





## INTRODUCTION MOFLASH

# Welcome to Moflash

Moflash is the largest independent manufacturer of signalling devices in the UK

Based in Birmingham at the heart of Great Britain, Moflash Signalling is the largest independent manufacturer of signalling devices in the UK. Formed from the Moflash Company Co Ltd in 1998, the company has grown dramatically over the last 17 years with the introduction of a number of new product lines and with the acquisition of signalling products from other manufacturers such as the Klaxon range of hooters and horns, now produced in the Moflash factory.

The company produces the following types of devices: Incandescent Beacons - both flashing and static, LED (Light Emitting Diode), Xenon Beacons and the traditional Rotating Beacons.

On the acoustic side of the business, the company offers, including Air Horns, Bells, Buzzers, Electronic Sounders, Hooters and Piezo devices for the following markets shown on the right.

Moflash serves a diverse range of customers from electrical wholesalers/contractors to global distribution organisations, original equipment manufacturers and a variety of end users such as mining, manufacturing, electrical and gas utilities, to name but a few.

With its programme of development, Moflash is in a strong position to keep meeting the increasing demands of a safety conscious world. With a dedicated team based in the UK and through the excellent relationships via local distributors and partners Moflash can successfully promote and sell its product range to over 70 countries worldwide.

Our products are always available to meet the customer's needs. Moflash can modify or design a beacon to your specific needs. If our standard products are outside the scope of your project, please speak with our technical department to see if we can help, or e-mail your requirements via our contact page on the Moflash website: [www.moflash.com](http://www.moflash.com). All projects will be considered on their commercial viability.

And finally, our commitment to quality and service continues today as it did when we formed 17 years ago: it underpins our focus and passion for our industry.

### Moflash Markets

Industrial

Process Control

Status Indication

Fire and Security

Explosive Environments

Obstruction Marking

Marine

Automotive

Safety and Protection



FM 558977

Image: New Moflash UK Headquarters



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# SELECTION & APPLICATION

## MOFLASH

## Selection & Application

### Audible & Visual Warning Signals

The environment in which the warning signal is to be installed will determine the product selection.

A signal designed for heavy industrial applications, incorporating a high decibel (dB) rating & high light intensity (20J) would not be suitable for local signalling at a control panel. Alternatively a low dB & light intensity (2J) would be ineffective for a large factory environment. Moflash can supply warning signals to cover all applications and listed below are some of the main market areas.

### Industrial & Marine

Warning signals for heavy duty, high light output applications such as foundries, factory shopfloors, large warehouses, docks, ports and general offshore use etc. For further information see our Industrial & Marine and Acoustic sections.

### Automotive

Warning beacons for use on automobiles (commercial & private) agricultural / off road vehicles and forklift trucks etc. For further information see our Automotive section.

### Fire

Warning signals designed & complying with the latest European standards for use in all commercial buildings used as fire evacuation signals. For further information see our Acoustic section.

### Obstacle Marking for Aerodromes

Visual warning signals that comply with the International Civil Aviation Authority (ICAO) requirement for the marking of objects in & around Aerodromes. For further information see our Obstacle Marking section.

### Explosion Proof

Warning Signals designed for use in potentially explosive atmospheres and complying with the latest global standards. Typically used on oil rigs, refineries, chemical plants, grain storage etc where in normal operations the atmosphere is flammable/ignitable etc. For further information see our Exd Explosion Proof section.

### Environmental Factors determining Selection

- A safe or potentially explosive atmosphere
- The ambient level of noise and / or brightness
- The ambient temperature
- The duration the signal has to operate for
- The Ingress protection (IP) required of the signal enclosure
- The electrical supply available

## Types of Warning Signals - Audible

### Airhorns

Airhorns are non-electrical devices that only operate from a compressed air supply. They offer very high dB output with very low frequency sound making them ideal for very noisy environments. Moflash offers an industrial and marine range. Being non-electrical they can be used in hazardous area Category 1 use.

### Bells

Bells are a cost effective traditional signalling device with a wide range of signalling applications. They offer medium dB output with a unique sound. Moflash offers two types of solenoid driven units for heavy duty industrial/ marine applications and an alternative economy unit for light industrial/ commercial applications.

