	59	3.15
	4.5 (3/16)	NB1-ICIN-316(*)-12-TBSL	NB2-ICIN-316(*)-12-TBSL	58	60	4.35
	6.0 (1/4)	NB1-ICIN-14(*)-12-TBSL	NB2-ICIN-14(*)-12-TBSL	62	64	7.50
IRON-CONSTANTAN 304 SS Sheath J	1.5 (1/16)	NB1-ICSS-116(*)-12-TBSL	NB2-ICSS-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-ICSS-18(*)-12-TBSL	NB2-ICSS-18(*)-12-TBSL	57	59	1.85
	4.5 (3/16)	NB1-ICSS-316(*)-12-TBSL	NB2-ICSS-316(*)-12-TBSL	58	60	3.15
	6.0 (1/4)	NB1-ICSS-14(*)-12-TBSL	NB2-ICSS-14(*)-12-TBSL	62	64	5.00
CHROMEGA®-** ALOMEGA® Inconel Sheath K	1.5 (1/16)	NB1-CAIN-116(*)-12-TBSL	NB2-CAIN-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-CAIN-18(*)-12-TBSL	NB2-CAIN-18(*)-12-TBSL	57	59	3.15
	4.5 (3/16)	NB1-CAIN-316(*)-12-TBSL	NB2-CAIN-316(*)-12-TBSL	58	60	4.35
	6.0 (1/4)	NB1-CAIN-14(*)-12-TBSL	NB2-CAIN-14(*)-12-TBSL	62	64	7.50
CHROMEGA®-** ALOMEGA® 304 SS Sheath K	1.5 (1/16)	NB1-CASS-116(*)-12-TBSL	NB2-CASS-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-CASS-18(*)-12-TBSL	NB2-CASS-18(*)-12-TBSL	57	59	1.85
	4.5 (3/16)	NB1-CASS-316(*)-12-TBSL	NB2-CASS-316(*)-12-TBSL	58	60	3.15
	6.0 (1/4)	NB1-CASS-14(*)-12-TBSL	NB2-CASS-14(*)-12-TBSL	62	64	5.00
CHROMEGA®-CONSTANTAN Inconel Sheath E	1.5 (1/16)	NB1-CXIN-116(*)-12-TBSL	NB2-CXIN-116(*)-12-TBSL	$57	$59	$1.85
	3.0 (1/8)	NB1-CXIN-18(*)-12-TBSL	NB2-CXIN-18(*)-12-TBSL	57	59	3.75
	4.5 (3/16)	NB1-CXIN-316(*)-12-TBSL	NB2-CXIN-316(*)-12-TBSL	58	60	5.00
	6.0 (1/4)	NB1-CXIN-14(*)-12-TBSL	NB2-CXIN-14(*)-12-TBSL	65	67	7.50
CHROMEGA®-CONSTANTAN 304 SS Sheath E	1.5 (1/16)	NB1-CXSS-116(*)-12-TBSL	NB2-CXSS-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-CXSS-18(*)-12-TBSL	NB2-CXSS-18(*)-12-TBSL	57	59	2.50
	4.5 (3/16)	NB1-CXSS-316(*)-12-TBSL	NB2-CXSS-316(*)-12-TBSL	58	60	3.15
	6.0 (1/4)	NB1-CXSS-14(*)-12-TBSL	NB2-CXSS-14(*)-12-TBSL	62	64	5.00
COPPER-CONSTANTAN Inconel Sheath T	1.5 (1/16)	NB1-CPIN-116(*)-12-TBSL	NB2-CPIN-116(*)-12-TBSL	$57	$59	$1.85
	3.0 (1/8)	NB1-CPIN-18(*)-12-TBSL	NB2-CPIN-18(*)-12-TBSL	57	59	3.75
	4.5 (3/16)	NB1-CPIN-316(*)-12-TBSL	NB2-CPIN-316(*)-12-TBSL	58	60	5.00
	6.0 (1/4)	NB1-CPIN-14(*)-12-TBSL	NB2-CPIN-14(*)-12-TBSL	65	67	7.50
COPPER-CONSTANTAN 304 SS Sheath T	1.5 (1/16)	NB1-CPSS-116(*)-12-TBSL	NB2-CPSS-116(*)-12-TBSL	$57	$59	$1.55
	3.0 (1/8)	NB1-CPSS-18(*)-12-TBSL	NB2-CPSS-18(*)-12-TBSL	57	59	2.50
	4.5 (3/16)	NB1-CPSS-316(*)-12-TBSL	NB2-CPSS-316(*)-12-TBSL	58	60	3.15
	6.0 (1/4)	NB1-CPSS-14(*)-12-TBSL	NB2-CPSS-14(*)-12-TBSL	62	64	5.00

** Specify junction type: G (Grounded), U (Ungrounded) or E (Exposed)*
***** For highest temperature and stability rating, change "SS" or "IN" to "XL" and add $3 to price.***
Note: *Probe length includes approx. ½" allowance for threads.*
† To order probes with lengths other than 12", change the "12" in the model no. to the desired length in inches, and add the appropriate price per add'l foot from the last column.
To order with 310 SS, 316 SS or 321 SS sheath*, change "SS" in model number to "310SS" , "316SS" or "321SS" respectively; no additional charge.*
Ordering Example: NB1-ICSS-14U-12-TBSL*, spring-loaded probe with NB1-type cast iron head, Type J calibration, 6.0 mm (¼") OD, ungrounded 304 SS sheath, 300 mm (12") L,* ***$64.***

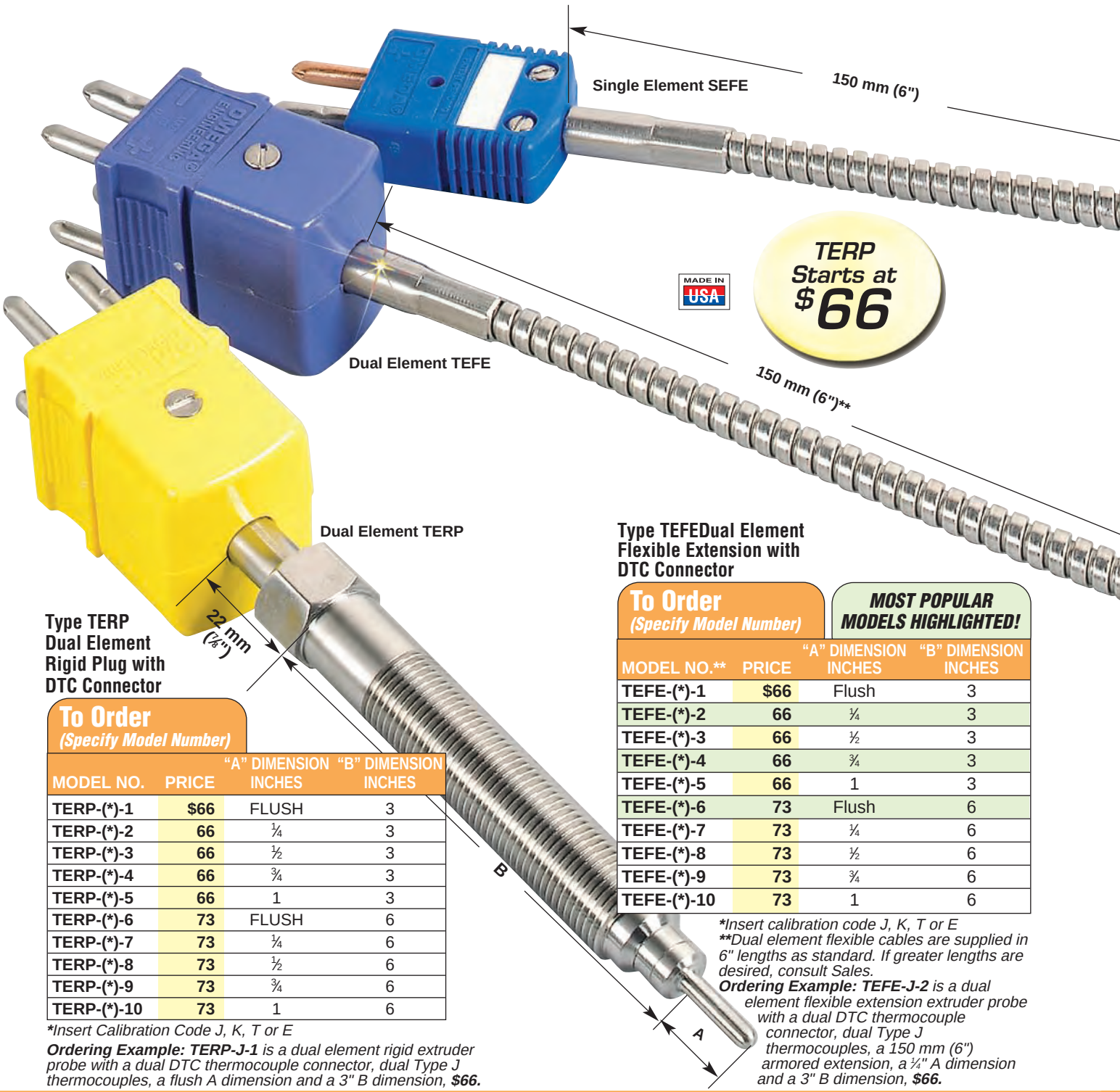
THERMOCOUPLE PROBES
FOR PLASTIC EXTRUDERS

ANSI color code shown | To order IEC color code see omega.com

- Service Temperatures to 900°F
- Single or Dual Element Probes with Quick-Disconnect Termination
- Rigid Plug or Flexible Extension Models
- 316 Stainless Steel Tips
- Many "A" and "B" Dimension Configurations Available

OMEGA's Heavy Duty, Plastic Processing Thermocouples mount directly in extruder heads or die adapters of injection molding machines with sensor tip projected directly into the plastic melt.

Immersion lengths, styles and mounting arrangements are available in a wide range of possible configurations. All thermocouples are constructed of Type 316 Stainless Steel.



MADE IN USA

TERP Starts at $66

Type TERP Dual Element Rigid Plug with DTC Connector

To Order *(Specify Model Number)*

MODEL NO.	PRICE	"A" DIMENSION INCHES	"B" DIMENSION INCHES
TERP-(*)-1	$66	FLUSH	3
TERP-(*)-2	66	¼	3
TERP-(*)-3	66	½	3
TERP-(*)-4	66	¾	3
TERP-(*)-5	66	1	3
TERP-(*)-6	73	FLUSH	6
TERP-(*)-7	73	¼	6
TERP-(*)-8	73	½	6
TERP-(*)-9	73	¾	6
TERP-(*)-10	73	1	6

*Insert Calibration Code J, K, T or E

Ordering Example: TERP-J-1 *is a dual element rigid extruder probe with a dual DTC thermocouple connector, dual Type J thermocouples, a flush A dimension and a 3" B dimension,* ***$66.***

Type TEFEDual Element Flexible Extension with DTC Connector

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

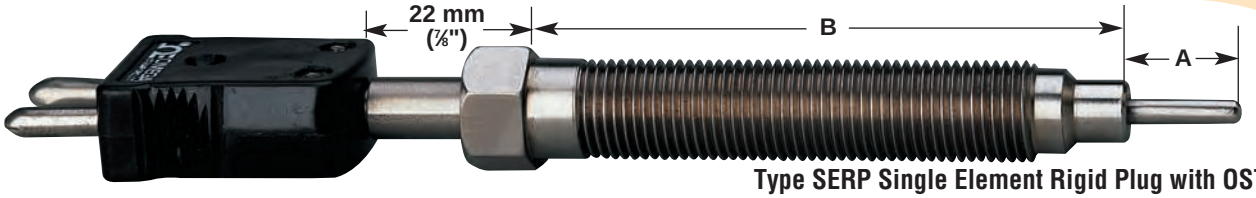
MODEL NO.**	PRICE	"A" DIMENSION INCHES	"B" DIMENSION INCHES
TEFE-(*)-1	$66	Flush	3
TEFE-(*)-2	66	¼	3
TEFE-(*)-3	66	½	3
TEFE-(*)-4	66	¾	3
TEFE-(*)-5	66	1	3
TEFE-(*)-6	73	Flush	6
TEFE-(*)-7	73	¼	6
TEFE-(*)-8	73	½	6
TEFE-(*)-9	73	¾	6
TEFE-(*)-10	73	1	6

*Insert calibration code J, K, T or E

**Dual element flexible cables are supplied in 6" lengths as standard. If greater lengths are desired, consult Sales.

Ordering Example: TEFE-J-2 *is a dual element flexible extension extruder probe with a dual DTC thermocouple connector, dual Type J thermocouples, a 150 mm (6") armored extension, a ¼" A dimension and a 3" B dimension,* ***$66.***

Sensors product line continues to expand, visit omegamation.com for new details!



Single Element SERP

Type SERP Single Element Rigid Plug with OST Connector

SERP Starts at $45

Custom Assemblies Available. Consult Sales for Information.

ANSI color code shown | To order IEC color code see omega.com

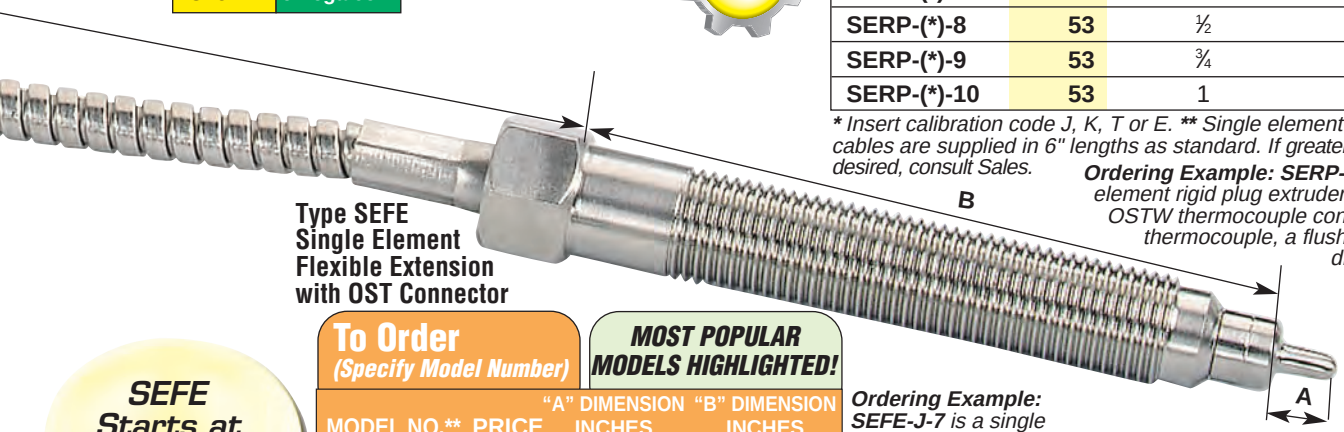
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.**	PRICE	"A" DIMENSION INCHES	"B" DIMENSION INCHES
SERP-(*)-1	$45	Flush	3
SERP-(*)-2	45	¼	3
SERP-(*)-3	45	½	3
SERP-(*)-4	45	¾	3
SERP-(*)-5	45	1	3
SERP-(*)-6	53	Flush	6
SERP-(*)-7	53	¼	6
SERP-(*)-8	53	½	6
SERP-(*)-9	53	¾	6
SERP-(*)-10	53	1	6

** Insert calibration code J, K, T or E. ** Single element flexible cables are supplied in 6" lengths as standard. If greater lengths are desired, consult Sales.*

Ordering Example: SERP-K-1** is a single element rigid plug extruder probe with an OSTW thermocouple connector, type K thermocouple, a flush tip and a 3" B dimension, **$45.



Type SEFE Single Element Flexible Extension with OST Connector

SEFE Starts at $45

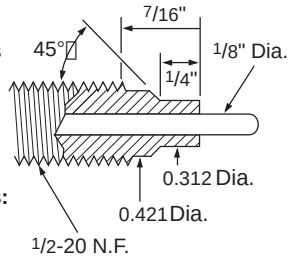
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.**	PRICE	"A" DIMENSION INCHES	"B" DIMENSION INCHES
SEFE-(*)-1	$45	Flush	3
SEFE-(*)-2	45	¼	3
SEFE-(*)-3	45	½	3
SEFE-(*)-4	45	¾	3
SEFE-(*)-5	45	1	3
SEFE-(*)-6	53	Flush	6
SEFE-(*)-7	53	¼	6
SEFE-(*)-8	53	½	6
SEFE-(*)-9	53	¾	6
SEFE-(*)-10	53	1	6

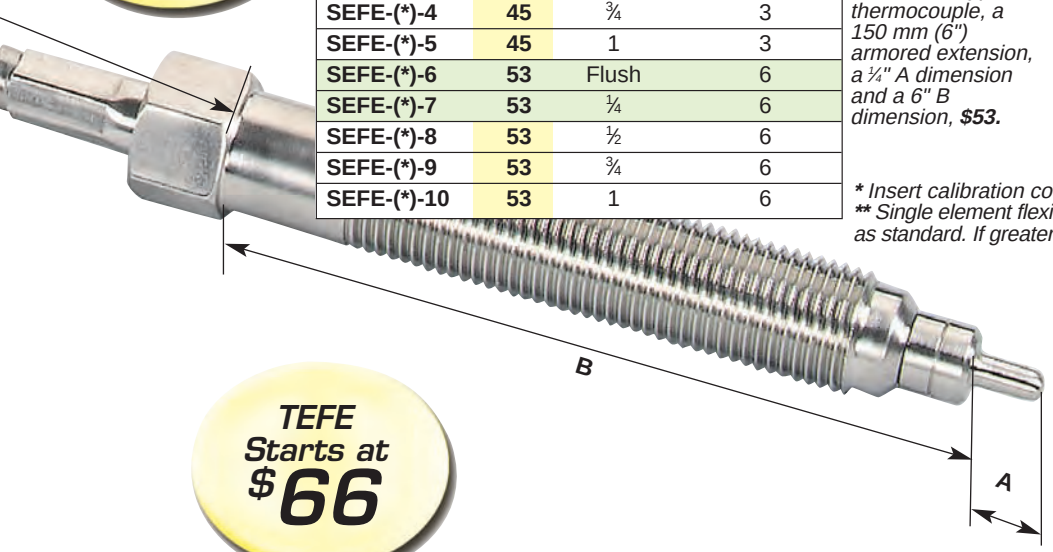
Ordering Example: SEFE-J-7** is a single element flexible extension extruder probe with an OSTW thermocouple connector, Type J thermocouple, a 150 mm (6") armored extension, a ¼" A dimension and a 6" B dimension, **$53.

Detailed Dimensions

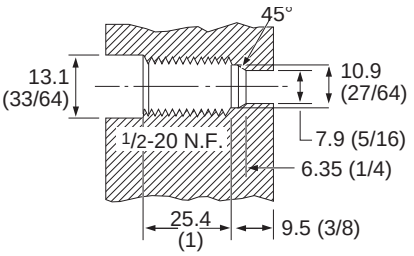


Dimensions: mm (in)

** Insert calibration code J, K, T or E.*
*** Single element flexible cables are supplied in 6" lengths as standard. If greater lengths are desired, consult Sales.*



TEFE Starts at $66



Recommended drilling dimensions for proper mounting in extruder

Dimensions: mm (in)

Example: TERP-K-8 signifies DUAL ELEMENT with RIGID PLUG, plug having an "A" dimension of 13 mm (½"), "B" dimension of 150 mm (6"), and Type K, CHROMEGA®-ALOMEGA® thermocouple elements.

Single element, UNGROUNDED probes are available for an additional **$6.00.** Dual element UNGROUNDED probes are available for an additional **$9.00.** (Please note that standard probes have GROUNDED junctions.)

Discount Schedule

1-10 Units	Net
11-24 Units	5%
25-100 Units	10%
101 Units and up	Consult sales

THERMOCOUPLES FOR EXTRUDERS/MOLDING AND PACKAGING MACHINES

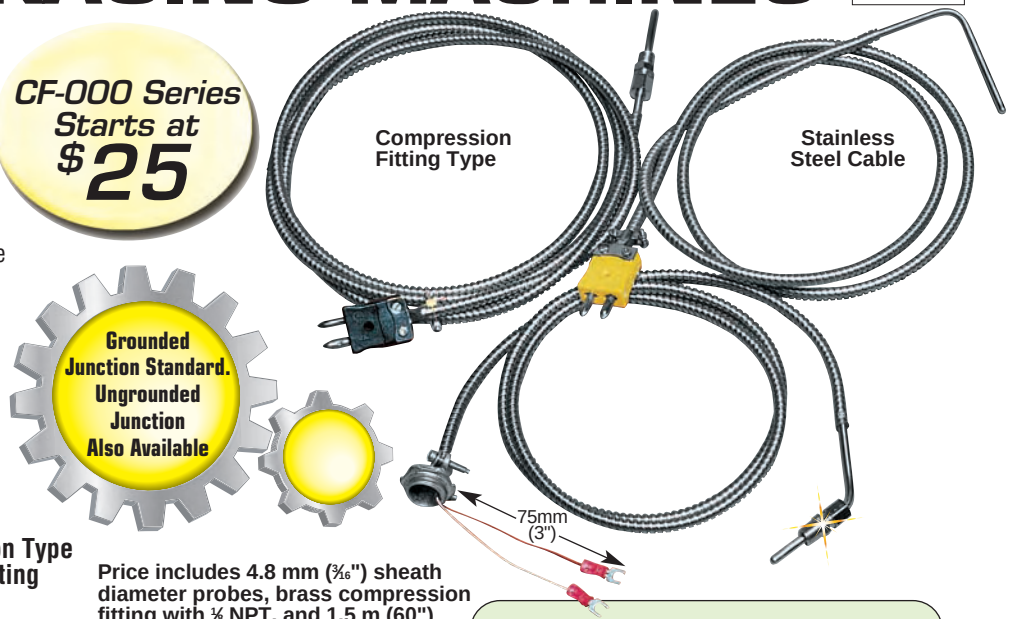
ANSI color code shown | To order IEC color code see omega.com

OMEGACAL™ Factory CAL AVAILABLE See omega.com

With Stainless Steel Cable

CF-000 Series Starts at $25

OMEGA's rugged Spring-Loaded Bayonet and Compression Fitting Thermocouples are ideally suited for measuring plastic processing machinery temperatures at the crosshead, die, and barrel. With OMEGA's pipe clamp adaptor, the Bayonet type can be used to measure pipewall and bearing temperatures. The maximum length for armored cable is 12 m (40') [1.5 m (5') is standard]. Dual elements are available. The standard termination is Style 1 or Style 2. Style 3 is available upon special request. Probes with 45° bends are also available. Consult Sales Department for availability.



Standard Extruder Probes Compression Type Allow 25 mm (1") for Compression Fitting

Price includes 4.8 mm (3/16") sheath diameter probes, brass compression fitting with 1/8 NPT, and 1.5 m (60") lead length.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DIMENSIONS*	COLD END TYPE	COLD END TERMINATION	MODEL NUMBER ANSI COLOR CODE	PRICE	DIMENSIONS	COLD END TYPE	COLD END TERMINATION	MODEL NUMBER	PRICE
Straight	J	1	CF-000-J-2-60-1	$25	90° Bend	J	1	CF-090-J-2-60-1	$26
	J	2	CF-000-J-2-60-2	28		J	2	CF-090-J-2-60-2	29
	K	1	CF-000-K-2-60-1	25		K	1	CF-090-K-2-60-1	26
	K	2	CF-000-K-2-60-2	28		K	2	CF-090-K-2-60-2	29
	T	1	CF-000-T-2-60-1	25		T	1	CF-090-T-2-60-1	26
	T	2	CF-000-T-2-60-2	28		T	2	CF-090-T-2-60-2	29
A = 50 mm (2")	E	1	CF-000-E-2-60-1	25	A = 50 mm (2")	E	1	CF-090-E-2-60-1	26
B = 1.5 m* 60")	E	2	CF-000-E-2-60-2	28	B = 1.5 m (60")	E	2	CF-090-E-2-60-2	29
	J	1	CF-000-J-4-60-1	$25		J	1	CF-090-J-4-60-1	$26
	J	2	CF-000-J-4-60-2	28		J	2	CF-090-J-4-60-2	29
	K	1	CF-000-K-4-60-1	25		K	1	CF-090-K-4-60-1	26
A = 100 mm (4")	K	2	CF-000-K-4-60-2	28	A = 100 mm (4")	K	2	CF-090-K-4-60-2	29
B = 1.5 m* (60")	T	1	CF-000-T-4-60-1	25	B = 1.5 m (60")	T	1	CF-090-T-4-60-1	26
	T	2	CF-000-T-4-60-2	28		T	2	CF-090-T-4-60-2	29
	E	1	CF-000-E-4-60-1	25		E	1	CF-090-E-4-60-1	26
	E	2	CF-000-E-4-60-2	28		E	2	CF-090-E-4-60-2	29

Ordering Example: CF-000-J-2-60-1, $25 Compression fitting style, Type J thermocouple with an "A" dimension of 100 mm (2") and 1.5 m (5') of leads. The cold end termination is Style 1 (spade lugs standard).

Termination Styles:

1 2 3

Note: Cutout for Style 1 is 21.3 mm (0.83") diameter, wall thickness < 3.2 mm (1/8"). Mating connectors (HSTW-K-F-FT for Style 2 and 3 may be found at omega.com (Add $5 to Style 1 price for Style 3).

** "B" lengths over 1.5 m (60") are available; change the "60" to desired length in inches, and add **$2.25/ft.** Longer "A" lengths are available at **$1.00/inch.** Cable Dia.: 7 mm (0.28").*

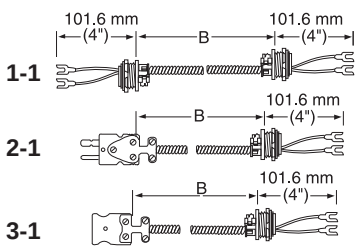
Thermocouple Extension Cable Assemblies

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

SPECIFY CALIBRATION	TERMINATION STYLES		PRICE
SEEX-□-48-1-1	1	1	$17
SEEX-□-48-2-1	2	1	20
SEEX-□-48-3-1	3	1	24

Construction: 6.4 mm (¼") Stainless Flexible Cable. Standard Length: 1.2 m (48").
Ordering Example: SEEX-J-48-3-1,** Type J 3-1 style thermocouple cable assembly, **$24.



*To order extension cable, insert desired calibration in first space "□" provided. Add **$2.25/ft** or fraction of single element extension cable over 1.2 m (48").*

*For dual element extension cables, add **$3.25/ft** or fraction of dual element extension cable over 1.2 m (48") and change **SEEX** to **DEEX**.*

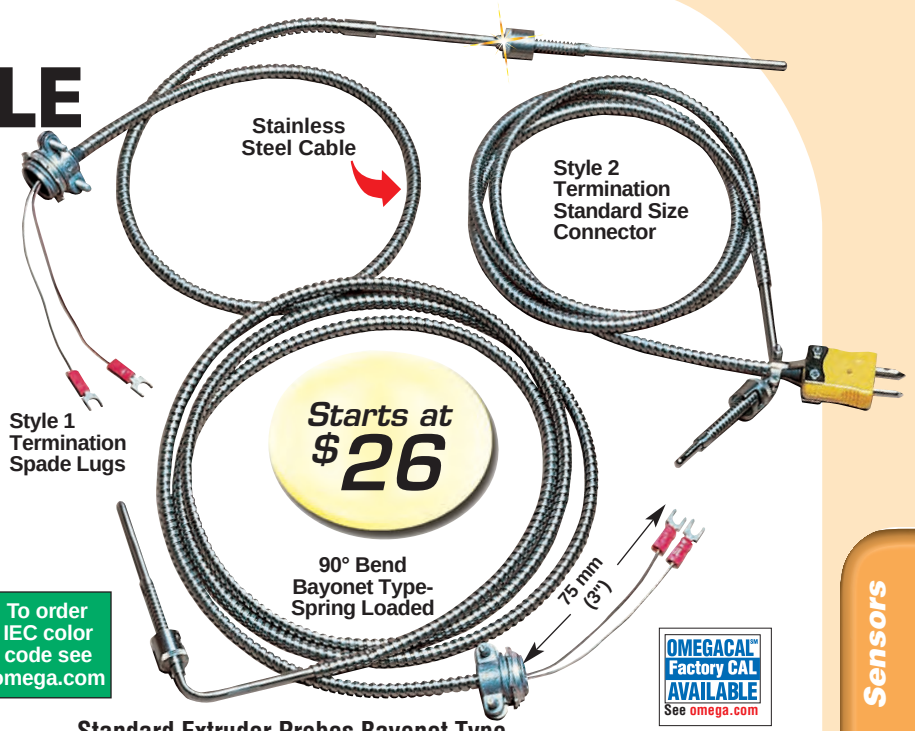
*For ungrounded, add **$6** and suffix **"-UNGROUNDED"** to model number.*

***Note:** Custom A and B configurations are available.*

Consult Sales Department for price and availability.

LOW-COST BAYONET STYLE WITH STAINLESS STEEL CABLE

- Service Temperature to 480°C (900°F) Except for Type T Thermocouple
- A Wide Variety of Immersion Lengths, Styles and Mounting Arrangements Are Available
- Standard Configurations for Fast Delivery
- 304 Stainless Steel Construction
- Flexible 7 mm (0.275") Stainless Steel Cable [1.5 m (60") Standard] Hollow Tube Design
- Glass Braid Insulated 20 Gage Solid Thermocouple Wire
- Stranded Wire Available as Option
- Grounded Junction



ANSI color code shown | To order IEC color code see omega.com

OMEGACAL™ Factory CAL AVAILABLE See omega.com

Standard Extruder Probes Bayonet Type

To Order *(Specify Model Number)*

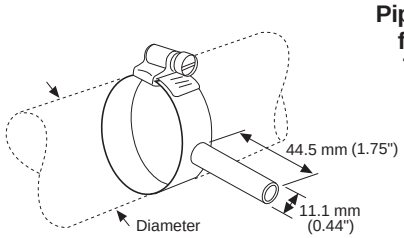
MOST POPULAR MODELS HIGHLIGHTED!

DIMENSIONS*	TYPE	COLD END TERMINATION	MODEL NUMBER ANSI COLOR CODE	PRICE
Straight A = 57.2 mm (2¼") or 89 mm (3½") B = 1.5 m (60")	J	1	BT-000-J-□-60-1	$26
	J	2	BT-000-J-□-60-2	29
	K	1	BT-000-K-□-60-1	26
	K	2	BT-000-K-□-60-2	29
	T	1	BT-000-T-□-60-1	26
	T	2	BT-000-T-□-60-2	29
	E	1	BT-000-E-□-60-1	26
	E	2	BT-000-E-□-60-2	29
90° Bend A = 57.2 mm (2.25") or 89 mm (3.50") B = 1.5 m (60")	J	1	BT-090-J-□-60-1	$27
	J	2	BT-090-J-□-60-2	30
	K	1	BT-090-K-□-60-1	27
	K	2	BT-090-K-□-60-2	30
	T	1	BT-090-T-□-60-1	27
	T	2	BT-090-T-□-60-2	30
	E	1	BT-090-E-□-60-1	27
	E	2	BT-090-E-□-60-2	30

***Note**: Insert 2¼ or 3½: Standard "A" Dimension in space (□). Longer lengths available at $1.00/inch. "B" standard dimensions is 60". For longer lengths, change "60" to desired length, (in inches) and add **$2.25** per foot to price. For ungrounded, add **$6** and suffix **"-UNGROUNDED"** to model number.*

Ordering Example: BT-090-K-2 1/4-60-2** is a 90° bend bayonet probe, Type K, 2¼ A dimension, 60" armored cable and an OSTW thermocouple connector, **$30.

Pipe Clamp Adaptors for Bayonet-Type Thermocouples†

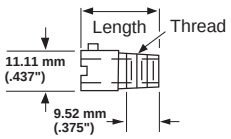


† Note: Choose "A" thermocouple dimension of 57 mm (2.25") for all bayonet type thermocouples used with pipe clamp adaptors.

To measure temperature of pipes without drilling. Easily installed and removed.

MODEL NUMBER ANSI COLOR CODE	FOR PIPE DIAMETER (in)	
BTC-1	½ to ⅞	All Sizes $11 each. Material is Stainless Steel
BTC-2	⅞ to 1½	
BTC-3	1 5/16 to 2¼	
BTC-4	2¼ to 3 5/16	
BTC-5	3 5/16 to 4¼	
BTC-6	4 5/16 to 5¼	

Adaptors for Bayonet-Type Thermocouples



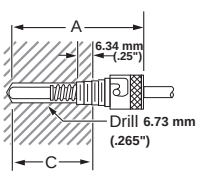
Like a compression fitting, does not seal

MODEL NUMBER ANSI COLOR CODE	LENGTH (IN)	THREAD SIZE	PRICE
BTA-1	⅞	⅛-27 NPT	$6
BTA-2	⅞	⅜-24	6
BTA-3	1⅜	⅛-27 NPT	7
BTA-4	1⅜	⅜-24	7
BTA-5	2½	⅛-27 NPT	8
BTA-6	2½	⅜-24	8

Adaptor material is stainless steel

Discount Schedule	
1–24 Units .....Net	100–249 Units 10%
25–99 Units.....7%	250 and up ....Consult Sales

Drilling Selection Table for Spring Loaded Bayonet Type Thermocouples



HOLE DEPTH "C" mm (in)*	PROBE LENGTH "A" (INCHES) ⅞" LONG ADAPTOR	1⅜" LONG ADAPTOR	2½" LONG ADAPTOR
6 to 13 (¼ to ½)	1⅜	2	3⅜
13 to 25 (½ to 1)	2	2½	3⅝
25 to 38 (1 to 1½)	2½	3	4⅜
38 to 50 (1½ to 2)	3	3½	4⅝
50 to 64 (2 to 2½)	3½	4	5⅜
64 to 76 (2½ to 3)	4	4½	5⅝
76 to 89 (3 to 3½)	4½	5	6⅜
89 to 102 (3½ to 4)	5	5½	6⅝
102 to 114 (4 to 4½)	5½	6	7⅜
114 to 127 (4½ to 5)	6	6½	7⅝

**For deeper holes than those listed, add ½ inch to probe dimension "A" for each ½ inch of hole depth dimension "C".*

***Note:** Thermocouples supplied without BTA adaptors.*

FINE WIRE DUPLEX INSULATED THERMOCOUPLE WIRE

MADE IN USA

ANSI color code shown | To order IEC color code see omega.com

- 30, 36, and 40 Gage
- Convenient Spool Lengths 25, 50, 100, 200, 500, 1000 ft.
- ANSI Special Limits of Error and EN 60584-2 Tolerance Class 1 Rating Available on Most Models

"SLE" Special Limits of Error Available

Shown smaller than actual size.

INSULATION CODE	INSULATION		RANGE INSULATION
	OVERALL	CONDUCTORS	
TT	PFA or Neoflon	PFA or Neoflon	-267 to 260°C -450 to 500°F
KK	Kapton	Kapton	-267 to 316°C -450 to 600°F
TG	Glass Braid	PFA or Neoflon	-73 to 260°C -100 to 500°F
GG	Glass	Glass	-73 to 482°C

K Duplex Insulated CHROMEGA®-ALOMEGA® Duplex ANSI Type K

ANSI Color Code: Positive Wire, Yellow; Negative Wire, Red; Overall, Brown

MOST POPULAR MODELS HIGHLIGHTED!

INSULATION	AWG NO.	MODEL NUMBER	PRICE/ 1000'	SLE/ 1000'**	TYPE WIRE	INSULATION CONDUCTOR	INSULATION OVERALL	MAX TEMP °C	MAX TEMP °F	NOMINAL SIZE MM (IN)	WT.'/1000' KG (LB)
Glass	30	**GG-K-30**	**$240**	**$275**	Solid	Glass Wrap	Glass Braid	482	900	0.9 x 1.3 (0.037 x 0.050)	2 (3)
	36	**GG-K-36**	**320**	**355**	Solid	Glass Wrap	Glass Braid	482	900	0.8 x 1.1 (0.033 x 0.045)	(2)
PFA Glass	30	**TG-K-30**	**530**	**–**	Solid	PFA	Glass Braid	260	500	0.9 x 1.2 (0.034 x 0.047)	1 (2)
	36	**TG-K-36**	**590**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x 1.0 (0.028 x 0.038)	1 (2)
	40	**TG-K-40**	**650**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x 0.9 (0.026 x 0.035)	1 (2)
Neoflon PFA	30	**TT-K-30**††	**335**	**370**	Solid	PFA	PFA	260	500	0.6 x 1.0 (0.024 x 0.040)	1 (2)
	36	**TT-K-36**††	**375**	**415**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.019 x 0.030)	1 (2)
	40	**TT-K-40**††	**500**	**550**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.017 x 0.026)	1 (2)
Kapton®	30	**KK-K-30**	**640**	**$730**	Solid	Fused Polyimide Tape	Fused Polyimide Tape	316	600	1.0 x 1.4 (0.040 x 0.055)	3 (6)

** **Note:** Kapton wire is not IEC or ANSI color coded.*
† Weight of spool and wire rounded to the next highest kg (lb) (does not include packing material). *†† Overall color clear.*
*** To order special limits of error wire, add **"-SLE"** to model number before spool length.*
Ordering Example: TT-K-30-SLE-1000,** 1000' of Special Limits of Error PFA duplex insulated thermocouple wire, **$370.

T Duplex Insulated Copper-Constantan Duplex ANSI Type T

ANSI Color Code: Positive Wire, Blue; Negative Wire, Red; Overall, Brown

INSULATION	AWG NO.	MODEL NUMBER	PRICE/ 1000'	SLE/ 1000'**	TYPE WIRE	INSULATION CONDUCTOR	INSULATION OVERALL	MAX. TEMP °C	MAX. TEMP °F	NOMINAL SIZE mm (in)	WT.'/1000' kg (lb)
Glass	30	**GG-T-30**	**$225**	**$270**	Solid	Glass Wrap	Glass Braid	150	300	0.9 x 1.3 (0.037 x 0.050)	2 (3)
PFA Glass	30	**TG-T-30**	**480**	**–**	Solid	PFA	Glass Braid	260	500	0.9 x 1.2 (0.034 x 0.047)	1 (2)
	36	**TG-T-36**	**550**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x 1.0 (0.028 x 0.038)	1 (2)
	40	**TG-T-40**	**620**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x .09 (0.026 x 0.035)	1 (2)
Neoflon PFA	30	**TT-T-30**††	**390**	**495**	Solid	PFA	PFA	150	300	0.6 x 1.0 (0.024 x 0.040)	1 (2)
	36	**TT-T-36**††	**450**	**715**	Solid	PFA	PFA	150	300	0.5 x 0.8 (0.019 x 0.030)	1 (2)
	40	**TT-T-40**††	**590**	**650**	Solid	PFA	PFA	150	300	0.5 x 0.8 (0.017 x 0.026)	1 (2)

† Weight of spool and wire rounded to the next highest kg (lb) (does not include packing material). *†† Overall color clear.*
*** To order special limits of error wire, add **"-SLE"** to model numberr before spool length.*
Ordering Example: TT-T-30-SLE-1000,** 1000' of Special Limits of Error PFA duplex insulated thermocouple wire, **$495.

J Duplex Insulated Iron-Constantan Duplex ANSI Type J

ANSI Color Code: Positive Wire, Black; Negative Wire, Red; Overall, Brown

MOST POPULAR MODELS HIGHLIGHTED!

INSULATION	AWG NO.	MODEL NUMBER	PRICE/ 1000'	SLE/ 1000'**	TYPE WIRE	INSULATION CONDUCTOR	INSULATION OVERALL	MAX TEMP °C	MAX TEMP °F	NOMINAL SIZE mm (in)	WT.†/1000' kg (lb)
Glass	30	**GG-J-30**	**$230**	**$265**	Solid	Glass Wrap	Glass Braid	316	600	0.9 x 1.3 (0.037 x 0.050)	2 (3)
	36	**GG-J-36**	**310**	**360**	Solid	Glass Wrap	Glass Braid	316	600	0.8 x 1.1 (0.033 x 0.043)	1 (2)
PFA and Glass	30	**TG-J-30**	**480**	**–**	Solid	PFA	Glass Braid	260	500	0.9 x 1.2 (0.034 x 0.047)	1 (2)
	36	**TG-J-36**	**550**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x 1.0 (0.028 x 0.038)	1 (2)
	40	**TG-J-40**	**620**	**–**	Solid	PFA	Glass Braid	260	500	0.7 x 0.9 (0.026 x 0.035)	1 (2)
Neoflon PFA	30	**TT-J-30**††	**350**	**385**	Solid	PFA	PFA	260	500	0.6 x 1.0 (0.024 x 0.040)	1 (2)
	36	**TT-J-36**††	**400**	**440**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.019 x 0.030)	1 (2)
	40	**TT-J-40**††	**530**	**580**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.019 x 0.030)	1 (2
Kapton	30	**KK-J-30**	**650**	**750**	Solid	Fused Polyimide Tape	Fused Polyimide Tape	316	600	1.0 x 1.4 (0.040 x 0.055)	3 (6)

** **Note:** Kapton wire is not IEC or ANSI color coded*
† Weight of spool and wire rounded to the next highest kg (lb) (does not include packing material). *†† Overall color clear.*
*** To order special limits of error wire, add **"-SLE"** to model number before spool length*
Ordering Example: TT-J-30-SLE-1000,** 1000' of Special Limits of Error PFA duplex insulated thermocouple wire, **$385

E Duplex Insulated CHROMEGA®-Constantan Duplex ANSI Type E

ANSI Color Code: Positive Wire, Purple; Negative Wire, Red; Overall, Brown

INSULATION	AWG NO.	MODEL NUMBER	PRICE/ 1000'	SLE/ 1000'**	TYPE WIRE	INSULATION CONDUCTOR	INSULATION OVERALL	MAX. TEMP °C	MAX. TEMP °F	NOMINAL SIZE mm (in)	WT.†/1000' kg (lb)
Glass	30	**GG-E-30**	**$330**	**395**	Solid	Glass Wrap	Glass Braid	320	700	0.9 x 1.3 (0.037 x 0.050)	2 (3)
	36	**GG-E-36**	**390**	**465**	Solid	Glass Wrap	Glass Braid	320	700	0.8 x 1.1 (0.033 x 0.043)	1 (2)
Neoflon PFA	30	**TT-E-30**††	**400**	**440**	Solid	PFA	PFA	260	500	0.6 x 1.0 (0.024 x 0.040)	1 (2)
	36	**TT-E-36**††	**450**	**495**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.019 x 0.030)	1 (2)
	40	**TT-E-40**††	**580**	**640**	Solid	PFA	PFA	260	500	0.5 x 0.8 (0.019 x 0.030)	1 (2)

† Weight of spool and wire rounded to the next highest kg (lb) (does not include packing material).
†† Overall color clear.
*** To order special limits of error wire, add **"-SLE"** to model number before spool length.*
Ordering Example: TT-E-30-SLE-1000,** 1000 ft of Special Limits of Error PFA duplex insulated thermocouple wire, **$440.

