Signalling and alarms
Product overview

CROUSE-HINDS SERIES

Eaton brings you the comprehensive MEDC and FHF signalling, alarm and notification range for hazardous and harsh environments

EATON
Powering Business Worldwide

Part of our wider solution for harsh and hazardous environments

PA / GA

Designed, engineered and manufactured according to individual project specifications and industry regulations. The Sonix™ system uses the latest in digital technology and can be integrated with a wide range of Eaton products to ensure the integrity of your assets in even the most demanding of environments.

CCTV

Cutting edge technology from our market leading brands of Hernis™ and Oxalis.

With the widest range of camera stations and system solutions from a single manufacturer, we have the products and experience to meet today's demanding surveillance and security needs.

With products available that are explosion protected or weatherproof, analogue or IP, fixed, dome or PTZ, our experience and proven reliability can meet your specification requirements.

Signalling and alarms

Our MEDC and FHF product lines offer a wide range of products specifically designed for harsh environments where there is a risk of explosion for both onshore and offshore applications. This range of products including manual activation, visual and audible alarms, and loudspeakers, can be connected to IMCOS or Sonix™ delivering the best combination of performance and safety.

IMCOS

One of only a few systems in the world to have seven different type approvals.

IMCOS provides the solutions you need both Onshore and Offshore. The following applications demonstrate the ability to provide a single solution.

With IMCOS and our latest developments in technology, we are able to provide a single network which provides reduced cable architecture. Our LAN systems are able to share a highway of information and resources, interlinking video, voice and data with our VoIP telephones, IPTV streaming, CCTV, PA/GA and Intercom systems through one fibre or copper backbone.

Mining control and communications

Our FHF-BT business has over 100 years of experience in mining applications. Today the team delivers intrinsically safe turnkey automation and communications solutions on a global basis. Our solutions based offering includes shaft signalling and communications, loudspeaker and conveyer belt control, data transmission, radio systems and various automation systems.

Telecommunications

Whether a traditional analogue, digital, VoIP or Hybrid telephone system is what you require, we can provide the solution you need with our IMCOS PABX system. Together with a wide range of telephones we can provide standard, weatherproof, explosion protected and IP phones.

Proven solutions for harsh and hazardous environments

Eaton has brought together the most recognised names in oil and gas, such as MEDC and FHF, to be able to provide you with a comprehensive product offering of specialist, high quality equipment designed to make harsh and hazardous locations a safer, more efficient working environment. Eaton offer a specialised team of highly qualified staff to ensure all aspects of engineering, design and configuration within your project are fulfilled - from initial stages of concept through to commissioning.

The MEDC signalling and alarm range has been relied upon by the oil & gas industry to deliver high quality, innovative products for many years. With an extensive range of worldwide certifications including ATEX and IECEx, Eaton has the capability to deliver industry leading solutions designed to meet customer and project specifications.

Additionally, Eaton can provide a world class range of FHF telephone equipment designed for harsh and hazardous environments. Decades of experience in the fields of industrial communication and signalling, together with our specialist expertise, ensure that customers are provided with the most reliable and up to date technology available.

How to use this overview

This overview contains concise information on Eaton's range of MEDC and FHF signalling and alarm products for use in potentially explosive atmospheres, harsh industrial and marine environments.

To use this guide, refer to the product group of interest, read through the brief information and select the specific product for your application.

For more detailed information and ordering codes visit our website www.crouse-hinds.com/hac where a detailed datasheet can be downloaded. Or alternatively contact one of our sales offices for a full catalogue, all details can be found on the back page.

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To see the complete Hazardous Area Communication range, please visit www.crouse-hinds.com/hac

Hazardous area guide

This information is intended as a guide only and further expert guidance should be sought before placing into service, maintaining or repairing any item of equipment in a potentially explosive atmosphere.

Definition

Potentially explosive atmospheres exist where there is a risk of explosion due to mixtures of gas/air, vapour/air, dust/air or other flammable combinations. Where electrical equipment has to be used in these areas, it must be so designed and constructed such that it does not create sources of ignition capable of igniting these mixtures.

Area classification

Process plants are divided into Zones (European and IEC method) or Divisions (North American method) according to the likelihood of a potentially explosive atmosphere being present. Note: North American legislation now allows Zones to be used to classify areas, where this practice is used it follows the IEC Zone method.

European & IEC Classification	Definition of zone or division	North American Classification
Zone 0 (gases) Zone 20 (dusts)	An area in which an explosive mixture is continuously present or present for long periods	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 1 (gases) Zone 21 (dusts)	An area in which an explosive mixture is likely to occur in normal operation	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 2 (gases) Zone 22 (dusts)	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time	Class I Division 2 (gases) Class II Division 2 (dusts) Class III Division 1 (fibres) Class III Division 2 (fibres)

Gas groups, dusts and fibres

There are two main gas groups and one dust group, Group I – Mining only and Group II – Surface Industries.

These categories are used in European and IEC. groupings.

Group I is concerned only with underground mining where methane and coal dust are present.

Group II gases occurring in surface industries, are sub-grouped according to their volatility. This enables electrical equipment to be designed to less onerous tolerances if it is to be used with the least volatile gases.

Group III explosive dusts occurring in surface industries and are sub grouped according to their volatility.

Typical gas/material	European/I.E.C. Gas Group	North American Gas Group
Methane	I	-
Acetylene	IIC	A
Hydrogen	IIC	B
Ethylene	IIB	C
Propane	IIA	D
Metal dust	-	E
Coal dust	-	F
Grain dust	-	G

ATEX

After 1st July 2003, the ATEX directive came into force and is a mandatory requirement for all equipment intended for use in Potentially Explosive Atmospheres within the E.U. All relevant MEDC equipment is covered by the date it comes into force and many are already certified. It should be noted also that MECHANICAL equipment is covered by the ATEX directive so for the first time items such as gearboxes will have to carry ATEX certification.

Temperature

To guard against hot surfaces igniting gases, all electrical equipment intended for use in Potentially Explosive Atmospheres is classified according to the maximum surface temperature it will reach in service (normally based on a surrounding ambient temperature of 40°C (102°F).

Temperature Classification		Maximum Surface Temperature
European/I.E.C.	North American	
T1	T1	450° C
T2	T2 T2A T2B T2C T2D	300° C 280° C 260° C 230° C 215° C
T3	T3 T3A T3B T3C	200° C 180° C 165° C 160° C
T4	T4 T4A	135° C 120° C
T5	T5	100° C
T6	T6	85° C

The equipment coding will be as the current practice plus an additional code as follows:

Ex II 2 GD i.e.

Ex – Explosionproof in accordance with ATEX.

II – Group II surface industries

2 – Category 2 equipment (suitable for use in Zone 1)

note: Category 1 is suitable for Zone 0.
Category 3 is suitable for Zone 2.

G – suitable for atmospheres containing gas

D – suitable for atmospheres containing dust

Equipment will be CE marked when certified to ATEX.

	International	Europe	U.S.A.
General Recommendations	IEC60079-14	EN60079-14	N.E.C. Chapter 5
Classification of Hazardous Areas	IEC60079-10	EN60079-10	N.E.C. Chapter 5
Inspection and Maintenance of Electrical Equipment	IEC60079-17	EN60079-17	-
Requirements for Flameproof Enclosures	IEC60079-14	EN60079-14	N.E.C. Chapter 5
Requirements for Intrinsically Safe Equipment	IEC60079-14	EN60079-14	N.E.C. Chapter 5
Requirements for Increased Safety Equipment	IEC60079-14	EN60079-14	N.E.C. Chapter 5
Requirements for Purged and Pressurised Equipment	IEC60079-14	EN60079-14	N.E.C. Chapter 5
Requirements for Non-Sparking Equipment	IEC60079-14	EN60079-14	-

Selection, installation and maintenance of electrical equipment intended for use in potentially explosive atmospheres

International and national standards are published giving details of requirements for the safe use of electrical equipment in potentially explosive atmospheres as follows:

Types of electrical equipment suitable for use in potentially explosive gas, vapour and mist atmospheres Different techniques are used to prevent electrical equipment from igniting explosive atmospheres. There are restrictions on where these different types of equipment can be used as follows:	**Typical EPL** Area of use Designation Standard		**USA** Area of use Designation Standard
Flameproof Enclosure – An enclosure used to house electrical equipment, which when subjected to an internal explosion will not ignite a surrounding explosive atmosphere.		**Zones**	**Class I Divisions 1 & 2**
	Ex da	0	–
	Ex db	1	–
	Ex dc	2	–
	IEC/EN 60079-1		UL1203
Intrinsic Safety – A technique whereby electrical energy is limited such that any sparks or heat generated by electrical equipment is sufficiently low as to not ignite an explosive atmosphere.		**Zones**	**Class I Divisions 1 & 2**
	Ex ia	0	–
	Ex ib	1	–
	Ex ic	2	–
	IEC/EN 60079-11		UL913
Increased Safety – This equipment is so designed as to eliminate sparks and hot surfaces capable of igniting an explosive atmosphere.		**Zones**	
	Ex e	1	–
	IEC/EN 60079-7		
Purged and Pressurised – Electrical equipment is housed in an enclosure which is initially purged to remove any explosive mixture, then pressurised to prevent ingress of the surrounding atmosphere prior to energisation.		**Zones**	**Class I**
	Ex pxb	1	Div 1
	Ex pyb	1	Div 1
	Ex pzc	2	Div 2
	IEC/EN 60079-2		NFPA496
Encapsulation – A method of exclusion of the explosive atmosphere by fully encapsulating the electrical components in an approved material.		**Zones**	
	Ex ma	0	–
	Ex mb	1	–
	Ex mc	2	–
	IEC/EN 60079-18		
Oil Immersion – The electrical components are immersed in oil, thus excluding the explosive atmosphere from any sparks or hot surfaces.		**Zones**	**Class I Divisions 1 & 2**
	Ex o	1	–
	IEC/EN 60079-6		
Powder Filling – Equipment is surrounded with a fine powder, such as quartz, which does not allow the surrounding atmosphere to come into contact with any sparks or hot surfaces.		**Zones**	–
	Ex q	1	–
	IEC/EN 60079-5		–
Non-sparking – Sparking contacts are sealed against ingress of the surrounding atmosphere, hot surfaces are eliminated.		**Zones**	–
	Ex n	2	–
	IEC/EN 60079-15		–
Optical Radiation - Protection of equipment and transmission systems using optical radiation		**Zones**	
	Op pr	1	Div 1
	Op sh	1	Div 1
	Op is	2	Div 2
	IEC/EN 60079-28		
Equipment for combustible dust	**Typical EPL** Area of use Designation Standard		**USA** Area of use Designation Standard
Enclosure - Equipment dust ignition protection by enclosure		**Zones**	**Class II Division 1 & 2**
	Ex ta	20	
	Ex tb	21	
	Ex tc	22	
	IEC/EN 60079-31		UL1263
Intrinsic Safety		**Zones**	**Class II Division 1 & 2**
	Ex ia	20	
	Ex ib	21	
	Ex ic	22	
	IEC/EN 60079-11		UL913
Encapsulation		**Zones**	
	Ex ma	20	
	Ex mb	21	
	Ex mc	22	
	IEC/EN 66079-18		
Pressurised		**Zones**	**Class II**
	Ex Pxb	21	(PX) Div 1
	Ex Pyb	21	(PY) Div 1
	Ex Pzc	22	(PZ) Div 2
	IEC/EN 60079-2		

Eaton advise that all Explosion-proof electrical equipment is maintained, by suitably trained personnel, in accordance with the Manufacturers' recommendations.

Any spare parts used should be purchased from the original Manufacturer and repairs should be carried out by the Manufacturer or under their supervision, in order that the item remains in conformance with the certification documents.

Hazardous area manual alarm call points

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Ex-Fire Alarm Switch

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Eaton provide a range of manual alarm call points specifically designed for the purpose of raising an alarm in the case of an emergency in a hazardous area.

The call points can be made from a selection of materials depending on project specification. This includes glass reinforced polyester (GRP), a light weight and corrosion free material, allowing easy installation and low maintenance cost. Stainless steel is also available which is a heavy duty, long wearing material with an increased life span.

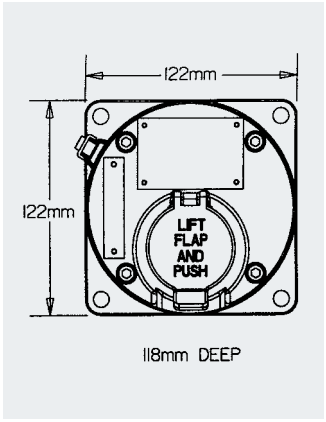
All of Eaton's call points have a minimum IP rating of IP66, with the majority also including IP67, and can be certified to one of our worldwide accreditations, including ATEX and IECEx. There are also options for the inclusion of LED status indicators and addressable location (or address) within the unit and many can be painted a variety of colours to the customer's specification.

Hazardous area manual alarm call points

SM87PB

Ex d & Ex ia Push button call points

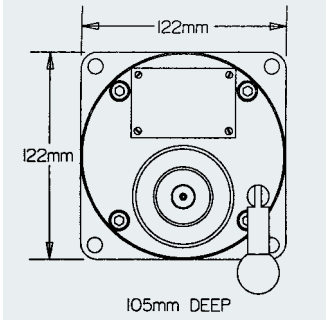
Certification	ATEX, IECEx, cULus, ULC, CSA, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2 GD, Ex d IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db Ex II 1 GD, Ex ia IIC T4 Ga
UL/NEC classification	Class 1, Div. 1, Groups C, D (CSA Ex ia also includes groups A & B)
Approvals	SIL2, Russian fire approval, ABS
Certified temperature	-55°C to +70°C*
Ingress protection	IP66, IP67 & IP68, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x M20, M25, ½" NPT or ¾" NPT
Weight	Stainless: 3.8kg. Alloy: 2.5kg
Switches	2 pole c/o (Up to 4 pole c/o available)
Options	Switch action, labels, LED, EOL and series resistors, diodes, 3 or 4 pole switches, colour



SM87BG

Ex d & Ex ia Break glass call points

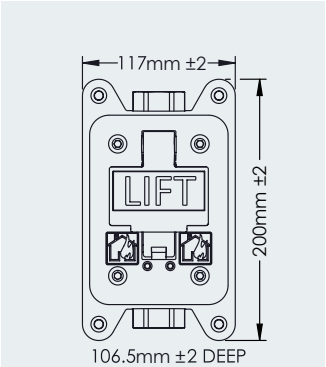
Certification	ATEX, IECEx, CSA, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2 GD, Ex d IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db Ex II 1 GD, Ex ia IIC T4 Ga
UL/NEC classification	Class 1, Div. 1, Groups C, D (CSA Ex ia also includes groups A, B)
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C*
Ingress protection	IP66, 67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x M20, M25, ½" NPT or ¾" NPT
Weight	Stainless: 3.8kg. Alloy: 2.5kg
Switches	2 pole c/o (Up to 4 pole c/o available)
Options	Switch action, labels, LED, EOL and series resistors, diodes, 3 or 4 pole switches, colour



PH1

Ex d Pull handle call point

Certification	ATEX, IECEx, cULus
Area classification	Zone 1, 2, 21, 22 & weatherproof
ATEX/IEC classification	Ex II 2 GD, Ex d IIC T6 Gb, Ex tb IIIC T85°C Db
UL/NEC classification	Class I, Div. 1, Groups B, C, D Class I, Div. 2, Groups A, B, C, D
Certified temperature	-55°C to +70°C*
Ingress protection	IP66, 67, NEMA 4X & 6
Material	Corrosion free GRP (UL Class I, Div. 1 Inner Cover: 316 stainless steel)
Entries	Up to 2 x M20, M25, ½" NPT or ¾" NPT
Weight	UL Class I, Div 2/ATEX/IECEx/UW: 2.6Kg UL Class I, Div. 1: 3.8Kg
Switches	1 or 2 pole c/o
Options	EOL and series resistors, diodes, labels, body colour



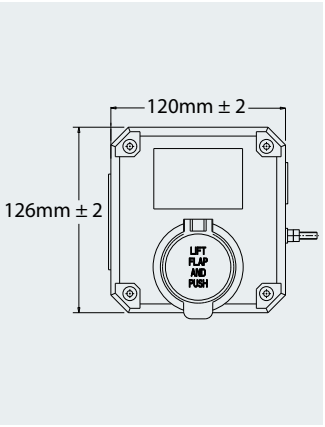
*Model dependent

Hazardous area manual alarm call points

PB

Ex de & Ex ia Push button call points

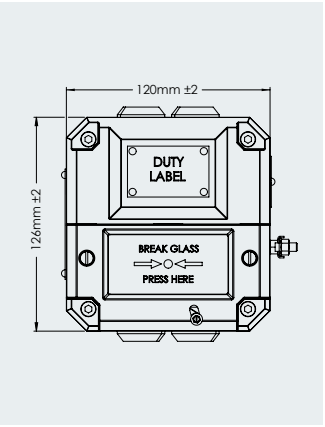
Certification	ATEX, IECEx, cULus, CSA, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2 GD,Ex de(mb) IIC T4/T6*Ex tb IIIC T120°C Db Ex II 1 GD, Ex ia IIC T4 GaEx ia IIIC T135°C Da
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL2, Russian fire approval, ABS
Certified temperature	-50°C to +70°C*
Ingress protection	IP66, 67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 4 x M16, M20 or ½" NPT
Weight	1.2kg*
Switches	1 or 2 pole c/o
Options	Labels, LED, EOL and series resistors, diodes, Earth continuity, switch action, number of terminals, colour



BG

Ex de & Ex ia Break glass call points

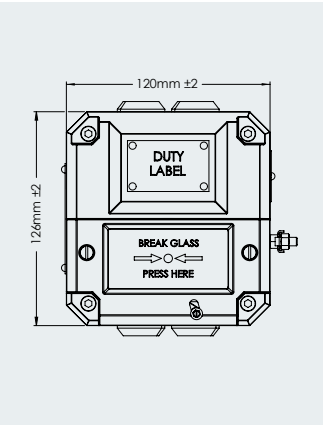
Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2 G, Ex de (mb) IIC T4/T6* Ex II 1 GD, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Approvals	SIL2, Russian fire approval, CCCF
Certified temperature	-50°C to +70°C *
Ingress protection	IP66, 67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 4 x M16, M20 or ½" NPT
Weight	1.2kg*
Switches	1 or 2 pole c/o
Options	Labels, switches, LED, Lift flap, EOL and series resistors, diodes, Earth continuity, plastic element, break glass hammer, colour



BG2

Ex de & Ex ia Break glass call points

Certification	ATEX
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2 G, Ex de (mb) IIC T4/T6* Ex II 1 GD, Ex ia IIC T4 Ga , Ex ia IIIC T135°C Da
Certified temperature	-40°C to +70°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	2 x M20
Weight	1.2kg*
Switches	1 pole c/o
Options	EOL and series resistors, diodes, lift flap



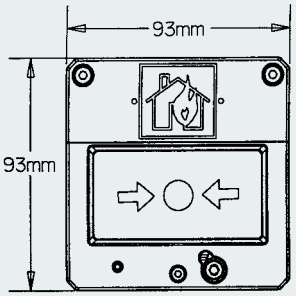
*Model dependent

Hazardous area manual alarm call points

BG3

Ex ia Break glass call points

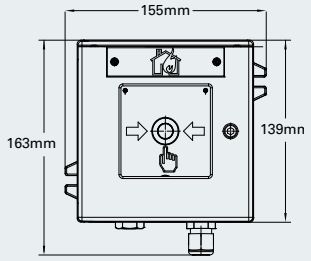
Certification	ATEX
Area classification	Zone 0, 1, 2, 20, 21, 22, weatherproof
ATEX/IEC classification	Ex II 1 G, EEx ia IIC T4
Certified temperature	-55°C to +55°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	2 x M20
Weight	0.5kg
Switches	1 or 2 pole c/o
Options	Labels, EOL and series resistors, diodes, polycarbonate or stainless steel lift flap, LED, double switch, plastic element, colour



Ex-Fire Alarm Switch

Ex de Break glass & push button call point

Certification	ATEX
Area classification	Zone 1, 2, 21, 22
ATEX/IEC classification	Ex II 2 GD, Ex de mb IIC T5/T6 Gb Ex tb IIIC T100 °C Db
Approvals	EN54-11, VDS
Certified temperature	-55°C to +70°C*
Ingress protection	IP66
Material	Corrosion free GRP
Entries	1 x M16 & 1 x blank plug M16
Weight	1.8kg
Switches	2 pole c/o
Options	Resistors, colour



*Model dependent

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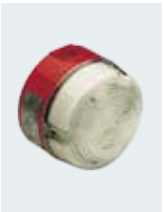

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Eaton's range of beacons, including flashing, steady-state indicators and rotating units, provide solutions for potentially explosive and harsh environmental conditions. These may be used to warn of potential hazards or indicate the status of plant items, gas and oil leaks and evacuation alerts.

The signals can be operated as stand-alone units or be incorporated into a wider system, such as a fire panel. Many units can also be customised with a choice of lens colours and can be painted to customer specification.

Eaton offer a range of LED beacons, which have the added benefit of low energy consumption, an increased lifespan and an option of flash patterns.

XB15 – 5J, 10J & 15J

Eaton, pioneers in the latest technology, are pleased to announce the evolution of the XB15 beacon range

In an emergency situation in a potentially explosive environment, it is paramount to have an effective warning system that you can depend on. Since its launch 10 years ago, the XB15 has proven to be the product of choice in the fire, flame, gas and telecom integration markets whenever strength, reliability and ease of installation are required.

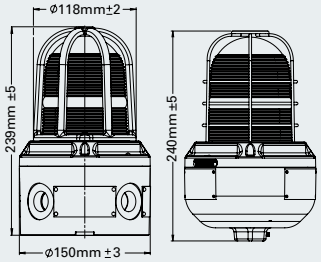
With a glass reinforced polyester body and borosilicate glass lens, the XB15 leads the way in signalling devices where the effects of adverse harsh environmental conditions and extreme temperatures of -55°C to +70°C demand the highest quality and performance possible. The effective candlepower of the 15J unit has been measured at 382cd, ensuring that our product will be effective no matter what the application.