### Buzzers

Either Electro Mechanical type where the diaphragm is deflected by a moving magnet which is triggered by a make and break contactor or the Piezo type where the diaphragm is controlled by an electronic circuit.

The Mechanical versions offer medium/high dB output with low frequency sound and are of robust construction.

Piezo versions are relatively low dB and high frequency and are only suitable for local signalling applications.

### Electronic Sounders

Electronic sounders are now the most versatile audible warning devices on the market today.

With multiple tone & decibel selections these type of products will satisfy most applications with the added benefit of remote tone selection & voice activation.

### Hooters

Hooters are powerful motor driven horns producing the unique and never forgotten 'Klaxon' sound used the world over. A serrated rotor driven against a hardened steel diaphragm stud creates a high dB output with low frequency sound. These types of signals are ideal for indoor and outdoor applications where a rugged and durable sounder is required

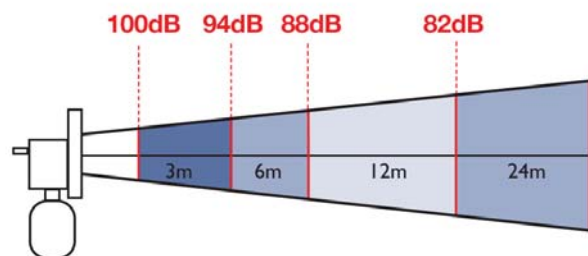
### Sirens

Sirens are powerful motor driven signals driving an internal impeller through a slotted cover creating a unique penetrating sound. Traditionally recognisable for creating the 'air raid' warning signal.



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### Note:

Every time the distance is doubled the decibels will be reduced by 6.

m	Attenuation Chart dB (A)																											
1	65	70	75	80	85	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130		
2	59	64	69	74	79	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124		
3	55	60	65	70	75	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120		
5	51	56	61	66	71	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116		
10	45	50	55	60	65	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110		
20	39	44	49	54	59	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104		
30	35	40	45	50	55	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100		
50	=	36	41	46	51	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96		
100		=	=	40	45	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90		
200				=	39	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84		
300					=	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80		
500						=	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76		
1000							=	=	=	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70		
2000										=	=	=	38	40	42	44	46	48	50	52	54	56	58	60	62	64		
3000													=	=	38	40	42	44	46	48	50	52	54	56	58	60		
5000															=	=	38	40	42	44	46	48	50	52	54	56		

### Note:

This chart displays the theoretical decibel attenuation in perfect conditions in an open area without obstruction. In addition, the sound frequency of the signal used will have a marked effect on the decibel reading at any given point. A much lower the sound frequency will achieve a higher dB rating over longer distances (say + 3dB against this table) than a much higher sound frequency (say -3dB)



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### Types of Warning Signals - Visual

#### Incandescent Beacons

Produces light with a wire filament heated to a high temperature by an electric current passing through it, until it glows and creates a bright light. These lamps have been incorporated into warning beacons in the following ways:

#### Rotating Beacons

A parabolic reflector, driven by an electric motor, revolves around a continuously illuminated bulb on the vertical axis of the beacon creating a powerful beam of light travelling through 360 degrees.

In general, this type of beacon has a greater degree of light output than other models but this is reduced as the parabolic reflector only illuminates one given point at a time.

#### Flashing Filament

Operating through an internal circuit, which simply cycles the bulb On, and Off. These types of beacons generally give a much lower light output as it takes longer for the bulb to fully illuminate itself.

The effective brightness can be increased by the use of a Dioptric (Fresnal) lens which is placed over the internal lamp, capturing the light emitted, magnifying and directing it to create a more effective warning signal. In terms of light coverage this type of beacon is more efficient as it illuminates the total surface constantly through 360 degrees.

#### Static Filament (Continuous) Beacons

These units are identical to Flashing Filament beacons with the exception that they do not operate through an On, and Off cycle. When the unit is energised the light source stays permanently 'On'. The main advantage of this type of beacon is that the light can be controlled by a separate source ie a control panel, giving the unit more flexibility.