N OmegaLLOY® Omega-P® vs. Omega-N® (Nicrosil-Nisil) ANSI Type N

ANSI Color Code: Positive Wire, Orange; Negative Wire, Red; Overall, Brown

INSULATION	AWG NO.	MODEL NUMBER	PRICE/ 1000'	SLE/ 1000'**	TYPE WIRE	INSULATION CONDUCTOR	INSULATION OVERALL	MAX. TEMP °C	MAX. TEMP °F	NOMINAL SIZE mm (in)	WT.†/1000' kg (lb)
Glass	30	**GG-N-30**	**$290**	**$335**	Solid	Glass Wrap	Glass Braid	482	900	0.9 x 1.3 (0.037 x 0.050)	2 (3)
PFA Glass	30	**TG-N-30**	**530**	**610**	Solid	PFA	Glass Braid	260	500	0.9 x 1.2 (0.034 x 0.047)	1 (2)
PFA	30	**TT-N-30**††	**380**	**435**	Solid	PFA	PFA	260	500	0.6 x 1.0 (0.024 x 0.040)	1 (2)

† Weight of spool and wire rounded to the next highest kg (lb) (does not include packing material).
†† Overall color clear.
*** To order special limits of error wire, add **"-SLE"** to model number before spool length.*
Ordering Example: TT-N-30-SLE-1000,** 1000' of Special Limits of Error PFA duplex insulated thermocouple wire, **$435.

Discount Schedule *(1000' spools only)*

3 to 4 spools 10%
5 to 9 spools 15%

SPOOL PRICING

Standard Spool Lengths

7.5 m (25')
15 m (50')
30 m (100')
60 m (200')
150 m (500')
300 m (1000')

For Longer Lengths Consult Sales for Price and Delivery!

To order standard length spools, multiply the 300 m or 1000' spool price by the multiplier and round to the nearest dollar.

Example: GG-K-20-50, 50' (15 m) spool of GG-K-20 wire = $410 x 0.1 = **$41**

Spool Pricing Guidelines

Multiply 300 m or 1000' spool price by multiplier and round to the nearest dollar. Consult Sales for price quote.

7.5 m or 25' =	Price from Chart	x	0.0625
15 m or 50' =	Price from Chart	x	0.1
30 m or 100' =	Price from Chart	x	0.175
60 m or 200' =	Price from Chart	x	0.3
150 m or 500' =	Price from Chart	x	0.5
300 m or 1000' =	Price from Chart	x	1.0

NEW

LINEAR SLIDES—PNEUMATIC MINI DLM DIRECTCONNECT™ MODULAR SERIES

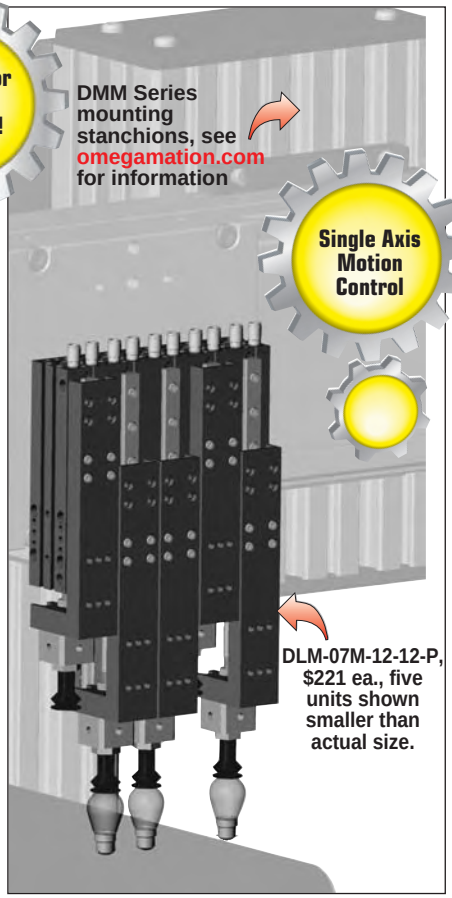
DE-STA-CO Robohand inc. A DOVER COMPANY

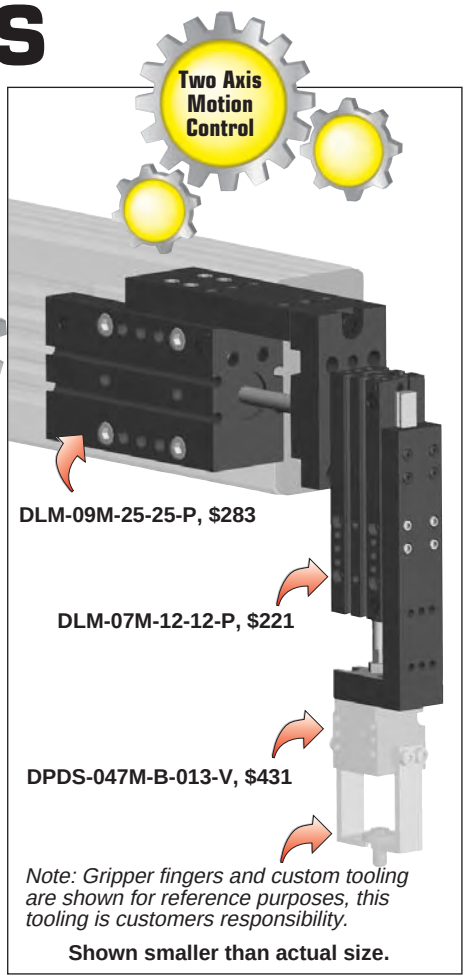
DLM Series Starts at $221

No Adaptor Plates Required!

MADE IN USA

- Highly Configurable Modular Automation—Exclusive Direct Connect™ Technology
- Precision Linear Motion—25 mm of Travel with 0.005 mm (0.0002") Accuracy
- Repeatability 0.08 mm (0.003") with Precision Stop Option
- Up to 5 Million Cycles in Typical Application—Up to 10 Million with Maintenance
- Temperature Operating Range -35 to 80°C (-30 to 180°F)
- Double Acting Pneumatic Cylinder Requiring 1.4 to 7 bar (20 to 100 psi) Dry Filtered (40 Micron or Better) Air Supply Along with a 4-Way, 2 Position Valve

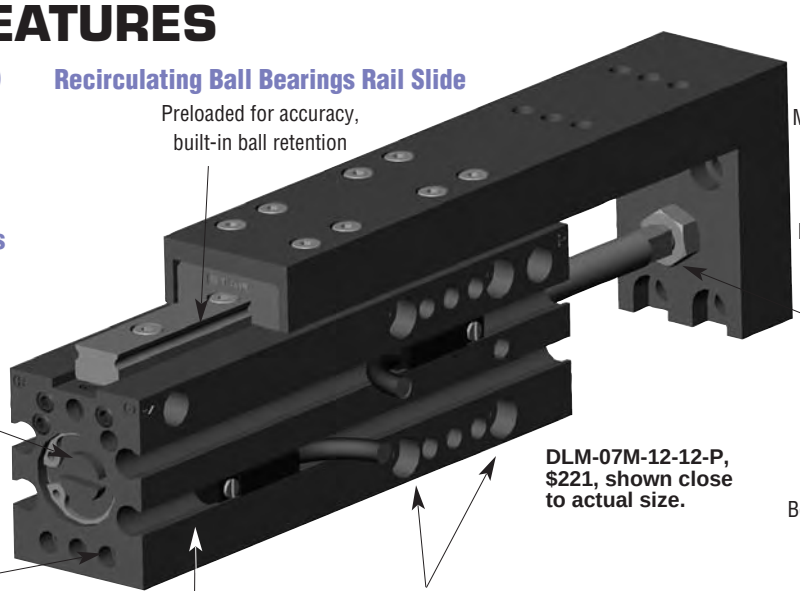




Note: Gripper fingers and custom tooling are shown for reference purposes, this tooling is customers responsibility.

Shown smaller than actual size.

PRODUCT FEATURES



Double Bearing (-D Option)
Three longer stroke sizes available with two bearings as an option for greater moment capacity

Recirculating Ball Bearings Rail Slide
Preloaded for accuracy, built-in ball retention

DIRECTCONNECT™ Mounting Patterns
Mounting on all six sides (standard)

Multiple Air Port Locations
4 standard airport location (bottom, back, and both sides)

Bearing Seals
Bearing blocks are equipped with low friction seals

Retract Stroke Adjustment
5 mm adjustment

Precision Tool Plate Position Adjustment
5 mm adjustment

DLM-07M-12-12-P, $221, shown close to actual size.

Manifold Air Ports
Bottom air ports are C'bored for O-ring manifold seals

Dowel Holes Standard
Slip fit dowel holes in body and tool plate

Magneto Resistive Sensing
Mounting slots and magnet are standard for up to eight sensors (sensors sold separately)

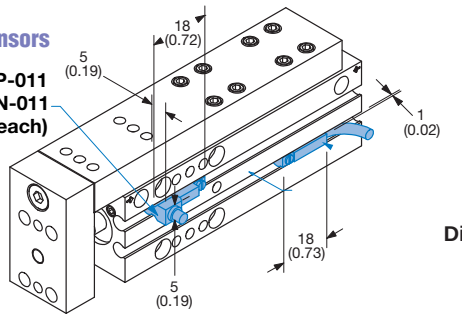
Thru-Body Mounting
C'bored holes for socket head cap screw on both sides

Precision Stops (-P Option)
Delrin® internal stops are available for increased repeatability

Motion product line continues to expand, visit omegamation.com for new details!

Position Sensors

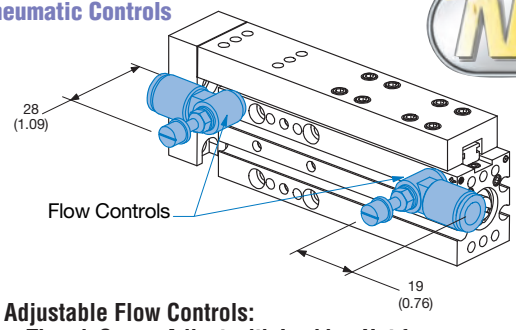
OHSP-011
OHSN-011
($63 each)



Dimensions: mm (in)

- Position Sensors Available—PNP and NPN Magneto Resistive Style, 2 per Slide Recommended
- Sensors are Slot Mounted, No Mounting Kits Required
- Simple Adjustment with Slotted Screw Driver
- Built-In LED for Ease of Positioning and Troubleshooting
- Low Profile Sensor Version or 90° Wire Exit Sensor Version
- Sensor Extension Cables Available—5 m Long, Quick-Disconnect Style (Model No. CABL-013, $26)

Pneumatic Controls



- Adjustable Flow Controls:
  - Thumb Screw Adjust with Locking Nut for Adjusting Actuation Time
  - Pneumatic Tubing Available
- Manifold O-Ring Seals (Model No. SLKT-239) and Seal Repair Kits (Model No. SLKT-236) Available
- Additional Pneumatic Controls and Accessories Available, Visit omegamation.com or Consult Sales

To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	LENGTH RETRACTED mm (in)	LENGTH EXTENDED mm (in)	DEPTH mm (in)	HEIGHT mm (in)	MAXIUM STROKE mm (in)	WEIGHT Kg (lbs)
DLM-07M-12-12-P	**$221**	78 (3.08)	90 (3.58)	20 (0.787)	35.5 (1.398)	12 (0.50)	0.13 (0.28)
DLM-07M-25-15-P	**231**	102 (4.02)	117 (4.60)	20 (0.787)	35.5 (1.398)	15 (0.59)	0.16 (0.35)
DLM-07M-25-25-P	**231**	102 (4.02)	127 (5.02)	20 (0.787)	35.5 (1.398)	25 (1.00)	0.16 (0.35)
DLM-07M-38-38-P	**241**	115 (4.53)	153 (6.03)	20 (0.787)	35.5 (1.398)	38 (1.50)	0.20 (0.43)
DLM-07M-50-50-P	**261**	127 (5.00)	177 (7.0)	20 (0.787)	35.5 (1.398)	50 (1.96)	0.32 (0.50)
DLM-09M-25-25-P	**283**	113 (4.46)	138 (5.56)	31 (1.22)	62 (2.44)	25 (1.00)	0.49 (1.08)
DLM-09M-50-50-P	**303**	160 (6.28)	210 (8.28)	31 (1.22)	62 (2.44)	50 (2.00)	0.64 (1.11)
DLM-09M-75-75-P	**324**	185 (7.26)	260 (10.26)	31 (1.22)	62 (2.44)	75 (3.00)	0.81 (1.78)
DLM-09M-100-100-P	**344**	209 (8.24)	309 (12.24)	31 (1.22)	62 (2.44)	100 (3.93)	0.97 (2.13)
DLM-12M-25-25-P	**305**	126 (4.97)	151 (5.97)	31 (1.22)	65 (2.51)	25 (1.00)	0.54 (1.18)
DLM-12M-50-50-P	**336**	166 (6.55)	216 (8.55)	31 (1.22)	65 (2.51)	50 (2.00)	0.65 (1.43)
DLM-12M-75-75-P	**356**	194 (7.61)	269 (10.61)	31 (1.22)	65 (2.51)	75 (3.00)	0.82 (1.80)
DLM-12M-100-100-P	**377**	220 (8.60)	320 (12.60)	31 (1.22)	65 (2.51)	100 (4.00)	1.02 (2.25)

Ordering Example: DLM-07M-12-12-P *mini pneumatic powered precison linear slide with a maximum stroke of 12 mm (0.50")* ***$221.*** *Recommend accessories include 2 sensors and 2 pneumatic flow controls for each slide, along with a 4 way 2 position valve.* ***DLM-07M*** *models; stroke reduction (return) 5 mm (0.19"), thrust force 66.7 N (15 lbs), max payload 0.23 Kg (0.5 lb) cylinder bore is 11 mm (0.437") actuation per 25 mm is 0.07 seconds.* ***DLM-09M*** *models - stroke reduction (return) 5 mm (0.19"), thrust force 138 N (31 lbs), max payload 0.45 Kg (1.0 lb) cylinder bore is 16 mm (0.630") actuation per 25 mm is 0.10 seconds* ***DLM-12M*** *models - stroke reduction (return) 5 mm (0.19"), thrust force 230 N (51 lbs), max payload 0.90 kg (2.0 lb) cylinder bore is 22 mm (0.813") actuation per 25 mm is 0.14 seconds.*
Detailed specifications and CAD drawings available at omegamation.com

Accessories

MODEL NO.	PRICE	DESCRIPTION
SENSOR ACCESSORIES		
OHSP-011	**$63**	PNP magneto resistive sensor 90° barrell with quick disconnect fitting
OHSN-011	**63**	NPN magneto resistive sensor 90° barrell with quick disconnect fitting
OHSP-017	**63**	PNP magneto resistive sensor short barrell with quick disconnect fitting
OHSN-017	**63**	NPN magneto resistive sensor short barrell with quick disconnect fitting
CABL-010	**23**	2 M sensor extension cable with quick disconnect fitting
CABL-013	**26**	5 M sensor extension cable with quick disconnect fitting
PNEUMATIC ACCESSORIES		
Pneumatic Tubing	**Consult Sales**	Polyurethane tubing in multiple diameters and colors available, see **omegamation.com**
Pneumatic Fittings	**Consult Sales**	Poly-Tube fittings in male or female NPT in multiple configurations, see **omegamation.com**
Pneumatic Flow Controls	**Consult Sales**	Adjustable flow control fittings and directional control valves, see **omegamation.com**
MECHANICAL ACCESSORIES		
DMM Series	**Consult Sales**	Aluminum extruded mounting stanchions for slides and thrusters, see **omegamation.com**
Mounting Hardware	**Consult Sales**	Gussets, clamps. end caps, covers and other hardware, see **omegamation.com**

NEW

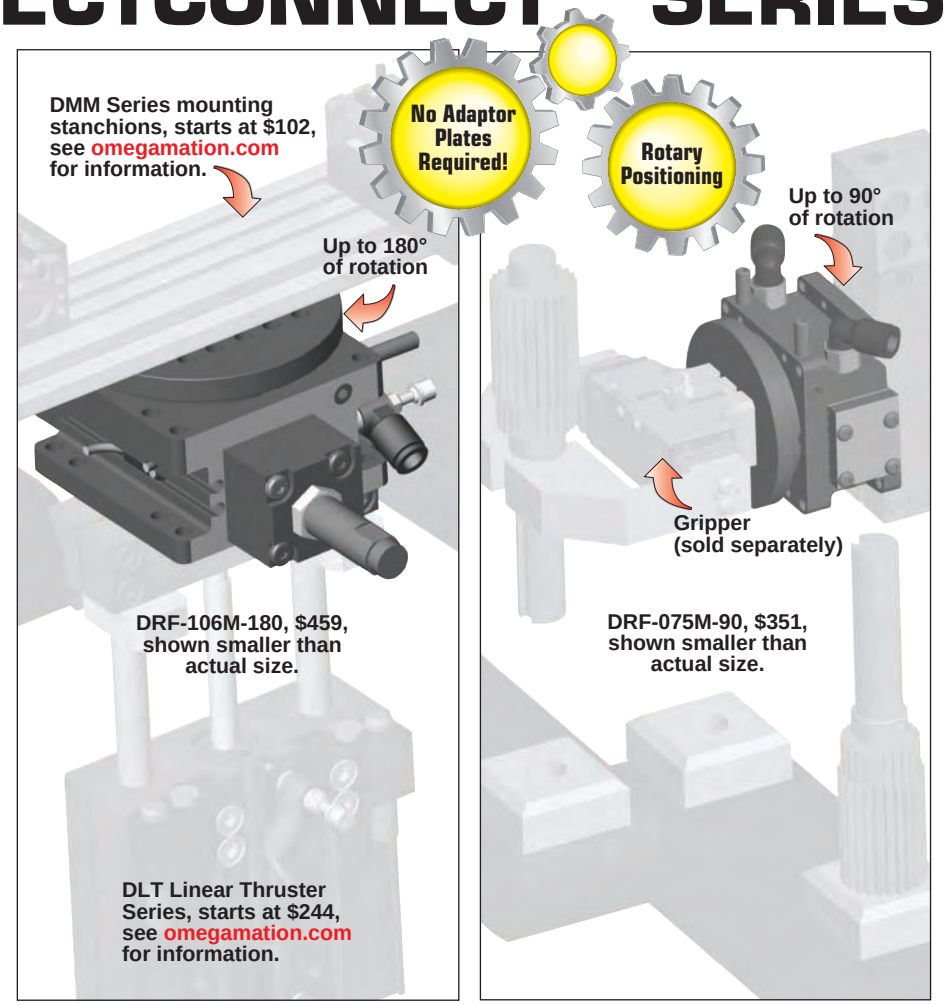
DE-STA-CO Robohand inc. A DOVER COMPANY

ROTARY ACTUATORS— PNEUMATIC, FLANGE MOUNTABLE DRF DIRECTCONNECT™ SERIES

DRF Series Starts at $351

MADE IN USA

- Rotary Motion Actuator—Precision End Stop Position and Zero Backlash
- Adjustable Rotation with a Maximum of 180° Full Rotation
- Repeatability ±0.02° of Rotation
- Highly Configurable Modular Automation, Exclusive DirectConnect Technology
- Multiple Mounting Locations—Tapped and Through the Flange on Top and Bottom Surfaces
- Up to 5 Million Cycles in Typical Application, Up to 10 Million with Maintenance
- Temperature Operating Range -35 to 80°C (-30 to 180°F)
- Double Acting Air Cylinder
- System Requires 3 to 7 bar (40 to 100 psi) Dry Filtered (40 Micron or Better) Air Supply
- Accessory Equipment Required—4-Way, 2 Position Pneumatic Direction Control Valve



PRODUCT FEATURES

Black Anodize Body
The body and End Plates are Black anodized, steel parts are black oxide.

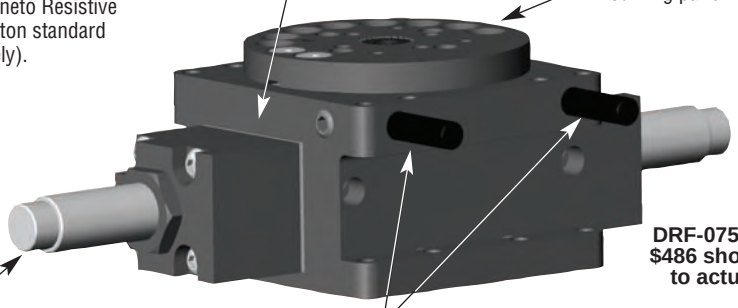
Flange Mounting
Turntable has DIRECTCONNECT mounting pattern

One Piece Body
One piece lightweight aircraft quality aluminum body.

Sensor Mounting Slots
Standard mounting slots for Magneto Resistive Sensors magnet mounted in piston standard (sensors sold separately).

Dowel Holes
Slip fit dowel pin holes in bottom body, and on turntable.

Extremely Rugged Design
Pinion is supported with upper and lower sealed ball bearings.



DRF-075M-090-A, $486 shown close to actual size.

Piston
Made of Delrin® for extended life.

End Stop Deceleration (-A Option)
Shock absorbers decelerates load at end of stroke.

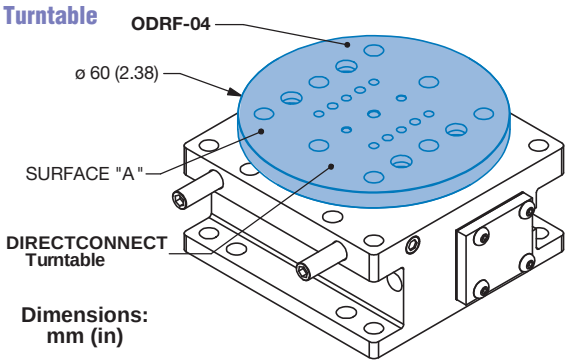
Case Hardened
Rack and pinion are case hardened for wear and long life.

Rotational Adjustments
All rotational adjustments made from front face. Adjustments are locked with set screw on side.

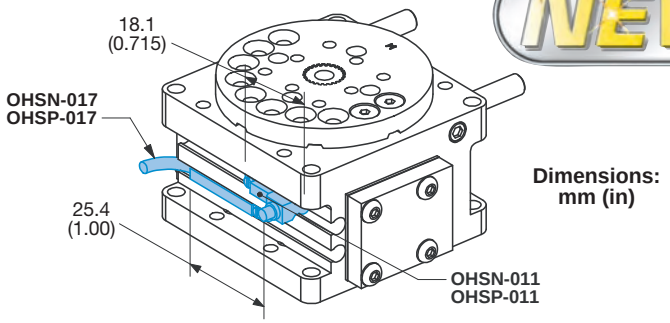
DIRECTCONNECT™ **Mounting Patterns**
Tapped and Dowel mounting surface on bottom of body and on turntable.

Motion product line continues to expand, visit omegamation.com for new details!

Turntable



Sensor and Flow Controls



- DIRECTCONNECT Turntable, Easily Removed, Pin Located
- High Quality Aircraft Aluminum, Black Anodized Finish
- Mounts Through Pinion with One Screw and Two Dowels
- No Machining Required, DIRECTCONNECT Grippers Mount Directly
- 90° Orientations

- PNP and NPN Magneto Resistive Available
- Sensors Are Slot Mounted, No Mounting Kits Required
- Precision Rotary Adjustments Made from Face and Locked with Set Screws
- Tubing, Fittings and Additional Pneumatic Controls and Accessories Available, see omegamation.com or Consult Sales

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DEPTH mm (in)	WIDTH mm (in)	HEIGHT mm (in)	MAX PAYLOAD Kg (lbs)	MAX ROTATION	WEIGHT Kg (lbs)
DRF-075M-90	**$351**	54 (2.13)	69 (2.69)	37 (1.52)	0.23 (0.5)	90°	0.24 (0.54)
DRF-075M-180	**351**	54 (2.13)	69 (2.69)	37 (1.52)	0.23 (0.5)	180°	0.24 (0.54)
DRF-075M-90-A	**486**	54 (2.13)	151 (5.93)	37 (1.52)	0.45 (1)	90°	0.34 (0.72)
DRF-075M-180-A	**486**	54 (2.13)	151 (5.93)	37 (1.52)	0.45 (1)	180°	0.34 (0.72)
DRF-094M-90	**384**	71 (2.78)	86 (3.36)	49 (1.76)	0.68 (1.50)	90°	0.50 (1.10)
DRF-094M-180	**384**	71 (2.78)	86 (3.36)	49 (1.76)	0.68 (1.50)	180°	0.50 (1.10)
DRF-094M-90-A	**548**	71 (2.78)	189 (7.45)	49 (1.76)	1.4 (3.00)	90°	0.64 (1.40)
DRF-094M-180-A	**548**	71 (2.78)	189 (7.45)	49 (1.76)	1.4 (3.00)	180°	0.64 (1.40)
DRF-106M-90	**459**	100 (3.94)	115 (4.54)	58 (2.28)	1.8 (4.00)	90°	1.1 (2.50)
DRF-106M-180	**459**	100 (3.94)	115 (4.54)	58 (2.28)	1.8 (4.00)	180°	1.1 (2.50)
DRF-106M-90-A	**648**	100 (3.94)	250 (9.84)	58 (2.28)	3.6 (8.00)	90°	1.4 (3.10)
DRF-106M-180-A	**648**	100 (3.94)	250 (9.84)	58 (2.28)	3.6 (8.00)	180°	1.4 (3.10)
DRF-131M-90	**536**	133 (5.25)	153 (6.02)	72 (2.82)	3.4 (7.50)	90°	2.9 (6.30)
DRF-131M-180	**536**	133 (5.25)	153 (6.02)	72 (2.82)	3.4 (7.50)	180°	2.9 (6.30)
DRF-131M-90-A	**785**	133 (5.25)	301 (11.85)	72 (2.82)	6.8 (15.00)	90°	3.1 (6.80)
DRF-131M-180-A	**785**	133 (5.25)	301 (11.85)	72 (2.82)	6.8 (15.00)	180°	3.1 (6.80)

Ordering Example: DRF-075M-90-A, *precision rotary actuator with 90° of rotation and built in shock absorber,* ***$486.*** *Recommend accessories include 2 sensors and 2 pneumatic flow controls for each slide, along with a 4-way 2 position valve.* ***DRF-075M*** *models: acutuation time [180° @ 7 bar (100 psi) 0.38 seconds], actuation time [90° @ 7 bar (100 psi) 0.29 seconds].* ***DRF-094M*** *models: acutuation time [180° @ 7 bar (100 psi) 0.38 seconds], actuation time [90° @ 7 bar (100 psi) 0.29 seconds].* ***DRF-106M*** *models: acutuation time [180° @ 7 bar (100 psi) 0.38 seconds], actuation time [90° @ 7 bar (100 psi) 0.29 seconds].* ***DRF-131M*** *models: acutuation time [180° @ 7 bar (100 psi) 0.38 seconds], actuation time [90° @ 7 Bar (100 psi) 0.29 seconds]. All models end stop adjustability 23°, over travel (each end) 1 to 3°.*
Detailed specification and CAD drawings available at omegamation.com.

Accessories

MODEL NO.	PRICE	DESCRIPTION
SENSOR ACCESSORIES		
OHSP-011	**$63**	PNP magneto resistive sensor 90° barrell with quick disconnect fitting
OHSN-011	**63**	NPN magneto resistive sensor 90° barrell with quick disconnect fitting
OHSP-017	**63**	PNP magneto resistive sensor short barrell with quick disconnect fitting
OHSN-017	**63**	NPN magneto resistive sensor short barrell with quick disconnect fitting
CABL-010	**23**	2 m sensor extension cable with quick disconnect fitting
PNEUMATIC ACCESSORIES		
Pneumatic Tubing	**Consult Sales**	Polyurethane tubing in multiple diameters and colors available, see **omegamation.com**
Pneumatic Fittings	**Consult Sales**	Poly-tube fittings in male or female NPT in multiple configurations, see **omegamation.com**
Pneumatic Flow Controls	**Consult Sales**	Adjustable flow control fittings and directional control valves, see **omegamation.com**
MECHANICAL ACCESSORIES		
ODRF-004	**49**	Rotary Size 075, DirectConnect turntable metric, direct mounting for gripper, no machining necessary
ODRF-010	**49**	Rotary Size 094, DirectConnect turntable metric, direct mounting for gripper, no machining necessary
DMM Series	**Consult Sales**	Aluminum extruded mounting stanchions for slides and thrusters, see **omegamation.com**
Hardware	**Consult Sales**	Gussets, and other hardware for stanchions, see **omegamation.com**

Turntables and output shafts available for all DRF models, see ***omegamation.com.***

NEW

GRIPPERS PNEUMATIC PRECISION PARALLEL MOVEMENT DPP DIRECTCONNECT™ SERIES

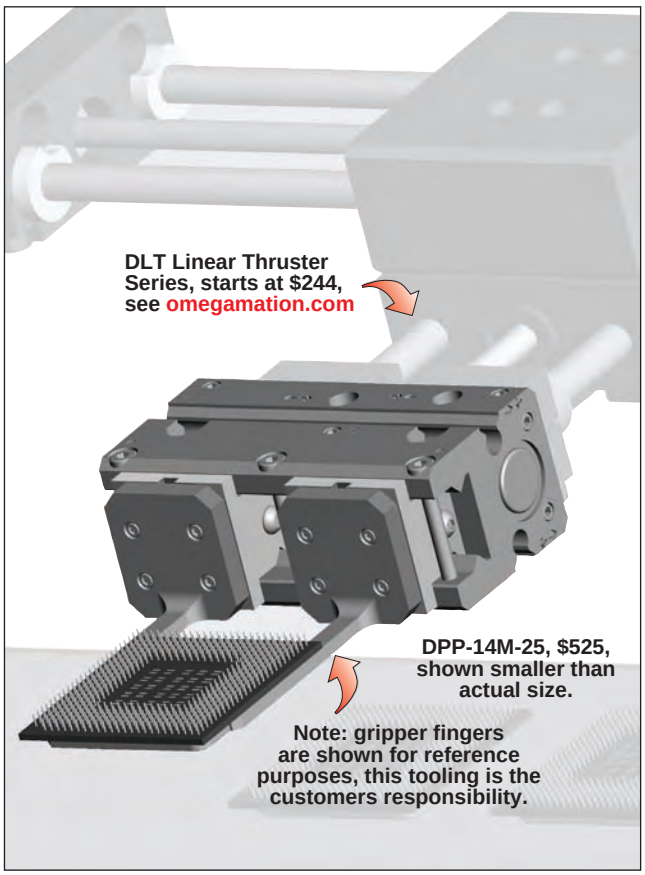
DE-STA-CO Robohand inc. A DOVER COMPANY

DPP Series Starts at $365

MADE IN USA

No Adaptor Plates Required!

- Precision Gripping—Preloaded V Roller Bearing Eliminate Side Play Resulting in Excellent Part Positioning
- Accuracy of ±0.03 mm (0.001") and Repeatability of ±0.01 mm (0.0005")
- Highly Configurable Modular Automation—Exclusive Direct Connect™ Technology Provides Multiple Mounting Options
- Multiple Pneumatic Port Locations—Tapped Ports on Front, Top and Both Sides are Standard
- Rigid and Low Friction Design Provides Longer Gripper Finger Lengths and the Ability to Handle Delicate Parts
- Non Synchronous Motion Option Provides Independent Jaw Motion
- Up to 5 Million Cycles in Typical Application—Up to 10 Million with Maintenance
- Temperature Operating Range -35 to 80ºC (-30 to 180ºF)
- System Requires 0.3 to 7 bar (5 to 100 psi) Dry Filtered (40 Micron or Better) Air Supply
- Accessory Equipment Required—4-Way, 2 Position Pneumatic Directional Control Valve



PRODUCT FEATURES

Excellent Accuracy
Excellent parallelism and accuracy between gripper mounting surface and jaw surfaces.

Top Manifold Air Ports
Eliminates the need for airlines.

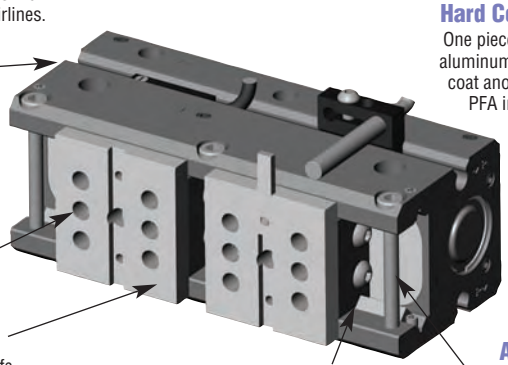
Standard Purge/ Scavenge Port
Used with a vacuum for clean room environments or positive pressure for harsh environments and jaw surfaces.

Shielded Design
Shielded design repels contamination from penetrating the "Dual-V" roller bearings.

Hard Coat Anodized
One piece, aircraft quality aluminum body, has hard-coat anodize 60 RC with PFA impregnation.

Multiple Air Port Locations
4 standard locations; front, top and both sides

Accessory Mounting Slots
For Magneto Resistive and Inductive sensors (sensors sold separately).



DPP-10M-06, $365, shown slightly smaller than actual size.

DIRECTCONNECT™ Mounting Patterns
DIRECTCONNECT™ tapped and dowel mounting surfaces on top and side of body (except DPP-28).

Dowel Holes
H7 dowel pin holes in body and jaws. Jaws also have key slot for better finger alignment.

Superior Jaw Support
Jaws are supported using our patented "Dual-V" roller bearing design.

Optional Spring Assist
For close stroke.

Hardened Plated Jaws
For wear resistance and longer life.

"Dual-V" Roller Bearings
Provide low friction motion and are preloaded for maximum support and zero side play.

Adjustable Pre-load Screws
Allows for adjustment of preload on roller bearings.

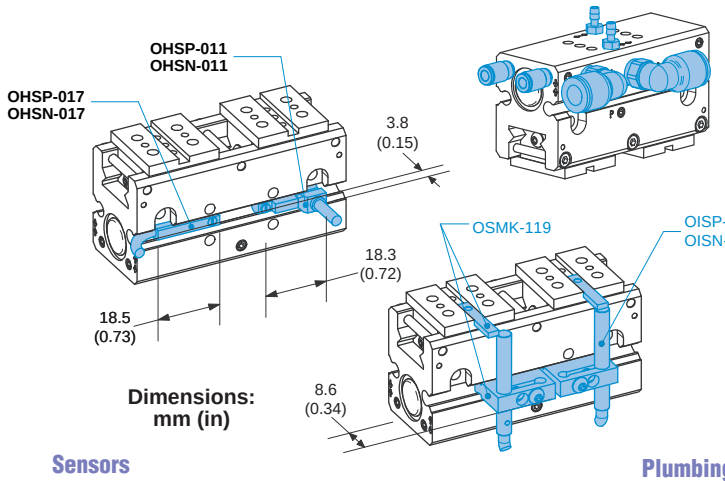
Self Lubricating Dynamic Seals
(Buna-N only)

Multiple Sensor Capabilities
Capable of sensing both jaws in the open and closed positions (up to 4 sensors can be used for multi-position sensing). Sensor magnets on pistons come standard for Magneto Resistive Sensing.

Viton Seals
Available for high temperature applications.

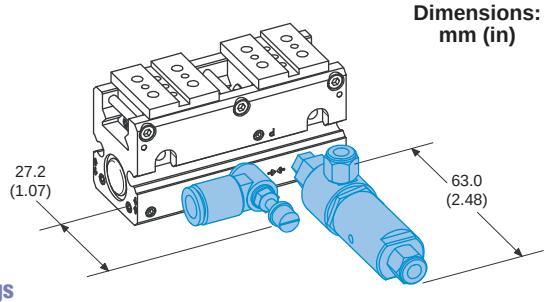
High Grip Force
With respect to weight due to extremely efficient drive mechanism.

Motion product line continues to expand, visit omegamation.com for new details!



Multiple Air Port Locations

- Standard M5 Air Ports on Front Surface
- 3 M3 Air Port locations (Left, Right, and Top Surface) Are Plugged as Standard



Sensors

- Magneto Resistive or Inductive Proximity Available
- Capable of Sensing 4 Positions Open and Closed on Both Jaws
- PNP and NPN Available
- Magneto Resistive Sensors Are Slot Mounted, No Mounting Kits Required
- Threaded Quick Disconnect with Built-In LED Output
- Sensors Mount on Either Side of Gripper
- Sensors Magnets in Pistons Are Standard

Plumbing Fittings

- Adjustable Flow Controls
  - Have Thumb Screw Adjust with Locking Nut for Adjusting Actuation Time
  - Available for 3 or 6 mm OD Tubing
- Failsafe Valve for Applications
  - Where it is Critical That the Part Being Gripped Not be Dropped if Air Pressure is Lost
  - Can Mount Directly to Gripper or In-Line with Plumbing to Gripper
  - For M5 Air Ports
- Consult Factory for Additional Plumbing Fittings

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	JAW LGTH CLOSED mm (in)	JAW LGTH OPEN mm (in)	BODY DEPTH mm (in)	BODY LGTH mm (in)	BODY HEIGHT mm (in)	MAX STROKE mm (in)	GRIP FORCE N (lbs)	WEIGHT Kg (lbs)
DPP-10M-06	**$365**	47 (1.85)	53 (2.10)	25 (0.98)	63 (2.47)	35 (1.36)	6.4 (0.25)	111(25)	0.16 (0.35)
DPP-10M-12	**415**	49 (1.93)	62 (2.43)	25 (0.98)	74 (2.90)	35 (1.36)	12.7 (0.50)	111(25)	0.20 (0.45)
DPP-14M-15	**450**	63 (2.47)	79 (3.10)	34 (1.34)	90 (3.55)	42 (1.66)	15.9 (0.63)	200 (45)	0.48 (1.05)
DPP-14M-25	**525**	82 (3.23)	107 (4.23)	34 (1.34)	119 (4.67)	42 (1.66)	25.4 (1.00)	200 (45)	0.57 (1.25)
DPP-10M-06-C	**390**	47 (1.85)	53 (2.10)	25 (0.98)	63 (2.47)	35 (1.36)	6.4 (0.25)	120 (27)	0.16 (0.35)
DPP-10M-12-C	**440**	49 (1.93)	62 (2.43)	25 (0.98)	74 (2.90)	35 (1.36)	12.7 (0.50)	120 (27)	0.20 (0.45)
DPP-14M-15-C	**485**	63 (2.47)	79 (3.10)	34 (1.34)	90 (3.55)	42 (1.66)	15.9 (0.63)	227 (51)	0.48 (1.05)
DPP-14M-25-C	**560**	82 (3.23)	107 (4.23)	34 (1.34)	119 (4.67)	42 (1.66)	25.4 (1.00)	214 (48)	0.57 (1.25)

Ordering Example: DPP-14M-25, *pneumatically powered precision gripper with DirectConnect easy mounting technology, 25.4 mm (1") jaw stroke and 200 N (45 lbs) of gripping force,* ***$525.*** *All models have a temperature range of -35 to 80ºC (-30 to 180ºF). The temperature range can be modified to -30 to 120ºC (-20 to 250ºF) with Viton® seals. Add* ***"V"*** *to the end of the model Number and* ***$36.*** *All models come standard with snychornous jaws, if non snychornous is required consult sales. All models with the* ***"-C"*** *option have a spring assist closing mechanism on the jaws to provide fail safe closing and additional gripping force.* ***Detailed specifications and CAD drawings are available at omegamation.com***

Accessories

MODEL NO.	PRICE	DESCRIPTION
SENSOR ACCESSORIES		
OISN-014	**$114**	NPN inductive proximity sensor
OISP-014	**114**	PNP inductive proximity sensor
OHSN-011	**63**	NPN magneto resistive sensor 90º barrell with quick disconnect fitting
OHSP-011	**63**	PNP magneto resistive sensor 90º barrell with quick disconnect fitting
OHSN-017	**63**	NPN magneto resistive sensor short barrell with quick disconnect fitting
OHSP-017	**63**	PNP magneto resistive sensor short barrell with quick disconnect fitting
CABL-010	**23**	2 m sensor extension cable with quick disconnect fitting
CABL-013	**26**	5 m sensor extension cable with quick disconnect fitting
OSMK-119	**40**	DPP-10M-14M inductive sensor mounting kit
PNEUMATIC ACCESSORIES		
Pneumatic Tubing	**Consult Sales**	Polyurethane tubing in multiple diameters and colors avaialable, see **omegamation.com**
Pneumatic Fittings	**Consult Sales**	Poly-Tube fittings in Male or Female NPT in multiple configurations, see **omegamation.com**
Pneumatic Flow Controls	**Consult Sales**	Adjustable flow control fittings and directional control valves, see **omegamation.com**

NEW SERIES OMPBD7 PILOT DEVICES

THE ECONOMICAL SOLUTION FOR HIGH PERFORMANCE CONTROL, SIGNALING AND SWITCHING APPLICATIONS

Omega's rugged OMPBD7 pilot devices offer maximum flexibility and a wide choice for all applications. This 22 mm line is aesthetically appealing and modularly designed to make assembly and interchangeability easy. The OMPBD7 operators are available in two different body styles to meet every application need. Both operators exhibit a new lower profile stylish appearance while maintaining the rugged performance necessary for demanding environments.