Hazardous area beacons

LD15

Ex d LED beacon

Certification	ATEX, IECEx, cULus, ULC, TR CU, CQST, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex db IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class II, Div. 2, Groups F, G Class I, Zone 1, AEx d IIC* & IIB, Ex d IIB
Approvals	SIL1 (1oo1) & SIL2 (1oo2)
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 3* x M20, M25, ½" NPT or ¾" NPT
Weight	Direct: 3.5Kg. Pipe: 3.1Kg
Voltage	12-48Vdc, 110-254Vac
Light source	LED
LED life	54,000 hours
Options	Lens colour, lens guard, mounting, tag & duty label, relay initiate, telephone initiate, body colour

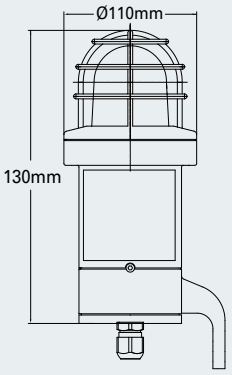


Direct mount Pipe mount

dSLB20-LED

Ex de LED beacon

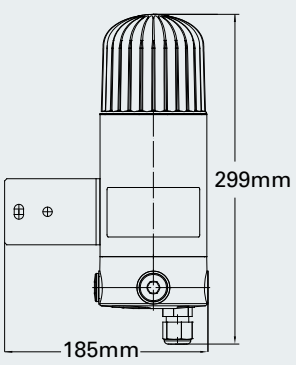
Certification	ATEX, IECEx, TR CU, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d e IIC T6 Gb, Ex tb IIIC T80°C Db
Approvals	ICAO
Certified temperature	-55°C to +55°C
Ingress protection	IP66 & IP67
Material	Aluminium
Entries	1x M20 and 1x blank plug M20
Weight	2kg
Voltage	24-48Vdc, 85-265Vac
Light source	LED
Options	LED colour



Expertline LED

Ex em LED light

Certification	ATEX, IECEx, cULus, TR CU, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2G, Ex e mb [ib] IIC T4 Gb Ex II 2D, Ex mb t IIIC IP66 T130°C Db
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Groups IIA, IIB, IIC, T4
Approvals	ICAO
Certified temperature	-40°C to +65°C*
Ingress protection	IP66, NEMA 4X
Material	Polycarbonate
Entries	2 x M20 & 1 x blank plug M20
Weight	2.5kg
Voltage	24Vdc, 120-230Vac
Light source	LED
Options	LED colour, ICAO obstruction light version



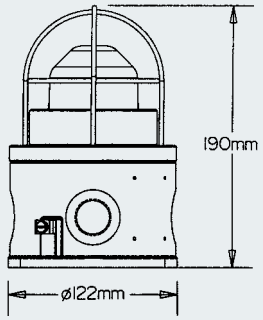
*Model dependent

Hazardous area beacons

SM87LED

Ex d LED beacon

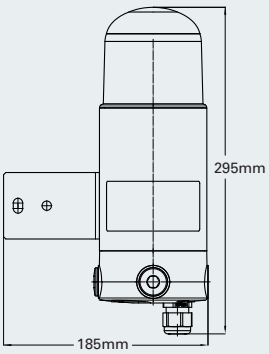
Certification	ATEX, IECEx, TR CU, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T6 Gb, Ex tb IIIC T70°C Db
Approvals	SIL2, Russian fire approval
Certified temperature	-55°C to +55°C
Operating temperature	-20°C to +55°C
Ingress protection	IP66 & IP67
Material	Stainless steel or alloy
Entries	Up to 4 x M20 or M25
Weight	Alloy: 2kg. Stainless steel: 3.8kg
Voltage	24-48Vdc
Light source	LED
Options	LED colour, lens guard, tag/duty label, telephone initiate, relay initiate, EOL resistor, body colour



ActiveLine GH5

Ex nR Multicolour LED beacon

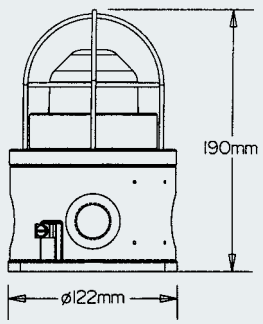
Certification	ATEX
Area classification	Zone 2, 22, weatherproof
ATEX/IEC classification	Ex II 3G, Ex nR IIC T6 Gc Ex II 3D, Ex tc IIIC T85°C Dc
Certified temperature	-20°C to +50°C
Ingress protection	IP66
Material	Polycarbonate
Entries	1 x M20 & 2 x blank plug M20
Weight	1.4kg
Voltage	24Vdc, 230Vac
Light source	Multicolour LED
Options	Flash function, LED colour



SM87HXB

5 joule Ex d xenon beacon

Certification	ATEX, IECEx, cULus, CSA, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T5/T6 Gb Ex tb IIIC T95°C/T80°C/T65°C Db
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Approvals	SIL2, Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x M20, M25, ½" NPT or ¾" NPT
Weight	Alloy: 2.0kg. Stainless steel: 3.8kg
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Lens colour, lens guard, tag/duty label, telephone initiate, relay initiate, EOL resistor, body colour

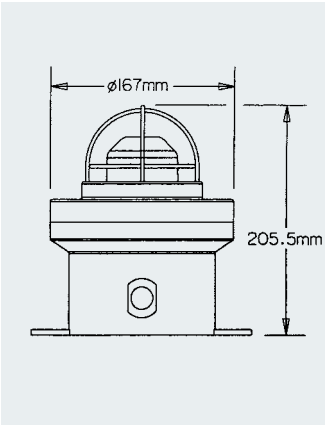


Hazardous area beacons

XB11

5 joule Ex d xenon beacon

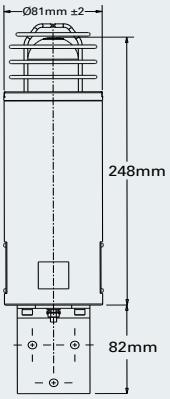
Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIB T4/T5/T6 Gb Ex tb IIIC T110°C/T85°C/T70°C Db
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval, CSFM
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x M20 or ½" NPT
Weight	2.5kg
Voltage	24-48Vdc, 110-240Vac
Light source	Xenon
Options	Flash rate, lens colour, lens guard, mounting, earth continuity, tag/duty label, telephone initiate, body colour



XB9

5 joule Ex d xenon beacon

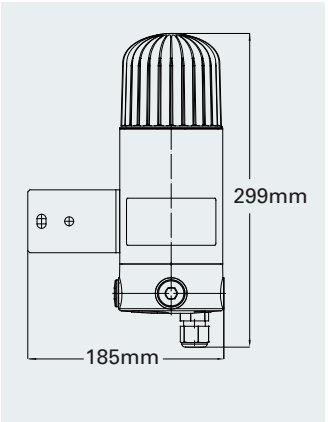
Certification	ATEX, IECEx, TR CU, CQST
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIC T5/T6 Gb
Approvals	Russian fire approval
Certified temperature	-55°C to +55°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	1 x M20, PG13.5, 3m cable tail
Weight	1.6kg
Voltage	12-60Vdc, 110-254Vac
Light source	Xenon
Options	Flash rate, lens colour, tag/duty label, body colour



BZ2/BD22

15 joule Ex nR xenon beacon

Certification	ATEX
Area classification	Zone 2, 22, weatherproof
ATEX/IEC classification	Ex II 3G, Ex nR IIC T5/T4 Gc Ex II 3D, Ex tc IIIC T85°C Dc
Certified temperature	-20°C to +50°C*
Ingress protection	IP66
Material	Polycarbonate
Entries	1 x M20 & 1 x blank plug
Weight	1.4kg
Voltage	12-24Vdc, 120-230Vac
Light source	Xenon
Options	Lens colour



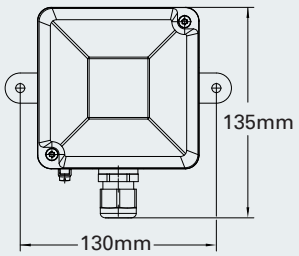
*Model dependent

Hazardous area beacons

BDK22

5 joule Ex td xenon beacon

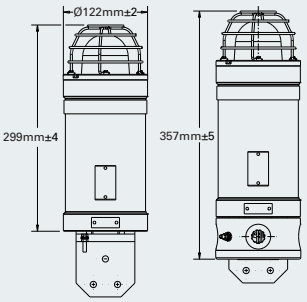
Certification	ATEX
Area classification	Zone 22, weatherproof
ATEX/IEC classification	Ex II 3D, Ex tc IIIB T85°C Dc
Certified temperature	-20°C to +50°C
Ingress protection	IP54
Material	Aluminium
Entries	1x M20
Weight	0.7kg
Voltage	24vdc, 230Vac
Light source	Xenon
Options	Lens colour



XB10

10 & 15 joule Ex d(e) xenon beacons

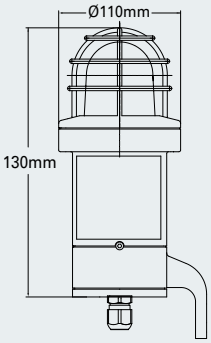
Certification	ATEX, IECEx, TR CU, INMETRO, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIB T4 Gb, Ex II 2G, Ex de IIB T4 Gb
Approvals	Russian fire approval
Certified temperature	10 joule: -55°C to +65°C* 15 joule: -55°C to +50°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Ex d: Up to 2 x M20, PG13.5 Ex de: 3 x M20
Weight	Ex d: 2.8kg. Ex de: 3.6kg
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Tube energy, lens colour, tag/duty label, telephone initiate, earth continuity, cable tail, body colour



dSLB 20

5 & 15 joule Ex de xenon beacons

Certification	ATEX, IECEx, TR CU, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d e IIC T5/T6 Gb Ex tb IIIC T80°C/T95°C Db
Certified temperature	-55°C to +55°C
Ingress protection	IP66 & IP67
Material	Aluminium
Entries	1x M20 & 1 x blank plug M20
Weight	2kg
Voltage	12-80Vdc, 115-230Vac
Light source	Xenon
Options	Tube energy, lens colour



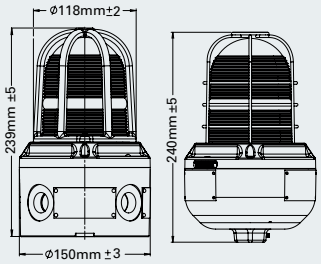
*Model dependent

Hazardous area beacons

XB15

5, 10 & 15 joule Ex d xenon beacons

Certification	ATEX, IECEx, cULus, ULC, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex db IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class II, Div. 2, Groups F, G Class I, Zone 1 AEx d IIC* & IIB, Ex d IIB
Approvals	SIL1, EN54-23, Russian fire approval, CCCF, CSFM
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 3* x M20, M25, ½" NPT or ¾" NPT
Weight	2.6kg - 3.0kg
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Tube energy, flash rate, lens colour, lens guard, mounting, tag & duty label, relay initiate, telephone initiate, body colour

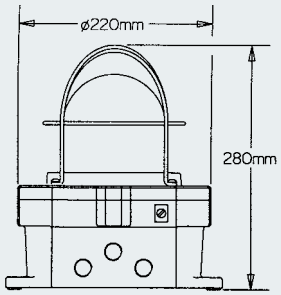


Direct mount Direct mount

XB4

21 joule Ex d(e) xenon beacon

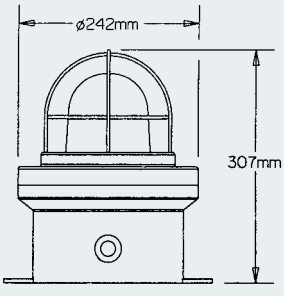
Certification	ATEX, IECEx, cULus, TR CU, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db Ex II 2GD, Ex de IIC Ex tD A21 T4/T5
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Groups IIB & IIA
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4* x M20, M25, ½" NPT or ¾" NPT
Weight	Alloy: 6.6kg -7.6kg. Stainless steel: 15kg - 16kg
Voltage	24-110Vdc, 110-254Vac
Light source	Xenon
Options	Flash rate, telephone initiate, relay initiate, lens guard, lens colour, tag/duty label, body colour



XB12

21 joule Ex d xenon beacon

Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIB T4/T5/T6 Gb
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval, CSFM, UL Marine
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x M20 or ½" NPT
Weight	7.0kg
Voltage	24Vdc, 110-240Vac
Light source	Xenon
Options	Body & lens colour, lens guard, tag & duty labels, telephone initiation, flash rate, mounting method, earth continuity



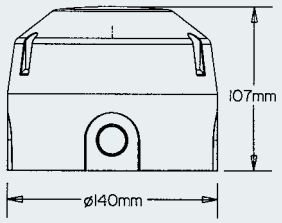
*Model dependent

Hazardous area beacons

XB8

0.5 joule Ex ia xenon beacon

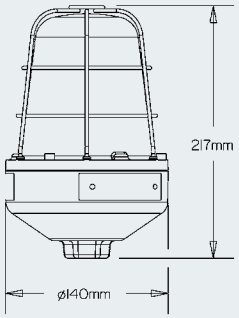
Certification	ATEX, IECEx, TR CU, CCOE
Area classification	Zone 0, 1, 2, weatherproof
ATEX/IEC classification	Ex II 1G, Ex ia IIC/IIB T4 Ga
Approvals	ABS
Certified temperature	-55°C to +60°C
Ingress protection	IP66 & IP67
Material	Body: corrosion free GRP. Lens: polycarbonate
Entries	Up to 3 x M20 via knockouts
Weight	1.4kg
Voltage	12-24Vdc
Light source	Xenon
Options	Lens colour, tag & duty label, body colour



XB16

10 joule UL xenon beacon

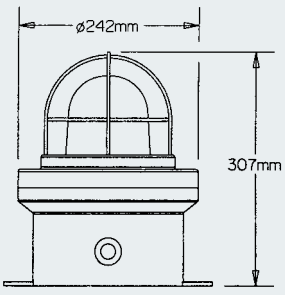
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	UL1971, CSFM
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	1 x ¾" NPT
Weight	1.0kg
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Flash rate, lens colour, lens guard, tag & duty label, relay initiate, body colour



TH12

Ex d rotating beacon

Certification	ATEX, IECEx, TR CU, INMETRO
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIB T3/T4 Gb
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	2 x M20
Weight	7.6kg
Voltage	12-24Vdc, 110-240Vac
Light source	Rotating tungsten halogen
Options	Rotation speed, lens colour, lens guard, mounting, tag & duty label, earth continuity, body colour

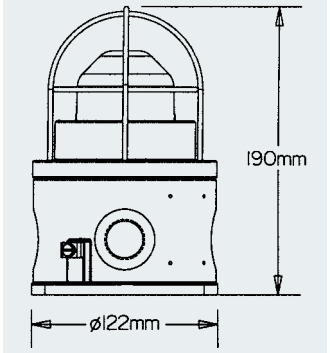


Hazardous area beacons

SM87LU1/LU3

Ex d Steady beacons

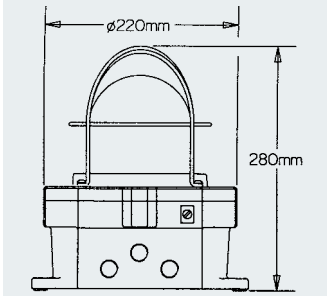
Certification	ATEX, IECEx, cULus, CSA, TR CU, CQST, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	SM87LU1:Ex II 2GD, Ex d IIC T6 Gb, Ex tb IIIC T85°C Db SM87LU3:Ex II 2GD, Ex d IIC T3/T4/T5/T6 Gb Ex tb IIIC T155°C/T130°C/T100°C/ T85°C Db
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Approvals	Russian fire approval
Certified temperature	SM87LU1: -55°C to +55°C SM87LU3: -55°C to +70°C
Operating temperature	SM87LU1: -20°C to +55°C SM87LU3: -55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	SM87LU1: Up to 3 x M20, M25, ½" NPT or ¾" NPT SM87LU3: Up to 4 x M20, M25, ½" NPT or ¾" NPT
Weight	Alloy: 2.5kg. Stainless steel: 3.8kg
Voltage	24-48Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lens colour, lens guard, tag/duty label, body colour



FL4 & FB4

Ex d(e) Steady beacons

Certification	ATEX, IECEx, cULus, TR CU
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	FB4: Ex II 2GD, Ex d IIC T3/T4/T5 Gb Ex tb IIIC T185°C/T135°C/T100°C Db FB4: Ex II 2GD, Ex de IIC Ex tD A21 T3/T4/T5 FL4: Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db FL4: Ex II 2GD, Ex de IIC Ex tD A21 T4/T5/T6
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Groups IIB & IIA
Certified temperature	-55°C to +70°C
Operating temperature	FL4: -20°C to +70°C FB4: -55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4* x M20, M25, ½" NPT or ¾" NPT
Weight	Alloy: 6.5kg - 8.9kg Stainless steel: 14.9kg - 17.3kg
Voltage	24-48Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lamp wattage, lens colour, lens guard, tag & duty labels, relay initiate, body colour



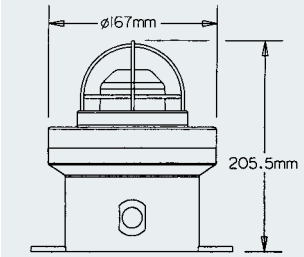
*Model dependent

Hazardous area beacons

FB11 & FL11

Ex d Steady beacons

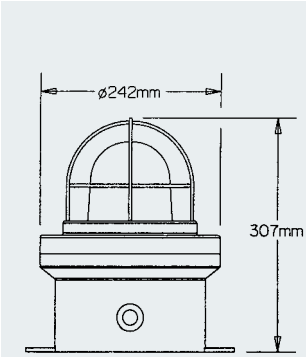
Certification	ATEX, IECEx, cULus, TR CU, INMETRO
Area classification	Zone 1, 2, 21*, 22*, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIB T4/T5/T6 Gb Ex tb IIIC T110°C/T85°C/T70°C Db
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C
Operating temperature	FB11: -55°C to +70°C FL11: -20°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x M20 or ½" NPT
Weight	2.8kg
Voltage	24-48Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lamp wattage, lens colour, lens guard, mounting, earth continuity, tag & duty labels, body colour



FL12 & FB12

Ex d Steady beacons

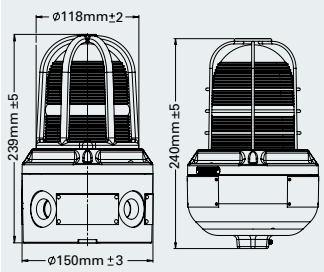
Certification	ATEX, IECEx, cULus, TR CU, INMETRO
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	FB11: Ex II 2G, Ex d IIB T3/T4/T5 Gb FL11: Ex II 2G, Ex d IIB T4/T5/T6 Gb
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval
Certified temperature	FB12: -55°C to +55°C FL12: -20°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x M20 or ½" NPT
Weight	7.2kg - 7.6kg
Voltage	24-48Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lamp wattage, lens colour, lens guard, mounting, earth continuity, tag & duty labels, body colour



FB15

Ex d Steady beacon

Certification	ATEX, IECEx, cULus, TR CU, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex db IIC T3/T4 Gb Ex tb IIIC T200°C/T135°C Db
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class I, Zone 1 AEx d IIC* & IIB, Ex d IIB
Approvals	Russian fire approval, CSFM
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 3* x M20, M25, ½" NPT or ¾" NPT
Weight	Pipe: 2.6Kg. Direct: 3.0Kg
Voltage	24-48Vdc, 110-254Vac
Light source	Filament
Options	Lamp wattage, lens colour, lens guard, mounting, tag & duty label, lens colour



Direct mount Pipe mount

*Model dependent

Industrial beacons

BLK-LED

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BLK-Super-LED

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BLG-LED

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BLE-LED

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ActiveLine GH1

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ActiveLine GH2

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Alpha 1/2/3 & 4

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Profiflash

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XB13

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BLG 10

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BLE 15

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BLK

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BLS

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SLD1/SLD2

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Profilux

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Eaton's range of weatherproof flashing beacons and status lights, including single colour or multi coloured options, can be either flashing, steady-state indicators or rotating units, providing solutions for harsh safe area environmental conditions.

These may be used to warn of potential hazards or indicate the status of plant items, gas and oil leaks and evacuation alerts in safe areas. The signals can be operated as stand-alone units or be incorporated into a wider system, such as a fire panel. Many units can also be customised with a choice of sources or lens colours.

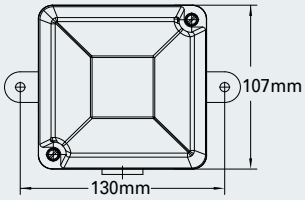
We now offers a comprehensive range of LED beacons, which have the added benefit of low energy consumption, an increased lifespan and an option of flash patterns.