#### Xenon (Strobe) Beacons

A discharge capacitor operating through a converter circuit ignites xenon gas inside a tube creating a brilliant flash of light. Xenon gas ignites virtually instantaneously so maximum brightness is obtained immediately. This signal can be improved further by the use of a Dioptric (Fresnal) lens as described earlier. In some Moflash models a 'Double Flash' option is also available which extends the signal duration making it more noticeable to the human eye.

Xenons have an added advantage of low current consumption combined with long life. The tube life of a xenon beacon is approximately 5 million flashes. These units are the most efficient available incorporating a 360 degree light output with the brightest and most effective visual signal.

#### LED Beacons - 'LED'

A light emitting diode (LED) is a semiconductor device that emits visible light when an electric current passes through it. The four major benefits of LED technology incorporated into warning beacons are:

- Low power requirement
- High efficiency
- Very long life
- Multiple Colour Signal options in a single beacon enclosure

Moflash offer a range of LED options, from beacons containing 8 off LEDs up to 144 off LEDs in a single enclosure. They can be set in various modes of operation from **Flashing, Static and Rotating**. Some beacons have a combined **Audible & Visual** option. **Ethernet** compatible and **PLC** controllable beacons also make up the range along with high 'Ingress Protection' enclosures.

#### Levels of Brightness

Brightness depends upon the type of beacon chosen, the rated power output of the unit ie Watts and Joules, the distance that the signal is observed from and the dome colour of the beacon used. In general, if the viewing distance is doubled, the light intensity observed is reduced to a quarter and if the distance is quadrupled the light intensity is reduced to a sixteenth.

#### Beacon Lens Colours

The intensity of the light can be greatly reduced as it passes through the dome of the beacon. The extent of this reduction is dependent upon:

- The type of light source used ie conventional filament (Incandescent) bulb, tungsten halogen bulb or a xenon tube.
- The colour of the beacon lens that is used.

The table below gives an indication of the percentage of light that will pass through the beacon dome for different light sources and dome colours.

COLOUR	FILAMENT	HALOGEN	XENON
Clear	100%	100%	100%
Amber	70%	70%	70%
Red	30%	27%	23%
Green	12%	15%	25%
Blue	8%	10%	13%

Dome colours convey different messages to the observer.

<b>RED</b>	= Serious danger act now!
<b>AMBER</b>	= Warning proceed with care
<b>GREEN</b>	= OK proceed as normal
<b>BLUE</b>	= Specific process notice/warning

Alternatively, green colour beacons are used by Doctors and Veterinarians and blue beacons for the Police and Fire departments.



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### IP Ratings

The IP 'Ingress Protection' rating system provides a means of classifying the Degrees of protection from dust and water afforded by electrical equipment and enclosures. The system is recognised in most countries and is set out in BS EN60529 1992 Degrees of Protection.








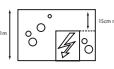
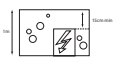

#### First Number

Protection Against Solids

IP	Test
0 	No protection
1 	Protection against solid objects over 50mm eg accidental touch by hands
2 	Protection against solid objects over 12mm eg fingers
3 	Protection against solid objects over 2.5mm (tools & wires)
4 	Protection against solid objects over 1mm (tools, wires & small wires)
5 	Protection against dust - limited Ingress (no harmful deposit)
6 	Totally protected against dust

#### Second Number

Protection Against Liquids

IP	Test
0 	No protection
1 	Protection against vertically falling drops of water
2 	Protection against direct sprays of water up to 15° from the vertical
3 	Protection against sprays 60° from the vertical
4 	Protection against water sprayed from all directions - limited Ingress permitted
5 	Protection against low pressure jets of water sprayed from all directions - limited Ingress permitted
6 	Protection against strong pressure jets of water eg for use on shipdecks - limited Ingress permitted
7 	Protection against the effects of temporary immersion between 15cm and 1m. Duration of test 30 minutes
8 	Protection against long periods of immersion under pressure
9k 	Protection against strong pressures jets of water (80-100 bar) at a temperature of 80°C for durations of 30 seconds. Simulating pressure cleaning conditions on a plan floor (Food Industry etc)



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### The CE Mark

The Moflash products that show the CE mark, are deemed to comply, where applicable, with the EMC Directive No: 89/366/EEC and additional amendments, regarding Electromagnetic Compatibility which states that 'An electrical product must not be susceptible to, or generate certain levels of, electromagnetic interference liable to interfere with other electronic equipment', and the LVD Directive No: 2006/95/EC regarding low voltage electrical material which states that 'Electrical equipment within the voltage ranges of 50 to 1000v Ac and 75 to 1500v Dc are constructed within the principles of good engineering practice and provide adequate levels of protection against an electric shock'.