Two Operator Types

OMPBD7P is a plastic operator with a captive black plastic front bezel. Constructed of high-grade thermoplastics the OMPBD7P is the corrosion resistant solution for harsh environments. For super tough applications, the OMPBD7M has a die-cast zinc housing and mounting ring for rugged durability. Both are finished with corrosion resistant chrome plating. The OMPBD7M also features a captive shiny metal bezel for a polished appearance.

Less Inventory, More Choices

Omega offers OMPBD7 pushbuttons in a wide range of devices— from selector switches to multifunction pushbuttons. Their modular design keeps the number of required parts to a minimum, while offering multiple functions and a variety of style and color combinations. Back-of-panel components can be combined with all front elements, making the OMPBD7 line extremely flexible. This approach reduces inventory, yet provides virtually any configuration you require.

Quick, Easy Installation

A standard anti-rotation tab keeps front elements from turning or falling off the control panel, making it possible for one person to install all OMPBD7 components even if the front and rear panel are not accessible at the same time. A central mounting ring allows for quick installation and removal of all OMPBD7 operators. All back-of-panel components including contact blocks and power module elements snap-on and are readily accessible and interchangeable without removing the pilot device from the panel.

OMPBD7M-F3PX10, $12, shown larger than actual size, see page 206 for details.

OMPBD7M-F9, $5, shown larger than actual size, see page 207 for details.

OMPBD7P-F9, $4, shown larger than actual size, see page 207 for details.

Tool-Less Mounting Latch

The OMPBD7 "tool-less" mounting latch mates the front element with the contact blocks and other back-of-panel components. The mounting latch is available in a plastic and metal design. The latches are easily installed with a "click" and removed by pushing a rotating collar to the right. Quick, reliable and strong, it's the best pilot device mounting latch available in the industry.

Long Electrical and Mechanical Life

Most OMPBD7 operators have a mechanical of ten million operations… five million contact blocks. Electrical life ranges from 500,000 cycles at 3 A to ten million at 0.1 A. The OMPBD7 line is also electronics compatible with self cleaning contacts.

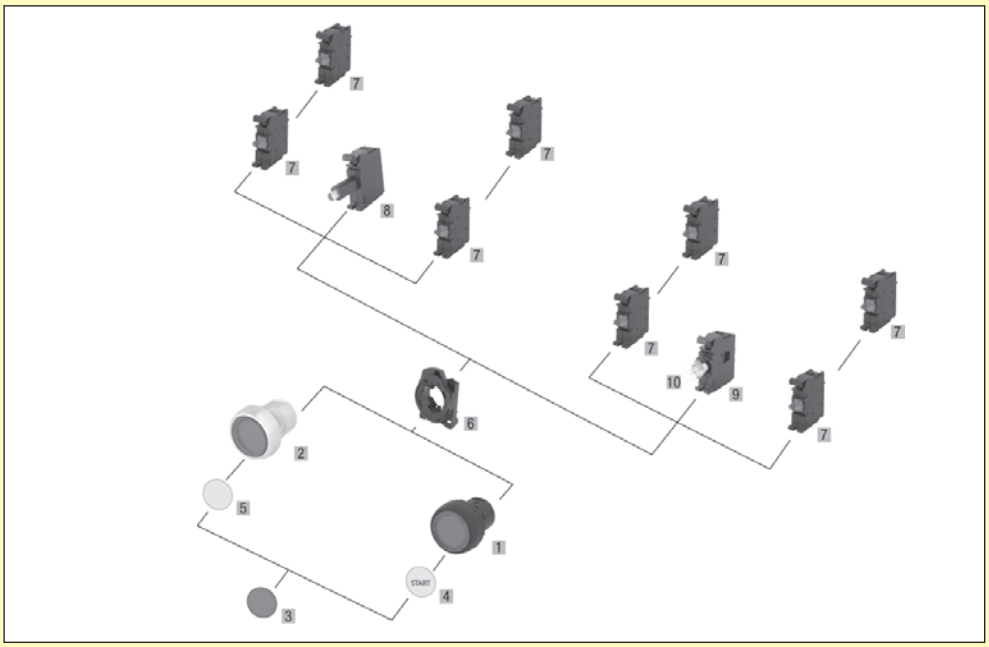
Environmental Ratings

Front elements, including pushbuttons, mushroom operators and selector switches, are IP 66 protection against submersion, oil and dirt, making them reliable in the toughest industrial environments. Metal operators are Type 4/13 and Type 4/4X/13 for plastic operators.

Push buttons product line continues to expand, visit omegamation.com for new details!

OMPBD7 Pilot Devices –Modular, Flexible and Complete

This illustration shows typical combinations available depending on the front and back-of panel components chosen. Up to six contact blocks can be used on non-illuminated devices.



1 OMPBD7P Operator—Corrosion resistant plastic construction with black plastic bezel

2 OMPBD7M Operator—Metal construction with shiny metal bezel

3 Colored Lenses and Color Caps— Available in many colors

4/5 Inscription Diffusers—Diffusers and color caps available in many standard text and ISO symbol options, and foreign languages

6 Tool-less Mounting Latch— For snap-on contact blocks and power module elements

7 Contact Blocks—Five types available including NOEM, NCLB, and Low Voltage

8 Power Modules, Integral LED—Full voltage module requires only one slot

9 Power Modules, Incandescent—Full voltage module requires only one slot

10 Bulbs—Incandescent and neon bulbs that include the incandescent power module

Additional Features and Options

Heavy-Duty Ratings—The OMPBD7 line is UL 46E, NEMA A600 and Q600 listed. All components carry a 10 Amp continuous current rating, covering all industrial control needs.

All Major Approvals—OMPBD7 front elements are UL Recognized, while all OMPBD7 assemblies are UL Approved. The line is also approved by every major international agency making them ideal for export requirements.

Special Contact Blocks & Power Modules— Screwless terminals are available for latching and base mounted contacts blocks & Integral LED modules. A new latch mounted screw type dual circuit contact block is available.

H-Bridge & Gold Plated Contacts— By doubling the available paths for current to pass through the contacts, the standard H-bridge design provides a cleaner current flow. Gold plated contacts quadruple the current paths for increased contact reliability in low voltage applications.

Molded Inscription Caps/Diffusers— Abrasion proof inscription caps/diffusers are offered in a two-color molded design for most common inscription text and symbols used in the industry.

Laser Engraved Caps/Diffusers—Durable long lasting laser engraved inscription caps/diffusers are offered in a wide variety of ISO symbols and text options. Unlike heat-stamped or ink inscriptions that can wear off, our molded and laser engraved inscription caps withstand repeated use in the harshest environments.

Touch-Safe—Back of panel components are finger safe, with IP 20 protection.

Long Lasting Integral LED Assemblies— Our new LED lamps last up to 11 years! They are conveniently offered as a complete unit for all illuminated operators which include the one piece Integral LED Module. They come in five different colors: amber, blue, green, red and white.

Full Line of Accessories and Enclosures— A variety of metal and plastic enclosures are available for any application. Replacement components, legend plates and convenient accessories are available from stock, including rings for adapting 30 mm holes to fit the 22 mm OMPBD7 line.

NEW OMPBD7 SERIES PUSHBUTTONS 22.5 mm

Kits Start at $11

Visit omegamation.com for our complete line of pushbuttons

OMPBD7M-F3PX10, $12, shown larger than actual size.

OMPBD7P-F3PX10, $11, shown larger than actual size.

To Order *(Specify Model Number)*

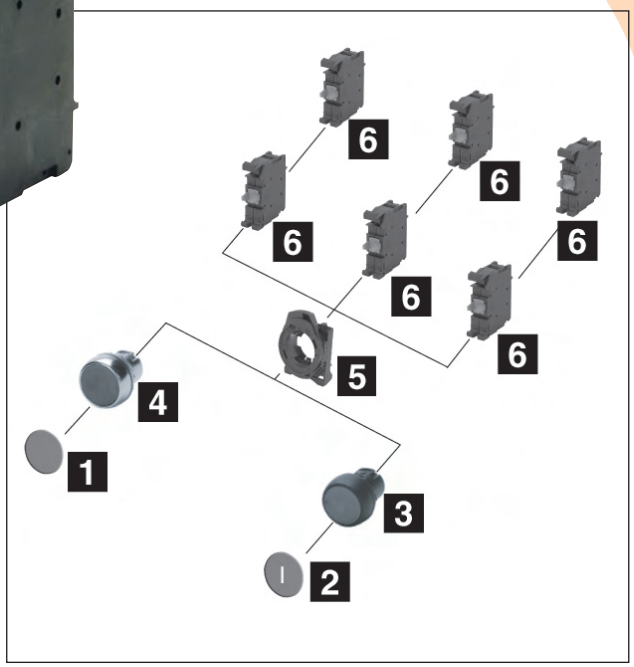
MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
Plastic Flush, Non-Illuminating, Momentary Pushbuttons (Complete Kits) 22.5 mm		
OMPBD7P-F2PX01	$11.00	Plastic black 1 NC momentary-flush
OMPBD7P-F2PX10	11.00	Plastic black 1 NO momentary-flush
OMPBD7P-F3PX01	11.00	Plastic green 1 NC momentary
OMPBD7P-F3PX10	11.00	Plastic green 1 NO momentary
OMPBD7P-F4PX01	11.00	Plastic red 1 NC momentary
OMPBD7P-F4PX10	11.00	Plastic red 1 NO momentary
Metal Flush, Non-Illuminating, Momentary Pushbuttons (Complete Kits) 22.5 mm		
OMPBD7M-F2PX01	$12.00	Metal black 1 NC momentary-flush
OMPBD7M-F2PX10	12.00	Metal black 1 NO momentary-flush
OMPBD7M-F3PX10	12.00	Metal green 1 NO momentary-flush
OMPBD7M-F4PX01	12.00	Metal red 1 NC momentary-flush
Plastic Flush, Non-Illuminating, Maintained Pushbuttons (Complete Kits) 22.5 mm		
OMPBD7P-FA2PX10E	$14.00	Maintained non-illum plastic-plastic ring-black cap-flush-1 NOEM
OMPBD7P-FA2PX01	14.00	Maintained non-illum plastic-plastic ring-black cap-flush-1 NC
OMPBD7P-FA3PX10E	14.00	Maintained non-illum plastic-plastic ring-green cap-flush-1 NOEM
OMPBD7P-FA4PX01	14.00	Maintained non-illum plastic-plastic ring-red cap-flush-1 NC
Metal Flush, Non-Illuminating, Maintained Pushbuttons (Complete Kits) 22.5 mm		
OMPBD7M-FA2PX01	$16.00	Maintained non-illum metal-metal ring-black-flush-1 NC
OMPBD7M-FA2PX10E	16.00	Maintained non-illum metal-metal ring-black-flush-1 NOEM
OMPBD7M-FA3PX01	16.00	Maintained non-illum metal-metal ring-green-flush-1 NC
OMPBD7M-FA3PX10E	16.00	Maintained non-illum metal-metal ring-green-flush-1 NOEM
OMPBD7M-FA4PX01	16.00	Maintained non-illum metal-metal ring-red-flush-1 NC
OMPBD7M-FA4PX10E	16.00	Maintained non-illum metal-metal ring-red-flush-1 NOEM

Complete kits comes with operator, color cap, mounting latch and contacts.
Ordering Example: OMPBD7P-F3PX10,** normally open momentary, non-illuminating pushbutton kit, **$11.

Pushbuttons product line continues to expand, visit omegamation.com for new details!

OMPBD7P-F3PX10, $11,
shown larger than actual size.



Components diagram for momentary pushbuttons.

OMPBD7M-F3PX10, $12,
shown larger than actual size.

To Order *(Specify Model Number)*

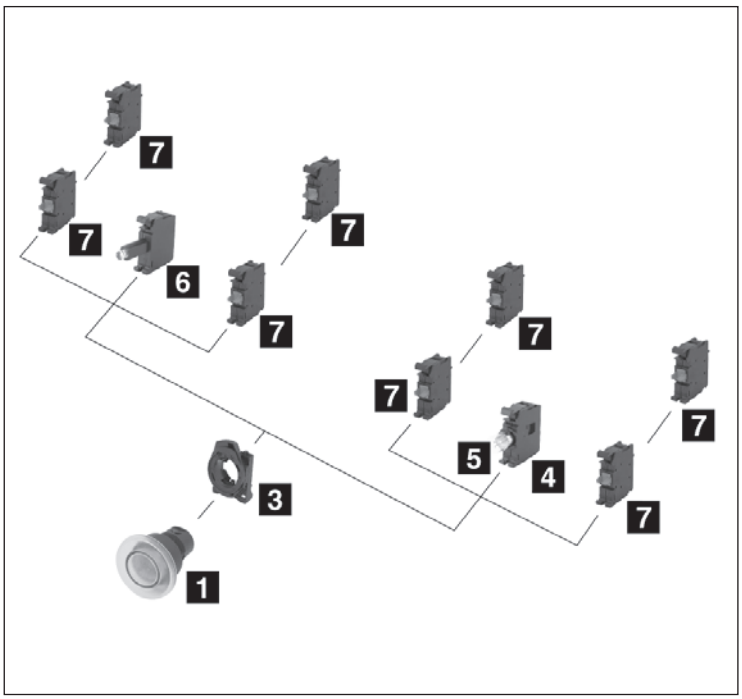
MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
Color Caps 1		
OMPBD7-AF3	$0.55	Color caps green-blank-flush
OMPBD7-AF4	0.55	Color caps red-blank-flush
OMPBD7-AF5	0.55	Color caps yellow-blank-flush
OMPBD7-AF6	0.55	Color caps blue-blank-flush
Inscription Color Caps 2		
OMPBD7-AF301	$2.50	Inscription color caps green-START-flush
OMPBD7-AF306	2.50	Inscription color caps green “I” flush
OMPBD7-AF402	2.50	Inscription color caps red-STOP-flush
OMPBD7-AF405	2.50	Inscription color caps red-O-flush
Plastic Operator with Plastic Bezel 22.5 mm 3		
OMPBD7P-F9	$4.00	Plastic operator with plastic bezel, momentary flush
OMPBD7P-FA9	6.00	Plastic operator with plastic bezel, maintained flush
Metal Operator with Metal Bezel 4		
OMPBD7M-F9	$5.00	Metal operator with shiny metal front bezel, momentary flush
OMPBD7M-FA9	8.00	Metal operator with shiny metal front bezel, maintained flush
Tool-less Mounting Latch 5		
OMPBD7-ALM	$4.95	Tool-less mounting latch, metal
OMPBD7-ALP	3.85	Tool-less mounting latch, plastic
Contact Blocks 6		**Note: up to 6 contact blocks can be attached**
OMPBD7-X01	$6.00	NC contact block contact block for momentary and maintained
OMPBD7-X10	6.00	NO contact block contact block for momentary
OMPBD7-X10E	6.00	NO early make contact block for momentary and maintained
OMPBD7-X01L	6.00	NC late break contact block for momentary
OMPBD7-X10V	12.00	NO low voltage contact block for momentary
OMPBD7-X01V	12.00	NC low votlage contact block for momentary and maintained

Comes with instruction sheet.
Ordering Example: OMPBD7-AF3, *green color cap,* ***OMPBD7P-F9,*** *plastic operator with bezel, momentary flush,* ***OMPBD7-ALP,*** *mounting latch,* ***OMPBD7-X10,*** *no contact block, $0.55 + 4 + 3.85 + 6 =* ***$14.40.***

NEW

OMPBD7P-LMM43, $14,
shown larger than actual size.



Components diagram for illuminated mushroom pushbuttons.

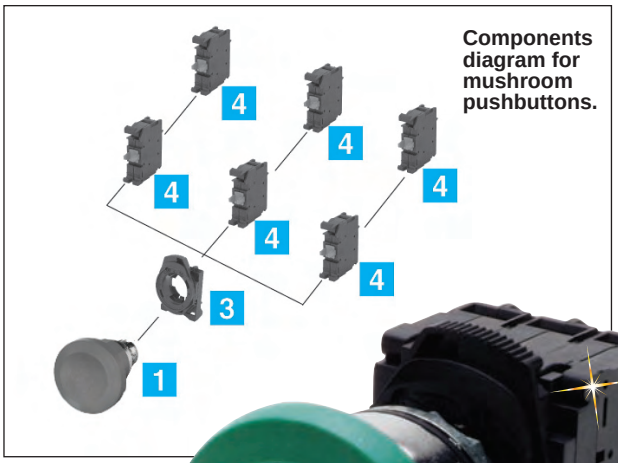
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

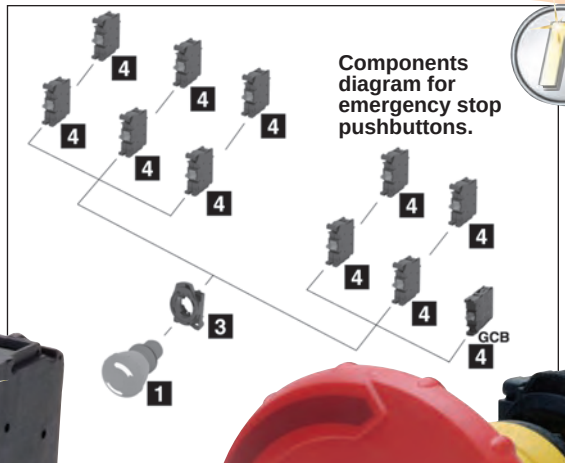
MODEL NO.	PRICE	DESCRIPTION
Standard Plastic Mushroom, Momentary, Illuminated Pushbuttons (Operators) 1		
OMPBD7P-LMM43	$14.00	Green-plastic operator with plastic bezel, momentary, 40 mm mushroom
OMPBD7P-LMM44	14.00	Red-plastic operator with plastic bezel, momentary, 40 mm mushroom
Tool-less Mounting Latch 3		
OMPBD7-ALM	$4.95	Tool-less mounting latch, metal
OMPBD7-ALP	3.85	Tool-less mounting latch, plastic
Power Module 4		
OMPBD7-DOC	$9.40	Power module incandescent
Lamps, Incandescent 5		
OMPBD7-N130	$4.40	Incandescent lamp 130 Vac/Vdc
OMPBD7-N157	4.40	Incandescent lamp 24 Vac/Vdc
Lamps, Neon 5		
OMPBD7-N240	$4.40	Neon lamp 240 Vac
Power Module, Integral LED 6		
OMPBD7-N3R	$15.00	Red power module, integral LED 24 Vac/Vdc
OMPBD7-N3G	15.00	Green power module, integral LED 24 Vac/Vdc
OMPBD7-N5R	15.00	Power module, integral LED 120 Vac
OMPBD7-N5G	15.00	Power module, integral LED 120 Vac
Contact Blocks 7		
OMPBD7-X01	$6.00	NC contact block contact block
OMPBD7-X10	6.00	NO contact block contact block
OMPBD7-X10E	6.00	NO early make contact block
OMPBD7-X01L	6.00	NC late break contact block
OMPBD7-X10V	12.00	NO low voltage contact block
OMPBD7-X01V	12.00	NC low votlage contact block

Comes with instruction sheet.
Ordering Example: OMPBD7P-LMM44,** red illuminated mushroom pushbutton, **OMPBD7-ALP,** mounting latch, **OMPBD7-DOC,** power module, **OMPBD7-N157,** incandescent lamp 24 Vac/Vdc, **OMPBD7-X10,** no contact block, $14 + 3.85 + 9.40 + 4.40 + 6 = **$37.65.

Pushbuttons product line continues to expand, visit omegamation.com for new details!



Components diagram for mushroom pushbuttons.



Components diagram for emergency stop pushbuttons.

NEW

OMPBD7P-MM43, $12.25, shown smaller than actual size.

OMPBD7P-MT64, $16, shown larger than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
Standard Plastic Mushroom, Momentary, Non-Illuminated Pushbuttons (Operators) 1		
OMPBD7P-MM43	**$12.25**	Green-plastic operator with plastic bezel, momentary, 40 mm mushroom
OMPBD7P-MM44	**12.25**	Red-plastic operator with plastic bezel, momentary, 40 mm mushroom
Tool-less Mounting Latch 3		
OMPBD7-ALM	**$4.95**	Tool-less mounting latch, metal
OMPBD7-ALP	**3.85**	Tool-less mounting latch, plastic
Contact Blocks 4		**Note: up to 6 contact blocks can be attached**
OMPBD7-X01	**$6.00**	NC contact block contact block
OMPBD7-X10	**6.00**	NO contact block contact block
OMPBD7-X10E	**6.00**	NO early make contact block
OMPBD7-X01L	**6.00**	NC late break contact block
OMPBD7-X10V	**12.00**	NO low voltage contact block
OMPBD7-X01V	**12.00**	NC low voltage contact block
Emergency Stop Operators, Twist-to-release (Trigger Action), Non-keyed (Operators) 1		
OMPBD7P-MT34	**$13.00**	Plastic operator with plastic bezel 30 mm red twist-to-release
OMPBD7P-MT44	**14.00**	Plastic operator with plastic bezel 40 mm red twist-to-release
OMPBD7P-MT64	**16.00**	Plastic operator with plastic bezel 60 mm red twist-to-release
Tool-less Mounting Latch 3		
OMPBD7-ALM	**$4.95**	Tool-less mounting latch, metal
OMPBD7-ALP	**3.85**	Tool-less mounting latch, plastic
Contact Blocks 4		**Note: up to 6 contact blocks can be attached**
OMPBD7-X01	**$6.00**	NC contact block contact block
OMPBD7-X10	**6.00**	NO contact block contact block
OMPBD7-X10E	**6.00**	NO early make contact block
OMPBD7-X01L	**6.00**	NC late break contact block
OMPBD7-X10V	**12.00**	NO low voltage contact block
OMPBD7-X01V	**12.00**	NC low votlage contact block
OMPBD7-X01S	**15.00**	GCB, guardian block

Comes with instruction sheet.
Ordering Example: OMPBD7P-MT44,** 40 mm operator, **OMPBD7-ALP,** mounting latch, **OMPBD7-X10,** no contact block, $14 + 3.85 + 6 = **$23.85.

NEW

SIGNAL50 WARNING TOWER LIGHTS FROM J. AUER

Basic Systems Start As Low As $68

1 YEAR WARRANTY

Visit omegamation.com for our complete line of warning lights

SIGNAL50 warning tower lights from the J. Auer company are the perfect compliment to any industrial control system. High grade, heavy duty and comprehensive, this 50 mm space saving line is also flexible and extremely easy to assemble and install.

Best of Class

In comparing SIGNAL50 warning tower lights to competitive products from manufacturers including Patlite, IDEC, Federal Signal and Werma, the SIGNAL50 line offers more features, approvals and options than any of these major stack light manufacturers.

Rugged Construction for Industrial Applications

Heavy duty industrial polycarbonate is used to construct all light modules and bases for the SIGNAL50 line. A stainless steel, pole-mount base, set on zinc die-cast metal foot is also available. The entire line meets UL Type 4/4X/13 and IP65 guidelines for use indoors or out. No other manufacturer of competitive product offers this extensive range of environmental approvals.

Over 100 Combinations of Lenses, Voltages and Illumination Types

Variety and interchangeability are standard with the SIGNAL50 line. Six lens colors are available (green, red, amber, blue, yellow and clear), more than any other major manufacturer. Light modules are offered in four different voltages including 12 and 24 Vac/Vdc, 120 and 240 Vac. Illumination types include incandescent, LED and strobe. A special flashing LED is also available.

Assembling a Stacklight System

1. **Select a Base Unit**
   A variety of base units are available. Bases include a mounting foot, extension tube and pole cap.
2. **Select Up to Five Light Modules**
   Light modules are available in a variety of colors in either steady, steady flashing or Xenon strobe configuration. Incandescent or LED light sources are available. The incandescent lights are lower cost and brighter than the LEDs, however, the LEDs have a greater bulb life. You may use up to 5 light modules or 4 light modules and one single circuit or 3 light modules and one dual circuit sound module.
3. **Select Incandescent or LED Lamp Bulbs**
   Please match the LED color to the light module color. Also note the Xenon strobe modules include bulbs.
4. **Optional Sound Module**
   The single circuit bi-tonal sound module may be used with up to 4 light modules. The dual circuit sound module may be used with up to 3 light modules.
5. **Choose an Optional Junction Box**
   The bases mount on top of the junction box to facilitate circuit wiring.

OMSL790542900
plastic foot, $43,
shown smaller than
actual size.

OMSL790552900
zinc foot, $95,
shown smaller
than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

HOUSING COLOR	LENGTH	PLASTIC FOOT AND CAP WITH ALUMINUM POLE MODEL NO.	PRICE	ZINC DIE-CAST FOOT AND CAP WITH STAINLESS STEEL POLE MODEL NO.	PRICE
Gray	5 cm	OMSL790141900	$42	OMSL790151900	$93
	10 cm	OMSL790142900	43	OMSL790152900	95
	25 cm	OMSL790143900	46	OMSL790153900	109
	40 cm	OMSL790144900	50	OMSL790154900	120
	50 cm	OMSL790145900	58	OMSL790155900	135
	60 cm	OMSL790146900	60	OMSL790156900	140
	80 cm	OMSL790147900	67	OMSL790157900	165
Black	5 cm	OMSL790541900	$42	OMSL790551900	$93
	10 cm	OMSL790542900	43	OMSL790552900	95
	25 cm	OMSL790543900	46	OMSL790553900	109
	40 cm	OMSL790544900	50	OMSL790554900	120
	50 cm	OMSL790545900	58	OMSL790555900	135
	60 cm	OMSL790546900	60	OMSL790556900	140
	80 cm	OMSL790547900	67	OMSL790557900	165

LIGHT MODULES

Steady Light Modules

Warning/indicator lights are used to warn the operator or to indicate that a defined action shall be initiated.

Starts at $23

Flashing Light Modules

Flashing signals are used for additional differentiation or as additional information and for additionally emphasize something particular.

COLOR	MEANING/EXPLANATION	ACTION OF OPERATOR
Red	Emergency dangerous situation	Immediate action for reacting to a dangerous situation
Amber/ Yellow	Abnormal situation up-coming critical situation	Monitor and/or action
Green	Normal situation	Optional
Blue	Indication of situation requiring a defined action by the operator	Conclusive action
White	Neutral—no particular meaning for other situation to be used if doubts exist when to use red, yellow, green or blue	Monitor

NEW

Flashing Signals are Particularly Used:

- Causing Attention
- Prompting Immediate Action
- Indicating a Difference Between Actual Condition
- Indicating a Process Change (Flashing While Changing Over)

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DESCRIPTION	LENS COLOR	VOLTAGE	MODEL NO.	PRICE
Steady[1,2]	Amber	Universal voltage module. Accepts 12V...230V incandescent, LED or flashing LED (bulb not included)	OMSL750001900	$23
	Red		OMSL750002900	23
	Clear		OMSL750004900	23
	Blue		OMSL750005900	23
	Green		OMSL750006900	23
	Yellow		OMSL750007900	23
Flashing[1,2,3]	Amber	12 to 24 Vac/Vdc	OMSL760001405	$45
		120 Vac	OMSL760001310	45
		240 Vac	OMSL760001313	45
	Red	12 to 24 Vac/Vdc	OMSL760002405	45
		120 Vac	OMSL760002310	45
		240 Vac	OMSL760000313	45
	Clear	12 to 24 Vac/Vdc	OMSL760004405	45
		120 Vac	OMSL760004310	45
		240 Vac	OMSL760004313	45
	Blue	12 to 24 Vac/Vdc	OMSL760005405	45
		120 Vac	OMSL760005310	45
		240 Vac	OMSL760005313	45
	Green	12 to 24 Vac/Vdc	OMSL760006405	45
		120 Vac	OMSL760006310	45
		240 Vac	OMSL760006313	45
	Yellow	12 to 24 Vac/Vdc	OMSL760007405	45
		120 Vac	OMSL760007310	45
		240 Vac	OMSL760007313	45
Strobe (Includes xenon bulbs)	Amber	12 to 24 Vac/Vdc	OMSL770001405	$99
		120 Vac	OMSL770001310	99
		240 Vac	OMSL770001313	99
	Red	12 to 24 Vac/Vdc	OMSL770002405	99
		120 Vac	OMSL770002310	99
		240 Vac	OMSL770002313	99
	Clear	12 to 24 Vac/Vdc	OMSL770004405	99
		120 Vac	OMSL770004310	99
		240 Vac	OMSL770004313	99
	Blue	12 to 24 Vac/Vdc	OMSL770005405	99
		120 Vac	OMSL770005310	99
		240 Vac	OMSL770005313	99
	Green	12 to 24 Vac/Vdc	OMSL770006405	99
		120 Vac	OMSL770006310	99
		240 Vac	OMSL770006313	99
	Yellow	12 to 24 Vac/Vdc	OMSL770007405	99
		120 Vac	OMSL770007310	99
		240 Vac	OMSL770007313	99

[1] *Light bulb not included. Order bulb separately.*
[2] *If using LED bulbs, match the lens color of the light module to the emitting color of the LED bulb.*
[3] *The flashing module accepts incandescent or LED steady bulbs only. The circuitry within the flashing module allows the bulb to flash ON and OFF continuously when powered.*

INCANDESCENT BULBS

NEW

All Models $3

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DESCRIPTION	FUNCTION	COLOR	VOLTAGE	MODEL NO.	PRICE
Incandescent Lamp	Steady	Clear	12 Vac/Vdc	OMSL890010904	$3
			24 Vac/Vdc	OMSL890010905	3
			120 Vac	OMSL890010910	3
			240 Vac	OMSL890010913	3

LED BULBS

Starts at $58

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DESCRIPTION	FUNCTION	COLOR	MODEL NO.	PRICE
Steady LED Lamp (for use with steady module and flashing[1]	Steady	Amber	OMSL893001(*)	$58
		Red	OMSL893002(*)	58
		Clear	OMSL893004(*)	58
		Blue	OMSL893005(*)	58
		Green	OMSL893006(*)	58
		Yellow	OMSL893007(*)	58
Steady Flashing LED Lamp (for use with steady module only)[1]	Flashing	Amber	OMSL893011(*)	$95
		Red	OMSL893012(*)	95
		Clear	OMSL893014(*)	95
		Blue	OMSL893015(*)	95
		Green	OMSL893016(*)	95
		Yellow	OMSL893017(*)	95

[1] *Always match the emitting color of the LED bulb to the lens color of the light module.*
(*) *Specify operating voltage: Insert* ***"404"*** *for 12 Vac/Vdc,* ***"405"*** *for 24 Vac/Vdc,* ***"310"*** *for 120 Vac or* ***"313"*** *for 240 Vac.*
Example: OMSL893001310 is an amber steady LED lamp for 120 Vac.

NEW

SOUND MODULES

OMSL781500310, $67, shown smaller than actual size.

Starts at $67

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DESCRIPTION	HOUSING COLOR	VOLTAGE	MODEL NO.	PRICE
Single Circuit Sound Module—Select either single tone or pulsing via internal DIP-switch. Low or high volume is also selectable.[1]	Gray	12 Vac/Vdc	OMSL781100404	$67
		24 Vac/Vdc	OMSL781100405	67
		120 Vac	OMSL781100310	67
		240 Vac	OMSL781100313	67
	Black	12 Vac/Vdc	OMSL781500404	67
		24 Vac/Vdc	OMSL781500405	67
		120 Vac	OMSL781500310	67
		240 Vac	OMSL781500313	67
Dual Circuit Sound Module—Used in applications where two types or audible alert are required to indicate different levels of machine status. Single tone is activated by one circuit and pulsing tone by the second circuit. Low or high volume is selectable by internal DIP-switch.[1,2]	Gray	12 Vac/Vdc	OMSL782100404	$85
		24 Vac/Vdc	OMSL782100405	85
		120 Vac	OMSL782100310	85
		240 Vac	OMSL782100313	85
	Black	12 Vac/Vdc	OMSL782500404	85
		24 Vac/Vdc	OMSL782500405	85
		120 Vac	OMSL782500310	85
		240 Vac	OMSL782500313	85

[1] *Sound modules must be installed as the last component (top level) of the tower light assembly.*
[2] *Tower light assemblies containing dual circuit sound modules may contain a maximum of four modules, consisting of three Light Modules and the Sound Module.*

JUNCTION BOXES FOR USE WITH POLE MOUNT BASES ONLY

Starts at $34

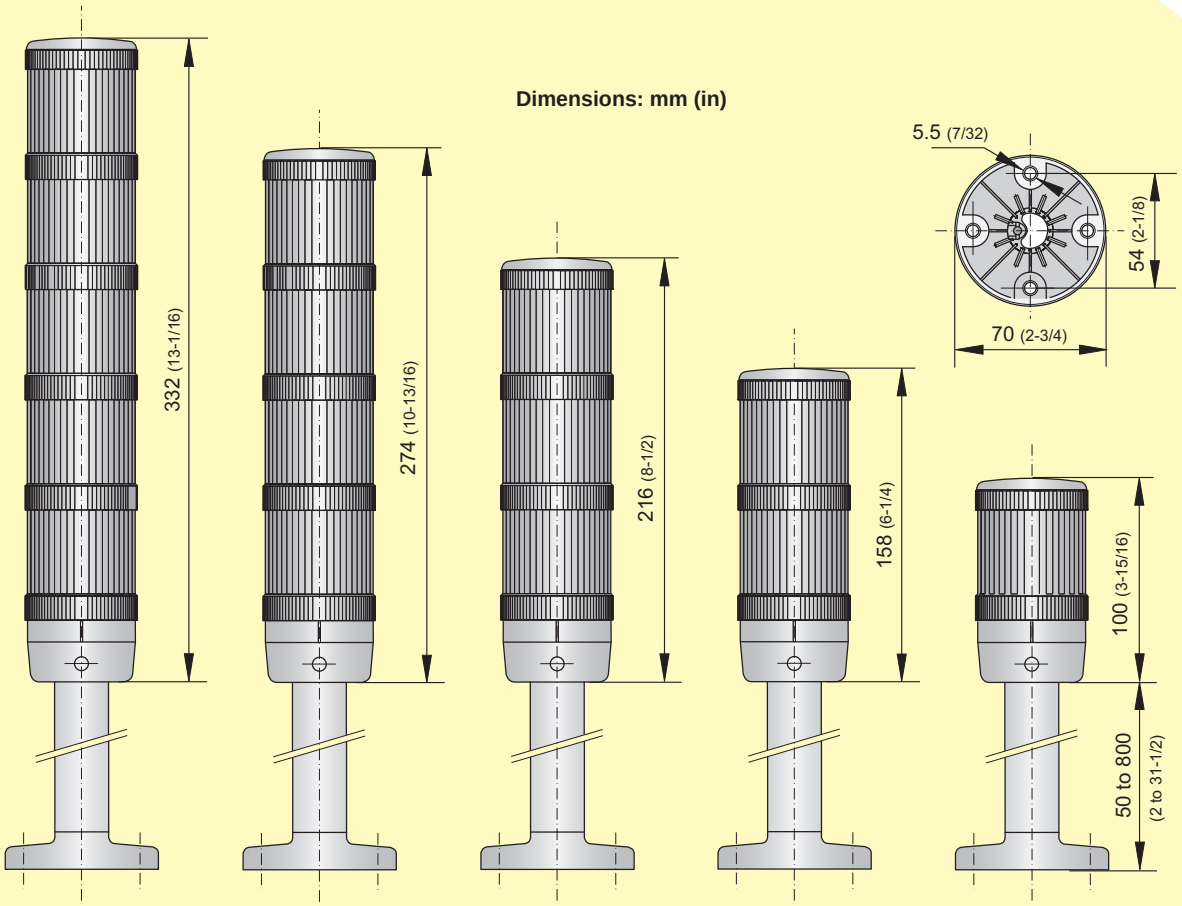
OMSL841102900, $34, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

DESCRIPTION	HOUSING COLOR	THREADING	MODEL NO.	PRICE
Horizontal Surface Mounting	Gray	½ NPT	OMSL841102900	$34
	Black	½ NPT	OMSL841502900	34
Horizontal Mounting with Magnetic Base	Gray	½ NPT	OMSL841122900	$96
	Black	½ NPT	OMSL841522900	96
Vertical Surface Mounting	Gray	½ NPT	OMSL841112900	$48
	Black	½ NPT	OMSL841512900	48

Pushbutton product line continues to expand, visit omegamation.com for new details!



To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION	FOR USE WITH
OMSL700000900	**$4**	Locking screws (5), used top light and sound modules from separating	All modules
OMSL698803002	**4**	Replacement cap, gray	All modules
OMSL698803003	**4**	Replacement cap, black	All modules
OMSL 698800002	**4**	Replacement gaskets and o-rings (5 pieces per bag)	Pole mount base (gasket)
OMSL 698800003	**4**	Replacement gaskets and o-rings (5 pieces per bag)	Modules, bases and caps (o-rings)
WTL-BULBPL	**4**	Incandescent bulb puller	Steady and flashing modules using incandescent bulbs

Ordering Example

WARNING TOWER LIGHT ASSEMBLY WITH 3 LIGHT MODULES		
Quantity 1	**OMSL790542900,** pole base with black plastic base and cap and aluminum pole	**$43**
Quantity 1	**OMSL750006900,** green steady light module	**23**
Quantity 1	**OMSL750001900,** amber steady light module	**23**
Quantity 1	**OMSL750002900,** red steady light module	**23**
Quantity 3	**OMSL890010910,** 120 Vac steady incandescent lamps	**$3 x 3 = 9**
Total		**$121**

NEW

THERMOCOUPLE-TO-WIRELESS CONNECTOR/ CONVERTER THE SMART CONNECTOR™

RTD Models Coming Soon!

UWTC Series Starts at $125

1 YEAR WARRANTY MADE IN USA EMC SERVICES

PATENTED
Covered by U.S. and International patents and pending applications.

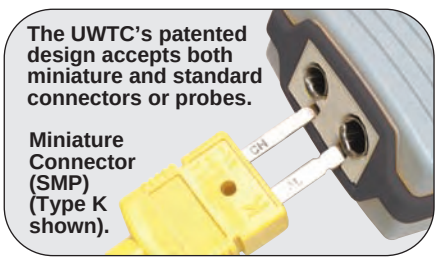
- User Configurable For Type J, K, T, E, R, S, B, C, N Thermocouple Input
- Free Software Converts Your PC Into a Multi-Channel Chart Recorder or Data Logger
- Built-In Cold Junction Compensation and Linearization
- Patented Design Accepts Both Miniature and Standard Size Probes and Connectors
- One Receiver Works with Multiple Wireless Remote Connectors
- Low Power Operation and Sleep Mode For Long Battery Life
- Each Wireless Connector Transmits Thermocouple Temperature, Ambient Temperature, Signal Strength and Battery Status in Real Time
- Interfaces with Model UWTC-REC1 For Multi-Channel PC Chart Recording and Data Logging or Model UWTC-REC2 (Single Channel Industrial Transceiver with Analog Output and Alarm)

Each Connector Includes

- One 3.6 V Lithium Battery
- Programming Software
- Measurement and Logging Software
- Mounting Bracket
- User Manual

Omega's new Wireless Thermocouple Connector Series features stand-alone, compact, battery powered thermocouple connectors that transmit their readings back to a host receiver up to 90 m (300') away.

Each unit can be programmed in the field to work as a type J, K, T, E, R, S, B, C or N calibration connector. When activated the connector will transmit readings continuously at pre set time interval that was programmed by the user during the initial setup. Each unit measures and transmits: Thermocouple Input Reading, Connector Ambient Temperature, RF Signal Strength and Battery Condition to the host and is displayed on the PC screen in real time using the provided software. When used with host receiver model UWTC-REC1 data from up to 12 wireless thermocouple connectors can be received and displayed. Each unit includes free software that converts your PC into a strip chart recorder or data logger so readings can be saved and later printed or exported to a spread sheet file. When used with host Transceiver model UWTC-REC2 wireless data from one connector can be re-transmitted out of the receiver by a wired connection as a analog voltage, current or thermocouple signal to interface with a controller, PLC or data acquisition board.



Thermocouple Included!
Each connector includes a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy. **Order a Spare!**
Model No. SC-GG-K-30-36, $15.

Wire connection product line continues to expand, visit omegamation.com for new details!

WIRELESS TC CONNECTOR AND RECEIVER COMPLETE WIRELESS THERMOCOUPLE SYSTEM

NEW

Free Strip Chart and Data Logging PC Software!

Monitor Up To 12 Different Wireless Thermocouple Connectors With One Receiver!