Industrial beacons

BLK-LED

Weatherproof LED beacon

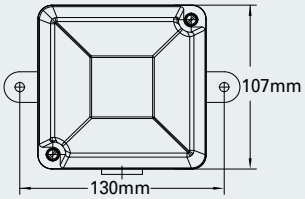
Area classification	Weatherproof
Operating temperature	-30°C to +50°C
Ingress protection	IP65
Material	Aluminium
Entries	Up to 2 x M20
Weight	0.7kg
Voltage	12-24Vdc, 230Vac
Light source	LED
Options	Flash function, lens colour



BLK-Super-LED

Weatherproof LED beacon

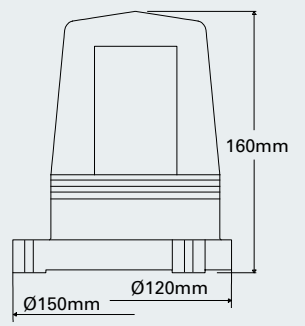
Area classification	Weatherproof
Operating temperature	-55°C to +75°C
Ingress protection	IP65
Material	Aluminium
Entries	Up to 2 x M20
Weight	1.4kg
Voltage	24Vdc, 230Vac
Light source	LED
Options	Flash function, lens colour



BLG-LED

Weatherproof LED beacon

Area classification	Weatherproof
Operating temperature	-40°C to +50°C
Ingress protection	IP67
Material	Body: rubber Lens: polycarbonate
Entries	Cable diameter 6-8mm
Weight	0.45kg
Voltage	12-24Vdc, 115-230Vac
Light source	LED
Options	Flash function, LED colour

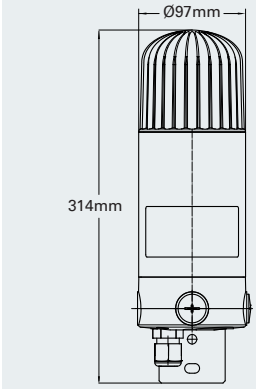


Industrial beacons

BLE-LED

Weatherproof LED beacon

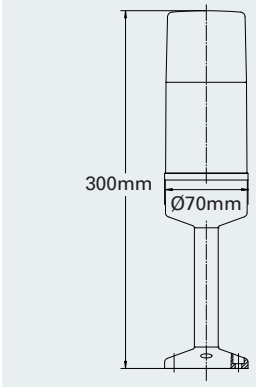
Area classification	Weatherproof
Operating temperature	-40°C to +65°C
Ingress protection	IP66
Material	Polycarbonate
Entries	1 x cable gland M20 & 2 x blank plugs M20
Weight	1.3kg
Voltage	24Vdc, 85-265Vac
Light source	LED
Options	Flash function, lens colour



ActiveLine GH1

Multicolour weatherproof LED beacon

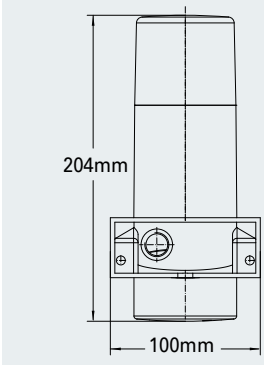
Area classification	Weatherproof
Operating temperature	-25°C to +60°C
Ingress protection	IP54
Material	Enclosure & footbracket: thermoplastic Stand: aluminium Lens: polycarbonate
Entries	Male thread bush M16
Weight	0.3kg
Voltage	24Vdc, 230Vac
Light source	Multicolour LED
Options	With/without sounder, flash functions, LED colour



ActiveLine GH2

Multicolour weatherproof LED beacon

Area classification	Weatherproof
Operating temperature	-25°C to +60°C
Ingress protection	IP54
Material	Enclosure: thermoplastic Lens: polycarbonate
Entries	1 x M16
Weight	0.3kg
Voltage	24Vdc, 230Vac
Light source	Multicolour LED
Options	Flash function, LED colour



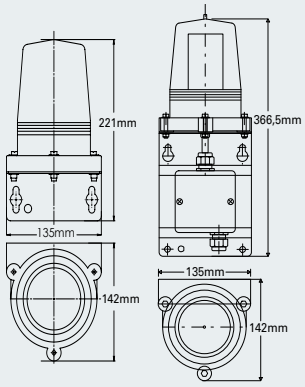
Industrial beacons

Alpha 1, Alpha 2, Alpha 3 & Alpha 4

LED Obstruction light

Alpha 2 / Alpha 3 and Alpha 4 shown

Area classification	Weatherproof
Approvals	ICAO annex 14 (low intensity)
Operating temperature	-20°C to +50°C
Ingress protection	IP65
Material	Body: rubber Lens: polycarbonate
Entries	Cable diameter 6-8-mm (Alpha 2-4 prewired)
Weight	0.5kg - 4.5kg*
Voltage	24Vdc, 115-230Vac
Light source	LED
Options	Mounting

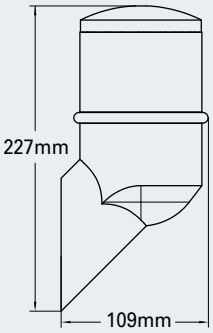


Alpha 2 and Alpha 3 shown

Profiflash

5 joule weatherproof beacon

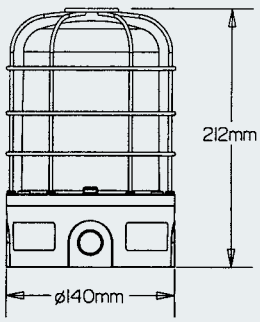
Area classification	Weatherproof
Operating temperature	-20°C to +40°C
Ingress protection	IP54
Material	Housing: ABS Lens: polycarbonate
Entries	Male thread bush M16
Weight	0.36kg
Voltage	24Vdc, 230Vac
Light source	Xenon
Options	Lens colour, housing colour, mounting options



XB13

10 joule weatherproof xenon beacon

Area classification	Weatherproof
Operating temperature	-40°C to +70°C
Ingress protection	IP66 & IP67
Material	Body: corrosion free GRP Lens: polycarbonate
Entries	Up to 3 x M20 via knockouts
Weight	1.1kg
Voltage	12-48Vdc, 115-230Vac
Light source	Xenon
Options	Body & lens colour, tag & duty labels, lens guard, telephone & relay initiate, single & dual flash mode



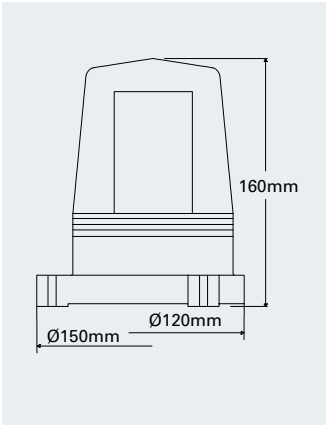
*Model dependent

Industrial beacons

BLG 10

10 joule weatherproof beacon

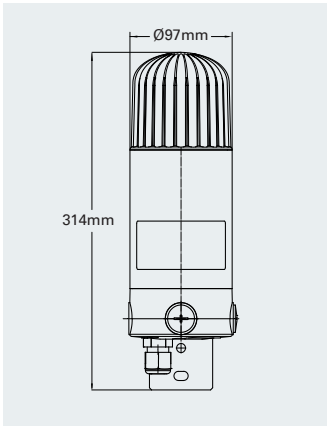
Area classification	Weatherproof
Operating temperature	-20°C to +50°C
Ingress protection	IP67
Material	Body: rubber Lens: polycarbonate
Entries	Cable diameter 6-8mm
Weight	0.45kg
Voltage	10-100Vdc, 20-230Vac
Light source	Xenon
Options	Lens colour



BLE 15

15 joule weatherproof beacon

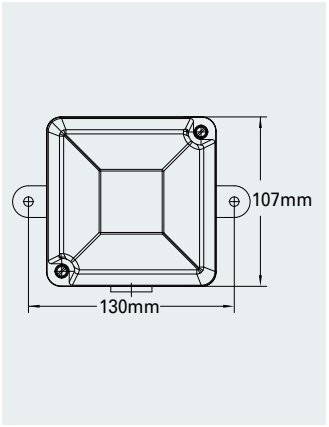
Area classification	Weatherproof
Operating temperature	-40°C to +50°C
Ingress protection	IP66
Material	Polycarbonate
Entries	1 x cable gland M20 & 2 x blank plugs M20
Weight	1.0kg
Voltage	24vdc, 230Vac
Light source	Xenon
Options	Lens colour



BLK

5 & 15 joule weatherproof beacons

Area classification	Weatherproof
Operating temperature	-50°C to +50°C*
Ingress protection	IP65
Material	Aluminium
Entries	Up to 2 x M20
Weight	0.7kg
Voltage	12-48Vdc, 24-230Vac
Light source	Xenon
Options	Tube energy, temperature range, lens colour



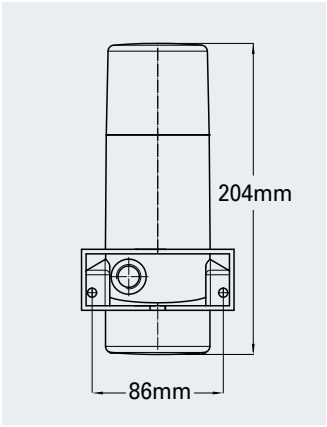
*Model dependent

Industrial beacons

BLS

5 & 15 joule weatherproof beacons

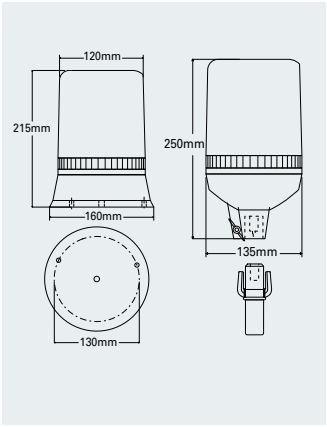
Area classification	Weatherproof
Operating temperature	-30°C to +50°C
Ingress protection	IP54
Material	ABS
Entries	1x self-sealing grommet M16
Weight	0.7kg
Voltage	12-24Vdc, 24-230Vac
Light source	Xenon
Options	Tube energy, lens colour



SLD1/SLD2

Weatherproof rotating halogen beacons

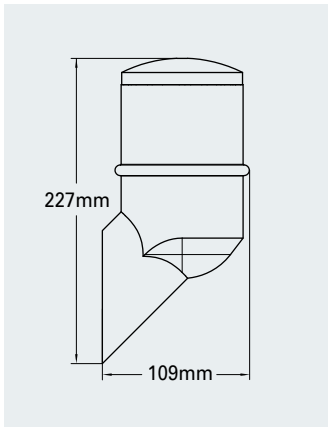
Area classification	Weatherproof
Approvals	German Federal Office for Motor Traffic
Operating temperature	-20°C to +50°C
Ingress protection	IP54
Material	Plastic socket with die cast metal bottom (for SLD 1 and 3) and full-surface PVC sealing
Entries	Cable diameter 8-12mm
Weight	1.0kg - 2.3kg*
Voltage	SLD1: 12-24Vdc, 110-230Vac SLD2: 12-24Vdc
Light source	Halogen bulb 55/70W
Options	Lens colour



Profilux

Weatherproof steady beacon

Area classification	Weatherproof
Operating temperature	-20°C to +40°C
Ingress protection	IP54
Material	ABS
Entries	Male thread bush M16
Weight	0.36kg
Voltage	24vdc, 230Vac
Light source	Filament 15W
Options	Housing colour, lens colour, mounting



*Model dependent

Hazardous area sounders

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The MEDC and FHF range of sounders are suitable for a wide variety of applications and feature a selection of tone settings and traditional bells.

Sounders are used to warn of potentially dangerous situations or to relay instructions. In addition the alarms may operate as stand-alone units or be incorporated into a hazard warning system. A wide variety of sound output levels and other options are also available. The sounders output in dB is measured to European standards at 1 metre.

Hazardous area sounder

The MEDC DB3B, the latest addition to the sounder range boasts improved functionality and performance; including a higher output than the DB3, with SPL reaching 122dB @ 1m (+/-3dB). This significantly improves sound coverage in high noise environments, and ensures that our product will be effective in almost any application.

The DB3B is ATEX, IECEx, INMETRO, cULus, TR CU, CQST, CCOE, CCCF and SIL 1 certified, and can be purchased as part of a beacon/sounder combination unit (please contact Eaton for details). In addition, it is available as either a flameproof enclosure (Ex d), or increased safety unit (Ex de), as well as protection against Gas or Gas & Dust atmospheres, allowing for greater flexibility to suit most specifications.

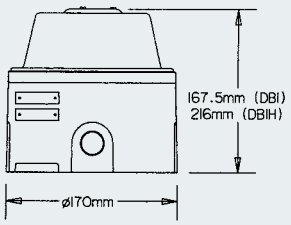
- Maximum output of 122dB @1m
- Certified –55°C to +70°C
- ATEX, IECEx, cULus, TR CU, CQST, CCOE, CCCF, SIL 1 & INMETRO certified
- Improved current consumption (329mA at nominal 24Vdc low inrush)
- Increased room in terminal chamber
- Drivers tested for over 1500 hours at full power
- Ex d/ Ex de units available
- Gas/ Gas & Dust units available
- Increased room in terminal chamber
- Improved control options
- 28 user selectable tones

Hazardous area sounders

DB1P

Ex d Sounder

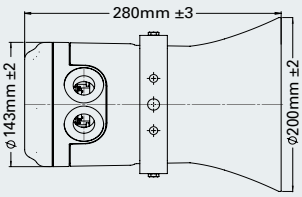
Certification	ATEX, IECEx, cULus, TR CU, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIB T5/T6
NEC classification	Class I, Div. 1, Groups C, D
Approvals	SIL1, Russian fire approval
Certified temperature	-25°C to +70°C
Ingress protection	IP66, NEMA 4X
Material	Stainless steel or alloy
Entries	Up to 3 x M20, M25, ½" NPT or ¾" NPT
Weight	3.5kg - 12.7kg*
Voltage	12-48Vdc, 110-240Vac
Sound output	Max: 110dB, 1m (±3dB)*
Tones	27
Stages	2*
Options	Output level, entries, tag & duty labels, telephone or relay initiate, remote tone select, EOL resistor, colour



DB3B

Ex d(e) Sounder

Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22*, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIC T4/T5/T6 Gb Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db Ex II 2G, Ex de IIC T4/T5/T6 Gb Ex II 2GD, Ex de IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL1, Russian fire approval, CCCF, CSFM
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Body: corrosion free GRP Flare: thermoplastic
Entries	Up to 2 x M20 or ½" NPT
Weight	Ex d: 4.6kg (based on long flare unit) Ex de: 5.4kg (based on long flare unit)
Voltage	12-48Vdc, 110-254Vac
Sound output	Max: 122dB, 1m (±3dB)*
Tones	28
Stages	3 (5 voltage free)
Options	Tag & duty labels, swivel bracket, EOL resistor, Earth continuity, tone activation method, voltage free activation, flare type, custom tones, flare colour



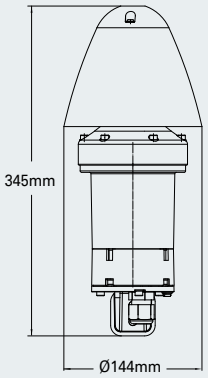
*Model dependent

Hazardous area sounders

dEV 20

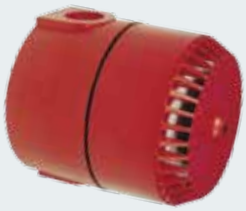
Ex de sounder

Certification	ATEX, IECEx, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2G, Ex de IIB + H_2 T6 Gb Ex II 2D, Ex tb IIIC T85°C Db
Certified temperature	-50°C to +60°C
Ingress protection	IP66
Material	Aluminium
Entries	1 x M20
Weight	2.8kg
Voltage	24Vdc, 85-265Vac
Sound output	Max: 115dB, 1m (±3dB)
Tones	32
Stages	2

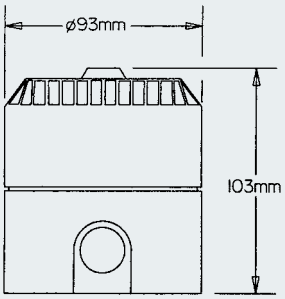


DB5

Ex ia Sounder



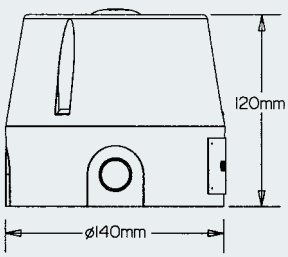
Certification	ATEX, ATEX mining, IECEx, IECEx mining, FM, CSA, CCOE
Area classification	Zone 1, 2
ATEX/IEC classification	Ex II 1G, Ex ia IIC T4 Ga Ex I M1, Ex ia I Ma
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Certified temperature	-20°C to +55°C
Ingress protection	IP66
Material	ABS
Entries	Up to 2 x M20 via knockouts
Weight	0.3kg
Voltage	12-24Vdc
Sound output	Max: 100dB, 1m (±3dB)
Tones	26
Options	Tag label, colour



DB7

Ex ia Sounder

Certification	ATEX, TR CU, CCOE
Area classification	Zone 0, 1, 2, weatherproof
ATEX/IEC classification	Ex II 1G, Eex ia IIB/IIC T4*
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 3 x M20 via knockouts
Weight	1.0kg
Voltage	12-24Vdc*
Sound output	Max: 106dB, 1m (±3dB)*
Tones	27
Stages	2
Options	Tag & duty labels, colour



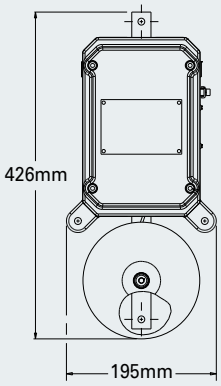
*Model dependent

Hazardous area sounders

DB6

Ex d Bell

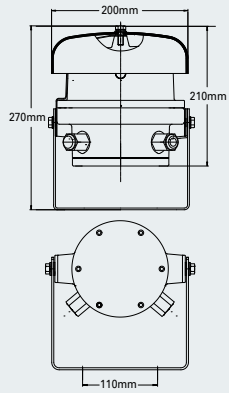
Certification	ATEX, IECEx
Area classification	Zone 1, 2
ATEX/IEC classification	Ex II 2G, Ex d IIB T5 Gb
Certified temperature	-20°C to +55°C
Ingress protection	IP65
Material	Cast iron
Entries	2 x M20 & 1 x blank plug M20
Weight	11.0kg
Voltage	24Vdc, 240Vac
Sound output	Max: 106dB, 1m (±3dB)*
Options	Tag label, colour



dGW21/dRGW21

Ex de Bell

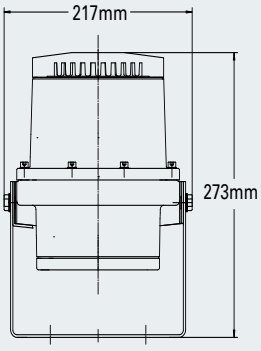
Certification	ATEX, UL, TR CU
Area classification	Zone 1, 2
ATEX/IEC classification	Ex II 2 G, EEx de IIC T6
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Certified temperature	-20°C to +40°C
Ingress protection	IP66, NEMA 4X
Material	Corrosion free GRP
Entries	1 x M20 & 1 x blank plug
Weight	5.5kg
Voltage	12-24Vdc, 110 - 240Vac
Sound output	Max: 105dB, 1m (±3dB)
Options	Telephone relay, body colour



dGH 21 / dRGH 21

Ex de Hooter

Certification	ATEX, UL, TR CU
Area classification	Zone 1, 2
ATEX/IEC classification	Ex II 2 G, Ex de IIC T5/T6*
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Certified temperature	-20°C to +75°C*
Ingress protection	IP66, NEMA 4X
Material	Corrosion free GRP
Entries	2 x M20
Weight	5.5kg
Voltage	12-24Vdc, 110-240Vac
Sound output	Max: 105dB, 1m (±3dB)
Options	Call relay, body colour



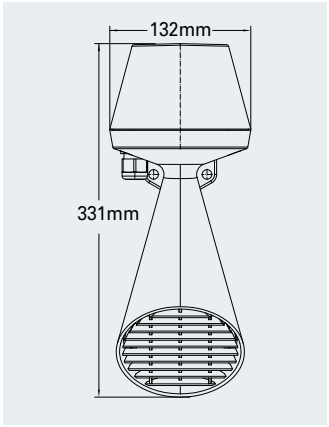
*Model dependent

Hazardous area sounders

mHG 11

Ex em Hooter

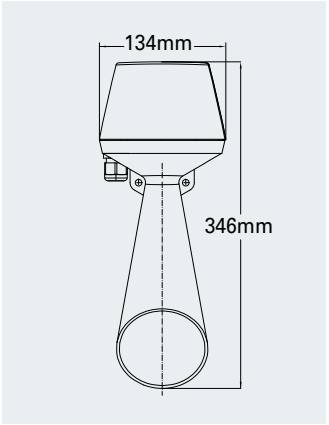
Certification	ATEX, IECEx, INMETRO
Area classification	Zone 1, 2, 21, 22
ATEX/IEC classification	II 2 G, Ex emb II T4/T5* II 2 D, Ex tD A21 IP66 T90°C
Operating temperature	-55°C to +70°C (T4)
Ingress protection	IP66
Material	Aluminium
Entries	1 x M20
Weight	2.0kg
Voltage	24Vdc, 115Vac, 230Vac
Sound output	Max: 108dB, 1m (±3dB)



mHP11

Ex em Hooter

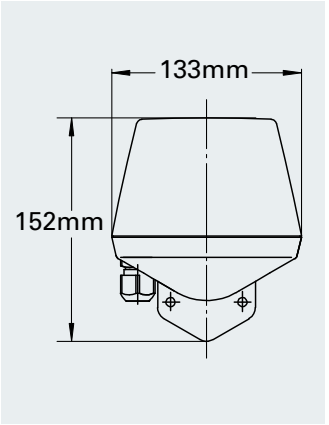
Certification	ATEX, IECEx, INMETRO
Area classification	Zone 1, 2
ATEX/IEC classification	II 2 G, Ex emb II T4/T5*
Operating temperature	-20°C to +70°C*
Ingress protection	IP54
Material	Polycarbonate
Entries	1 x M20
Weight	1.0kg
Voltage	24Vdc, 115Vac, 230Vac
Sound output	Max: 108dB, 1m (±3dB)



mHP12

Ex em Hooter

Certification	ATEX, IECEx
Area classification	Zone 1, 2
ATEX/IEC classification	II 2 G, Ex emb II T4/T5*
Operating temperature	-20°C to +70°C*
Ingress protection	IP54
Material	Polycarbonate
Entries	1 x M20
Weight	1.0kg
Voltage	24Vdc, 230Vac
Sound output	Max: 108dB, 1m (±3dB)



*Model dependent

Industrial sounders

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EV 21 voice

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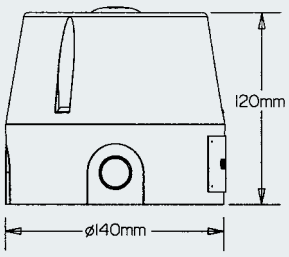
Eaton offer a range of industrial sounders specifically designed for harsh environmental conditions. Designed to function in extreme temperatures, and with ingress protection ratings of up to IP66, these sounders have been engineered to consistently work in the harshest of environmental conditions.

