

Signaling Devices - Visual and Audible

Section S

A comprehensive range of signaling products specifically designed for use in areas where harsh environmental conditions prevail and where there is a risk of explosion due to the presence of flammable atmospheres.



S Signaling Devices - Visual and Audible

Table of Contents

Section S of the Eaton's Crouse-Hinds Catalog contains the following product groupings:

Section 1S

Fire Alarm or Emergency Call Points and Heat Detectors

(for use in hazardous areas)

Call points are used for fire alarm activation, evacuation, and process shut-down. Heat detectors are used in turbine/generator skids, switchgear or motor control status rooms, and process tank areas or transmission lines

SM87PBL BG3
SM87BG HD1
PB
BG
BG2

Section 2S

Strobe Lights

(for use in hazardous and non-hazardous areas)

Strobe lights for condition signaling, security alerts, equipment obstruction warnings, and emergency evacuation signaling

XB15 XB12 VWL
XB16 UL XB13 OX2L
SM87 HXB EXFASC VX2L
XB11 EXR OAL
XB4 OWL VAL

Section 3S

Steady-On Beacons

(for use in hazardous areas)

For safety lighting, continuous communication sources, obstacle warnings, exit or entrance lights, and for identifying the location of safety equipment such as showers or emergency telephones

FB4
FL4
FB11 UL
FB12 UL
FB15
SM87 LU3
SM87 LU1
EXSO, EXDSO
VF

Section 4S

Status Lights

(for use in hazardous areas)

For process status, messaging, and alert or emergency condition indication

SM87 SL
XB11 SLUL
XB12 SL, FB12 SL

Section 5S

Speakers and Tone Generators

(for use in hazardous areas)

For plant-wide alarm notifications and audible process alarms

DB1 ETH855, ETH845
DB3 ETH840, ETH640
DB4 ETH
DB5 W2H
DB12 WH
DB15 ESR
DB16 UL

Section 6S

Visual and Audible Combination Units

(for use in hazardous areas)

Strobe light and audible tone generator in one package

DB3 / XB11
DB3 / SM87HX
DB12 / XB13

For Hazardous and Non-hazardous Locations

Visual and Audible Signaling Devices as tough as your environment

- The broadest line of harsh and hazardous signaling, alarm and communication products available in both IEC and NEC designs and certifications.
- Hazardous area call points (fire alarm or emergency notification devices) provide you a unique product offering unequalled by any other manufacturer of hazardous location signaling products.
- Worldwide listings with UL, cUL, ATEX, GOST, CSA and CQST (Chinese) approvals provide customer solutions that the competition can't match.
- Superior enclosure materials, providing unmatched ingress protection and corrosion resistance from the harshest conditions.
- A unique signaling product offering integral visual and audible signaling capability pre-wired for simultaneous output activation.
- Heat detectors for early indication of potential processing problems.

Applications:

- For use in hazardous and non-hazardous areas.
- As visual signals or warning lights.
- To identify the location of safety equipment such as emergency shower, eye wash stations, and emergency telephones, fire extinguishers and emergency stop switches.
- For status indication of machinery or processes.
- To indicate dangerous areas or areas requiring caution.
- To signal dangerous or hazardous conditions.
- Where a high-decibel sound is required for alert or evacuation.

Considerations for Selection:

Environmental:

- What is the hazardous area classification (NEC/CEC) of the location in which the luminaire will be installed?

Signaling Requirements:

- What will the visual signal be used for (communicating, alerting, warning)?

Physical Arrangements:

- Type of luminaire mounting needed.



Manual Call Points



Strobes and Beacons



Horns and Speakers



Combination Units

What Types of Visual Signals are Available?

1. Strobe Lights — Used for signaling or warning of various conditions. Emits a powerful blast of bright light.
2. Rotating Beacons — Used to signal over a large area when the light must be seen from a long distance.
3. Steady-on Beacons — Typically used as a continuous source to warn, communicate or draw attention to an area, machine or process.
4. Stack Lights — Used for multiple indication in one signaling device. Compact and versatile, the three-color (red, amber and green) is most popular.

Lens Color and Their Applications

Most Eaton's Crouse-Hinds strobes, steady, and flashing beacons come in six lens colors: amber, blue, clear, green, magenta and red. Eaton's Crouse-Hinds LED signals come in amber, blue, green, red and, in some cases, white. The following are examples of how various lens colors are used in industrial and commercial signaling environments:

- Amber** - Denotes caution
- Blue** - Used for safety and security
- Clear (or White) and Green** - Used to indicate normal run operation
- Magenta** - Used for radiation alarms
- Red** - Denotes emergency or warning



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Hazardous

Description	Page No.
Fire Alarm or Emergency Call Points	
BG, BG2, BG3	see pages 1222–1228
PB	see pages 1222–1228
SM87	see pages 1222–1228
Heat Detectors	
HD1	see pages 1229–1231



1S Fire Alarm or Emergency Call Points

Hazardous Locations
Weatherproof
Marine

MEDC Series



Class I, Div. 2, Zone 2 Touch-safe coated glass for finger activation.



Class I, Div. 2, Zone 2 Push to activate.



Class I, Div. 1 Push to activate. Key switch to reset.

These manual fire alarm call points have been designed for use in hazardous locations and harsh environmental conditions. They offer:

- The broadest range of hazardous location manual fire alarm activation devices in the industry.
- The compact design, activation choices such as pushbutton or break glass, housing color choices and comprehensive worldwide certifications make this product family a project closer.
- Flexibility as all units accept metric cable or NPT conduit entries, and each unit can be custom designed for a specific fire alarm or emergency activation requirements.

Applications:

- Fire alarm activation
- Emergency evacuation
- Process shut-down


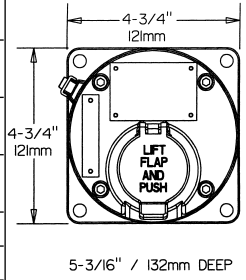
Industries:


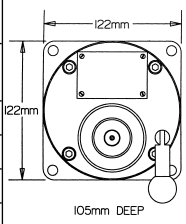
- Liquid natural gas terminals
- Energy exploration
- Chemical
- Refinery
- Power generation

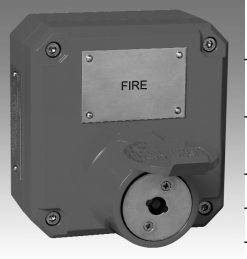
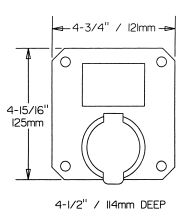
Features and Benefits:

- In-line and end-of-line resistors fitted for use in fire activation circuits
- Optional LED to indicate operation
- Plastic break glass element available—easy activation yet safe to touch
- Corrosion resistant GRP—ideal for marine applications
- Retained stainless steel cover screws—won't corrode and never lose screws
- Optional lift flap for protection

MEDC Series

SM87PBL		Push Button Fire Alarm Call Point—Explosionproof	
	Certification UL Listed for:	UL, CSA, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Marine Grade Alloy Stainless Steel (ATEX only)	
	Entries	Up to 4 x 1/2" or 3/4" NPT	
	Weight	5.5lb/2.5kg	
	Options	Body color, certification	
			
5-3/16" / 132mm DEEP			
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, CSA, Class I, Div. 1, Groups C, D, Zone 1	36200102	SM87PBLAUL3T3B3NNR	Explosion protected, 2 x 1/2" NPT entries, duty label "Fire—Press Here," single pushbutton switch—latching, marine grade alloy, red finish

SM87BG		Break Glass Call Point—Explosionproof	
	Certification Intrinsically Safe Flameproof	ATEX, CSA, GOST-R, GOST-K, GB ATEX Ex II 1G, Exia IIC T4 ATEX Ex II 2G, Exd IIC T6	
	Certified Ambient Temperature	-55°C to +70°C -20°C to +55°C (LED)	
	Ingress Protection	IP66 & 67	
	Material	Stainless Steel or Alloy	
	Entries	Up to 4 x 20mm or 25mm	
	Weight	3.8kg (Steel) 2.5kg (Alloy)	
	Options	Body color, 3 & 4 pole changeover switch, certification	
			
105mm DEEP			
Certification	Ordering Code	Cat. #	Standard Product Configuration
ATEX Ex II 2GD	16200174	SM87BGLAD1B1NNR	Break glass call point, Ex II 2GD, Exd IIC T6, IP 66 & 67, 1 x M20 bottom entries, duty label, "Fire Breakglass," alloy material, red finish


PB		Push Button Fire Alarm Call Point—Hazardous Locations	
	Certification UL Listed for:	UL, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zones 1 & 2	
	Certified Ambient Temperature	-13°F to +158°F -25°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 4 x 1/2" NPT, M20	
	Weight	2.6lb/1.2kg	
	Options:	Body color, certification	
			
4-1/2" / 114mm DEEP			
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, Class I, Div. 2, Groups A, B, C, D, Zone 1 & 2	869105	PBUL4C6C0DSN7R	Explosion protected, 2 x 1/2" NPT bottom entries, no duty label, DC, single pushbutton switch latching, painted red GRP
ATEX Ex II 2GD	800010	PBEB4B6B0DSN6R	Explosion protected, Ex II 2GD, Exe, IIC, T6, Zone 1 & 2, 2 x M20 entries, DC, single switch, red finish

1S


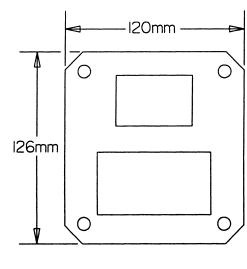
1S Fire Alarm or Emergency Call Points

Hazardous Locations
Weatherproof
Marine


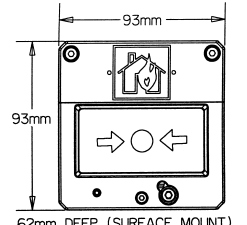
MEDC Series

BG Break Glass Fire Alarm Call Point—Hazardous Locations			
	Certification UL Listed for:	UL, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zone 2	
	Certified Ambient Temperature	-13°F to +131°F -25°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 4 × 1/2" NPT, M20	
	Weight	2.6lb/1.2kg	
	Options	Body color, certification, lift flap, LED, tag & duty label, series and EOL resistor	

Certification	Type	Ordering Code	Cat. #	Standard Product Configuration
UL Listed, Class I, Div. 2, Groups A, B, C, D, Zone 2	Haz. Loc.	869101	BGUL4C6C1DSN7R	Explosion protected, 2 × 1/2" NPT bottom entries, single break glass switch latching, painted red GRP finish
ATEX Ex II 1GD	Intrinsically Safe	800002	BGIB4B6B1DSN6R	Explosion protected, Zone 0, 1 & 2, DC, 2 × M20 bottom entries, single break glass switch latching, single switch, red finish
ATEX Ex II 2GD	Increased Safety	800003	BGEB4B6B1DSN6R	Explosion protected Ex II 2GD, Exed, IIC, T6, Zone 1 & 2, DC, 2 × M20 bottom entries, single break glass switch latching, red finish
IP66 & 67	Waterproof	800001	BGWN4B6B1ASN6R	Dust-tight and weatherproof, uncertified AC, 2 × M20 bottom entries, single break glass switch latching, red finish

BG2 Break Glass Call Point—Hazardous Locations			
	Certification Intrinsically Safe Increased Safety	ATEX ATEX Ex II 1GD, Exia IIC T4 ATEX Ex II 2GD, Exed(m) IIC T4 (T6)	
	Certified Ambient Temperature	-40°C to +55°C (Exia) -20°C to +50°C (Exed)	
	Ingress Protection	IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	2 × M20	
	Weight	1.2kg	
	Options	Lift flap	

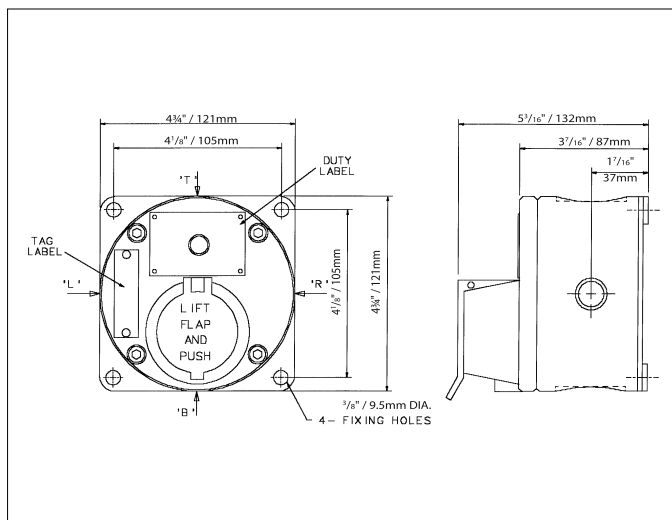
Certification	Type	Ordering Code	Cat. #	Standard Product Configuration
ATEX Ex II 1GD	Intrinsically Safe	800005	BG2INN1N	Explosion protected, Zone 0, 1 & 2, DC, 2 × M20 bottom entries, single break glass switch latching, red finish
Increased Safety	Increased Safety	800004	BG2EDC1N	Explosion protected, Zone 1 & 2, DC, 2 × M20 bottom entries, single break glass switch latching, red finish

BG3 Break Glass Call Point—Explosionproof & Weatherproof			
	Certification UL Listed for:	ATEX, GB ATEX Ex II 1G, Exia IIC T4	
	Certified Ambient Temperature	-55°C to +55°C (Exia)	
	Ingress Protection	IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	2 × M20	
	Weight	0.5kg	
	Options	Body color, lift flap	

Certification	Type	Ordering Code	Cat. #	Standard Product Configuration
ATEX Ex II 1G	Intrinsically Safe	800007	BG311NBN	Explosion protected, Zone 0 / 1 & 2 DC, standard models are surface mount version, have 2 × M20 bottom entries, single break glass switch latching, duty label "Burning House," red GRP finish
ATEX Ex II 1G	Weatherproof	800006	BG3W1NBN	Uncertified, dust-tight & weatherproof, 24V DC, single break glass switch latching, duty label "Burning House," red finish

1S

MEDC Series



Specification – SM87PBL Unit

Certification:	UL Listed: Class I, Div. 1, Groups C, D and Class I, Zone 1. Listing No: E186629.
CSA Certification:	I.S. Version Class I, Groups A, B, C, D Exd Class I, Div. 2 1/2 Group D Enclosure type 4, Cert. No. 79120
ATEX approved:	EN50014, EN50018 Cert. No. Baseefa 03ATEX0075
Voltage:	24V AC/DC
Rating:	2 amp
Switches:	2 pole c/o, wired to terminals
Terminals:	Will accept up to 14AWG cable
Entries:	Up to 4 x 1/2" or 3/4" NPT, 20mm, 25mm
Optional Indicator:	A red high intensity LED can be fitted for alarm indication
Material:	LM 25 TF Marine Grade Alloy or Grade 316 ANCHB stainless steel
Weight:	5.5 lb/2.5kg (approx.)
Finish:	Epoxy paint finish as standard or to customer's specification
Certified Temperature:	Exd/Exi: -55°C to 70°C -20°C to +55°C (LED version only) UL: -67°F to +158°F (-55°C to +70°C) -4°F to +131°F (-20°C to +55°C) LED version only CSA: -58°F to +131°F (-50°C to +55°C) (Exd) -58°F to +104°F (-50°C to +40°C) (Exi)
Ingress Protection:	NEMA 4X and 6, IP66 & 67 SM87 PB IP68 (40m for 8 hours)
Addressable:	Consult MEDC for specification
Resistor Values:	470R minimum (DC & I.S. units only)

Field Installed Duty Labels

Use with SM87 Call Points:	Duty Label	Ordering Code
SM87PBL/SM87BGL	Blank	869530
SM87PBL/SM87BGL	Fire	869526
SM87PBL/SM87BGL	Emergency Shut Down	869532
SM87PBL/SM87BGL	Suppression Release	869534

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Model	Material	Certification	Entries	Duty Label	Tag Label	Features	Finish
SM87	PBL				N	N	N	

*Material	Code
Stainless Steel	S
Alloy	A

*UL version only available in Alloy.

Certification	Code
EExdIICT6	D
UL Listed	UL
CSA Certified	C

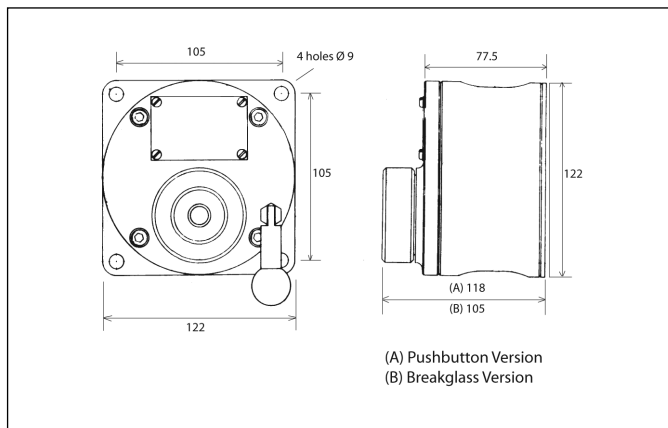
Entries	Code
20mm Left/Right	1L1R
20mm Top/Bottom	1T1B
20mm Bottom	1B
25mm Left/Right	2L2R
25mm Top/Bottom	2T2B
25mm Bottom	2B
1/2" NPT Left/Right	3L3R
1/2" NPT Top/Bottom	3T3B
1/2" NPT Bottom	3B
3/4" NPT Left/Right	4L4R
3/4" NPT Top/Bottom	4T4B
3/4" NPT Bottom	4B

Finish	Code
Red	R
Blue	B
Yellow	Y
Yellow/Black Stripes	X

1S Fire Alarm or Emergency Call Points

Hazardous Locations
Weatherproof
Marine

MEDC Series



Both the ExIICT4 units and the ExdIICT6 units have the same external appearance. Also the internal components are identical throughout the range. Each unit can be wired for either NO, NC or CO contacts to customer specification.

Field Installed Duty Labels

Use with SM87 Call Points:	Duty Label	Ordering Code
SM87PBL/SM87BGL	Blank	869530
SM87PBL/SM87BGL	Fire	869526
SM87PBL/SM87BGL	Emergency Shut Down	869532
SM87PBL/SM87BGL	Suppression Release	869534

Specification – SM87BGL Unit

Break glass unit, latching	Type SM87BGL
Lift flap, break glass, latching	Type SM87LBGL
Voltage:	Exd 24V AC/DC Exia 28V
Rating:	2 amp
Switches:	2 pole c/o, wired to terminals Optional up to 4 pole
Terminals:	Will accept up to 2.5mm ² cable
Entries:	Up to 4 x 20mm or 25mm ISO EExd/EEExia
Optional Indicator:	A red high intensity LED can be fitted for alarm indication
Material:	Grade 316 ANC4B Stainless Steel or LM 25 TF Marine Grade Alloy
Weight:	3.8 kg. steel (approx.) or 2.5 kg. alloy (approx.)
Finish:	Epoxy paint finish as standard or to customer's specification
Certification:	CENELEC EN 50014, EN50018 (for Exd) and EN50020 (for Exi) ExialIC T4 Cert No. Baseefa 02 ATEX 0152X ExdIIC T5/T6 Cert No. Baseefa 03 ATEX 0075 CSA Certification: Class I Groups A-D I.S. version (SM87 PBI only) Class I, Div. 1 & 2, Group D (Exd – SM87 PB & SM87 BG) GOST 'R' Certification: 1Exib IIC T4, 1Exd IIC T4* GOST 'K' Certification: Exib IIC T4* Chinese Certification: CQST – Exia IIC T4, Exd IIC T5/T6* *Available upon request
Certified Temperature:	Exd/Exi* -55°C to +70°C -20°C to +55°C (LED version only) CSA -50°C to +55°C (Exd) -50°C to +40°C (Exi) *Note: includes ATEX, GOST & Chinese versions.
Ingress Protection:	IP66 and IP67 SM87 PB IP68 (40m for 8 hours)
Resistor Values:	470R minimum (DC & I.S. units only)

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Model	Material	Certification	Entries	Duty Label	Tag Label	Features	Finish
SM87	BGL				N	N	N	

Material	Code
Stainless Steel	S
Alloy	A

Certification	Code
EExdIICT6	D
CSA	C

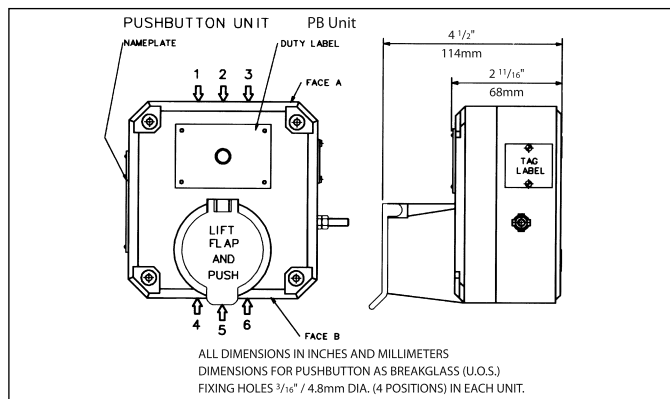
Entries	Code
20mm Left/Right	1L1R
20mm Top/Bottom	1T1B
20mm Bottom	1B
25mm Left/Right	2L2R
25mm Top/Bottom	2T2B
25mm Bottom	2B
½" NPT Left/Right	3L3R
½" NPT Top/Bottom	3T3B
½" NPT Bottom	3B
¾" NPT Left/Right	4L4R
¾" NPT Top/Bottom	4T4B
¾" NPT Bottom	4B

Finish	Code
Red	R
Blue	B
Yellow	Y
Yellow/ Black Stripes	X

Note: the units can be internally wired to suit customers' specifications. Please discuss your requirements with us.

Crouse-Hinds
by **E.T.N.**

MEDC Series

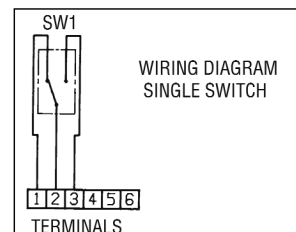


Field Installed Duty Labels

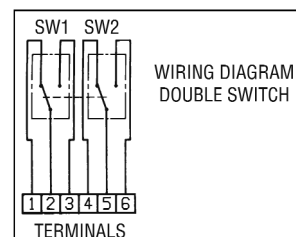
Use with PB Call Points:	Duty Label	Ordering Code
PB	Blank	869530
PB	Fire	869526
PB	Emergency Shut Down	869532
PB	Suppression Release	869534

Specification – PB Unit

Certification:	UL Listed — Hazardous locations: Class I, Div. 2, Groups A, B, C, D and Class I, Zone 2 UL Listing No. E186629 Ordinary locations: Fire Alarm Boxes. UL Listing No. S8117 CSA Certified to C22.2 (PB only), Nos. 0-M, 0.4M, 14-M, 25,30-M, 94, 142-M 1987, 157M 1987, 157-92, Enclosure Type 4, 4A, Class I, Groups A, B, C, D, Cert. No. 79120 ATEX Approved: EN50014, EN50018, EN50019, EN50028 Cert. No. BAS02ATEX2105X (BG & PB), Exedm II C T6 (switch only), Exedm IIC T4 (other versions)
Voltage:	Up to 240V
Certified Temperature:	BGUL/PBUL: -13°F to +131°F (-25°C to + 55°C) PB (CSA): -58°F to +104°F (-50°C to +40°C)
Ingress Protection:	NEMA 4X & 6, IP66 & 67
Terminals:	7 x 14 AWG standard
Switch Rating (1 or 2 changeover switches fitted):	Max Rating 240VAC, 3A
Cable Entries:	Up to 4 entries 1/2" NPT or 20mm
Weight:	2.6 lb/1.2kg (varies with model & entries)
Material:	Glass reinforced polyester
Finish:	Red epoxy painted finish as standard or to customer's specification
Resistors:	Various configurations available on versions up to 24V, 470R minimum
LED Indication:	A high intensity red LED can be fitted as an optional extra to indicate operation on versions up to 24V
Labeling:	PB & BG duty label — worded to client's requirements (riveted on) PB & BG tag label — worded to client's requirements (screwed on)



Basic single changeover switch wiring diagram



Basic double changeover switch wiring diagram

For versions containing in-line and end-of-line resistors, please specify your requirements.

Ordering Requirements

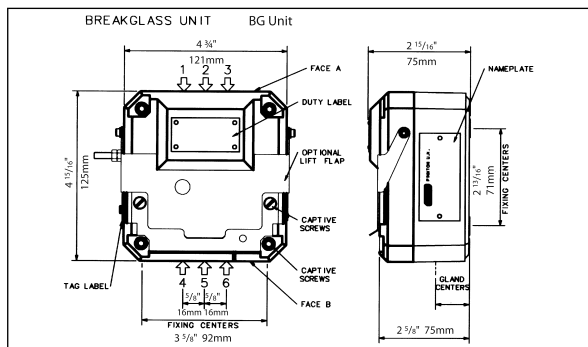
The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model	Certification	Entries	Labels	Switches	Features	Terminals	Finish
PB			N	DS	N	7	
Certification	Code	Entries	Code	Switches	Code	Terminals	Code
ATEX/CENELEC – EExe	EB	1 Bottom M20	5B	DC double change over	DD	Red (Standard)	R
ATEX/CENELEC – EExi	IB	2 Bottom M20	4B 6B	AC single change over	AS	Natural Black	N
CSA – Exi (PBI only)	IC	1 Top, 1 Bottom M20	2B 5B	AC double change over	AD	Blue	B
UL – Class I, Div. 2	UL	1 Bottom 1/2" NPT	5C			Yellow	Y
		2 Bottom 1/2" NPT	4C 6C			Gray	G
		1 Top, 1 Bottom 1/2" NPT	2C 5C				
		16 mm	*A				
		20 mm	*B				
		1/2" NPT	*C				
		*Prefix entry size (see diagram above) with entry position code e.g. 1A, 2A.					
		UL & CSA Versions only available with 1/2" NPT entries					

1S Fire Alarm or Emergency Call Points

Hazardous Locations
Weatherproof
Marine

MEDC Series

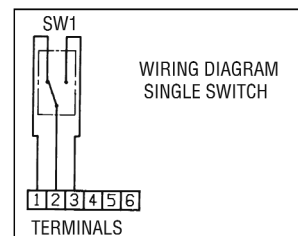


Field Installed Duty Labels

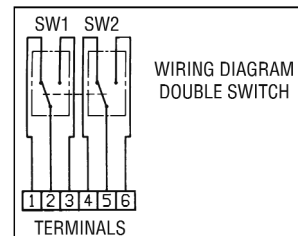
Use with BG Call Points:	Duty Label	Ordering Code
BG	Blank	869531
BG	Fire	869525
BG	Emergency Shut Down	869533
BG	Suppression Release	869535

Specification – BG Unit

Certification:	UL Listed — Hazardous locations: Class I, Div. 2, Groups A, B, C, D and Class I, Zone 2 UL Listing No. E186629 Ordinary locations: Fire Alarm Boxes. UL Listing No. S8117. CSA Certified to C22.2 (PB only), Nos. 0-M, 0.4M, 14-M, 25,30-M, 94, 142-M 1987, 157M 1987, 157-92, Enclosure Type 4, 4A, Class I, Groups A, B, C, D, Cert. No. 79120 ATEX Approved: -58°F to +104°F (-50°C to +40°C) Cert. No. BAS02ATEX2105X (BG & PB), Exed II C T6 (switch only), Exedm IIC T4 (other versions)
Voltage:	Up to 240V
Certified Temperature:	BGUL/PBUL: -13°F to +131°F (-25°C to + 55°C) PB (CSA): -58°F to +104°F (-50°C to +40°C)
Ingress Protection:	NEMA 4X & 6, IP66 & 67
Terminals:	7 x 14 AWG standard
Switch Rating (1 or 2 changeover switches fitted):	Max Rating 240VAC, 3A
Cable Entries:	Up to 4 entries 1/2" NPT or 20mm
Weight:	2.6 lb/1.2kg (varies with model & entries)
Material:	Glass reinforced polyester
Finish:	Red epoxy painted finish as standard or to customer's specification
Resistors:	Various configurations available on versions up to 24V, 470R minimum
LED Indication:	A high intensity red LED can be fitted as an optional extra to indicate operation on versions up to 24V
Labeling:	BG glass label — reads either: (1) Fire break glass — press here (2) Break glass — press here (3) Worded to client's requirements PB & BG tag label — worded to client's requirements (screwed on) PB & BG duty label — worded to client's requirements (riveted on)



Basic single changeover switch wiring diagram



Basic double changeover switch wiring diagram

For versions containing in-line and end-of-line resistors, please specify your requirements.

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model	Certification	Entries	Labels	Switches	Features	Terminals	Finish																																																								
BG				DS	N	7																																																									
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Crouse-Hinds
by E.T.N.

MEDC Series



Exd version (optional guard)



Exia/Exem/UL versions (optional guard)

The MEDC heat detector has been designed for use in hazardous environments. These units are suitable for fire alarm and/or suppression systems in offshore and onshore applications including paint spray booths, flammable material stores, turbine rooms, extract ductwork and other hazardous areas throughout the oil & gas, petrochemical and process industries.

Comprising a Fenwal rate-compensated detector with all-stainless steel external construction, mounted to either a type SM87 marine grade alloy enclosure (Exd version) or JB10 corrosion-free GRP enclosure (Exia, Exem/UL versions). The contact in the detector CLOSES at alarm temperature.

To select appropriate temperature setting, see specification on reverse.

Applications:

- Compressor turbine/generator skids
- Switchgear or motor control status rooms
- Process tank areas or transmission lines

Typical Industries:

- Power generation
- Nuclear plants
- Chemical processing
- Upstream/downstream oil and gas


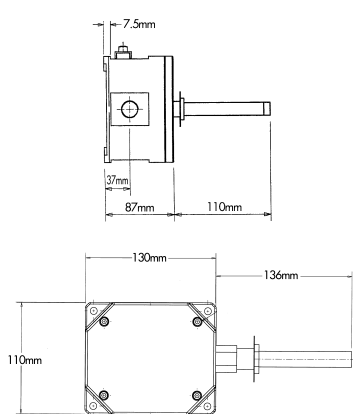
Certifications and Compliances:

- Zone 0, Zone 1 and Zone 2
- Exia IIC T4/T6, Exd IIB T3/T6 or Exem II T6
- ATEX approved
 - Ex II 1G (Exia)
 - Ex II 2G (Exd/Exem)
- BASEEFA certified
- UL listed for USA and Canada
 - Class I, Div. 2, Groups A, B, C, D
- GOST 'R' & 'K' certified
- Chinese (CQST) certified
- IP66 & IP67
- Certified temperature:
 - 20°C to +125°C (Exd)*
 - 20°C to +55°C (Exem/UL)
 - 55°C to +55°C (Exia)
- Stainless steel probe
- Detector temperature settings:
 - 60°C to 385°C, (140°F to 725°F)
- Marine grade Alloy or GRP enclosure
- Optional guard

*Model dependent.