PRELIMINARY SPECIFICATIONS

THERMOCOUPLE (TC) INPUT

Software Selectable: J, K, T, E, R, S, B, C or N

Thermocouple Measurement Range:
- **J:** -210 to 760°C
- **K:** -270 to 1370°C
- **T:** -270 to 400°C
- **E:** -270 to 980°C
- **R:** -50 to 1760°C
- **S:** -50 to 1760°C
- **B:** 500 to 1820°C
- **C:** -18 to 2310°C
- **N:** -270 to 1300°C

TC Measurement Accuracy:
- **Type J, K, T, E, N:** ±0.5°C of Reading
- **Type R, S, B, C:** ±2.0°C of Reading

TC Measurement Resolution:
- **Type J, K, T, E, N:** 0.1°C
- **Type R, S, B, C:** 0.5°C

Cold Junction Compensation (Automatic): -10 to 70°C

Thermocouple Connection: Patented universal female accepts both standard male (OSTW Series) or miniature male (SMPW Series) mating connector

Operating Environment: -10 to 70°C

Computer Interface: USB (one interface cable included with receiver)

Transmit Sample Rate: Programmable from 1 sample/minute to 1 sample/every 5 seconds

Radio Frequency (RF) Transceiver Carrier: ISM 2.4 GHz, direct sequence spread spectrum, license free worldwide (2.450 to 2.490 GHz -12 channels)

RF Output Power:
- **UWTC-1:** 0dBm (1 mW)
- **UWTC-2:** 2dBm (10 mW)

Range of RF Link:
- **UWTC-1:** Up to 60 m (200') outdoor line of sight. Up to 20 m (65') indoor/urban
- **UWTC-2:** Up to 120 m (400') outdoor line of sight. Up to 40 m (130') indoor/urban

RF Data Packet Standard: IEEE 802.15.4, open communication architecture

Software (Included Free): Requires Windows 98, ME, 2000, XP, or Vista operating system

Connector Internal Battery:
- **Model UWTC-1:** One Standard 3.6 V lithium, 2.4 Ah capacity (AA) Omega No. UWTC-BATT (included)
- **Model UWTC-2:** One High Pulse 3.6 V lithium, 1.2 Ah capacity (AA) Omega No. UWTC-BATT-HP (included)

Battery Life (Typical):
- **Model UWTC-1:** (1 year) 1 sample/minute reading rate @ 25°C
- **Model UWTC-2:** (6 Months) 1 sample/minute reading rate @ 25°C

Data Transmitted to Host: Thermocouple Reading, Connector Ambient Reading, RF Transmit Strength and Battery Condition

Dimensions: 100 L x 50 W x 25 mm H (without antenna)

Weight:
- **UWTC-1, UWTC-2:** 70 grams UWTC-REC1, UWTC-REC2,
- **UWTC-REC2-D:** 206 grams

Case:
- **UWTC-1, UWTC-2:** ABS plastic UWTC-REC1, UWTC-REC2,
- **UWTC-REC2-D:** Painted Steel

UWTC-REC1, 12-channel receiver/host, $225, shown smaller than actual size.

UWTC-REC2-D, 1-channel transceiver/host with analog output, alarm and LCD, $265, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

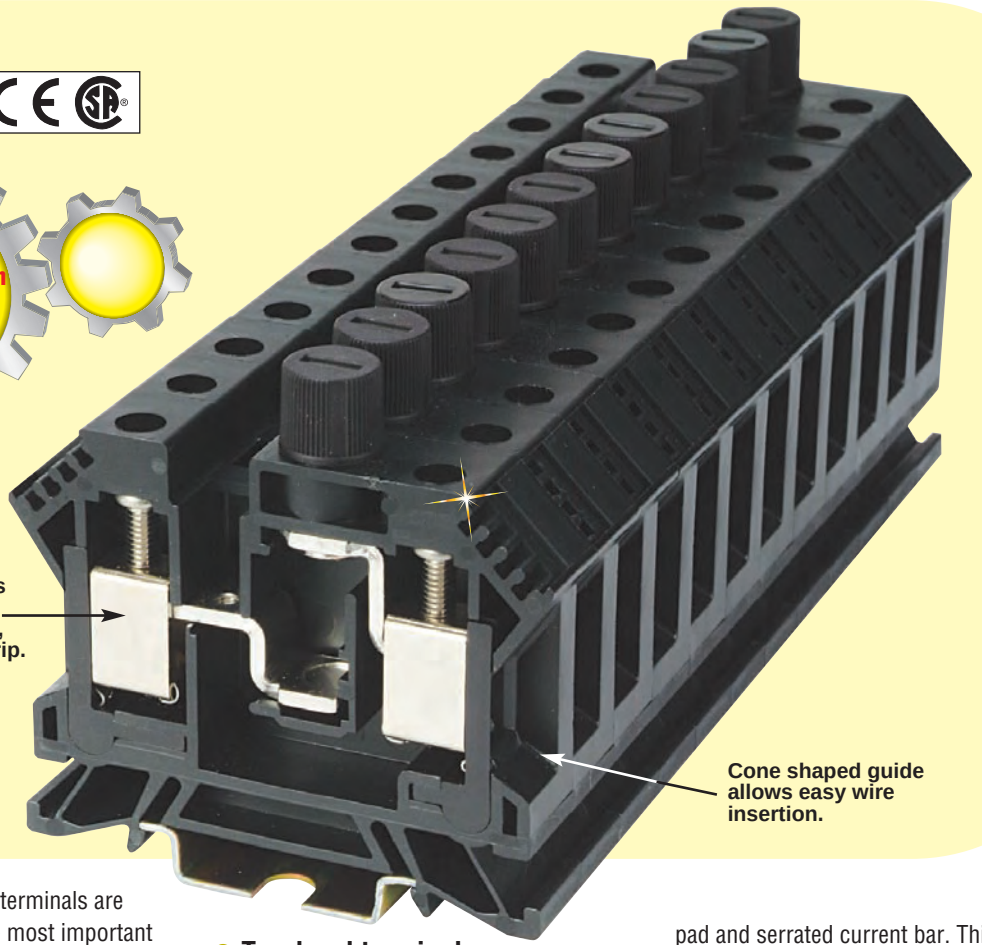
MODEL NO.	PRICE	DESCRIPTION
UWTC-1	**$125**	Wireless thermocouple connector (standard distance range)
UWTC-2	**135**	Wireless thermocouple connector (extended distance range)
UWTC-REC1	**225**	12-channel receiver/host (USB powered)
UWTC-REC2	**235**	1-channel transceiver with analog output
UWTC-REC2-D	**265**	1-channel transceiver with analog output and LCD display
UWTC-ANT-LR	**10**	Optional high-performance antenna (standard antenna included)
UWTC-BATT	**12**	Replacement battery for model UWTC-1
UWTC-BATT-HP	**20**	Replacement battery for model UWTC-2
UWTC-CABLE	**5**	Spare programing cable (one provided with receivers)

Comes with one 3.6 V Lithium battery, programming software, measurement and logging software, mounting bracket, Type K beaded wire thermocouple, and user manual.

Ordering Examples: UWTC-1,** wireless thermocouple connector/transmitter, **UWTC-REC2,** 1-channel transceiver/host with analog output and alarm, and **OM-NOMAD-BATT,** spare battery, $125 + 235 + 12 = **$372.** Two **UWTC-1,** wireless thermocouple connector/transmitters, **UWTC-REC1,** 12-channel receiver/host, and two **OM-NOMAD-BATT,** spare batteries, $125 + 125 + 225 + 12 + 12 = **$499.

NEW INTRODUCTION TO DIN RAIL TERMINAL BLOCKS

Visit omegamation.com for our complete line of terminal blocks



Stainless steel screws and serrated current bars provide a strong, corrosion-resistant grip.

Cone shaped guide allows easy wire insertion.

Omega's new OMTBV7-W terminals are designed to meet the three most important criteria when selecting a terminal block line – ease of wiring, secure connections and durability. The line is also comprehensive, offering a wide array of terminal types for most circuits and functions, from control to low level power.

The Size You Need

OMTBV7-W feed-through terminals come in ten sizes and are rated to 600VAC (800V-IEC). They accommodate a full range of wire sizes from 30AWG to 3/0 AWG (0.5mm2 to 70mm2 wire cross section). Many "specialty" feed-through terminals are also available that provide multiple terminations or increase the density of connections. This reduces panel space and saves money.

Comprehensive Selection of Special Terminals

Aside from the broad selection of standard feed-through terminals, many special terminals are also part of the new OMTBV7-W line, including:

- **Two level terminals**
- **High Current terminals**
- **Ground terminals**
- **Dual connection terminals**
- **Diode and resistor terminals**
- **Plug-in style terminals**
- **Various isolating terminals**
- **Fuse terminals**
- **Sensor terminals**
- **Thermocouple terminals**
- **Proximity switch terminals**

Even the most varied circuit requirements can be supported by the broad selection offered with this line.

Super Reliable Connections

The most important aspect of a terminal block is to join wires in a reliable connection. With OMTBV7-W terminals, a cone shaped guide allows easy insertion of the wire into a nickel plated barrel. As tightening torque is applied to strong stainless steel screws, the wire is secured between a recessed contact pad and serrated current bar. This corrosion-resistant clamping mechanism provides excellent performance in the most demanding industrial conditions.

Superior Insulation and Protection Features

All metal parts are recessed, providing a touch-safe, dead front design for optimum safety. Terminal bodies are manufactured from Polyamide 6.6, known for its excellent thermal stability, impact resistance and resistance to electrical creepage. The insulating cases are rated up to 90°C (195°) for continuous operation. They also stay elastic down to -40°C (-40°F) without fracturing.

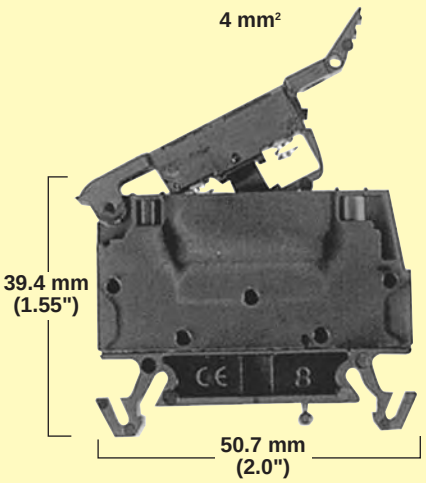
International Approvals

Omega's new OMTBV7-W terminal block line is UL recognized and CSA Certified. Many terminals have also been certified for use in hazardous locations. The line also carries the CE Mark for use in most international markets.

DIN RAIL FUSE TERMINAL BLOCKS

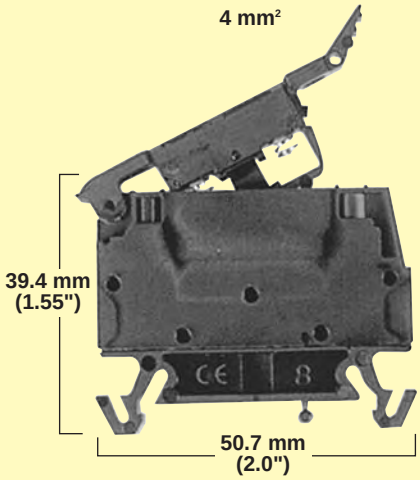
NEW

OMTBV7-WFB4-10



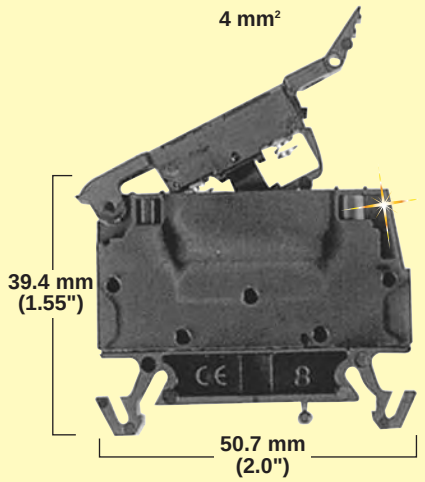
Single circuit fuse block

OMTBV7-WFB424-10



Single circuit fuse block with LED blown fuse indication

OMTBV7-WFB4250-10



Single circuit fuse block fuse block with neon blown fuse indication

Standard Fuse Blocks

To Order *(Specify Model Number)*

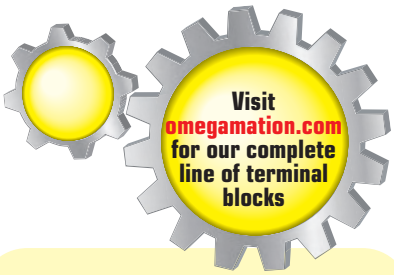
MOST POPULAR MODELS LISTED!

TERMINAL	MODEL NO.	PRICE	MODEL NO.	PRICE	MODEL NO.	PRICE
Gray (Pkg of 10)	**OMTBV7-WFB4-10**	**$41.90**	**OMTBV7-WFB424-10**	**$79.00**	**OMTBV7-WFB4250-10**	**$79.00**
ACCESSORIES						
End Barrier	Not Required		Not Required		Not Required	
End Anchors -50 (pkg of 50) -10 (pkg of 10) Screw Type—Normal Duty Screw Type—Heavy Duty	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **$26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **$26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **$26.00** **19.60**
Jumpers (Pkg of 10) Side Jumper (10-pole Insulated)	**OMTBV7-SJFB8-10-10**	**25.20**	**OMTBV7-SJFB8-10-10**	**25.20**	**OMTBV7-SJFB8-10-10**	**25.20**
DIN Rail, 35 mm, 2 meter length	**RAIL-35-2**	**15.00**	—	—	—	—
Marking Systems	**See omegamation.com**	—	—	—	—	—

SPECIFICATIONS									
Approvals									
Voltage Rating (AC/DC)	300 V	300 VC	500 V	300 V	300 V	500 V	300 V	300 V	500 V
Maximum Current	15 A	15 A	15 A	15 A	15 A	15 A	15 A	15 A	15 A
Wire Range (Rated Cross Section)	#22 to #12 AWG	#22 to #12 AWG	0.05 to 4 mm²	#22 to #12 AWG	#22 to #12 AWG	0.05 to 4 mm²	#22 to #12 AWG	#22 to #12 AWG	0.05 to 4 mm²
Indicator Type	Non-Indicating			LED			Neon		
Leakage Current	—			2m A @ 24 V			1m A @ 264 Vac		
Working Voltage	Per Fuse Rating			10 to 57 V AC/DC			85 to 264 Vac		
Fuse Size (not supplied)	5 x 20 mm			5 x 20 mm			5 x 20 mm		
Wire Strip Length	8 mm (0.31")			8 mm (0.31")			8 mm (0.31")		
Recommended Tightening Torque	0.6 Nm (5.0 to 5.6 lb-in.)			0.6 Nm (5.0 to 5.6 lb-in.)			0.6 Nm (5.0 to 5.6 lb-in.)		
Density	125/m (38 pcs./ft)			125/m (38 pcs./ft)			125/m (38 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		

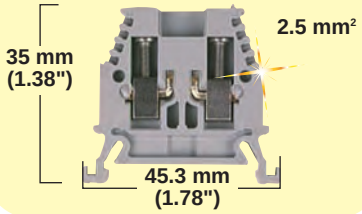
Comes with instruction sheet. Fuses not included.
Ordering Example: OMTBV7-WFB4-10,** single circuit fuse block, **OMTBV7-EAH35-10,** end anchors, and **OMTBV7-SJFB8-10-10,** jumpers, $41.90 + 19.60 + 25.20 = **$86.70.

NEW DIN RAIL TERMINAL BLOCKS

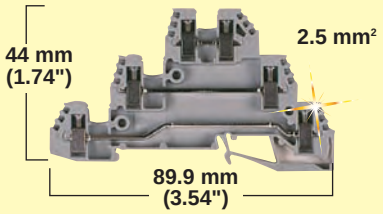


- Thermocouple and Sensor Terminal Blocks
- Type J, K, T, E Terminal Blocks
- Easy-to-Use Sensor Teminal Blocks
- Reliable Connections

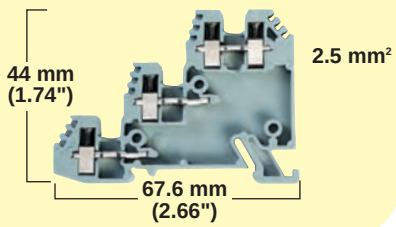
OMTBV7-WTC3E-10



OMTBV7-WTF3-25



OMTBV7-WTS3-25



Standard Thermocouple Blocks

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

BAR MATERIAL	MODEL NO.	PRICE PKG OF 10
Chrome/Constantan - Type E	**OMTBV7-WTC3E-10**	**$105.50**
Iron/Constantan - Type J	**OMTBV7-WTC3J-10**	**105.50**
Chromel/Alumel - Type K	**OMTBV7-WTC3K-10**	**105.50**
Copper/Constantan - Type T	**OMTBV7-WTC3T-10**	**105.50**
ACCESSORIES		
End Barrier (pkg of 50)	**OMTBV7-EB3-50**	**$26.00**
End Anchors-50 (pkg of 50) -10 (pkg of 10)		
Screw Type—Normal Duty	**OMTBV7-EA35-50**	**18.00**
Screw Type—Heavy Duty	**OMTBV7-EAH35-10**	**19.60**
SPECIFICATIONS		
Wire Range (Rated Cross Section)	0.2 to 2.5 mm (#28 to #14 AWG)	
Wire Strip Length	10 mm (0.35")	
Recommended Tightening Torque	0.6 Nm (5.0 to 5.6 lb-in.)	
Density	100/m (30 pcs./ft)	
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)	

Standard Sensor Blocks

To Order *(Specify Model Number)*

TERMINAL	MODEL NO.	PRICE	MODEL NO.	PRICE
Gray Pkg of 25	**OMTBV7-WTF3-25**	**$74.25**	**OMTBV7-WTS3-25**	**$70.25**
ACCESSORIES				
End Barrier Pkg of 25	**OMTBV7-EBTF3-25**	**$14.75**	**OMTBV7-EBTS3-25**	**$14.75**
End Anchors -50 (pkg of 50) -10 (pkg of 10) Screw Type — Normal Duty Screw Type — Heavy Duty	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**
Din Rail, 35 mm, 2 meter length	**RAIL-35-2**	**15.00**	—	—
Marking Systems	**See omegamation.com**	—	—	—
JUMPERS (PKG OF 5 OR 10)				
Side Jumper – 10-pole Insulated	**OMTBV7-SJT5-20-R-10**	**$31.50**	**OMTBV7-SJT5-20-R-10**	**$31.50**
Center Jumper – 50-pole	**OMTBV7-CJT5-50-5**	**63.00**	**OMTBV7-CJT5-50-5**	**63.00**
Center Jumper – 10-pole	**OMTBV7-CJT5-10-10**	**30.20**	**OMTBV7-CJT5-10-10**	**30.20**
Center Jumper Link	**OMTBV7-CJL5-10**	**4.10**	**OMTBV7-CJL5-10**	**4.10**

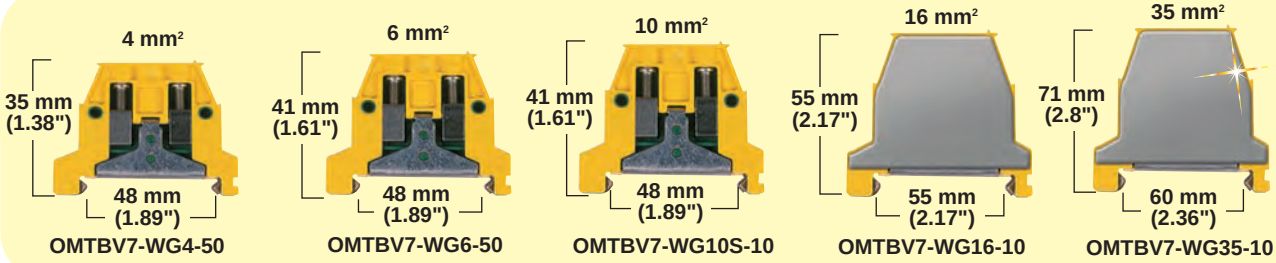
SPECIFICATIONS						
Approvals	CSA	UL	IEC	CSA	UL	IEC
Voltage Rating (AC/DC)	300V	300V	500V	300V	300V	500V
Maximum Current	10 A	10 A	24 A	10 A	10 A	24 A
Wire Range (Rated Cross Section)	#26 to #14 AWG	26 to #14 AWG	0.5 to 2.5 mm²	#26 to #14 AWG	#26 to #14 AWG	0.5 to 2.5 mm²
Wire Strip Length	8 mm (0.31")			8 mm (0.31")		
Recommended Tightening Torque	0.5 Nm (4.2 to 4.6 lb-in.)			0.5 Nm (4.2 to 4.6 lb-in.)		
Density	197/m (60 pcs./ft)			197/m (60 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		

Comes with instruction sheet.
Ordering Example: OMTBV7-WTC3K-10, *K thermocouple terminal blocks,* ***OMTBV7-EB3-50,*** *end barriers, and* ***OMTBV7-EAH35-10,*** *end anchors, $105.50 + 26.00 + 19.60 =* ***$151.10.***

Wire connection product line continues to expand, visit omegamation.com for new details!

GROUNDING BLOCKS

NEW



Grounding Blocks

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TERMINAL	MODEL NO.	PRICE	MODEL NO.	PRICE
Gray/Yellow Pkg of 50	**OMTBV7-WG4-50**	**$135.00**	**OMTBV7-WG6-50**	**$143.00**
ACCESSORIES				
End Barrier Pkg of 50 or 10	**OMTBV7-EB3-Y-50**	**$29.50**	**OMTBV7-EB10-Y-50**	**$22.50**
End Anchors -50 (pkg of 50) -10 (pkg of 10) DIN Rail — Normal Duty DIN Rail — Heavy Duty	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**

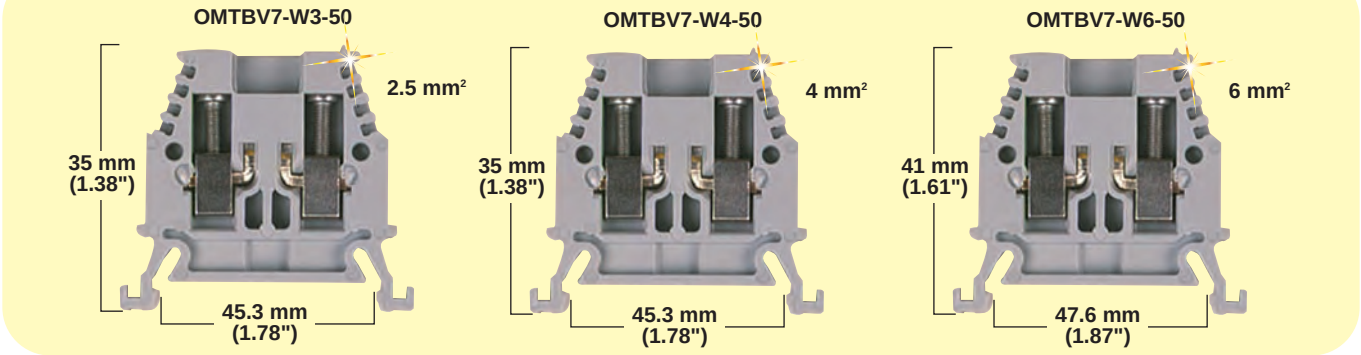
SPECIFICATIONS						
Approvals			IEC			IEC
Maximum Current	Grounding			Grounding		
Wire Range (Rated Cross Section)	#22 to #14 AWG	#22 to #12 AWG	4 mm²	#22 to #10 AWG	#22 to #10 AWG	6 mm²
Wire Strip Length	11 mm (0.43")			12 mm (0.47")		
Recommended Tightening Torque	0.7 Nm (5.6 to 6.8 lb/in.)			0.7 Nm (5.6 to 6.8 lb/in.)		
Density	166/m (50 pcs./ft)			142/m (43 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		

TERMINAL	MODEL NO.	PRICE	MODEL NO.	PRICE	MODEL NO.	PRICE
Gray/Yellow Pkg of 10	**OMTBV7-WG10S-10**	**$34.40**	**OMTBV7-WG16-10**	**$47.90**	**OMBV7-WG35-10**	**$63.90**
ACCESSORIES						
End Barrier Pkg of 50 or 10	**OMTBV7-EB10-Y-50**	**$22.50**	Not Required	—	Not Required	—
End Anchors -50 (pkg of 50) -10 (pkg of 10) DIN Rail — Normal Duty DIN Rail — Heavy Duty	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**

SPECIFICATIONS									
Approvals			IEC			IEC			IEC
Maximum Current	Grounding			Grounding			Grounding		
Wire Range (Rated Cross Section)	#22 to #8 AWG	#22 to #8 AWG	10 mm²	#10 to #4 AWG	#10 to #4AWG	16 mm²	#6 to #1/0 AWG	#6 to #1/0 AWG	35 mm²
Wire Strip Length	11 mm (0.43")			18 mm (0.70")			21 mm (0.83")		
Recommended Tightening Torque	0.8 Nm (7.1 to 6.8 lb-in.)			2.5 Nm (22.1lb-in.)			5.0 Nm (44.3 lb-in.)		
Density	125/m (38 pcs./ft)			76/m (23 pcs./ft)			55/m (16 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		

Comes with instruction sheet.
Ordering Example: OMTBV7-WG16-10,** grounding block and **OMTBV7-EAH35-10,** end anchors, $47.90 + 19.60 = **$67.50.

NEW DIN RAIL TERMINAL BLOCKS



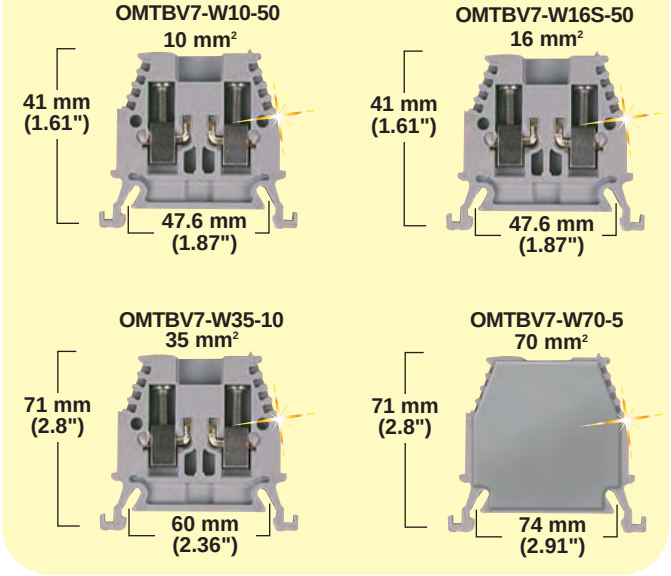
Standard Feed-Through Blocks

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

TERMINAL PKG OF 50	MODEL NO.	PRICE	MODEL NO.	PRICE	MODEL NO.	PRICE
Gray	OMTBV7-W3-50	$46.00	OMTBV7-W4-50	$46.00	OMTBV7-W6-50	$49
Red	OMTBV7-W3-RE-50	48.50	OMTBV7-W4-RE-50	48.50	OMTBV7-W6-RE-50	52
Blue	OMTBV7-W3-B-50	48.50	OMTBV7-W4-B-50	48.50	OMTBV7-W6-B-50	51
Black	OMTBV7-W3-BL-50	48.50	OMTBV7-W4-BL-50	48.50	OMTBV7-W6-BL-50	52
Green	OMTBV7-W3-G-50	48.50	OMTBV7-W4-G-50	48.50	OMTBV7-W6-G-50	52
Yellow	OMTBV7-W3-Y-50	48.50	OMTBV7-W4-Y-50	48.50	OMTBV7-W6-Y-50	52
Orange	OMTBV7-W3-OR-50	48.50	OMTBV7-W4-OR-50	48.50	OMTBV7-W6-OR-50	52
White	OMTBV7-W3-W-50	48.50	OMTBV7-W4-W-50	48.50	OMTBV7-W6-W-50	51
Brown	OMTBV7-W3-BR-50	48.50	OMTBV7-W4-BR-50	48.50	OMTBV7-W6-BR-50	52
ACCESSORIES						
End barrier package of 50	OMTBV7-EB3-50	$26.00	OMTBV7-EB3-50	$26.00	OMTBV7-EB10-50	$22.50
End anchors -50 (pkg of 50) -10 (pkg of 10) DIN rail—normal duty DIN rail—neavy duty	 OMTBV7-EA35-50 OMTBV7-EAH35-10	 26.00 19.60	 OMTBV7-EA35-50 OMTBV7-EAH35-10	 26.00 19.60	 OMTBV7-EA35-50 OMTBV7-EAH35-10	 26.00 19.60
JUMPERS PKG OF 5 OR 10						
Side jumper, 10-pole insulated	OMTBV7-SJ5-10-10	$10.80	OMTBV7-SJ6-10-10	$13.30		
Center jumper, 50-pole	OMTBV7-CJ5-50-5	63.00	OMTBV7-CJ6-50-5	55.45		
Center jumper, 10-pole	OMTBV7-CJ5-10-10	30.20	OMTBV7-CJ6-10-10	28.10	OMTBV7-CJ7-10-10	$33.30
Center jumper, 3-pole	OMTBV7-CJ5-3-10	11.30	OMTBV7-CJ6-3-10	10.40	OMTBV7-CJ7-3-10	12.40
Center jumper, 2-pole	OMTBV7-CJ5-2-10	7.90	OMTBV7-CJ6-2-10	7.20	OMTBV7-CJ7-2-10	8.80
SPECIFICATIONS						

Approvals	CSA		IEC	CSA		IEC	CSA		IEC
Voltage Rating (AC/DC)	600V	600V	800V	600V	600V	800V	600V	600V	800V
Maximum Current	20 A	20 A	24 A	30 A	30 A	32 A	40 A	40 A	41 A
Wire Range (Rated Cross Section)	#22 to #14 AWG	#30 to #14 AWG	0.5 to 2.5 mm²	#22 to #10 AWG	#22 to #10 AWG	0.5 to 4 mm²	#22 to #10 AWG	#22 to #10 AWG	0.5 to 6 mm²
Wire Strip Length	10 mm (0.39")			10 mm (0.39")			12 mm (0.47")		
Recommended Tightening Torque	0.6 Nm (5.0 to 5.6 lb-in.)			0.6 Nm (5.0 to 5.6 lb-in.)			0.7 Nm (5.6 to 6.8 lb-in.)		
Density	200/m (61 pcs./ft)			166/m (50 pcs./ft)			142/m (43 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		



Standard Feed-Through Blocks

NEW

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

TERMINAL PKG OF 5	MODEL NO.	PRICE
Gray	**OMTBV7-W70-5**	**$65.80**
Blue	**OMTBV7-W70-B-5**	**65.95**
End barrier	Not Required	—
End anchors -50 (pkg of 50) -10 (pkg of 10) DIN rail—normal duty DIN rail—heavy duty	— **OMTBV7-EAH35-10**	— **19.60**

SPECIFICATIONS			
Approvals	SP		IEC
Voltage Rating (AC/DC)	600V	600V	750V
Maximum Current	310 A	200 A	175 A
Wire Range (Rated Cross Section)	#4... #3/0 AWG	#4... #3/0 AWG	4...70 mm²
Wire Strip Length	26 mm (1.02")		
Recommended Tightening Torque	15 Nm (132.8 lb-in.)		
Density	43/m (38 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)		

Standard Feed-Through Blocks

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

TERMINAL	MODEL NO.	PRICE Pkg of 50	MODEL NO.	PRICE Pkg of 50	MODEL NO.	PRICE Pkg of 10
Gray	**OMTBV7-W10-50**	**$59.50**	**OMTBV7-W16S-50**	**$103.50**	**OMTBV7-W35-10**	**$45.00**
Red	**OMTBV7-W10-RE-50**	**62.00**	**OMTBV7-W16S-RE-50**	**108.00**		
Blue	**OMTBV7-W10-B-50**	**61.00**	**OMTBV7-W16S-B-50**	**108.00**	**OMTBV7-W35-B-10**	**47.50**
Black	**OMTBV7-W10-BL-50**	**62.00**	**OMTBV7-W16S-BL-50**	**108.00**		
Green	**OMTBV7-W10-G-50**	**61.00**	**OMTBV7-W16S-G-50**	**108.00**		
Yellow	**OMTBV7-W10-Y-50**	**62.00**	**OMTBV7-W16S-Y-50**	**108.00**		
Orange	**OMTBV7-W10-OR-50**	**62.00**	**OMTBV7-W16S-OR-50**	**108.00**		
White	**OMTBV7-W10-W-50**	**61.00**	**OMTBV7-W16S-W-50**	**108.00**		
Brown	**OMTBV7-W10-BR-50**	**62.00**	**OMTBV7-W16S-BR-50**	**108.00**		
ACCESSORIES						
End barrier pkg of 50	**OMTBV7-EB10-50**	**$22.50**	**OMTBV7-EB10-50**	**$22.50**	**OMTBV7-EB35-50**	**$34.00**
End anchors -50 (pkg of 50) -10 (pkg of 10) DIN rail—normal duty DIN rail—heavy duty	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**	 **OMTBV7-EA35-50** **OMTBV7-EAH35-10**	 **26.00** **19.60**
JUMPERS PKG OF 10						
Center jumper 3-pole 2-pole	 **OMTBV7-CJ14-3-10** **OMTBV7-CJ14-2-10**	 **$26.10** **22.50**	 **OMTBV7-CJS11-3-10** **OMTBV7-CJS11-2-10**	 **$22.50** **21.40**	 **OMTBV7-CJ14-3-10** **OMTBV7-CJ14-2-10**	 **$26.10** **22.50**

SPECIFICATIONS									
Approvals	SP		IEC	SP		IEC	SP		IEC
Voltage Rating (AC/DC)	600V	600V	800V	600V	600V	800V	600V	600V	750V
Maximum Current	50 A	50 A	57A	85A	85A	76A	140A	125A	138A
Wire Range (Rated Cross Section)	#22 to #8 AWG	#22 to #8 AWG	0.5 to 10 mm²	#14 to #4 AWG	#14 to #4 AWG	#2.5 to #16 AWG	#14...	2.5...35	
Wire Strip Length	13 mm (0.51")			13 mm (0.51")			17 mm (0.67")		
Recommended Tightening Torque	1.4 Nm (12.2 to 13.4 lb-in.)			2.1 Nm (18 to 20 lb-in.)			2.5 Nm (22.1 lb-in.)		
Density	125/m (38 pcs./ft)			90/m (27 pcs./ft)			71/m (21 pcs./ft)		
Insulation Temperature Range	-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)			-40 to 90°C (-40 to 195°F)		

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*

PROFESSOR BUTTS BUILDS HIMSELF A NEW COUNTRY HOME AND FORGETS TO PUT IN THE STAIRS. WHILE HE IS DROPPING INTO THE BASEMENT HE CONCEIVES AN IDEA TO KEEP YOUR GOLF OPPONENT FROM CHEATING.

AS OPPONENT (A) SWINGS CLUB AND MISSES BALL (B) HE FILLS AIR WITH SAND. OSTRICH (C) MISTAKES UPHEAVAL FOR SAND STORM AND BURIES HIS HEAD IN BOX (D), FRIGHTENING WORM (E) WHICH CRAWLS OUT AND ENTERS APPLE (F). ADDED WEIGHT OF APPLE CAUSES WATERING-CAN (G) TO TILT AND SPRAY PLANT (H) MAKING IT GROW AND PUSH AGAINST PADDLE (I). AS PADDLE RAISES, IT RELEASES HOOK (J) ALLOWING SPRING (K) TO FLY BACK, CAUSING SHOE (L) TO KICK YOU SHARPLY, INDICATING THAT YOUR OPPONENT HAS TAKEN A STROKE.

WHILE YOUR OPPONENT IS BUSY GETTING SAND OUT OF HIS EYES YOU WILL HAVE PLENTY OF TIME TO SET THE APPARATUS FOR HIS NEXT STROKE.

WITH THE NEW SKY-SCRAPERS RISING TO HUNDREDS OF STORIES, THE ELEVATOR TRIP BECOMES AN ENDURANCE CONTEST.

BOY, WAKE ME UP WHEN WE REACH THE 236TH FLOOR - I'VE GOT A DATE UP THERE THIS EVENING

SORRY, BUT WE DON'T REACH THERE TILL TOMORROW

THEY'LL HAVE TO PUT SLEEPERS IN THE ELEVATORS.

SAY, I ADVERTISED FOR AN OFFICE BOY!

BUT I WAS A BOY WHEN I STARTED UP IN THE ELEVATOR

HIS OFFICE WAS ON THE TOP FLOOR.

I'M GLAD I BROUGHT MY WINTER UNDERWEAR

THE WEATHER CHANGES AS ELEVATOR GOES UP A FEW HUNDRED FLOORS

GOOD-BYE, DEAR - I'LL BE TERRIBLY LONESOME WHILE YOU'RE GONE

DARLING, I'LL DROP YOU A POSTAL FROM THE 619TH FLOOR

A HEART-BREAKING SCENE AS THE ELEVATOR BOY STARTS TO THE TOP.

TELEPHONIES

WE HAVE LOVELY NEIGHBORS

THE ORIGINAL IDEA OF TRAFFIC LIGHTS WAS TO KEEP MOTORISTS FROM BUMPING INTO ONE ANOTHER - BUT NOW TRAFFIC SIGNALS HAVE BECOME A NATIONAL MANIA AND THEY ARE PUTTING THEM IN PLACES WHERE THERE IS NO TRAFFIC! THERE SEEMS TO BE A CAMPAIGN ON TO MAKE AUTOMOBILES STOP FOR NO OTHER REASON THAN TO SIMPLY MAKE THEM STOP.

THE RED LIGHT IS ON, DEAR, SO I GUESS WE'LL HAVE TO STOP - BUT THERE'S BEEN NO CROSS-TRAFFIC HERE SINCE THE LAST COVERED WAGON GALLOPED WEST AT THE TERRIFIC SPEED OF TEN MILES A DAY

2.58 MILES TO THE FIRST TREE

FOOLISH QUESTIONS NO. 77,832

OH, DO YOU RIDE HORSE-BACK?

NO, I FELL OUT OF A WINDOW AND LANDED HERE BY ACCIDENT

It would take over 500 pages to cover our vast array of wire, connectors, and probes. Visit omega.com to view over complete line.

G Thermocouple Connectors and Panel Systems

Connector Selection Guide G-3

Ultimate Standard Size Thermocouple Connectors G-5

Most Popular Standard Size Thermocouple Connectors G-7

Low Noise Miniature and Standard Size Thermocouple Connectors G-9

3-Prong Connectors and Accessories G-11

4-Prong Dual Circuit Thermocouple Connectors G-12

Miniature and Standard Connectors with Molded-In Ferrite Cores G-14

High Temperature Ceramic Connectors G-17

Ultimate Miniature Thermocouple Connectors G-21

Most Popular Miniature Thermocouple Connectors G-23

Wireless Thermocouple Connector G-36

Panel Jacks G-37

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Multiconductor Feedthroughs G-55

Universal Jack Panels G-64

2- and 3-Pole Switches G-67

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Connector Dimension Charts G-71

H Wire: Thermocouple, RTD, Thermistor, and Heater Hook-up

It would take over 500 pages to cover our vast array of wire, connectors, and probes. Visit omega.com to view over complete line.

Thermocouple Wire Reference Guides H-3

Uninsulated Fine Gage Thermocouple Wire H-11

Resistance Heating Wire H-17

Ceramic Sleeving and PFA Tubing H-21

Thermocouple Wire H-23

Insulated, Fine Gage Single Strand & Duplex Thermocouple Wire H-24

Extension Wire

Wire Overbraiding

Retractable Cables H-44

OMEGACLAD® Standard, Dual, Metric H-50

Super OMEGACLAD® XL H-54

OMEGACLAD® RTD MI Cable H-56

Heater Hook-up Wire H-60

MULTIPIN DESIGN THERMOCOUPLE CONNECTORS

MODEL MTC WITH 200°C (392°F) MAXIMUM SERVICE TEMPERATURE

MTC Series Starts at $41

For Five-Cavity Female Flanged Connector– Pins Sold Separately

MADE IN USA

- Thermocouple Alloy Pins
- Air and Moisture Resistant Connection
- Removable Crimp Contacts
- 20 to 24 AWG Stranded Wire
- Aluminum Shells
- Black Anodized Finish
- Threaded Coupling

Shown larger than actual size.

See omega.com for multipair extension cable.

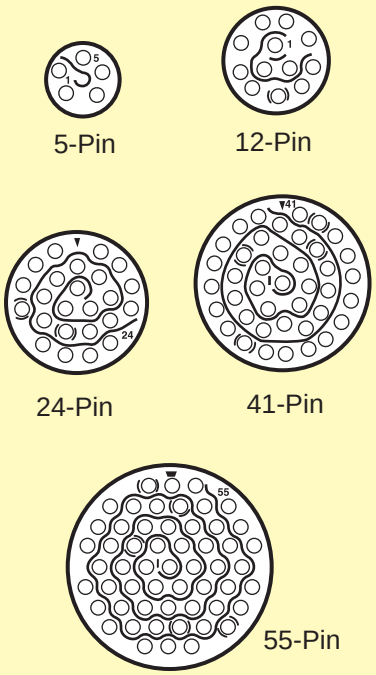
Shown with In-Line Cable Connector with Optional Backshell Cable Clamp

OMEGA® sturdy multipin connectors provide an efficient means of joining multiwire thermocouple cables. They can be used with multiple OMEGA® extension wire for rapid, convenient connections and for dismantling an apparatus without handling individual sensors.

When used with MTC Series pins, the connector design utilizes a combination of resilient and rigid dielectric insulators to eliminate internal air voids and prevent the passage of air and moisture into or through the connector. Connectors can withstand ambient temperatures to 200°C (392°F), contributing to an extended connector life.

Although MTC PINS do not carry a MIL. SPEC. NUMBER, they do meet the performance requirements of MIL-C-26500E and are intermateable with MIL-C-26500 connectors.

Recommended for Use With Stranded Wire



Contact cavities are identified with a spiral guide line indicating cavity sequence. The first and last cavities are numbered and every tenth cavity is bracketed.

Style FF

Flange mounted receptacle with threaded coupling. Uses sockets only.