### The Machinery Directive 2006/42/EC

These directives are designed to harmonise wide range health and safety requirements in machinery design and daily use by indicating a potential hazard by the use of an immediately recognisable audible or visual warning signal.

### prEN 842 Safety of Machinery: Visual Warning Signals

Classifies the type of warning light and specifies the characteristics the warning light must achieve to conform to the machine directive.

### Warning Signals

Visual warning signals must be at least five times brighter than the area where they are used.

### Danger Signals

Clearly visible even in strong light, distinguishable from other lights and Visual warning signals and be understood immediately.

### Emergency Signals

These have the highest priority and must be at least ten times brighter than the area that they are to be used in and understood immediately.

### IEC 60073 - Colours of Luminous Indicators &

#### Push Buttons

Establishes the various meanings of coloured luminous indicators and push buttons to conform to the machine directive.

#### Colour: **RED**

DANGER ACT NOW

- Danger of live or unguarded
- Moving machinery or essential
- Equipment in protected zone

#### Colour: **AMBER**

WARNING: PROCEED WITH CARE

- Temperature of pressure different from normal level

#### Colour: **GREEN**

SAFETY PRECAUTION: GO AHEAD

- Checks complete the machine is about to start

#### Colour: **BLUE**

SPECIFIC MEANING GIVEN DEPENDING ON SITUATION

- Pre-set ready or remote control

#### Colour: **CLEAR**

NO SPECIFIC MEANING

- Could confirm an earlier message

All Moflash coloured domes are manufactured from 'UV' stable polycarbonate plastic that will not tarnish, fade or become brittle over a period of time unlike many domes available that are produced from Acrylic plastic.