MEDC Series

HD1 Heat Detector – Explosionproof & Intrinsically Safe			
	Certification Flameproof Increased Safety Intrinsically Safe	cULus, ATEX, GOST-R, GOST-K, GB ATEX Ex II 2G, Exd IIB T6 ATEX Ex II 2G, Exem II T6 ATEX Ex II 1G, Exia IIC T6	
	Certified Ambient Temperature	-20°C to +125°C Exd (T3) ATEX/GOST 'R' -20°C to +55°C Exd (T6)/Exem -55°C to +55°C Exia	
	Ingress Protection	IP66 & 67	
	Material	Marine Grade Alloy (Exd) Corrosion-free GRP (Exia/Exem)	
	Temperature Settings	140°F to 725°F (60°C to 385°C)	
	Entries	2 × M20	
	Weight	1.1–2.0kg (model dependent)	
	Options:	Enclosures, color, tag and duty labels, temperature setting	

Compensated Heat Detector with Guard Fitted Natural Black Finish

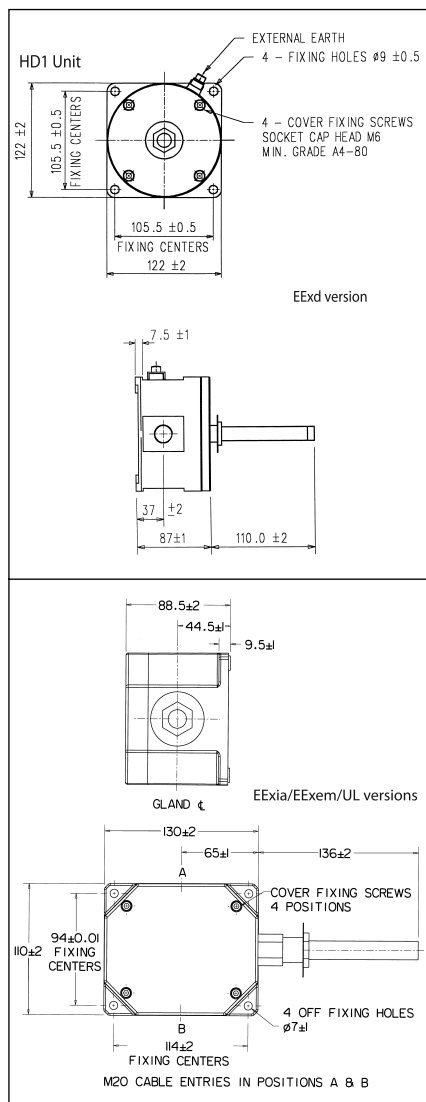
To select appropriate temperature settings, choose detector at 56°C (100°F) above maximum ambient temperature.

Certification	Temperature Setting		Tolerance		Color Code Detector Tip	Ordering Code	Cat. #
	(°F)	(°C)	(°F)	(°C)			
UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	140	60	+7/-8	±4	Black	46500152	HD1ULE140GN
	160	71	+7/-8	±4	Black	46500153	HD1ULE160GN
	190	88	+7/-8	±4	White	46500154	HD1ULE190GN
	225	107	+7/-8	±4	White	46500155	HD1ULE225GN
	275	135	±10	±6	Blue	46500156	HD1ULE275GN
	325	163	±10	±6	Red	46500157	HD1ULE325GN
	360	182	±10	±6	Red	46500158	HD1ULE360GN
	450	232	±15	±8	Green	46500159	HD1ULE450GN

Certification	Standard Product Configuration	Ordering Code	Cat. #
ATEX Exd	140°F detector, marine grade alloy enclosure, painted gray	465607	HD1BD140NG
ATEX Exd	160°F detector, marine grade alloy enclosure, painted gray	465602	HD1BD160NG
ATEX Exd	190°F detector, marine grade alloy enclosure, painted gray	465603	HD1BD190NG
ATEX Exd	225°F detector, marine grade alloy enclosure, painted gray	465614	HD1BD225NG
ATEX Exd	275°F detector, marine grade alloy enclosure, painted gray	465609	HD1BD275NG
ATEX Exd	325°F detector, marine grade alloy enclosure, painted gray	465605	HD1BD325NG
ATEX Exd	360°F detector, marine grade alloy enclosure, painted gray	46500043	HD1BD360NG
ATEX Exd	450°F detector, marine grade alloy enclosure, painted gray	465601	HD1BD450NG
ATEX Exd	600°F detector, marine grade alloy enclosure, painted gray	46500045	HD1BD600NG
ATEX Exd	725°F detector, marine grade alloy enclosure, painted gray	46500104	HD1BD725NG
ATEX Exem	140°F detector, GRP enclosure, natural black	46500026	HD1BE140NN
ATEX Exem	160°F detector, GRP enclosure, natural black	465301	HD1BE160NN
ATEX Exem	190°F detector, GRP enclosure, natural black	465305	HD1BE190NN
ATEX Exem	225°F detector, GRP enclosure, natural black	465304	HD1BE225NN
ATEX Exem	275°F detector, GRP enclosure, natural black	46500031	HD1BE275NN
ATEX Exem	325°F detector, GRP enclosure, natural black	465306	HD1BE325NN
ATEX Exem	360°F detector, GRP enclosure, natural black	46500072	HD1BE360NN
ATEX Exem	450°F detector, GRP enclosure, natural black	465303	HD1BE450NN

1S

MEDC Series



Specification – HD1 Unit

Certification:	CENELEC EN50014, 19 & 28 Exd IIB T6 (T3 at +125°C), Cert.No. Baseefa 03ATEX0447 Exia IIC T6 (T4 with diodes/resistors), Cert. No. Baseefa 03ATEX0427 Exem II T6, Cert. No. Baseefa 03ATEX0428 UL listed for USA and Canada – Class I, Div 2, Groups A, B, C & D – UL Listing No. E252920 GOST 'R' & 'K' Certification: Exd, Exi & Exem versions Russian Fire Alarm (VNIPO) approved Chinese Certification: CQST – Exd, Exi & Exem versions																																																												
Material:	Detector: 316 stainless steel Enclosures: Exd – LM25 marine grade alloy Exia/Exem/UL – GRP (anti-static) Stainless steel cover screws Optional Guard: 316 stainless steel																																																												
Finish:	Detector: Sand blasted Enclosures: Exd – Epoxy painted gray as standard or to customer's specification Exia/Exem/UL – Self colored black or epoxy painted to customer's specification																																																												
Weight:	Exd, 2kg. Exia/Exem/UL, 1.1kg.																																																												
Certified Temperature:	–20°C to +125°C Exd (T3) ATEX & GOST 'R' only –20°C to +55°C Exd (T6)/Exem/UL, –55°C to +55°C Exia																																																												
Ingress Protection:	IP66 & IP67																																																												
Operation:	The detector contact is normally open and CLOSSES at alarm temperature																																																												
Listed Temperature Settings:	To select appropriate temperature settings, choose detector at 56°C (100°F) above maximum ambient temperature.																																																												
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Contact Rating:	Exd/Exem/UL: 125V AC – 5A, 125V DC – 0.5A, 48V DC – 1A. Exia: 30V – 300mA																																																												
Terminals:	6 x 4mm ² (BK6)																																																												
Labels:	Optional stainless steel tag and duty labels																																																												
Cable Entries:	2 x M20 ISO (ATEX/Exd/Exe/Exi versions) 2 x 1/2" NPT via adaptors (UL version)																																																												
Resistor:	2 x M20 ISO (ATEX/Exd/Exe/Exi versions) 2 x 1/2" NPT via adaptors (UL version)																																																												
Diodes:	Up to 2 off available in Exd, Exi & UL versions—contact sales office																																																												

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model HD1	Certification []	Type []	Temp. Settings []	Options []	Enclosure Finish []
Certification Code ATEX B UL listed UL	Type Code Exd D Exe E Exi I UL U*	Temp °F Code 140 140 160 160 190 190 225 225 275 275 325 325 360 360 450 450	Guard Code N No Guard G Guard	Finish Code Natural Black (EExe/EEEx/UL only) N Gray G	

*Select this option for UL listed.



Hazardous and Non-hazardous

Description	Page No.
Strobe Lights - MEDC Series	
SM87 HXB	see pages 1239–1240
XB4	see pages 1242–1244
XB11	see pages 1239–1241
XB12	see pages 1242–1245
XB13	see pages 1243–1246
XB15	see pages 1235–1238
XB16 UL	see pages 1236–1238
Strobe Lights - Hazard•Gard EX Series	
EXFASC	see page 1247
EXR	see pages 1251–1253
EXS, EXDS	see pages 1248–1250



MEDC Series



XB16



XB15 Pipe Mount (with cast guard)

These listed strobes have been designed for use in potentially explosive atmospheres and harsh environmental conditions. The enclosures are suitable for use offshore or onshore, where a lightweight product combined with corrosion resistance is required.

The housing is manufactured from a U.V. stable, glass reinforced polyester, with the lens manufactured from a U.V. stable polycarbonate. Stainless steel screws are used, ensuring a totally corrosion-free product.

The strobes contain supervisory diode and four wire leads for fire alarm applications. This strobe is also available UL 1971 (ADA) Listed for hearing impaired applications.

Units can be painted to customer specification and supplied with identification labels.

Applications:

- Condition signaling
- Security alert
- Equipment obstruction warning
- Emergency evacuation signaling

Features and Benefits:

- Pipe mount with 1/2" NPT entry
- Corrosion resistant GRP enclosure
- XB16 580,000 peak candlepower
XB15 520,000 peak candlepower
- Polycarbonate lens, various colors available†
- 4 wire diode monitored board
- Optional relay initiate
- Optional lens guard

†UL 1971 version available with clear lens only (XB16 only).
*Conforms to UL regulated voltage.


Certifications and Compliances:

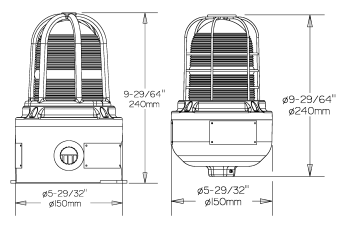
- UL Listed for USA and Canada
 - Hazardous locations for USA and Canada
Class I, Div. 2, Groups A, B, C, D*
UL 1971 compliant version available
 - Ordinary locations: Visual Signal Device
- NEMA 4X and 6, IP66 & 67
- Certified temperature
 - 67°F to +158°F
 - 55°C to +70°C

Typical Industries:

- Utility gas plants
- Wastewater treatment plants
- Mining
- Petroleum refineries
- Chemical and petrochemical
- Pulp and paper

MEDC Series

XB15		15 Joule Flashing Xenon—Hazardous & Ordinary Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zones 1 & 2, AExd IIC T5/T6	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 3 x 1/2" NPT or 3 x 3/4" NPT	
	Weight	6–8lb/2.6–3.6kg	
	Options: Body & lens color, voltages 12–48V DC, 110–254V AC		



Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Red	869400	XB15UL12006RWBNN	15 joules, direct mount w/backstrap , x 3/4" NPT side entries, wire guard, 60 flashes per minute, natural black finish
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Amber	869401	XB15UL12006AWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Red	869402	XB15UL12006RWPNN	15 joules, pipe mount , 1 x 3/4" NPT entry, wire guard, 60 flashes per minute, natural black finish
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Amber	869403	XB15UL12006AWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Clear	27600042	XB15UL02406CWBNN	15 joule beacon, 60 flashes per minute, wire guard, backstrap , 2 x 3/4" NPT entries, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Green	27600043	XB15UL02406GWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Blue	869393	XB15UL02406BWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Red	869398	XB15UL02406RWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Amber	869399	XB15UL02406AWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Clear	27600047	XB15UL02406CWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Green	27600048	XB15UL02406GWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Blue	869394	XB15UL02406BWPNN	15 joule beacon, 60 flashes per minute, wire guard, pipe mounting , 1 x 3/4" NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Red	869396	XB15UL02406RWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Amber	869397	XB15UL02406AWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Clear	27600052	XB15UL12006CWBNN	15 joule beacon, 60 flashes per minute, wire guard, backstrap , 2 x 3/4" NPT entries, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Green	27600053	XB15UL12006GWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Blue	869405	XB15UL12006BWBNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Clear	27600057	XB15UL12006CWPNN	15 joule beacon, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Green	27600058	XB15UL12006GWPNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Blue	869404	XB15UL12006BWPNN	

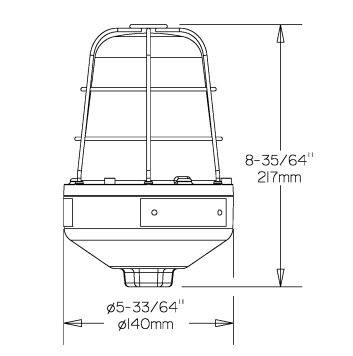
2S

MEDC Series

XB16 UL 10 Joule Flashing Xenon—Hazardous & Ordinary Locations



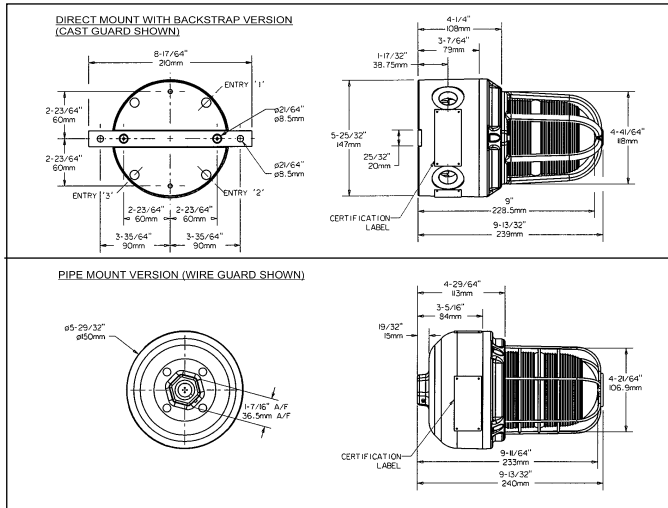
Certification UL Listed for:	cULus, UL 1971 compliant Class I, Div. 2, Groups A, B, C, D
Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C
Ingress Protection	NEMA 4X & 6 IP66 & 67
Material	Corrosion-free GRP
Entries	Standard 1 x 1/2" NPT
Weight	2.2lb/1kg
Options	Body & lens color, lens guard, voltages 12–48V DC, 110–254V AC



Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
UL 1971 compliant	24V DC	Clear	29600023	XB16US02460CYNN	UL 1971 Listed for signaling devices for the hearing impaired. Suitable for fire alarm indication. 10 joule beacon, 60 flashes per minute, lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Blue	869406	XB16UL12060BYNN	10 joules, 60 flashes per minute, 1 x 3/4" NPT entry, 240 Cd, lens guard, natural black finish
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Red	869407	XB16UL12060RYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Amber	869408	XB16UL12060AYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Clear	29600013	XB16UL12060CYNN	10 joule beacon, 60 flashes per minute, lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Green	29600014	XB16UL12060GYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Blue	29600011	XB16UL12060BYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Red	29600003	XB16UL12060RYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	120V AC	Amber	29600004	XB16UL12060AYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Green	29600016	XB16UL02460GYNN	10 joule beacon, 60 flashes per minute, lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Blue	29600017	XB16UL02460BYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Red	869410	XB16UL02460RYNN	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	24V DC	Amber	869411	XB16UL02460AYNN	

2S

MEDC Series



Specification – XB15 Unit

Certification: UL Listed for USA and Canada:
 – Hazardous locations
 Class I, Div. 2, Groups A, B, C, D
 Class I, Zone 1, AExd IIC T5/T6
 UL listing No. E187894
 – Ordinary locations: Visual Signal Device
 UL listing No. S8128
 CENELEC/ATEX approved
 CENELEC EN50014 & EN50018
 ATEX Cert. No. Baseefa 04ATEX0009X

Material: Body: Glass reinforced polyester
 Lens: Glass
 Backstrap: stainless steel 316
 Wire Guard (optional): stainless steel wire
 Cast Guard (optional): aluminium LM25M

Finish: Natural black or epoxy painted to customer specification

Voltage: 24, 48V DC
 110, 120, 230, 240, 254V AC

Tube Energy: 15 joules

Tube Life: >1 × 10⁶ flashes

Flash Rate: 60, 80, 120 fpm

Certified: –67°F to +131°F (–55°C to +55°C) T6

Temperature: –67°F to +158°F (–55°C to +70°C) T5

Weight: Pipe mount: 5.75 lb/2.6kg; Direct mount: 6.5 lb/3.0kg

Ingress Protection: NEMA 4X & 6, IP66 & IP67

Entries: Supplied as 2 × 3/4" NPT (direct mount) or 3/4" (pipe mount) as standard
 Other options available:
 Up to 3 × 1/2" NPT or 3 × 3/4" NPT (direct mount);
 1/2" NPT (pipe mount) — contact sales office to order

Terminals: Direct mount: 12 x 14AWG
 Pipe mount: 8 x 14AWG

Relay Initiate: Available on all units — suitable for 24V DC supplies only

Labels: Tag/Duty label option

Electrical Ratings:

	DC		AC				
	24	48	110	120	230	240	254
Voltage	24	48	110	120	230	240	254
Current (A) at 60 fpm	.78	.67	0.4	0.4	0.2	0.2	0.17
Current (A) at 80 fpm	.99	.73	0.4	0.4	0.2	0.2	0.17
Current (A) at 120 fpm	.99	.73	0.4	0.4	0.2	0.2	0.17
Effective Candlepower	330 (Effective candlepower is the intensity that would appear to an observer if the light was burning steadily)						
Peak Candlepower	520,000 (Peak candlepower is the maximum light intensity generated by a flashing light during its light pulse)						

Multiplying Factor for Colored Lenses:

Red	Blue	Amber	Green	Yellow
0.15	0.12	0.51	0.49	0.86

Ordering Requirements

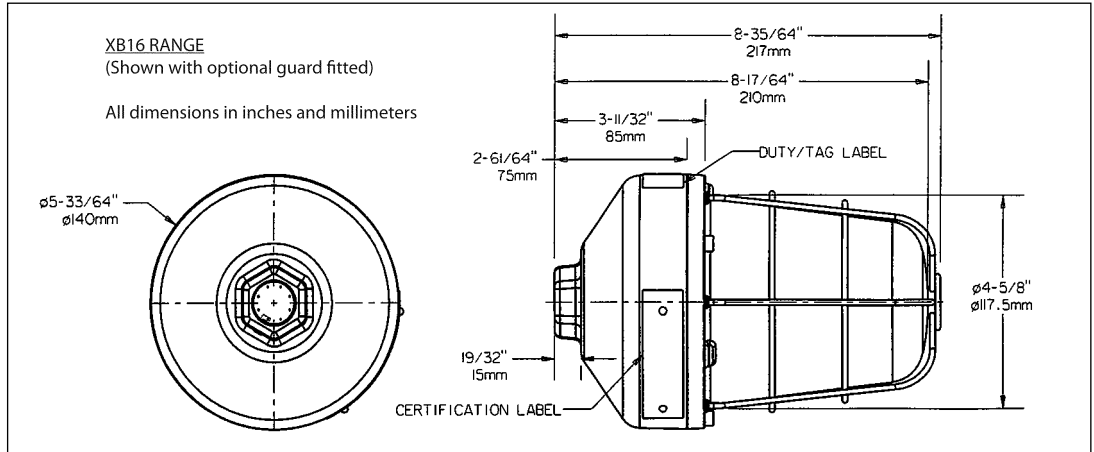
The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model	Certification	Voltage	Lens Flashrate	Lens Color	Unit Guard	Fixing	Unit Options	Finish																																																		
XB15	<input type="text"/>	<input type="text"/>	06	<input type="text"/>	<input type="text"/>	<input type="text"/>	N	N																																																		
	<table border="1"> <tr><th>Certification</th><th>Code</th></tr> <tr><td>ATEX</td><td>B</td></tr> <tr><td>UL</td><td>UL</td></tr> </table>	Certification	Code	ATEX	B	UL	UL	<table border="1"> <tr><th>Voltage</th><th>Code</th></tr> <tr><td>24V DC</td><td>024</td></tr> <tr><td>110V AC</td><td>110</td></tr> <tr><td>120V AC</td><td>120</td></tr> <tr><td>240V AC</td><td>240</td></tr> </table>	Voltage	Code	24V DC	024	110V AC	110	120V AC	120	240V AC	240	<table border="1"> <tr><th>Lens Flashrate</th><th>Code</th></tr> <tr><td>08</td><td>80 fpm</td></tr> <tr><td>12</td><td>120 fpm</td></tr> </table>	Lens Flashrate	Code	08	80 fpm	12	120 fpm	<table border="1"> <tr><th>Guard</th><th>Code</th></tr> <tr><td>None</td><td>N</td></tr> <tr><td>Cast</td><td>C</td></tr> <tr><td>Wire</td><td>W</td></tr> </table>	Guard	Code	None	N	Cast	C	Wire	W	<table border="1"> <tr><th>Color</th><th>Code</th></tr> <tr><td>Red</td><td>R</td></tr> <tr><td>Blue</td><td>B</td></tr> <tr><td>Green</td><td>G</td></tr> <tr><td>Amber</td><td>A</td></tr> <tr><td>Yellow</td><td>Y</td></tr> <tr><td>Clear</td><td>C</td></tr> </table>	Color	Code	Red	R	Blue	B	Green	G	Amber	A	Yellow	Y	Clear	C	<table border="1"> <tr><th>Unit Fixing</th><th>Code</th></tr> <tr><td>Pipe mount</td><td>P*</td></tr> <tr><td>Direct w/backstrap</td><td>B</td></tr> </table>	Unit Fixing	Code	Pipe mount	P*	Direct w/backstrap	B		
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*Not available on ATEX version.



MEDC Series



Specification—XB16UL Unit

- Certification:** UL Listed for USA and Canada:
– Hazardous locations for USA and Canada Class I, Div. 2, Groups A, B, C, D
UL listing No. E251185
– Ordinary locations: Visual Signal Device: UL1638
UL listing No. E251185
– Hazardous locations for hearing impaired: UL1971
UL listing No. E251185
- Material:** Body: Glass reinforced polyester
Lens: U.V. stable polycarbonate
Lens screws: stainless steel 316
- Finish:** Natural black or painted to customer specification
- Voltage:** 24, 48V DC
110, 120, 230, 240, 254V AC
Conforms to UL regulated voltage output (12V DC, 24V DC, 120V AC, 240V AC)
- Certified Temperature:** –67°F to +158°F (–55°C to +70°C)
- Tube Energy:** 10 joules
- Tube Life:** > 1 × 10⁶ flashes
- Weight:** 2.2lb/1.0kg
- Ingress Protection:** NEMA 4X & 6, IP66 & IP67
- Entries:** Standard 1 × 1/2" NPT pipe mount
- Terminals:** 8 × 14AWG
- Labels:** Tag/Duty label option

Electrical Ratings:

For Hazardous Locations and Ordinary Locations (UL1638) Units

Voltage	DC				AC		
	24	48	110	120	230	240	254
Current (A) at 60 fpm	0.89	0.30	0.38	0.38	0.22	0.22	0.18
Current (A) at 80 fpm	0.89	0.30	0.38	0.38	0.22	0.22	0.18
Current (A) at 120 fpm	0.89	0.30	0.38	0.38	0.22	0.22	0.18

Effective intensity (Cd): 240 at 80 f.p.m.
Peak candlepower: 580,000 (Peak candlepower is the maximum light intensity generated by a flashing light during its light pulse)

For UL1971 Units Only

Voltage	DC				AC		
	24	48	110	120	230	240	254
Current (A) at 60 fpm	1.22	1.52	0.38	0.38	0.78	0.78	0.18
Current (A) at 80 fpm	1.22	1.52	0.38	0.38	0.78	0.78	0.18
Current (A) at 120 fpm	1.22	1.52	0.38	0.38	0.78	0.78	0.18

Effective intensity (Cd): 240 at 80 fpm.
Peak candlepower: 580,000 (Peak candlepower is the maximum light intensity generated by a flashing light during its light pulse)
On UL1971 units, max. current rating is based on in-rush current. This is why the current ratings are not proportional as with other beacons/strobes.
UL 1971 On-axis output: 15 Cd.

Note: 24V DC units are certified for use in regulated 24V DC supplies (16–33V AC).
110/120V DC units are certified for use on regulated 120V AC supplies (96–132V AC).
230/240V DC units are certified for use on regulated 240V AC supplies (192–264V AC).

Multiplying factor for colored lenses:

Red	Blue	Amber	Green	Yellow
0.15	0.12	0.51	0.49	0.86

Ordering Requirements


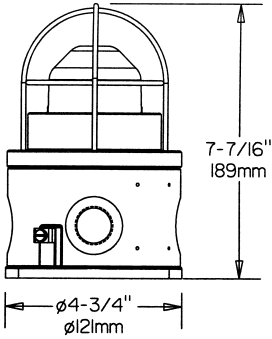
The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model	Certification	Voltage	Flashrate	Lens Color	Guard	Options	Unit Finish
<input type="text" value="XB16"/>	<input type="text" value="UL"/>	<input type="text"/>	<input type="text" value="60"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text" value="N"/>


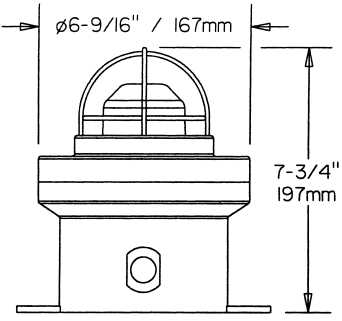
Certification	Code	Voltage	Code	Color	Code	Guard	Code
UL	UL	12V DC	012	Red	R	Yes	Y
		24V DC	024	Blue	B	None	N
		110V AC	110	Green	G		
		120V AC	120	Amber	A		
		240V AC	240	Yellow	Y		
				Clear	C		

Lens Flashrate	Code
80	80 fpm
120	120 fpm

MEDC Series

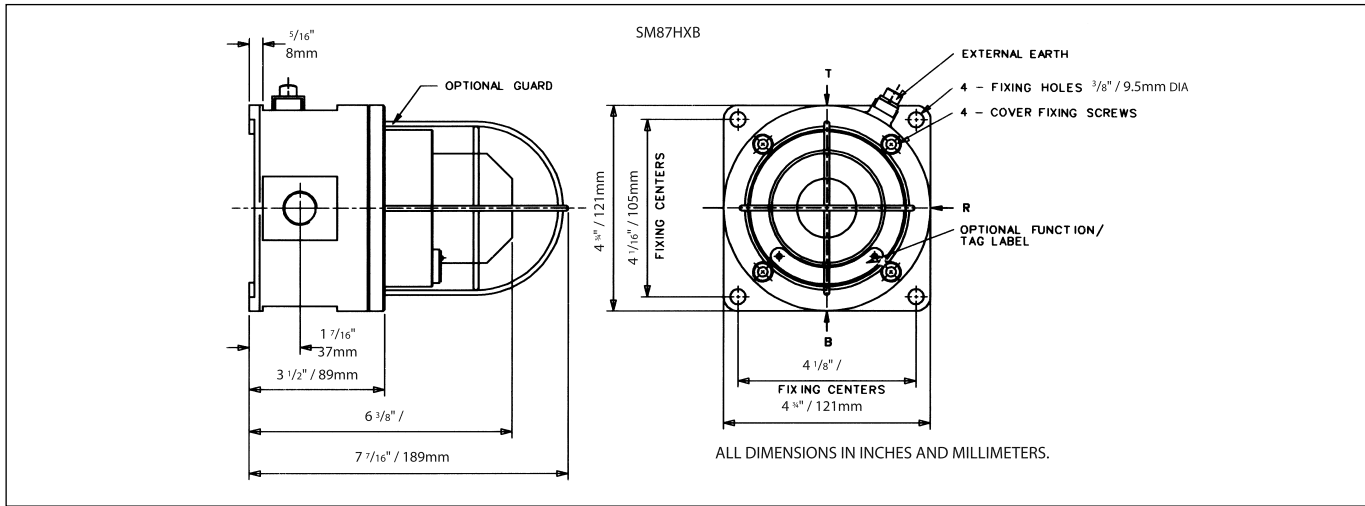
SM87 HXB		5 Joule Xenon Strobe—Explosionproof	
	Certification UL Listed for:	cULus, CSA, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	Up to 2 × 1/2" or 3/4" NPT, M20, M25	
	Weight	4.4lb/2.0kg approx.	
	Options	Body & lens color, certification, lens guard, voltages 24–48V DC, 110–254V AC	
			

Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
ATEX EX II 2GD	24V DC	Red	813005	SM87HXBAB024RN1R1LNNR	5 joules, 2 × M20 Entries, 29Cd, Exd IIc
ATEX EX II 2GD	24V DC	Amber	813006	SM87HXBAB024AN1R1LNNR	
ATEX EX II 2GD	240V AC	Red	813007	SM87HXBAB240RN1R1LNNR	7 joules, 2 × M20 Entries, 39Cd, Exd IIc
ATEX EX II 2GD	240V AC	Amber	813008	SM87HXBAB240AN1R1LNNR	
ATEX EX II 2GD	24V DC	Red LED	813009	SM87LEDAB024RN1R1LNNR	192Cd, 2 × M20 Entries, Exd IIc
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	Red	869161	SM87HXBAL024RN3R3LNNR	Standard models are in alloy, red body color, no tag or duty labels, 2 × 1/2" NPT entries, 29Cd, 60 flashes per minute
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	Amber	869162	SM87HXBAL024AN3R3LNNR	
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	Red	869165	SM87HXBAL110RN3R3LNNR	Standard models are in alloy, red body color, no tag or duty labels, 2 × 1/2" NPT entries, 32Cd, AExd IIB, 60 flashes per minute
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	Amber	869166	SM87HXBAL110AN3R3LNNR	

XB11		5 Joule Xenon Strobe—Hazardous Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups C, D Class I, Zones 1 & 2, AExd IIB T5	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	2 × 1/2" NPT, 20mm	
	Weight	2.6lb/1.2kg	
	Options	Body & lens color, voltages 24V DC, 110–254V AC	
			

Certification	Voltage	Body Color	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red	Red	869171	XB11UL02406RNBNNNR	No tag or duty labels, 2 × 1/2" NPT entries, 60 flashes per minute
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red	Amber	869172	XB11UL02406ANBNNNR	
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Natural Black	Clear	869173	XB11UL02406CNBNNNR	
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red	Clear	869174	XB11UL02406CNBNNNR	
UL, cUL Listed, Class I, Div. 2, Groups C, D	110V AC	Red	Red	869175	XB11UL11006RNBNNNR	
ATEX EX II 2GD	24V DC	Natural Black	Red	811101	XB11B02406RNBNNNR	GRP, natural black body, no tag or duty labels, backstrap mounting, 2 × M20 entries, 60 flashes per minute
ATEX EX II 2GD	24V DC	Natural Black	Amber	811102	XB11B02406ANBNNNR	
ATEX EX II 2GD	24V DC	Natural Black	Red	811103	XB11B24006RNBNNNR	
ATEX EX II 2GD	24V DC	Natural Black	Amber	811104	XB11B24006ANBNNNR	

MEDC Series



Specification – SM87HXB Unit

Certification: UL Listed for USA and Canada for Class I, Div. 1, Groups C, D and Class I, Zone 1. Listing No. E187894.
CSA Certification: to C22.2, Nos. 0, 0.4, 0.5, 9, 30-M 1986, 94-M91, 137-M 1981, Class I, Div. 1, Group 0, Enclosure 3/4, Cert. No. 96406.
ATEX approved: EN50014, EN50018, EN50019 Cert. No. Baseefa 03ATEX0222, Exd IIC T6

Material: LM25 TF Marine Grade Alloy
 Lens: Toughened Glass

Finish: Epoxy paint finish as standard or to customer's specification

Weight: 5.5lb/2.5kg. approx.