Style FC

Styles MC and FC

In-line cable connectors with threaded couplings. Style MC uses pins; style FC uses sockets.

Style SHL

Multipin Connector Bodies*

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

NUMBER OF CAVITIES	MC MALE CORD	PRICE	FC FEMALE CORD	PRICE	FF FEMALE FLANGED	PRICE	BACKSHELL CABLE CLAMP**	PRICE
5	MTC-5-MC	$43	MTC-5-FC	$76	MTC-5-FF	$41	MTC-5-SHL	$48
12	MTC-12-MC	46	MTC-12-FC	62	MTC-12-FF	46	MTC-12-SHL	35
24	MTC-24-MC	53	MTC-24-FC	95	MTC-24-FF	60	MTC-24-SHL	38
41	MTC-41-MC	63	MTC-41-FC	110	MTC-41-FF	68	MTC-41-SHL	44
55	MTC-55-MC	75	MTC-55-FC	113	MTC-55-FF	77	MTC-55-SHL	48

Ordering Example: MTC-55-FC, *multipin connector body,* ***$113.***

** Contacts not included. Order from next page.*

*** Backshell cable clamps provide effective support for the cable at the male or female connector and prevent twisting and pulling.*

THERMOCOUPLE CONTACTS FOR MODEL MTC CONNECTORS

PRECISION CNC MACHINED

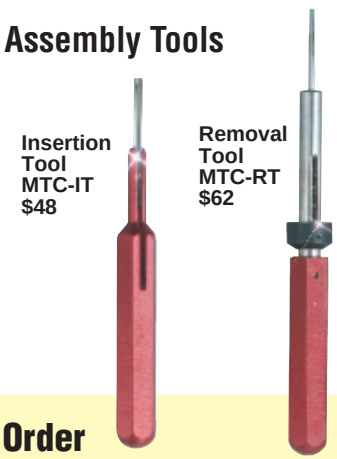
ANSI color code shown | To order IEC color code see omega.com

MADE IN USA

- Crimp-Type Attachment
- Contacts Are Color-Coded
- Accessories Available
- High Performance Design

OMEGA® push-in crimp style contacts are manufactured from thermocouple alloy materials and are generically color-coded for easy identification. Contacts are crimp-terminated outside the connector assembly and inserted into the appropriate cavity by means of an insertion tool. They can be readily removed from the connector assembly using a special removal tool. Sealing plugs are available to seal unused positions in lieu of pin or socket.

Assembly Tools

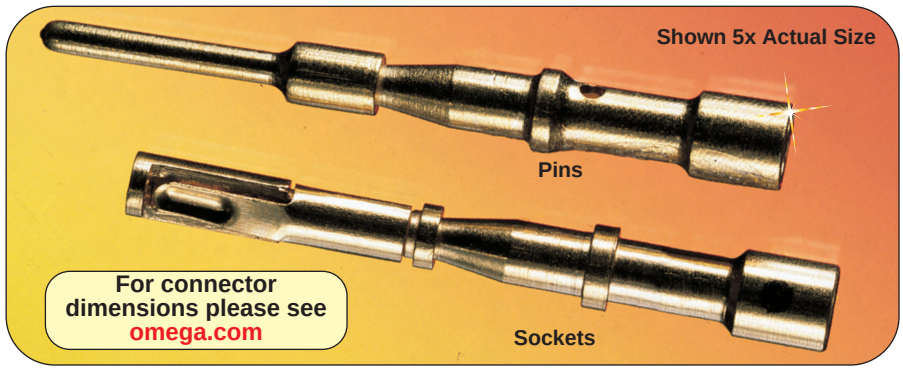


To Order

Specify Connector Body, Contacts and Backshell (See Note 1).
Example: Cord-to-Cord connectors for 6 type J (Iron-Constantan) thermocouple circuits (pairs).

Male Connector Assembly
1. Body: **MTC-12-MC**
2. Pins: (+) Pos. Alloy, **MTC-IR-P**, 6 ea.
   (–) Neg. Alloy, **MTC-CO-P**, 6 ea.
3. Backshell: **MTC-12-SHL**

Female Connector Assembly
1. Body: **MTC-12-FC**
2. Sockets:
   (+) Pos. Alloy, **MTC-IR-S**, 6 ea.
   (–) Neg. Alloy, **MTC-CO-S**, 6 ea.
3. Backshell: **MTC-12-SHL**



MATERIAL	THERMOCOUPLE TYPE (ANSI SYMBOL)
Iron/Constantan	J
CHROMEGA®/ALOMEGA®	K
Copper/Constantan	T
CHROMEGA®/Constantan	E
OMEGA-P®/OMEGA-N®	N

PIN AND SOCKET QUANTITY DISCOUNTS	
1–10 units	Net
11–24 units	10%
25–49 units	15%
50–99 units	20%
100 and up	25%

Thermocouple Alloy and Gold-Plated Copper Contacts for Multipin Connectors

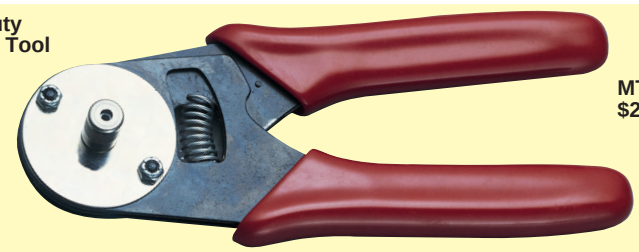
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

ALLOY TYPE	PINS (MALE)	CODING COLOR LETTER	PRICE EACH	SOCKETS (FEMALE)	CODING COLOR LETTER	PRICE EACH
Iron (+)	**MTC-IR-P**	BLK M	**$15**	**MTC-IR-S**	BLK M	**$25**
Constantan (–)	**MTC-CO-P**	YEL N	**25**	**MTC-CO-S**	YEL N	**25**
Copper (+)	**MTC-CU-P**	RED C	**20**	**MTC-CU-S**	RED C	**20**
CHROMEGA® (+)	**MTC-CH-P**	WHT P	**17**	**MTC-CH-S**	WHT P	**25**
ALOMEGA® (–)	**MTC-AL-P**	GRN R	**17**	**MTC-AL-S**	GRN R	**25**
OMEGA-P®(+)	**MTC-OP-P**	Orange OP	**20**	**MTC-OP-S**	Orange OP	**25**
OMEGA-N®(–)	**MTC-ON-P**	Blue ON	**20**	**MTC-ON-S**	Blue ON	**25**
*Gold-Plated (Uncompensated)	**MTC-AU-P**	Color Bands RED, YEL, BRN	**0.75**	**MTC-AU-S**	Color Bands RED, BLUE, BLK	**1.25**

*Sealing Plugs, Model **MTC-HP**, **$0.50** each.*
** For use with non-thermocouple wire in the same body.*
Grommets available. Consult Sales Department for price and delivery.

Heavy Duty Crimping Tool



MTC-CT $250

Easy-to-Use Ratchet Action! Specially designed MS standard crimping tool MUST be used to crimp wires properly to pins and sockets. Ratchet action ensures a complete crimp every time.

Important Notes

1. MS Standard Assembly Tools are required to crimp and assemble connectors properly. Order with first purchase.
2. Match pins and sockets to thermocouple alloys–Example: A 12-cavity connector carries 6 thermocouple circuits (pairs) requiring: 6 positive alloy pins or sockets and 6 negative alloy pins or sockets per body.
3. Order bodies in mating pairs. Style MC mates with both style FF and style FC.
4. Backshell cable clamps are recommended with each cord style connector.

THERMOCOUPLE CONTACTS FOR MODEL MTC CONNECTORS

ECONOMICAL DESIGN HPC SERIES

ANSI color code shown | To order IEC color code see omega.com

MADE IN USA

- Crimp-Type Attachment
- Contacts Are Color-Coded
- Accessories Available
- Hollow Pin Construction
- 20 to 24 AWG Stranded Wire

OMEGA® push-in crimp-style contacts are manufactured from thermocouple alloy materials and are color-coded for easy identification. Contacts are crimp-terminated outside the connector assembly and inserted into the appropriate cavity by means of an insertion tool. They can be readily removed from the connector assembly using a special removal tool. Sealing plugs are available to seal unused positions in lieu of pin or socket.

Important Notes

1. MS Standard Assembly Tools are required to crimp and assemble connectors properly. Order with first purchase.
2. Match pins and sockets to thermocouple alloys–Example: A 12-cavity connector carries 6 thermocouple circuits (pairs) requiring: 6 positive alloy pins or sockets and 6 negative alloy pins or sockets per body.
3. Order bodies in mating pairs. Style MC mates with both style FF and style FC.
4. Backshell cable clamps are recommended with each cord style connector.

To Order

Specify Connector Body, Contacts and Backshell (See Note 1).

Example: Cord-to-Cord connectors for 6 type J (Iron-Constantan) thermocouple circuits (pairs).

Male Connector Assembly
1. Body: **MTC-12-MC**
2. Pins:
   (+) Pos. Alloy, **HPC-IR-P**, 1 pkg. (6 required)
   (–) Neg. Alloy, **HPC-CO-P**, 1 pkg. (6 required)
3. Backshell: **MTC-12-SHL**

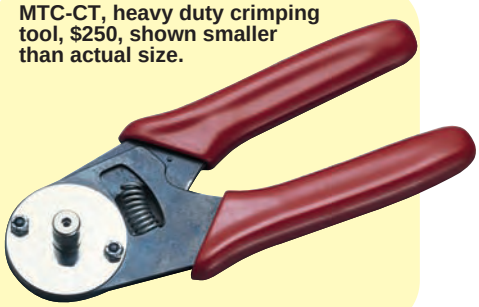
Female Connector Assembly
1. Body: **MTC-12-FC**
2. Sockets:
   (+) Pos. Alloy, **HPC-IR-S**, 1 pkg. (6 required)
   (–) Neg. Alloy, **HPC-CO-S**, 1 pkg. (6 required)
3. Backshell: **MTC-12-SHL**

Shown 2x Actual Size

Pins

Sockets

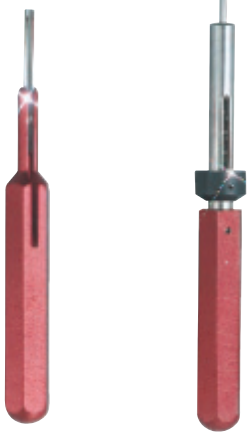
MATERIAL	THERMOCOUPLE TYPE (ANSI SYMBOL)
Iron/Constantan	J
CHROMEGA®/ALOMEGA®	K
Copper/Constantan	T
CHROMEGA®/Constantan	E



MTC-CT, heavy duty crimping tool, $250, shown smaller than actual size.

Ratchet Action Easy-to-Use! Specially designed MS standard crimping tool MUST be used to crimp wires to pins and sockets properly. Ratchet action ensures a complete crimp every time.

Assembly Tools



Insertion Tool MTC-IT $48

Removal Tool MTC-RT $62

Thermocouple Alloy and Gold-Plated Copper Contacts for Multipin Connectors

To Order *(Specify Model Number)* — ***MOST POPULAR MODELS HIGHLIGHTED!***

ALLOY TYPE	CODING COLOR	LETTER	PINS (MALE)	PRICE PKG OF 20	SOCKETS (FEMALE)	PRICE PKG OF 20
Iron (+)	BLK	M	HPC-IR-P	$60	HPC-IR-S	$100
Constantan (–)	YEL	N	HPC-CO-P	100	HPC-CO-S	100
Copper (+)	RED	C	HPC-CU-P	80	HPC-CU-S	80
CHROMEGA® (+)	WHT	P	HPC-CH-P	68	HPC-CH-S	100
ALOMEGA® (–)	GRN	R	HPC-AL-P	68	HPC-AL-S	100
*Gold-Plated (Uncompensated)	Color Bands†		HPC-AU-P	15	HPC-AU-S	20

*Sealing plugs, model no. **MTC-HP**, **$.50** each.*
** For use with non-thermocouple wire in same body.*
Grommets available. Consult Sales Department for price and delivery.
† Pins have red, yellow and brown color bars; sockets have red, blue and black color bars.

NEW SINGLE- AND THREE-PHASE DIN RAIL MOUNT SOLID STATE RELAYS

SSRDIN Series Starts at $53

1 YEAR WARRANTY

- **Ratings Up to 30 A (22.5 mm), 45 A (45 mm), or 25 A 3-Phase**
- **LED Input Status Indicator**
- **Integral Heat Sink Eliminates the Need for Complex Thermal Calculations**
- **DBC Substrate for Superior Thermal Performance**
- **Epoxy-Free Design Minimizes Internal Component Stress**
- **Standard Ratings Up to 30 A @ 600 Vac**
- **No External Transient Protection Required (Internal TVS)**
- **IP20 Touch-Safe Housing**
- **AC or DC Inputs**
- **4000 Vac Optical Isolation**
- **Zero-Voltage Switching**
- **Mounts on DIN Rail or Panel**

SSR3PH600DC25, $189.

SSRDIN600DC20, $60.

SSRDIN600DC35, $76.

All models shown smaller than actual size.

Designed for superior thermal performance in harsh industrial environments, OMEGA's new SSRDIN/SSR3PH relay is the most advanced DIN rail solid state relay in its range. The epoxy-free design eliminates stress on internal components, preventing damage to the encapsulant during load failure.

The vertical placement of the direct-bond substrate allows the SCR die to efficiently transfer heat to the heat sink and into ambient air. As a result, these relays can operate at a lower temperature than their competitors, which accounts for the higher I2T and surge-current ratings.

The SSRDIN's internal transient protection is fully repeatable, making MOVs or other external suppressors unnecessary. This feature allows the output to conduct load-current when a transient is detected across the output terminals, rather than forcing load-current through the protection circuit. Thus, no degradation of protection occurs.

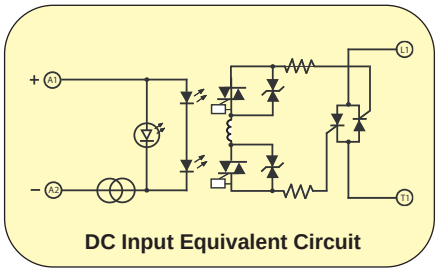
These relays are ideal for numerous commercial and industrial applications, including mercury relay replacement, professional food-service equipment (ovens, fryers, dispensing equipment, conveyors, etc.), sterilizers, temperature control systems, plastic extrusion/thermoforming machinery, HVAC and R, kilns, packaging equipment, sorting equipment, wave solder and reflow systems, lighting systems, pump controls, incubators, motor-switching, and UPS systems.

SPECIFICATIONS

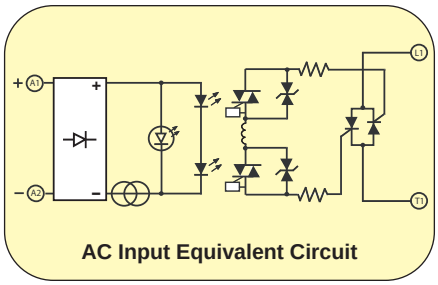
Operating Temperature:
-20 to 80ºC* (-4 to 176°F)
Storage Temperature:
-40 to 100 ºC (-40 to 212°F)
Input-to-Output Isolation: 4000 Vrms
Input/Output-to-Ground Isolation:
4000 Vrms
Input-to-Output Capacitance:
8 pF (typical)
Operating Frequency: 40 to 63 Hz
Housing Material:
UL 940VD (self-extinguishing)
Weight: 600 g (1.3 lb)
** For 108 to 280 Vac input.*

Relays and timers product line continues to expand, visit omegamation.com for new details!

SSRDIN280DC10, $53, shown smaller than actual size.



DC Input Equivalent Circuit



AC Input Equivalent Circuit

SSRDIN600DC35, $76, shown smaller than actual size.

22.5 mm DIN Rail SSR

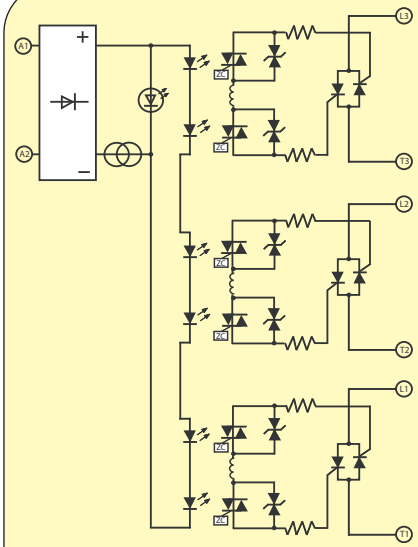
Output Specifications			
Voltage Range (Vrms)	24 to 240 Vac	48 to 600 Vac	600 Vac
Output Current	10	20	30
Peak Voltage (Vp, t = 1 min)	550	1100	1100
Off-State Leakage µArms (@ Max Line Voltage and T_a = 25ºC)	100	250	250
Minimum Current (mArms)	100	100	100
Maximum 1-Cycle Surge Current (Ap, T_a = 25ºC)	100	495	750
Maximum 1 s Surge Current (Ap, T_a = 25ºC)	30	100	150
Forward Voltage Drop (Vp @ I_{max}, T_a = 25ºC)	1.5	1.35	1.35
I^2T (60 Hz, ½ Cycle)	340	1020	2350
Static Off-State dv/dt (Vµs, T_a = 25ºC)	500	500	500
hp Ratings at 120 V	—	½	¾
hp Ratings at 240 V	—	1	2
Output Type	Triac	SCR	SCR
Min/Max Stranded Wire	16/8 AWG	16/8 AWG	16/8 AWG
Min/Max Solid Wire	16/10 AWG	16/10 AWG	16/10 AWG
Input Specifications			
Input Voltage	4 to 32 Vdc	90 to140 Vac	180 to 280 Vac
Dropout Voltage	1 Vdc	10 Vac	10 Vac
Minimum Input Current (for On-State)	16 mA	5 mA	6 mA
Maximum Input Current	19 mA	6 mA	8 mA
Input Resistance (Ω)	Current Regulated		
Turn-On Time*	8.33 ms	20 ms	20 ms
Turn-Off Time	8.33 ms	30 ms	30 ms
Min/Max Stranded/Solid Wire	24/16 AWG	24/16 AWG	24/16 AWG

**** Random SSRs turn on in less than 100 µs.***

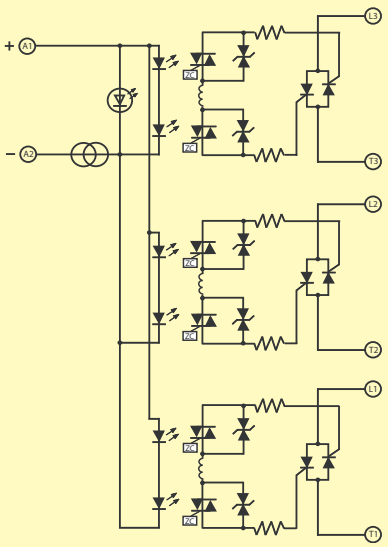
45 mm DIN Rail SSR

Output Specifications			
Voltage Range (Vrms)	48 to 600 Vac		48 to 600 Vac
Output Current	35		45
Peak Voltage (Vp , t = 1 min)	1100		1100
Off-State Leakage µArms (@ 480 V and T_a = 25ºC)	250		250
Minimum Current (mArms)	100		100
Maximum 1-Cycle Surge Current (Ap, T_a = 25ºC)	770		800
Maximum 1 s Surge Current (Ap, T_a = 25ºC)	150		160
Forward Voltage Drop (Vp @ I_{max}, T_a = 25ºC)	1.35		1.35
I^2T (60 Hz, ½ Cycle)	2500		2600
Static Off-State dv/dt (Vµs, T_a = 25ºC)	500		500
hp Ratings at 240 V	2		3
hp Ratings at 480 V	3		4
Output Type	SCR		SCR
Min/Max Stranded Wire	16/8 AWG		16/8 AWG
Min/Max Solid Wire	16/10 AWG		16/10 AWG
Input Specifications			
Input Voltage	4 to 32 Vdc	90 to 140 Vac	180 to 280 Vac
Dropout Voltage	1 Vdc	10 Vac	10 Vac
Minimum Input Current (for On-State)	16 mA	5 mA	6 mA
Maximum Input Current	19 mA	6 mA	8 mA
Input Resistance (Ω)	Current Regulated		
Turn-On Time*	8.33 ms	20 ms	20 ms
Turn-Off Time	8.33 ms	30 ms	30 ms
Min/Max Stranded/Solid Wire	24/16 AWG	24/16 AWG	24/16 AWG

**** Random SSRs turn on in less than 100 µs.***



DC Equivalent Circuit



AC Equivalent Circuit

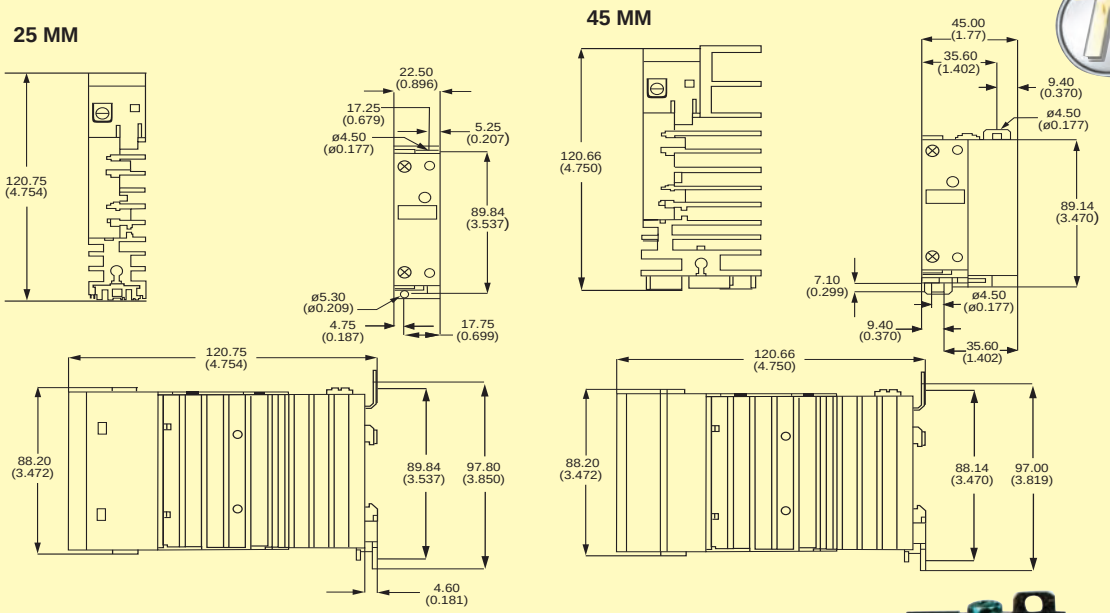
90 mm 3-Phase DIN Rail SSR

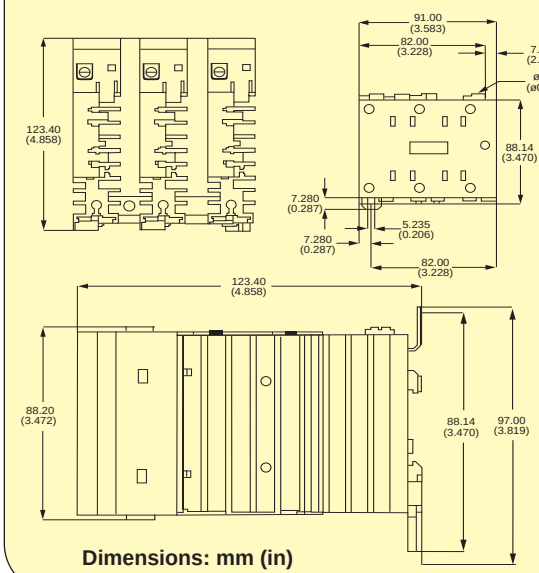
Output Specifications			
Voltage Range (Vrms)		48 to 600 Vac	
Output Current		25	
Peak Voltage (Vp , t = 1 min)		1100	
Off-State Leakage µArms (@ Max Line Voltage and T_a = 25ºC)		250	
Minimum Current (mArms)		100	
Maximum 1-Cycle Surge Current (Ap, T_a = 25ºC)		500	
Maximum 1 s Surge Current (Ap, T_a = 25ºC)		100	
Forward Voltage Drop (Vp @ I_{max}, T_a = 25ºC)		1.35	
I^2T (60 Hz, ½ Cycle)		1040	
Static Off-State dv/dt Vµs, T_a = 25ºC)		500	
hp Ratings at 480 V		3	
Output Type		SCR	
Min/Max Stranded Wire		16/8 AWG	
Min/Max Solid Wire		16/10 AWG	
Input Specifications			
Input Voltage	4 to 32 Vdc	90 to 140 Vac	180 to 280 Vac
Dropout Voltage	1 Vdc	10 Vac	10 Vac
Minimum Input Current (for On-State)	50 mA	15 mA	19 mA
Maximum Input Current	62 mA	19 mA	24 mA
Input Resistance (Ω)	Current Regulated		
Turn-On Time*	8.33 ms	20 ms	20 ms
Turn-Off Time	8.33 ms	30 ms	30 ms
Min/Max Stranded/Solid Wire		12/16 AWG	

** Random SSRs turn on in less than 100 µs.*

AC/DC Control Specifications

Model Number	Current A	Output Voltage	Input Voltage	Output Type	Size: mm (in)
SSRDIN280AC10	10	24 to 280 Vac	90 to 140 Vac	Triac	22.5 (0.9)
SSRDIN280DC10	10	24 to 280 Vac	4 to 32 Vdc	Triac	22.5 (0.9)
SSRDIN600AC20	20	48 to 600 Vac	90 to 140 Vac	SCR	22.5 (0.9)
SSRDIN600DC20	20	48 to 600 Vac	4 to 32 Vdc	SCR	22.5 (0.9)
SSRDIN600AC30	30	48 to 600 Vac	90 to 140 Vac	SCR	22.5 (0.9)
SSRDIN600DC30	30	48 to 600 Vac	4 to 32 Vdc	SCR	22.5 (0.9)
SSRDIN600AC35	35	48 to 600 Vac	90 to 140 Vac	SCR	45.0 (1.8)
SSRDIN600DC35	35	48 to 600 Vac	4 to 32 Vdc	SCR	45.0 (1.8)
SSRDIN600AC45	45	48 to 600 Vac	90 to 140 Vac	SCR	45.0 (1.8)
SSRDIN600DC45	45	48 to 600 Vac	4 to 32 Vdc	SCR	45.0 (1.8)
SSR3PH600AC25	25	48 to 600 Vac	90 to 140 Vac	SCR	90.0 (3.6)





Dimensions: mm (in)

SSRDIN and SSR3PH Series solid state relays, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	PRICE	DESCRIPTION	NOMINAL RATING (A)
SSRDIN280DC10	**$53**	DC control signal, 24 to 280 Vac line	10
SSRDIN600DC20	**60**	DC control signal, 48 to 600 Vac line	20
SSRDIN600DC30	**66**	DC control signal, 48 to 600 Vac line	30
SSRDIN280AC10	**56**	AC control signal, 24 to 280 Vac line	10
SSRDIN600AC20	**68**	AC control signal, 48 to 600 Vac line	20
SSRDIN600AC30	**75**	AC control signal, 48 to 600 Vac line	30
SSRDIN600DC35	**76**	DC control signal, 48 to 600 Vac line	35
SSRDIN600DC45	**79**	DC control signal, 48 to 600 Vac line	45
SSRDIN600AC35	**79**	AC control signal, 48 to 600 Vac line	35
SSRDIN600AC45	**86**	AC control signal, 48 to 600 Vac line	45
SSR3PH600DC25	**189**	DC control signal, 48 to 600 Vac line, 3 phase	25
SSR3PH600AC25	**193**	AC control signal, 48 to 600 Vac line, 3 phase	25

Comes with operator's manual.

Ordering Example: SSR3PH600DC25, *DC input, 25 A, 3-phase relay,* ***$189.***

SINGLE-PHASE DIN RAIL MOUNT SOLID STATE RELAYS

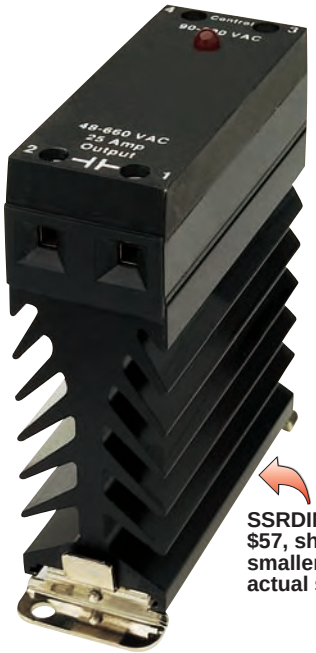
AC/DC INPUT; 25 AND 40 A, 660 VAC OUTPUT

SSRDIN Series Starts at $57

1 YEAR WARRANTY

- Integrated Heat Sink
- Mounts on DIN Rail or Panel
- Optically Isolated
- Safe to the Touch
- 1400 V Blocking Voltage
- Zero Voltage Turn-On
- 4000 Volt Isolation
- Built-In Snubber
- LED Indicator

OMEGA's SSRDIN Series solid state relays are fully integrated with heat sink and DIN rail mounting plate in a space-saving design. They are touch safe with LED input indication. Each is a single-pole, normally open, zero crossing device, capable of millions of cycles of operation. Dual SCR's provide a high level of reliability, capable of handling higher overloads than triacs.



SSRDIN660DC25, $57, shown smaller than actual size.

SSRDIN660DC40, $71, shown smaller than actual size.

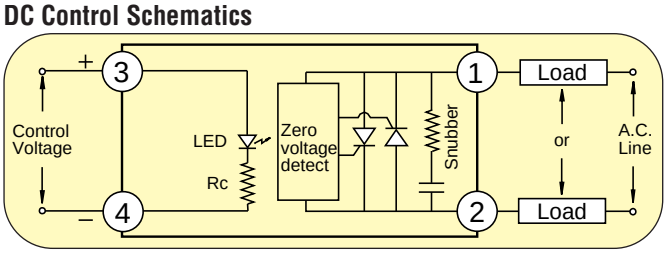
DC Control Specifications

Model Number	Line Voltage Range (Vac)	Load Current Range (Arms)	Min Control Voltage and Current Draw	Max Control Voltage and Current Draw	Release Voltage (Vdc)
SSRDIN660DC25	24 to 660	0.05 to 25	4 Vdc/3.5 mA	32 Vdc/8 mA	1
SSRDIN660DC40	24 to 660	0.05 to 40	4 Vdc/3.5 mA	32 Vdc/8 mA	1

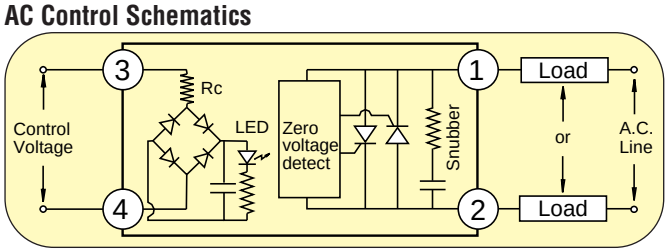
AC Control Specifications

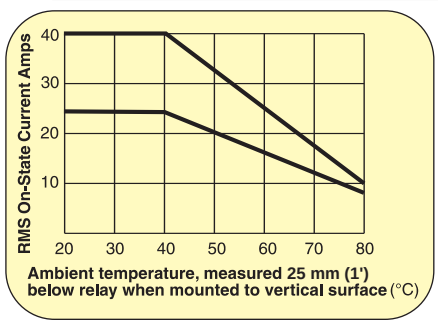
Model Number	Line Voltage Range (Vac)	Load Current Range (Arms)	Min Control Voltage and Current Draw	Max Control Voltage and Current Draw	Release Voltage (Vac)
SSRDIN660AC25	24 to 660	0.05 to 25	100 Vac/9 mA	280 Vac/25 mA	20
SSRDIN660AC40	24 to 660	0.05 to 40	100 Vac/9 mA	280 Vac/25 mA	20

DC Control Schematics



AC Control Schematics





To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	PRICE	DESCRIPTION	NOMINAL RATING
SSRDIN660DC25	**$57**	DC control signal	25 A
SSRDIN660DC40	**71**	(660 Vac line)	40 A
SSRDIN660AC25	**60**	AC control signal	25 A
SSRDIN660AC40	**77**	(660 Vac line)	40 A

Comes with operator's manual.
Ordering Example: SSRDIN660DC25, *DC control signal (660 Vac line) relay,* ***$57.***

Relays and timers product line continues to expand, visit omegamation.com for new details!

FULLY INTEGRATED "INTELLIGENT" SOLID STATE RELAYS

AC/DC INPUT; 50, 75, 100 A, 660 VAC OUTPUT

Shown smaller than actual size.

SSRINT660DC75, $192.

SSRINT660DC100, $378.

SSRINT660 Series Starts at $124

1 YEAR WARRANTY

- Integrated Heat Sink
- Built-in, Replaceable Semiconductor Fuse
- Automatic Shutdown on Overtemperature
- Mounts on DIN Rail or Panel
- Optically Isolated
- Safe to the Touch
- 1200 V Blocking Voltage
- 4000 V Isolation
- Zero Voltage Turn-On
- Built-In Snubber
- LED Indicator (Function and Alarm)

OMEGA's SSRINT Series "intelligent" solid state relays are fully integrated with heat sink and DIN rail mounting plate in a space to saving design. They are touch-safe with LED input indication. All units come with built-in, replaceable semiconductor fuses. LED's indicate fuse failure. These "intelligent" relays automatically shut down when in over-temperature conditions. When returned to normal operating temperatures, the relay will turn back on. "Intelligent" relays are single pole, normally open devices, capable of millions of cycles of operation. Dual SCR's provide a high level of reliability.

Switching takes place at the 0 voltage crossover point of the alternating current cycle. Because of this, no appreciable electrical noise is generated, making SSR's ideal for environments where there are apparatuses susceptible to RFI.

Although these relays have integrated heat sinks, SSR's should be located where the ambient temperature is relatively low, since the current switching rating is lowered as the temperature increases (see derating curves). Another SSR characteristic is a small leakage of current across the output when the relay is open. Because of this, a voltage will always exist on the load side of the device.

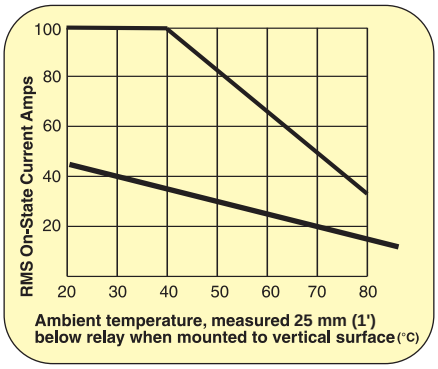
DC Control Specifications

Model Number	Line Voltage Range (Vac)	Load Current Range (Arms)	Min Control Voltage and Current Draw	Max Control Voltage and Current Draw	Release Voltage (Vdc)
SSRINT660DC50	48 to 660	0.05 to 50	4 Vdc/6 mA	28 Vdc/9 mA	1
SSRINT660DC75	48 to 660	0.05 to 75	4 Vdc/6 mA	28 Vdc/9 mA	1
SSRINT660DC100	48 to 660	0.05 to 100	4 Vdc/6 mA	28 Vdc/9 mA	1

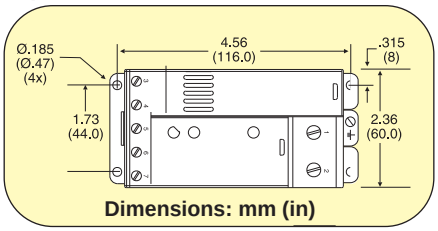
AC Control Specifications

Model Number	Line Voltage Range (Vac)	Load Current Range (Arms)	Min Control Voltage and Current Draw	Max Control Voltage and Current Draw	Release Voltage (Vac)
SSRINT660AC50	48 to 660	0.05 to 50	100 Vac/5 mA	280 Vac/15 mA	20
SSRINT660AC75	48 to 660	0.05 to 75	100 Vac/5 mA	280 Vac/15 mA	20
SSRINT660AC100	48 to 660	0.05 to 100	100 Vac/5 mA	280 Vac/15 mA	20

Derating Curve

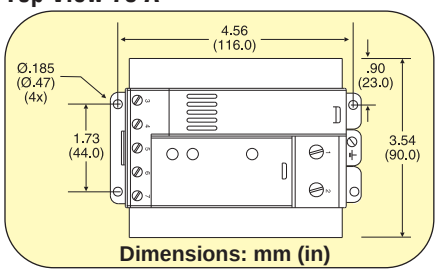


Top View 50 A



Dimensions: mm (in)

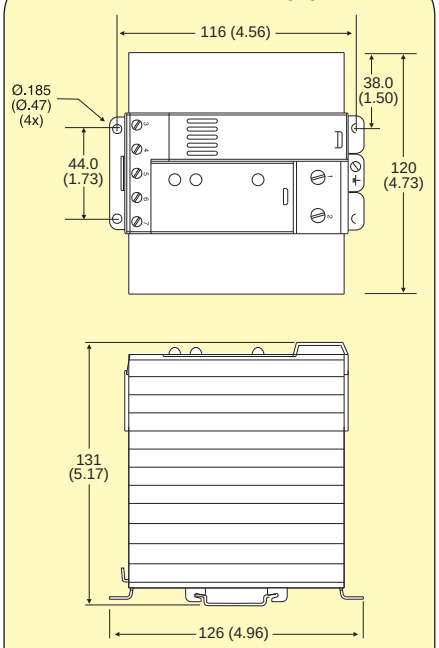
Top View 75 A



Dimensions: mm (in)

Top View 100 A

Dimensions: mm (in)



Side View (All Models)

SSRINT660DC75, $192.

SSRINT660DC50, $124.

Shown smaller than actual size.

SSRINT660DC100, $378.

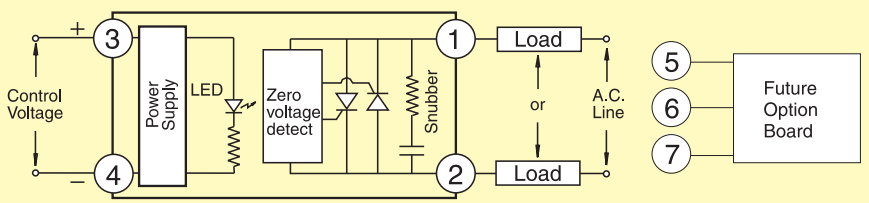
To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NUMBER	PRICE	DESCRIPTION	NOMINAL RATING
SSRINT660DC50	**$124**	DC control signal (660 Vac line)	50 A
SSRINT660DC75	**192**		75 A
SSRINT660DC100	**378**		100 A
SSRINT660AC50	**128**	AV control signal (660 Vac line)	50 A
SSRINT660AC75	**195**		75 A
SSRINT660AC100	**382**		100 A
KAX-SEMI-100	**30**	Semiconductor	100 A

Comes with complete operator's manual.
Ordering Example: SSRINT660DC50**, DC 50 A relay, **$124.

SSRINT660 Series Schematic



SOLID STATE RELAYS

HIGH RELIABILITY, VDC INPUT/VAC OUTPUT, VAC INPUT/VAC OUTPUT

SSRL Series Starts at $21

1 YEAR WARRANTY

SSRL240AC10, $25, shown smaller than actual size.

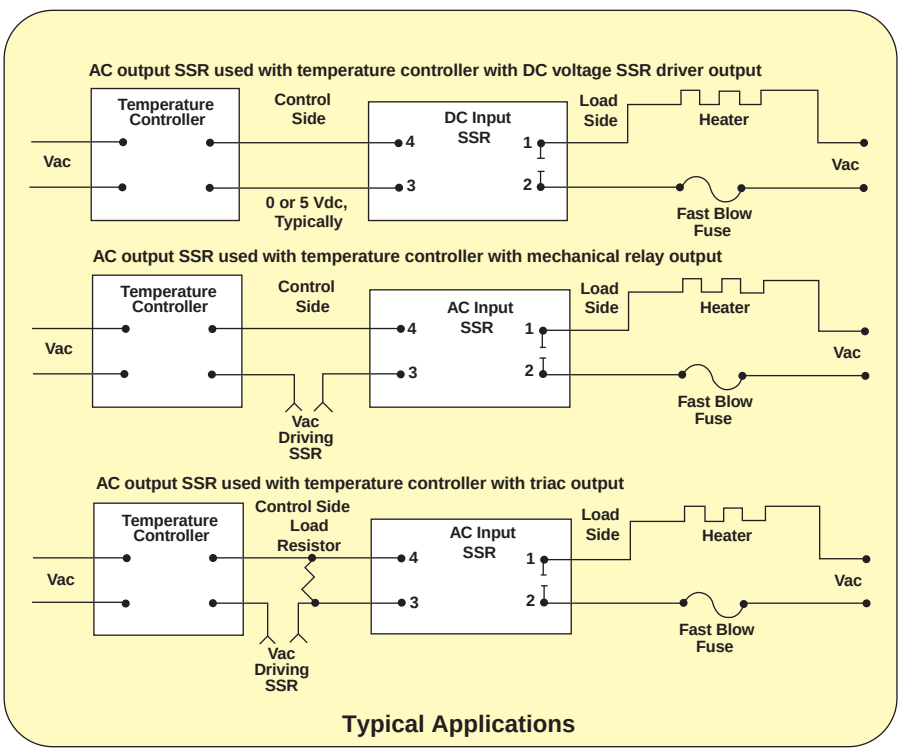
- Current Ratings to 100 A
- Multi-Million Cycle Life
- Compatible with Temperature Controllers
- Solid-State, SCR Design
- Zero Voltage Switching
- Control AC Lines to 660 Vac
- AC and DC Control Signal Models
- LED Input Status Indicator
- Thermal Conductive Pad Included

The SSRL Series solid state relays are used to control large resistance heaters in conjunction with temperature controllers. Solid state relays are SPST, normally open switching devices with no moving parts, capable of millions of cycles of operation. By applying a control signal, an SSR switches "on" the AC load current, just as the moving contacts do on a mechanical contactor. Three-phase loads can be controlled using 2 or 3 SSR's. Use 3 SSR's for "Y" or "star" 3-phase loads using a neutral line. Two SSR's will control "delta" loads with no neutral line. Three solid state relays are also used when there is no neutral load to provide redundancy and extra assurance of control.