Industrial sounders

DB12

Weatherproof sounder

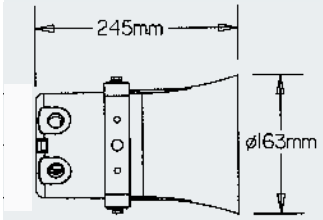
Area classification	Weatherproof
Operating temperature	-55°C to +70°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 3 x M20 via knockouts
Weight	1.2kg
Voltage	12-24Vdc, 115-230Vac
Sound output	Max: 110dB, 1m (±3dB)
Tones	27
Stages	2*
Options	Tag & duty labels, body colour



DB15

Weatherproof sounder

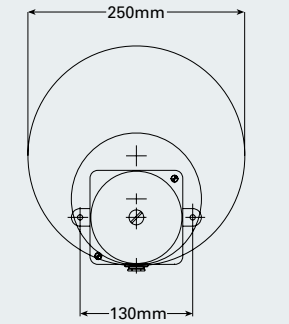
Area classification	Weatherproof
Operating temperature	-55°C to +70°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	2 x M20 & 1 x blank plug M20
Weight	2.6kg
Voltage	12-48Vdc, 110-254Vac
Sound output	Max: 117dB, 1m (±3dB)
Tones	27
Stages	Up to 2
Options	Tag & duty labels, Earth continuity, EOL resistors, blank plug, colour



AW 1-6 signalling bell

Weatherproof bell

Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP55
Material	Body: aluminium. Dome: steel
Entries	1 x M20
Weight	1.45kg - 2.95kg*
Voltage	6-220Vdc, 12-240Vac*
Sound output	Max: 110dB, 1m (±3dB)*
Options	Dome size, strike rate



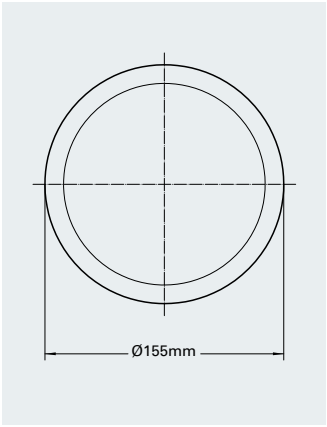
*Model dependent

Industrial sounders

UWE signalling bell

Bell

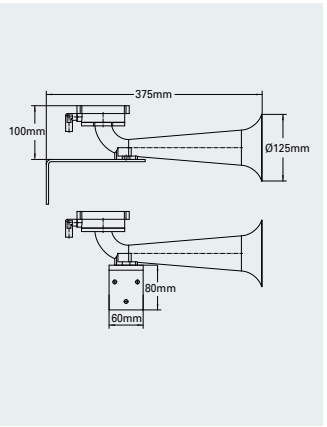
Area classification	Industrial
Operating temperature	-10°C to +55°C
Ingress protection	IP40
Material	Body: plastic. Dome: steel
Entries	1 x M20
Weight	1.2kg
Voltage	18-30Vdc, 200-250Vac*
Sound output	Max: 96dB, 1m (±3dB)



PH1

Industrial pneumatic horn

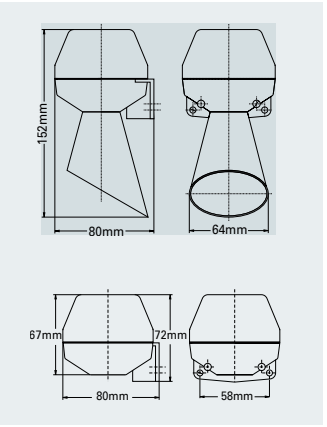
Area classification	Industrial
Operating temperature	-25°C to +40°C
Material	Impact-resistant plastic
Weight	0.34kg
Voltage	24Vdc, 230Vac*
Sound output	Max: 135dB, 1m (±3dB)
Tones	400Hz operated with compressed air



HP & HPO

Weatherproof hooter

Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP43
Material	Impact resistant thermoplastic (ABS)
Entries	Cable diameter 5-8mm
Weight	0.185kg
Voltage	6-220Vdc, 6-230Vac*
Sound output	Max: 92dB, 1m (±3dB)
Options	Trumpet



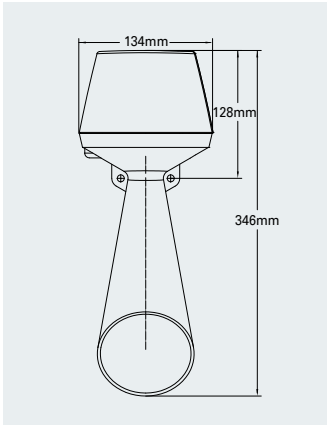
*Model dependent

Industrial sounders

HPW 11 & HPW 12

Weatherproof hooter

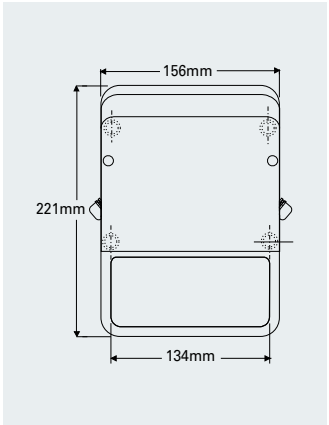
Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP55
Material	Impact resistant thermoplastic (ABS)
Entries	1 x M20 self sealing grommet
Weight	1.1kg
Voltage	6-230Vdc, 6-240Vac*
Sound output	Max: 108dB, 1m (±3dB)
Options	Trumpet



HGK

Weatherproof hooter

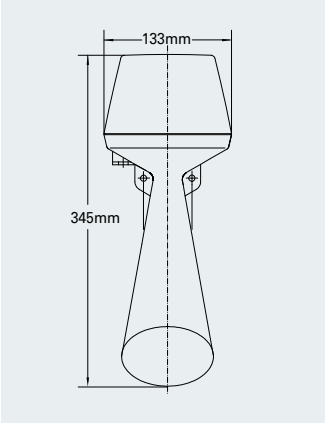
Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP65
Material	Aluminium with ABS cover
Entries	1 x M20
Weight	1.75kg
Voltage	24Vdc, 230Vac*
Sound output	Max: 108dB, 1m (±3dB)



HGW11

Weatherproof hooter

Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP56
Material	Aluminium
Entries	1 x M20
Weight	2.7kg
Voltage	6-220Vdc, 6-240Vac*
Sound output	Max: 108dB, 1m (±3dB)



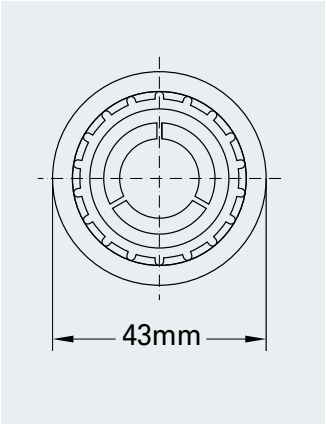
*Model dependent

Industrial sounders

EKS/EKSP

Weatherproof sounder

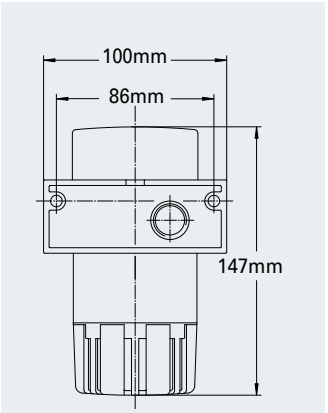
Area classification	Weatherproof
Operating temperature	-20°C to +70°C
Ingress protection	IP30
Material	Thermoplastic
Weight	0.05kg
Voltage	24-48Vdc, 24-230Vac*
Sound output	Max: 90dB, 1m (±3dB)
Options	Tone



KS

Weatherproof motor siren

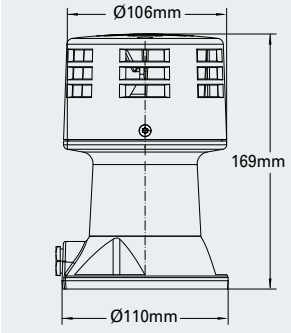
Area classification	Weatherproof
Operating temperature	-20°C to +50°C
Ingress protection	IP44
Material	Thermoplastic
Entries	1 x M16
Weight	0.45kg
Voltage	24Vdc, 230Vac*
Sound output	Max: 100dB, 1m (±3dB)



F0 FI FII FIII

Weatherproof motor siren

Area classification	Weatherproof
Operating temperature	0°C (-40°C with protection cover) to +65°C
Ingress protection	IP22 (IP44 with protection cover)
Material	Aluminium
Entries	F0,FI & FII: M16. FIIa & FIIIb: M20
Weight	1.6kg - 22.0kg*
Voltage	24-230Vdc, 24-400Vac*
Sound output	Max: 123dB, 1m (±3dB)*
Options	Protection cover



F0 shown

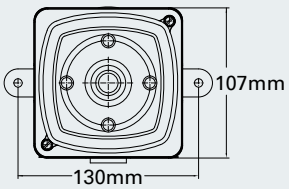
*Model dependent

Industrial sounders

EV 21/EV 24

Weatherproof sounder

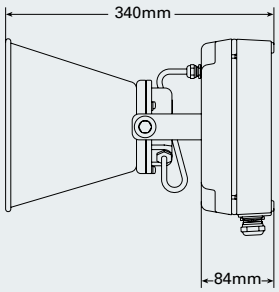
Area classification	Weatherproof
Operating temperature	EV 21: -25°C to +60°C EV 24: -50°C to +60°C
Ingress protection	IP54
Material	Aluminium
Entries	1 x M20
Weight	1.7kg
Voltage	12-24Vdc, 12-230Vac*
Sound output	Max: 105dB, 1m (±3dB)
Tones	21
Stages	3



EV 11

Weatherproof sounder

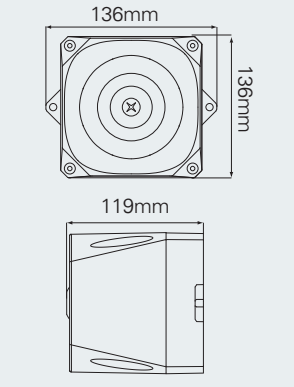
Area classification	Weatherproof
Operating temperature	-25°C to +50°C
Ingress protection	IP55
Material	Aluminium
Entries	2 x M20 & 2 x blank plugs M20
Weight	4.0kg
Voltage	24Vdc, 24-230Vac*
Sound output	Max: 118dB, 1m (±3dB)
Tones	7 tone, chime and voice
Options	Desktop microphone, pre-amplifier



AX03

Weatherproof sounder

Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Material	Plastic
Entries	Up to 2 x M20 via knockouts
Weight	AC: 0.4kg. DC: 0.3kg
Voltage	9-60Vdc, 115-230Vac*
Sound output	Max: 105dB, 1m (±3dB)
Tones	32
Stages	2



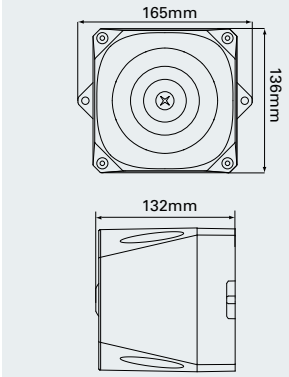
*Model dependent

Industrial sounders

AX05

Weatherproof sounder

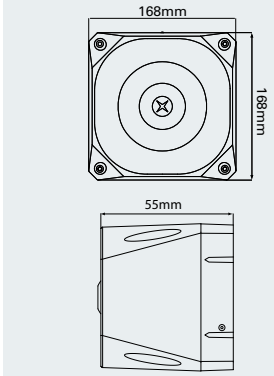
Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Material	Plastic
Entries	Up to 2 x M20 via knockouts
Weight	AC 0.7kg, DC 0.5kg
Voltage	9-60Vdc, 115-230Vac*
Sound output	Max: 112dB, 1m (±3dB)
Tones	32
Stages	2



AX08

Weatherproof sounder

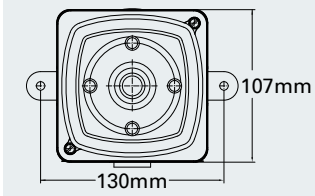
Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Material	Plastic
Entries	Up to 2 x M20 via knockouts
Weight	AC 2.5kg, DC 1.6kg
Voltage	24Vdc, 115-230Vac*
Sound output	Max: 120dB, 1m (±3dB)
Tones	42
Stages	3



EV 21 voice

Weatherproof sounder

Area classification	Weatherproof
Operating temperature	-25°C to +60°C
Ingress protection	IP54
Material	Aluminium
Entries	1 x M20
Weight	1.4kg
Voltage	24Vdc, 85-265Vac
Sound output	Max: 105dB, 1m (±3dB)
Capacity	4GB storage
Options	2nd entry



*Model dependent

Introducing the EV 21 Voice sounder

The EV 21 V Voice Sounder is a compact electronic signalling device designed for both industrial and commercial applications for either internal or external use.

Applications include production line and process control announcements or warnings, timed voice announcements and many others.

The EV 21 V can provide up to eight different speech announcements that can be proceeded by an alert tone to attract the attention of the message recipient.

An internal 4 GB micro SD memory card provides the non-volatile memory for the storage of both alert tones and messages accordingly. Message and alert tones are stored as WAV files and can be assigned different volume levels.

The programming and configuration of the EV21 V is achieved using an easy to use PC based application for ease of programming and configuration even when installed using a via laptop via a USB interface.

- Capacity: Up to eight message announcements proceeded by alert tones
- Memory: 4GB Micro SD Memory Card
- Maximum Sound Pressure Level: 105dBA
- Power supply: 85-265 Vac or 24 Vdc
- Operating temperature: -25°C to +60°C
- Ingress protection: IP54

Hazardous area loudspeakers

DB4B

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Eaton's range of explosion protected, heavy duty, industrial and commercial speakers are designed to meet the requirements for public address, voice alarm and evacuation procedures. This range of loudspeakers, specifically designed for potentially explosive gas and dust atmospheres, is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The units can be operated as part of 100 or 70 volt line systems, and include a wide range of sound output levels, which are all measured in dB at 1 watt / 1 metre.

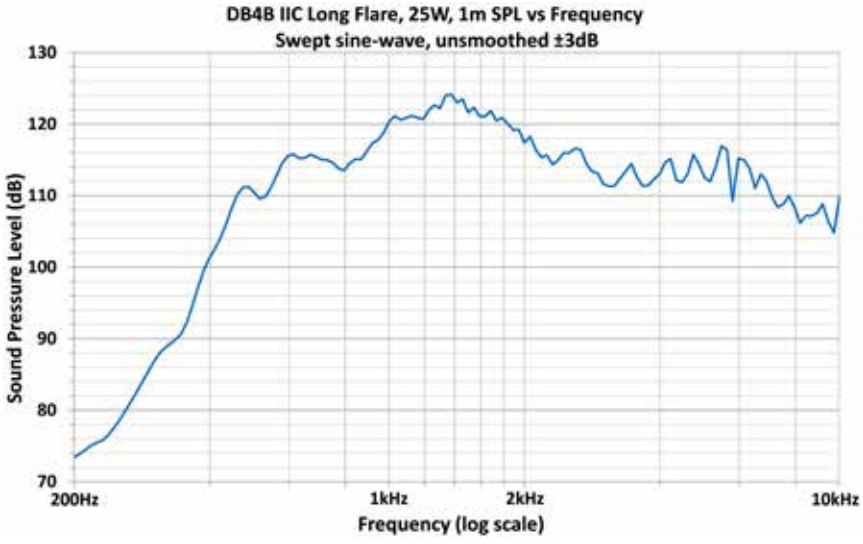
Eaton ensures the production of rugged, hard wearing products by using corrosion free materials such as GRP (glass reinforced polyester) and stainless steel.

MEDC DB4B – 124dB loudspeaker

The DB4B, a new high power, explosion proof loudspeaker launched by Eaton, offers a specific SPL figure of up to 124dB (for sensitivity of 25W @ 1m). The 8W and 15W units generate sufficient SPL (120dB and 122dB @1M respectively) to satisfy most specifications, allowing end users to install units with lower power consumption, therefore reducing the amount of application and support equipment required.

With a range of certifications, including ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE, SIL 2 and DNV the DB4B is manufactured from a GRP Ex enclosure and rugged thermoplastic flare. The units are also certified for from -55°C up to +70°C*, ensuring that our products are suitable for safe use in the harshest working environments.

The DB4B has an extended frequency response, ensuring that critical voice messages and general alarm tones are highly intelligible. This allows the human voice to be heard and clearly understood, as demonstrated on the below frequency response chart. In addition, the new unit provides a clearer sound for sibilant consonants, allowing for much crisper and intelligible speech.



- ATEX/IECEx/cULus/TR CU/CQST/ INMETRO/CCOE/SIL 2 and DNV certified
- Certified –55°C to +70°C*
- Gas/Gas & Dust units available
- Ex d/Ex de units available
- Extended frequency response

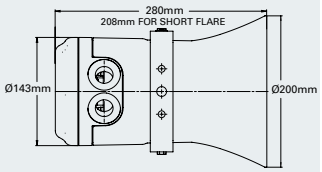
*Model dependent

Hazardous area loudspeakers

DB4B

Ex d(e) Loudspeaker

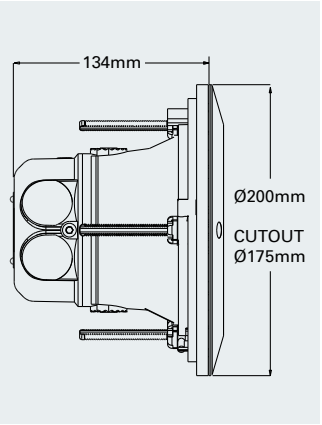
Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22*, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIC T4/T5/T6 Gb Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db Ex II 2G, Ex de IIC T4/T5/T6 Gb Ex II 2GD, Ex de IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL2, Russian fire approval, DNV, CSFM
Operating temperature	-55°C to +70°C*
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Body: corrosion free GRP. Flare: thermoplastic
Entries	Up to 2 x M20 or ½" NPT
Weight	Ex d: 5.0kg (based on long flare unit) Ex de: 5.8kg (based on long flare unit)
Sound output	Sensitivity (1W, 1m): 110dB* (±3dB) Max at full power (25W, 1m): 124dB* (±3dB)
Transformer	100V, 70V, 25V
Wattage & transformer tappings	25W: 25.0, 12.5, 6.0, 4.0, 2.0, 1.0* 15W: 15.0, 7.5, 5.0, 4.0, 2.0, 0.8* 8W: 8.0, 4.0, 2.0, 1.5, 0.7, 0.4*
Low impedance	8Ω*
Options	Tag & duty labels, swivel bracket, DC blocking capacitor, flare length, flare colour



DB20C

Ex de Loudspeaker

Certification	ATEX, IECEx, TR CU
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD Ex de IIC T4/T5, Ex tD A21 T100°C/T115°C/T130°C
Approvals	DNV
Operating temperature	-50°C to +70°C
Ingress protection	IP66 & IP67
Material	Body: corrosion free GRP Flare: U.V. stable ABS
Entries	2 x M20 & 1 x blank plug M20
Weight	1.5kg
Output	Sensitivity (1W, 1m): 100dB (±3dB) Max at full power (4W, 1m): 106dB (±3dB)
Transformer	100V
Wattage & transformer tappings	4W: 4.0, 2.0, 1.0, 0.75, 0.38, 0.2*
Low impedance	8Ω*
Options	Tag & duty labels, Earth continuity, loop in/out terminals



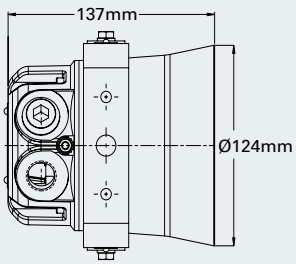
*Model dependent

Hazardous area loudspeakers

DB20

Ex de Loudspeaker

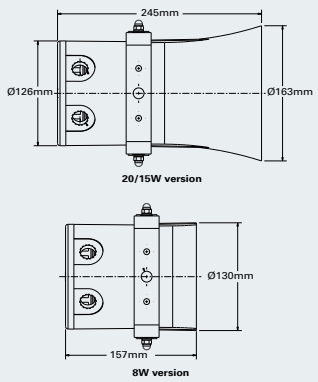
Certification	ATEX, IECEx, TR CU, CCOE
Area classification	Zone 1, 2, 21, 22*, weatherproof
ATEX/IEC classification	Ex II 2G, Ex de IIB T3/T4, Ex II 2GD Ex de IIC T4/T5, Ex tD A21 T130°C/T115°C/T100°C
Approvals	Russian fire approval
Operating temperature	-50°C to +70°C
Ingress protection	IP66 & IP67
Material	Body: corrosion free GRP. Flare: U.V. stable ABS
Entries	2 x M20 & 1 x blank plug M20
Weight	1.5kg
Sound output	Sensitivity (1W, 1m): 100dB* (±3dB) Max at full power (8W, 1m): 112dB* (±3dB)
Transformer	100V
Wattage & transformer tappings	8W: 8.0, 4.0, 2.0, 1.5, 0.7, 0.4* 4W: 4.0, 2.0, 1.0, 0.75, 0.38, 0.2*
Low impedance	8Ω*
Options	Tag & duty labels, Earth continuity, loop in/out terminals, colour



DB10

Ex de Loudspeaker

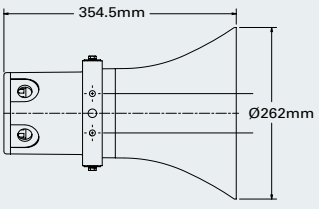
Certification	ATEX, IECEx, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22*, weatherproof
ATEX/IEC classification	Ex II 2G, Ex de IIB + H_2 T4/T5/T6 Gb Ex II 2G, Ex de IIC T4/T5/T6 Gb
Approvals	Russian fire approval, DNV
Operating temperature	-50°C to +65°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 2 x M20
Weight	Short flare: 3.1kg. Long flare: 3.5kg
Sound output	Sensitivity (1W, 1m): 105dB* (±3dB) Max at full power (15W, 1m): 115dB* (±3dB)
Transformer	100V
Wattage & transformer tappings	8W: 8.0, 4.0, 2.0, 1.0, 0.5, 0.25* 15W: 15.0, 7.5, 3.75, 2.5, 1.25, 0.75*
Low impendance	8Ω*
Options	Tag & duty labels, Earth continuity, colour



DB16

Ex de Loudspeaker

Certification	ATEX, IECEx, cULus, TR CU, CCOE
Area classification	Zone 1, 2, 21, 22*, weatherproof
ATEX/IEC classification	Ex II 2G, Ex de IIB T3 Gb Ex de IIC T3 Gb, Ex tb IIIC T110°C Db
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D*
Approvals	Russian fire approval, DNV
Certified temperature	-50°C to +65°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 2 x M20, M25, ½" NPT or ¾" NPT*
Weight	5.5kg
Output	Sensitivity (1W, 1m): 110dB* (±3dB) Max at full power (30W, 1m): 122dB* (±3dB)
Transformer	100V
Wattage & transformer tappings	25W: 25.0 ,12.5, 6.0, 4.0, 2.0, 1.0* 30W: 30.0, 25.0, 12.0, 6.0, 4.0, 2.0*
Low impedance	8Ω*
Options	Tag & duty labels, Earth continuity, Earth stud, colour



*Model dependent

Industrial loudspeakers

IMCOS 5242

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DB14

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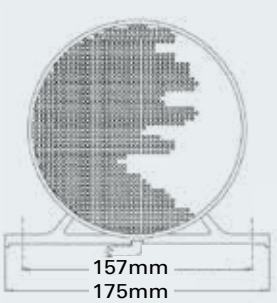
Eaton's range of safe area loudspeakers are manufactured from materials including steel, aluminium and plastic. They also include a variety of mounting options, suitable for multiple applications.