Certified Temperature: Standard unit SM87 HXB: -67°F to +158°F, -55°C to +70°C
 High temperature unit: -67°F to +185°F, -55°C to +85°C

Ingress Protection: NEMA 4X & 6, IP66 & 67

Terminals: 4 off suitable for up to 14AWG conductor size

Labels: Duty & tag labels optional

Entries: Up to 4 off 1/2" or 3/4" NPT

Voltage	DC		AC 50/60Hz			
	24	48	110	120	240	254
Tube Energy (joules)	5	5	6	7	7	8
Peak Current Consumption (mA)	320	170	250	275	135	150
Power Consumption (Watts)	7.2	7.6	25	27	27	35
Effective Intensity (Cd)	29	29	32	39	39	44
Peak Candle Power	22213	22213	25061	30187	30187	34174

The above figures (Cd) are for a clear lens @ 1Hz flash rate.

For Colored Lenses

Color	Red	Blue	Amber	Green	Yellow
Multiplying Factor	0.15	0.12	0.51	0.49	0.86

The photometric data has been independently verified. A report is available if required.

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

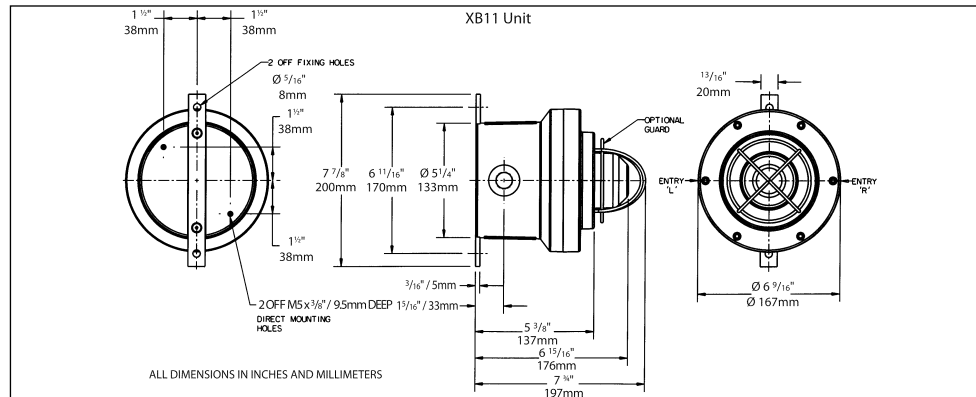
Model: **SM87HXB** Material: Certification: Voltage: Lens/LED color: Lens Guard: Entries: Tag/Duty Label: **N** Initiate Option: **N** Finish: **R**

Type	Code	Color	Code	Guard	Code	Entries	Code
Alloy	A	Red	R	Yes	Y	20mm Left/Right	1L1R
Stainless Steel	S*	Blue	B	No	N	20mm Top/Bottom	1T1B
		Green	G			20mm Bottom	1B
		Amber	A			25mm Left/Right	2L2R
		Yellow	Y			25mm Top/Bottom	2T2B
		Clear	C			25mm Bottom	2B
						1/2" NPT Left/Right	3L3R
						1/2" NPT Top/Bottom	3T3B
						1/2" NPT Bottom	3B
						3/4" NPT Left/Right	4L4R
						3/4" NPT Top/Bottom	4T4B
						3/4" NPT Bottom	4B

Certification	Code	Voltage	Code
ATEX	B	24V DC	024
UL	UL	110V AC	110
CSA	C	120V AC	120
Only HXBS is available CSA certified.		220V AC	220
		240V AC	240

*Not UL Listed

MEDC Series



Specification—XB11 Unit

Certification: UL Listed for USA and Canada
 – Hazardous locations:
 Class I, Div. 2, Groups C, D
 Class I, Zones 1 & 2, AExd IIB T5
 UL Listing No. E187894
 – Ordinary locations: Visual Signal Device
 UL Listing No. S8128
ATEX approved:
 Exd IIB T5/T6
 Cert. No. 99 ATEX 2195X
 CENELEC EN50014 and EN50018

Material: Body: Glass reinforced polyester
 Lens: Glass
 Cover Screws + Backstrap: Stainless steel 316

Finish: Natural black or painted to customer specification

Weight: 5.5lb/2.5kg

Certified Temperature: Standard unit SM87 HXB: –67°F to +158°F, –55°C to +70°C
 –67°F to +158°F, –55°C to +70°C
 High temperature unit:
 –67°F to +185°F, –55°C to +85°C

Ingress Protection: NEMA 4X & 6, IP66 & 67

Terminals: 6 off suitable for up to 14 AWG conductor size

Labels: Duty/tag label optional

Entries: 2 × 1/2" NPT, 20mm

Strobe/Sounder Unit: The beacon may be combined with an MEDC Sounder to create a visual/audible alarm. Contact MEDC for price and specification.

Voltage	DC	AC 50/60Hz	
	24	110	240
XB11 Tube Energy (joules)	5	5	5
Peak Current Consumption (mA)	320	100	60
Effective Intensity (Cd)	29	29	29
Peak Candle Power	22213	22213	22213
Power Consumption (Watts)	8	11	18

The Cd figures are for a clear lens @ 1Hz flash rate.

For Colored Lenses

Color	Red	Blue	Amber	Green	Yellow
Multiplying Factor	0.15	0.12	0.51	0.49	0.86

The photometric data has been verified by BSI. A report is available if required.

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.


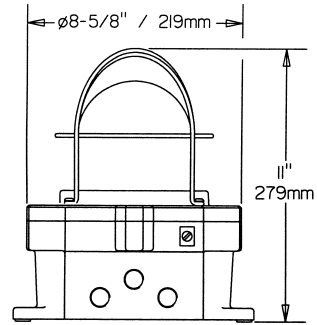
Model Type	Certification	Voltage	Flash Rate	Lens Color	Lens Guard	Unit Fixing	Earth Continuity	Tag/Duty Label	Options	Unit Finish
XB11			06			B	N	N	N	

<table border="1"> <tr><th>Certification</th><th>Code</th></tr> <tr><td>ATEX</td><td>B</td></tr> <tr><td>UL</td><td>UL</td></tr> </table>	Certification	Code	ATEX	B	UL	UL	<table border="1"> <tr><th>Guard</th><th>Code</th></tr> <tr><td>Yes</td><td>Y</td></tr> <tr><td>No</td><td>N</td></tr> </table>	Guard	Code	Yes	Y	No	N
Certification	Code												
ATEX	B												
UL	UL												
Guard	Code												
Yes	Y												
No	N												


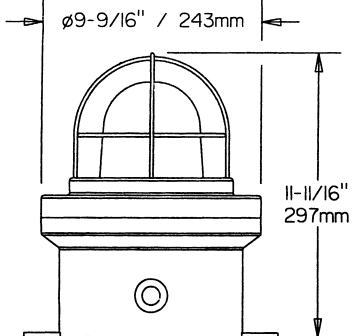
<table border="1"> <tr><th>Voltage</th><th>Code</th></tr> <tr><td>24V DC</td><td>024</td></tr> <tr><td>110V AC</td><td>110</td></tr> <tr><td>240V AC</td><td>240</td></tr> <tr><td colspan="2">Other voltages available, please specify.</td></tr> </table>	Voltage	Code	24V DC	024	110V AC	110	240V AC	240	Other voltages available, please specify.		<table border="1"> <tr><th>Color</th><th>Code</th></tr> <tr><td>Red</td><td>R</td></tr> <tr><td>Blue</td><td>B</td></tr> <tr><td>Green</td><td>G</td></tr> <tr><td>Yellow</td><td>Y</td></tr> <tr><td>Amber</td><td>A</td></tr> <tr><td>Clear</td><td>C</td></tr> </table>	Color	Code	Red	R	Blue	B	Green	G	Yellow	Y	Amber	A	Clear	C	<table border="1"> <tr><th>Finish</th><th>Code</th></tr> <tr><td>Natural Black</td><td>N</td></tr> <tr><td>Red</td><td>R</td></tr> </table>	Finish	Code	Natural Black	N	Red	R
Voltage	Code																															
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110V AC	110																															
240V AC	240																															
Other voltages available, please specify.																																
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Finish	Code																															
Natural Black	N																															
Red	R																															



MEDC Series


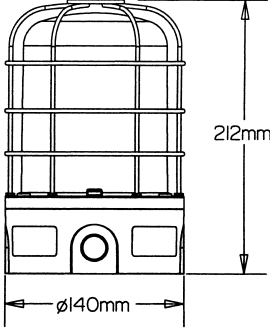
XB4		21 Joule Xenon Strobe—Explosionproof	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB T4, T5	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	Up to 3 × 1/2" or 3/4" NPT, 20mm, 25mm	
	Weight	14.5lb/6.6kg	
	Options	Body & lens color, lens guard, certification, voltages 24V DC, 110V AC & 240V AC	
			

Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
ATEX Approved Ex II 2G	24V DC	Red	814001	XB4BB8D2B3B06AN0RN1R	21 joules, 2 × M20 entries, 355Cd, 60 flashes per minute, no labels, red finish
ATEX Approved Ex II 2G	240V AC	Red	814002	XB4BH8D2B3B06AN0RN1R	
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	Red	869121	XB4ULB8D2E3E06ANRN1R	Marine grade alloy, 2 × 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	Amber	869122	XB4ULB8D2E3E06ANAN1R	
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	Red	869125	XB4ULE8D2E3E06ANRN1R	
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	Amber	869126	XB4ULE8D2E3E06ANAN1R	

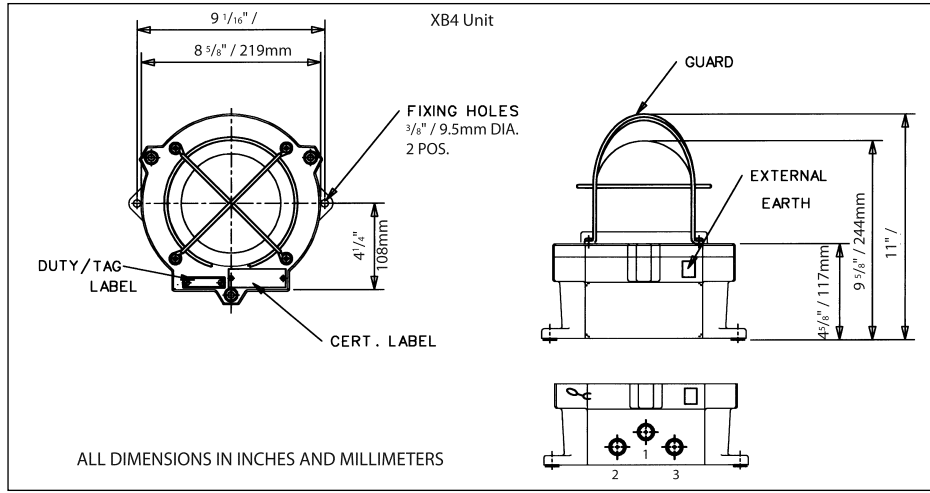
XB12		21 Joule Xenon Strobe—Hazardous Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups C, D Class I, Zones 1 & 2, AExd IIB T4	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 2 × 1/2" NPT, 20mm	
	Weight	15.5lb/7.0kg	
	Options	Body & lens color, lens guard, certification, voltages 24V DC, 110–254V AC	
			

Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
ATEX Approved Ex II 2G	24V DC	Red	812101	XB12B02406RNBNNNN	21 joules, 2 × M20 entries, 355Cd, 60 flashes per minute, no labels, black body
ATEX Approved Ex II 2G	24V DC	Amber	812102	XB12B02406ANBNNNN	
ATEX Approved Ex II 2G	240V AC	Red	812103	XB12B24006RNBNNNN	
ATEX Approved Ex II 2G	240V AC	Amber	812104	XB12B24006ANBNNNN	
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red	869181	XB12UL02406RNBNNNR	Red painted GRP, no tag or duty labels, 2 × 1/2" NPT, 60 flashes per minute, 355 Cd
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Amber	869182	XB12UL02406ANBNNNR	
UL, cUL Listed, Class I, Div. 2, Groups C, D	110V AC	Red	869185	XB12UL11006RNBNNNR	
UL, cUL Listed, Class I, Div. 2, Groups C, D	110V AC	Amber	869186	XB12UL11006ANBNNNR	

MEDC Series

XB13		10 Joule Flashing Xenon—Weatherproof and Heavy Duty			
	Certification UL Listed for:	Weatherproof IP66 & 67			
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C			
	Ingress Protection	NEMA 4X & 6 IP66 & 67			
	Material	Corrosion-free GRP			
	Entries	Up to 3 × 20mm via knockouts			
	Weight	1.1kg			
	Options	Body & lens color, lens guard, voltages 12–24V DC, 115–230V AC			
					
Certification	Voltage	Lens Color	Ordering Code	Cat. #	Standard Product Configuration
Weatherproof, IP66 & 67	24V DC	Red	813101	XB13024RNNN	
Weatherproof, IP66 & 67	24V DC	Amber	813102	XB13024ANNN	
Weatherproof, IP66 & 67	230V AC	Red	813103	XB13230RNNN	
Weatherproof, IP66 & 67	230V AC	Amber	813104	XB13230ANNN	Dust-tight and weatherproof, uncertified, no tag or duty labels, 3 × 20mm entries via knockouts, 60 flashes per minute, dual and single flash modes, natural red GRP

MEDC Series



Specification—XB4 Unit

Certification:	UL Listed for USA and Canada – Hazardous locations: Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB T4 UL Listing No. E187894 – Ordinary locations: Visual Signal Device UL Listing No. S8128 ATEX approved: Exd IIC T5 Cert. No. Baseefa 02ATEX0224X
Materials:	LM25TF Marine Grade Alloy body Grade 316 ANC4B Stainless Steel body Toughened Wellglass
Finish:	Red epoxy paint finish as standard or to customer's specification
Weight:	LM25: 14.5lb/6.6kg. Stainless Steel: Add 18.5lb/8.5kg.
Certified Temperature:	–67°F to +158°F –55°C to +70°C
Ingress Protection:	NEMA 4X & 6, IP66 & 67
Terminals:	8 off suitable for up to 8 AWG conductor size
Entries:	Up to 3 × 1/2" or 3/4" NPT, 20mm, 25mm

Voltage	DC	AC 50/60Hz	
	24	110	240
Tube Energy (joules)	21	21	21
Peak Current Consumption (mA)	1400	350	185
Effective Intensity (Cd)	355	355	355
Peak Intensity (Cd)	123691	123691	123691

Note: The above figures (Cd) are for a clear lens @ 1Hz flash rate.

For Colored Lenses

Color	Red	Blue	Amber	Green	Yellow
Multiplying Factor (Approximate)	0.15	0.12	0.51	0.49	0.86

The photometric data has been independently verified. A report is available if required.

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model Type	Certification	Voltage	Terminals	Cable Entries	Flash Rate	Initiate Options	Lens Guard	Lens Color	Tag/Duty Label	Material	Finish
XB4			8D		06	A			N		R

Certification	Code
ATEX	B
UL	UL

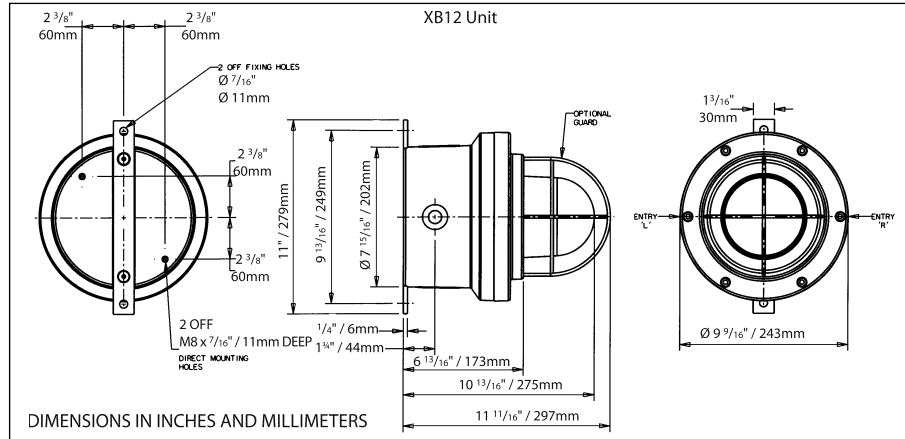
Entries	Code
1-M25 Entry	1C
2-M25 Entries	2C3C
1-3/4" NPT Entry	1E
2-3/4" NPT Entry	2E3E
1-20mm Entry	1B
2-20mm Entries	2B3B
1-1/2" NPT	1D
2-1/2" NPT	2D3D

Guard	Code
Yes	Y
No	N

Color	Code
Red	R
Blue	B
Green	G
Yellow	Y
Amber	A
Clear	C

Material	Code
Alloy	1
Stainless Steel	0

MEDC Series



Specification – XB12

Certification:	UL Listed for USA and Canada – Hazardous locations: Class I, Div. 2, Groups C, D Class I, Zone 1 & 2, AExd IIB T4/T5 UL Listing No. E187894 – Ordinary locations: Visual Signal Device UL Listing No. S8128 ATEX approved: Exd IIB T4/T5 Cert. No. 99 ATEX 2196
Materials:	Body: Glass reinforced polyester Lens: Toughened Glass Cover Screws + Backstrap: Stainless steel 316
Finish:	Natural black or painted to customer specification
Weight:	15.5 lb/7.0kg
Certified Temperature:	–67°F to +158°F (–55°C to +70°C) hazardous locations –67°F to +131°F (–55°C to +55°C) ordinary locations
Ingress Protection:	NEMA 4X and 6, IP66 & 67
Terminals:	6 off suitable for up to 10 AWG conductor size
Labels:	Duty/tag label optional
Entries:	2 x 1/2" NPT, 20mm

	DC	AC 50/60Hz	
	24	110	240
Voltage			
XB12 Tube Energy (joules)	21	21	21
Peak Current Consumption (mA)	1400	350	185
Effective Intensity (Cd)	355	355	355
Peak Intensity (Cd)	123691	123691	123691
Power Consumption (Watts)	33.6	38.5	44.4

The Cd figures are for a clear lens @ 1Hz flash rate.

For Colored Lenses

Color	Red	Blue	Amber	Green	Yellow
Multiplying Factor	0.15	0.12	0.51	0.49	0.86

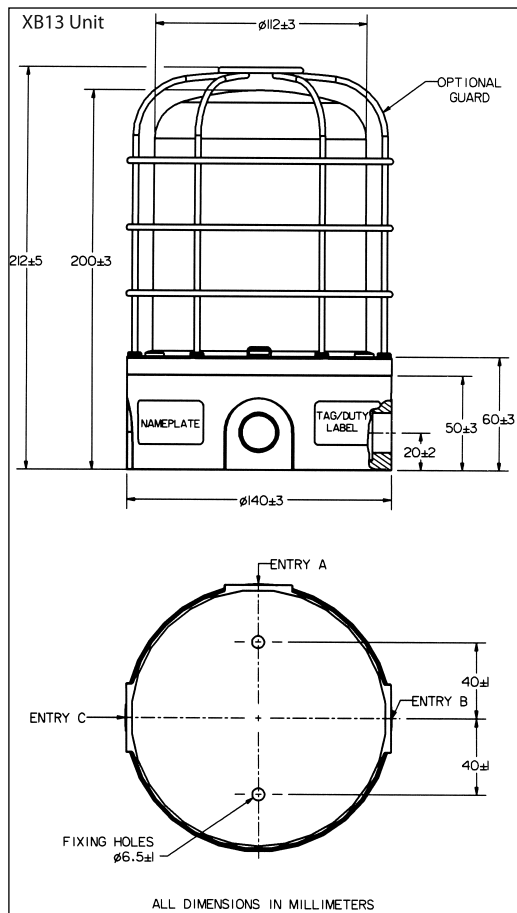
The photometric data has been verified by BSI. A report is available if required.

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Model Type	Certification	Voltage	Flash Rate	Lens Color	Lens Guard	Unit Fixing	Earth Continuity	Tag/Duty Label	Options	Unit Finish																																										
XB12			06			B	N	N	N																																											
<table border="1"> <tr><th>Certification</th><th>Code</th></tr> <tr><td>ATEX</td><td>B</td></tr> <tr><td>UL</td><td>UL</td></tr> </table>		Certification	Code	ATEX	B	UL	UL	<table border="1"> <tr><th>Voltage</th><th>Code</th></tr> <tr><td>24V DC</td><td>024</td></tr> <tr><td>110V AC</td><td>110</td></tr> <tr><td>240V AC</td><td>240</td></tr> <tr><td colspan="2">Other voltages available, please specify.</td></tr> </table>		Voltage	Code	24V DC	024	110V AC	110	240V AC	240	Other voltages available, please specify.		<table border="1"> <tr><th>Color</th><th>Code</th></tr> <tr><td>Red</td><td>R</td></tr> <tr><td>Blue</td><td>B</td></tr> <tr><td>Green</td><td>G</td></tr> <tr><td>Yellow</td><td>Y</td></tr> <tr><td>Amber</td><td>A</td></tr> <tr><td>Clear</td><td>C</td></tr> </table>		Color	Code	Red	R	Blue	B	Green	G	Yellow	Y	Amber	A	Clear	C	<table border="1"> <tr><th>Guard</th><th>Code</th></tr> <tr><td>Yes</td><td>Y</td></tr> <tr><td>No</td><td>N</td></tr> </table>		Guard	Code	Yes	Y	No	N	<table border="1"> <tr><th>Finish</th><th>Code</th></tr> <tr><td>Natural Black</td><td>N</td></tr> <tr><td>Red</td><td>R</td></tr> </table>			Finish	Code	Natural Black	N	Red	R
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MEDC Series



Specification – XB13 Unit

Materials:	UV stable glass reinforced polyester body UV stable polycarbonate cover/lens Retained stainless steel cover screws	
Finish:	Self colored red as standard or epoxy coated to customer's specification	
Tube Energy:	10 joules (second flash 7.5 joules)	
Weight:	1.1kg	
Operating Temperature:	-55°C to +70°C	
Ingress Protection:	IP66 & IP67	
Tube Life:	>1 × 10 ⁶ flashes	
Voltage:	12V DC, 24V DC, 115V AC, 230V AC	
Current Consumption:	Voltage	Current Consumption
	12V DC	1.4A
	24V DC	650mA
	115V AC	180mA
	230V AC	100mA
Tube Type:	Xenon discharge	
Lens Color:	Various colors available	
Terminals:	8 × 2.5mm ²	
Flash Rate:	1 flash per second	
Dual Flash Rate:	Time between dual flashes = 0.5 seconds Charging time = 1 second Cycle repeats every 1.5 seconds	
Labels:	Duty and tag labels available	
Tube Type:	Up to 3 × M20 via knockouts	
Intensity:	Effective intensity 220 Cd. Peak intensity 75,000 Cd. (Figures are for clear lens at 1Hz flash rate).	

For Colored Lenses

Color	Red	Blue	Amber	Green	Yellow
Multiplying Factor	0.15	0.12	0.51	0.49	0.86

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Voltage	Lens Color	Lens Guard	Options	Unit Finish is Red																												
XB13				N	N																												
	<table border="1"> <thead> <tr> <th>Voltage</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>24V DC</td> <td>024</td> </tr> <tr> <td>115V AC</td> <td>115</td> </tr> <tr> <td>230V AC</td> <td>230</td> </tr> </tbody> </table>	Voltage	Code	24V DC	024	115V AC	115	230V AC	230	<table border="1"> <thead> <tr> <th>Color</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Red</td> <td>R</td> </tr> <tr> <td>Blue</td> <td>B</td> </tr> <tr> <td>Green</td> <td>G</td> </tr> <tr> <td>Yellow</td> <td>Y</td> </tr> <tr> <td>Amber</td> <td>A</td> </tr> <tr> <td>Clear</td> <td>C</td> </tr> </tbody> </table>	Color	Code	Red	R	Blue	B	Green	G	Yellow	Y	Amber	A	Clear	C	<table border="1"> <thead> <tr> <th>Guard</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Y</td> </tr> <tr> <td>No</td> <td>N</td> </tr> </tbody> </table>	Guard	Code	Yes	Y	No	N		
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Fire Alarm Strobe Light HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 and 2, Group IIB
Cl. II, Div. 1, Groups E, F, G
Class III

UL and cUL Listed
NEMA 4X; IP66

2S

The Hazard•Gard® EXFASC Series is a visual fire alarm signaling device for hazardous areas. The EXFASC Series strobes are UL 1971 Listed for indoor signaling applications for the hearing impaired in non-sleeping areas. They are also UL Listed for Type 3R, 4X installations. The strobes are available for pendant, wall and ceiling mounts.

The EXFASC Series Fire Alarm Explosionproof Strobe contains a supervisory diode for use in fire alarm applications. Under normal operation the diode is reversed biased, meaning it blocks voltage from being applied to the strobe light and prevents it from lighting. When a fire-initiating device such as a smoke alarm is activated, the diode's polarity is reversed through a fire alarm panel. The diode becomes forward biased, allowing voltage to the device and activating the strobe.

Applications:

- Visual fire alarm signaling device for hazardous areas

Typical Industries:

- Energy exploration
- Utilities
- Wastewater treatment plants
- Pulp and paper plants
- Petrochemical plants
- Petroleum refineries
- Oil rigs

Features and Benefits:

- Meets NFPA requirements for fire safety warning devices
- State of the art electronic design (full wave rectified design)
 - Low current draw is efficient
 - 24V DC regulated full wave rectified
 - Limited in-rush current favorable to other fire alarm system components
 - Proven, reliable circuitry designed specifically for use with fire alarm control panels
- Available in pendant, wall and ceiling mount
- Strobe light produces 65 flashes per minute
- Factory sealed—no external seals required
- Quick connect—strobe fixture threads onto mounting module for easy installation
- Small compact size—ceiling mount is 13³/₄-inch long

Certifications and Compliances:

- Class I, Division 1, Groups C, D
- Class I, Zones 1 and 2, Group IIB
- Class II, Division 1, Groups E, F, G
- Class III
- UL 1638 and 1203 Listed
- UL 1971 Listed for indoor visual signaling for the hearing impaired in non-sleeping areas
- cUL Listed C22.2 No. 205
- NEMA 4X watertight, IP66

Materials & Finishes:

- Body, mounting modules and guard—Copper-free aluminum
- Globe—Heat and impact-resistant glass
- Gaskets—Silicone
- External hardware—Stainless steel
- Internal components—Solid-state electronics in a moisture-resistant and heat-dissipating epoxy
- Epoxy powder coated for corrosion resistance

Crouse-Hinds

by **E•T•N**

www.crouse-hinds.com US: 1-866-764-5454 CAN: 1-800-265-0502 Copyright© 2013 Eaton's Crouse-Hinds Business

1247



Temperature Performance Data:

See page 1203

Ratings:

- 16–33V DC
- Operating Current: 1.08–0.83 amps
- Peak Candlepower: 800,000

Hub Size:

- ³/₄-inch NPT pendant, ceiling and wall mount

Ordering Information:

Step 1 - Order Strobe Type

Catalog Number	Voltage	Lens Color	NEMA Rating
FIRE ALARM RATED EXPLOSIONPROOF STROBE			
EXFASC301/16 33	24 VDC regulated full wave rectified	Clear	3R, 4X

Step 2 - Order Mounting Module

Catalog Number	Hub Size	Mounting Style
EVMP2	³ / ₄ "	Pendant
EV22 & EV87	³ / ₄ "	Wall
EV22	³ / ₄ "	Ceiling
EVMJ4	1 ¹ / ₄ "	Stanchion



Cl. I, Div. 1, Groups C, D
 Cl. I, Zone 1 and 2, Group IIB
 Cl. II, Div. 1, Groups E, F, G
 Class III

UL and cUL Listed
 NEMA 4X; IP66

The **Hazard•Gard EXS and EXDS Series** Explosionproof Strobe Lights are designed for installation indoors and outdoors in locations which are hazardous due to the presence of flammable vapors or gases, ignitable dusts or ignitable fibers and flyings. The units are UL Listed for Type 3R and 4X installations. The 120V and 24V DC models are Marine Rated. The strobes are available for pendant, wall, stanchion and ceiling mounts, and come in six different globe colors.

The **EXDS Series** is diode polarized for use in electrically supervised circuits. Electrically supervised circuits are typically used in life-safety or security applications.