# SELECTION & APPLICATION

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### Icon Legends



 <b>FPM 60</b>	Single or Double flashes per minute.	Flashes Simples o Dobles por minuto. Muestra que la unidad tiene una opcion de doble flash	Einfacher oder doppelter Blitz pro Minute. Zeigt an, dass das Geraet ueber eine Doppelblitz-Funktion verfuegt	Signaux clignotants simples ou doubles par minute. Indique que l' unite est equipee d' une option de signal clignotant double	Flash singoli o doppie al minute. Indica che il dispositivo puo fornire flash doppi	
 <b>FPM</b>	Shows the unit has a double flash option.					
 <b>RPM 120</b>	Revolutions per minute	Revoluciones por minuto	Umdrehungen pro Minute	Tours / minute	Giri al minuto	
<b>IP 65</b>	Ingress Protection of the unit	Grado de proteccion IP	Schutzart	Protection de l' unite	Indice di protezione del dispositivo	
 <b>°C -25+55</b>	Operating Temperature in Centigrade	Temperatura de funcionamiento	Betriebstemperatur	Températures de service l' unite	Temperatura di funzionamento in gradi centigadi	
<b>Kg 0.20 to 0.3</b>	Boxed weight including the Dome	Peso empaquetado incluída la cupula	Gewicht einschließlich Haube und Verpackung	Poids conditionne, y compris partie superieure	Peso inscatolato con calotta	
 <b>50/60 Hz</b>	Operates on a frequency of 50/60 Hz Ac	Funciona a una freceuncia de 50/60 Hz Ac	Nennfrequenz: 50/60 Hz	Fonctionne sur une frequence de 50/60 Hz CA	Funziona con 50/60 Hz in CA	
<b>dB 90</b>	Indicates Decibel level at 1 meter	Indica el nivel de decibelios a 1 metro	Lautstaerke in dB bei 1 m Abstand	Indique le niveau de decibel a 1 m	Indica 1 dB a 1m	
 <b>MARINE</b>	Suitable for use in marine applications.	Utilizable en aplicaciones maritimas	Geeignet zum Einsatz im Bereich Schiffsbau und Marine	Approprie aux applications en milieu naval	Idonei per applicazoni navali	
 <b>FIRE</b>	Suitable for use in fire alarm systems	Utilizable en sistmas de alarma anti incendios	Geeignet zum Einsatz in Brandmeldeanlagen	Approprie aux installations de lutte contre le feu	Idonei per impianti antincendio	
 <b>INDUSTRIAL</b>	Suitable for use in industrial applications	Valido para uso en aplicaciones industriales	für Anwendungen im Industriebereich geeignet	Convient aux applications industrielles	Adatto per impiego nel settore industriale	
 <b>AUTOMOTIVE</b>	Suitable for use in automotive applications	Valido para uso en aplicaciones de automocion	für Anwendungen in der Automobilindustrie geeignet	Convient aux applications automobiles	Adatto per impiego nel settore dell'auto	
 <b>OBSTACLE MARKING</b>	Suitable for obstacle marking applications	Valido para uso en aplicaciones de balizamiento	Hindernisbefeuerung	Convient aux applications de marquage d' obstacle	Adatto per segnalazione ostacolo aereo	
 <b>EXPLOSION PROOF</b>	Suitable for eplosive proof applications to ATEX/ IECEx approval	Valido para uso en aplicaciones en zonas de riesgo con certification ATEX/IECEx	Geeignet zum Einsatz in explosionsgeschuetzten Bereichen mit Atex- und IECEx-Zulassung	Convient aux applications antideflagrantes repondant a la norma ATEX/IECEx	Adatto per impeigo in atmosfera esplosiva secondo omologazione ATEX/ IECEx	
<b>Lens Colours</b>	<b>01</b>	<b>Amber</b>	<b>Ambar</b>	<b>Gelb</b>	<b>Jaune</b>	<b>Arancio</b>
	<b>02</b>	<b>Red</b>	<b>Rojo</b>	<b>Rot</b>	<b>Rouge</b>	<b>Rosso</b>
	<b>03</b>	<b>Blue</b>	<b>Azul</b>	<b>Blau</b>	<b>Bleu</b>	<b>Blu</b>
	<b>04</b>	<b>Green</b>	<b>Verde</b>	<b>Gruen</b>	<b>Vert</b>	<b>Verde</b>
	<b>05</b>	<b>Clear</b>	<b>Transparente</b>	<b>Klar</b>	<b>Transparent</b>	<b>Incolore</b>



## SELECTION & APPLICATION

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### Environments with Potentially Explosive Atmospheres

Moflash offers a range of Audible & Visual warning signals along with manual activation devices that have been designed for use in harsh environmental conditions & potentially explosive atmospheres or as sometimes known, Hazardous Areas or Hazardous Locations.

All of these products comply with European ATEX directive 94/9/EC (to be superseded by 2014/34/EU 20th April 2016) and the International Electrical Commission (IEC) for Explosion atmospheres IECEx.

Moflash ATEX & IECEx certificates have been issued by DNV NEMKO Norway.

These directives help classify areas where hazardous explosive atmospheres may occur into zones. The classification given to a particular zone, and its size and location, depends upon the likelihood of an explosive atmosphere occurring and its persistence if it does. Areas that have been classified into zones must be protected from effective sources of ignition. The equipment & protective systems intended to be used in zoned areas must meet the requirements of the ATEX directive.

Zone Classification		
European and IEC Classification	Definition of zone or division.	North American Classification
<b>Zone 0</b> (Gases/Vapors)	An area in which an explosive mixture is continuously present or present for long periods.	Class I Division 1 (gases)
<b>Zone 1</b> (Gases/Vapors)	An area in which an explosive mixture is likely to occur in normal operation.	Class I Division 1 (gases)
<b>Zone 2</b> (Gases/Vapors)	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)
<b>Zone 20</b> (Dusts)	An area in which an explosive mixture is continuously present or present for long periods.	Class II Division 1 (dusts)
<b>Zone 21</b> (Dusts)	An area in which an explosive mixture is likely to occur in normal operation.	Class II Division 1 (dusts)
<b>Zone 22</b> (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 II Division 2 (dusts)

### Gas Groups

Explosive gases, vapors and dusts have different chemical properties that affect the likelihood and severity of an explosion. Such properties include flame temperature, minimum ignition energy, upper and lower explosive limits, and molecular weight. Empirical testing is done to determine parameters such as the maximum experimental safe gap, minimum ignition current, explosion pressure and time to peak pressure, spontaneous ignition temperature, and maximum rate of pressure rise. Every substance has a differing combination of properties but it is found that they can be ranked into similar ranges, simplifying the selection of equipment for hazardous areas.