Industrial loudspeakers

IMCOS 5242

Industrial loudspeaker

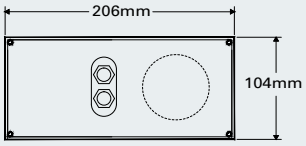
Area classification	Industrial
Approvals	ABS, BV, DNV, GL, LR, RINA, Chinese classification societies
Operating temperature	-25°C to +90°C
Ingress protection	IP22
Material	Aluminium
Entries	Prewired cable
Weight	1.5kg
Sound output	Sensitivity (1W, 1m): 97dB (±3dB)
Transformer	100V
Wattage & transformer tappings	6W: 6.0, 3.0, 2.0, 1.5, 0.8, 0.5



IMCOS 5253

Weatherproof loudspeaker

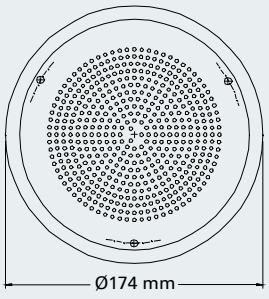
Area classification	Weatherproof
Approvals	ABS, BV, DNV, GL, LR, RINA, Chinese classification societies
Operating temperature	-25°C to +90°C
Ingress protection	IP56
Material	Polycarbonate
Entries	2 x PG13
Weight	0.8kg*
Sound output	Sensitivity (1W, 1m): 88dB (±3dB)
Transformer	100V
Wattage & transformer tappings	10W: 10.0, 5.0, 3.5, 2.5, 1.5, 0.8
Low impedance	8Ω



IMCOS 6801

Industrial loudspeaker

Area classification	Industrial
Approvals	ABS, BV, DNV, GL, LR, RINA, Chinese classification societies
Operating temperature	-25°C to +70°C
Ingress protection	IP22
Material	Alumnium/steel*
Entries	2 x M20
Weight	1.0kg
Sound output	Sensitivity (1W, 1m): 92dB (±3dB)
Transformer	100V
Wattage & transformer tappings	6W: 6.0, 3.0, 2.0, 1.5, 0.8, 0.5
Low impedance	8Ω



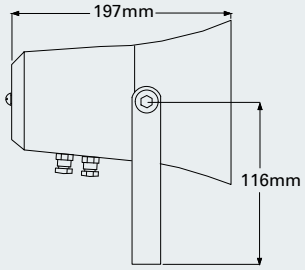
*Model dependent

Industrial loudspeakers

IMCOS 6811

Weatherproof loudspeaker

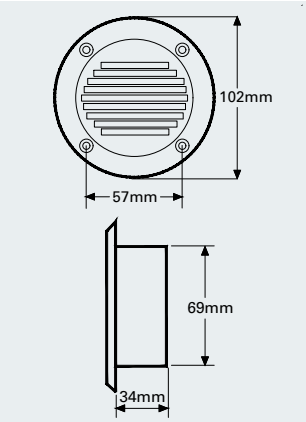
Area classification	Weatherproof
Approvals	ABS, BV, DNV, GL, LR, RINA, Chinese classification societies
Operating temperature	-50°C to +90°C
Ingress protection	IP66
Material	Plastic
Entries	2 x PG16
Weight	1.3kg
Sound output	Max at full power (30W, 1m): 119dB (±3dB)
Transformer	100V
Wattage & transformer tappings	30W: 30.0, 15.0, 10.0, 5.0, 2.5, 1.5
Low impedance	8Ω



IMCOS 6899

Weatherproof loudspeaker

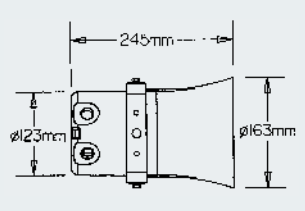
Area classification	Weatherproof
Approvals	ABS, BV, DNV, GL, LR, RINA, Chinese classification societies
Operating temperature	-25°C to +90°C
Ingress protection	IP55
Material	ABS
Entries	Prewired cable
Weight	0.35kg
Sound output	Max at full power (1.5W, 1m): 92dB (±3dB)
Transformer	100V
Wattage & transformer tappings	1.5W



DB14

Weatherproof loudspeaker

Area classification	Weatherproof
Operating temperature	-55°C to +70°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	2 x M20
Weight	2.6kg
Output	Sensitivity (1W, 1m): 107dB (±3dB) Max at full power (15W, 1m): 117dB (±3dB)
Transformer	100V
Wattage & transformer tappings	15W: 15.0, 7.5, 5.0, 4.0, 2.0, 0.8*
Low impedance	8Ω*
Options	Tag & duty labels, colour



*Model dependent

Hazardous Area Communications

MEDC Oxalis IMCOS™ HERNIS™ Sonix™ Yuhua FHF

Hazardous Area Communications is a comprehensive product offering for potentially explosive atmospheres, bringing together a range of specialist systems and solutions for the fire & gas, telecoms and CCTV markets.

Our solution names of MEDC, Oxalis, IMCOS™, HERNIS™, Sonix™, Yuhua and FHF offer a specialised team of highly qualified staff to ensure all aspects of engineering, design and configuration with your project are fulfilled - from initial stages of concept through to commissioning.

With experience dating back over 100 years, we work together with one idea in mind; to make working environments a safer, more reliable place to operate.

Hazardous area status lights and combination units

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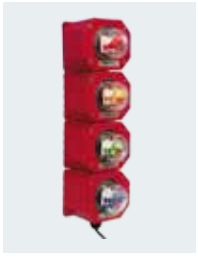

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Eaton's range of audible and visual combination units are designed for the purpose of alerting audio and visual awareness to an emergency situation. The combination units are built for use in harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries. As well as the products found in this section, combination units can be built to order from various sounders and beacons found in this catalogue. Please contact Eaton for details.

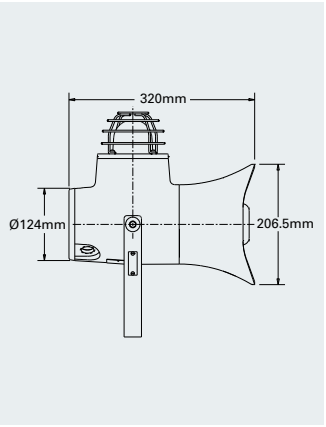
Eaton also offer a range of Status Lights designed for potentially explosive atmospheres and harsh environmental conditions. Status lights are commonly found in oil, gas, petrochemical and other hazardous areas where multi-coloured lamp combinations are used to identify the safety status of specific zones. Customers can choose from a range of materials, including stainless steel and GRP and a selection of light sources including LED.

Hazardous area status lights and combination units

CU1

Ex de sounder / 5 & 10 joule beacon combination units

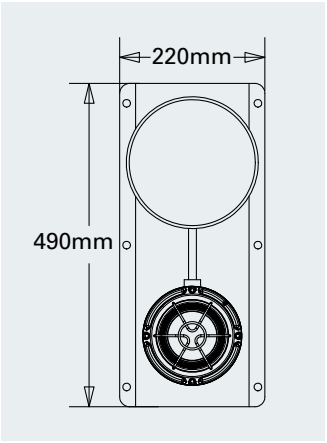
Certification	ATEX, IECEx, TR CU, INMETRO, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex de IIB T4 Gb
Approvals	Russian fire approval, ABS
Certified temperature	-50°C to +70°C*
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 2 x M20, M25, ½" NPT or ¾" NPT
Weight	6.5kg
Voltage	24-48Vdc, 110-254Vac
Sound output	Max: 116dB*, 1m (±3dB)
Tones	27
Stages	2*
Light source	Xenon
Options	Tube energy, flash rate, lens colour, labels, telephone initiate, relay initiate, independent operation, Earth continuity, special tones, EOL resistor, body colour



DB3B/XB15

Ex d sounder / 5, 10 & 15 joule beacon combination units

Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db*
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Materials	Body: corrosion free GRP. Flare: thermoplastic
Entries	Up to 2 x M20, M25, ½" NPT or ¾" NPT customer entries. Note: Customer entries are in the beacon
Voltage	24-48Vdc, 110-254Vac
Sound output	Max: 122dB*, 1m (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Tube energy, body, lens & flare colour, lens guard, flash rate, earth continuity, relay & tel. initiate, flare type, labels



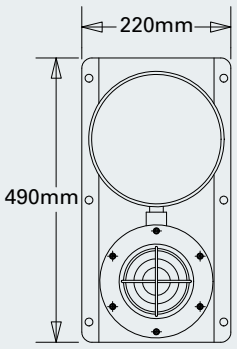
*Model dependent

Hazardous area status lights and combination units

DB3B/XB11

Ex d sounder / 5 joule beacon combination unit

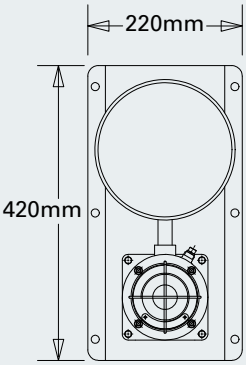
Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area certification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIB T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db*
UL/NEC classification	Class I, Div. 2, Groups C, D
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Materials	Body: corrosion free GRP. Flare: thermoplastic
Entries	1 x M20 or ½" NPT customer entry Note: Customer entries are in the beacon
Voltage	24-48Vdc, 110-240Vac
Sound output	Max: 122dB*, 1m (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Body, lens & flare colour, lens guard, flash rate, earth continuity, tel. initiate, flare type, labels



DB3B/SM87HXB

Ex d sounder / 5 joule beacon combination unit

Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db*
UL/NEC classification	Class I, Div. 1, Groups C, D
Approvals	SIL1, Russian fire approval
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Materials	Beacon body: stainless steel or alloy Sounder body: corrosion free GRP Flare: thermoplastic
Entries	Up to 3 x M20 or ½" NPT customer entries Note: Customer entries are in the beacon
Voltage	24-48Vdc, 110-254Vac
Sound output	Max: 122dB*, 1m (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Body, lens & flare colour, lens guard, flash rate, earth continuity, tel. initiate, flare type, labels



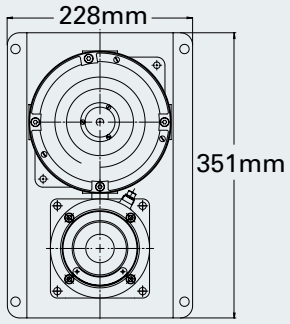
*Model dependent

Hazardous area status lights and combination units

DB1P/SM87HXB

Ex d sounder / 5 joule beacon combination unit

Certification	ATEX, IECEx, cULus, TR CU, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex d IIB T5/T6
UL/NEC classification	Class I, Div. 1, Groups C, D
Approvals	SIL1
Certified temperature	-25°C to +70°C
Ingress protection	IP66, NEMA 4X
Materials	Stainless steel or alloy
Entries	Up to 3 x M20 or ½" NPT customer entries Note: Customer entries are in the beacon
Voltage	24-48Vdc, 110-240Vac
Sound output	Max: 110dB*, 1m (±3dB)
Tones	27
Stages	2
Light source	Xenon
Options	Body & lens colour, lens guard, flash rate, earth continuity, tel initiate, number of sounder stages, labels

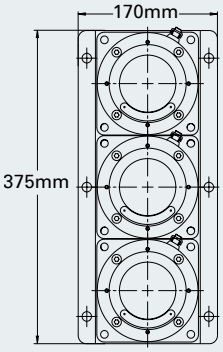


SM87SL

5 joule Ex d xenon and LED status light

3 way shown

Certification	ATEX, IECEx, cULus*, CSA*, TR CU, CQST*, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Xenon: Ex II 2GD, Ex d IIC T5/T6 Gb Ex tb IIIC T95°C/T80°C/T65°C Db Fluorescent: Ex II 2GD, Ex d IIC T6 Gb Ex tb IIIC T85°C Db Filament: Ex II 2GD, Ex d IIC T3/T4/T5/T6 Gb Ex tb IIIC T155°C/T130°C/100°C/T85°C Db LED: Ex II 2GD, Ex d IIC T6 Gb Ex tb IIIC T70°C Db
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Approvals	Russian fire approval
Certified temperature	-55°C to +70°C*
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 3 x M20, M25, ½" NPT or ¾" NPT
Weight	See datasheet
Voltage	24-48Vdc, 110-254Vac*
Light source	Xenon, filament, fluorescent, LED
Number of ways	Up to 5
Options	Lens colour, LED colour, lens guard, tag/duty label, telephone initiate, relay initiate, EOL resistor, body colour



3 way shown

*Model dependent

Hazardous area status lights and combination units

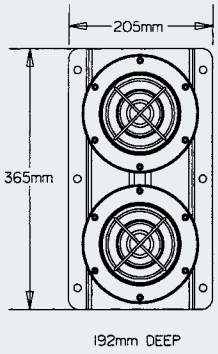
XB11SL

5 joule Ex d status light

2 way shown

Certification	ATEX, IECEx, cULus, TR CU, CQST, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIB T4/T5/T6 Gb Ex tb IIIC T110°C/T85°C/T70°C Db
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval, CSFM
Certified temperature	-55°C to +70°C
Operating temperature	-55°C to +70°C†
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	1 x M20 or ½" NPT
Weight	See datasheet*
Voltage	24-48Vdc, 110-240Vac
Light source	Xenon, filament, fluorescent
Number of ways	Up to 5
Options	Flash rate, lamp wattage, lens colour, lens guard, earth continuity, tag/duty label, telephone initiate, body colour

† Fluorescent operating temperature = -20°C



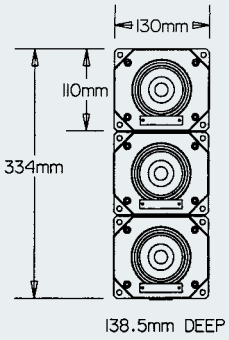
2 way shown

SL5

Ex e xenon, filament and LED status light

4 way shown

Certification	ATEX, IECEx, CQST
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Xenon: Ex II 2G, Ex e mb IIC T4 Gb Filament: Ex II 2G, Ex e IIC T3 Gb LED: Ex II 2G, Ex e mb IIC T4 Gb
Certified temperature	Xenon: -40°C to +55°C Filament: -40°C to +55°C LED: -40°C to +45°C
Ingress protection	IP66 & IP67
Material	Corrosion free GRP
Entries	Up to 2 x M16, M20 or 1 x M25, M32
Weight	1.2kg per way
Voltage	12-48Vdc*
Light source	Xenon, filament, LED
Number of ways	Up to 5
Options	Light source, tag & duty labels, body colour



3 way shown

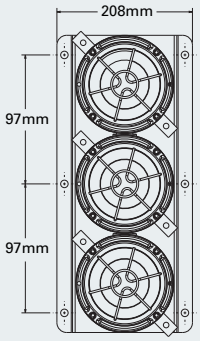
*Model dependent

Hazardous area status lights and combination units

SL15

5, 10 & 15 joule Ex d xenon and LED status light

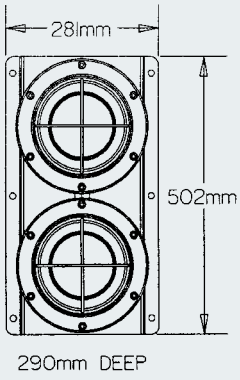
Certification	ATEX, IECEx, cULus
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Xenon: Ex II 2GD, Ex db IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db Filament: Ex II 2GD, Ex db IIC T3/T4 Gb Ex tb IIIC T200°C/T135°C Db LED: Ex II 2GD, Ex db IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db
UL/NEC classification	Class II, Div. 2, Groups F, G
Certified temperature	-55°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 2 x M20, M25, ½" NPT or ¾" NPT
Weight	See datasheet
Voltage	24-48Vdc, 110-254Vac*
Light source	Xenon, filament, LED
Number of ways	Up to 4
Options	Flash rate (xenon & LED), light source, tube energy (xenon), lens guard, tag & duty label, body colour



XB12SL

21 joule xenon and steady Ex d status light

Certification	ATEX, IECEx, cULus, TR CU, INMETRO
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Xenon: Ex II 2G, Ex d IIB T4/T5/T6 Gb Filament: Ex II 2G, Ex d IIB T3/T4/T5 Gb Fluorescent: Ex II 2G, Ex d IIB T4/T5/T6 Gb Rotating: Ex II 2G, Ex d IIB T3/T4 Gb
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	Russian fire approval, CSFM
Certified temperature	Xenon: -55°C to +70°C Filament: -55°C to +55°C Fluorescent: -20°C to +70°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	1 x M20 or ½" NPT
Weight	See datasheet
Voltage	24Vdc, 110-240Vac
Light source	Xenon, filament, fluorescent, rotating tungsten halogen
Number of ways	Up to 5
Options	Flash rate, lamp wattage, lens colour, lens guard, earth continuity, tag/duty label, telephone initiate, body colour



*Model dependent

Industrial status lights and combination units

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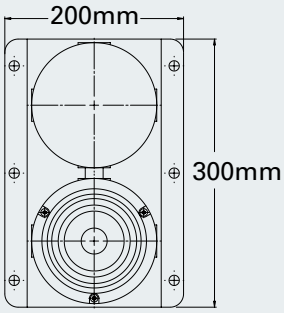
Industrial status lights and combination units

DB12/XB13

Weatherproof sounder / 10 joule beacon combination unit

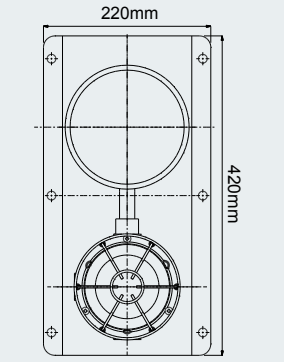
Area classification	Weatherproof
Operating temperature	-40°C to +70°C
Ingress protection	IP66 & IP67
Materials	Body: corrosion free GRP. Lens: polycarbonate
Entries	Up to 2 x M20 customer entries Note: Customer entries are in the beacon
Voltage	12-24Vdc, 115-230Vac
Sound output	Max: 110dB, 1m (±3dB)
Tones	27
Stages	2*
Light source	Xenon
Options	Body & lens colour, lens guard, telephone & relay initiate, single & dual flash mode, tag & duty labels



DB15/XB13

Weatherproof sounder / 10 joule beacon combination unit

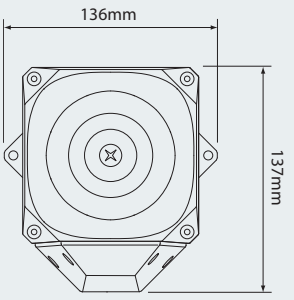
Area classification	Weatherproof
Operating temperature	-40°C to +70°C
Ingress protection	IP66 & IP67
Materials	Body: corrosion free GRP. Lens: polycarbonate
Entries	Up to 2 x M20 customer entries Note: Customer entries are in the beacon
Voltage	12-48Vdc, 115-230Vac
Sound output	Max: 117dB, 1m (±3dB)
Tones	27
Stages	2*
Light source	Xenon
Options	Body & lens colour, lens guard, telephone & relay initiate, single & dual flash mode, tag & duty labels



AXL04

Weatherproof sounder / 2 joule beacon combination unit

Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Materials	Impact resistant ABS
Weight	0.5kg
Voltage	9-60Vdc, 115-230Vac
Sound output	Max: 105dB, 1m (±3dB)
Tones	32
Stages	2
Light source	Xenon
Options	Lens colour



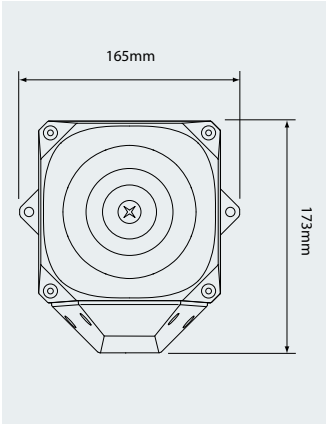
*Model dependent

Industrial status lights and combination units

AXL05

Weatherproof sounder / 2.5 joule beacon combination unit

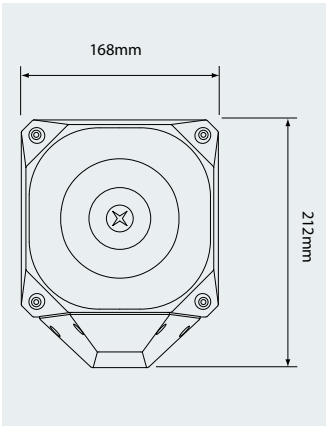
Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Materials	Impact resistant ABS
Weight	0.8kg
Voltage	9-60Vdc, 115-230Vac
Sound output	Max: 112dB, 1m (±3dB)
Tones	32
Stages	2
Light source	Xenon
Options	Lens colour



AXL08

Weatherproof sounder / 2 & 3.6 joule beacon combination units

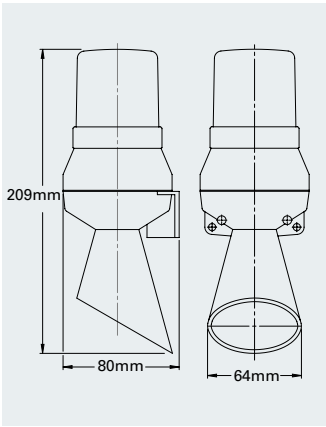
Area classification	Weatherproof
Operating temperature	-25°C to +70°C
Ingress protection	IP66
Materials	Impact resistant ABS
Weight	1.8kg - 2.8kg*
Voltage	18-30Vdc, 230Vac
Sound output	Max: 120dB, 1m (±3dB)
Tones	42
Stages	3
Light source	Xenon
Options	Lens colour



HPL/HPLB

Weatherproof mini hooter with warning light

Area classification	Weatherproof
Operating temperature	-20°C to +50°C
Ingress protection	IP43
Material	Impact resistant ABS
Weight	0.185Kg
Voltage	12-24Vdc, 230Vac
Sound output	Max: 92dB, 1m (±3dB)
Light source	HPL: 7W Filament. HPLB: 1 joule xenon
Options	Light source, lens colour



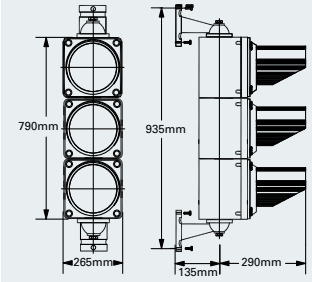
*Model dependent

Industrial status lights and combination units

SAM

Weatherproof traffic light

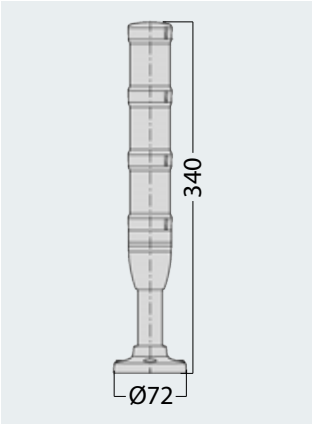
Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP54
Material	UV Resistant plastic
Entries	Via the bracket
Weight	2.0kg - 4.7kg*
Voltage	24Vdc, 230Vac
Light source	Filament, LED
Number of ways	Up to 3
Options	Light source, Lens colours, number of ways



SL 4

Weatherproof stack light

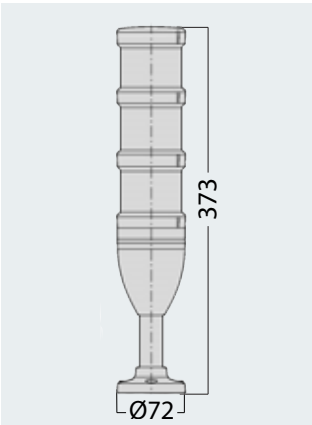
Area classification	Weatherproof
Operating temperature	-30°C to +60°C
Ingress protection	IP66
Material	Polycarbonate
Entries	Various depending on base
Weight	Various depending on configuration
Voltage	18-250*Vdc, 110-250*Vac
Light source	LED
Number of ways	Up to 5
Options	Lens colour, flashing or continuous, mounting base, light source, sounder, SmartWire-DT



SL 7

Weatherproof stack light

Area classification	Weatherproof
Operating temperature	-30°C to +60°C
Ingress protection	IP66
Material	Polycarbonate
Entries	Various depending on base
Weight	Various depending on configuration
Voltage	18-250*Vdc, 110-250*Vac
Light source	LED
Number of ways	Up to 5
Options	Lens colour, flashing or continuous, mounting base, light source, sounder, SmartWire-DT



*Model dependent

Explosion proof telephones and accessories

ExResistTel

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ExResistTel MB

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ExResistTel IP2

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FernTel 3 Zone 2

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FernTel IP Z2

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Ex-Howl-Call telephone

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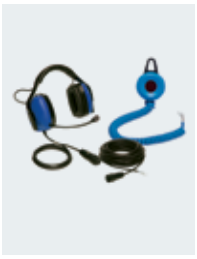
ResistTel accessories



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TWIN-EExII

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Secondary telephone bell

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Telephone call relay mTAR

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Eaton offers a range of analogue and VOIP telephones from Funke+Huster Fernsig (FHF).