Under normal operation the diode is reversed biased, meaning it blocks voltage from being applied to the strobe and prevents it from lighting. When an initiating device such as a smoke detector is activated, the diode's polarity is reversed through a circuit panel. The diode becomes forward biased, allowing voltage to the device and activating the strobe.

Applications:

- Condition signaling
- Equipment obstruction warning
- Security alert
- Emergency evacuation signaling
- In areas where audible signals cannot be heard

Typical Industries:

- Utility gas plants
- Petroleum refineries
- Wastewater treatment plants
- Chemical and petrochemical
- Mining
- Pulp and paper

Features and Benefits:

- Strong strobe signal that produces 65 flashes per minute
- Compact design will not obstruct in low ceiling or small areas, ceiling mount is only 13³/₄"-inch long
- Quick connect—strobe fixture threads onto mounting module for easy installation
- Factory sealed—no external seals required
- Available in pendant, wall, stanchion and ceiling mount
- Available in six different globe colors—clear, red, blue, amber, green and magenta
- Silicone gasket seals out dirt and moisture

Certifications and Compliances:

- Class I, Division 1, Groups C, D
- Class I, Zones 1 and 2, Group IIB
- Class II, Division 1, Groups E, F, G
- Class III
- UL and cUL 1638, UL 1203 and UL 844 Listed
- 1598A Marine Listed (120V AC and 24V DC only)
- cUL Listed C22.2 No. 205
- NEMA 4X watertight, IP66



Materials and Finishes:

- Body, mounting modules and guard—Copper-free aluminum
- Globe—Heat and impact-resistant glass
- Gaskets—Silicone
- External hardware—Stainless steel
- Internal components—Solid-state electronics in a moisture-resistant and heat-dissipating epoxy
- Epoxy powder coated for corrosion resistance

Ratings:

- 120V AC (EXS), 12–48V DC (EXSNM) and 24V DC nominal, voltage operating range is 16–33V DC (EXDS)
- Operating Current: 0.10 amps at 120V AC
 1.2–3.8 amps at 12–48V DC
 0.8 amps at 24V DC
- Peak Candlepower: 800,000

Hub Size:

- 3/4-inch NPT pendant, ceiling and wall mount
- 1 1/4-inch NPT stanchion mount

Explosionproof Strobe Lights

HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
 Cl. I, Zone 1 and 2, Group IIB
 Cl. II, Div. 1, Groups E, F, G
 Class III

UL and cUL Listed
 NEMA 4X; IP66

2S

Ordering Information:

Step 1 - Order Strobe Type

Cat. #	Voltage	Lens Color	NEMA Rating
Explosionproof Strobes			
EXS301A/120	120V AC	Amber	3R 4X, Marine
EXS301B/120	120V AC	Blue	3R 4X, Marine
EXS301C/120	120V AC	Clear	3R 4X, Marine
EXS301G/120	120V AC	Green	3R 4X, Marine
EXS301M/120	120V AC	Magenta	3R 4X, Marine
EXS301R/120	120V AC	Red	3R 4X, Marine
EXSNM301A/12 48	12-48V DC	Amber	3R 4X
EXSNM301B/12 48	12-48V DC	Blue	3R 4X
EXSNM301C/12 48	12-48V DC	Clear	3R 4X
EXSNM301G/12 48	12-48V DC	Green	3R 4X
EXSNM301M/12 48	12-48V DC	Magenta	3R 4X
EXSNM301R/12 48	12-48V DC	Red	3R 4X
Diode Polarized Explosionproof Strobes			
EXDS301A/24	24V DC	Amber	3R 4X, Marine
EXDS301B/24	24V DC	Blue	3R 4X, Marine
EXDS301C/24	24V DC	Clear	3R 4X, Marine
EXDS301G/24	24V DC	Green	3R 4X, Marine
EXDS301M/24	24V DC	Magenta	3R 4X, Marine
EXDS301R/24	24V DC	Red	3R 4X, Marine

Step 2 - Order Mounting Module

Cat. #	Hub Size	Mounting Style
EVMP2	3/4"	Pendant
EV22 and EV87	3/4"	Wall
EV22	3/4"	Ceiling
EVMJ4	1 1/4"	Stanchion

Temperature Performance Data:

	Ambient Max. Temp.	Supply Wire	Class I, Div. 1, 2, Groups C, D, Class I, Zone 1, Group II B	Class II, Class III, Div. 1, Groups E, F, G	Class II, Class III, Div. 2, Groups F, G
EXFASC Series Fire Alarm Voltage 24V DC Regulated Full Wave Rectified (Operating Range 16-33V DC) (Marine Listed)	40°C 55°C	75°C 90°C	T6 (85°C) T5 (100°C)	T4A (120°C) T4 (135°C)	T4A (120°C) T4 (135°C)
EXS Series Strobe Light Voltage 120V AC (Marine Listed)	40°C 55°C 65°C	75°C 90°C 105°C	T6 (85°C) T6 (85°C) T6 (85°C)	T4A (120°C) T4 (135°C) T4 (135°C)	T4A (120°C) T4 (135°C) T4 (135°C)
EXSNM Series Strobe Light Voltage 12-48V DC (Not Marine Listed)	40°C 55°C 65°C	75°C 90°C 105°C	T6 (85°C) T6 (85°C) T6 (85°C)	T4A (120°C) T4 (135°C) T4 (135°C)	T4A (120°C) T4 (135°C) T4 (135°C)
EXDS Series Strobe 40°C Light-Diode Polarized Voltage 24V DC (Marine Listed)	40°C 55°C	75°C 90°C	T6 (85°C) T5 (100°C)	T4A (120°C) T4 (135°C)	T4A (120°C) T4 (135°C)

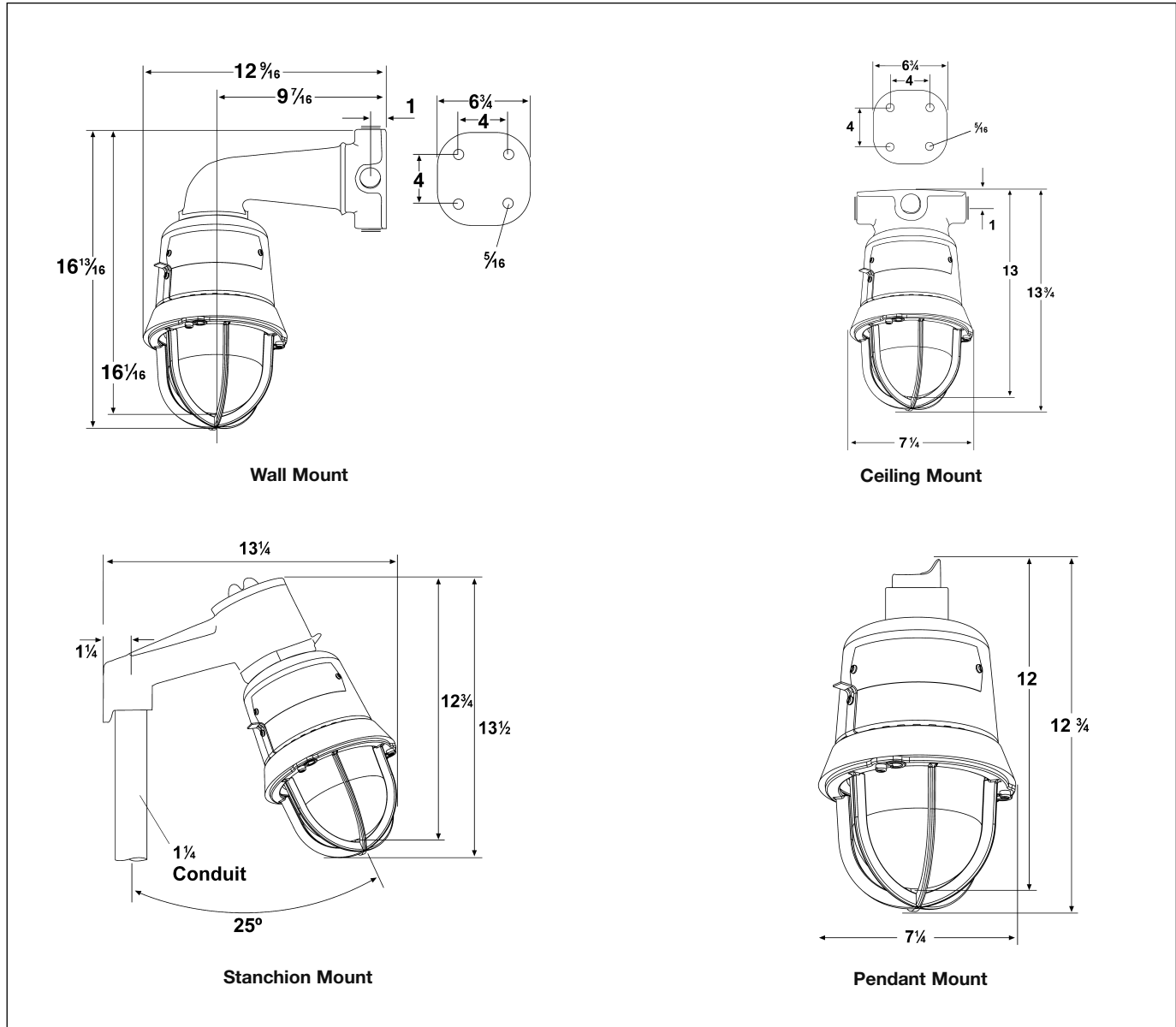
2S

2S Explosionproof Strobe Lights HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 and 2, Group IIB
Cl. II, Div. 1, Groups E, F, G
Class III

UL and cUL Listed
NEMA 4X; IP66

Dimensions In Inches:



Net Luminaire Weights:

Type	lbs.
Luminaire Housing with Guard	11.0

Type	lbs.
Add mounting modules:	
Pendant	1.0
Ceiling	1.0
Wall	4.5
Stanchion	2.5

Explosionproof Rotating Beacons

HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 and 2, Group IIB
Cl. II, Div. 1, Groups E, F, G
Class III

UL and cUL Listed
NEMA 4X; IP66

2S

Eaton's Crouse-Hinds **Hazard•Gard EXR Series Explosionproof Rotating Beacons** are designed for installation in hazardous locations, such as manufacturing plants, heavy industrial facilities, refineries, chemical, petrochemical, pharmaceutical and offshore drilling platforms.

The units are UL Listed for Type 3R, 4X and marine installations. The rotating beacons are available for pendant, wall, stanchion and ceiling mounts, and come in six different globe colors.

The EXDR Series Explosionproof Rotating Beacon is diode polarized for use in standard 24–28V DC electrical circuits or in electrically supervised circuits. Electrically supervised circuits are typically used in life safety or security applications.

Under normal operation in an electrically supervised circuit, the diode is reversed biased, meaning it blocks voltage from being applied to the rotating beacon and prevents it from lighting. When a warning detecting device is activated, the diode's polarity is reversed through a circuit panel. The diode becomes forward biased, allowing voltage to the device and activating the rotating beacon.

Applications:

- Security alert
- Equipment obstruction warning
- Obstacle warning
- Status indication of a process
- Areas under construction
- Supplement audible signaling or off limits

Typical Industries:

- Utility gas plants
- Pharmaceutical plants
- Wastewater treatment plants
- Refineries
- Chemical plants
- Mining

Features and Benefits:

- Powerful halogen rotating beacon emits bright light to provide critical visual warning
- Available in pendant, wall, stanchion and ceiling mount
- Available in six different globe colors—amber, blue, clear, green, magenta and red
- Beacon produces 75 rotations per minute
- Factory sealed—no external seals required
- Quick connect—strobe fixture threads onto mounting module for easy installation

Certifications and Compliances:

- Class I, Division 1, Groups C, D
- Class II, Division 1, Groups E, F, G
- Class I, Zones 1 & 2, Group IIB
- Class III
- UL and cUL 1638, UL 1203 and UL 844 Listed
- 1598A Marine Listed
- NEMA 4X watertight, IP66



Materials and Finishes:

- Body, mounting modules and guard—Copper-free aluminum
- Globe—Heat and impact-resistant glass
- Gaskets—Silicone
- External hardware—Stainless steel
- Internal components—Solid-state electronics in a moisture-resistant and heat-dissipating epoxy
- Epoxy powder coated for corrosion resistance

Ratings:

- 120V AC (EXR) and 24–28V DC (EXDR)
- Operating Current: 0.382 amps at 120V AC
0.8 amps at 24–28V DC
- Peak Candlepower: 3328 (EXR)
2838 (EXDR)

Hub Size:

- 3/4-inch NPT pendant, ceiling and wall mount
- 1 1/4-inch NPT stanchion mount

2S Explosionproof Rotating Beacons HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 and 2, Group IIB
Cl. II, Div. 1, Groups E, F, G
Class III

UL and cUL Listed
NEMA 4X; IP66

Ordering Information:

Step 1 - Order Rotating Beacon Type

Cat. #	Voltage	Lens Color	NEMA Rating
Explosionproof Rotating Beacons			
EXR301A/120	120V AC	Amber	3R, 4X, Marine
EXR301B/120	120V AC	Blue	3R, 4X, Marine
EXR301C/120	120V AC	Clear	3R, 4X, Marine
EXR301G/120	120V AC	Green	3R, 4X, Marine
EXR301M/120	120V AC	Magenta	3R, 4X, Marine
EXR301R/120	120V AC	Red	3R, 4X, Marine
Diode Polarized Explosionproof Rotating Beacons			
EXDR301A/24 28	24–28V DC	Amber	3R, 4X, Marine
EXDR301B/24 28	24–28V DC	Blue	3R, 4X, Marine
EXDR301C/24 28	24–28V DC	Clear	3R, 4X, Marine
EXDR301G/24 28	24–28V DC	Green	3R, 4X, Marine
EXDR301M/24 28	24–28V DC	Magenta	3R, 4X, Marine
EXDR301R/24 28	24–28V DC	Red	3R, 4X, Marine

Step 2 - Order Mounting Module

Cat. #	Hub Size	Mounting Style
EVMP2	3/4"	Pendant
EV22 & EV87	3/4"	Wall
EV22	3/4"	Ceiling
EVMJ4	1 1/4"	Stanchion

Temperature Performance Data:

Description	Ambient Max. Temp.	Supply Wire	Class I, Div. 1, 2, Groups C, D Class I, Zone 1, Group IIB	Class II, Class III, Div. 1, Groups E, F, G	Class II, Class III, Div. 2, Groups F, G
EXR Series Rotating Beacon Voltage 120V AC	40°C	75°C	T6 (85°C)	T4A (120°C)	T4A (120°C)
	55°C	90°C	T5 (100°C)	T4 (135°C)	T4 (135°C)
	65°C	105°C	T5 (100°C)	T4 (135°C)	T4 (135°C)
EXR Series Rotating Beacon—Diode Polarized Voltage 24–28V DC	40°C	75°C	T6 (85°C)	T4A (120°C)	T4A (120°C)
	55°C	90°C	T6 (85°C)	T4 (135°C)	T4 (135°C)
	65°C	105°C	T6 (85°C)	T4 (135°C)	T4 (135°C)

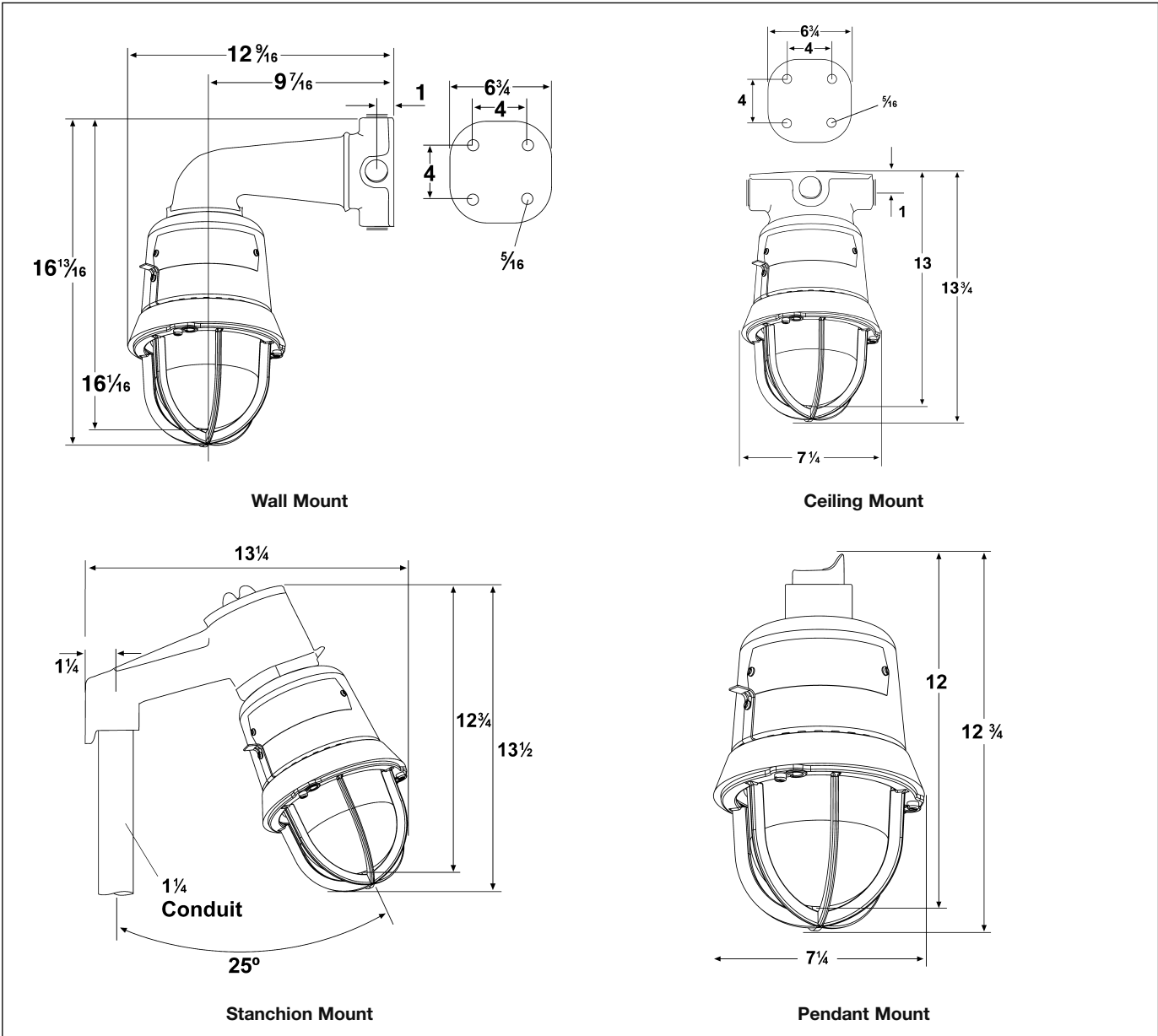
Explosionproof Rotating Beacons HAZARD•GARD® Series

Cl. I, Div. 1, Groups C, D
Cl. I, Zone 1 and 2, Group IIB
Cl. II, Div. 1, Groups E, F, G
Class III

UL and cUL Listed
NEMA 4X; IP66

2S

Dimensions In Inches:



Net Luminaire Weights:

Type	lbs.
Luminaire Housing with Guard	11.0

Type	lbs.
Add mounting modules:	
Pendant	1.0
Ceiling	1.0
Wall	4.5
Stanchion	2.5

Hazardous

Description	Page No.
Steady-On Beacons - MEDC Series	
FB4	see pages 1257–1258
FB11 UL	see pages 1259–1261
FB12 UL	see pages 1259–1261
FB15	see pages 1260–1262
FL4	see pages 1257–1258
SM87 LU3	see pages 1263–1264
SM87 LU1	see pages 1263–1264
Steady-On Beacons - Hazard•Gard EX Series	
EXSO, EXDSO	see pages 1265–1267
Steady-On Beacons - Compact Fluorescent	
VF	see pages 1268–1269



3S Steady-On Beacons

Cl. I, Div. 1 (FB4 & FL4) NEMA 4X
Cl. I, Div. 2 (FB11, FB12 & FB15) IP66 & IP67
Cl. I, Zone 1

MEDC Series



**FB15 Direct Mount
(with wire guard)**

**FB15 Pipe Mount
(with cast guard)**

The units are UL Listed for Type 3R, 4X and marine installations. The steady-on beacons are available for pendant, wall, stanchion and ceiling mounts, and come in six different globe colors.

Typical industrial and commercial applications include food processing plants, refineries, mines, tankers, laboratories, sewage treatment plants, off-shore oil rigs, water and filtration plants and chemical plants. The diode polarized steady-on beacon is used in electrically supervised circuitry for life-safety or security applications.

Applications:

- Safety lighting
- Continuous source to communicate
- Obstacle warning
- Exit or entrance lights
- For identifying the location of safety equipment such as showers or emergency telephones

Typical Industries:

- Chemical plants
- Storage handling
- Dust conveyor systems
- Energy exploration
- Textile mills
- Flour and feed mills

Certifications and Compliances:

- Class I, Division 1, Groups C, D
- Class I, Zone 1 & 2, Group IIB
- Class II, Division 1, Groups E, F, G
- Class III
- UL and cUL 1638, UL 1203 and UL 844 Listed
- 1598A Marine Listed
- NEMA 4X watertight, IP66

3S


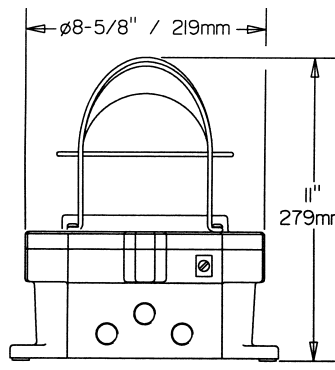
Steady-On Beacons


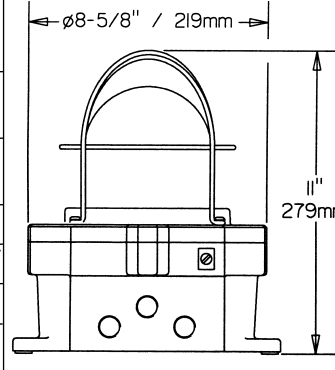
Cl. I, Div. 1 (FB4 & FL4)
 Cl. I, Div. 2 (FB11, FB12 & FB15)
 Cl. I, Zone 1

NEMA 4X
 IP66 & IP67

3S

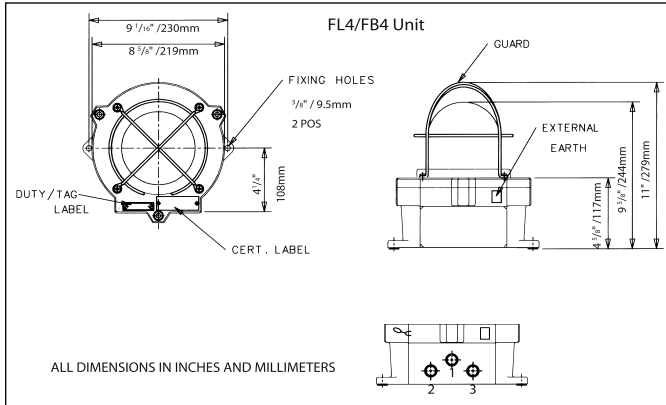
MEDC Series

FB4		100 Watt Steady Incandescent Light - Explosionproof	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB T4	
	Certified Ambient Temperature	-67°F to +131°F -55°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	Up to 3 x 1/2" or 2 x 3/4" NPT	
	Weight	13lb/6.4kg	
	Options:	Body & lens color, lens guard, certification, voltage 120V AC only	
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups C, D	17800002	FB4EUL8U1N100B1N1G	Marine grade alloy, 120V AC, 100W bulb (not included) blue lens, lens guard, no labels, gray finish

FL4		13-39 Watt Steady Fluorescent Light—Explosionproof	
	Certification UL Listed for:	UL, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIC T5	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	Up to 3 x 1/2" NPT or 2 x 3/4" NPT	
	Weight	14.5lb/6.6kg	
	Options:	Body & lens color, lens guard, certification, voltages 24V DC, 120V, 240V AC	
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL Listed, Class I, Div. 2, Groups C, D	27800006	FL4BUL8U2M3M13R1N1RZ	Marine grade alloy, 24V DC, 2 x 1/2" NPT entries, 13W tube (not included), red lens, lens guard, red finish , one certified plug

3S

MEDC Series



Specification – FL4 and FB4 Units

Certification: UL Listed for USA and Canada
 – Hazardous locations:
 Class I, Div. 1, Groups C, D
 Class I, Zone 1, AExd IIB T4/T5
 UL Listing No. E187894
 – Ordinary locations: Visual-Signal Device (FL4 only).
 UL Listing No. S8128.
ATEX approved:
 Exd IIC
 Certificate No. Baseefa 02ATEX0224X

Material: LM25TF Marine Grade Alloy body
 Grade 316 ANC48 Stainless Steel body
 Toughened Wellglass

Models: FL4: Up to 3 x 13 Watt PL compact fluorescent lamps
 FB4: 100 watt GLS incandescent lamps. E27 holder as standard

Finish: Gray epoxy paint finish as standard or to customer's specification

Voltage: FL4: 24V DC, 120V AC, 240V AC ± 10% 50/60hz.
 FB4: 120V AC ± 10% 50/60hz.

Weight: FL4: 14–17lb/6.5–7.9kg (add 19lb/8.4kg for stainless steel)
 FB4: 13lb/6.4 kg

Certified Temperature: FL4: –4°F to +131°F (–20°C to + 55°C)
 FB4: –67°F to +131°F (–55°C to + 55°C)

Ingress Protection: NEMA 4X & 6
 IP66 & IP67

Lamps: Units are supplied without lamps

Terminals: 8 off suitable for up to 8 AWG conductor size

Entries: Up to 3 x 1/2" NPT or 2 x 3/4" NPT

FL4 Lamp Details

Unit Type	Lamp Type	Lamp Ref.	Holder Type
FL4 DC	Osram Dulux D/E 13W	DD/E 13/XX	G24q-1
	Philips PLC 13W	PLC 13 P4	G24q-1
FL4 AC	Osram Dulux D 13W	DD 13	G24d-1
	Philips PLC 13W	PLC 13	G24d-1
	Osram Color XX = (21 = Cool white) (31 = Warm white) (41 = Interna)		

Temperature Ratings

Type	Voltage/Wattage	Lamp Ref.	Max. Amb.
FL4	DC units	DD/E 13/XX	55°C
	AC units	PLC 13 P4	55°C
FB4	60W	DD 13	55°C
	100W	PLC 13	55°C

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Voltage	Certification	Entries	Lamp Wattage	Lens Color	Guard	Options	Material	Finish
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text"/>	<input type="text" value="R"/>
FL4 FB4		Certification Code ATEX B8D UL* UL8U	Entries Code 1 x 20mm 1B 2 x M20 2B3B 1 x M25 1C 2 x M25 2C3C 1 x 1/2" NPT 1M 2 x 1/2" NPT† 2M3M 1 x 3/4" NPT† 1N 2 x 3/4" NPT† 2N3N	Lamp Wattage Code FL4 13W(1 x 13W tube) 13 26W(2 x 13W tubes) 26* FB4 60W 60 100W 100	Color Code Clear C Red R Blue B Green G Yellow Y Amber A	Guard Code None 0 Guard 1	Options Code N	Material Code Stainless Steel 0 Alloy 1	
Voltage Code 24V DC B 120V AC E 240V AC H		*UL (FB4)—only available 24VDC, 110VAC, NPT entries.	†UL Listed version only.						

*Only available in the following voltages: 26W—AC only.