"Switching" takes place at the 0 voltage crossover point of the alternating current cycle. Because of this, no appreciable electrical noise is generated, making SSR's ideal for environments where there are apparatuses susceptible to RFI.

COMMON SPECIFICATIONS

Operating Temperature: -20 to 80°C (-5 to 175°F)
Storage Temperature: -40 to 80°C (-40 to 175°F)



Typical Applications

Isolation: 4000 Vrms, input to output; 2500 Vrms input/output to ground
Capacitance: 8 pF, input to output (max)
Line Frequency Range: 47 to 63 Hz

Turn-On Time: 20 ms, AC; 05 cycle, DC
Turn-Off Time: 30 ms, AC; 05 cycle, DC

Output Specifications for Vac and Vdc Input Models

Specifications	10 Amp	25 Amp	50 Amp	75 Amp	100 Amp
Max On-State Current	10 A	25 A	50 A	75 A	100 A
Min On-State Current	100 mA				
Max 1-Cycle Surge	150 A	300 A	750 A	1000 A	1200 A
Max 1 sec Surge	30 A	75 A	150 A	225 A	300 A
I^2T (60 Hz), A^2sec	416	937	2458	5000	6000

These SSR's are of the twin SCR type, inherently more reliable and capable of higher overloads before failure than triacs. Heat is developed in a solid state relay due to the nominal voltage drop across the switching device. To dissipate the heat, an SSR must be mounted on a finned heat sink or aluminum plate. An SSR should be located where the ambient temperature is relatively low, since the current switching rating is lowered as the temperature increases. Another SSR characteristic is a small leakage current across the output when the relay is open. Because of this, a voltage will always exist on the load side of the device.

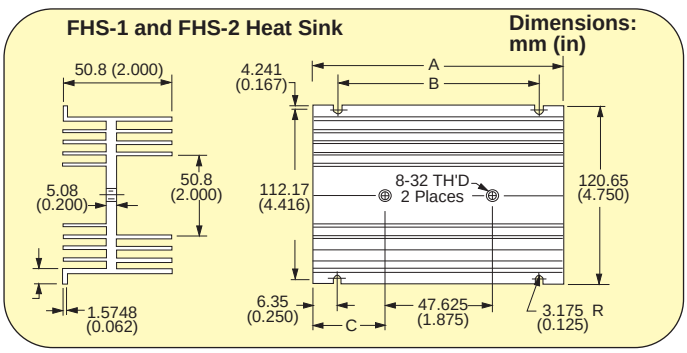
In comparing SSR's with mechanical contactors, the SSR has a cycle life many times that of a comparably priced contactor. However, SSR's are more prone to failure due to overload and improper initial wiring. Solid state relays can fail, contact closed, on overload circuits. It is essential that a properly rated, fast blowing I2T fuse be installed to protect the load circuit.

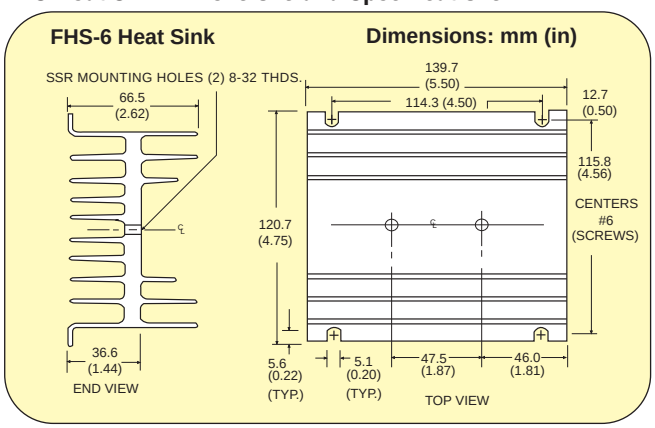
Finned heat sinks are anodized fabrications that come complete with tapped mounting holes and screws. See thermal rating curves and ordering instructions for proper selection.

All SSRL series relays come with a thermally conductive pad mounted on the baseplate. This will significantly improve the thermal conductivity between the heat sink and SSR baseplate. It is also suggested that 10"/lb of torque be used on the SSR mounting screws.

SSRL240DC50 solid state relay, $37, shown with FHS-2 heat sink, $17. See P-130 for more information.

FHS Heat Sink Dimensions and Specifications



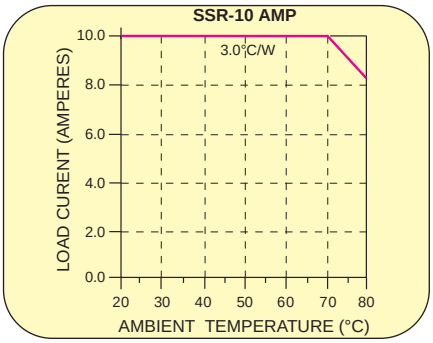


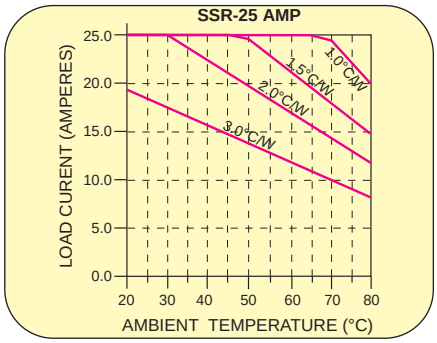
Model No.	A	B	C	Thermal Rating
FHS-1	3.00"	2.50"	0.56"	2 °C/W
FHS-2	5.50"	5.00"	1.81"	1.2 °C/W

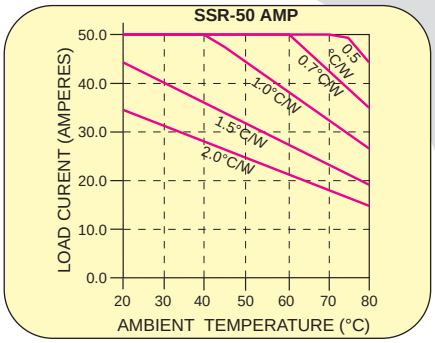
SSR240 Series Electrical Specifications

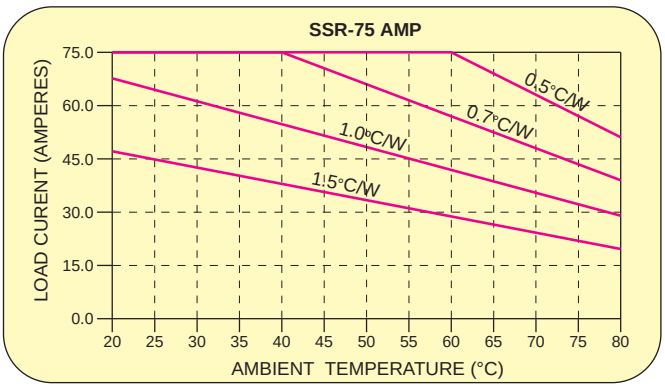
			Input-Control Signal			Output
Model No.	Type	Control Signal Voltage	Control Signal Turn-On	Control Signal Turn-Off	Max Input Current	Peak Voltage* (60 s Max)
SSRL240AC10 SSRL240AC25 SSRL240AC50 SSRL240AC75 SSRL240AC100	AC control signal	90 to 280 Vac	90 Vac	10 Vac	10 mA	800 V
SSRL240DC10 SSRL240DC25 SSRL240DC50 SSRL240DC75 SSRL240DC100	DC control signal	3 to 32 Vdc	3 Vdc	1 Vdc	14 mA	800 V
SSRL660AC50 SSRL660AC75 SSRL660AC100	AC control signal	90 to 280 Vac	90 Vac	10 Vac	10 mA	1200 V
SSRL660DC50 SSRL660DC75 SSRL660DC100	DC control signal	4 to 32 Vdc	4 Vdc	1 Vdc	14 mA	1200 V

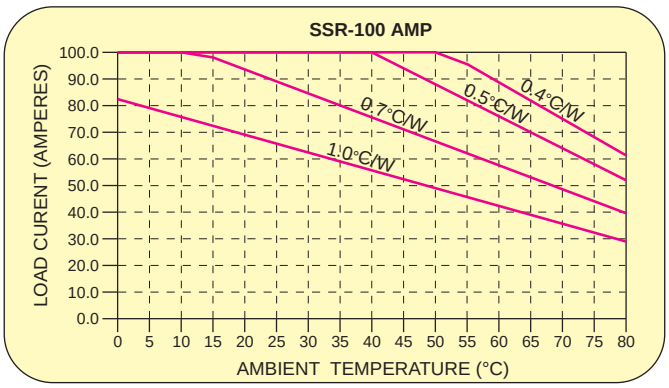
**Transients above table value should be suppressed.*

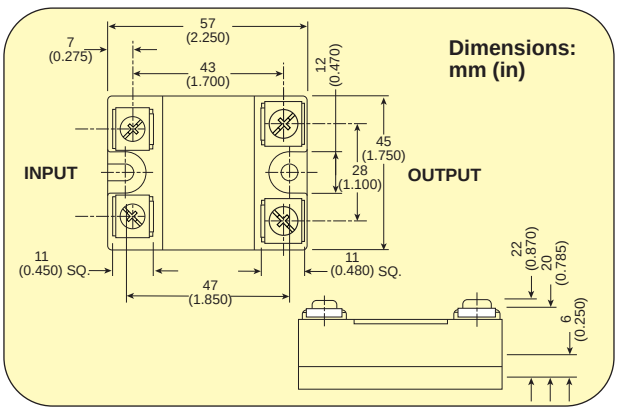


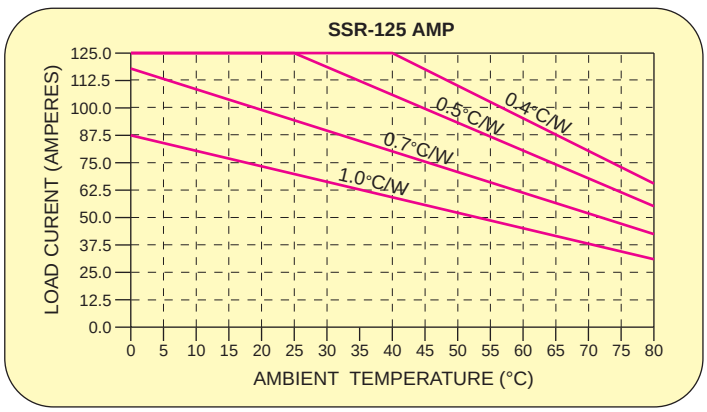










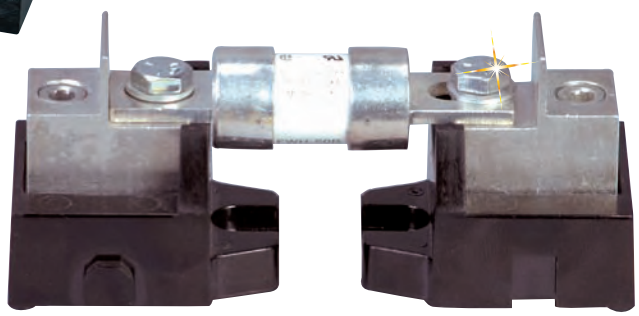


SSR240 Series Output-Vac Load Specifications

Model Number	Nominal AC Line Voltage	Nominal Load Current	Maximum Contact Voltage Drop	Maximum Off-State Leakage (25°C Maximum Ambient)		
				120 Vac	240 Vac	440 Vac
SSRL240AC10 **SSRL240AC25** **SSRL240AC50** **SSRL240AC75** **SSRL240AC100**	24 to 280 Vac	10 A 25 A 50 A 75 A 100 A	1.6 V	0.1 mA	0.1 mA	N/A
SSRL240DC10 **SSRL240DC25** **SSRL240DC50** **SSRL240DC75** **SSRL240DC100**	24 to 280 Vac	10 A 25 A 50 A 75 A 100 A	1.6 V	0.1 mA	0.1 mA	N/A
SSRL660AC50 **SSRL660AC75** **SSRL660AC100**	48 to 660 Vac	50 A 75 A 100A	1.6 V	0.25 mA	0.25 mA	0.25 mA
SSRL660DC50 **SSRL660DC75** **SSRL660DC100**	48 to 660 Vac	50 A 75 A 100 A	1.6 V	0.25 mA	0.25 mA	0.25 mA

FB-1 ($11), FB-2 ($20),
and FB-3 ($32) fuse blocks
shown with KAX-25 ($23 ea.) fuses.

BS-101 fuse block, $58,
shown with KAX-10 fuse, $18.



Fuses

To Order *(Specify Model Number)*

MODEL NO.	PRICE	CAPACITY	DIMENSIONS (DIA. X L)
KAX-10	**$18**	10 A	14 x 51 mm (0.6 x 2")
KAX-25	**23**	25 A	14 x 51 mm (0.6 x 2")
KAX-30	**23**	30 A	14 x 51 mm (0.6 x 2")
KAX-50	**45**	50 A	21 x 81 mm (0.8 x 3.2")
KAX-70	**49**	70 A	31 x 92 mm (1.2 x 3.6")
KAX-100	**59**	100 A	31 x 92 mm (1.2 x 3.6")
KBH-50	**35**	50 A	18 x 81 mm (0.7 x 3.2")
KBH-70	**46**	70 A	19 x 92 mm (0.7 x 3.6")
KBH-90B	**46**	90 A	19 x 92 mm (0.7 x 3.6")

Fuse Blocks

To Order *(Specify Model Number)*

MODEL NO.	NO. OF FUSES	PRICE	COMPATIBLE FUSES
FB-1	1	**$11**	KAX-10, KAX-25, KAX-30
FB-2	2	**20**	KAX-10, KAX-25, KAX-30
FB-3	3	**32**	KAX-10, KAX-25, KAX-30
BS-101	1	**58**	KAX-50, KAX-70, KAX-100, KBH (all models)

Shunt Resistors for Controllers with AC SSR (Triac) Output

To Order *(Specify Model Number)*

MODEL NO.*	PRICE	VALUE
SSRR20-12	**$8**	2000 Ω, 12 watts
SSRR20-50	**9**	2000 Ω, 50 watts
SSRR15-12	**6**	1500 Ω, 12 watts
SSRR15-50	**9**	1500 Ω, 50 watts

*****12 W versions for 120 V circuits; 50 W for 240 V.*

How to Order:

1) Select solid state relay based on type of controlsignal (AC or DC) and current switching requirements for resistive load.
2) Select fast blow (I2T) fuse and fuse block. It is essential that a fuse be installed to protect the load circuit.
3) Select required finned heat sink based on max ambient temperature and thermal rating curve on previous page.

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	NOMINAL DESCRIPTION	RATING
SSRL240AC10	**$25**	AC control signal (24 to 280 Vac line)	10 A
SSRL240AC25	**30**		25 A
SSRL240AC50	**40**		50 A
SSRL240AC75	**65**		75 A
SSRL240AC100	**80**		100 A
SSRL240DC10	**21**	DC control signal (24 to 280 Vac line)	10 A
SSRL240DC25	**26**		25 A
SSRL240DC50	**37**		50 A
SSRL240DC75	**61**		75 A
SSRL240DC100	**76**		100 A
SSRL660AC50	**48**	AC control signal (48 to 660 Vac line)	50 A
SSRL660AC75	**69**		75 A
SSRL660AC100	**84**		100 A
SSRL660DC50	**45**	DC control signal (48 to 660 Vac line)	50 A
SSRL660DC75	**65**		75 A
SSRL660DC100	**85**		100 A
FHS-1	**13**	Finned heat sink	2°C/W
FHS-2	**17**		1.2°C/W
FHS-6	**21**		0.7°C/W

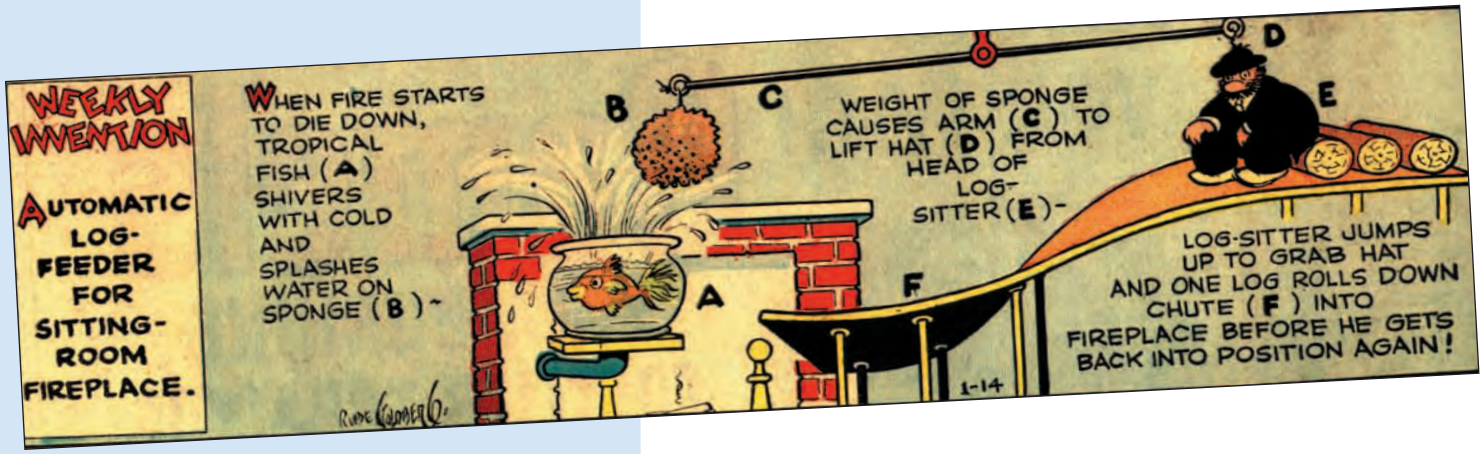
Comes with complete operator's manual.
***Note:** All SSRL Series come with thermally conducting pad. Reference SSR330 Series for additional heat sinks.*

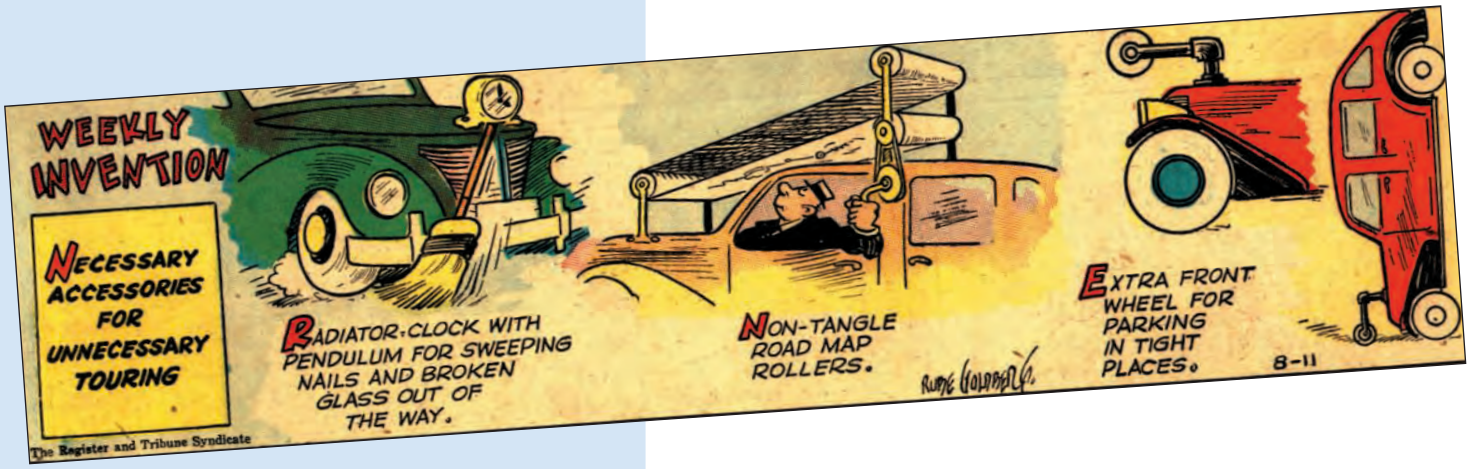
Ordering Example: SSRL240DC25**, solid state relay, **FHS-2,** finned heat sink, **KAX-25,** fuse, and **FB-1,** fuse block, $26 + 17 + 23 + 11 = **$77.

Before there was
OMEGAMATION™
there was...

RUBE GOLDBERG

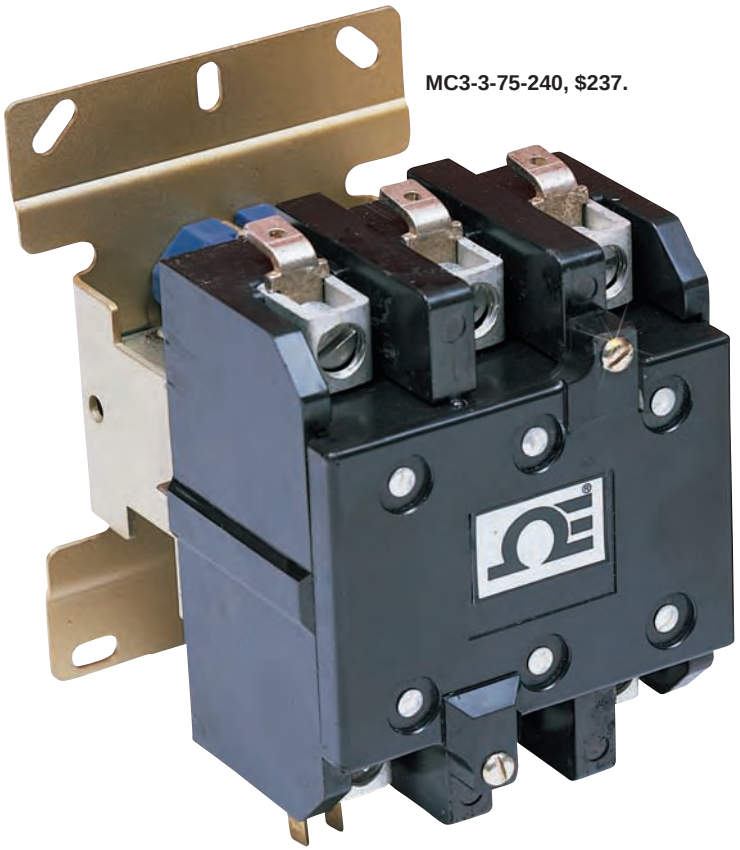
Rube Goldberg (ro͞ob gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*





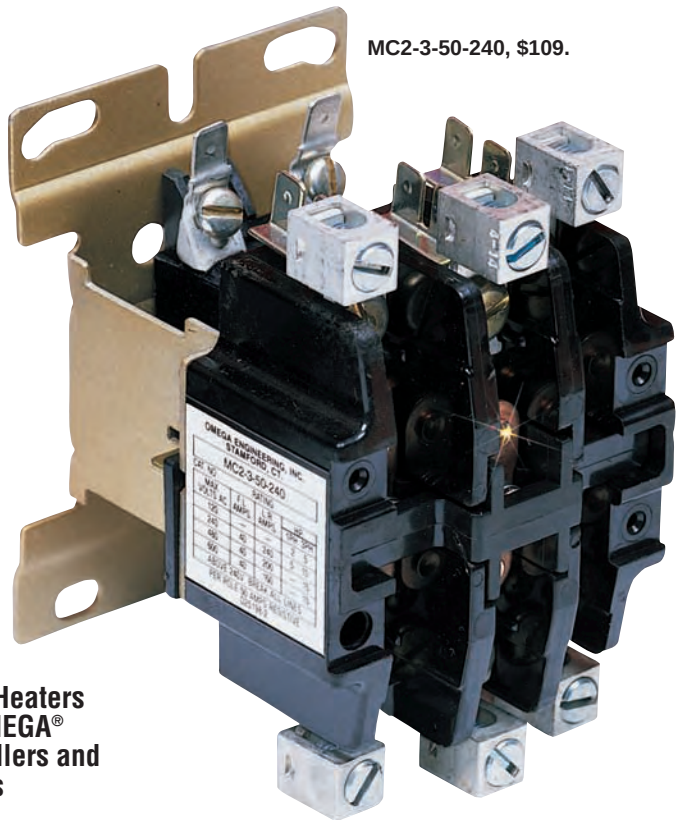
MAGNETIC CONTACTORS

SPECIAL PURPOSE CONTACTORS FOR HIGH-POWER TEMPERATURE CONTROL



MC3-3-75-240, $237.

Shown slightly smaller than actual size.



MC2-3-50-240, $109.

MC Series Starts at $47

1 YEAR WARRANTY

MADE IN USA

Control Resistance Heaters up to 75 A Using OMEGA® Temperature Controllers and Magnetic Contactors

- Long Life–Over 500,000 Operations
- 30 to 75 A
- Heavy-Duty Construction
- Easy Mounting
- 600 Vac Contacts

Applications Rating Guide

Model Number	MC1-2-30-120 MC1-2-30-240	MC2-2-40-120 MC2-2-40-240	MC2-3-40-120 MC2-3-40-240	MC2-3-50-240	MC3-3-75-240
Non-Inductive Amps	30	40	40	50	75
Full Load Amps	20	30	30	40	60
Locked Rotor Amps @ 240 V @ 480 V @ 600 V	 120 100 80	 180 150 120	 180 150 120	 240 200 160	 360 300 240
Number of Poles	2	2	2	3	3
Wire Size (AWG)	16 to 8	16 to 8	16 to 8	14 to 6	14 to 2

Note:

1) Contacts are rated to 600 Vac.
2) Poles cannot be used in parallel to increase current rating.
3) Relays do not provide overload protection from motors.
4) Relays must be mounted vertically.

Relays and timers product line continues to expand, visit omegamation.com for new details!

Mechanical Contactors for Temperature Control

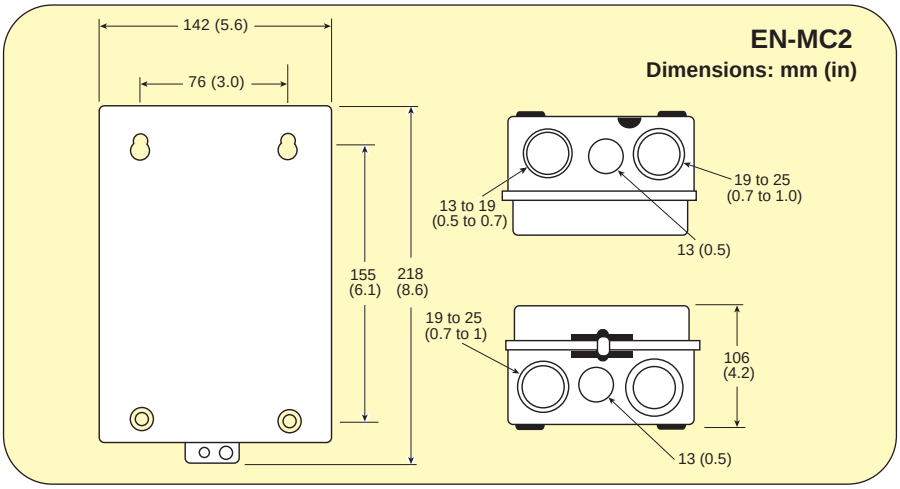
OMEGA® mechanical contactors are designed to be used independently with 120 and 240 Vac control signals or with any of the OMEGA® temperature controllers. OMEGA® special purpose contactors provide the process industry with exceptionally reliable control for heating and cooling applications. Long electromechanical life is assured by extra electrical capacity and short stroke magnet design. Silver-cadmium oxide contacts have superior weld resistant characteristics, high conductivity and high resistance to arc erosion. The specially designed contact spacing gives arc over protection up to 600 Vac.

Installation is simplified because terminal and mounting screws are accessible from the same direction. Contactors are designed to be mounted vertically either exposed, in existing equipment, or individually using NEMA 1 (IP10) enclosures (Model EN-MC2).

EN-MC2 relay enclosure, $40, shown smaller than actual size.

SPECIFICATIONS

Mounting Holes: Keyhole slots and regular holes are embossed to facilitate mounting on uneven wall surfaces
Knockouts: NEMA 1 (IP10) enclosures have ample knockouts for wiring
General: Enclosures are drawn steel with a baked gray acrylic lifetime finish
Note: *The enclosures are not water or dust tight. They are intended for indoor use only. Fits MC2 style contactors.*



How To Order

Select:

1. Style
2. Determine No. of Poles
3. Full Load Amps
4. Coil Voltage

MC [1]-[2]-[3]-[4]

- [1] Style
- [2] No. of Poles
- [3] Full Load Amps
- [4] Coil Voltage

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	DESCRIPTION
MC1-2-30-120	**$47**	120 Vac coil, 30 Amp, 2-pole magnetic contactor
MC1-2-30-240	**47**	240 Vac coil, 30 Amp, 2-pole magnetic contactor
MC2-2-40-120	**68**	120 Vac coil, 40 Amp, 2-pole magnetic contactor
MC2-2-40-240	**68**	240 Vac coil, 40 Amp, 2-pole magnetic contactor
MC2-3-40-120	**99**	120 Vac coil, 40 Amp, 3-pole magnetic contactor
MC2-3-40-240	**99**	240 Vac coil, 40 Amp, 3-pole magnetic contactor
MC2-3-50-240	**109**	240 Vac coil, 50 Amp, 3-pole magnetic contactor
MC3-3-75-240	**237**	240 Vac coil, 75 Amp, 3-pole magnetic contactor

Comes with operator's manual.

Ordering Example: MC2-2-40-120, *120 Vac coil, 40 Amp, 2-pole, magnetic contactor,* ***$68.***

NEW FAST ACTING FUSES

Starts at $36 Pkg of 10

MCL10-10PK, $37.50, shown larger than actual size.

MEQ30-10PK, $44.25, shown larger than actual size.

Fast Acting 600V Fuse

- **Compact Dimensions**
- **High Interrupting Rating**
- **Fast-Acting Design Responds Quickly to Both Overloads and Short-Circuit Current**

A fast-acting, high-interrupting capacity, current-limiting type fuse. The MCL style fuse feature provides an excellent choice for applications such as: street lighting holders, HID lighting, control circuits, electronic equipment protection.

SPECIFICATIONS

Dimensions: 13/32" ferrule, 1.5" length
Weight: Approx 0.2 lbs
Voltage Rating: MCL - 600 Vac
Ampere Rating: .1 to 50 A
Interrupting Rating: 100 K RMS amps
Agency Approvals: (0.1 to 30) UL Listed to 198G, File E162443; (0.1 to 30) CSA Cert. C22.2 Part 59.2, LR700489

Fast Acting 250V Fuse

- **Compact Dimensions**
- **Economical Laminated Paper Tube Design**

The MOL is an economical solution for over current protection. The MOL style fuse feature provides an excellent choice for applications such as: supplemental protection for noninductive control and lighting circuits.

SPECIFICATIONS

Dimensions: 13/32" ferrule, 1.5" length
Weight: Approx 0.2 lbs
Voltage Rating: MOL - 250 Vac
Ampere Rating: 0.5 to 30 A
Interrupting Rating: 10 K RMS amps
Agency Approvals: (0.5 - 30) UL Listed to 198G, File E162443; (0.5 - 30) CSA Cert. C22.2 Part 59.2, LR700489

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PKG. OF 10	AMP RATING	MODEL NO.	PKG. OF 10	AMP RATING
MCL.5-10PK	40.75	0.5	MCL8-10PK	$38.50	8
MCL1-10PK	37.50	1	MCL10-10PK	37.50	10
MCL1.5-10PK	40.75	1.5	MCL12-10PK	43.25	12
MCL2-10PK	37.50	2	MCL15-10PK	37.50	15
MCL2.5-10PK	45.50	2.5	MCL20-10PK	37.50	20
MCL3-10PK	37.50	3	MCL25-10PK	37.50	25
MCL3.5-10PK	47.75	3.5	MCL30-10PK	37.50	30
MCL4-10PK	38.50	4	MCL35-10PK	47.75	35
MCL5-10PK	37.50	5	MCL40-10PK	43.25	40
MCL6-10PK	36.00	6	MCL50-10PK	49.00	50

MODEL NO.	PKG. OF 10	AMP RATING	MODEL NO.	PKG. OF 10	AMP RATING
MEQ.25-10PK	50.00	0.25	MEQ5-10PK	44.25	5
MEQ.5-10PK	46.75	0.5	MEQ6-10PK	44.25	6
MEQ1-10PK	44.25	1	MEQ7-10PK	46.75	7
MEQ1.5-10PK	46.75	1.5	MEQ8-10PK	44.25	8
MEQ2-10PK	44.25	2	MEQ10-10PK	44.25	10
MEQ2.5-10PK	46.75	2.5	MEQ12-10PK	44.25	12
MEQ3-10PK	44.25	3	MEQ15-10PK	44.25	15
MEQ3.5-10PK	50.00	3.5	MEQ20-10PK	44.25	20
MEQ4-10PK	44.25	4	MEQ25-10PK	44.25	25
MEQ4.5-10PK	53.75	4.5	MEQ30-10PK	44.25	30

Comes with instruction sheet.
Ordering Example: MCL10-10PK,** 10 A fuse, package of 10, **$37.50.

TIME DELAY FUSES

NEW

Starts at $8.25 Pkg of 10

MEN10-10PK, $16.25, shown actual size.

MOL10-10PK, $8.25, shown larger than actual size.

Time-Delay 500V Fuses

- **Compact Dimensions**
- **Fiber Tube Construction**
- **Time-Delay Allows Harmless Inductive Surges to Pass Without Needless Fuse Opening**

The MEQ midget class time delay fuse is ideal for the many applications including supplemental protection of transformers, solenoids, and other high inrush circuits.

SPECIFICATIONS

Dimensions: 13/32" ferrule, 1.5" length
Weight: Approx 0.2 lbs
Voltage Rating: MEQ - 500 Vac
Ampere Rating: 0.1 to 30 A
Interrupting Rating: 10 K RMS amps
Agency Approvals: (0.1 - 30) UL Listed to 198G, File E162443; (0.1 - 30) CSA Cert. C22.2 Part 59.2,LR700489

Time-Delay 250V Fuses

- **Compact Dimensions**
- **Fiber Tube Construction**
- **Dual-Element Construction Allows Harmless Inductive Surges to Pass Without Opening**

The MEN midget class time delay fuse is ideal for the many applications including supplemental protection of small motors, transformers, solenoids, and other high inrush power electronic circuits.

SPECIFICATIONS

Dimensions: 13/32" ferrule, 1.5" length
Weight: Approx 0.2 lbs
Voltage Rating: MEN - 250 Vac
Ampere Rating: 0.5 to 30 A
Interrupting Rating: 10K RMS amps @ 125 V
Agency Approvals: UL Listed to 198G, File E162443; CSA Cert. C22.2 Part 59.2, LR700489

To Order *(Specify Model Number)*

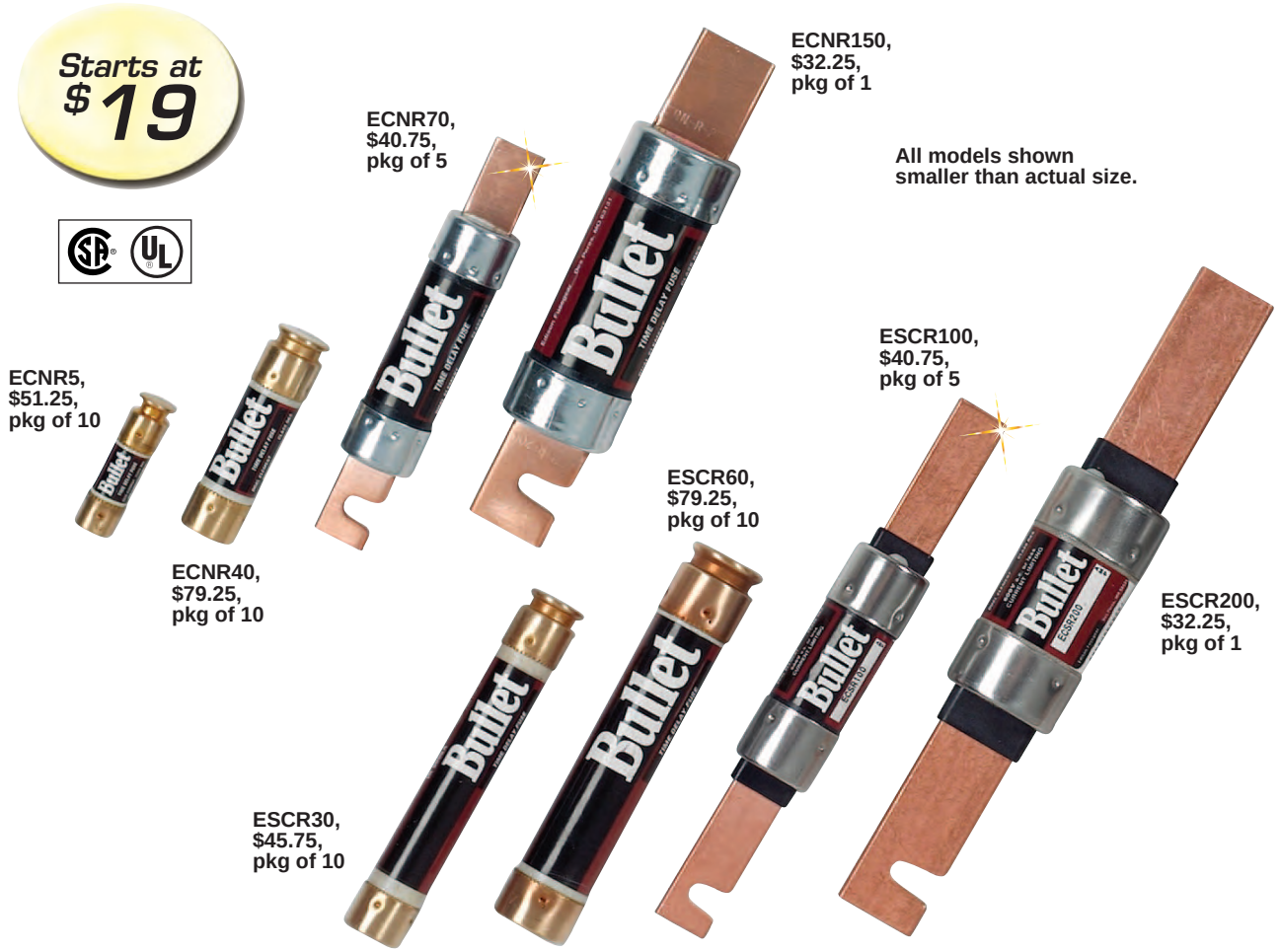
MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PKG. OF 10	AMP RATING	MODEL NO.	PKG. OF 10	AMP RATING
MEN.5-10PK	$18.75	0.5	MEN5-10PK	$16.25	5
MEN.6-10PK	18.75	0.6	MEN6-10PK	17.50	6
MEN1-10PK	17.50	1	MEN7-10PK	16.25	7
MEN1.4-10PK	22.50	1.4	MEN8-10PK	16.25	8
MEN1.5-10PK	18.75	1.5	MEN10-10PK	16.25	10
MEN2-10PK	16.25	2	MEN12-10PK	18.75	12
MEN2.5-10PK	17.50	2.5	MEN15-10PK	16.75	15
MEN3-10PK	16.25	3	MEN20-10PK	17.50	20
MEN3.5-10PK	16.25	3.5	MEN25-10PK	18.75	25
MEN4-10PK	16.25	4	MEN30-10PK	17.50	30

MODEL NO.	PKG. OF 10	AMP RATING	MODEL NO.	PKG. OF 10	AMP RATING
MOL.5-10PK	$11.50	0.5	MOL6-10PK	$9.25	6
MOL1-10PK	9.25	1	MOL8-10PK	9.25	8
MOL1.5-10PK	11.50	1.5	MOL10-10PK	8.25	10
MOL2-10PK	9.25	2	MOL15-10PK	8.25	10
MOL2.5-10PK	11.50	2.5	MOL20-10PK	11.50	20
MOL3-10PK	9.25	3	MOL25-10PK	11.50	25
MOL4-10PK	11.50	4	MOL30-10PK	10.00	30
MOL5-10PK	9.25	5			

Comes with instruction sheet.
Ordering Example: MOL10-10PK,** 10 A fuse, package of 10, **$8.25.

NEW CLASS RK5 AND RK1 DUAL ELEMENT TIME-DELAY FUSES



- **True Dual - Element Spring - Trigger Construction Allows Sizing of 125% FLA for Motor Backup Protection**
- **Superior Overload and Cycling Capabilities**
- **Extremely Current Limiting; Provides Superior Short Circuit Component Protection**

RK5 Dual Element Time-Delay Fuses

These fuses are recommended for AC power distribution system mains, feeders and branch circuits having inductive loads (motors, transformers) or non-inductive loads (lighting, heating) where the available short-circuit current does not exceed 200,000 RMS symmetrical amperes.