Eaton provides a wide range of Hazardous Area and Industrial Telephones tested in harsh environments such as chemical plants, off-shore platforms and remote gas generating stations.

The hazardous area phones are offered with global ATEX, IECEx, INMETRO, UL and TR CU approvals.

FHF ExResistTel IP2

Proven technology from Eaton ensures the FHF ExResistTel IP2 is the ideal unit for all kinds of adverse weather conditions at a wide variety of diverse facilities. The housing is made of impact and shock resistant fiberglass-reinforced polyester. Its robust design is perfect to meet the latest requirements demanded of VoIP telephones for use in hazardous areas.

The ExResistTel IP2 allows efficient operation by providing especially convenient features and benefits such as an illuminated heated display, a V4A keypad suitable for use with industrial gloves, and handsfree communication. It also supports all features of the H.323 SIP(SIP over UDP), TSIP(SIP over TCP) and SIPS(SIP over TLS). A headset, available as accessory equipment, can be easily connected to the telephone.

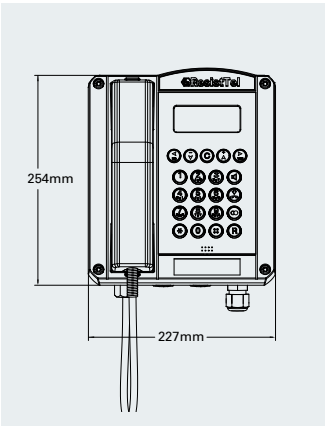
- ATEX and IECEx certified
- Ringing volume of 95dB(A)
- IP66 protection
- Operating temperature -40°C to +60°C
- Illuminated, heated LCD display
- Intelligent, user friendly menu structure
- Handsfree communication
- Standard H.323, SIP, TSIP, SIPS protocols
- Power supply: Power over Ethernet or external supply
- Simply connected to a single 10/100 BASE T Ethernet LAN, RJ45

Explosion proof telephones and accessories

ExResistTel

Explosion proof robust telephone

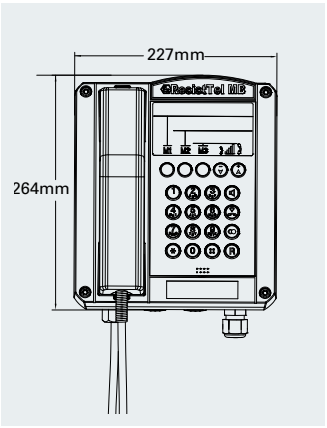
Certification	ATEX, IECEx, INMETRO, TR CU, UL
ATEX/IEC classification	Ex II 2G, Ex e mb [ib] IIC T6/T5 Gb Ex II 2D, Ex tb [ib] IIIC T80°C/T100°C Db
Certified temperature	-25°C to +60°C T5 -25°C to +40°C T6
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5.5kg
Options	Body colour, certification, keypad & display, accessories; headset, earpiece, TWIN sounder/beacon, secondary sounder



ExResistTel MB

Explosion proof robust telephone

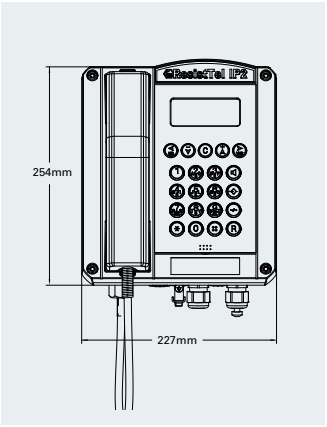
Certification	ATEX, IECEx,
ATEX/IEC classification	Ex II 2G, Ex e mb [ib] IIC T6/T5 Gb Ex II 2D, Ex tb [ib] IIIC T80°C/T100°C Db
Certified temperature	-25°C to +60°C (T5) -25°C to +40°C (T6)
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5.5kg
Options	Accessories, headset, earpiece, ExTWIN sounder/beacon, secondary ex sounder, certification



ExResistTel IP2

Explosion proof IP telephone

Certification	ATEX, IECEx, INMETRO, TR CU
ATEX/IEC classification	II 2G Ex e ib [ib] mb IIC T4 Gb, III 2D Ex ib [ib] tb IIIC T 135 °C Db
Certified temperature	-40°C to +60°C
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5kg approx
Protocol	H.323, SIP, TSIP, SIPS
Power supply	Power over Ethernet
Options	Certification, headset

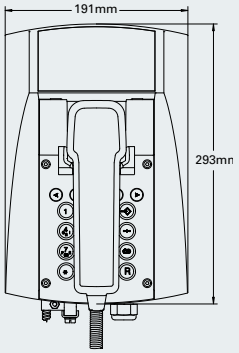


Explosion proof telephones and accessories

FernTel 3 Zone 2

Explosion proof wall and desk telephone

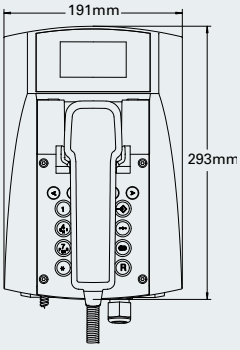
Certification	ATEX, IECEx, INMETRO
ATEX/IEC classification	Ex II 3G, Ex nA ic IIC T5 Gc Ex II 3D, Ex tc ic IIIC T80°C Dc
Certified temperature	-20°C to +55°C
Display:	-10°C to +55°C
Ingress protection	IP65
Material	Polycarbonate
Entries	Up to 2 x M20
Weight	2.3 Kg
Options	Body colour, spiral/armed cord, with/without display and without keypad, stabilizer bracket



FernTel IP Z2

Explosion proof wall and desk IP telephone

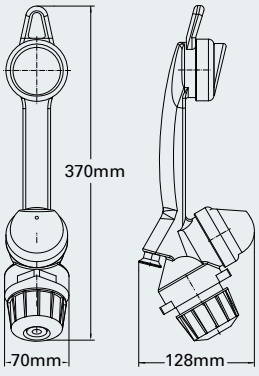
Certification	ATEX, IECEx, INMETRO, UL
ATEX/IEC classification	Ex II 3G, Ex nA ic IIC T5 Gc Ex II 3D, Ex tc ic IIIC T80°C Dc
Certified temperature	-20°C to +55°C
Ingress protection	IP65
Material	Polycarbonate
Weight	2.34kg approx
Protocol	H.323, SIP, TSIP, SIPS
Power supply	Power over Ethernet
Options	Body colour, certification, spiral cord/armoured cord, stabiliser bracket



Ex-howl-call telephone

Sound powered telephone for use in Zone 1

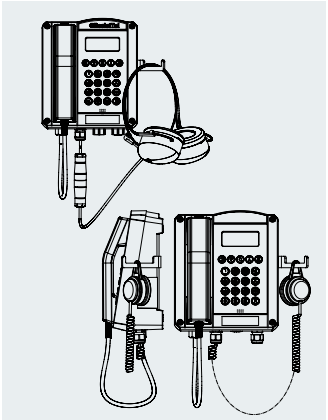
Certification	ATEX
ATEX/IEC classification	Ex II 1G, Ex ia IIC T6 Ga Ex I M1, Ex ia I Ma
Certified temperature	-20°C to +40°C
Ingress protection	IP54
Material	Plastic
Weight	approx. 1,3 Kg
Options	Accessories; snap-in plug, coupling socket, wall socket, prick pincers, flat-band cable



Explosion proof telephones and accessories

Ex-ResistTel accessories

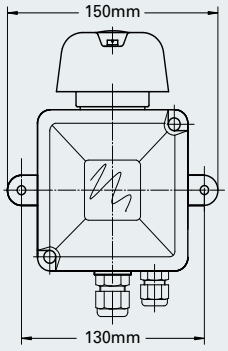
Certification	ATEX, TR CU
ATEX/IEC classification	II 2 G EEx em[ib] IIC T5/T6
Certified temperature	-25°C to +60°C*
Ingress protection	Secondary receiver set: IP54 Headset: IP20
Material	GRP
Weight	Headset approx. 1 kg



TWIN-EExII

Ex em sounder / 0.9 joule beacon combination unit

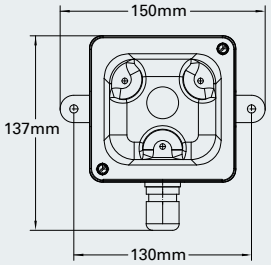
Certification	ATEX
Area classification	Zone 1, 2
ATEX/IEC classification	Ex II 2G, Ex e mb [ib] T6/T5/T4 Gb
Certified temperature	-20°C to +60°C*
Ingress protection	IP66
Material	Housing: Aluminium die cast, polycarbonate
Entries	2 x M20
Weight	1.5kg
Voltage	230Vac
Sound output	Max: 90dB, 1m (±3dB)
Tones	8
Light source	Xenon
Options	Lens colour



Explosion proof secondary telephone bell

For use as a secondary ringer

Certification	ATEX, TR CU, INMETRO
ATEX/IEC classification	II 2G Ex e ib mb IIC T6
Certified temperature	-20°C to +40°C
Ingress protection	IP66
Material	Aluminium
Weight	0.5kg approx
Options	Certification



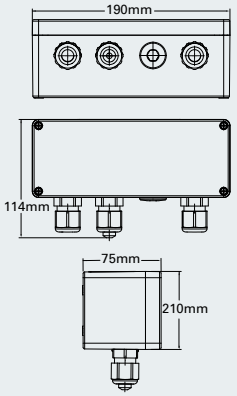
*Model dependent

Explosion proof telephones and accessories

Explosion proof telephone call relay mTAR

Connects signalling devices with telephones

Certification	ATEX, IECEx, INMETRO
ATEX/IEC classification	Ex II 2G, Ex e ib mb IIC T4 Gb Ex II 2D, Ex tb IIIC T135°C Db
Certified temperature	-40°C to +70°C
Ingress protection	IP66
Material	GRP
Weight	0.5kg approx
Voltage	230VAC 5A (max. 100W)
Options	Call break bridging



Industrial telephones and accessories

ResistTel

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VoIP InduTel

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IntellyCom station

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TAR 21 Call relay

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AWS signalling

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Protection housing

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Protection hoods

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Secondary telephone bell

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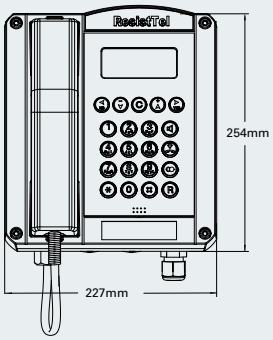
Industrial telephones and accessories

ResistTel

Weatherproof robust telephone

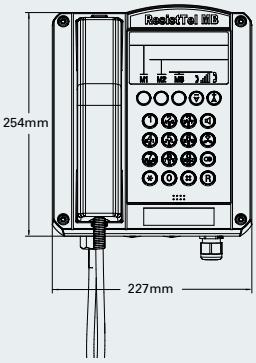
Certification	Weatherproof
Operating temperature	-25°C to +60°C T5
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5.5kg
Options	Body colour, keypad & display, accessories; headset, earpiece, loudspeaker set, TWIN sounder/beacon, protection hood, secondary sounder



ResistTel MB

Weatherproof robust telephone

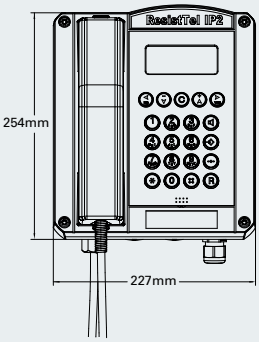
Certification	Weatherproof
Operating temperature	-25°C to +60°C
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5.5kg
Options	Accessories



ResistTel IP

Weatherproof IP telephone

Certification	Weatherproof
Operating temperature	-40°C to +70°C
Ingress protection	IP66
Material	Corrosion-free GRP
Weight	5kg
Protocol	H.323, SIP, TSIP, SIPS
Power supply	Power over Ethernet
Options	Body colour, spiral cord/armoured cord, stabiliser bracket, relay, 2nd Lan

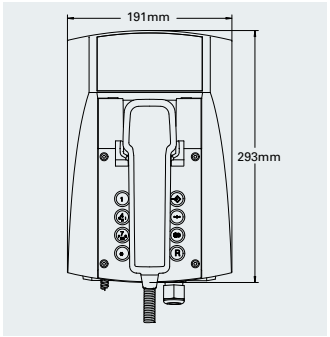


Industrial telephones and accessories

FernTel

Weatherproof wall and desk telephone

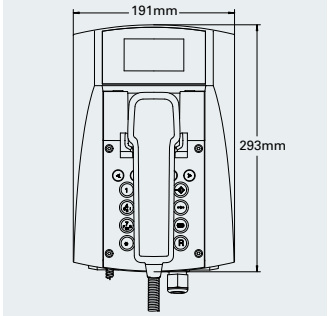
Certification	Weatherproof
Operating temperature	-20°C to +55°C
Display:	-10°C to +55°C
Ingress protection	IP65
Material	Polycarbonate
Entries	Up to2 x M20 and 2 x M25
Weight	2.3 Kg
Options	Body colour, spiral cord/armoured cord, stabiliser bracket



FernTel IP

Weatherproof wall and desk IP telephone

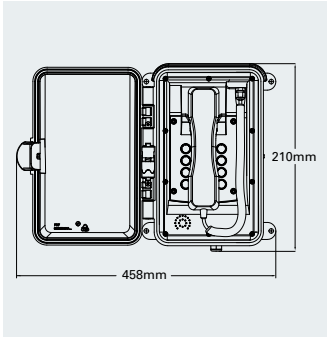
Certification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP65
Material	Polycarbonate
Weight	2.34kg approx
Protocol	H.323, SIP, TSIP, SIPS
Power supply	Power over Ethernet
Options	Body colour, spiral cord/armoured cord, stabiliser bracket



VoIP InduTel wall telephone

IP telephone with protection door

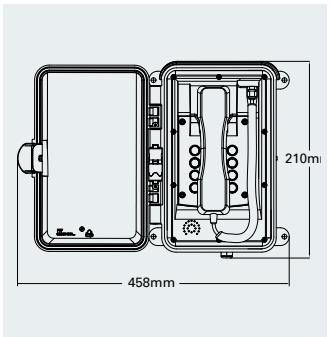
Area classification	Weatherproof
Operating temperature	-40°C to +55°C
Ingress protection	IP66
Material	Polycarbonate
Weight	2.3kg approx
Protocol	SIP
Power supply	Power over Ethernet
Options	Housing colour



Analogue InduTel wall telephone

Weatherproof telephone with protection door

Certification	Weatherproof
Operating temp	-25°C to +55°C
Ingress protection	IP66
Material	Polycarbonate
Weight	2.3kg approx
Options	Keypad, transparent door, optical call indicator

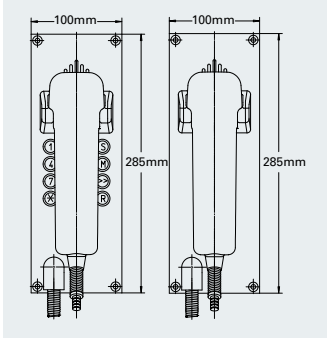


Industrial telephones and accessories

FernTel W and FernTel W ZB

Built in telephone

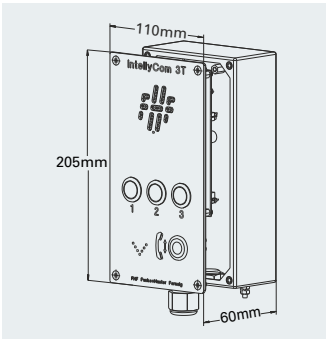
Area classification	Weatherproof
Operating temp	-25°C to +60°C
Ingress protection	IP65
Material	Polycarbonate
Options	Illuminated keypad, steel armoured handset cord, sprial cord, without/without keypad



IntellyCom Station

Intercom station

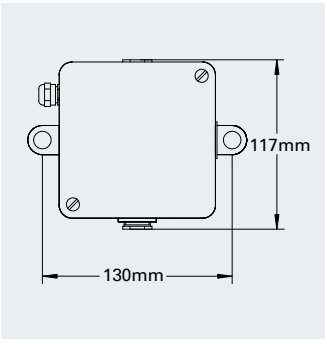
Area classification	Weatherproof
Operating temp	-40°C to +60°C
Ingress protection	IP66
Material	Stainless steel
Weight	1.5kg approx
Options	With/without housing, one/three dialling keys



TAR 21 call relay

Connects signalling devices with telephones

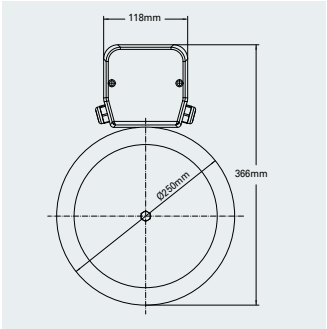
Area classification	Weatherproof
Operating temp	-20°C to +60°C
Ingress protection	IP55
Material	Aluminium
Weight	0.75kg
Options	With call break bridging



AWS signalling bell

Weatherproof bell with telephone relay

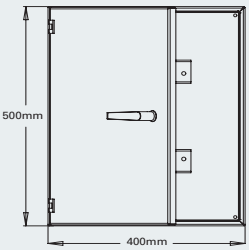
Area classification	Weatherproof
Operating temperature	-20°C to +60°C
Ingress protection	IP55
Material	Housing: aluminium. Dome: steel
Entries	2 x M20
Weight	1.8kg - 3.3kg*
Voltage	230Vac
Sound output	Max: 110dB, 1m (±3dB)*
Options	Dome size



Industrial telephones and accessories

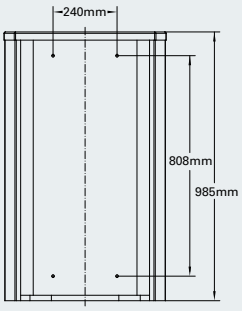
Protection housing

Area classification	Weatherproof
Operating temp	From -50°C to + 70°C*
Material	Plastic, GRP, sheet steel, V4A
Weight	Depends on material
dB attenuation	16 & 26*
Options	Material, colours



Protection hoods

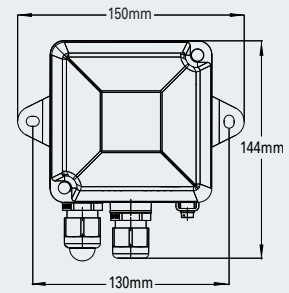
Area classification	Weatherproof
Material	GRP, DIN 5510, Class S4, Perforated plate metal, plastic, sheet steel* and stainless steel*
Weight	Depends on material
Noise insilation	25dB
Options	Material, colours, console



WP Twin LED

LED (Telephone) sounder / beacon combination unit

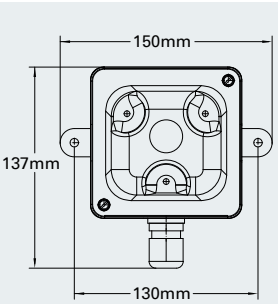
Area classification	Weatherproof
Operating temperature	-40°C to +65°C*
Ingress protection	IP66
Material	Seawater resistant aluminium body
Entries	2 x M20
Weight	1.8kg
Voltage	24Vdc, 115-230Vac
Sound output	Max: 102dB, 1m (±3dB)
Tones	8
Light source	LED
Options	Lens colour (clear, red, yellow green, blue)



Secondary telephone bell

For use as a secondary ringer

Operating temperature	-20°C to +40°C
Ingress protection	IP66
Material	Aluminium
Weight	0.5kg approx



*Model dependent

Introducing the WP Twin LED

Eaton is pleased to announce the launch of the new TWIN LED audio visual signalling device using high intensity LED technology. The unit is designed to be used as a stand alone sounder beacon combination unit or in conjunction with a telephone.