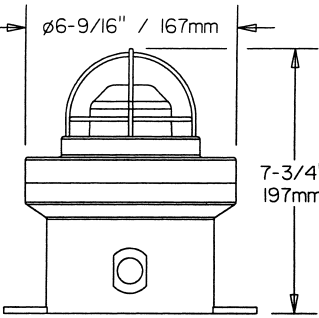
Steady-On Beacons

Cl. I, Div. 1 (FB4 & FL4)
 Cl. I, Div. 2 (FB11, FB12 & FB15)
 Cl. I, Zone 1


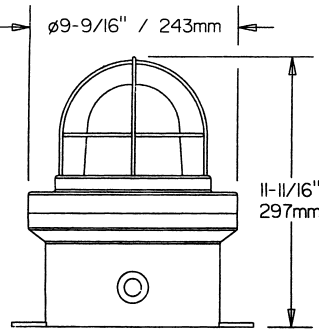
NEMA 4X
 IP66 & IP67

3S

MEDC Series

FB11 UL		10 Watt Steady Incandescent Light—Hazardous Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups C, D Class I, Zone 1, AExd IIB T4/T5	
	Certified Ambient Temperature	-67°F to +131°F -55°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 2 × 1/2" NPT, M20	
	Weight	6.2lb/2.8kg	
	Options	Body & lens color, lens guard, certification, voltage 24, 48V DC, 110–120V AC	

Certification	Ordering Code	Cat. #	Standard Product Configuration
ATEX	32500004	FB11B02410RNBNNN	24V DC, 10W bulb, red lens, mounting bracket, natural black finish
UL, cUL Listed, Class I, Div. 2, Groups C, D	32500028	FB11UL02410GNBNNR	10W incandescent beacon, 24V DC, green lens, no lens guard, 2 × 1/2" NPT entries, painted red enclosure
UL, cUL Listed, Class I, Div. 2, Groups C, D	32500029	FB11UL11010GNBNNR	10W incandescent beacon, 110V AC, green lens, no lens guard, 2 × 1/2" NPT, painted red enclosure


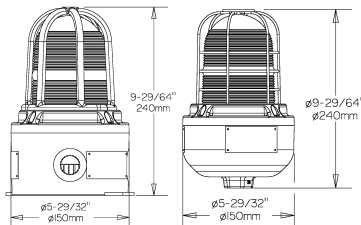
FB12 UL		60W/100W Steady Incandescent Light—Hazardous Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups C, D Class I, Zone 1, AExd IIB T4/T5	
	Certified Ambient Temperature	-67°F to +131°F -55°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 2 × 1/2" NPT, M20	
	Weight	2.6lb/1.2kg	
	Options	Body & lens color, lens guard, certification, voltage 120V AC	

Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups C, D	326023	FB12UL12060CNBNNN	120V AC, 60W bulb, clear lens, mounting bracket, no labels, natural black finish
UL, cUL Listed, Class I, Div. 2, Groups C, D	32600035	FB12UL12060GNBNNR	60W incandescent beacon, 120V AC, green lens, no lens guard, 2 × 1/2" NPT entries in a painted red enclosure
UL, cUL Listed, Class I, Div. 2, Groups C, D	32600036	FB12UL02460GNBNNR	60W incandescent beacon, 24V DC, green lens, no lens guard, 2 × 1/2" NPT entries, painted red enclosure
UL, cUL Listed, Class I, Div. 2, Groups C, D	32600037	FB12UL120100GNBNNR	100W incandescent beacon, 24V DC, green lens, no lens guard, 2 × 1/2" NPT entries, painted red enclosure

3S

MEDC Series

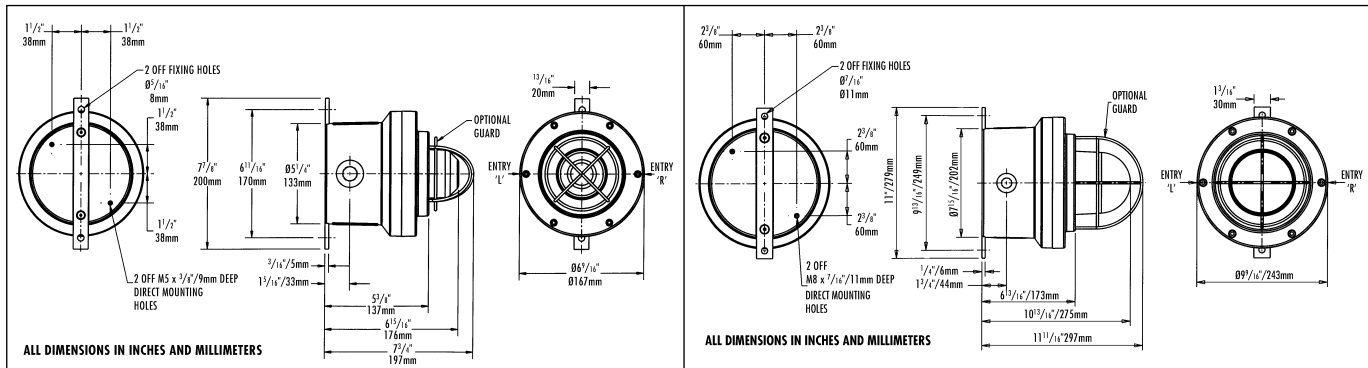
FB15 100W Steady Incandescent Light – Hazardous & Ordinary Locations

	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zone 1, AExd IIC T3/T4	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Entries	Up to 3 x 1/2" NPT or 3 x 3/4" NPT	
	Weight	6-8lb/2.6-3.6kg	
	Options	Body & lens color, lens guard, lamp wattage, unit fixing, mounting method, voltages 12-48V DC, 110-254V AC	

Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600001	FB15UL120100GNANR	120V AC, 100W bulb, green lens, mounting bracket, no labels, red finish
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600020	FB15UL120100ANPNN	100W incandescent beacon, 120V AC, amber lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600021	FB15UL120100RNPNN	100W incandescent beacon, 120V AC, red lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600022	FB15UL120100GNPNN	100W incandescent beacon, 120V AC, green lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600023	FB15UL120100CNPNN	100W incandescent beacon, 120V AC, clear lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600024	FB15UL120100BNPNN	100W incandescent beacon, 120V AC, blue lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600025	FB15UL024100ANPNN	100W incandescent beacon, 24V DC, amber lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600026	FB15UL024100RNPNN	100W incandescent beacon, 24V DC, red lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600027	FB15UL024100GNPNN	100W incandescent beacon, 24V DC, green lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600028	FB15UL024100CNPNN	100W incandescent beacon, 24V DC, clear lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	47600029	FB15UL024100BNPNN	100W incandescent beacon, 24V DC, blue lens, no lens guard, pipe mounting, 1 x 3/4 NPT entry, natural black enclosure

3S

MEDC Series



Specification—FB11 and FB12 Units

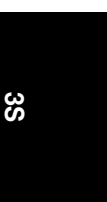
Models:	FB11 & FB12—Incandescent
Certification:	UL Listed for USA and Canada – Class I, Div. 2, Groups C, D – Class I, Zone 1, AExd IIB T4/T5 UL listing No. E187894 ATEX approved: CENELEC EN50014 and EN50018 FB11: Cert. No. 99 ATEX 2195X FB12: Cert. No. 99 ATEX 2196
Voltage:	FB11: 24, 48V DC 110, 220, 240, 250V AC FB12: 120V AC
Incandescent:	FB11: 10W incandescent fitted as standard FB12: 60W or 100W incandescent fitted as standard
Material:	Body: Glass reinforced polyester Lens: Glass Cover screws + backstrap: stainless steel 316

Finish:	Natural black or painted to customer specification
Ingress Protection:	NEMA 4X & 6, IP66 & IP67
Terminals:	FB11: 6 x 14 AWG FB12: 6 x 10 AWG
Labels:	Duty/Tag Label optional
Entries:	2 x 1/2" NPT
Certified Temperature:	FB11: -67°F to +131°F (-55°C to +55°C) T4 -67°F to +104°F (-55°C to +40°C) T5. FB12: -67°F to +131°F (-55°C to +55°C) T4 -67°F to +104°F (-55°C to +40°C) T5.
Weight:	FB11: 6.2lb / 2.8kg. FB12: 16.7lb / 7.6kg.

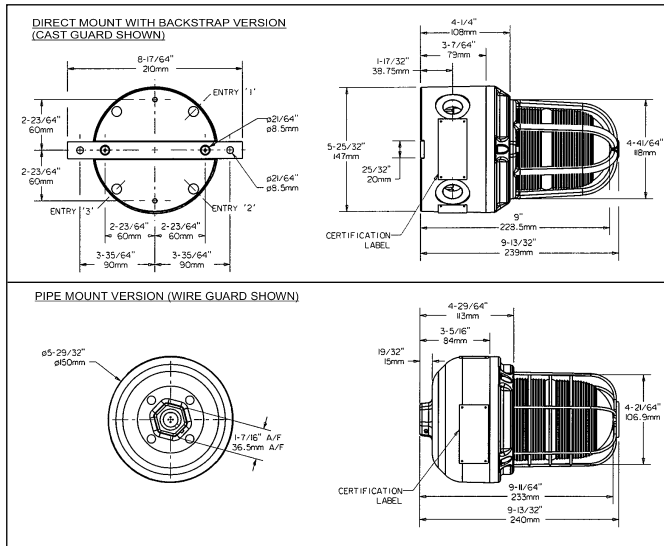
Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Certification	Voltage	Lamp Wattage	Lens Color	Lens Guard	Unit Fixing	Earth Continuity	Tag/Duty Label	Finish
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text" value="B"/>	<input type="text" value="N"/>	<input type="text" value="N"/>	<input type="text"/>
FB11 FB12	Cert. Code ATEX B UL Listed UL	<input type="text"/>	<input type="text"/>	<input type="text"/>				Finish Code Natural Black N Red R	
Voltage Code		Lamp Wattage Code		Color Code					
24V DC 024 110V AC 110 120V AC† 120 240V AC 240 Other voltages available, please specify. †FB12 UL Listed only		FB11 10W AC & DC (1 x 10W bulb) 10 FB12 60W AC & DC (1 x 60W bulb) 60 100W AC & DC (1 x 100W bulb) 100		Red R Blue B Green G Amber A Yellow Y Clear C					



MEDC Series



Specification – FB15 Unit

Certification: UL Listed for USA and Canada:
 – Hazardous locations
 Class I, Div. 2, Groups A, B, C, D
 Class I, Zone 1, AExd IIC T3/T4
 UL listing No. E187894
 – Ordinary locations: Visual Signal Device
 UL listing No. S8128
 CENELEC/ATEX approved
 CENELEC EN50014 & EN50018
 ATEX Cert. No.
 Baseefa 04ATEX0009X

Material: Body: Glass reinforced polyester
 Lens: Glass
 Backstrap: Stainless steel 316
 Wire Guard (optional): Stainless steel wire
 Cast Guard (optional): Aluminium LM25M

Finish: Natural black or epoxy painted to customer specification

Voltage: 24, 48V DC
 110, 120, 230, 240, 254V AC

Lamp Type: 60W or 100W GLS incandescent

Lamp Holder: E27 as standard

Certified Temperature: 60W: -67°F to +131°F (-55°C to +55°C) T4
 -67°F to +158°F (-55°C to +70°C) T3
 100W: -67°F to +104°F (-55°C to +40°C) T4

Weight: Pipe mount: 5.75lb/2.6kg;
 Direct mount: 6.5lb/3.0kg

Ingress Protection: NEMA 4X & 6, IP66 & IP67

Entries: Supplied as 2 x M20, up to 3 x M20 or 3 x M25
 Supplied as 2 x 1/2" NPT (direct mount) or 3/4" (pipe mount) as standard
 Other options available:
 Up to 3 x 1/2" NPT or 3 x 3/4" NPT (direct mount);
 1/2" NPT (pipe mount) – contact sales office to order

Terminals: Direct mount: 12 x 14AWG
 Pipe mount: 8 x 14AWG

Labels: Tag/duty label option

Electrical Ratings:

Voltage	DC		AC				
	24	48	110	120	230	240	254
Current (A) – 60W lamp	2.5	.67	0.55	0.50	0.26	0.25	0.24
Current (A) – 100W lamp	4.2	.73	0.91	0.83	0.43	0.42	0.39

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box. Standard products available for immediate shipping - contact sales office for details.

Model **Certification** **Voltage** **Lamp Wattage** **Lens Color** **Unit Guard** **Fixing** **Unit Options** **Finish**

Certification	Code
ATEX	B
UL	UL

Voltage	Code
24V DC	024
110V AC	110
120V AC	120
240V AC	240

Lamp Wattage	Code
60	60
100	100

Guard	Code
None	N
Cast	C
Wire	W

Color	Code
Red	R
Blue	B
Green	G
Amber	A
Yellow	Y
Clear	C

Unit Fixing	Code
Pipe mount	P*
Direct w/backstrap	B

* Not Available on ATEX version.


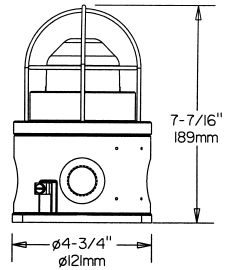
Steady-On Beacons


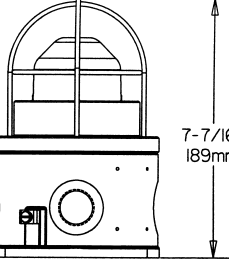
Cl. I, Div. 1 (FB4 & FL4)
 Cl. I, Div. 2 (FB11, FB12 & FB15)
 Cl. I, Zone 1

NEMA 4X
 IP66 & IP67

3S

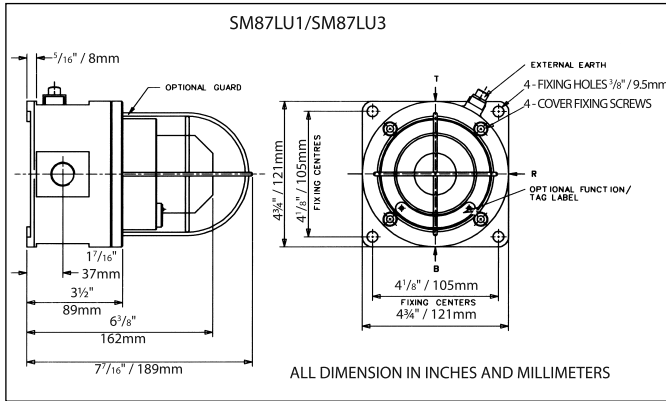
MEDC Series

SM87 LU3		10 Watt Steady Incandescent Light—Explosionproof	
	Certification UL Listed for:	cULus, CSA, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB	
	Certified Ambient Temperature	-67°F to +131°F -55°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	2 x 1/2" or 3/4" NPT, 20mm, 25mm	
	Weight	4.4lb/2.0kg	
	Options	Body & lens color, lens guard, certification, voltages 12–48V DC, 110V–254V AC	
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups C, D	762311	SM87LU3AUL024RN3R3LNR	24V DC, red lens, 2 x 1/2" NPT entries, no labels, red finish
ATEX	46200122	SM87LU3AB024GN1T1BNR	Exd, IIC, T4/T6 incandescent beacon, 24V DC, green lens, no lens guard, 2 x M20 cable entries, painted red enclosure
UL, cUL Listed, Class I, Div. 1, Groups C, D	46200096	SM87LU3AUL024GN3T3BNR	24V DC, green lens, 10W incandescent bulb, marine grade alloy, red finish

SM87 LU1		10 Watt Steady Fluorescent Light—Explosionproof	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB	
	Certified Ambient Temperature	-67°F to +131°F -55°C to +55°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Alloy	
	Entries	2 x 1/2" or 3/4" NPT, 20mm, 25mm	
	Weight	4.4lb/2.0kg	
	Options	Body & lens color, lens guard, certification, voltages 12–48V DC, 120V–254V AC	
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups C, D	46200054	SM87LU1AUL024RN4T4BNR	24V DC, red lens, 2 x 3/4" NPT entries, no labels, red finish
UL, cUL Listed, Class I, Div. 1, Groups C, D	46200052	SM87LU1AUL024GN4T4BNR	24V DC, green lens, 10W fluorescent bulb, marine grade alloy, red finish
ATEX	46200121	SM87LU1AB024GN1T1BNR	Exd, IIC, T4/T6 fluorescent beacon, 24V DC, green lens, no lens guard, 2 x M20 cable entries, painted red enclosure

3S

MEDC Series



Specification – SM87LU1/SM87LU3 Units

Models:	SM87 LU1: Fluorescent SM87 LU3: Incandescent
Certification:	UL Listed for USA and Canada: Class I, Div. 1, Groups C, D and Class I, Zone 1. Listing No: E187894. CSA Certified for Class I, Div. 1 & 2, Group D Certificate No. 96406 ATEX approved: Exd IIC T3-T6 (model dependent) Certificate No. 03ATEX0222X
Ingress Protection:	NEMA 4X and 6 IP66 & IP67
Material:	Marine Grade Aluminium Alloy LM25TF with glass lens
Finish:	Epoxy paint finish as standard or to customer's specification
Fluorescent:	10 Watt tube light output 600 Lumens (240V & 254V AC versions) 5 Watt tube max. light output 250 Lumens (DC versions)
Incandescent:	Single incandescent fitted as standard 10 watts. Others may be available, please contact MEDC with your requirements
Weight:	4.4lb/2.0kg approx.
Certified Temperature:	SM87LU1/3 -67°F to +131°F -55°C to +55°C
Voltage:	12, 24, 48V DC, 110V (LU3 only), 220V, 240V, 254V AC 50Hz as standard. 60Hz available if required
Terminals:	SM87: 4 off for up to 14 AWG cable
Entries:	SM87LU1& 3: 2 x 1/2" or 3/4" NPT, 20mm, 25mm
Power Consumption:	LU1- 7 Watts for 12V DC, 24V DC, 48V DC, 220V AC 14 Watts for 240V AC, 15 Watts for 254V AC LU3- Single incandescent fitted as standard 10W. Other options are available—please contact MEDC with your requirements

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.



Model	Certification	Voltage	Lens Color	Lens Guard	Entries	Tag/Duty Label	Unit Finish
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text" value="R"/>

Type	Code
Fluorescent (Alloy) [†]	SM87LU1A
Fluorescent (Stainless Steel) [*]	SM87LU1S
Incandescent (Alloy) [†]	SM87LU3A
Incandescent (Stainless Steel) [*]	SM87LU3S

^{*}Not available UL Listed or GOST Certified.
[†] Not available CSA certified.

Voltage	Code
24V DC	024
110V AC	110
240V AC	240

Color	Code
Red	R
Blue	B
Green	G
Amber	A
Yellow	Y
Clear	C

Entries	Code
M20 left, M20 bottom	1B1L
M20 bottom	1B
1/2" NPT left, 1/2" NPT bottom	3B3L
1/2" NPT Bottom	3B

Certification	Code
ATEX/CENELEC	B
UL Listed	UL
CSA Certified	C

Steady-On Beacons

Eaton's Crouse-Hinds Hazard•Gard **EXSO and EXDSO (Diode Polarized) Series Explosionproof Steady-On Beacons** are designed for installation in hazardous locations where a visual signal is required for tough environmental conditions involving corrosives, water, dust and extreme temperature.

The units are UL Listed for Type 3R, 4X and marine installations. The steady-on beacons are available for pendant, wall, stanchion and ceiling mounts, and come in six different globe colors.

Typical industrial and commercial applications include food processing plants, refineries, mines, tankers, laboratories, sewage treatment plants, offshore oil rigs, water and filtration plants and chemical plants.

The diode polarized steady-on beacon is used in electrically supervised circuitry for life safety or security applications.

Applications:

- Safety lighting
- Exit or entrance lights
- Obstacle warning
- Continuous source to communicate
- For identifying the location of safety equipment such as showers or emergency telephones

Typical Industries:

- Chemical plants
- Storage handling
- Dust conveyor systems
- Energy exploration
- Textile mills
- Flour and feed mills

Features and Benefits:

- Powerful halogen light source for clear visual indication
- Available in six different globe colors—amber, blue, clear, green, magenta and red
- Factory sealed—no external seals required
- Quick connect—steady-on beacon fixture threads onto mounting module for easy installation
- Small compact size—ceiling mount is 13³/₄-inch long
- Available in pendant, wall, stanchion and ceiling mount



Certifications and Compliances:

- Class I, Division 1, Groups C, D
- Class I, Zones 1 & 2, Group IIB
- Class II, Division 1, Groups E, F, G
- Class III
- UL and cUL 1638, UL 1203 and UL 844 Listed
- 1598A Marine Listed (120V AC and 24V DC only)
- cUL Listed C22.2 No. 205
- NEMA 4X watertight, IP66

Materials and Finishes:

- Body, mounting modules and guard—Copper-free aluminum
- Globe—Heat and impact-resistant glass
- Gaskets—Silicone
- External hardware—Stainless steel
- Internal components—Solid-state electronics in a moisture-resistant and heat-dissipating epoxy
- Epoxy powder coated for corrosion resistance

Ratings:

- 120V AC (EXR) and 24–28V DC (EXDR)
- Operating Current: 0.35 amps at 120V AC (EXSO); 0.8 amps at 24–28V DC (EXDSO, diode polarized)
- Peak Candlepower: 3328

Hub Size:

- ³/₄-inch NPT pendant, ceiling and wall mount
- 1¹/₄-inch NPT stanchion mount

Steady-On Beacons

Ordering Information:

Step 1 - Order Rotating Beacon Type

Cat. #	Voltage	Lens Color	NEMA Rating
Explosionproof Steady-On Beacons			
EXSO301A/120	120V AC	Amber	3R, 4X, Marine
EXSO301B/120	120V AC	Blue	3R, 4X, Marine
EXSO301C/120	120V AC	Clear	3R, 4X, Marine
EXSO301G/120	120V AC	Green	3R, 4X, Marine
EXSO301M/120	120V AC	Magenta	3R, 4X, Marine
EXSO301R/120	120V AC	Red	3R, 4X, Marine

Diode Polarized Explosionproof Steady-On Beacons

EXDSO301A/24 28	24-28V DC	Amber	3R, 4X, Marine
EXDSO301B/24 28	24-28V DC	Blue	3R, 4X, Marine
EXDSO301C/24 28	24-28V DC	Clear	3R, 4X, Marine
EXDSO301G/24 28	24-28V DC	Green	3R, 4X, Marine
EXDSO301M/24 28	24-28V DC	Magenta	3R, 4X, Marine
EXDSO301R/24 28	24-28V DC	Red	3R, 4X, Marine

Step 2 - Order Mounting Module

Cat. #	Hub Size	Mounting Style
EVMP2	3/4"	Pendant
EV22 & EV87	3/4"	Wall
EV22	3/4"	Ceiling
EVMJ4	1 1/4"	Stanchion

Temperature Performance Data:

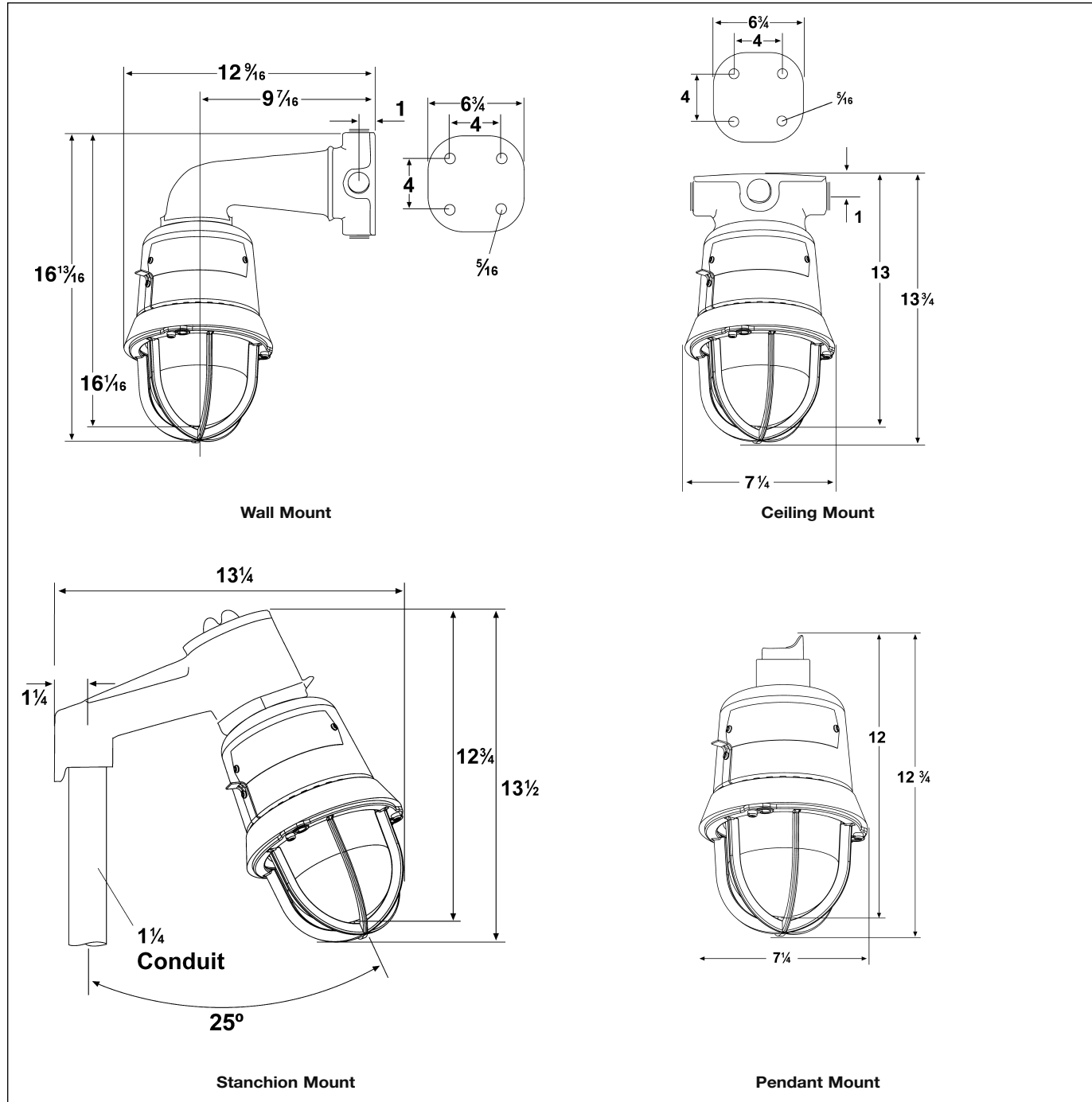
Description	Ambient Max. Temp.	Supply Wire	Class I, Div. 1, 2, Groups C, D, Class I, Zone 1, Group IIB	Class II, Class III, Div. 1, Groups E, F, G	Class II, Class III, Div. 2, Groups F, G
EXSO Series Steady-On Beacon Voltage 120V AC	40°C	75°C	T6 (85°C)	T4A (120°C)	T4A (120°C)
	55°C	90°C	T5 (100°C)	T4 (135°C)	T4 (135°C)
	65°C	105°C	T5 (100°C)	T4 (135°C)	T4 (135°C)
EXDSO Series Steady-On Beacon—Diode Polarized Voltage 24-28V DC	40°C	75°C	T6 (85°C)	T4A (120°C)	T4A (120°C)
	55°C	90°C	T6 (85°C)	T4 (135°C)	T4 (135°C)
	65°C	105°C	T6 (85°C)	T4 (135°C)	T4 (135°C)



Steady-On Beacons

Dimensions

In Inches:



Net Luminaire Weights:

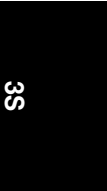
Description	Weight
Luminaire Housing with Guard	11.0 lbs.

Add mounting modules:

Pendant	1.0 lbs.
Ceiling	1.0 lbs.
Wall	4.5 lbs.
Stanchion	2.5 lbs.

Crouse-Hinds

by **EATON**



VF "Steady On" Beacon

Compact Fluorescent Warning and Visual Indication Light

Cl. I, Div. 2, Groups A, B, C, D
 Cl. I, Zone 2, Group IIC
 Wet Locations
 3, 3R

Green – Safety Shower
 Blue – Emergency Telephones
 Red – Danger
 Amber – Warning
 Visual Signal

Applications:

VF series "Steady On" fluorescent beacons are used indoors or outdoors:

- Where the energy efficiency and long life of compact fluorescent lamps are desired
- For continuous signaling requirements
- Where a continuous "Steady-On" fluorescent light signal is required
- Where ambient noise makes audible signals difficult to hear
- As visual signals or warning lights on loading docks; at obstructions, exits or entrances
- For identifying the location of safety equipment such as safety showers or emergency telephones
- For call signals
- For status indication or area lighting on offshore rigs, mines, refineries etc.
- In locations which are hazardous due to the presence of flammable vapors or gases and where dampness or corrosion are present
- To identify a potentially dangerous obstacle
- As a continuous source to warn or communicate

Typical Applications are:

- Green - Identify safety shower locations
- Blue - Identify emergency telephones
- Amber - Caution signal
- Red - Danger signal
- Red & Amber - Emergency situations
- Blue & Red - Security or malfunctioning equipment
- Green & Clear - Equipment end of cycle

Features:

- Extremely energy-efficient, only 18 watt (2-9 watt compact fluorescent lamps)
- Packs considerable punch for ample visibility even in harsh environments
- Compact size and light weight allow adaptation and easy installation in many industrial applications
- Cast copper-free aluminum (less than 0.4 of 1% copper) construction and epoxy powder finish provide excellent resistance to corrosion
- Variety of mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket, angle stanchion
- Glass globes are internally fluted and stippled to enhance visibility; exteriors are smooth to shed dust
- Grounding wire for safety



Certifications and Compliances:

- NEC and CEC:
 Class I, Division 2, Groups A, B, C, D
 Class I, Zone 2
- UL Standards:
 844
 1598 Luminaires
- CSA Standards:
 C22.2 No. 137

Standard Materials:

- Bodies and guards – copper-free aluminum (less than 0.4 of 1%)
- Globes – glass

Standard Finishes:

- Copper-free aluminum – powder epoxy finish

Electrical Ratings:

- Input voltage – 120 VAC, 60 hertz
- Wattages: 18W (Two 9W lamps)

Ordering Information:

Style	Cat. # - by Globe Color				
	Red	Amber	Green	Blue	Clear
Pendant	VFA222GRP	VFA222GAP	VFA222GPP	VFA222GBP	VFA222GP
Wall	VFHBF222GRP	VFHBF222GAP	VFHBF222GPP	VFHBF222GBP	VFHBF222GP
Ceiling	VFHF222GRP	VFHF222GAP	VFHF222GPP	VFHF222GBP	VFHF222GP
Stanchion	VFHA422GRP	VFHA422GAP	VFHA422GPP	VFHA422GBP	VFHA422GP

Weights:

Luminaire Type	2-Lamp Luminaire With Globe & Guard (lbs.)
VFA	5
VFHF	5¼
VFHBF	7½

Temperature Performance Data:

Style 1 & 2 Lamp	Class I, Div. 2	Max. Ambient	Supply Wire °C	Minimum Operating
9W	T3B	40°C	75°C	-4°C (25°F)

VF "Steady On" Beacon

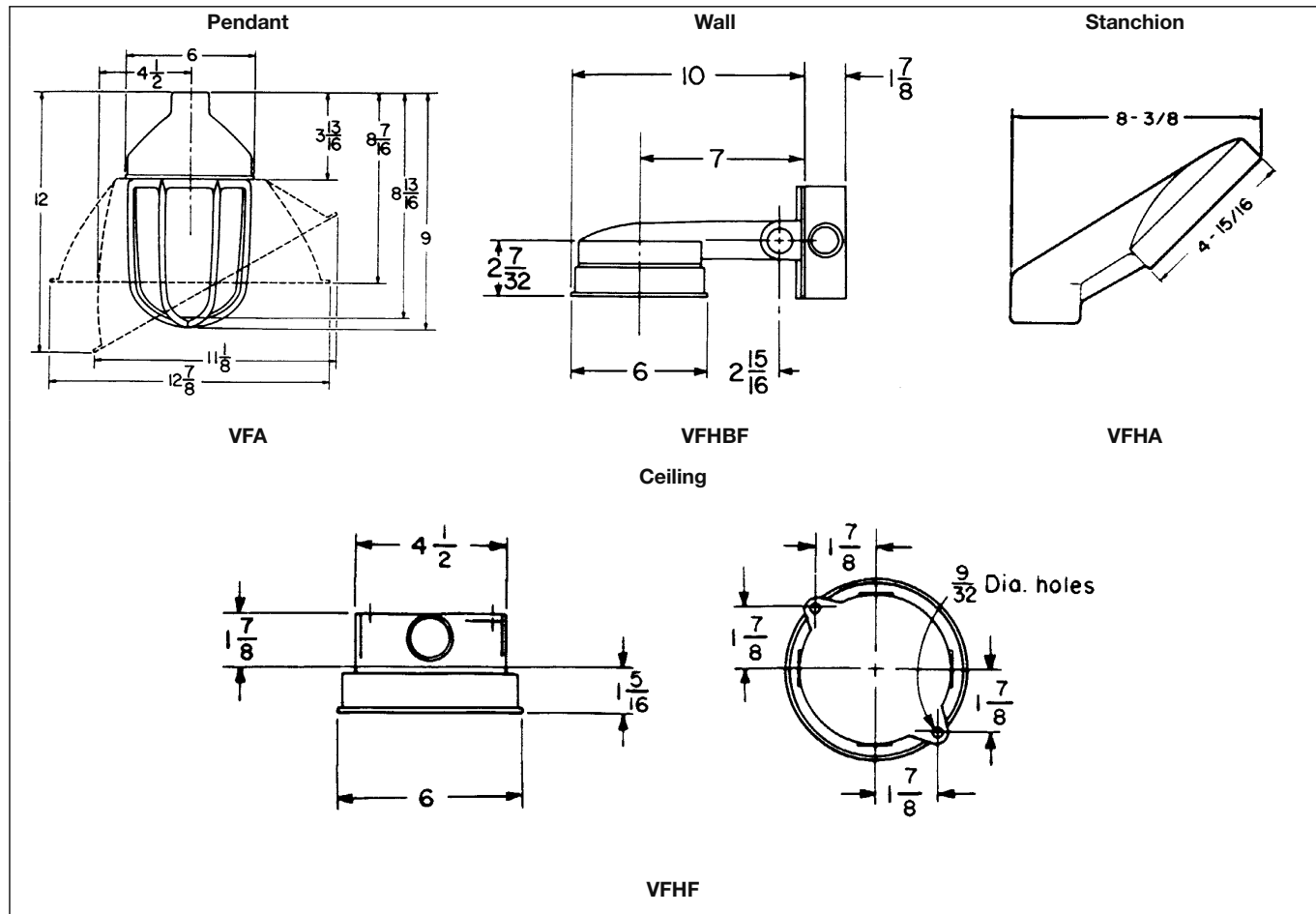
**Compact Fluorescent
Warning and Visual
Indication Light**

Cl. I, Div. 2, Groups A, B, C, D
Cl. I, Zone 2, Group IIC
Wet Locations
3, 3R

Green – Safety Shower
Blue – Emergency Telephones
Red – Danger
Amber – Warning
Visual Signal

3S

Dimensions In Inches:



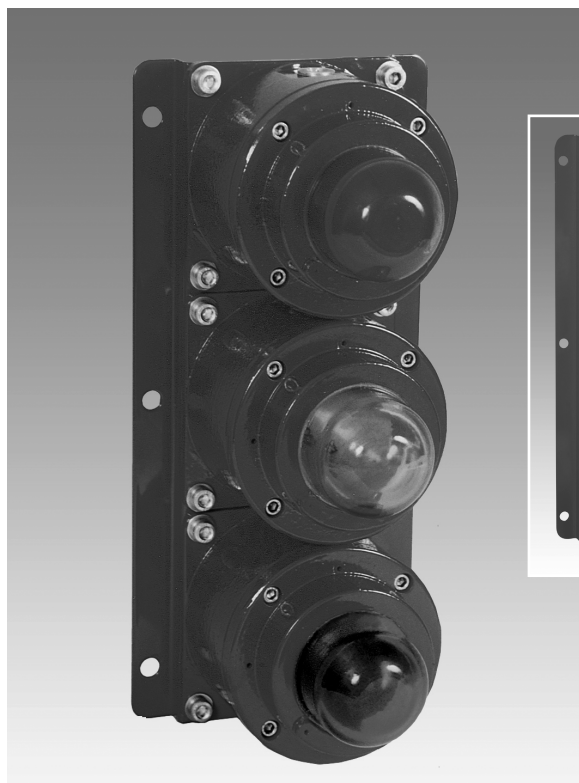
3S

Hazardous

Description	Page No.
Status Lights - MEDC Series	
FB12 SL	see pages 1272-1275
SM87 SL	see pages 1272-1275
XB11 SLUL	see pages 1272-1275
XB12 SL	see pages 1272-1275



MEDC Series



SM87 SL



XB12 SL

NOTE: Units shown are for representation only. Other variations are available.