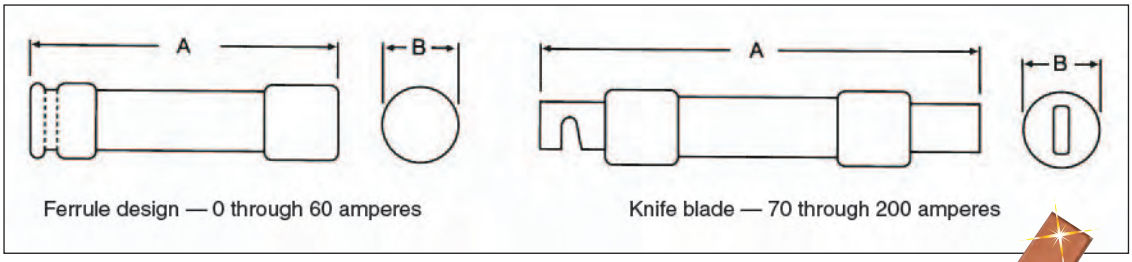
These "dual element, time-delay" fuses have minimum industry standard time-delay of 10 seconds at 5 times the fuse rating (8 s minimum for 250V, 30 A and less). The time-delay characteristics of these fuses typically allows them to be sized closer to the running ampacity of inductive loads to reduce cost and provide improved overcurrent protection. These fuses will override normal equipment current surges to reduce unnecessary fuse openings. They are the most popular fuses used in the industry and the most economical for most applications, especially motors and transformers. They have moderate current limitation.

CLASS R FUSES WILL FIT CLASS H, K AND R FUSE CLIPS. CLASS R FUSE CLIPS WILL ONLY ACCEPT CLASS R FUSES. FUSES RATED 600 VOLTS AC OR LESS MAY BE APPLIED AT ANY LOWER VOLTAGE.

RK1 Dual Element Time-Delay Fuses

The application recommended for these fuses is exactly the same as for the Edison ECNR/ECSR fuses except for the advantages of greater current limitation. The Edison LENRK/LESRK fuses have up to 40% more current limitation and up to 350% more Amps-Squared-Second (I2t) limitation under fault conditions than Edison ECNR/ECSR fuses to reduce potential for damage. In addition, LENRK/LESRK fuses allow better selectivity for electrical power system designers and better short circuit protection for breakers having inadequate interrupting ratings. ECNR/ECSR and LENRK/LESRK fuse lines are physically interchangeable (and electrically interchangeable per U.L. equipment listing conditions) and are recommended as a practical, economical way to upgrade systems for many situations.

Dimensions: in, see dimensions chart below.



NEW

All models shown smaller than actual size.

SPECIFICATIONS

Voltage Rating:
ECNR and LENRK: 250 Vac
ECSR and LESRK: 600 Vac

Ampere Rating:
ECNR and ECSR: 0.1 to 600 A
LENRK and LESRK: 0.2 to 600 A

Interrupting Rating: 200,000 RMS symmetrical amps

LENRK and LESRK Self-Certified Interrupting Rating: 300,000 RMS symmetrical amps

Current Limiting:
ECNR and ECSR: RK5 fuse
LENRK and LESRK: RK1 fuse

Agency Approvals: UL Listed, Class RK5 and RK1, Guide JDDZ, File E162363; CSA Certified HRCI-R per C22.2, No. 248.12

Self-Certified DC Ratings:
Voltage Rating: ECNR (0.1 to 600) 125 Vdc; ECSR (0.1 to 600) 300 Vdc; LENRK (0.2 to 600) 125 Vdc; LESRK (0.25 to 30) 200 Vdc; (35 to 600) 300 Vdc

Interrupting Rating:
ECNR and ECSR: 20,000 amperes DC
LENRK and LESRK: 20,000 amperes DC

Dimensions: in

MODEL NO./ AMPS	OVERALL LENGTH A	MAX DIA. B
ECNR AND LENRK 250V		
0 to 30	2	0.56
35 to 60	3	0.81
70 to 100	5.88	1.06
110 to 200	7.13	1.56
ECSR AND LESRK 600V		
0 to 30	5	0.81
35 to 60	5.5	1.06
70 to 100	7.88	1.11
110 to 200	9.63	1.61

To Order *(Specify Model Number)*

MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.	PRICE	PKG SIZE	AMP RATING
ECNR1-10PK	$29.00	10	1
ECNR2-10PK	28.00	10	2
ECNR3-10PK	26.75	10	3
ECNR5-10PK	25.75	10	5
ECNR10-10PK	25.70	10	10
ECNR15-10PK	21.25	10	15
ECNR20-10PK	21.25	10	20
ECNR25-10PK	21.25	10	25
ECNR30-10PK	21.25	10	30
ECNR40-10PK	38.00	10	40
ECNR50-10PK	38.00	10	50
ECNR60-10PK	38.00	10	60
ECNR70-5PK	42.50	5	70
ECNR80-5PK	42.50	5	80
ECNR100-5PK	42.50	5	100
ECNR150	19.00	1	150
ECNR200	19.00	1	200

MODEL NO.	PRICE	PKG SIZE	AMP RATING
ECSR3-10PK	$51.25	10	3
ECSR4-10PK	51.25	10	4
ECSR5-10PK	51.25	10	5
ECSR10-10PK	51.25	10	10
ECSR15-10PK	45.75	10	15
ECSR20-10PK	45.75	10	20
ECSR30-10PK	45.75	10	30
ECSR40-10PK	79.25	10	40
ECSR50-10PK	79.25	10	50
ECSR60-10PK	79.25	10	60
ECSR70-5PK	40.75	5	70
ECSR80-5PK	40.75	5	80
ECSR100-5PK	40.75	5	100
ECSR125	32.25	1	125
ECSR150	32.25	1	150
ECSR200	32.25	1	200

MODEL NO.	PRICE	PKG SIZE	AMP RATING
LENRK10-10PK	$38.00	10	10
LENRK15-10PK	30.00	10	15
LENRK20-10PK	30.00	10	20
LENRK30-10PK	30.00	10	30
LENRK60-10PK	55.75	10	60

MODEL NO.	PRICE	PKG SIZE	AMP RATING
LESRK5-10PK	$75.75	10	5
LESRK10-10PK	75.75	10	10
LESRK15-10PK	67.00	10	15
LESRK20-10PK	67.00	10	20
LESRK30-10PK	67.00	10	30
LESRK40-10PK	115.00	10	40
LESRK50-10PK	115.00	10	50
LESRK60-10PK	115.00	10	60
LESRK100-5PK	119.25	5	100
LESRK200	47.75	1	200

Comes with instruction sheet.
Ordering Example: ECNR1-10PK,** amp fuse, package of 10, **$29. LENRK10-10PK,** 5 amp fuse, package of 10, **$38.

NEW FUSE ACCESSORIES

BM Series Starts at $30 Pack of 10

BM Series fuse blocks are compatible with the Edison MCL, MEQ, MEN, and MOL and for use with any 13/32 x 1½" fuses.

SPECIFICATIONS

CLASS M SUPPLEMENTARY FUSEBLOCKS
Construction: Thermoplastic, UL flammability; 94 V
Ratings: 600 Vac, 30 A
Agency Approvals: UL Recognized, Guide IZLT2, File E14853; CSA, Class 6225-01, File 47235

Shown smaller than actual size.

To Order *(Specify Model Number)* — *MOST POPULAR MODELS HIGHLIGHTED!*

MODEL NO.	PRICE	PKG	POLES
BM6031PQ-10PK	$31	10	1
BM6032PQ-8PK	44	8	2
BM6033PQ-6PK	60	6	3

Comes with instruction sheet.
Ordering Example: BM6032PQ,** 2 pole fuse blocks, package of 10, **$31.

R250 Series Starts at $5

These R250 Series fuse blocks are compatible with Class R fuses, such as: Edison LENRK and ECNR.

SPECIFICATIONS

Construction: Thermoplastic, UL flammability; 94 V
Ampere Ratings: 1/10 to 600 A
Voltage Ratings: H250, 250 Vac; H600, 600 Vac; R250, 250 Vac; R600, 600 Vac
Agency Approvals: UL Listed, Guide IZLT, File E14853; CSA, Class 6225-01, File 47235

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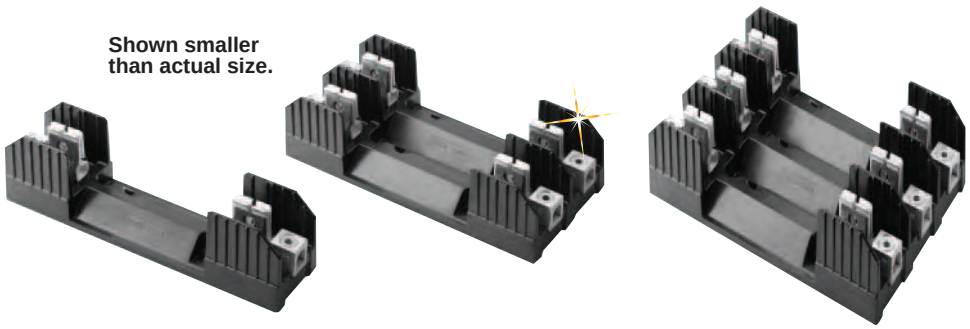


To Order *(Specify Model Number)* — *MOST POPULAR MODELS HIGHLIGHTED!*

MODEL NO.	PRICE	POLES
FUSE BLOCK ACCESSORIES FOR 250V		
R25030-1SR	$5.00	1
R25030-2SR	7.50	2
R25030-3SR	11.00	3
R25060-1CR	10.00	1
R25060-2CR	19.00	2
R25060-3CR	27.00	3

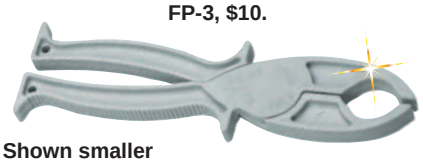
***Note:** SR is a Screw type, clip with reinforced spring, CR is a Box lug type, clip with reinforced spring.*
Comes with instruction sheet.
Ordering Example: R25030-1SR,** screwtype fuse block, 1 pole, **$5.

FP Series Starts at $9

The FP-2 and FP-3 are tools to help easily remove fuses. FP-2 is for 13/32 to 13/16" diameter fuses. FP-3 is for 1 to 1¼" diameter fuses.

FP-2, $9.

FP-3, $10.



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Fusepullers

To Order *(Specify Model Number)* — *MOST POPULAR MODELS HIGHLIGHTED!*

MODEL NO.	PRICE	DESCRIPTION - FUSE DIAMETERS AND TYPES
FP-2	$9	13/32 to 13/16", 0 to 60 A, 250 V and 0 to 30 A, 600 V
FP-3	10	1 to 1 3/4", 70 to 200 A, 250 V and 35 to 200 A, 600 V

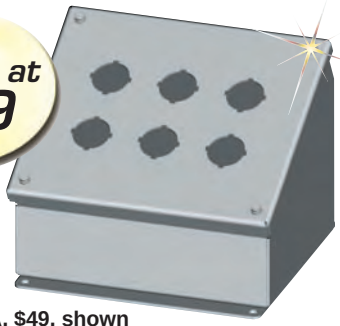
Comes with instruction sheet.
Ordering Example: FP-2,** 13/32 to 13/16" fuse puller, **$9.

TYPE 12 30.5 mm SLOPING FRONT PUSHBUTTON ENCLOSURES

NEW

Starts at $49

RoHS



SCE-1PBA, $49, shown smaller than actual size.

- 0.075" Carbon Steel
- Continuously Welded Seams
- Captivated Cover Screws Thread Into Sealed Wells
- 4 -Way Pushbutton Holes Accept All Brands of Oil-Tight Pushbuttons, Switches and Pilot Lights
- Hole Diameter is 30.5 mm (1.20")
- Immediate Removal of Cover is Permitted
- Oil-Resistant Gasket

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 SLOPING FRONT 30.5 mm PUSHBUTTON ENCLOSURES

MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	DEPTH (D)
SCE-1PBA	$49	3.50	3.25	4.84	3.53
SCE-2PBA	57	3.50	5.50	4.84	3.53
SCE-3PBA	64	3.50	7.75	4.84	3.53
SCE-4PBA	73	3.50	10.00	4.84	3.53
SCE-4SPBA	81	7.25	6.25	6.75	6.78
SCE-6PBA	95	7.25	8.50	6.75	6.78
SCE-8PBA	107	7.25	10.75	6.75	6.78
SCE-9PBA	112	9.50	8.50	7.88	8.73
SCE-10PBA	119	7.25	13.00	6.75	6.78
SCE-12PBA	130	7.25	15.25	6.75	6.78
SCE-12SPBA	124	11.75	8.50	9.00	10.69
SCE-16PBA	138	11.75	10.75	9.00	10.69
SCE-20PBA	159	11.75	13.00	9.00	10.69
SCE-25PBA	182	14.00	13.00	10.12	12.62
SCE-30PBA	198	14.00	15.25	10.12	12.62

Ordering Example: SCE-1PBA *Type 12 Sloping Front 30.5 mm Pushbutton Enclosure,* ***$49***

TYPE 12 PUSHBUTTON ENCLOSURES

Starts at $33

MADE IN USA · UL · SA · 1 YEAR WARRANTY · RoHS

- 0.075" Carbon Steel
- Continuously Welded Seams
- Captivated Cover Screws Thread Into Sealed Wells
- 4-way Puhbutton Holes Accept all Brands of Oil-Tight Pushbuttons, Switches and Pilot Lights
- Hole Diameter is 1.20" (30.5 mm)
- Immediate Removal of Cover is Permitted
- Oil-Resistant Gasket

SCE-1PB, $33, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SCE-1PB	$33	Type 12 30.5 mm pushbutton enclosures	3.50	3.25	2.75
SCE-2PB	38	Type 12 30.5 mm pushbutton enclosures	5.75	3.25	2.75
SCE-3PB	43	Type 12 30.5 mm pushbutton enclosures	8.00	8.00	2.75
SCE-4PB	47	Type 12 30.5 mm pushbutton enclosures	10.25	3.25	2.75
SCE-4SPB	53	Type 12 30.5 mm pushbutton enclosures	7.25	6.25	3.00
SCE-5PB	52	Type 12 30.5 mm pushbutton enclosures	12.50	3.25	2.75
SCE-6PB	61	Type 12 30.5 mm pushbutton enclosures	9.50	6.25	3.00
SCE-6PBVL	57	Type 12 30.5 mm pushbutton enclosures	14.75	3.25	2.75
SCE-8PB	68	Type 12 30.5 mm pushbutton enclosures	20.25	3.25	2.75
SCE-9PB	70	Type 12 30.5 mm pushbutton enclosures	9.50	8.50	3.00
SCE-12PB	78	Type 12 30.5 mm pushbutton enclosures	11.75	8.50	3.00
SCE-16PB	91	Type 12 30.5 mm pushbutton enclosures	11.75	10.75	3.00
SCE-20PB	98	Type 12 30.5 mm pushbutton enclosures	14.00	10.75	3.00

Ordering Example: SCE-1PB *Type 12 30.5 mm Pushbutton Enclosure,* ***$33***

NEW TYPE 12 SERIES 9 CONSOLES

SCE-924B, $912, shown smaller than actual size.

Starts at $912

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Carbon Steel
- Sloping Control Panel Attached With Concealed Hinge on Bottom Edge
- Door Opens to 90°
- Black Zinc Die Cast Keylocking/ Padlocking Handle
- 3-Point Latching Mechanism
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket on Door
- Interior Print Pocket
- Optional Back and Side Panels are Mounted on Collar Studs
- Removable Eyebolts
- Ground Stud on Door

To Order *(Specify Model Number)*

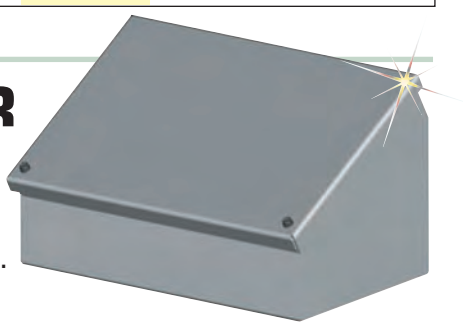
MOST POPULAR MODELS LISTED!

TYPE 12 SERIES 9 CONSOLES

ENCLOSURES					SUB-PANEL				
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	QTY	HEIGHT (D)	WIDTH (E)
SCE-924B	$912	48.00	24.00	18.00	SCE-30P20	$42	3	27.00	17.00
SCE-936B	1120	48.00	36.00	18.00	SCE-30P20	42	2	27.00	17.00
					SCE-30P30	63	1	27.00	27.00

Ordering Example: SCE-924B *Type 12 Series 9 Console,* ***$912***

TYPE 12 CONSOLETS/OPERATOR SYSTEM ENCLOSURES



SCE-8C8, $78, shown smaller than actual size.

Starts at $78

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knock-Outs
- Captivated Cover Screws Thread Into sealed wells
- Door Attached With Continuous Hinge
- Oil-Resistant Gasket
- Ground Stud on Door
- May Also Be Ordered in Type 304 and Type 316 Stainless Steel

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 CONSOLETS/OPERATOR SYSTEM ENCLOSURES

MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	DEPTH (D)
SCE-8C8	$78	8.00	8.00	7.09	7.44
SCE-8C12	85	8.00	12.00	7.09	7.44
SCE-8C16	95	8.00	16.00	7.09	7.44
SCE-8C20	102	8.00	20.00	7.09	7.44
SCE-12C12	100	12.00	12.00	9.09	10.91
SCE-12C16	112	12.00	16.00	9.09	10.91
SCE-12C20	123	12.00	20.00	9.09	10.91
SCE-12C24	132	12.00	24.00	9.09	10.91
SCE-16C16	130	16.00	16.00	11.09	14.38
SCE-16C20	144	16.00	20.00	11.09	14.38
SCE-16C24	157	16.00	24.00	11.09	14.38
SCE-16C30	180	16.00	30.00	11.09	14.38
SCE-16C36	202	16.00	36.00	11.09	14.38

Ordering Example: SCE-8C8 *Type 12 Consolet,* ***$78***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 12 SERIES 14 TWO-DOOR CONSOLES

Starts at $2016

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

NEW

SCE-1448BD, $2016, shown smaller than actual size.

- 0.104" Carbon Steel
- Sloping Control Panel Attached with Concealed Hinge on Bottom Edge
- Door opens to 90°
- Black Zinc Die Cast Keylocking/ Padlocking Handles on Front and Rear Doors
- 3-Point Latching Mechanism
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket on Door
- Optional Equipment Mount to Horizontal Channels Welded to Sides
- Flush Mounted Doors
- Optional Writing Desk and Top Section Available
- Interior Print Pocket
- Removable Eyebolts in Console Body
- Ground Stud on Door

To Order *(Specify Model Number)* — ***MOST POPULAR MODELS LISTED!***

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SERIES 14 TWO DOOR CONSOLES—48" WIDE					
SCE-1448BD	$2016	Console body	50.00	48.00	23.00
SCE-1448T	506	Console top	16.00	48.00	12.50
SCE-1448P2	160	Half panel	22.00	41.00	
SCE-1448P3	254	Full panel	42.25	41.00	
SCE-1448W	175	Writing desk	48.00	10.00	
SERIES 14 TWO DOOR CONSOLES—60" WIDE					
SCE-1460BD	$2086	Console body	50.00	60.00	23.00
SCE-1460T	586	Console top	16.00	60.00	12.50
SCE-1460P2	185	Half panel	22.00	53.00	
SCE-1460P3	303	Full panel	42.25	53.00	
SCE-1460W	206	Writing desk	60.00	10.00	
SERIES 14 TWO DOOR CONSOLES—72" WIDE					
SCE-1472BD	$2285	Console body	50.00	72.00	23.00
SCE-1472T	668	Console top	16.00	72.00	12.50
SCE-1472P3	351	Full panel	42.25	65.00	
SCE-1472W	238	Writing desk	72.00	10.00	

Ordering Example: SCE-1448BD, *Type 12 series 14 two-door console,* ***$2016.***

TYPE 12 SERIES 14 SINGLE DOOR CONSOLES

Starts at $1340

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.104" Carbon Steel
- Sloping Control Panel Attached With Concealed Hinge on Bottom Edge
- Door Opens to 90°
- Black Zinc Die Cast Keylocking/ Padlocking Handles on Front and Rear Doors
- 3-Point Latching Mechanism
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket on Door
- Optional Equipment Mount to Horizontal Channels Welded to Sides
- Flush Mounted Doors
- Optional Writing Desk and Top Section Available
- Interior Print Pocket
- Removable Eyebolts in Console Body
- Ground Stud on Door

SCE-14B, $1340, shown smaller than actual size.

To Order *(Specify Model Number)* — ***MOST POPULAR MODELS LISTED!***

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
TYPE 12 SERIES 14 SINGLE DOOR CONSOLES—24" WIDE					
SCE-14B	$1340	Console body	50.00	24.00	23.00
SCE-14T	342	Console top	16.00	24.00	12.50
SCE-14P1	126	Swing-out panel	22.00	18.12	—
SCE-14P2	109	Half panel	22.00	17.00	—
SCE-14P3	157	Full panel	42.25	17.00	—
SCE-14R	111	Set of 2 rack angles	29.00	—	—
SCE-14W	110	Writing desk	24.00	10.00	—
TYPE 12 SERIES 14 SINGLE DOOR CONSOLES—36" WIDE					
SCE-1436B	1567	Console body	50.00	36.00	23.00
SCE-1436T	424	Console top	16.00	36.00	12.50
SCE-1436P1	156	Swing-out panel	22.00	30.12	—
SCE-1436P2	134	Half panel	22.00	29.00	—
SCE-1436P3	206	Full panel	42.25	29.00	—
SCE-1436W	142	Writing desk	36.00	10.00	—

Ordering Example: SCE-14B, *Type 12 series 14 single-door console,* ***$1340.***

NEW TYPE 12 SCREW COVER ENCLOSURES

SCE-404SC, $37, shown smaller than actual size.

Starts at $37

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Captivated Cover Screws Thread Into Sealed Wells
- Oil Resistant Gasket
- Standoffs Provided for Mounting Optional Panels

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 SCREW COVER ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-404SC	$37	4.00	4.00	3.00	No Panel	—	—	—
SCE-4044SC	37	4.00	4.00	4.00	No Panel	—	—	—
SCE-604SC	42	6.00	4.00	3.00	SCE-6P4	$3	4.88	2.88
SCE-6044SC	47	6.00	4.00	4.00	SCE-6P4	3	4.88	2.88
SCE-606SC	50	6.00	6.00	4.00	SCE-6P6	3	4.88	4.88

Ordering Example: ***SCE-404SC*** *Type 12 Screw Cover Enclosure,* ***$37***

TYPE 12 TWO-DOOR ENCLOSURES

SCE-604808LP, $1007, shown smaller than actual size.

Starts at $1007

- 0.104" Carbon Steel or 304 Stainless Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Black Zinc Die Cast Keylocking/ Padlocking Handle
- Concealed Hinge
- 12" Removable Floor Stands
- Heavy Duty Lifting Eyes
- Panel Supports
- Oil Resistant Goor Gasket
- Ground Stud on Door

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 TWO-DOOR CARBON STEEL ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-604808LP	$1007	60.00	48.00	8.00	SCE-60P48	$202	56.00	44.00
SCE-604810LP	1039	60.00	48.00	10.00	SCE-60P48	202	56.00	44.00
SCE-604812LP	1071	60.00	48.00	12.00	SCE-60P48	202	56.00	44.00
SCE-604816LP	1135	60.00	48.00	16.00	SCE-60P48	202	56.00	44.00
SCE-604824LP	1265	60.00	48.00	24.00	SCE-60P48	202	56.00	44.00

TYPE 12 TWO-DOOR 304 STAINLESS STEEL ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-604808SSLP	$4430	60.00	48.00	8.00	SCE-60P48	$202	56.00	44.00
SCE-604810SSLP	4572	60.00	48.00	10.00	SCE-60P48	202	56.00	44.00
SCE-604812SSLP	4716	60.00	48.00	12.00	SCE-60P48	202	56.00	44.00
SCE-604816SSLP	4994	60.00	48.00	16.00	SCE-60P48	202	56.00	44.00
SCE-604824SSLP	5565	60.00	48.00	24.00	SCE-60P48	202	56.00	44.00

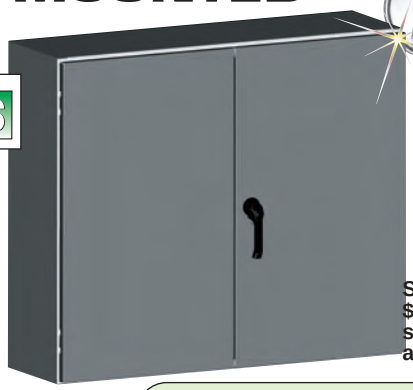
Ordering Example: ***SCE-604808LP*** *Type 12 Carbon Steel Two-Door Enclosure,* ***$1007***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 12 TWO-DOOR WALL-MOUNTED ENCLOSURES

NEW

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Flange Trough Collar Around All Sides of Door Opening
- Black Zinc Die Cast Keylocking/ Padlocking Handle
- Concealed Hinge
- Oil Resistant Door Gasket
- Ground Stud on Door
- Mounting Hardware, Sealing Washer and Hole Plug Included



Starts at $401

SCE-244208WFLP, $401, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 TWO-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-244208WFLP	$401	24.00	42.00	8.00	SCE-42P24	$69	39.00	21.00
SCE-244808WFLP	434	24.00	48.00	8.00	SCE-48P24	74	45.00	21.00
SCE-304210WFLP	479	30.00	42.00	10.00	SCE-42P30	88	39.00	27.00
SCE-304810WFLP	521	30.00	48.00	10.00	SCE-48P30	97	45.00	27.00
SCE-306010WFLP	603	30.00	60.00	12.00	SCE-60P30	120	57.00	27.00
SCE-364212WFLP	558	36.00	42.00	16.00	SCE-42P36	103	39.00	33.00
SCE-364216WFLP	607	36.00	42.00	10.00	SCE-42P36	103	39.00	33.00
SCE-364810WFLP	599	36.00	48.00	12.00	SCE-48P36	103	45.00	33.00
SCE-364812WFLP	609	36.00	48.00	16.00	SCE-48P36	103	45.00	33.00
SCE-364816WFLP	665	36.00	48.00	12.00	SCE-48P36	103	45.00	33.00

Ordering Example: SCE-244208WFLP** Type 12 Two-Door Enclosure, **$401

TYPE 12 SINGLE-DOOR ENCLOSURES

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Flange Trough Collar Around All Sides of Door Opening
- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Flange Trough Collar Around All Sides of Door Opening
- Concealed Hinge
- Hasp and Staple for Padlocking
- Oil Resistant Gasket
- Ground Stud on Door

Starts at $161

SCE-161206LP, $161, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 SINGLE-DOOR ENCLOSURES

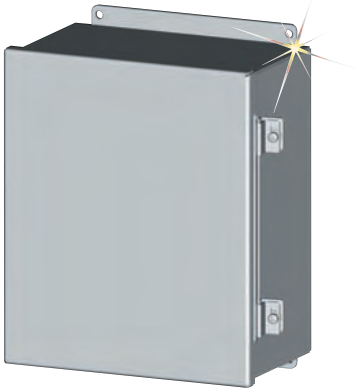
ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-122406LP	$180	12.00	24.00	6.00	SCE-12P24	$21	9.00	21.00
SCE-122408LP	191	12.00	24.00	8.00	SCE-12P24	21	9.00	21.00
SCE-161206LP	161	16.00	12.00	6.00	SCE-16P12	11	13.00	9.00
SCE-161208LP	168	16.00	12.00	8.00	SCE-16P12	11	13.00	9.00
SCE-161210LP	176	16.00	12.00	10.00	SCE-16P12	11	13.00	9.00
SCE-161606LP	172	16.00	16.00	6.00	SCE-16P16	19	13.00	13.00
SCE-161608LP	182	16.00	16.00	8.00	SCE-16P16	19	13.00	13.00
SCE-162006LP	185	16.00	20.00	6.00	SCE-20P16	23	17.00	13.00
SCE-162008LP	195	16.00	20.00	8.00	SCE-20P16	23	17.00	13.00
SCE-201206LP	170	20.00	12.00	6.00	SCE-20P12	17	17.00	9.00

Ordering Example: SCE-161206LP** Type 12 Single-Door Enclosure, **$161

NEW TYPE 12 CONTINUOUS HINGE ENCLOSURES

Starts at $27

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Continuous Hinge
- Oil Resistant Gasket
- Standoffs Provided for Mounting Optional Panels
- Ground Stud on Door



SCE-404CH, $27, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 CONTINUOUS HINGE ENCLOSURES

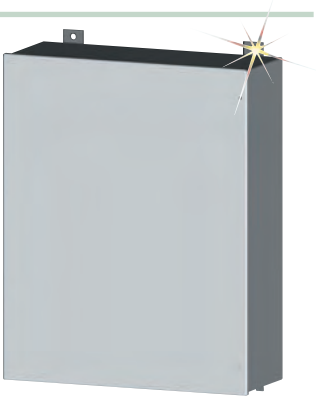
ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-404CH	$27	4.00	4.00	3.00	No Panel	—	—	—
SCE-4044CH	28	4.00	4.00	4.00	No Panel	—	—	—
SCE-604CH	30	6.00	4.00	3.00	SCE-6P4	$3	4.88	2.88
SCE-6044CH	32	6.00	4.00	4.00	SCE-6P4	3	4.88	2.88
SCE-606CH	36	6.00	6.00	4.00	SCE-6P6	3	4.88	4.88
SCE-806CH	38	8.00	6.00	3,50	SCE-8P6	4	6.75	4.88
SCE-8066CH	43	8.00	6.00	6.00	SCE-8P6	4	6.75	4.88
SCE-808CH	42	8.00	8.00	4.00	SCE-8P8	4	6.75	6.88
SCE-8086CH	50	8.00	8.00	600	SCE-8P8	4	6.75	6.88
SCE-1008CH	46	10.00	8.00	4.00	SCE-10P8	4	8.75	6.88

Ordering Example: SCE-404CH *Type 12 Continuous Hinge Enclosure,* ***$27***

TYPE 12 LARGE CONTINUOUS HINGE ENCLOSURES

Starts at $201

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Continuous Hinge
- Rivnut/Screw Fastened Cover
- Oil Resistant Gasket



SCE-20C16ALP, $201, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 LARGE CONTINUOUS HINGE ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-20C16ALP	$201	20.00	16.00	7.00	SCE-20P16	$30	17.00	13.00
SCE-20C16BLP	215	20.00	16.00	9.00	SCE-20P16	30	17.00	13.00
SCE-20C20ALP	223	20.00	20.00	7.00	SCE-20P20	35	17.00	17.0
SCE-20C20BLP	239	20.00	20.00	9.00	SCE-20P20	35	17.00	17.00
SCE-24C20ALP	244	24.00	20.00	7.00	SCE-24P20	45	21.00	17.00
SCE-24C20BLP	263	24.00	20.00	9.00	SCE-24P20	45	21.00	17.00
SCE-24C24ALP	269	24.00	24.00	7.00	SCE-24P24	53	21.00	21.00
SCE-24C24BLP	289	24.00	24.00	9.00	SCE-24P24	53	21.00	21.00
SCE-24C24CLP	326	24.00	24.00	11.00	SCE-24P24	53	21.00	21.00
SCE-30C20ALP	275	30.00	20.00	7.00	SCE-30P20	55	27.00	17.00

Ordering Example: SCE-20C16ALP *Type 12 Large Continuous Hinge Enclosure,* ***$201***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 12 FREE-STANDING SINGLE-DOOR SINGLE-ACCESS ENCLOSURES

NEW

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.104" Carbon Steel or 304 Stainless Steel
- Concealed Hinge
- Flange Trough Collar Around All Sides of Door Opening
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Lifting Eyes for Easy Handling
- Black Zinc Die Cast Keylocking/ Padlocking Handle
- Oil Resistant Gasket
- Ground Stud on Door

Starts at $678

SCE-602418FS, $678, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SINGLE-ACCESS CARBON STEEL ENCLOSURES					
SCE-602418FS	$678	Type 12 free-standing single door	60.00	24.0	18.00
SCE-603624FS	899	Type 12 free-standing single door	60.00	36.00	24.00
SCE-722418FS	752	Type 12 free-standing single door	72.00	24.0	18.00
SCE-722424FS	836	Type 12 free-standing single door	72.00	24.0	24.00
SCE-723018FS	829	Type 12 free-standing single door	72.00	30.00	18.00
SINGLE-ACCESS 304 STAINLESS STEEL ENCLOSURES					
SCE-602418SSFS	$2985	Type 12 free-standing single door	60.00	24.0	18.00
SCE-603624SSFS	3955	Type 12 free-standing single door	60.00	36.00	24.00
SCE-722418SSFS	3309	Type 12 free-standing single door	72.00	24.0	18.00
SCE-722424SSFS	3677	Type 12 free-standing single door	72.00	24.0	24.00
SCE-723018SSFS	3647	Type 12 free-standing single door	72.00	30.00	18.00

Ordering Example: SCE-602418FS *Type 12 Free Standing Single-Door, Single-Access Enclosure,* ***$678***

TYPE 12 FREE STANDING TWO-DOOR SINGLE-ACCESS ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.104" Carbon Steel or 304 Stainless Steel
- Concealed Hinge
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Lifting Eyes for Easy Handling
- Black Zinc Die Cast Keylocking/ Padlocking Handle
- Flange Trough Collar Around All Sides of Door Opening
- Oil Resistant Gasket
- Ground Stud on Door

Starts at $1229

SCE-604818FSD, $1229, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SINGLE-ACCESS CARBON STEEL ENCLOSURES					
SCE-604818FSD	$1229	Type 12 free-standing two door	60.00	48.00	18.00
SCE-724818FSD	1353	Type 12 free-standing two door	72.00	48.00	18.00
SCE-724824FSD	1466	Type 12 free-standing two door	72.00	48.00	24.00
SCE-726018FSD	1523	Type 12 free-standing two door	72.00	60.00	18.00
SCE-726024FSD	1647	Type 12 free-standing two door	72.00	60.00	24.00
SINGLE-ACCESS 304 STAINLESS STEEL ENCLOSURES					
SCE-604818SSFSD	$5407	Type 12 free-standing two door	60.00	48.00	18.00
SCE-724818SSFSD	5957	Type 12 free-standing two door	72.00	48.00	18.00
SCE-724824SSFSD	6453	Type 12 free-standing two door	72.00	48.00	24.00
SCE-726018SSFSD	6700	Type 12 free-standing two door	72.00	60.00	18.00
SCE-726024SSFSD	7250	Type 12 free-standing two door	72.00	60.00	24.00

Ordering Example: SCE-604818FSD *Type 12 Free Standing Two-Door, Single-Access Enclosure,* ***$1229***

NEW TYPE 12 FREE-STANDING, SINGLE-DOOR DUAL-ACCESS ENCLOSURES

- 0.104" Carbon Steel or 304 Stainless Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Lifting Eyes for Easy Handling
- Black Zinc Die Cast Keylocking/ Padlocking Handle

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- Concealed Hinge
- Flange Trough Collar Around All Sides of Door Opening
- Oil Resistant Gasket

Starts at $1476

SCE-722424FSDA, $1476, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
DUAL ACCESS CARBON STEEL ENCLOSURES					
SCE-722424FSDA	$1476	Type 12 free-standing single-door	72.00	24.00	24.00
SCE-722430FSDA	1623	Type 12 free-standing single-door	72.00	24.00	30.00
SCE-722436FSDA	1772	Type 12 free-standing single-door	72.00	24.00	36.00
SCE-723024FSDA	1624	Type 12 free-standing single-door	72.00	30.00	24.00
SCE-723624FSDA	1772	Type 12 free-standing single-door	72.00	36.00	24.00
DUAL ACCESS 304 STAINLESS STEEL ENCLOSURES					
SCE-722424SSFSDA	$5312	Type 12 free-standing single-door	72.00	24.00	24.00
SCE-722430SSFSDA	5841	Type 12 free-standing single-door	72.00	24.00	30.00
SCE-722436SSFSDA	6378	Type 12 free-standing single-door	72.00	24.00	36.00
SCE-723024SSFSDA	5845	Type 12 free-standing single-door	72.00	30.00	24.00
SCE-723624SSFSDA	6378	Type 12 free-standing single-door	72.00	36.00	24.00

Ordering Example: SCE-722424FSDA *Type 12 Free Standing Single-Door, Dual-Access, Carbon Steel Enclosure,* ***$1476***

TYPE 12 FREE-STANDING, TWO-DOOR, DUAL-ACCESS ENCLOSURES

- 0.104" Carbon Steel or 304 Stainless Steel
- Seams Continuously Welded and Ground Smooth, No Holes or Knockouts
- Lifting Eyes for Easy Handling

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- Black Zinc Die Cast Keylocking/Padlocking Handle
- Concealed Hinge
- Flange Trough Collar Around All Sides of Door Opening
- Oil Resistant Gasket

Starts at $2551

SCE-724824FSDAD, $2551, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
DUAL ACCESS CARBON STEEL ENCLOSURES					
SCE-724824FSDAD	$2551	Type 12 free-standing two-door	72.00	48.00	24.00
SCE-726024FSDAD	2866	Type 12 free-standing two-door	72.00	60.00	24.00
SCE-726036FSDAD	3298	Type 12 free-standing two-door	72.00	60.00	36.00
SCE-727224FSDAD	3181	Type 12 free-standing two-door	72.00	72.00	24.00
SCE-907224FSDAD	3653	Type 12 free-standing two-door	90.00	72.00	24.00
DUAL ACCESS 304 STAINLESS STEEL ENCLOSURES					
SCE-724824SSFSDAD	$9181	Type 12 free-standing two-door	72.00	48.00	24.00
SCE-726024SSFSDAD	10,379	Type 12 free-standing two-door	72.00	60.00	24.00
SCE-726036SSFSDAD	11,871	Type 12 free-standing two-door	72.00	60.00	36.00
SCE-727224SSFSDAD	11,450	Type 12 free-standing two-door	72.00	72.00	24.00
SCE-907224SSFSDAD	13,148	Type 12 free-standing two-door	90.00	72.00	24.00

Ordering Example: SCE-724824FSDAD *Type 12 Free-Standing, Two-Door, Dual-Access, Carbon Steel Enclosure,* ***$2551***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 12 MULTI-DOOR STEEL FREE STANDING ENCLOSURES

NEW

Starts at $3483

SCE-86M3E, $3483, shown smaller than actual size.

- 0.125" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Heavy Duty Lifting Eyes
- Black Zinc Die Cast Padlocking Handle
- Concealed Hinge
- Mechanical Interlock
- Far Right Hand Door is Main Door
- Oil-Resistant Door Gasket
- Ground Stud on Door
- Flange Trough Collar Around All Sides of Door Opening

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 12 MULTI-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-86M3E	$3483	86.00	112.00	14.00	SCE-82P76	Included	78.00	72.00
					SCE-82P37	Included	78.00	33.75
SCE-86M3E20	$3848	86.00	112.00	20.00	SCE-82P76	Included	78.00	72.00
					SCE-82P37	Included	78.00	33.75
SCE-86M4E	$4371	86.00	149.19	14.00	SCE-82P76(2)	Included	78.00	72.00
SCE-86M4E	$4792	86.00	149.19	20.00	SCE-82P76(2)	Included	78.00	72.00
SCE-86M5E	$5263	86.00	187.00	14.00	SCE-82P76(2)	Included	78.00	72.00
					SCE-82P37	Included	78.00	33.75
SCE-86M5E20	$5812	86.00	187.00	20.00	SCE-82P76(2)	Included	78.00	72.00
					SCE-82P37	Included	78.00	33.75

Ordering Example: SCE-86M3E *Type 12 Multi-Door Carbon Steel Free-Standing Enclosure,* ***$3483***

TYPE 4 ENVIROLINE® SERIES SINGLE-DOOR ENCLOSURES

Starts at $131

SCE-12EL1206LP, $131, shown smaller than actual size.