Designed to provide both audio and visual signalling and warning in high noise environments, the TWIN LED permits clear audio and visually signalling in industrial environments.
The TWIN LED offers both improved audio performance with a higher ring volume up to 102 db(A) and greater brightness and visibility by using high power LED technology instead of Xenon flash tubes.
The TWIN LED has an ingress protection of IP66 and is designed to withstand the harsh environments onshore, offshore and marine.
As the mounting dimensions are unchanged from previous model, it means it is reverse compatible and can be simply used to replace and upgrade current installations.

- High intensity LED technology
- Long life LED technology
- High output volume 102dB(A)
- Available with 5 different lens colours
- Power supply options 24 VDC, or 230 VAC (103 -253 VAC)
- Ingress protection IP66
- Operating temperature -40°C to +65°C

Hazardous area control and distribution

HD1

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JB10 & JB11

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GP & JL

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Surge arrestor DUS

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Eaton offers standard and bespoke control and distribution units for harsh and hazardous areas.

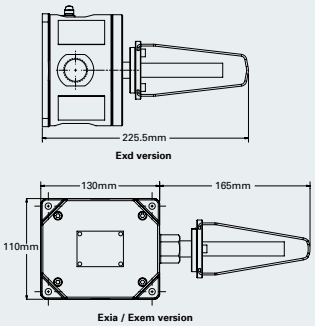
The control units are designed with convenient operation, safety and reliability in mind. As a leading manufacturer of hazardous area and explosion proof equipment, Eaton can provide hazardous and safe area control units in a range of dimensions to suit your required specification.

Hazardous area control and distribution

HD1

Ex d, Ex e & Ex ia Heat detectors

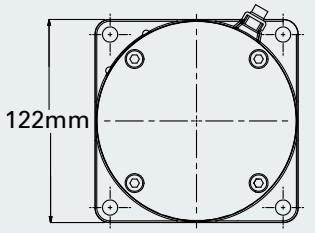
Certification	ATEX, IECEx, cULus, TR CU, CCOE
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, EEx d IIB+H2 T6 Ex II 2GD, Ex d IIC Ex tD A21 T85°C Ex II 2G, EEx em II T6 (T4 with diodes/resistors) Ex II 1G, Ex ia IIC T6 Ga (T4 with diodes/resistors)
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class I, Zone 2, Group IIC
Approvals	SIL2, Russian fire approval, ABS
Certified temperature	Ex d/Ex e/UL: -20°C to +55°C ATEX/TR CU: -20°C to +125°C* Ex ia: -55°C to +55°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Ex d: marine grade alloy Ex ia/EEx em/UL: corrosion free GRP
Entries	2 x M20
Voltage	1.1kg - 2.0kg*
Options	Temperature setting ,tag & duty label, probe guard, monitoring resistors and diode, body colour



SM87JB

Ex d Junction box

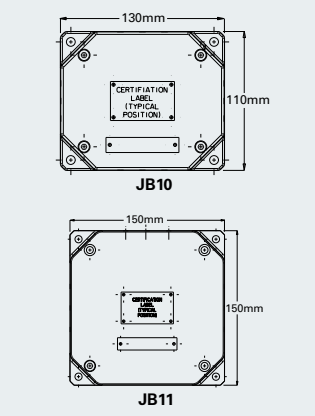
Certification	ATEX, IECEx
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2GD, Ex d IIC T4/T5/T6 Gb Ex tb IIIC T135°C/T100°C/T85°C Db
Certified temperature	-55°C to +85°C
Ingress protection	IP66 & IP67
Material	Stainless steel or alloy
Entries	Up to 4 x M20, M25
Weight	3.1kg
Options	Terminals, tag/duty label, telephone initiate, relay initiate, resistors, diodes, body colour



JB10 & JB11

Ex e Junction boxes

Certification	ATEX, IECEx, cULus, CCOE
Area classification	Zone 1, 2, weatherproof
ATEX/IEC classification	Ex II 2G, Ex e IIC T4/T5/T6
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class I, Zone 1, AEx e IIC Ex e IIC
Certified temperature	-50°C to +55°C
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 2 x M16, M20, M25, M32, ½" NPT or ¾" NPT per face
Weight	JB10: 1.1kg. JB11: 1.8kg
Options	Terminals, earth continuity, tag label, body colour



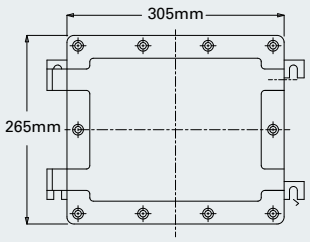
*Model dependent

Hazardous area control and distribution

GP & JL

Ex d Range of custom build control panels

Certification	ATEX, IECEx
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	JL, GP1 & GP3: Ex II 2G, Exd IIB GP2 & GP4: Ex II 2GD Exd IIB Gb, Ex tb IIIC Db
Certified temperature	GP1 & GP3: -40°C to +55°C GP2: -40°C to +55°C GP4: -55°C to +60°C JL4: -55°C to +55°C
Ingress protection	GP1 & JL4: IP65 GP2, GP3 & GP4: IP66
Material	Cast iron, stainless steel or alloy
Entries	M16, M20, M25, M32, M40, M50, M63 or M75
Weight	GP1: 149kg GP2: 70kg GP3: 182kg GP4: 146kg JL4 40kg
Options	Isolators, relays, contactors, transformers, MCBs, fuses, rotary switches, printed circuit boards, invertors, PLCs, meters, indicators, pushbuttons, potentiometers, RCDs (ELCBs), timers, IS components, clients products

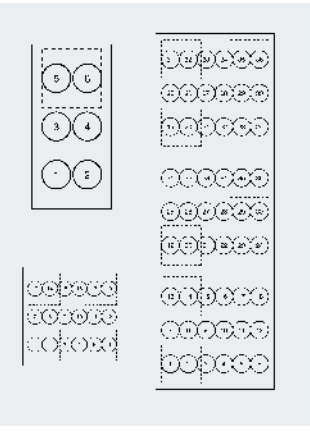


J24 shown

GHG 74/44

Ex e Control stations and terminal boxes

Certification	ATEX, IECEx, TR CU, cCSAus
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2G, Ex e IIC T4/T5/T6 Gb / Ex e ib [ia/ib] IIC T4/T5/T6 Gb Ex II 2D, Ex tb IIIC T95°C/T80°C Db
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G Class II, Div. 2, Groups F, G Class I, Zone 1, AEx e II, Ex e II
Certified temperature	Normal: -20°C to +40°C Optional: -55°C to +55°C
Ingress protection	IP66
Material	Corrosion free GRP or stainless steel
Entries	Multiple entries per face*
Weight	See datasheet*
Options	Terminals, enclosure size



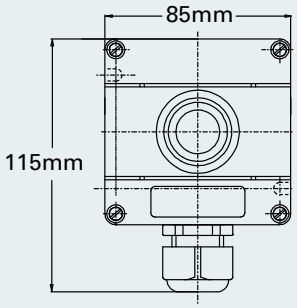
*Model dependent

Hazardous area control and distribution

GHG 411 81

Ex e Control station

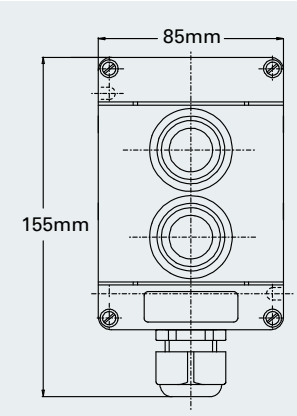
Certification	ATEX, IECEx, TR CU, cULus, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex II 2G, Ex ed ib m IIC T6 Ex II 2D, Ex tD A21 T80°C
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -20°C to +40°C Optional: -55°C to +55°C
Ingress protection	IP66
Material	Polyamide
Entries	1 x M20
Weight	0.5kg*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



GHG 411 82

Ex e Control station

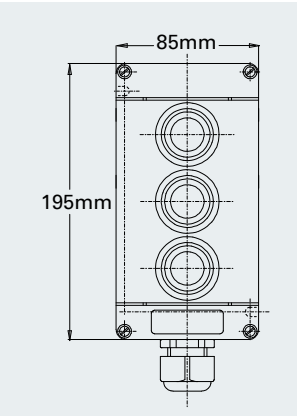
Certification	ATEX, IECEx, TR CU, cULus, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex e II T6, Ex e ib IIC T6 Ex ed IIC T6 or Ex ed ib IIC T6
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -20°C to +40°C Optional: -55°C to +55°C
Ingress protection	IP66
Material	Polyamide
Entries	1 x M20
Weight	0.5kg*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



GHG 411 83

Ex e Control station

Certification	ATEX, IECEx, TR CU, cULus, INMETRO
Area classification	Zone 1, 2, 21, 22, weatherproof
ATEX/IEC classification	Ex e II T6, Ex e ib IIC T6 Ex ed IIC T6 or Ex ed ib IIC T6
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -20°C to +40°C Optional: -55°C to +55°C
Ingress protection	IP66
Material	Polyamide
Entries	1 x M20
Weight	0.5kg*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



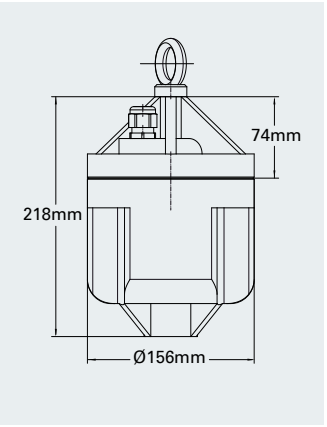
*Model dependent

Industrial control and distribution

EL 101 D

Cast iron pendulum switch

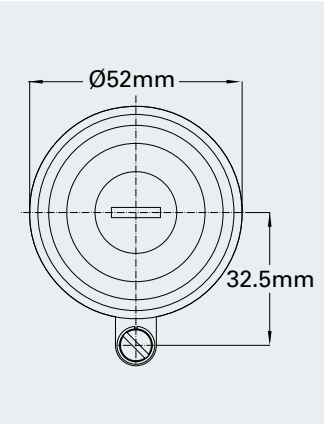
Area classification	Weatherproof
Operating temperature	-25°C to +60°C
Ingress protection	IP66
Material	Cast iron
Entries	1 x M20
Weight	10.5kg
Voltage	230Vac



DUS

1kV discharge surge arrester

Ingress protection	IP00
Material	Housing: polyester Insulating layer: mica
Options	Spark-over voltages



*Model dependent

HAC products and solutions

Public Alarm & General Systems (PAGA)

Designed to enhance modern communication philosophies, the Sonix™ PA/GA system includes a highly sophisticated yet simplified architecture that removes the need for lengthy engineering cycles, bespoke and costly software, custom field engineering or expensive onsite support. We are able to offer fully compliant communications solutions to meet the most demanding applications for onshore, offshore and industrial installations.

Closed Circuit Television Stations (CCTV)

HERNIS™, Oxalis and Yuhua lead the way in developing advanced camera-based surveillance systems for marine and oil & gas installations worldwide. Our solutions contribute to increased efficiency and provide safety for people and equipment in hazardous areas and under extreme conditions.

Loudspeakers

The MEDC range of hazardous, heavy duty, industrial and commercial speakers are designed to meet the requirements for public address, voice alarm (evacuation) and background music.

Status lights & audible and visual combination units

For use in situations where both audible and visual awareness is required together to alert operators of a potential hazard. Customised solutions from MEDC and FHF can be designed and manufactured using our sounders and beacons to suit the specific needs of the customer.

Call points

Manual alarm call points are designed for the purpose of raising an alarm manually once verification of a fire or emergency condition exists, by operating the push button or break glass the alarm signal can be raised.

Audible alarms

MEDC and FHF's range of audible alarms are suitable for a wide array of applications, feature a variety of tone settings, and are designed to raise the alarm in dangerous situations. Traditional bells are also available.

Telephones

Gitiesse and FHF supply a full range of automatic and sound powered telephones suitable for any kind of application: IP and analogue, weatherproof proof and explosion protected. Supplementary audio and optical devices are also available as an option.

Visual alarms

MEDC and FHF offer a range of beacons and combination units including flashing, steady-state indicators and rotating units. These may be used to warn of potential hazards or indicate the status of plant conditions, fire and gas alarms, evacuation alerts and many more.

Control and distribution

At MEDC we offer standard and bespoke control and distribution units for harsh and hazardous environments. As a leading manufacturer of explosion proof equipment, MEDC can provide hazardous and safe area control units in a range of dimensions to suit your required specification.

Hazardous area US products

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Eaton offers a range of products specifically designed and certified for use in the US and Canada.

This range of call points, signalling devices, telephones and control panels is certified to UL and CSA standards and is suitable for use in hazardous locations such as zone I and zone II.

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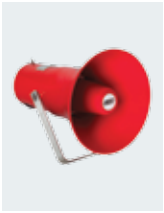

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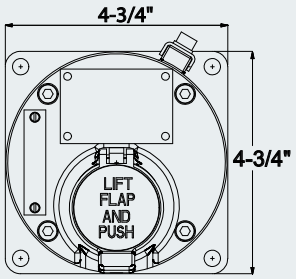
Hazardous area US products

SM87PB

Hazardous location push button call point

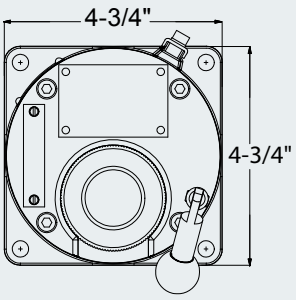
Certification	cULus, ULC, CSA
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class 1, Div. 1, Groups C, D (CSA Ex ia also includes groups A & B) Class I, zone 1. Groups IIA, IIB
Approvals	SIL2, ABS
Certified temperature	-58°F to +158°F*
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x ½" NPT or ¾" NPT
Weight	Stainless: 8.4lb. Alloy: 5.5lb
Switches	2 pole c/o (Up to 4 pole c/o available)
Options	Switch action, labels, LED, EOL and series resistors, diodes, 3 or 4 pole switches, colour



SM87BG

Hazardous location break glass call point

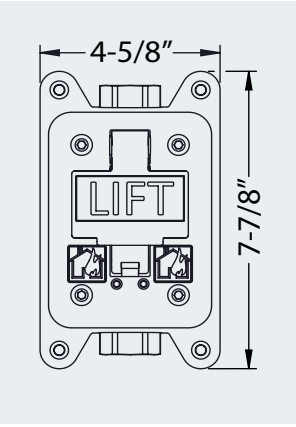
Certification	CSA
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class 1, Div. 1. Groups A, B, C, D
Certified temperature	-58°F to +158°F*
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x ½" NPT or ¾" NPT
Weight	Stainless: 8.4lb. Alloy: 5.5lb
Switches	2 pole c/o (Up to 4 pole c/o available)
Options	Switch action, labels, LED, EOL and series resistors, diodes, 3 or 4 pole switches, colour



PH1

Hazardous location pull handle call point

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups B, C, D Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G Class III Class I, Zone 1, AEx d IIC, Ex d IIC
Certified temperature	-58°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP (UL Class I, Div. 1 Inner Cover: 316 stainless steel)
Entries	Up to 2 x ½" NPT or ¾" NPT
Weight	UL Class I, Div 2/ATEX/IECEx/UW: 5.8lb UL Class I, Div. 1: 8.4lb
Switches	1 or 2 pole c/o
Options	EOL and series resistors, diodes, labels, body colour



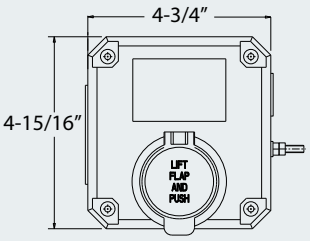
*Model dependent

Hazardous area US products

PB

Hazardous location push button call point

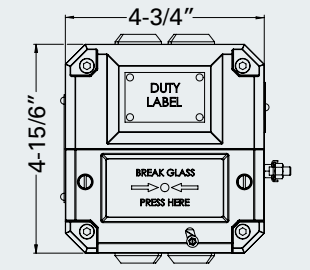
Certification	cULus, CSA
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G Class I, Zone 2
Approvals	SIL2, ABS
Certified temperature	-58°F to +131°F*
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 4 x ½" NPT
Weight	2.6lb
Switches	1 or 2 pole c/o
Options	Labels, LED, EOL and series resistors, diodes, Earth continuity, switch action, number of terminals, colour



BG

Hazardous location break glass call point

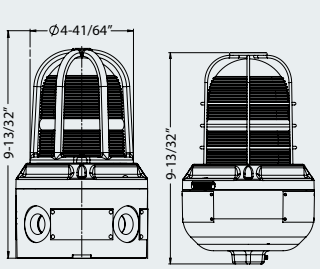
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2 Groups A, B, C, D Class I, Zone 2
Approvals	SIL2
Certified temperature	-13°F to +131°F*
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 4 x ½" NPT
Weight	2.6lb
Switches	1 or 2 pole c/o
Options	Labels, switches, LED, Lift flap, EOL and series resistors, diodes, Earth continuity, plastic element, break glass hammer, number of terminals, colour



LD15

Hazardous location LED strobe

Certification	cULus, ULC
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class II, Div. 2, Groups F, G Class I, Zone 1, AEx d IIC* & IIB, Ex d IIB
Approvals	SIL1 (1oo1) & SIL2 (1oo2)
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 3* x ½" NPT or ¾" NPT
Weight	Direct: 7.7lb. Pipe: 6.8lb
Voltage	12-48Vdc, 110-254Vac
Light source	LED
LED life	54,000 hours
Options	Lens colour, lens guard, mounting, tag & duty label, relay initiate, body colour



Direct mount Pipe mount

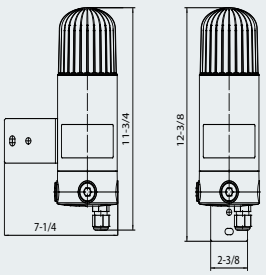
*Model dependent

Hazardous area US products

Expertline LED

Hazardous location LED strobe

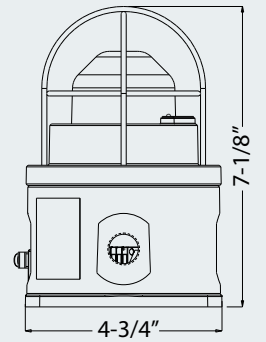
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Groups IIA, IIB, IIC, T4
Certified temperature	-40°F to +140°F
Ingress protection	NEMA 4X
Material	Polycarbonate
Entries	1x ½" NPT, 2x blind plug ½" NPT
Weight	5.5lb
Voltage	24Vdc, 120-230Vac
Light source	LED
Options	LED colour



SM87HXB

5 joule hazardous location strobe

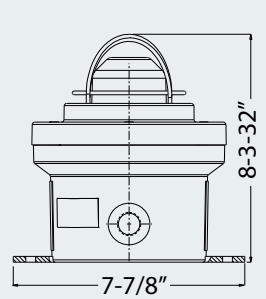
Certification	cULus, CSA
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div, 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Approvals	SIL2
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 4 x ½" NPT or ¾" NPT
Weight	Alloy: 4.4lb. Stainless steel: 8.4lb
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Lens colour, lens guard, lens guard, tag/duty label, body colour



XB11

5 joule hazardous location strobe

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	CSFM
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x ½" NPT
Weight	5.5lb
Voltage	24-48Vdc, 110-240Vac
Light source	Xenon
Options	Flash rate, lens colour, lens guard, mounting, tag/duty label, body colour



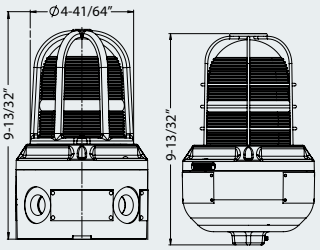
*Model dependent

Hazardous area US products

XB15

5, 10 & 15 joule hazardous location xenon strobes

Certification	cULus, ULC
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class II, Div. 2, Groups F, G Class I, Zone 1 AEx d IIC* & IIB, Ex d IIB
Approvals	SIL1, CSFM, UL Marine
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 3* x ½" NPT or ¾" NPT
Weight	5.7lb - 6.6lb
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Tube energy, flash rate, lens colour, lens guard, mounting, tag & duty label, relay initiate, body colour

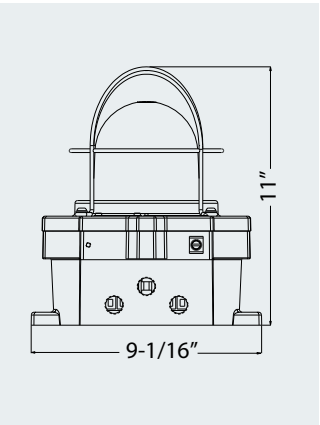


Direct mount Pipe mount

XB4

21 joule hazardous location xenon strobe

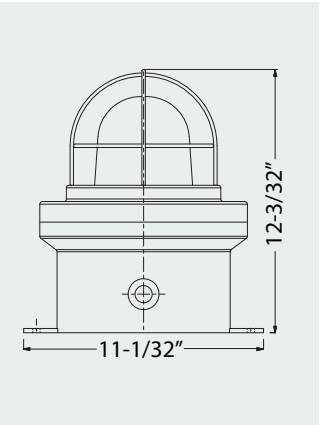
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Groups IIB & IIA
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 3 x ½" NPT or ¾" NPT
Weight	Alloy: 14.5lb - 16.7lb Stainless steel: 33.0lb - 35.0lb
Voltage	24Vdc, 110-240Vac
Light source	Xenon
Options	Flash rate, relay initiate, lens guard, lens colour, tag/duty label, body colour



XB12

21 joule hazardous location xenon strobe

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	CSFM, UL Marine
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x ½" NPT
Weight	15.4lb
Voltage	24Vdc, 110-240Vac
Light source	Xenon
Options	Body & lens colour, lens guard, tag & duty labels, flash rate, mounting method



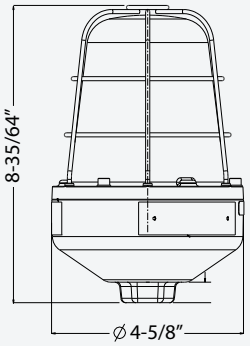
*Model dependent

Hazardous area US products

XB16

10 joule hazardous location xenon strobe

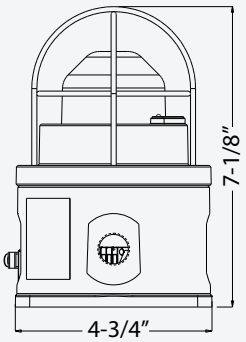
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A ,B, C, D Class II, Div. 2, Groups F, G
Approvals	UL1971, CSFM
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	1 x ¾" NPT
Weight	2.2lb
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon
Options	Flash rate, lens colour, lens guard, tag & duty label, relay initiate, body colour