The most rugged and reliable status lights for harsh and hazardous applications.

Available as Xenon, incandescent and fluorescent beacons/strobes.

The SM87 SL range is manufactured in marine grade alloy and the XB12 SL in corrosion-free GRP to provide a wide range of status lights to suit your requirements.

All units can be supplied as 1, 2, 3, 4 or 5 stacks.

Applications:

- Process status
- Messaging
- Alert or emergency condition indication

Typical Industries:

- Offshore & onshore
- Energy exploration & transmission
- Refining
- Chemical & petrochemical
- Pharmaceutical

Features and Benefits:


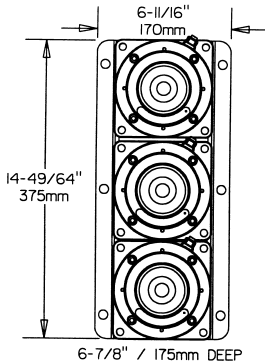
- 4-wire monitored connection for supervisory circuits*
- Marine grade alloy or GRP
- Pre-wired to customer's requirements

Certifications and Compliances:

- UL Listed for USA and Canada*
Class I, Div. 1 & 2, Groups C, D
Class I, Zone 1, AExd IIB T6
- CSA certified*
- ATEX approved
- Xenon, fluorescent, incandescent*
- NEMA 4X & 6, IP66 & 67
- Certified temperature -67°F to +131°F*
-55°C to +55°C

*Depending on model.

MEDC Series

SM87 SL		Xenon, Incandescent & Fluorescent Status Lights—Explosionproof		
	Certification UL Listed for:	cULus, CSA, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1, AExd IIB T4		
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C		
	Ingress Protection	NEMA 4X & 6 IP66 & 67		
	Material	Alloy		
	Entries	Up to 1 x 1/2" NPT		
	Max. No. of Ways	4		
	Options	Body & lens color, certification, voltages 24-48V DC, 110-254V AC		
Certification	Voltage	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200043	SM87SL3	Explosion protected, three stack, one 1/2" NPT entry on bottom, no lens guards, xenon strobe with red, green, and clear lens
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200055	SM87SL2	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200056	SM87SL2	Incandescent status lamp, two stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200057	SM87SL2	Fluorescent status lamp, two stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	26200058	SM87SL2	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200059	SM87SL3	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	24VDC	26200060	SM87SL3	Incandescent status lamp, three stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	26200061	SM87SL3	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	26200062	SM87SL3	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	110V AC	26200066	SM87SL3	Incandescent status lamp, three stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL, cUL Listed, Class I, Div. 1, Groups C, D	220V AC	26200063	SM87SL3	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection

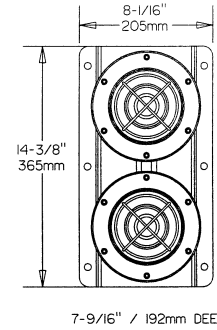
4S

MEDC Series

XB11 SLUL Xenon Strobe & Incandescent Status Lights—Hazardous Locations



Certification UL Listed for:	UL, ATEX Class I, Div. 2, Groups C, D Class I, Zones 1 & 2, AExd IIB T4
Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C
Ingress Protection	NEMA 4X & 6 IP66 & 67
Material	Corrosion-free GRP
Entries	1 x 1/2" NPT
Max. No. of Ways	5
Options	Body & lens color, tag & duty labels

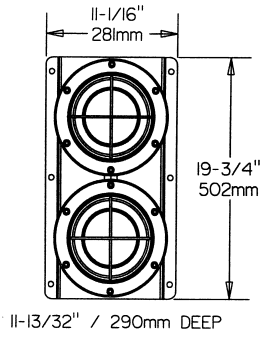


Certification	Ordering Code	Cat. #	Standard Product Configuration
UL Listed, Class I, Div. 2, Groups C, D	42500005	XB11ULSL3	Explosion protected, 3 stack, one 1/2" NPT entry on bottom, 24V DC, green incandescent on top, yellow xenon flashing in middle, red xenon flashing on bottom, no lens guards, red finish

XB12 SL/FB12 SL Xenon Strobe & Incandescent Status Lights—Hazardous Locations



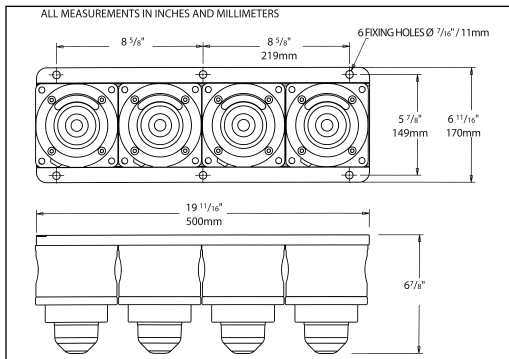
Certification UL Listed for:	UL, ATEX Class I, Div. 2, Groups C, D Class I, Zones 1 & 2, AExd IIB T4
Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C
Ingress Protection	NEMA 4X & 6 IP66 & 67
Material	Corrosion-free GRP
Entries	1 x 1/2" NPT
Max. No. of Ways	5
Options	Body & lens color, certification, voltages 24V DC, 110-254V AC



Certification	Ordering Code	Cat. #	Standard Product Configuration
UL Listed, Class I, Div. 2, Groups C, D	42600001	XB12ULSL3	110V AC, explosion protected, three stack , one 1/2" NPT entries, red xenon flashing on top, amber xenon flashing in middle, clear xenon flashing on bottom; no lens guards, red finish
UL Listed, Class I, Div. 2, Groups C, D	42600007	XB12ULSL2	24V DC xenon status lamp, two stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL Listed, Class I, Div. 2, Groups C, D	42600008	FB12ULSL2	24V DC incandescent status lamp, two stack 60W beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL Listed, Class I, Div. 2, Groups C, D	42600009	XB12ULSL3	24V DC xenon status lamp, three stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection
UL Listed, Class I, Div. 2, Groups C, D	42600010	FB12ULSL3	24V DC incandescent status lamp, three stack 60W beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT entry in the bottom unit for customer connection

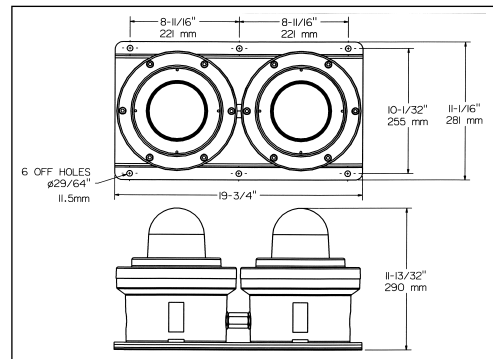
4S

MEDC Series



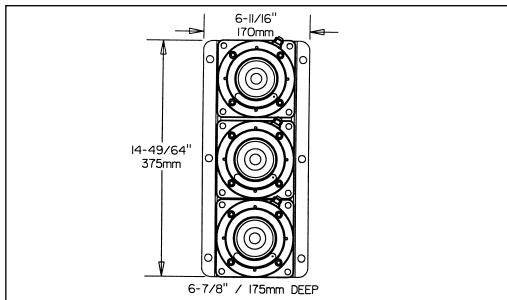
SM87 SL

Typical four unit assembly. Various options are available.

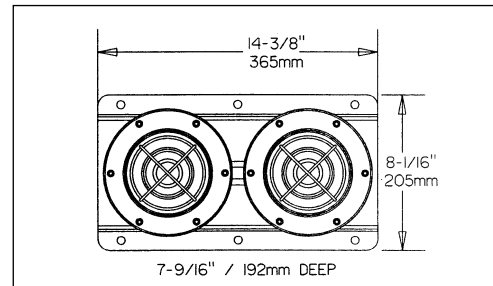


XB12 SL

Typical two unit assembly. Various options are available.



SM87 SL typical three unit assembly



XB11 SL

Specification—SM87SL Unit and XB12SL Unit

	SM87 SL	XB12 SL
Lamp Types	Xenon 5 joules maximum Fluorescent 10W or 5W Incandescent 40W maximum	Xenon 21 joules Incandescent 60W
Voltage Frequency	50 Hz as standard. 60 Hz available if required.	
Xenon Voltages	24, 48V DC 110, 120, 240, 254V AC (see SM87 HXB data sheet for further information)	24V DC, 110V, 240V AC (see XB12 data sheet for further information)
Incandescent Voltages	12, 24, 48V DC, 110, 220, 240, 254V AC (see SM87 LU3 data sheet for further information)	120V AC (see FB12 data sheet for further information)
Fluorescent Voltages	12, 24, 48V, 220, 240, 254V AC (see SM87 LU1 data sheet for further information)	—
Lamp Colors	Red, Amber, Yellow, Green, Blue or Clear	
Certification	UL Listed for USA and Canada Class I, Div. 1, Groups C, D, Class I, Zone 1, AExd IIB T6. Listing No. E187894. CSA Certified: Class I, Div. 1 & 2, Group D. Cert. No. 96406. ATEX Approved: Exd IIC T4 (incandescent), Exd IIC T6 (Fluorescent & Xenon) Cert. No. Baseefa 03ATEX0222X CENELEC EN50014, EN50018	UL Listed for USA and Canada Class I, Div. 2, Groups C, D, Class I, Zones 1 & 2, AExd IIB T4/T5 Listing No. E187894 ATEX Approved: Exd IIB T4/T5 Cert. No. 99 ATEX 2196 CENELEC EN50014 and EN50018
Terminals	Will accept up to 14AWG cable	Will accept up to 6 off 10AWG cable
Wiring	Standard configuration of internal wiring is to common the negative/neutral connections If individually wired lamps are required, please state requirements	
Entries	Up to 3 x 1/2" or 3/4" NPT	1 x 1/2" NPT
Enclosure	LM 25TF Marine Grade Alloy	GRP
Lens	Glass	
Finish	Epoxy paint as standard or to customer's specification	Natural black or epoxy paint to customer's specification
Ingress Protection	NEMA 4X and 6, IP66 & 67	
Ambient Temp.	-13°F to 131°F (-25°C to +55°C) – Class I, Div 1 -67°F to +131°F (-55°C to +55°C) – Class I, Zone 1	-67°F to +158°F (-55°C to +70°C)

NOTE: XB11 SLUL also available.

Hazardous

Description	Page No.
Speakers and Tone Generators - MEDC Series	
DB1	see pages 1278–1280
DB3	see pages 1278–1281
DB4	see pages 1282–1285
DB5	see pages 1282–1286
DB12	see pages 1283–1287
DB15	see pages 1283–1288
DB16 UL	see pages 1284–1289
Speakers and Tone Generators - Flex•Tone Series	
ETH640, ETH840	see page 1292
ETH645, ETH845	see page 1291
ETH655, ETH855	see page 1290
Signaling Horns and Bells	
ESR	see pages 1296–1297
ETH	see page 1293
W2H	see page 1294
WH	see page 1295



Up to 30 Watts

Loudspeakers and tone generators provide high decibel communication for messaging, alert and evacuation in harsh and hazardous locations.

- Metallic and non-metallic housings
- Explosionproof and Class I, Division 2 horns and speakers
- Mounting brackets that allow a full 180° swivel
- Products designed for both conduit wiring and/or cable connection (NPT or metric entries available)
- Selectable tones

This range of loudspeakers, intended for use in potentially explosive gas and dust atmospheres, has a power rating of up to 30 Watts and is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The flamepaths, flare and body, are manufactured from a UV stable glass reinforced polyester. Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product.

Applications:

- Plant-wide alarm notification
- Audible process alarms

Typical Industries:

- Refineries
- Chemical plants
- Oil and gas exploration
- Marine terminals for transportation & storage



DB16

Certifications and Compliances:


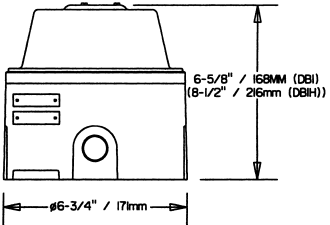
- UL Listed for USA and Canada
 - Hazardous locations:
 - Class I, Div. 2, Groups A, B, C, D*
 - Class I, Zone 1, AExde IIB/IIC T3/T4*
 - Ordinary locations: Signalling Speaker
- ATEX approved
- NEMA 4X & 6, IP66 and IP67
- Certified temperature:
 - 67°F to +104°F
 - 50°C to +40°C

Features and Benefits:

- GRP corrosion-free flamepath
- Up to 112dBA at 30 Watts at 10 feet*
- Power tapings via integral transformer
- Ratcheted swivel mounting stirrup
- Stainless steel fixtures
- 100V line or 8 ohm versions available

*Model dependent.

Up to 30 Watts

DB1		103dB(A) @ 10ft Horn—Explosionproof		
	Certification UL Listed for:	UL, ATEX Class I, Div. 1, Groups C, D Class I, Zone 1		
	Certified Ambient Temperature	-13°F to +158°F -25°C to +70°C		
	Ingress Protection	NEMA 4X & 6 IP66 & 67		
	Material	Alloy		
	Entries	Up to 3 x 1/2" or 3/4" NPT, 20mm, 25mm		
	Weight	7.7lb/3.5kg (model dependent)		
	No. of Tones	Multiple tones available		
	Options:	Body color, certification, voltages 12-48V DC, 110V ACC		
Certification	Output	Ordering Code	Cat. #	Standard Product Configuration
ATEX approved Ex II 2GD	103dB(A)	801001	DB1BA024A1A3NNNR	Choice of 6 tones, red finish
UL Listed, Class I, Div. 2, Groups C, D	Up to 96dB(A) @ 10ft	869111	DB1PULA024D1D2NNNR	Two-stage alarms, with 26 tones, 24V DC, alloy, red body color, no tag or duty labels, 2 x 3/4" NPT entries
UL Listed, Class I, Div. 2, Groups C, D	Up to 103dB(A) @ 10ft	869115	DB1HPULA024D1D2NNNR	
UL Listed, Class I, Div. 2, Groups C, D	Up to 96dB(A) @ 10ft	17300108	DB1PULA110C1C3NNNR	Sounder, 110V AC, 2 x 1/2" NPT entries, red painted enclosure

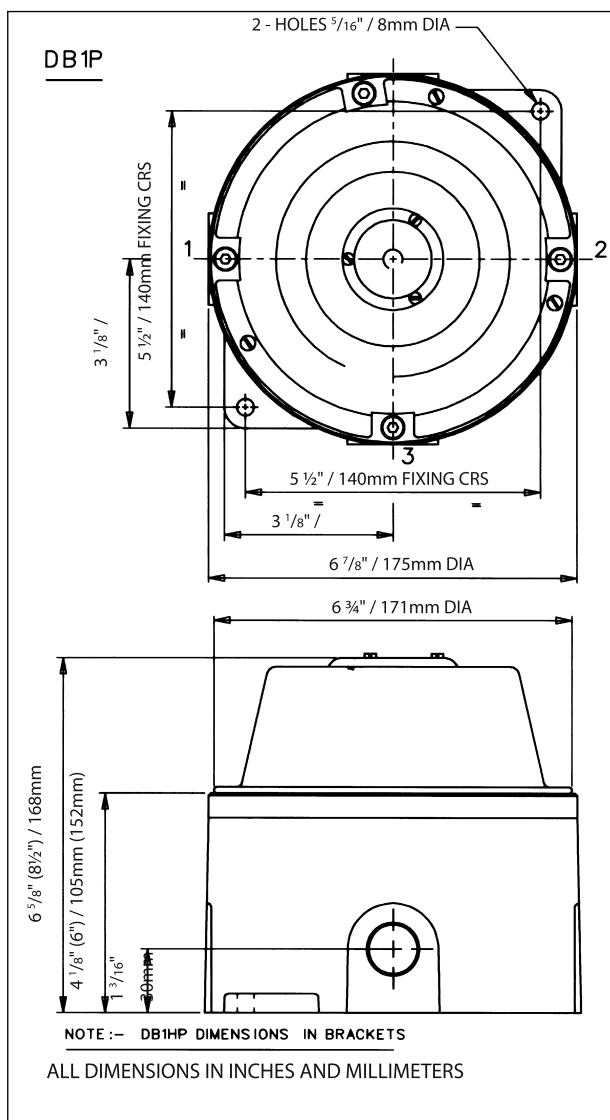
DB3		108dB(A) @ 10ft Horn—Hazardous Locations				
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zones 1 & 2, AExd IIC T4				
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C				
	Ingress Protection	NEMA 4X & 6 IP66 & 67				
	Material	Corrosion-free GRP				
	Entries	Up to 2 x 1/2" NPT, 20mm				
	Weight	13.2lb/6.0kg				
	No. of Tones	27 + 5 Programmable				
	Options:	Body color, certification, voltages 12-48V DC, 110V-254V AC				
Certification	Body Color	Voltage	Type*	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	Red	12-48V DC	Single Stage	869131	DB3UL048N2CNRZ	27 tones, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 2 x 1/2" NPT entries with certified plug
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	Red	12-48V DC	Two Stage	869132	DB3PUL048N2CNRZ	
UL, cUL Listed, Class I, Div. 2, Groups A, B, C, D	Red	110V AC	Single Stage	869135	DB3UL110N2CNRZ	
ATEX Ex II 2GD	Natural Black	12-48V DC	Two Stage	803121	DB3PD048N2BNNZ	27 tones, no tag or duty labels, 2 x M20 entries with one certified plug fitted
ATEX Ex II 2GD	Natural Black	240V AC	Single Stage	803122	DB3D240N2BNNZ	
ATEX Ex II 2GD	Red	12-48V DC	Two Stage	803123	DB3PD048N2CNRZ	
ATEX Ex II 2GD	Red	240V AC	Single Stage	803124	DB3D240N2BNRZ	
ATEX Ex II 2GD	Red	12-48V DC	Single Stage	803125	DB3D048N2CNRZ	

*Single Stage
4 wired diode monitored connection—on board diode allows unit to be operated in supervisory mode when monitoring line in reverse polarity.

*Two Stage
Switchable unit available in DC versions only either by:
(i) Reversing the polarity of the supply, or,
(ii) By a 3 wire common +ve system, switching between the -ve lines.



Up to 30 Watts



Specification—DB1 Unit

Certification:	UL Listed for Class I, Div. 1, Groups C, D and Class I, Zone 1 UL Listing No. E187688 ATEX Approved: Exd, IIB T3 Cert. No. Baseefa 02ATEX0207 for DB1(P) Cert. No. Baseefa 02ATEX0209 for DB1H(P)
Material:	LM25 corrosion resistant alloy with stainless steel cover screws ABS flare
Finish:	Epoxy paint finish as standard or to customer's specification
Max. Sound Levels:	DB1P=93±3dB(A) (86±3dB(A) for 12V DB1) DB1HP=100 ± 3dB(A) @ 10 feet Note: Sound level is dependent upon the tone selection.
Weight:	DB1P 7.7lb/3.5kg approx. DB1HP. 12.3lb/5.6kg approx.
Certified Temperature:	-13°F to +158°F -25°C to +70°C
Ingress Protection:	NEMA 4X, IP66
Tone Selection:	27 user selectable tones

Tone	Tone Frequency	Tone	Tone Frequency
1	Alt Tones 800/970Hz at 1/4 sec.	15	554 Hz for 0.1S/440 Hz for 0.1S
2	Sweeping 800/970Hz at 7 Hz	16	Int 660 Hz 150 mS on 150 mS off
3	Sweeping 800/970Hz at 1 Hz	17	Int 660 Hz 1.8 sec. on 1.8 sec. off
4	Continuous at 2850 Hz	18	Int 660 Hz 6.5 sec. on 13 sec. off
5	Sweeping 2400-2850 Hz at 7 Hz	19	Continuous 660 Hz
6	Sweeping 2400-2850 Hz at 1 Hz	20	Alt 554/440 Hz at 1 Hz
7	Slow Whoop	21	Int 660 Hz at 7/8 Hz
8	Sweep 1200-500 Hz at 1 Hz	22	Int 2850 Hz 150 mS on 100 mS off
9	Alt Tones 2400/2850Hz at 2 Hz	23	Sweep 800-970 Hz at 50 Hz
10	Int Tones of 970 Hz at 1 Hz	24	Sweep 2400-2850 Hz at 50 Hz
11	Alt Tones 800/970Hz at 7/8 Hz	25	3x970 Hz pulses 0.5 off, 1.5 off
12	Int Tone at 2850 Hz at 1 Hz	26	3x2850z pulses 0.5 on/0.5 off, 1.5 off.
13	970 Hz at 1/4 sec. on 1 sec. off	27	Int 3100 Hz 0.3 sec. on 0.7 sec. off
14	Continuous at 970 Hz		

Single Stage

4 wired diode monitored connection—on board diode allows unit to be operated in supervisory mode when monitoring line in reverse polarity.

Two Stage

Switchable unit available in DC versions only either by:

- (i) Reversing the polarity of the supply, or,
- (ii) By a 3 wire common +ve system, switching between the -ve lines.

Current Consumption:	Voltage	DB1P	DB1HP
	12V	125mA	900mA
	24V	250mA	700mA
	48V	250mA	-
	110V	60mA	200mA

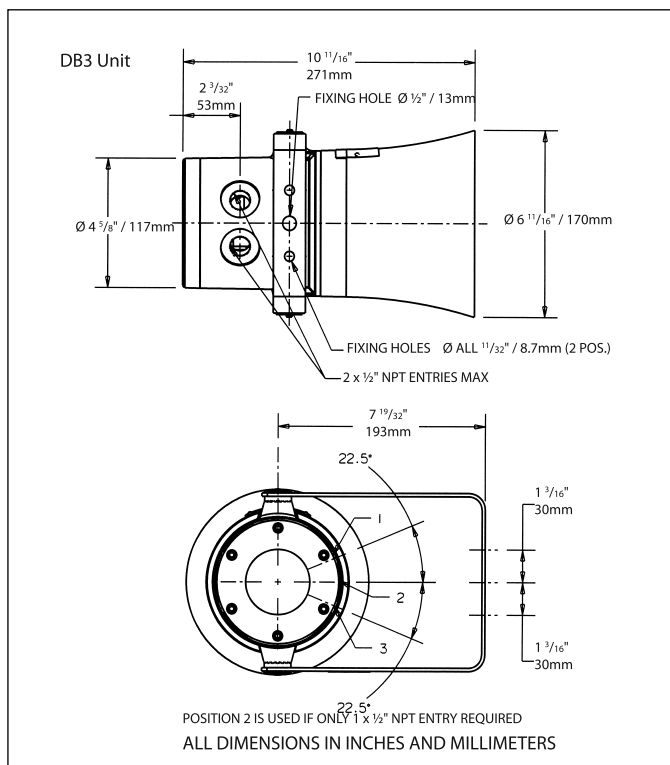
Labels:	Duty and tag labels optional
Entries:	Up to 3 x 1/2" or 3/4" NPT
Terminals:	Suitable to accept up to 12 AWG conductor size

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type	Certification	Material	Voltage	Cable Entries	Duty Labels	Tag Label	Features	Finish
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
DB1	Cert. Code	Material Code	Voltage Code	Entries Code	N	N	N	R
DB1H	ATEX/CENELEC B	Stainless Steel S	12V DC 012	1 x 20mm A3				
DB1P	UL(DB1P & DB & IHP only) UL	Alloy A	24V DC 024	1 x 25mm B3				
DB1HP	UL - available Alloy only. - 12V DC, 24V DC, 48V DC, 110V AC only		110V AC 110	1 x 1/2" NPT (UL only) C3				
			240V AC 240	1 x 3/4" NPT (UL only) D3				
				2 x M20 A1A2				
				2 x M25 B1B2				
				2 x 1/2" NPT C1C2				
				2 x 3/4" NPT D1D2				

Up to 30 Watts



Terminals:	4 x 14 AWG (AC), 6 x 14 AWG (DC)
Mounting:	Stainless steel bracket with ratchet facility
Labels:	Duty and tag labels optional
Cable Entries:	UP TO 2 x 1/2" NPT
Tone Selection:	27 user selectable tones available
Horn/Strobe Unit:	The DB3 may be combined with an MEDC strobe to create a combined audio/visual alarm. Contact MEDC for price and specification.
Two Stage Unit: DB3P	Switchable between any two tones by either: (i) Reversing the polarity of the supply, or (ii) by a 3 wire common +ve system, switching between the two -ve lines. Note: Two stage unit available in <u>DC</u> versions only.
3 & 4 Tone Unit:	Remote 3 & 4 tone unit available—contact sales office for details.

Specification—DB3 Unit

Certification:	UL Listed for USA and Canada – Hazardous locations: Class I, Div. 2, Groups A, B, C, D Class I, Zones 1 & 2, AExd IIC T4 UL Listing No. E203310 – Ordinary locations: Audible Signal Device UL Listing No. S8116 ATEX approved: CENELEC EN50014, 18, 19 Cert. No. BAS00ATEX2097X, Exd IIC Cert. No. BAS00ATEX2098X, Exde IIC Zones 1 & 2																				
Material:	Body & horn in anti-static, UV stable, glass reinforced polyester Swivel bracket and captive cover screws in stainless steel																				
Finish:	Body and horn, natural black or epoxy paint coated to client's color requirements																				
Sound Output:	DB3 105 ±3dB(A) Typical at 10 feet (tone dependent)																				
Volume Control:	Integral volume control																				
	<table border="1"> <thead> <tr> <th>*Nominal Output (dBa)</th> <th>Input Current (mA)</th> </tr> </thead> <tbody> <tr><td>83</td><td>50</td></tr> <tr><td>95</td><td>100</td></tr> <tr><td>98</td><td>150</td></tr> <tr><td>101</td><td>200</td></tr> <tr><td>102</td><td>250</td></tr> <tr><td>104</td><td>300</td></tr> <tr><td>105</td><td>350</td></tr> </tbody> </table>	*Nominal Output (dBa)	Input Current (mA)	83	50	95	100	98	150	101	200	102	250	104	300	105	350				
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104	300																				
105	350																				
	*Output measured with 24V input voltage. Tone set to 970Hz continuous.																				
Weight:	13.2lb/6.0kg approx.																				
Certified Temperature:	–67°F to +158°F –55°C to +70°C																				
Ingress Protection:	NEMA 4X & 6, IP66 & 67																				
Voltage:	Up to 48V DC Up to 254V AC																				
Current Consumption:	<table border="1"> <thead> <tr> <th>V</th> <th>I</th> </tr> </thead> <tbody> <tr><td>12V DC</td><td>760mA</td></tr> <tr><td>24V DC</td><td>380mA</td></tr> <tr><td>48V DC</td><td>190mA</td></tr> <tr><td>110V AC</td><td>135mA</td></tr> <tr><td>120V AC</td><td>124mA</td></tr> <tr><td>220V AC</td><td>68mA</td></tr> <tr><td>230V AC</td><td>65mA</td></tr> <tr><td>240V AC</td><td>62mA</td></tr> <tr><td>254V AC</td><td>62mA</td></tr> </tbody> </table>	V	I	12V DC	760mA	24V DC	380mA	48V DC	190mA	110V AC	135mA	120V AC	124mA	220V AC	68mA	230V AC	65mA	240V AC	62mA	254V AC	62mA
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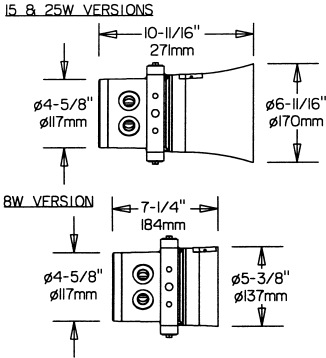
Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.