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Flange Trough Collar Around All Sides of Door Opening
- Oil-Resisitant Gasket
- Concealed Hinge
- Mounting Holes in Back of Enclosure
- Mounting Hardware, Sealing Washer and Hole Plug Included
- Ground Studs on Door and Body
- Black Quarter Turn Latches

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 ENVIROLINE SERIES SINGLE-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-12EL1206LP	$131	12.00	12.00	6.00	SCE-12DLP12	$10	9.00	9.00
SCE-12EL2406LP	157	12.00	24.00	6.00	SCE-12P24	21	9.00	21.00
SCE-16EL1206LP	139	16.00	12.00	6.00	SCE-16P12	11	13.00	9.00
SCE-16EL1208LP	147	16.00	12.00	8.00	SCE-16P12	11	13.00	9.00
SCE-16EL1408LP	151	16.00	14.00	8.00	SCE-16DLP14	13	13.00	11.00
SCE-16EL1606LP	150	16.00	16.00	6.00	SCE-16P16	19	13.00	13.00
SCE-16EL1608LP	168	16.00	16.00	8.00	SCE-16P16	19	13.00	13.00
SCE-16EL2006LP	169	16.00	20.00	6.00	SCE-20P16	23	17.00	13.00
SCE-16EL2008LP	170	16.00	20.00	8.00	SCE-20P16	23	17.00	13.00
SCE-20EL1206LP	150	20.00	12.00	6.00	SCE-20P12	17	17.00	9.00

Ordering Example: SCE-12EL1206LP *Type 4 Enviroline Series Single-Door Enclosure,* ***$131***

NEW TYPE 1 ENCLOSURES WITH KNOCKOUTS

- 0.060 and 0.075" Carbon Steel
- Concealed Hinges
- Spot Weld Construction
- Rain Cap
- Mounting Hole in Back of Enclosure
- Provisions For Subplate
- Black Quarter Turn Latches
- Doors Open 180°
- Black Quarter Turn Latch with Padlocking Provisions
- Oil Resistant Gasket
- Ground Studs On Door And Body
- ⅜-16 Grounding Kit
- Subplate Mounting Hardware
- Optional Mounting Straps Svailable

Starts at $128

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

SCE-18N1606N-T, $128 shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 1 ENCLOSURES WITH KNOCKOUTS

		ENCLOSURES				SUB-PANEL	
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	LIST PRICE	HEIGHT (D)	WIDTH (E)
SCE-18N1606NK-T	$128	18.00	16.00	6.00	Included	16.00	14.00
SCE-18N1606NK-B	128	18.00	16.00	6.00	Included	16.00	14.00
SCE-18N1606NK-O	128	18.00	16.00	6.00	Included	16.00	14.00
SCE-24N2006NK-T	152	24.00	20.00	6.00	Included	22.00	18.00
SCE-24N2006NK-B	152	24.00	20.00	6.00	Included	22.00	18.00
SCE-24N2006NK-O	152	24.00	20.00	6.00	Included	22.00	18.00
SCE-36N2406NK-T	234	36.00	24.00	6.00	Included	34.00	22.00
SCE-36N2406NK-B	234	36.00	24.00	6.00	Included	34.00	22.00
SCE-36N2406NK-O	234	36.00	24.00	6.00	Included	34.00	22.00

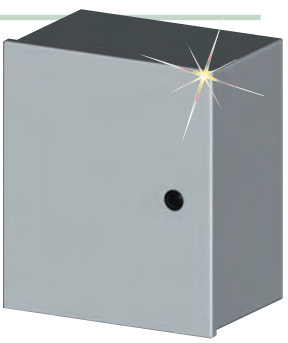
Ordering Example: SCE-18N1606NK-T *Type 1 Enclosure with Knockout,* ***$128***

TYPE 1 SINGLE-DOOR ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.060 and 0.075" Carbon Steel
- Spot Weld Construction
- Concealed Hinges
- Standoffs Provided for Mounting Optional Panels
- Black Quarter Turn Latches
- Doors Open 180°
- Black Quarter Turn Latches
- Latches Are Opened or Closed with a Screwdriver
- Ground Studs On Door
- Mounting Holes in Back of Enclosure
- Subplate Mounting Hardware
- Tamper-Resistant Inserts Available
- Optional Mounting Straps Available

Starts at $19



SCE-6N604LP, $19,shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 1 SINGLE-DOOR ENCLOSURES

	ENCLOSURES				SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-6N604LP	$19	6.00	6.00	4.00	SCE-6N6MP	$2	4.00	4.00
SCE-8N604LP	21	8.00	6.00	4.00	SCE-8N6MP	2	6.00	4.00
SCE-8N804LP	24	8.00	8.00	4.00	SCE-8N8MP	2	6.00	6.00
SCE-8N806LP	26	8.00	8.00	6.00	SCE-8N8MP	2	6.00	6.00
SCE-10N804LP	26	10.00	8.00	4.00	SCE-10N8MP	3	8.00	6.00
SCE-10N806LP	29	10.00	8.00	6.00	SCE-10N8MP	3	8.00	6.00
SCE-10N1004LP	29	10.00	10.00	4.00	SCE-10N10MP	3	8.00	8.00
SCE-10N1006LP	32	10.00	10.00	6.00	SCE-10N10MP	3	8.00	8.00
SCE-12N1004LP	32	12.00	10.00	4.00	SCE-12N10MP	4	10.00	8.00
SCE-12N1006LP	35	12.00	10.00	6.00	SCE-12N10MP	4	10.00	8.00
SCE-12N1204LP	35	12.00	12.00	4.00	SCE-12N12MP	4	10.00	10.00
SCE-12N1206LP	38	12.00	12.00	6.00	SCE-12N12MP	4	10.00	10.00
SCE-12N1208LP	43	12.00	12.00	8.00	SCE-12N12MP	4	10.00	10.00
SCE-14N1204LP	42	14.00	12.00	4.00	SCE-14N12MP	5	12.00	10.00

Ordering Example: SCE-6N604LP *Type 1 Single-Door Enclosure,* ***$19***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 3R HINGED COVER ENCLOSURES

NEW

- 0.060 and 0.075" Galvannealed Steel
- Concealed Hinges
- Spot Weld Construction
- Rain Cap
- Mounting Hole In Back of Enclosure

- Provisions for Subplate
- Black Quarter Turn Latches
- Doors Open 180°
- Black Quarter Turn Latch with Padlocking Provisions
- Oil Resistant Gasket
- Ground Studs on Door and Body
- ⅜-16 Grounding Kit
- Subplate Mounting Hardware
- Optional Mounting Straps Available

Starts at $57

SCE-12R1206LP, $57, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 3R HINGED COVER ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-12R1206LP	$57	12.00	12.00	6.00	SCE-12DLP12	$10	9.00	9.00
SCE-12R1208LP	58	12.00	12.00	8.00	SCE-12DLP12	10	9.00	9.00
SCE-16R1206LP	74	16.00	12.00	6.00	SCE-16P12	11	13.00	9.00
SCE-16R1208LP	75	16.00	12.00	8.00	SCE-16P12	11	13.00	9.00
SCE-20R1606LP	96	20.00	16.00	6.00	SCE-20P16	23	17.00	13.00
SCE-20R1608LP	101	20.00	16.00	8.00	SCE-20P16	23	17.00	13.00
SCE-24R2006LP	147	24.00	20.00	6.00	SCE-24P20	34	21.00	17.00
SCE-24R2008LP	154	24.00	20.00	8.00	SCE-24P20	34	21.00	17.00
SCE-24R2012LP	165	24.00	20.00	12.00	SCE-24P20	34	21.00	17.00
SCE-24R2016LP	188	24.00	20.00	16.00	SCE-24P20	34	21.00	17.00
SCE-30R2408LP	203	30.00	24.00	8.00	SCE-30P24	48	27.00	21.00

Ordering Example: SCE-12R1206LP** Type 3R Hinged Cover Enclosure, **$57

TYPE 3R SCREW COVER ENCLOSURES

- 0.060" Galvannealed Steel
- Spot Weld Construction
- Continuous Hinge with Stainless Steel Hinge Pin

- Rain Cap
- Mounting Hole In Back of Enclosure
- Slip On Removable Screw
- No Gasket
- No Subpanel or Provisions
- Ground Studs on Door and Body
- Optional Mounting Straps Available

Starts at $24

SCE-4R44, $24, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SCE-4R44	$24	Type 3R screw cover	4.00	4.00	4.00
SCE-6R64	25	Type 3R screw cover	6.00	6.00	4.00
SCE-6R66	26	Type 3R screw cover	6.00	6.00	6.00
SCE-8R64	29	Type 3R screw cover	8.00	6.00	4.00
SCE-8R66	32	Type 3R screw cover	8.00	6.00	6.00
SCE-10R84	36	Type 3R screw cover	10.00	8.00	4.00
SCE-10R86	38	Type 3R screw cover	10.00	8.00	6.00
SCE-10R104	43	Type 3R screw cover	10.00	10.00	4.00
SCE-10R106	50	Type 3R screw cover	10.00	10.00	6.00
SCE-12R104	54	Type 3R screw cover	12.00	10.00	4.00
SCE-12R106	56	Type 3R screw cover	12.00	10.00	6.00
SCE-12R124	59	Type 3R screw cover	12.00	12.00	4.00
SCE-12R126	63	Type 3R screw cover	12.00	12.00	6.00

Ordering Example: SCE-4R44,** Type 3R Screw Cover Enclosure, **$24.

NEW TYPE 4 ENVIROLINE® SERIES SINGLE-DOOR ENCLOSURES FOR FLANGE-MOUNTED DISCONNECTS

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Flange Trough Collar Around All Sides Of Door Opening
- Oil-Resistant Gasket
- Disconnect Cutout Provided On Flange
- Concealed Hinge
- 3-Point Latching Mechanism
- Mounting Holes on Back of Enclosure
- Mounting Hardware, Sealing Washer and Hole Plug Included
- Ground Stud On Door and Body
- Black Zinc Die Cast Coinproof/ Padlocking Handle
- Disconnect Switch (or Circuit Breaker) and Operating Mechanism Are Not Furnished with This Enclosure

Starts at $349

SCE-20XEL2108LP, $349, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 ENVIROLINE SERIES SINGLE-DOOR FOR FLANGE MOUNTED DISCONNECTS

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-20XEL2108LP	$349	20.00	21.38	8.00	SCE-20P20	$35	17.00	17.00
SCE-20XEL2110LP	367	20.00	21.38	10.00	SCE-20P20	35	17.00	17.00
SCE-24XEL2108LP	376	24.00	21.38	8.00	SCE-24P20	45	21.00	17.00
SCE-24XEL2508LP	405	24.00	25.38	8.00	SCE-24P24	53	21.00	21.00
SCE-24XEL2510LP	425	24.00	25.38	10.00	SCE-24P24	53	21.00	21.00
SCE-30XEL2508LP	450	30.00	25.38	8.00	SCE-30P24	63	27.00	21.00

Ordering Example: SCE-20XEL2108LP *Type 4 Enviroline Series Single-Door Enclosure for Flange Mounted Disconnects,* ***$349***

TYPE 4 SINGLE-DOOR ENCLOSURES FOR FLANGE-MOUNTED DISCONNECTS

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Continuous Hinge With Stainless Steel Hinge Pin
- Stainless Steel Clamps On 3 Sides of Door
- Flange Trough Collar Around All Sides of Door Opening
- Oil-Resistant Gasket
- Disconnect Cutout Provided on Flange
- Ground Stud On Door
- No Door Stiffener Required
- Disconnect Switch (or Circuit Breaker) and Operating Mechanism Are Not Furnished with This Enclosure

Starts at $456

SCE-24HS2108LP, $456 shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 SINGLE-DOOR FLANGE-MOUNTED DISCONNECTS

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-24HS2108LP	$456	24.00	21.38	8.00	SCE-24P20	$45	21.00	17.00
SCE-24HS2508LP	494	24.00	25.38	8.00	SCE-24P24	53	21.00	21.00
SCE-30HS2508LP	546	30.00	25.38	8.00	SCE-30P24	63	27.00	21.00
SCE-36HS2508LP	601	36.00	25.38	8.00	SCE-36P24	75	33.00	21.00
SCE-36HS3108LP	677	36.00	31.38	8.00	SCE-36P30	101	33.00	27.00
SCE-36HS3112LP	749	36.00	31.38	12.00	SCE-36P30	101	33.00	27.00
SCE-42HS3112LP	822	42.00	31.38	12.00	SCE-42P30	116	33.00	27.00
SCE-42HS3712LP	915	42.00	37.38	12.00	SCE-42P36	136	39.00	33.00
SCE-48HS3712LP	995	48.00	37.38	12.00	SCE-48P36	154	45.00	33.00
SCE-60HS3712LP	1158	60.00	37.38	12.00	SCE-60P36	189	57.00	33.00

Ordering Example: SCE-24HS2108LP *Type 4 Single-Door Enclosure for Flange-Mounted Disconnects,* ***$456***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 4 ENVIROLINE® JUNCTION ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.063" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Flange Trough Collar Around All Sides of Door Opening
- Oil-Resistant Gasket
- Removable Stainless Steel Hinge Pins
- Sealing Washers and Hole Plugs Included
- Ground Stud on Door and Body

NEW

Starts at $28

SCE-604ELJ, $28, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 ENVIROLINE JUNCTION ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-604ELJ	$28	6.00	4.00	4.00	SCE-6P4J	$3	5.25	3.25
SCE-606ELJ	30	6.00	6.00	4.00	SCE-6P6J	3	5.25	5.25
SCE-806ELJ	37	8.00	6.00	4.00	SCE-8P6J	3	7.25	5.25
SCE-8066ELJ	44	8.00	6.00	6.00	SCE-8P6J	3	7.25	5.25
SCE-1008ELJ	54	10.00	8.00	4.00	SCE-10P8J	4	9.25	7.25
SCE-10086ELJ	57	10.00	8.00	6.00	SCE-10P8J	4	9.25	7.25
SCE-1210ELJ	62	12.00	10.00	6.00	SCE-12P10J	6	11.25	9.25
SCE-12108ELJ	71	12.00	10.00	8.00	SCE-12P10J	6	11.25	9.25
SCE-1212ELJ	74	12.00	12.00	6.00	SCE-12P12J	7	11.25	11.25
SCE-1412ELJ	84	14.00	12.00	6.00	SCE-14P12J	8	13.25	11.25

Ordering Example: SCE-604ELJ** Type 4 Enviroline Junction Enclosure, **$28

TYPE 4X 304 AND 316 STAINLESS STEEL ENVIROLINE® JUNCTION ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.063" Stainless Steel Type 304 and 316
- Seams Continuously Welded and Ground Smooth
- Flange Trough Collar Around All Sides of Door Opening
- Oil-Resistant Gasket
- Removable Stainless Steel Hinge Pins
- Sealing Washers and Hole Plugs Included
- Ground Stud on Door and Body

Starts at $75

SCE-604ELJSS, $75, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

ENCLOSURES					SUB-PANEL	
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE
TYPE 4X 304 STAINLESS STEEL ENVIROLINE JUNCTION ENCLOSURES						
SCE-604ELJSS	$75	6.00	4.00	4.00	SCE-6P4J	$2
SCE-606ELJSS	84	6.00	6.00	4.00	SCE-6P6J	3
SCE-806ELJSS	100	8.00	6.00	4.00	SCE-8P6J	3
SCE-8066ELJSS	121	8.00	6.00	6.00	SCE-8P6J	3
SCE-1008ELJSS	201	10.00	8.00	4.00	SCE-10P8J	4
TYPE 4X 316 STAINLESS STEEL ENVIROLINE JUNCTION ENCLOSURES						
SCE-604ELJSS6	$120	6.00	4.00	4.00	SCE-6P4J	2
SCE-606ELJSS6	135	6.00	6.00	4.00	SCE-6P6J	3
SCE-806ELJSS6	161	8.00	6.00	4.00	SCE-8P6J	3
SCE-8066ELJSS6	196	8.00	6.00	6.00	SCE-8P6J	3
SCE-1008ELJSS6	325	10.00	8.00	4.00	SCE-10P8J	4

Ordering Example: SCE-604ELJSS** Type 4X 304 Stainless Steel Enviroline Junction Enclosure, **$75

NEW TYPE 4 ENVIROLINE® SERIES TWO-DOOR STEEL ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.104" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket
- Flange Trough Collar Around All Sides of Door Opening
- Concealed Hinge
- Removable and Inchangeable Doors
- Black Quarter Turn Latches
- Removable Print Pocket
- Lifting Eyes for Easy Handling
- Ground Studs on Door and Body
- Collar Studs Provided for Mounting Optional Panels
- 12" Removable Floor Stands
- Removable Centerposts
- No Door Stiffeners Required
- Padlocking or Keylocking Handle with 3-Point Operating Mechanism and Tamper-Resistant Hardware is Available
- Provision for Mechanical Interlock
- Interchangeable Latches and Handles Available

Starts at $1429

SCE-60EL4812LP, $1429, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 ENVIROLINE SERIES TWO-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-60EL4812LP	$1429	60.00	48.00	12.00	SCE-60P48	$202	56.00	44.00
SCE-60EL4818LP	1457	60.00	48.00	18.00	SCE-60P48	202	56.00	44.00
SCE-60EL6012LP	1566	60.00	60.00	12.00	SCE-60P60	250	56.00	56.00
SCE-60EL6018LP	1595	60.00	60.00	18.00	SCE-60P60	250	56.00	56.00
SCE-72EL6012LP	1751	72.00	60.00	12.00	SCE-72P60	298	68.00	56.00
SCE-72EL6018LP	1733	72.00	60.00	18.00	SCE-72P60	298	68.00	56.00
SCE-72EL7212LP	1963	72.00	72.00	12.00	SCE-72P72	355	68.00	68.00
SCE-72EL7218LP	2015	72.00	72.00	18.00	SCE-72P72	355	68.00	68.00
SCE-72EL7224LP	2279	72.00	72.00	24.00	SCE-72P72	355	68.00	68.00

Ordering Example: SCE-60EL4812LP *Type 4 Enviroline Series Two-Door Enclosure,* ***$1429***

TYPE 4 ENVIROLINE® SERIES FREE-STANDING STEEL ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

Starts at $774

SCE-72EL2418FS, $774, shown smaller than actual size.

- 0.104" Carbon Steel
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket
- Flange Trough Collar Around All Sides of Door Opening
- Concealed Hinge
- Removable and Interchangeable Doors
- Black Quarter Turn Latches
- Removable Print Pocket
- Lifting Eyes for Easy Handling
- Ground Studs on Door and Body
- Mounting Channels Welded Horizontally on Sides of Interior Body at Top, Bottom and Middle for Mounting Optional Panels or Rack Mounting Angles
- No Door Stiffeners
- Padlocking or Keylocking Handle with 3-Point Operating Mechanism and Tamper-Resistant Hardware is Available
- Interchangeable Latches and Handles Available

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4 FREE STANDING STEEL ENCLOSURES

MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SCE-72EL2418FS	$774	72.00	24.00	18.00
SCE-72EL3024FS	947	72.00	30.00	24.00
SCE-72EL3624FS	1033	72.00	36.00	24.00

Ordering Example: SCE-72EL2418FS *Type 4 Enviroline Free Standing Carbon Steel Enclosure,* ***$774***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 4X 304 AND 316 STAINLESS STEEL ENVIROLINE® FREE-STANDING SINGLE-DOOR SINGLE-ACCESS ENCLOSURES

NEW

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.104" Stainless Steel Type 304 and 316
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket
- Flange Trough Collar Around All Sides of Door Opening
- Stainless Steel Concealed Hinge
- Removable and Interchangeable Doors
- Black Quarter Turn Latches
- Removable Print Pocket
- Lifting Eyes for Easy Handling
- Ground Stud On Door and Body
- Mounting Channels Welded Horizontally On Sides of Interior Body At Top, Bottom and Middle for Mounting Optional Panels or Rack Mounting Angles
- No Door Stiffener Required
- Padlocking or Keylocking Handles with 3-Point Operating Mechanism, and Tamper-Resistant Hardware is Available

Starts at $3894

SCE-72EL2418SSFS, $3894, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

MODEL NO.	PRICE	DESCRIPTION	HEIGHT (A)	WIDTH (B)	DEPTH (C)
304 STAINLESS STEEL SINGLE ACCESS ENCLOSURES					
SCE-72EL2418SSFS	$3894	Type 4X free-standing single-door	72.00	24.00	18.00
SCE-72EL3024SSFS	5130	Type 4X free-standing single-door	72.00	30.00	24.00
SCE-72EL3624SSFS	5646	Type 4X free-standing single-door	72.00	36.00	24.00
316 STAINLESS STEEL SINGLE ACCESS ENCLOSURES					
SCE-72EL2418SS6FS	$4673	Type 4X free-standing single-door	72.00	24.00	18.00
SCE-72EL3024SS6FS	6159	Type 4X free-standing single-door	72.00	30.00	24.00
SCE-72EL3624SS6FS	6775	Type 4X free-standing single-door	72.00	36.00	24.00

Ordering Example: SCE-72EL2418SSFS *Type 4X 304 Stainless Steel Enviroline Free-Standing Single-Door Single-Access Enclosure,* ***$3894***

TYPE 4X STAINLESS STEEL 30.5 mm PUSHBUTTON ENCLOSURES

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

Starts at $134

SCE-1PBSS, $134, shown smaller than actual size.

- 0.075" Stainless Steel Type 304
- Seams Continuously Welded and Ground Smooth
- Captivated Cover Screws Thread Into Sealed Wells
- 4-Way Pushbutton Holes Accept All Brands of Oil-Tight Pushbuttons, Switches and Pilot Lights
- Hole Diameter is 30.5 mm (1.20")
- Immediate Removal of is Permitted
- Oil-Resistant Door Gasket
- Can Be Special Ordered in Type 316 Stainless Steel

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4X STAINLESS STEEL 30.5 mm PUSHBUTTON ENCLOSURES				
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)
SCE-1PBSS	$134	3.50	3.25	2.75
SCE-2PBSS	168	5.75	3.25	2.75
SCE-3PBSS	183	8.00	3.25	2.75
SCE-4PBSS	207	10.25	3.25	2.75
SCE-4PBXSS	247	10.00	4.00	4.75
SCE-4SPBSS	228	7.25	6.25	3.00
SCE-6PBSS	272	9.50	6.25	3.00
SCE-9PBSS	308	9.50	8.50	3.00
SCE-12PBSS	351	11.75	8.50	3.00
SCE-16PBXSS	442	11.75	10.75	4.75

Ordering Example: SCE-1PBSS *Type 4X Stainless Steel 30.5mm Pushbutton Enclosure,* ***$134***

NEW TYPE 4X 304 STAINLESS STEEL SINGLE-DOOR ENCLOSURES

Starts at $405

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Stainless Steel Type 304
- No Holes or Knockouts, Continuously Welded Seams Ground Smooth
- Flange Trough Collar Around All Sides Of Door Opening
- Oil-Resistant Door Gasket
- Collar Studs Provided for Mounting Optional Sub-Panels
- Hasp and Staple For Padlocking
- Stainless Steel Continuous Hinge
- Ground Stud On Door

SCE-16H1206SSLP, $405, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4X 304 STAINLESS STEEL SINGLE-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-16H1206SSLP	$405	16.00	12.00	6.00	SCE-16P12	$11	13.00	9.00
SCE-16H1208SSLP	434	16.00	12.00	8.00	SCE-16P12	11	13.00	9.00
SCE-16H1606SSLP	450	16.00	16.00	6.00	SCE-16P16	19	13.00	13.00
SCE-16H2006SSLP	495	16.00	20.00	6.00	SCE-20P16	23	17.00	13.00
SCE-20H1606SSLP	495	20.00	16.00	6.00	SCE-20P16	23	17.00	13.00
SCE-20H1608SSLP	530	20.00	16.00	8.00	SCE-20P16	23	17.00	13.00
SCE-20H1610SSLP	566	20.00	16.00	10.00	SCE-20P16	23	17.00	13.00
SCE-20H2006SSLP	546	20.00	20.00	6.00	SCE-20P20	27	17.00	17.00
SCE-20H2408SSLP	640	20.00	24.00	8.00	SCE-24P20	34	21.00	17.00
SCE-24H1608SSLP	576	24.00	16.00	8.00	SCE-24P16	25	21.00	13.00

Ordering Example: SCE-16H1206SSLP *Type 4X 304 Stainless Steel Single-Door Enclosure,* ***$405***

TYPE 4X 304 STAINLESS STEEL ENVIROLINE® SERIES ENCLOSURES

Starts at $346

MADE IN USA · UL · CSA · 1 YEAR WARRANTY · RoHS

- 0.075" Stainless Steel Type 304
- Seams Continuously Welded and Ground Smooth
- Flange Trough Collar Around All Sides of Door Opening
- Oil-Resistant Gasket
- Stainless Steel Concealed Hinge
- Mounting Holes In Back of Enclosure
- Mounting Hardware, Sealing Washer and Hole Plug Included
- Ground Studs On Door and Body

SCE-12EL1206SSLP, $346, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4X 304 STAINLESS STEEL ENVIROLINE SERIES ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-12EL1206SSLP	$346	12.00	12.00	6.00	SCE-12DLP	$10	12 9.00	9.00
SCE-12EL2406SSLP	460	12.00	24.00	6.00	SCE-12P24	21	9.00	21.00
SCE-16EL1206SSLP	382	16.00	12.00	6.00	SCE-16P12	11	13.00	9.00
SCE-16EL1208SSLP	408	16.00	12.00	8.00	SCE-16P12	11	13.00	9.00
SCE-16EL1606SSLP	423	16.00	16.00	6.00	SCE-16P16	19	13.00	13.00
SCE-16EL1608SSLP	445	16.00	16.00	8.00	SCE-16P16	19	13.00	13.00

Ordering Example: SCE-12EL1206SSLP *Type 4X 304 Stainless Steel Enviroline Series Enclosure,* ***$346***

Enclosures product line continues to expand, visit omegamation.com for new details!

TYPE 4X 304 AND 316 STAINLESS STEEL TWO-DOOR ENCLOSURES

- 0.104" Stainless Steel Type 304 and 316
- Seams Continuously Welded and Ground Smooth
- Stainless Steel Concealed Hinge
- Oil-Resistant Gasket
- Ground Stud On Door
- 12" Removable Floor Stands
- Hasp and Staple for Padlocking
- Panel Supports
- Heavy Duty Lifting Eyes
- Stainless Steel Clamps On 3 Sides of Door

SCE-62H4812SSLP, $7327, shown smaller than actual size.

NEW

Starts at $7327

MADE IN USA | UL | CSA | 1 YEAR WARRANTY | RoHS

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4X TWO-DOOR 304 STAINLESS STEEL ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-62H4812SSLP	$7327	62.00	48.00	12.00	SCE-60P48	$268	56.00	44.00
SCE-62H6012SSLP	8218	62.00	60.00	12.00	SCE-60P60	331	56.00	56.00
SCE-74H6012SSLP	9859	74.00	60.00	12.00	SCE-72P60	394	68.00	56.00
SCE-74H7212SSLP	10,123	74.00	72.00	12.00	SCE-72P72	470	68.00	56.00

TYPE 4X TWO-DOOR 316 STAINLESS STEEL ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-62H4812SS6LP	$8792	62.00	48.00	12.00	SCE-60P48	$268	56.00	44.00
SCE-62H6012SS6LP	9862	62.00	60.00	12.00	SCE-60P60	331	56.00	56.00
SCE-74H6012SS6LP	11,831	74.00	60.00	12.00	SCE-72P60	394	68.00	56.00
SCE-74H7212SS6LP	12,147	74.00	72.00	12.00	SCE-72P72	470	68.00	68.00

Ordering Example: SCE-62H4812SSLP *Type 4X Two-Door 304 Stainless Steel Enclosure,* ***$7327***

TYPE 4X 304 AND 316 STAINLESS STEEL ENVIROLINE® TWO-DOOR ENCLOSURES

MADE IN USA | UL | CSA | 1 YEAR WARRANTY | RoHS

- 0.104" Stainless Steel Type 304 and 316
- Seams Continuously Welded and Ground Smooth
- Oil-Resistant Gasket
- Stainless Steel Concealed Hinge
- Lifting Eyes for Easy Handling
- Ground Stud On Door and Body
- 12" Removable Floor Stands

Starts at $4495

SCE-60EL4812SSLP, $4495, shown smaller than actual size.

To Order *(Specify Model Number)*

MOST POPULAR MODELS LISTED!

TYPE 4X 304 STAINLESS STEEL ENVIROLINE SERIES TWO-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-60EL4812SSLP	$4495	60.00	48.00	12.00	SCE-60P48	$202	56.00	44.00
SCE-60EL4818SSLP	4768	60.00	48.00	18.00	SCE-60P48	202	56.00	56.00
SCE-60EL6012SSLP	5045	60.00	60.00	12.00	SCE-60P60	250	56.00	56.00
SCE-60EL6018SSLP	5283	60.00	60.00	18.00	SCE-60P60	250	56.00	56.00

TYPE 4X 316 STAINLESS STEEL ENVIROLINE SERIES TWO-DOOR ENCLOSURES

ENCLOSURES					SUB-PANEL			
MODEL NO.	PRICE	HEIGHT (A)	WIDTH (B)	DEPTH (C)	MODEL NO.	PRICE	HEIGHT (D)	WIDTH (E)
SCE-60EL4812SS6LP	$6260	60.00	48.00	12.00	SCE-60P48	$202	56.00	44.00
SCE-60EL4818SS6LP	6640	60.00	48.00	18.00	SCE-60P48	202	56.00	56.00
SCE-60EL6012SS6LP	7026	60.00	60.00	12.00	SCE-60P60	250	56.00	56.00
SCE-60EL6018SS6LP	7359	60.00	60.00	18.00	SCE-60P60	250	56.00	56.00

Ordering Example: SCE-60EL4812SSLP *Type 4X 304 Stainless Steel Enviroline Series Two-Door Enclosure,* ***$4495***

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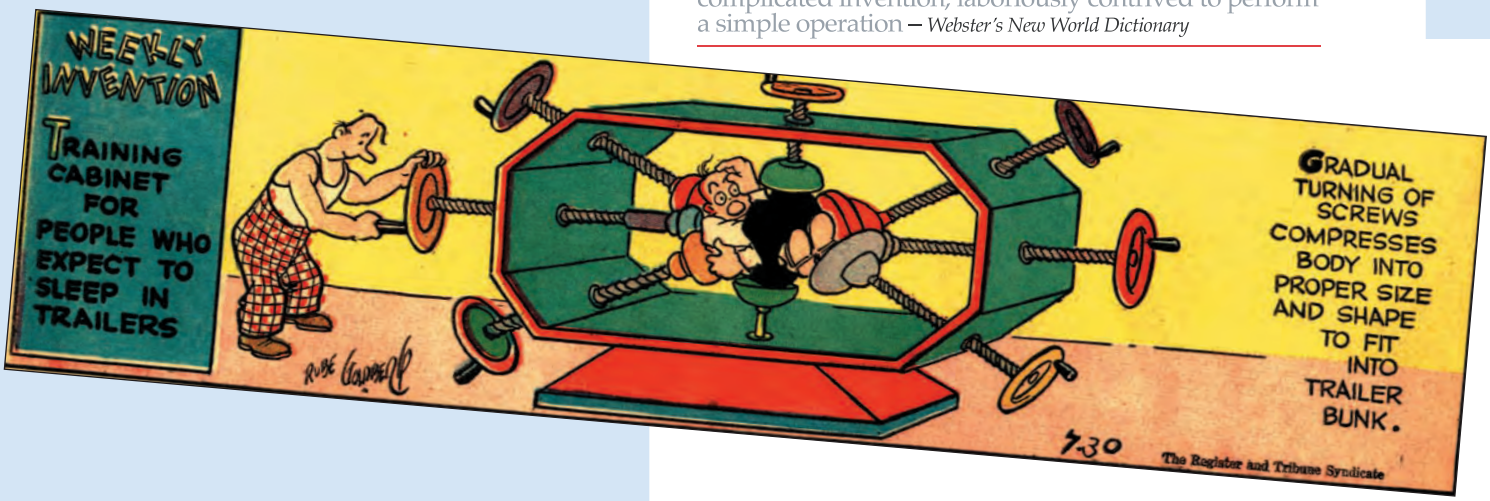
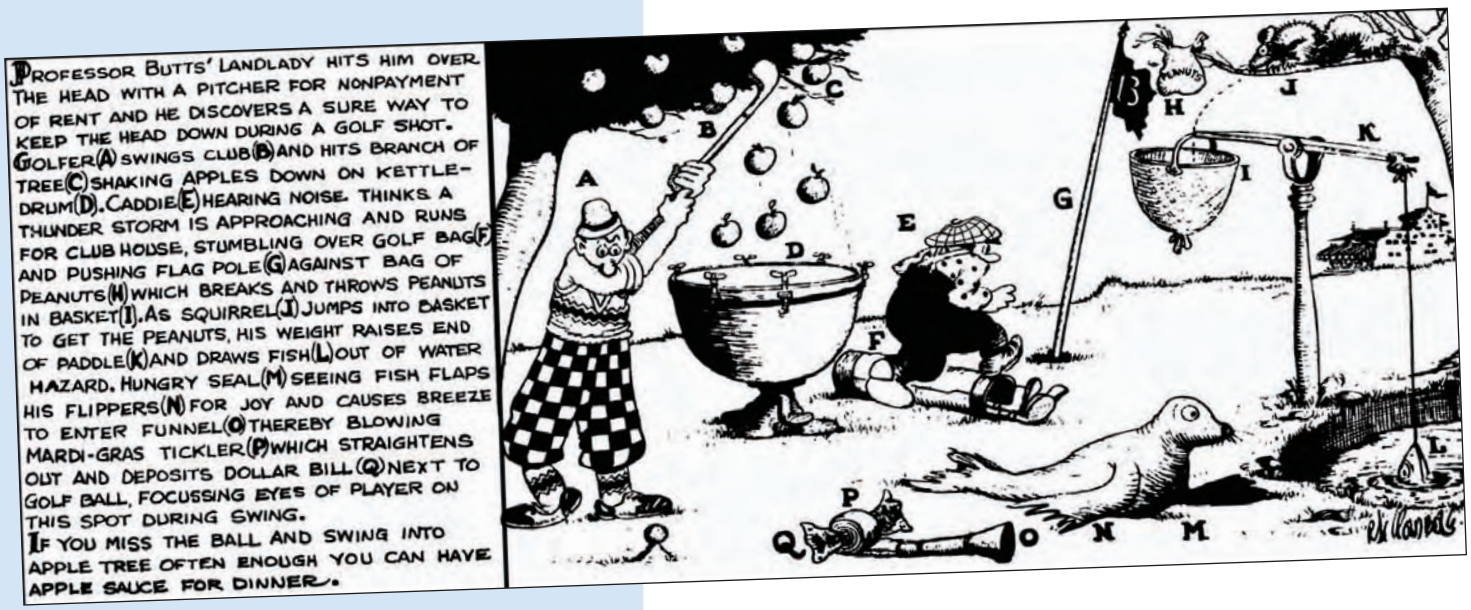
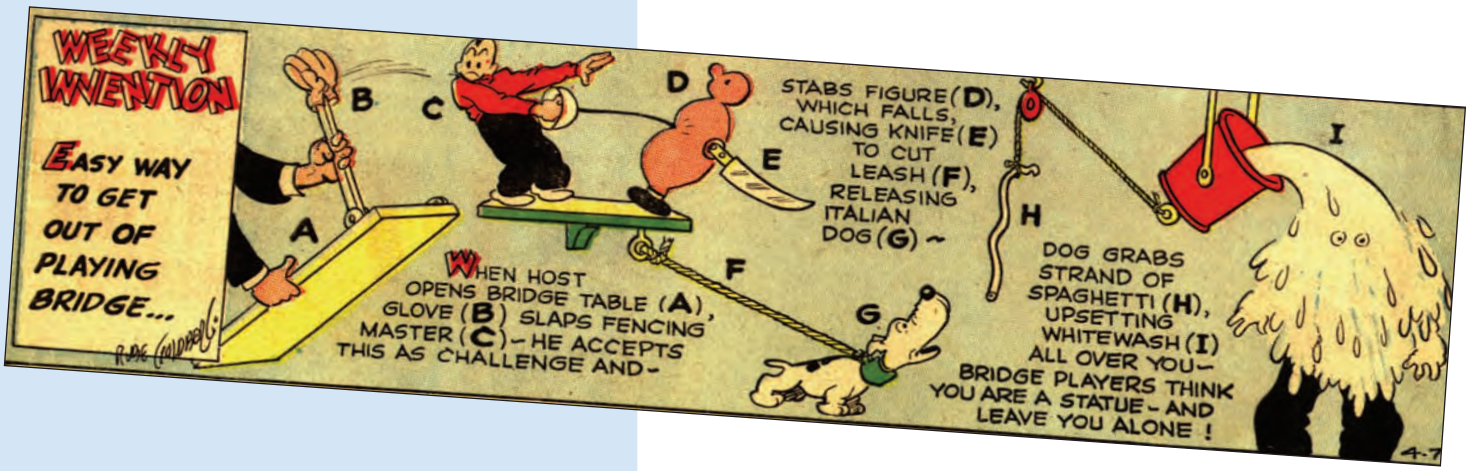
OMEGAMATION™
there was...

RUBE GOLDBERG

Rube Goldberg (rōōb gōld'berg), n. a comically involved, complicated invention, laboriously contrived to perform a simple operation — *Webster's New World Dictionary*







BOOKS ON AUTOMATION

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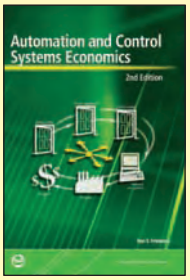

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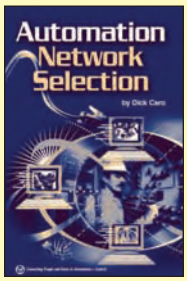

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Jim Pinto
ISBN: 978-1-55617-864-1
Publisher: ISA

If you have heard industry pundit Jim Pinto speak, or read his barbed writings or laugh-out-loud poems, or subscribe to his popular e-newsletter, you'll enjoy his new book. It's loaded with critical analysis of the changing face of industrial automation; predictions about future automation technology trends.

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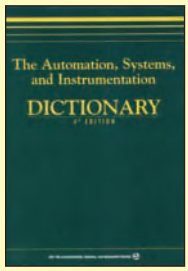

No technical library is complete without this comprehensive dictionary covering the entire vocabulary of automation, systems, and instrumentation. Now in its 4th edition, this authoritative dictionary has been revised and expanded to reflect the latest trends in industrial instrumentation and automation. References to relevant ISA and IEC standards are now included throughout, along with illustrations to enhance the definitions of more difficult terms.

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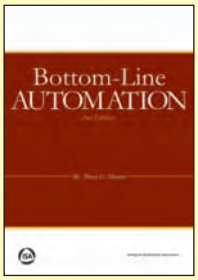
Peter G. Martin
ISBN: 978-1-55617-962-4
Publisher: ISA



This newly revised edition helps today's manufacturing companies face the challenges of a global marketplace where every part of the operation must become more efficient to enhance the bottom line. Based on the results and conclusions of an applied research project of process manufacturing operations directed by the author, Bottom-Line Automation presents an overview of more than 30 years of industry trends.

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Publisher: ISA

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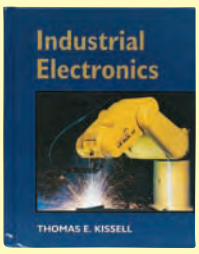

This book discusses solid state devices, programmable controllers, photo electronics, lasers, fiber optics, industrial power supplies, and open and closed loop feedback systems. This text uses applied mathematics; each formula is accompanied by a detailed example. Every chapter provides detailed industrial applications for each device and circuit discussed.

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Ted Williams, Stan Weiner, and Greg McMillan
ISBN: 978-1-55617-957-0
Publisher: ISA

Reasons to Buy This Book: Endorsed by the AMA (Automation Medical Association). Laughter is the best medicine, especially after a hard day's night on startup; Wonderful coloring book for kids. See if they can spot their parents; Inspiring comic book for aspiring automation engineers. The "Great Automator" is the superhero of choice for budding geeks; Inspiring comic book for expiring automation engineers.

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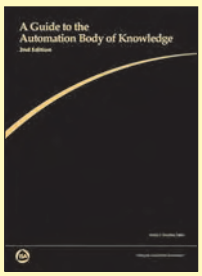
A Guide to the Automation Body of Knowledge, 2nd Edition
Vernon L. Trevathan
ISBN: 978-1-55617-984-6
Publisher: ISA



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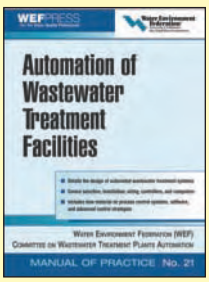
Automation of Wastewater Treatment Facilities
Water Environment Federation
ISBN: 0071479376
Publisher: McGraw-Hill



Especially written for design professionals, Automation of Wastewater Treatment Facilities discusses the selection of instruments, installation, sizing of control elements, and the best choice for controllers and computers for automated wastewater plants.

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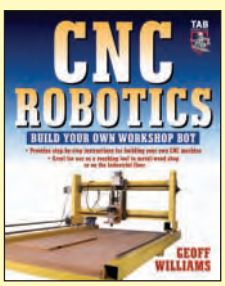
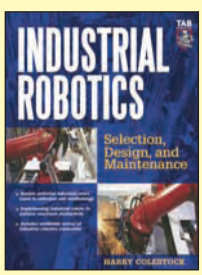
CNC Robotics
Geoff Williams
ISBN: 0071418288
Publisher: McGraw-Hill



Here's the FIRST book to offer step-by-step guidelines that walk the reader through the entire process a building a CNC (Computer Numerical Control) machine from start to finish. Using inexpensive, off-the-shelf parts, readers can build CNC machines with true industrial shop applications such as machining, routing, and cutting—at a fraction of what it would cost to purchase one.

Order No. AB-113 **Price: $34.95**

Industrial Robotics
Harry Colestock
ISBN: 0071440526
Publisher: McGraw-Hill



With the proliferation of many types of robots in recent years, there is a real need to assist engineers, automation manufacturers, and robot aficionados in the proper selection, care, and feeding of a robot to achieve the maximum in productivity. This book does just that, along with classifying robots in accordance to their complexity and function provided. The book is perfect for large corporations as well as smaller "Mom and Pop" shops.

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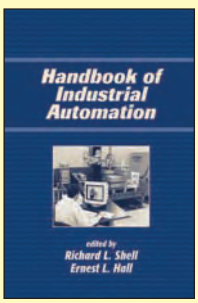
Richard Shell
ISBN: 9780824703738
Publisher: Taylor & Francis



Supplies the most essential concepts and methods necessary to capitalize on the innovations of industrial automation, including mathematical fundamentals, ergonometrics, industrial robotics, government safety regulations, and economic analyses.

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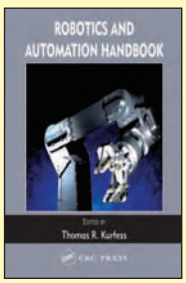
Robotics and Automation Handbook
Thomas R Kurfess
ISBN: 9780849318047
Publisher: CRC Press



The Robotics and Automation Handbook provides a solid foundation for engineers and scientists interested in designing, fabricating, and enabling robotic systems and their various applications. It presents kinetic and dynamic methods for analyzing robotic systems, considering factors such as force and torque. From these analyses, the book develops several controls approaches, including servo actuation, hybrid control, and trajectory planning.

Order No. AB-116 **Price: $149.95**

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