SM87LU1/LU3

Hazardous location steady burning light

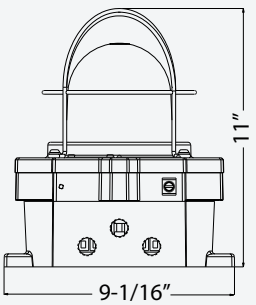
Certification	cULus, CSA
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Certified temperature	-67°F to +131°F
Operating temperature	SM87LU1: -4°F to +131°F SM87LU3: -67°F to +131°F
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	SM87LU1: Up to 3 x ½" NPT or ¾" NPT SM87LU3: Up to 4 x ½" NPT or ¾" NPT
Weight	Alloy: 5.5lb. Stainless steel: 8.3lb
Voltage	24-48Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lens colour, lens guard, tag/duty labels, body colour



FL4 & FB4

Ex d(e) steady beacons

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Groups IIB & IIA
Certified temperature	FL4: -4°F to +131°F FB4: -67°F to +131°F
Operating temperature	FL4: -4°F to +131°F FB4: -67°F to +131°F
Ingress protection	NEMA 4X & 6
Material	Stainless steel or alloy
Entries	Up to 3 x ½" NPT or ¾" NPT
Weight	Alloy: 14.3lb - 19.6lb Stainless steel: 32.8lb - 38.1lb
Voltage	24-110Vdc, 110-254Vac
Light source	Filament, fluorescent
Options	Lamp wattage, lens colour, lens guard, tag & duty labels, relay initiate, body colour

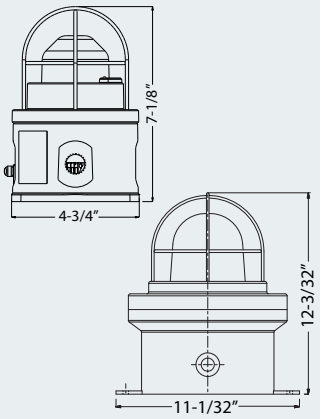


Hazardous area US products

FB11 & FB12

Hazardous location steady burning lights

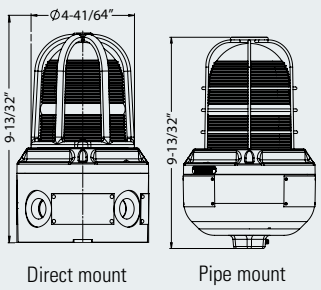
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Certified temperature	-67°F to +131°F
Ingress protection	NEMA 4X and 6
Material	Corrosion free GRP
Entries	2 x ½" NPT
Weight	FB11: 6.2lb. FB12: 16.7lb
Voltage	24-48Vdc, 110-254Vac
Light source	Filament
Options	Lamp wattage, lens colour, lens guard, mounting, tag/duty label, body colour



FB15

Hazardous location steady burning light

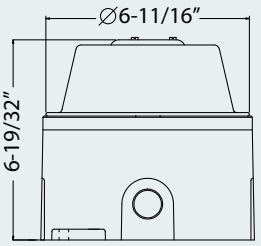
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D Class I, Zone 1 AEx d IIC* & IIB, Ex d IIB
Approvals	CSFM
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X and 6
Material	Corrosion free GRP
Entries	Up to 3* x ½" NPT or ¾" NPT
Weight	Pipe: 5.7lb. Direct: 6.6lb
Voltage	24-48Vdc, 110-254Vac
Light source	Filament
Options	Lamp wattage, lens colour, lens guard, mounting, tag & duty label, lens colour



DB1P

Hazardous location horn

Certification	cULus
UL/NEC classification	Class I, Div 1, Groups C & D
Approvals	SIL1
Certified temperature	-13°F to +158°F
Ingress protection	NEMA 4X
Material	Alloy
Entries	Up to 3 x ½" NPT or ¾" NPT
Weight	7.7lb - 12.3lb*
Voltage	12-48Vdc, 110Vac
Sound output	Max: 100dB, 10' (±3dB)*
Tones	27
Stages	2*
Options	Output level, entries, tag & duty labels, relay initiate, remote tone select, EOL resistor, colour



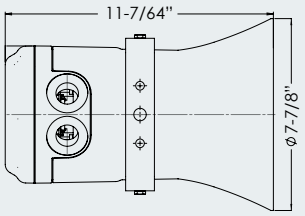
*Model dependent

Hazardous area US products

DB3B

Hazardous location horn

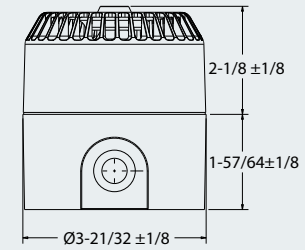
Certification	cULus
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL2, CSFM
Operating temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Body: corrosion free GRP Flare: thermoplastic
Entries	Up to 2 x ½" NPT or M20
Weight	10lb (based on long flare unit)
Voltage	12-48Vdc, 110-254Vac
Sound output	Max: 112dB, 10' (±3dB)*
Tones	28
Stages	3 (5 voltage free)
Options	Tag & duty labels, swivel bracket, EOL resistor, Earth continuity, tone activation method, voltage free activation, flare type, custom tones, flare colour



DB5

Hazardous location horn

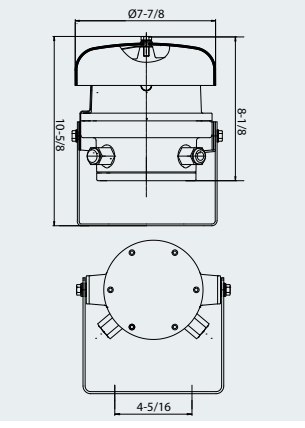
Certification	FM, CSA
UL/NEC classification	Class I, Div, 1, Groups A, B, C, D
Operating temperature	-4°F to +131°F
Ingress protection	NEMA 4
Material	ABS
Entries	Up to 2 x M20 via knockouts
Weight	0.7lb
Voltage	12-24Vdc
Sound output	Max: 90dB, 10' (±3dB)
Tones	26
Options	Tag label, body colour



dGW21/dRGW21

Hazardous location bell

Certification	cULus
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Operating temperature	-4°F to +104°F
Ingress protection	NEMA 4X
Material	Corrosion free GRP
Entries	2 x ½" NPT
Weight	12lb
Voltage	24Vdc, 120Vac
Sound output	Max: 105dB, 10' (±3dB)



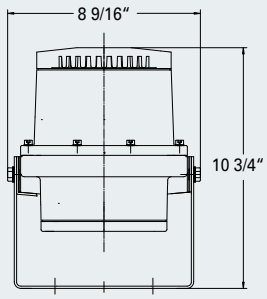
*Model dependent

Hazardous area US products

dGH 21

Hazardous location hooter

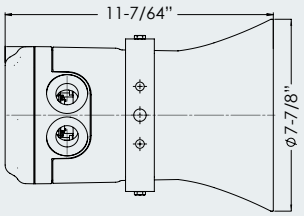
Certification	cULus
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D
Certified temperature	-4°F to +104°F
Ingress protection	NEMA 4X
Material	Corrosion free GRP
Entries	2 x ½" NPT
Weight	12lb
Voltage	24Vdc, 240Vac
Sound output	Max: 105dB, 10' (±3dB)



DB4B

Hazardous location loudspeaker

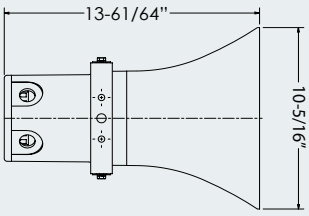
Certification	cULus
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL2, CSFM
Operating temperature	-67°F to +158°F*
Ingress protection	NEMA 4X & 6
Material	Body: corrosion free GRP. Flare: thermoplastic
Entries	Up to 2 x ½" NPT or M20
Weight	11.0lb (based on long flare unit)
Sound output	Sensitivity (1W, 10'): 100dB* (±3dB) Max at full power (25W, 10'): 114dB* (±3dB)
Transformer	100V, 70V, 25V
Wattage & transformer tappings	25W: 25.0, 12.5, 6.0, 4.0, 2.0, 1.0* 15W: 15.0, 7.5, 5.0, 4.0, 2.0, 0.8* 8W: 8.0, 4.0, 2.0, 1.5, 0.7, 0.4*
Low impedance	8Ω*
Options	Tag & duty labels, swivel bracket, DC blocking capacitor, flare length, flare colour



DB16

Hazardous location loudspeaker

Certification	cULus
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D*
Certified temperature	-67°F to +104°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 2 x ½" NPT or ¾" NPT
Weight	12.0lb
Sound output	Sensitivity (1W, 10'): 100dB* (±3dB) Max at full power (30W, 10'): 112dB* (±3dB)
Transformer	100V
Wattage & transformer tappings	25W: 25.0 ,12.5, 6.0, 4.0, 2.0, 1.0* 30W: 30.0, 25.0, 12.0, 6.0, 4.0, 2.0*
Low impedance	8Ω*
Options	Tag & duty labels, Earth continuity, Earth stud, colour



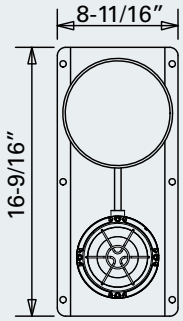
*Model dependent

Hazardous area US products

DB3B/XB15

Hazardous location horn / 5, 10 & 15 joule strobe combination units

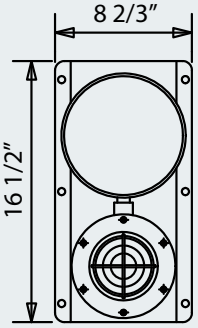
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups F, G
Approvals	SIL1
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Body: corrosion free GRP. Flare: thermoplastic
Entries	Up to 2 x ½" NPT or ¾" NPT customer entries Note: customer entries are in the strobe
Voltage	24-48Vdc, 110-254Vac
Sound output	Max: 112dB*, 10' (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Tube energy, body, lens & flare colour, lens guard, flash rate, earth continuity, relay & tel. initiate, flare type, labels



DB3B/XB11

Hazardous location horn / 5 joule strobe combination unit

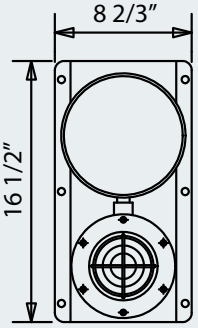
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Body: corrosion free GRP. Flare: thermoplastic
Entries	1 x ½" NPT customer entry Note: customer entry is in the strobe
Voltage	24-48Vdc, 110-240Vac
Sound output	Max: 112dB*, 10' (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Body, lens & flare colour, lens guard, flash rate, earth continuity, tel. initiate, flare type, labels



DB3B/SM87HXB

Hazardous location horn / 5 joule strobe combination unit

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups C, D
Approvals	SIL1
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4X & 6
Material	Strobe: stainless steel or alloy Sounder body: corrosion free GRP Flare: thermoplastic
Entries	Up to 3 x ½" NPT customer entries Note: Customer entries are in the strobe
Voltage	24-48Vdc, 110-254Vac
Sound output	Max: 112dB*, 10' (±3dB)
Tones	28
Stages	3
Light source	Xenon
Options	Body, lens & flare colour, lens guard, flash rate, earth continuity, tel. initiate, flare type, labels



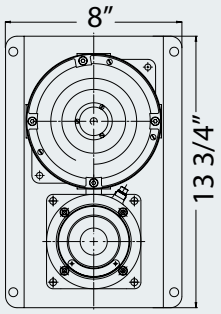
*Model dependent

Hazardous area US products

DB1/SM87HXB

Hazardous location horn / 5 joule strobe combination unit

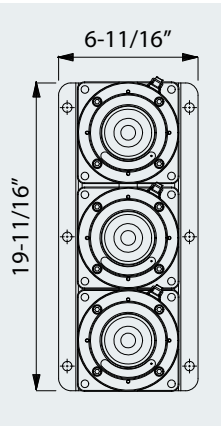
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div, 1, Groups C, D
Approvals	SIL1
Certified temperature	-13°F to +158°F
Ingress protection	NEMA 4X
Material	Stainless steel or alloy
Entries	Up to 3 x ½" NPT customer entries Note: Customer entries are in the strobe
Voltage	24-48Vdc, 110-240Vac
Sound output	Max: 100dB*, 10' (±3dB)
Tones	27
Stages	2
Light source	Xenon
Options	Body & lens colour, lens guard, flash rate, earth continuity, tel initiate, labels



SM87SL

5 joule hazardous location xenon and LED status light

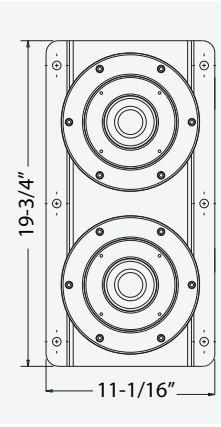
Certification	cULus*, CSA*
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 1, Groups C, D Class I, Zone 1, Aex d IIB, Exd IIB
Certified temperature	Class I, Div 1: -13°F to +131°F Class I, Zone 1: -67°F to +131°F
Ingress protection	NEMA 4X and 6
Material	Alloy
Entries	Up to 3 x ½" NPT or ¾" NPT
Weight	See datasheet
Voltage	24-48Vdc, 110-254Vac
Light source	Xenon, filament, fluorescent
No. of ways	Up to 5
Options	Lens colour, lens guard, lens guard, tag/duty label, body colour



XB11SL

5 joule hazardous location status light

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Certified temperature	-67°F to +158°F*
Ingress protection	NEMA 4X and 6
Material	Corrosion free GRP
Entries	1 x ½" NPT
Weight	See datasheet
Voltage	24-48Vdc, 110-240Vac
Light source	Xenon, filament, fluorescent
No. of ways	Up to 5
Options	Body & lens colour, tag & duty labels



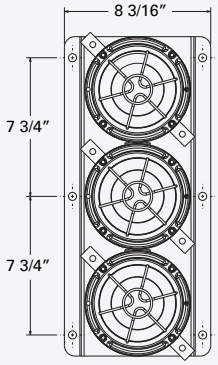
*Model dependent

Hazardous area US products

SL15

5, 10 and 15 joule hazardous location xenon and LED status light

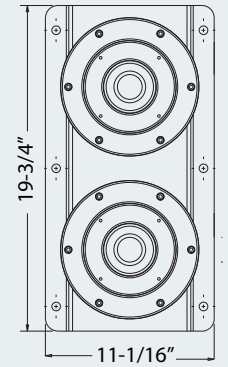
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A*, B*, C, D †Class II, Div. 2, Groups F, G Class I, Zone 1, AEx d IIC* & IIB, Ex d IIB
Approvals	UL Marine
Certified temperature	-67°F to +158°F
Ingress protection	IP66 & IP67, NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 2 x ½" NPT or ¾" NPT
Weight	See datasheet
Voltage	24-48Vdc, 110-254Vac*
Light source	Xenon, filament, LED
No. of ways	Up to 4
Options	Flash rate (xenon & LED), light source, tube energy (xenon), lens guard, tag & duty label, body colour
	† Not filament



XB12SL

21 joule xenon strobe and steady burning hazardous location status light

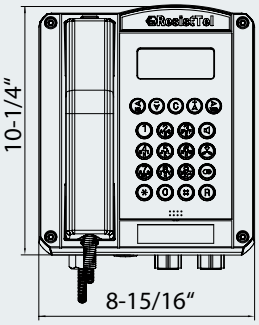
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups C, D Class I, Zone 1, AEx d IIB, Ex d IIB
Approvals	CSFM
Certified temperature	-67°F to +158°F
Ingress protection	NEMA 4x & 6
Material	Corrosion free GRP
Entries	1 x ½" NPT
Weight	See datasheet
Voltage	24Vdc, 110-240Vac
Light source	Xenon, filament, fluorescent, rotating tungsten halogen
No. of ways	Up to 5
Options	Flash rate, lamp wattage, lens colour, lens guard, tag/duty label, body colour



ExResistTel

Hazardous and ordinary location robust telephone

Certification	UL
UL/NEC classification	Class 1, Div 2, Groups A, B, C, D T5
Certified temperature	-4°F to +104°F
Ingress protection	NEMA 4X
Material	Corrosion-free GRP
Weight	13lbs
Options	Loudspeaker set, TWIN sounder/beacon, protection hood, secondary sounder



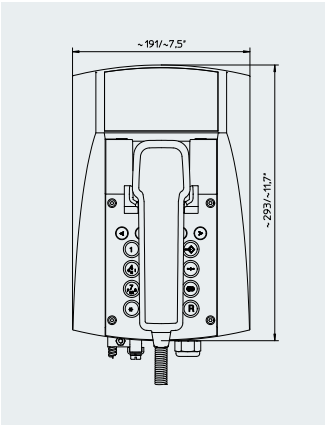
*Model dependent

Hazardous area US products

FernTel IP Zone 2

Hazardous and ordinary location wall and desk IP telephone

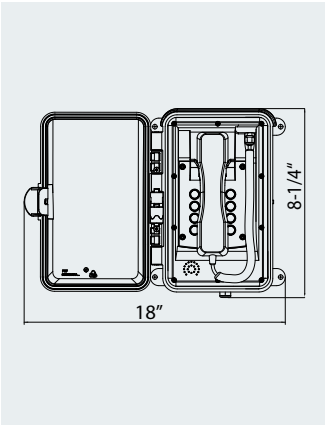
Certification	UL
ATEX/IEC classification	Class 1, Division 2, Groups A, B, C, D T5
Certified temperature	-4°F to +140°C
Ingress protection	NEMA 4X
Material	Polycarbonate
Weight	5.3lbs
Options	Body colour, spiral cord/armoured cord, stabiliser bracket



Analogue InduTel Wall telephone

Ordinary location telephone with protection door

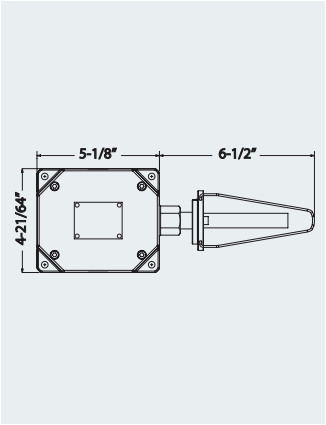
Certification	UL
UL/NEC classification	IT equimpment safety
Certified temperature	-40°F to +141°F
Ingress protection	NEMA 3R
Material	Polycarbonate
Weight	5lbs approx
Options	Keypad, transparent door, optical call indicator
Options	Body colour



HD1

Hazardous location heat detector

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class I, Zone 2, Group IIC
Approvals	SIL2, ABS
Certified temperature	-4ºF to +131ºF
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	2 x ½" NPT (via supplied adaptors)
Weight	2.4lb
Options	Temperature setting ,tag & duty label, probe guard, monitoring resistors and diode, body colour

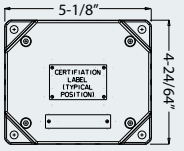


Hazardous area US products

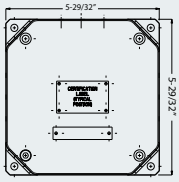
JB10 & JB11

Hazardous location junction boxes

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class I, Zone 1, AEx e IIC, Ex e IIC
Certified temperature	-4°F to +131°F
Ingress protection	NEMA 4X & 6
Material	Corrosion free GRP
Entries	Up to 2 x ½" NPT or ¾" NPT per face
Weight	JB10: 2.4lb. JB11: 4.0lb
Options	Terminals, earth continuity, tag label, body colour



JB10

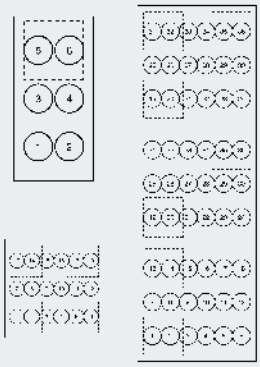


JB11

GHG 74/44

Hazardous location control units and terminal boxes

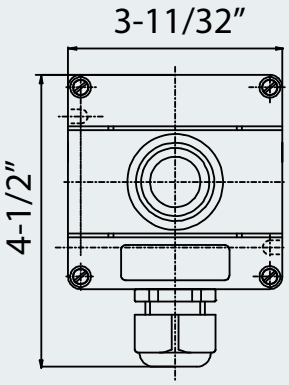
Certification	cCSAus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, groups A, B, C, D Class II, Div. 1, Groups E, F, G Class II, Div. 2, Groups F, G Class I, Zone 1, AEx e II, Ex e II
Certified temperature	Normal: -4°F to +104°F Optional: -67°F to +131°F
Ingress protection	IP66
Material	Corrosion free GRP or stainless steel
Entries	Multiple entries per face*
Weight	See datasheet*
Options	Terminals, enclosure size



GHG 411 81

Hazardous location control station

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -4°F to +104°F Optional: -67°F to +131°F
Ingress protection	IP66
Material	Polyamide
Entries	1 x ½" NPT
Weight	1.0lb*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



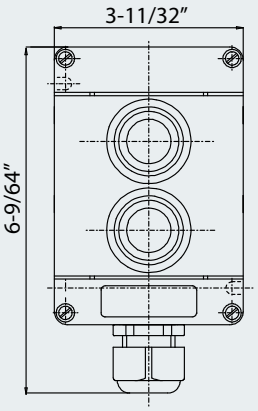
*Model dependent

Hazardous area US products

GHG 411 82

Hazardous location control station

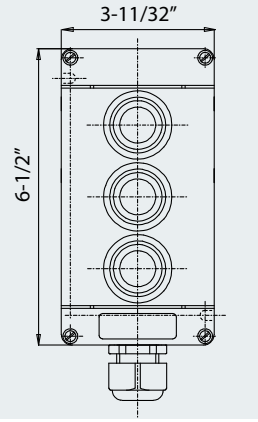
Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -4°F to +104°F Optional: -67°F to +131°F
Ingress protection	IP66
Material	Polyamide
Entries	1 x ½" NPT
Weight	1.0lb*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



GHG 411 83

Hazardous location control station

Certification	cULus
Area classification	Hazardous locations, ordinary locations
UL/NEC classification	Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G (Canada) Class II, Div. 2, Groups F, G Class I, Zone 1, AE x e IIC T6, Ex e II T6
Certified temperature	Normal: -4°F to +104°F Optional: -67°F to +131°F
Ingress protection	IP66
Material	Polyamide
Entries	1 x ½" NPT
Weight	1.0lb*
Options	Pushbuttons, emergency stop, rotary switches block, potentiometer, lamps, 3 position key switch, gold contact block



*Model dependent

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See the complete offering at http://www.medc.com and www.fhf.de

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