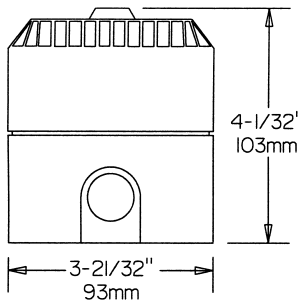
Unit Type	Certification	Voltage	Labels	Entries	Options	Color																																						
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text"/>																																						
<table border="1"> <thead> <tr><th>Type</th><th>Details</th></tr> </thead> <tbody> <tr><td>DB3</td><td>Standard unit</td></tr> <tr><td>DB3P</td><td>Two stage (DC only)</td></tr> </tbody> </table>	Type	Details	DB3	Standard unit	DB3P	Two stage (DC only)	<table border="1"> <thead> <tr><th>Type</th><th>Code</th></tr> </thead> <tbody> <tr><td>EExd</td><td>D</td></tr> <tr><td>UL Listed</td><td>UL</td></tr> </tbody> </table>	Type	Code	EExd	D	UL Listed	UL	<table border="1"> <thead> <tr><th>Voltage</th><th>Code</th></tr> </thead> <tbody> <tr><td>12V–48V DC</td><td>048</td></tr> <tr><td>*110V AC</td><td>110</td></tr> <tr><td>*120V AC</td><td>120</td></tr> <tr><td>*240V AC</td><td>240</td></tr> <tr><td colspan="2">*DB3P not available in AC version.</td></tr> </tbody> </table>	Voltage	Code	12V–48V DC	048	*110V AC	110	*120V AC	120	*240V AC	240	*DB3P not available in AC version.		<table border="1"> <thead> <tr><th>Entries</th><th>Code</th></tr> </thead> <tbody> <tr><td>1 x 20 mm (EExd)</td><td>1B</td></tr> <tr><td>2 x 20mm (EExd/EExde)</td><td>2B</td></tr> <tr><td>1 x 1/2" NPT (UL only)</td><td>1C</td></tr> <tr><td>2 x 1/2" NPT (UL only)</td><td>2C</td></tr> </tbody> </table>	Entries	Code	1 x 20 mm (EExd)	1B	2 x 20mm (EExd/EExde)	2B	1 x 1/2" NPT (UL only)	1C	2 x 1/2" NPT (UL only)	2C	<table border="1"> <thead> <tr><th>Finish</th><th>Code</th></tr> </thead> <tbody> <tr><td>Natural Black</td><td>N</td></tr> <tr><td>Red</td><td>R</td></tr> </tbody> </table>	Finish	Code	Natural Black	N	Red	R
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Red	R																																											



Up to 30 Watts

DB4		8-25 Watt Speaker—Hazardous Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups A, B, C, D Class I, Zone 1, AExd IIC T4	
	Certified Ambient Temperature	-67°F to +158°F -55°C to +70°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Output	97 dB(A) at 1W at 10 feet 109 dB(A) at 25W at 10 feet	
	Entries	Up to 2 x 1/2" NPT, 20mm	
	Weight	11lb/5.0kg	
	Options	Body color, transformer, certification, power 25W, 15W, 8W	
			


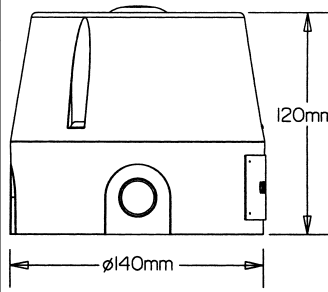
Certification	Power	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed Class I, Div. 2, Groups A, B, C, D	25W	869142	DB425ULX(100)N2CNR	100V line transformer, no labels, 2 x 1/2" NPT entries, red finish
UL, cUL Listed Class I, Div. 2, Groups A, B, C, D	25W	869144	DB425ULX(70)N2CNR	70V line transformer, no labels, 2 x 1/2" NPT entries, red finish
ATEX Approved ExII 1G	15W	804215	DB415DXN2BNZ	100V line transformer, no labels, 2 x M20, one certified plug, flameproof enclosure, natural black finish
ATEX Approved ExII 1G	25W	804225	DB425DXN2BNZ	


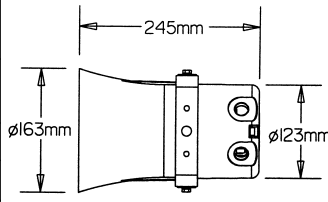
DB5		Up to 93dB(A) @ 10ft Horn—Intrinsically Safe	
	Certification FM Approved for:	FM, ATEX Class I, Div. 1 & 2, Groups A, B, C, D	
	Certified Ambient Temperature	-4°F to +131°F -20°C to +55°C	
	Ingress Protection	NEMA 4 IP65	
	Material	Corrosion-free ABS	
	Entries	Up to 2 x 19/16" via knockouts	
	Weight	0.71lb/0.3kg	
	No. of Tones	26	
	Options	Body color, certification, voltages 12V–240V DC	
			

Certification	Voltage	Ordering Code	Cat. #	Standard Product Configuration
ATEX Approved ExII 1G	12V DC	805001	DB5B012NR	Intrinsically safe, up to 3 x M20 entries via knockouts, no labels, natural red finish
ATEX Approved ExII 1G	24V DC	805002	DB5B024NR	
FM Approved for Class I, Div. 1 & 2, Groups A, B, C, D	24V DC	869150	DB5FM024NR	Intrinsically safe, 26 tones, 93 dB(A) output, natural red body color, no tag or duty labels, 2 x 19/16" entries via knockouts

5S


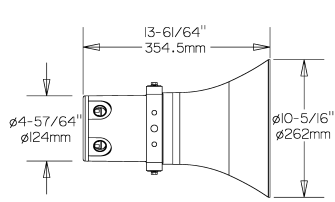
Up to 30 Watts

DB12		110dB(A) Sounder—Weatherproof & Heavy Duty			
	Certification UL Listed for:	Weatherproof			
	Certified Ambient Temperature	-55°C to +70°C			
	Ingress Protection	NEMA 4X & 6 IP66 & 67			
	Material	Corrosion-free GRP			
	Entries	Up to 3 x 20mm			
	Weight	1kg			
	No. of Tones	27 + 5 programmable			
Options	Body color, voltages 12V & 24V DC				
Certification	Voltage	Type	Ordering Code	Cat. #	Standard Product Configuration
CE Certification	115/230V AC	Single Stage	808003	DB12115NN	Weatherproof, dust-tight, no labels, choice of 27 tones, natural red finish, 3 x M20 knockouts
CE Certification	24V DC	Two Stage	869155	DB12P024NN	Weatherproof, choice of 27 tones, natural red finish, 3 x M20 knockouts

DB15		110dB(A) Tone Generator—Weatherproof & Heavy Duty			
	Certification UL Listed for:	Weatherproof			
	Certified Ambient Temperature	-55°C to +70°C			
	Ingress Protection	NEMA 4X & 6 IP66 & 67			
	Material	Corrosion-free GRP			
	Entries	2 x M20			
	Weight	2.6kg			
	No. of Tones	27 + 5 programmable			
Options	Body color, two stage alarm (DB15P) version, earth continuity, EOL resistor, voltages 12–48V DC, 110–254V AC				
Certification	Voltage	Type	Ordering Code	Cat. #	Standard Product Configuration
CE Certification	12–48V DC	Two Stage	808110	DB15P048NN	Weatherproof, dust-tight, no labels, choice of 27 tones, painted gray finish
CE Certification	12–48V DC	Two Stage	808115	DB15P048NR	Weatherproof, dust-tight, no labels, choice of 27 tones, painted red finish
CE Certification	240V AC	Single Stage	808120	DB15240NN	Weatherproof, dust-tight, choice of 27 tones, natural gray finish
CE Certification	240V AC	Single Stage	808125	DB15240NR	Weatherproof, dust-tight, choice of 27 tones, painted red finish

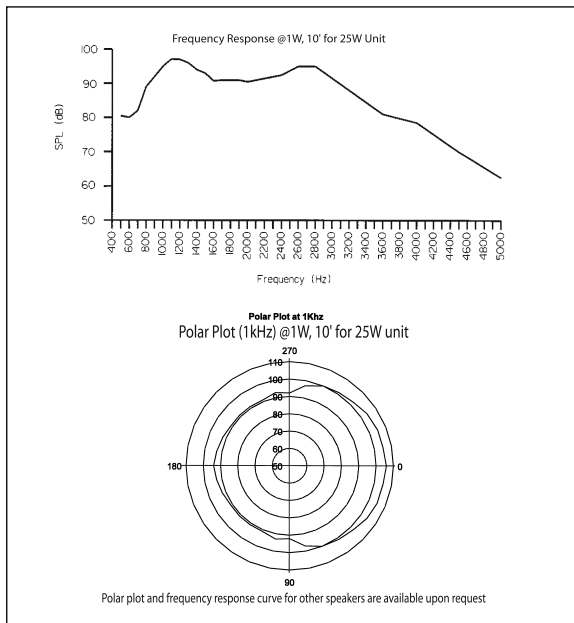
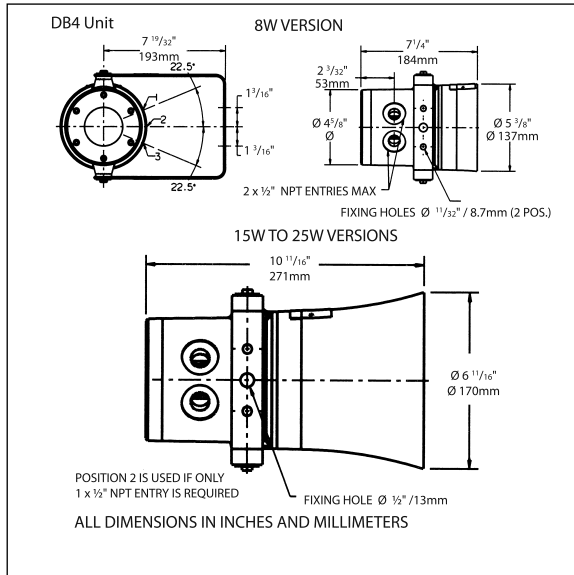
5S

Up to 30 Watts

DB16 UL		30 Watt Speaker — Hazardous & Ordinary Locations	
	Certification UL Listed for:	cULus, ATEX Class I, Div. 2, Groups C, D / A, B, C, D Class I, Zone 1, AExde IIB T3/IIC T110°C	
	Certified Ambient Temperature	-61°F to +90°F -50°C to +40°C	
	Ingress Protection	NEMA 4X & 6 IP66 & 67	
	Material	Corrosion-free GRP	
	Output	Groups C & D:100dB(A) at 1Watt at 10 ft. 112dB(A) at 30 Watts at 10 ft.	
	Groups A, B, C, D:	3dB(A) less than C & D versions	
	Entries	Up to 2 x 1/2" NPT or 2 x 3/4" NPT, 20mm, 25mm	
	Weight	12.1lb/5.5kg	
	Tappings @ 30 Watts	30, 25, 12, 6, 4, 2	
	Options:	Body color, transformer	
Certification	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div 2, Groups C & D	28600006	DB16UCXN2MPN	Unit suitable for gas Groups A, B, C, D, 70V line transformer, 2 x 1/2" NPT, one certified plug, natural black finish

5S

Up to 30 Watts

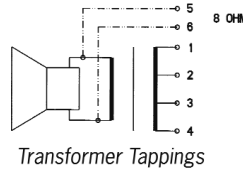


Specification - DB4 Unit

Rated Power:	8, 15 or 25 watts RMS continuous (at 77°F)
Certification:	UL Listed for USA and Canada - Class I, Div. 2, Groups A, B, C, D - Class I, Zone 1, AExd IIC T4 UL Listing No. E203310 ATEX approved: EN50014, 18, 19 Cert. No. BAS00ATEX2097X, Exd IIC T4/T5 Cert. No. BAS00ATEX2098X, ExDC IIC T4/T5 Zones 1 and 2; not for use in atmospheres containing carbon disulphide
Material:	Body & horn in anti-static, UV stable, glass reinforced polyester Swivel bracket in stainless steel Captive cover screws in stainless steel
Finish:	Body and horn, natural black or epoxy paint coated to client's color requirements
Output:	97 dB(A) at 1 watt at 10 feet 109 dB(A) at 25 watts at 10 feet Measured in accordance with IEC 268
Weight:	11lb/5.0kg approx. dependent on model
Certified Temperature:	-67°F to +158°F -55°C to +70°C
Ingress Protection:	NEMA 4X and 6, IP66 & 67
Frequency Range:	400Hz to 8kHz
Voice Coil Impedance:	8 ohms

Transformer:

Used to vary the rated power by selecting different tapings (see table below).



Transformer Tappings	Power		
	25W	15W	8W
1:2	25.0	15.0	8.0
2:3	12.5	7.5	4.0
3:4	6.0	5.0	2.0
1:3	4.0	4.0	1.5
2:4	2.0	2.0	0.7
1:4	1.0	0.8	0.4

Transformer Options:

- i) Loop in/Loop out: (4 x 2) terminal tap change (8 terminals).
- ii) Optional Tapping: 4 terminal tap change with 2 terminals (5 & 6) directly connected to driver (8 ohms).

Other tapings & driver impedances available on request.

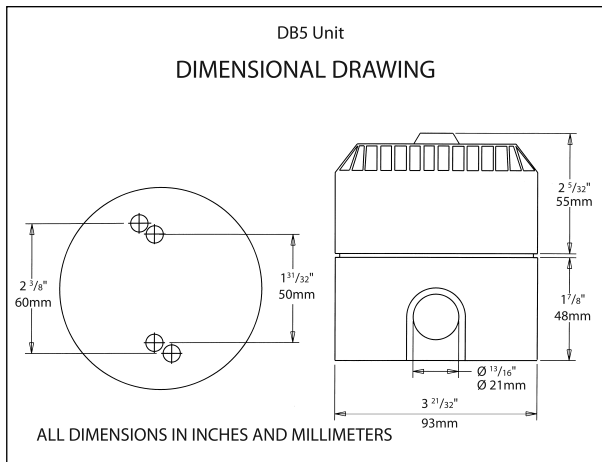
Terminals:	8 x 14AWG Other terminal arrangements available on request
Mounting:	Bracket with ratchet facility
Labels:	Duty and tag labels optional
Cable Entries:	Up to 2 x 1/2" NPT

Ordering Requirements

Max. Rated Power		Certification		Transformer		Labels		Entries		Color	
DB4						N					
Power	Code	Type	Code	Transformer	Code		Entries	Code	Color	Code	
8 watt	8	EExd	D	Yes	X*		1 x M20 (EExd)	1B	Natural Black	N	
15 watt	15	UL listed	UL	None	N		2 x M20 (EExd/EExdel)	2B	Red	R	
25 watt	25						1 x 1/2" NPT (UL listed only)	1C			
							2 x 1/2" NPT (UL listed only)	2C			

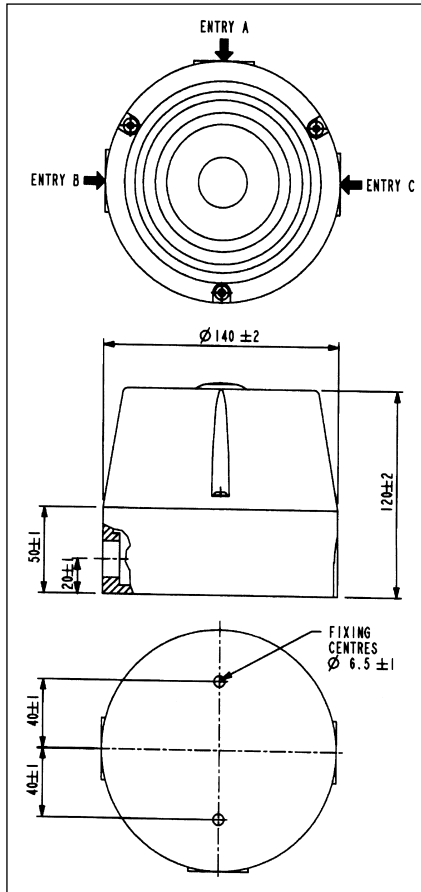
To specify certified plug, suffix appropriate code with 'P'.
e.g. 2BP is 2 x M20 entries with one certified plug.

Up to 30 Watts

**Specification – DB5 Unit**

Certification:	FM approved for Class I, Div. 1, Groups A, B, C, D, J.I. 3001835 CSA certified to C22.2 Nos. 0, 0.4, 0.5, 25, 30, 205, Class I, Groups A, B, D, Cert. No. 79122 ATEX approved , EN50014 and EN50020 & EN50284 Exia IICT4. 12/24V version Cert. No. BAS00ATEX 1259 (unit) and 01E2024 (system) HSE(M) to EN50014, EN50020 and EN50303 Exia 1 Cert. No. MECS01ATEX4260 (unit) and 94Y7095 (system)
Material:	A.B.S. (Acrylonitrile Butadiene Styrene)
Finish:	Available in red as standard
Certified Temperature:	-4°F to +131°F -20°C to +55°C
Weight:	0.7lb/0.3kg
Entries:	Up to 1 x 1 9/16" on each side via knockouts
Sound Output:	90± 3dB(A) at 10 feet for 12V and 24V versions Typical max value only—variable with tone
Current Consumption:	24V model—14 mA max. nominal 12V model—12 mA max. nominal

Up to 30 Watts



Specification – DB12 Unit

Material:	UV stable glass reinforced polyester. Retained stainless steel cover screws	
Finish:	Self colored red as standard or epoxy coated to customer's specification	
Sound Output:	107± 3dB(A) at 1 meter Typical value only—variable with tone	
Volume Control:	Integral volume control	
	*Nominal Output (dBa)	Input Current (mA)
	92	60
	100	70
	104	80
	109	90
	*Output measured with 24V input voltage. Tone set to 2850Hz continuous.	
Tone Selection:	27 user selectable tones	
Single Stage DB12:	Switchable between any two tones by either:	
Two stage Unit DB12P:	(i) Reversing the polarity of the supply, or (ii) by a 3 wire common +ve system, switching between the two -ve lines.	
	Note: Two stage unit available in DC versions only.	
Weight:	1.0 kg. Dc, 1.2kg AC	
Operating Temperature:	-55°C to +70°C	
Ingress Protection:	IP66 & IP67	
Voltage:	DC: 12V, 24V AC: 115/230V	
Current Consumption:	24V operation 55mA–100mA	115V operation 85mA–140mA
	12V operation 55mA–90mA	230V operation 45mA–60mA
Terminals:	6 x 2.5mm ²	
Labels:	Duty and tag labels available	
Cable Entries:	Up to 3 x M20 via knockouts	

AFNOR NF S 32 001 compliant version available—contact sales office for details.

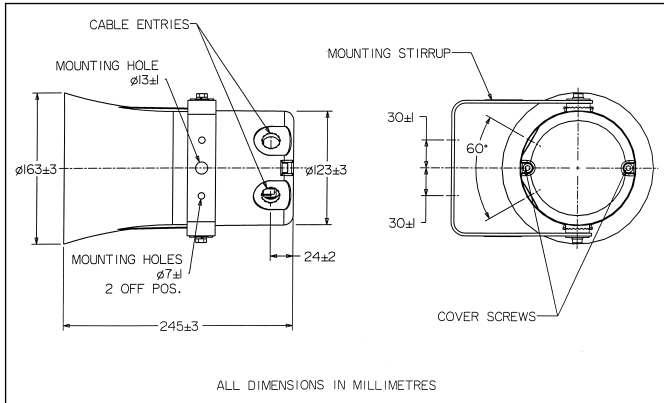
Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type		Voltage		Labels		Color	
<input type="text"/>		<input type="text"/>		<input type="text" value="N"/>		<input type="text" value="N"/>	
Type	Details	Voltage	Code				
DB12	Standard Unit	12V DC	012				
DB12P	Two Stage (DC only)	24V DC	024				
		115/230V AC	115				



Up to 30 Watts



Tone Selection:

- DB15:** 27 user selectable tones available. Additional 5 tones may be programmed.
- DB15P (Two stage unit):** Switchable between any two of the 27 tones by either:
- (i) Reversing the polarity of the supply, or
 - (ii) by a 3 wire common +ve system, switching between the two -ve lines.
- Note: Two stage unit available in DC versions (DB15P) only.

AFNOR NF S 32 001 compliant version available—contact sales office.

Specification – DB15 Unit

Material: Body & horn in UV stable, glass reinforced polyester
Swivel bracket in stainless steel
Cover screws in stainless steel

Finish: Body and horn, natural gray to RAL 7035 or epoxy paint coated to client's color requirements

Sound Output: DB15 117dB(A) maximum

Volume Control: Integral volume control

*Nominal Output (dBa)	Input Current (mA)
100	150
105	250
108	350
110	450
112	550

*Output measured with 24V input voltage. Tone set to 970Hz continuous.

Weight: 2.6kg approx. dependent on model

Temperature Range: -55°C to +70°C

Ingress Protection: IP66 and IP67

Voltage: Up to 48V DC Up to 254V AC

Current Consumption:

V	I
12V DC	900mA
24V DC	600mA
48V DC	280mA
110V AC	150mA
120V AC	175mA
220V AC	93mA
240V AC	86mA
254V AC	80mA

Terminals: 4 x 2.5mm² (AC), 6 x 2.5mm² (DC)

Earth Continuity: Available

Mounting: Stainless steel bracket with ratchet facility

Labels: Duty and tag labels optional

Cable Entries: 2 x M20 ISO

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type

DB15
DB15P

Voltage

Voltage	Code
12V DC	012
24V-48V DC	048
*110V AC	110
*120V AC	120
*240V AC	240
*DB15P not available in AC version.	

Options

Color

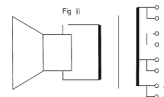
Up to 30 Watts

Specification – DB16 Unit

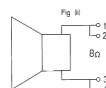
Rated Power:	30 Watts RMS continuous (at 77°F/25°C)
Certification:	<p>UL Listed for USA and Canada</p> <p>– Hazardous locations: Class I, Div. 2, Groups C, D, Class I, Zone 1, AExde IIB T3 Class I, Div. 2, Groups A, B, C, D, Class I, Zone 1, AExde IIC T110°C UL Listing No. E203310</p> <p>– Ordinary locations: Signalling Speaker; UL Listing No. 58847 CENELEC EN50014, 18, 19</p> <p>IIB Version: Cert. No. Baseefa04ATEX0166X ATEX Ex II 2G Exde IIB T3 (Tamb. -50°C to +40°C)</p> <p>IIC Version: Cert. No. Baseefa04ATEX0167X ATEX Ex II 2GD Exde IIC T110°C (Tamb. -50°C to +40°C)</p> <p>Zones 1 and 2</p>
Material:	Body & horn in anti-static, UV stable, glass reinforced polyester Mounting stirrup and fixtures in stainless steel
Finish:	All natural or body and horn can be painted to client's requirements
Output:	<p>Groups C, D Version: Maximum output at 1W at 10 feet is 100dBA Maximum output at 30W at 10 feet is 112dBA</p> <p>Groups A, B, C, D Version: Maximum output at 1W at 10 feet is 97dBA Maximum output at 30W at 10 feet is 109dBA</p>
Weight:	12lb/5.5kg approx.
Certified Temperature:	67°F to +104°F (-50°C to +40°C)
Ingress Protection:	NEMA 4X & 6, IP66 & IP67
Voltage:	370Hz to 8kHz
Voice Coil Impedance:	8 ohms
Transformer:	Used by combining the rated power tapings below

Transformer Tapping Options:

Transformer Tappings	Power (W)
1:2	30
2:3	25
3:4	12
1:3	6
2:4	4
1:4	2



(i) Loop in/loop out (4 x 2) power tap change; 8 terminals



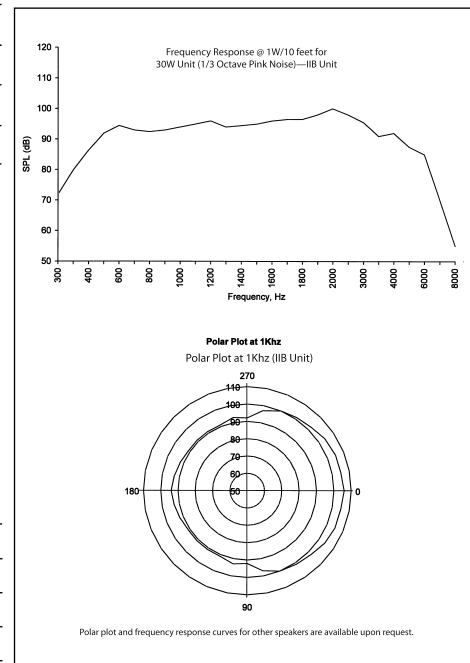
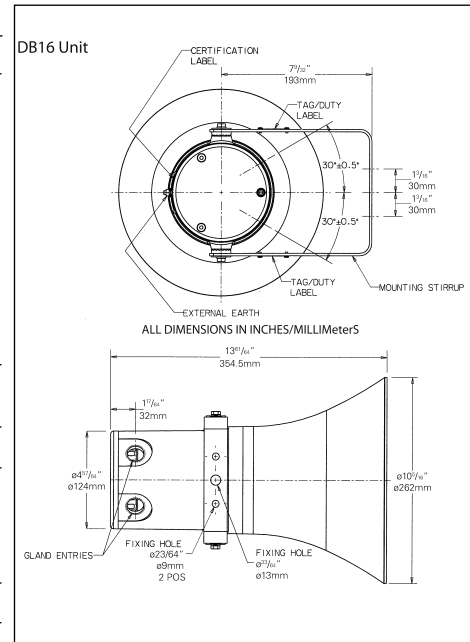
(ii) Loop in/loop out (2 x 2) 8 ohm; 4 terminals

Terminals:	8 x 2.5mm ²
Earth Continuity:	Available via optional earthing stud or by internal earth plate
Mounting:	Via stirrup with ratchet facility
Labels:	Optional stainless steel tag and duty labels
Cable Entries:	Up to 2 x 1/2" NPT or 2 x 3/4" NPT into termination chamber, 20mm, 25mm

Ordering Requirements

The following code is designed to help in the selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

DB16	<table border="1"> <tr><td colspan="2">Certification</td></tr> <tr><td>Certification</td><td>Code</td></tr> <tr><td>UL (A, B, C, D)</td><td>UC</td></tr> <tr><td>ATEX IIC</td><td>BC</td></tr> <tr><td colspan="2">Unit suitable for gas groups.</td></tr> </table>	Certification		Certification	Code	UL (A, B, C, D)	UC	ATEX IIC	BC	Unit suitable for gas groups.		<table border="1"> <tr><td colspan="2">Transformer</td></tr> <tr><td>Transformer</td><td>Code</td></tr> <tr><td>Yes</td><td>X*</td></tr> <tr><td>No</td><td>N</td></tr> <tr><td colspan="2">*Std 100V. Other voltages available, specify voltage.</td></tr> </table>	Transformer		Transformer	Code	Yes	X*	No	N	*Std 100V. Other voltages available, specify voltage.		<table border="1"> <tr><td colspan="2">Options</td></tr> <tr><td>Options</td><td>Code</td></tr> <tr><td>N</td><td></td></tr> </table>	Options		Options	Code	N		<table border="1"> <tr><td colspan="2">Entries</td></tr> <tr><td>Entries</td><td>Code</td></tr> <tr><td>1 x M20</td><td>1B</td></tr> <tr><td>2 x M20</td><td>2B</td></tr> <tr><td>1 x M25</td><td>1C</td></tr> <tr><td>2 x M25</td><td>2C</td></tr> <tr><td>1 x 1/2" NPT</td><td>1M</td></tr> <tr><td>2 x 1/2" NPT</td><td>2M</td></tr> <tr><td>1 x 3/4" NPT</td><td>1N</td></tr> <tr><td>2 x 3/4" NPT</td><td>2N</td></tr> <tr><td colspan="2">To specify certified plug, suffix appropriate code with 'P', e.g. 2BP is 2 x M20 entries with one certified plug.</td></tr> </table>	Entries		Entries	Code	1 x M20	1B	2 x M20	2B	1 x M25	1C	2 x M25	2C	1 x 1/2" NPT	1M	2 x 1/2" NPT	2M	1 x 3/4" NPT	1N	2 x 3/4" NPT	2N	To specify certified plug, suffix appropriate code with 'P', e.g. 2BP is 2 x M20 entries with one certified plug.		<table border="1"> <tr><td colspan="2">Finish</td></tr> <tr><td>Option</td><td>Code</td></tr> <tr><td>Natural Black</td><td>N</td></tr> <tr><td>Red</td><td>R</td></tr> </table>	Finish		Option	Code	Natural Black	N	Red	R
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ETH Flex•Tone™ Series Signaling Devices

Electronic Signals

Cl. I, Div. 1 & 2, Groups B, C, D
 Cl. II, Div. 1 & 2, Groups E, F, G
 Cl. III
 UL and cUL 464 and 1203 Listed

Explosionproof
 Dust-Ignitionproof
 Raintight
 Wet Locations

Eaton's Crouse-Hinds **Flex•Tone Series Electronic Signals** are explosionproof, heavy duty, tone-selectable signaling devices capable of producing volume-controlled, high decibel tones. Certified for use in Class I, Division 1, Groups B, C, and D applications, the Flex•Tone Series is ideal for signaling warning or emergency conditions.

The **Flex•Tone ETH855** accepts up to two contact closures and delivers two audible output signals selected from 55 available tones. The two tones are selected by setting miniature switches within the unit. One of the tones can be assigned a priority status to override the other tone.

The **Flex•Tone ETHD855** is diode polarized for applications requiring electrical supervision of signaling circuit field wiring. The signal delivers one audible output signal selected from the 55 tones available.

Applications:

- For use where a high decibel sound is required for alert or evacuation in hazardous locations.

Features and Benefits:

- Heavy duty zinc cast construction.
- 55 tone capacity – no additional tone modules needed.
- Internal volume control with internal potentiometer.
- Corrosion-resistant heat-flowed epoxy finish.
- Supplied with factory sealed 1/2" threaded fitting for quick installation.
- Speaker can swivel 180° vertically or horizontally depending on orientation of mounting bracket.
- Mounts onto any surface using only three bolts.
- 30" numbered wire leads.



Explosionproof Electronic Signal Stand-Alone Unit

Certifications and Compliances:

- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III
- UL and cUL 464 and 1203 Listed

Materials and Finishes:

- Body – Heavy duty zinc cast construction
- External hardware – Stainless steel

Ratings:

- 24VDC, 36VDC, 125VDC, 250VDC, 24VAC, 120VAC and 240VAC (ETH)
- 20 – 31VDC (ETHD)

Output Sound Pressure:

- 109 decibel (dBA) output

Ordering Information:

Cat. #	Voltage	Signal OFF		Signal ON	
		Standby Current (Amps)	Operating Current (Amps)	Standby Current (Amps)	Operating Current (Amps)
Explosionproof, Two Output					
ETH855/24	24VDC	0.061	0.250	0.061	0.250
ETH855/36	36VDC	0.077	0.380	0.077	0.380
ETH655/24	24VAC, 50 / 60Hz	0.250	0.950	0.250	0.950
ETH655/120	120VAC	0.088	0.260	0.088	0.260
ETH655/240	240VAC	0.091	0.190	0.091	0.190
ETH855/125	125VDC	0.031	0.130	0.031	0.130
ETH855/250	250VDC	0.019	0.070	0.019	0.070
Diode Polarized, Explosionproof, Single Output For Fire Alarm Applications					
Meets min. 75 dBA for fire alarm indication					
ETHD855/24	20 – 31VDC	0.061	0.950	0.061	0.950

ETH Flex•Tone™ Series Signaling Devices

Remote Speaker / Amplifier

Cl. I, Div. 1 & 2, Groups B, C, D
 Cl. II, Div. 1 & 2, Groups E, F, G
 Cl. III
 UL and cUL 464 and 1203 Listed

Explosionproof
 Dust-Ignitionproof
 Raintight
 Wet Locations

5S

Eaton's Crouse-Hinds **Flex•Tone Series Explosionproof Remote Speaker/Amplifier** is designed for remote mounting in Division 1 areas where simultaneous high decibel signaling is required.

Used in connection with the Panel Control Signaling Generator, the **Flex•Tone ETH845** operates directly from local power sources, allowing remote speaker/amplifiers of different voltages to be connected within the same system. Available in both AC and DC voltages, the Flex•Tone can be mixed and matched throughout an application using the available line power.

ETH845 Series Remote Speaker/Amplifiers must be used with Eaton's Crouse-Hinds Flex•Tone Panel Control Signal Generator on next page.



Explosionproof Remote Speaker/Amplifier

Applications:

- For use where simultaneous signaling of a high decibel sound is required for alert or evacuation in hazardous locations.

Features and Benefits:

- Heavy duty zinc cast construction.
- Individual volume control.
- Corrosion-resistant heat-flowed epoxy finish.
- Supplied with factory sealed 1/2" threaded fitting for quick installation.
- Speaker can swivel 180° vertically or horizontally depending on orientation of mounting bracket.
- Mounts onto any surface using only three bolts.
- 30" numbered wire leads.

Certifications and Compliances:

- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III
- UL and cUL 464 and 1203 Listed

Materials and Finishes:

- Body – Heavy duty zinc cast construction
- External hardware – Stainless steel

Ratings:

- 120VAC, 240VAC, 125VDC and 250VDC

Output Sound Pressure:

- 109 decibel (dBA) output

Ordering Information:

Cat. #	Voltage	Signal OFF	Signal ON
		Standby Current (Amps)	Operating Current (Amps)
Explosionproof Remote Speaker/Amp			
ETH845/24	24VDC	0.061	0.250
ETH645/24	24VAC, 50/60Hz	0.250	0.950
ETH645/120	120VAC	0.088	0.260
ETH645/240	240VAC	0.091	0.190
ETH845/125	125VDC	0.031	0.130
ETH845/250	250VDC	0.091	0.070

ETH845 Series Remote Speaker/Amplifiers must be used with Eaton's Crouse-Hinds Flex•Tone Panel Control Signal Generator on next page.

ETH845 Series Remote Speaker/Amplifiers **accept a 10VAC audio signal** from Flex•Tone Panel Control Signal Generator.

5S

Eaton's Crouse-Hinds **Flex•Tone Series Panel Control Signal Generator** controls and initiates a synchronous signaling sound from all Flex•Tone 3 Remote Speaker/Amps installed in a system. The Panel Control Signal Generator is mounted in a Division 2 area, while controlling the Flex•Tone 3 Speaker/Amps that are remotely mounted in Division 1 areas.

The Panel Control Signal Generator produces 27 sounds. Four tones may be activated from field-wired, normally open contacts, or a 24VDC or 120VAC external voltage source such as an output from a PLC.

Applications:

- Hazardous area applications calling for high decibel output with simultaneous signal delivery over all speakers installed in a system
- Emergency warning systems, plant evacuation alarms, security intrusion alarms, process monitoring, shift start and dismissal horns, and paging signals

Features and Benefits:

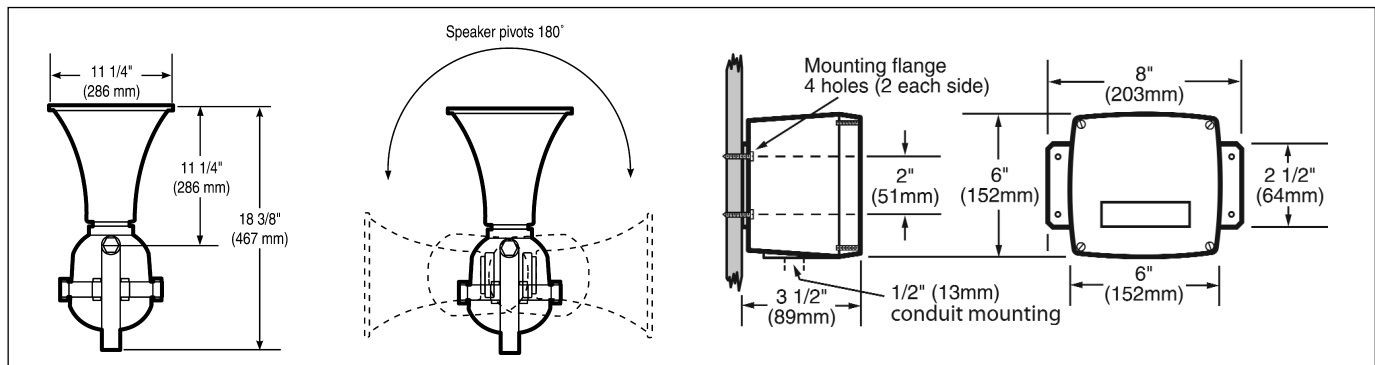
- 27 tone capability – no additional tone modules needed
- Centralized programmable tone selection
- PLC compatible
- System-wide priority tone
- 24 VDC battery back-up terminals
- Short circuit protected

Ordering Information:

Cat. #	Voltage	Input Card	Signal OFF	Signal ON
		Activation Voltage	Standby Current (Amps)	Operating Current (Amps)
Panel Control Signal Generator				
ETH840/24E74	24VDC	24VDC	0.10	0.74
ETH640/24E13	24VAC, 50/60Hz	24VDC	0.10	1.30
ETH640/120E36	120VAC, 50/60Hz	24VDC	0.10	0.36
ETH640/120M38	120VAC, 50/60Hz	120VAC	0.10	0.38
ETH640/120E32	120VAC, 50/60Hz	24VDC	0.10	0.32
ETH640/240E20	240VAC, 50/60Hz	24VDC	0.10	0.20
ETH840/125E21	125VDC	24VDC	0.10	0.21
ETH840/250E10	250VDC	24VDC	0.02	0.10
ETH640/120M31	120VAC, 50/60Hz	120VAC	0.10	0.31
ETH640/240M20	240VAC, 50/60Hz	120VAC	0.10	0.20
ETH840/125M20	125VDC	120VAC	0.10	0.20
ETH840/250M10	250VDC	120VAC	0.02	0.10
ETH640/120R31	120VAC, 50/60Hz	RS485	0.10	0.31
ETH640/240R20	240VAC, 50/60Hz	RS485	0.10	0.20
ETH840/125R20	125VDC	RS485	0.10	0.20
ETH840/250R10	250VDC	RS485	0.02	0.10

Flex•Tone Panel Control Signal Generator must be used with Eaton's Crouse-Hinds ETH845 Remote Speaker/Amps on previous page.

Dimensions In Inches:



Certifications and Compliances:

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups F, G
- Class III
- UL 464 and 1604 Listed
- cUL C22.2 No. 205
- CE Marked – GENELEC LV and EMC Directives
- NEMA 3R, IP44

Materials and Finishes:

- Zinc-cast construction with an epoxy powder coat finish

Ratings:

- See table below

ETH Horn Signals

Cl. I, Div. 1 & 2, Groups B†, C, D
 Cl. II, Div. 1, Groups E, F, G
 Cl. II, Div. 2, Groups F, G
 Cl. III
 NEMA 7B†CD, 9EFG

Explosionproof
 Dust-Ignitionproof
 Raintight
 Wet Locations

5S

Factory Sealed

Applications:

ETH horn signals are used:

- For call signals, alarms, and various other signalling applications
- In specific hazardous atmospheres as found in chemical plants, oil and gas refineries, bulk loading stations, paint and varnish manufacturing plants, grain processing industries and grain elevators, as well as in certain metal, coal, combustible fiber processing or handling areas
- In conduit systems and mounted on a flat surface with the projectors aimed in the desired direction

Features:

- No external conduit seal is required.
- The AC signals do not have arcing contacts.
- The DC horns have factory sealed wire leads in the interconnecting nipple and hub.
- The body cover joint of AC horn signals is of serrated construction, machined to close tolerance to ensure flametightness and secured by a clamping ring. The DC unit has a ground joint design.

Certifications and Compliances:

- NEC:
 - Class I, Division 1 & 2, Groups B†, C, D
 - Class II, Division 1, Groups E, F, G
 - Class II, Division 2, Groups F, G
 - Class III
- UL Standard: 464, 1203
- CSA Standard: C22.2 No. 30

Standard Materials:

- Copper-free aluminum

Standard Finishes:

- Natural

Size Ranges:

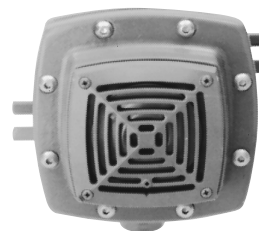
- Hub – 1/2" or 3/4" size

Sound Levels:

- See Ordering Information table for individual ratings

Electrical Rating Ranges:

- Nominal voltage – 24, 115, 230 VAC 24 VDC



ETH grill type horn signal

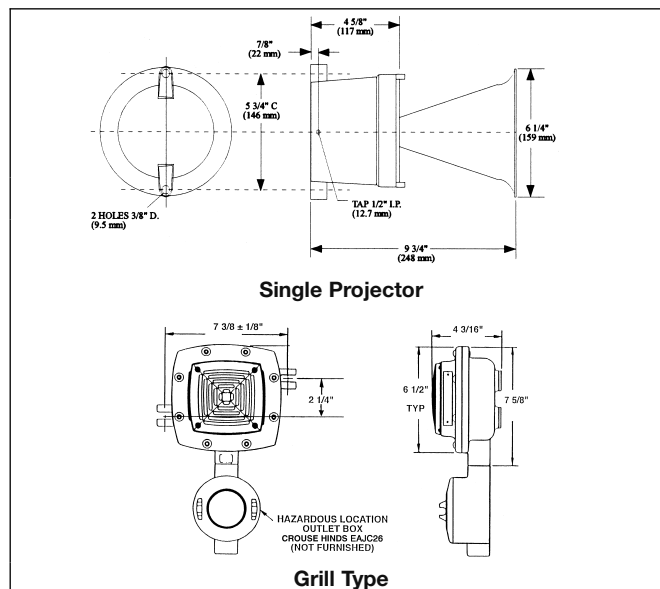
Table 1
Operating Current in Amperes at the Nominal Voltage for Horn and Siren Signals
Horn Signal

Nom. Volts	Amperes		DC ETH2416
	Single Projector	Grill Type	
50 to 60 hertz AC	50 to 60 hertz AC		
ETH2702, ETH2703	ETH2313, ETH2316, ETH2312		
24	—	0.625	0.16
115	.45	0.13	
230	.2	0.065	

Ordering Information:

Supply	Nom. Volts*	Nom. Watts	Minimum audibility rating (dB) at 10':	Hub Size	Cat. #
Single Projector Horn Signal					
50 to 60 hertz AC	115	33	105 dB	1/2	ETH2703
	230	33	105 dB	1/2	ETH2702
Grill Type Horn Signals					
50 to 60 hertz AC	24		100 dB	3/4	ETH2316
	115	49	100 dB	3/4	ETH2313
	230		100 dB	3/4	ETH2312
DC	24	30	100 dB	3/4	ETH2416

Dimensions In Inches:



Dimensions are approximate, not for construction purposes.

†Grill type horns are certified for Group B.
 * See Table 1 for more complete ratings

5S

Applications:

W2H series signaling devices are used:

- As independent audible signal or warning devices
- In Class I, Division 2, Groups A, B, C, D hazardous areas where flammable vapors or gases may be present due to accidental or abnormal operation
- In Class II, Division 2, Group G hazardous areas where combustible dusts may be present due to accidental or abnormal operation

Features:

- The W2H is solid-state, compact, rugged but lightweight. The system is programmable, which allows the convenience of tone selection, without the need for separate tone modules. Each unit can be programmed for any one of four different tones (whoop, wail, hi-lo and horn), by wiring to the corresponding terminal on the unit's terminal strip. Separate sound modules not required.
- Unit may be field wired for multiple signal selection by manual or automatic control.
- 180° speaker rotation allows flexibility in direction of sound.
- Corrosion-resistant conformal coating protects the printed circuit and other interior components.

Certifications and Compliances:

- UL Standard: 1203
- NEC:
 - Class I, Division 2, Groups A, B, C, D
 - Class II, Division 2, Group G
- NEMA 3, 7ABCD Division 2, 9G Division 2

Standard Materials:

- Body – die-cast aluminum
- Projector – spun aluminum
- Hardware – stainless steel

Standard Finishes:

- Body and projector – gray hammertone enamel
- Stainless steel – natural

Sound Levels:

- Minimum audibility rating (dB) at 10': W2H Series – 93dB



Signal Selection:

Signal Terminal	Sound Description	Audible Frequency	Repetition Rate
#4 Whoop	Ascending low to high, repeated	Low tone – 400 Hz High tone – 850 Hz	48 cy/min. 48 cy/min.
#5 Wail	Conventional Siren	400 – 1100 Hz	24 cy/min.
#6 Hi-Lo	Alternating Hi-Lo	Low tone – 650 Hz High tone – 850 Hz	24 cy/min. 24 cy/min.
#7 Horn	Steady	630 Hz	Continuous

Electrical Rating Ranges:

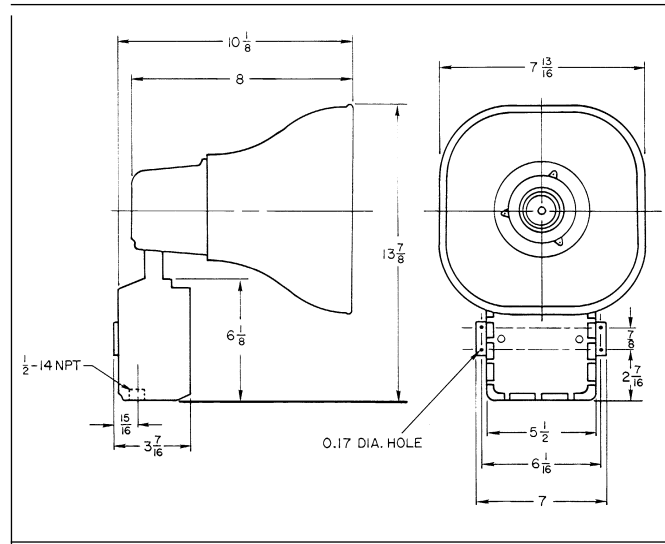
- Nominal voltage – 24, 120, 240 AC; 60 Hz 24 DC

Ordering Information - Normal Power

Nominal Voltage	Operating Current	Standby Current	Cat. #
24VDC	0.55A	0.06A	W2H840
24VAC	1.25A	0.13A	W2H640
120VAC	0.27A	0.03A	W2H620
240VAC	0.15A	0.02A	W2H660

Dimensions

In Inches:



Dimensions are approximate, not for construction purposes.



Applications:

WH vibrating horn signals are used:

- For code or call signals, or as a general alarm in a signal system that might involve hours of continuous operation
- In non-hazardous atmospheres of industrial areas such as warehouses, yards, exteriors of buildings, and in-plant areas
- Mounted on walls or other flat surfaces with projectors aimed in a desired direction

Features:

- The joint between the body and horn assembly is gasketed for raintightness

Certifications and Compliances:

- UL Standard: 464

Standard Materials:

- Copper-free aluminum and die cast zinc

Standard Finishes:

- Gray hammertone enamel

Capacity Ranges:

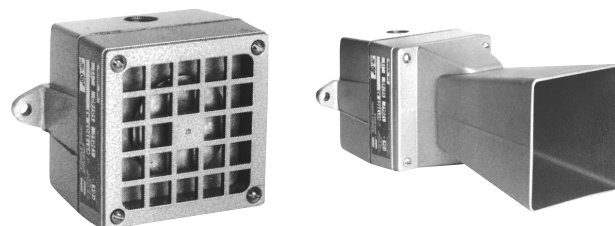
- Minimum audibility rating (dB) at 10':
AC – 87 decibels

Electrical Rating Ranges:

- Nominal voltage
120 AC, 50 / 60 hertz
- Operating characteristics
Voltage range +10%, -20%
Nominal watts – 18 VA on 120 VAC

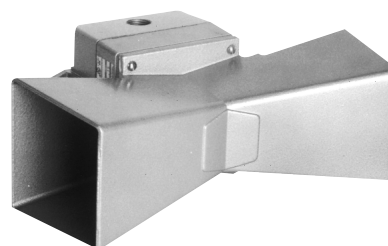
Ordering Information

Nominal Voltage	Nominal Voltage	Grill Cat #	Single Projector Cat. #	Double Projector Cat. #
.15	120 AC 50 to 60 Hz	WH13503	WH13513	WH13523



WH with grill

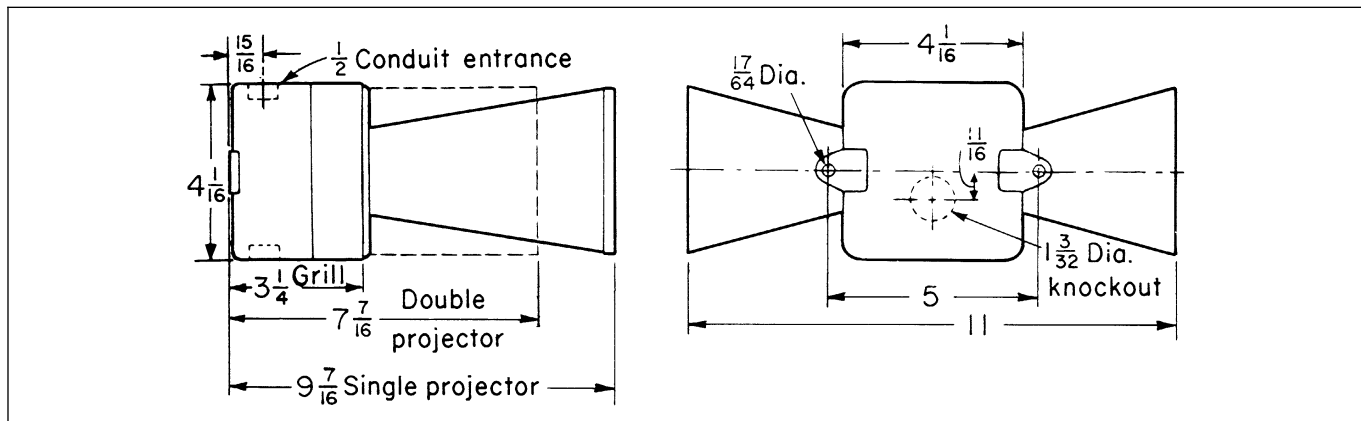
WH with single projector



WH with double projector

Dimensions

In Inches:



Dimensions are approximate, not for construction purposes.

Applications:

ESR bell signals are used:

- For call signals, alarms, or in various other signalling applications
- In specific hazardous atmospheres such as in chemical plants, oil and gas refineries, bulk loading stations, paint and varnish manufacturing plants, grain processing industries and grain elevators, as well as in certain metal, coal, combustible fiber processing or handling areas
- In conduit systems, and mounted on a vertical flat surface with the striker at the bottom

Features:

- The conduit hub contains an integral bushing.
- The body cover assembly permits the location of a hub at the top, bottom or either side (the striker must be located at the bottom for proper operation).
- There are no external seals required except when used in Group B hazardous areas.
- The AC signal does not have arcing contacts.
- Binding screw terminals are provided in AC signals for supply conductors.
- A vibrating or single stroke striker mechanism is furnished with 6 or 10 inch diameter gongs.

Certifications and Compliances:

Standard Units:

- NEC/CEC:
 - Class I, Division 1 & 2, Groups C, D
 - Class II, Division 1, Groups E, F, G
 - Class II, Division 2, Groups F, G
 - Class III

NEMA/EEMAC: 7CD, 9EFG

- UL Standard: 464, 1203
- CSA Standard: C22.2 No. 30

Group B Units:

- NEC/CEC:
 - Class I, Division 1 & 2, Groups B, C, D
 - Class II, Division 1, Groups E, F, G
 - Class II, Division 2, Groups F, G
 - Class III

NEMA/EEMAC: 7BCD, 9EFG

- UL Standard: 464, 1203
- CSA Standard: C22.2 No. 30

Standard Materials:

- Body – Feraloy® iron alloy
- Cover – copper-free aluminum
- Junction box
 - body – Feraloy iron alloy
 - cover – copper-free aluminum
- Gong – steel

Standard Finishes:

- Feraloy iron alloy – electrogalvanized and aluminum acrylic paint
- Aluminum – natural
- Steel – gray matte



Size Ranges:

- Hub – one 3/4" size

Sound Levels:

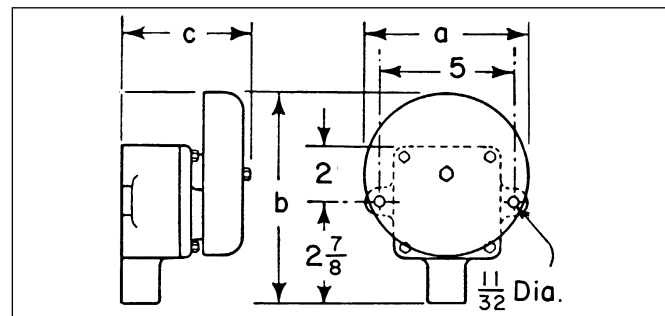
- See Table 1 below for individual ratings

Electrical Rating Ranges:

- Nominal voltage – 12, 24, 48, 115, 230 AC

See Table 1 for complete ratings.

Dimensions In Inches:



Dimensions are approximate, not for construction purposes.

Dia. Gong	a	b	c
6	6	6 3/4	5 1/4
10	10	10 3/4	6

Table 1

Operating Current in Amperes at the Nominal Voltage For Bell Signals

Nom. Volts	Amperes	
	All Vibrating 25 to 60 Hz AC	All Single Stroke 50 to 60 Hz AC
12	1.67	1.75
24	.53	.62
48	.44	.41
115	.189	.189
230	.092	.086

ESR Bell Signals

Cl. I, Div. 1 & 2, Groups B, C, D
 Cl. II, Div. 1, Groups E, F, G
 Cl. II, Div. 2, Groups F, G
 Cl. III

Explosionproof
 Dust-Ignitionproof
 Raintight
 Wet Locations

5S

Factory Sealed

Ordering Information:

Hub Size	Supply	Nom. Volts	Voltage Range	Dia. Bell	Vibrating Hammer (25 to 60 hertz)		Minimum audibility rating (dB) at 10':	Single Stroke Hammer (50 to 60 hertz) Cat. #	Minimum audibility rating (dB) at 10':
					Standard Units Cat. #	Group B Units‡ Cat. #			
3/4	AC	12	9.6 to 13.2	6	ESR2675	ESR2675 GB	67	ESR2665	64
		24	19.2 to 26.4		ESR2674	ESR2674 GB	82	ESR2664	64
		48	38.4 to 52.8		ESR2673	ESR2673 GB	88	ESR2663	67
		115	92 to 126.5		ESR2672	ESR2672 GB	88	ESR2662	67
		230	184 to 253		ESR2671	ESR2671 GB	85	ESR2661	67
		12	9.6 to 13.2	10	ESR2615	ESR2615 GB	82	ESR2625	64
		24	19.2 to 26.4		ESR2614	ESR2614 GB	85	ESR2624	64
		48	38.4 to 52.8		ESR2613	ESR2613 GB	85	ESR2623	67
		115	92 to 126.5		ESR2612	ESR2612 GB	91	ESR2622	67
		230	184 to 253		ESR2611	ESR2611 GB	85	ESR2621	67

‡ Install seal within 1/2" of conduit opening.



Combination Visual & Audible Signaling Devices

6S

Hazardous

Description	Page No.
Combination Units - MEDC Series	
DB3/SM87	see pages 1300–1301
DB3/XB11	see pages 1300–1301
DB12/XB13	see pages 1300–1301

6S

MEDC Series

Truly a unique product offering with integral visual and audible signaling devices pre-wired for simultaneous output activation.

- Suitable for Class I, Division 2 applications
- Strobe light and audible tone generator in one package
- Mounts with ease and facilitates quick field wiring
- UL, cUL, Ex and ATEX for worldwide acceptance

This range of lightweight all GRP, explosionproof horns intended for use in potentially explosive atmospheres has been designed with high ingress protection to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The flamepaths, flare, and body are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion-free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths.

Features and Benefits:

- All GRP corrosion-free
- Up to 108dBA output at 10 feet
- Integral volume control
- 27 tones, user selectable
- Horn/Strobe Combination Unit available

Certifications and Compliances:

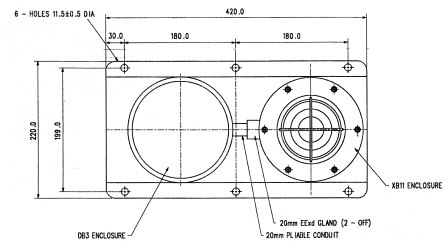
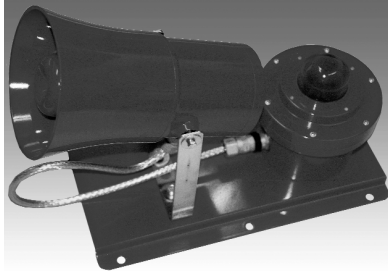
- UL Listed for USA and Canada
 - Hazardous locations:
 - Class I, Div. 2, Groups A, B, C, D
 - Class I, Zones 1 & 2, AExd IIC T4
 - Ordinary locations: Audible Signal device
- ATEX approved
- NEMA 4X & 6, IP66 & 67
- Certified temperature
 - 67°F to +158°F
 - 55°C to +70°C



Horn/Strobe Combination Unit

MEDC Series

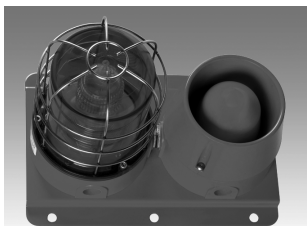
Visual & Audible Combination Units—Hazardous Locations, Weatherproof



Certification	Voltage	Lens/Body Color	Ordering Code	Cat. #	Standard Product Configuration
ATEX Ex II 2GD	24V DC	Red/Red	803130	DB3/XB11B24V RED/RED	DB3/XB11, Exd IIB T5, choice of 27 tones, 115dB(A) at 1m output, 29 Cd, no labels, 1 x M20 entry
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red/Natural Black	869200	DB3/XB11UL24V RED/NB	DB3/XB11, GRP material, NEMA 4X & 6, choice of 27 tones, 106dB(A) at 10 feet output, 29 Cd, no labels, 1 x 1/2" NPT entries
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red/Red	869205	DB3/XB11UL24V RED/RED	
UL, cUL Listed, Class I, Div. 2, Groups C, D	110V AC	Red/Red	869210	DB3/XB11UL110V RED/RED	



Certification	Voltage	Lens/Body Color	Ordering Code	Cat. #	Standard Product Configuration
UL, cUL Listed, Class I, Div. 1, Groups C, D	24V DC	Red/Red	62500182	DB1P/SM87HXBUL 24V RED/RED	24V DC, alloy sounder, interconnected to, painted red stainless steel baseplate, alloy 5 joule beacon
UL, cUL Listed, Class I, Div. 2, Groups C, D	24V DC	Red/Red	62500183	DB3/SM87HXBUL 24V RED/RED	GRP sounder interconnected to, painted red stainless steel baseplate, alloy 5 joule beacon



Certification	Voltage	Lens/Body Color	Ordering Code	Cat. #	Standard Product Configuration
Ex II 2GD	24V DC	Red/Red	62500009	DB12/XB13 24V RED/RED	IP66 & 67 weatherproof only, 24V DC, GRP sounder interconnected to, on a painted red stainless steel baseplate, a IP66 & 67 weatherproof only, GRP 10 joule beacon