Flammability of combustible liquids are defined by their flash-point. The flash-point is the temperature at which the material will generate sufficient quantity of vapor to form an ignitable mixture. The flash point determines if an area needs to be classified. A material may have a relatively low autoignition temperature yet if its flash-point is above the ambient temperature, then the area may not need to be classified. Conversely if the same material is heated and handled above its flash-point, the area must be classified.

Each chemical gas or vapour used in industry is classified into a gas group.

Group	Representative Gases
<b>I</b>	All Underground Coal Mining, Firedamp (methane)
<b>IIA</b>	Industrial methane, propane, petrol and the majority of industrial
<b>IIB</b>	Ethylene, coke oven gas and other industrial gases
<b>IIC</b>	Hydrogen, acetylen, carbon disulphide

Group IIC is the most severe group. Hazards in this group can be ignited very easily indeed. Equipment marked as suitable for Group IIC is also suitable for IIB and IIA. Equipment marked as suitable for IIB is also suitable for IIA but NOT for IIC. If equipment is marked, for example, Ex d IIC then it is suitable for all subgroups IIA, IIB and IIC.

A list must be drawn up of every chemical gas or vapor that is on the refinery/chemical complex and included in the site plan of the classified areas. The above groups are formed in order of how volatile the gas or vapor would be if it was ignited, IIC being the most volatile and IIA being the least. The groups also indicate how much energy is required to ignite the gas by spark ignition, Group IIA requiring the most energy and IIC the least.

### Effective Ignition Sources

Is a term defined in the ATEX directive as an event which, in combination with sufficient oxygen and fuel in gas, mist, vapour or dust form, can cause an explosion. Effective sources of ignition are:

- Lightning strikes
- Open flames
- Mechanically generated impact or friction sparks
- Electric sparks,
- Very high surface temperatures
- Electrostatic discharge & Adiabatic compression etc



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### Equipment Protection Level

In recent years also the Equipment Protection Level (EPL) is specified for several kinds of protection. The required Protection level is linked to the intended use in the zones described below:

Group	Ex risk	Zone	EPL	Minimum type
I (mines)	energized		Ma	
I (mines)	de-energized in presence of Ex atmosphere		Mb	
II (gas)	explosive atmosphere > 1000 hrs/yr	0	Ga	ia, ma
II (gas)	explosive atmosphere between 10 and 1000 hrs/yr	1	Gb	ib, mb, px, py, e, o, q, s
II (gas)	explosive atmosphere between 1 and 10 hrs/yr	2	Gc	n, ic, pz
III (dust)	explosive surface > 1000 hrs/yr	20	Da	ia
III (dust)	explosive surface between 10 and 1000 hrs/yr	21	Db	ib
III (dust)	explosive surface between 1 and 10 hrs/yr	22	Dc	ic

### Temperature Classification

Another important consideration is the temperature classification of the electrical equipment. The surface temperature or any parts of the electrical equipment that may be exposed to the hazardous atmosphere should be tested that it does not exceed 80% of the auto-ignition temperature of the specific gas or vapor in the area where the equipment is intended to be used.

The temperature classification on the electrical equipment label will be one of the following (in degree Celsius):

USA °C		International (IEC) °C	Germany °C Continuous - Short Time
T1 - 450	T3A - 180	T1 - 450	G1: 360 - 400
T2 - 300	T3B - 165	T2 - 300	G2: 240 - 270
T2A - 280	T3C - 160	T3 - 200	G3: 160 - 180
T2B - 260	T4 - 135	T4 - 135	G4: 110 - 125
T2C - 230	T4A - 120	T5 - 100	G5: 80 - 90
T2D - 215	T5 - 100	T6 - 85	
T3 - 200	T6 - 85		

The above table tells us that the surface temperature of a piece of electrical equipment with a temperature classification of T3 will not rise above 200 °C.

### Auto-ignition Temperatures

The auto-ignition temperature of a liquid, gas or vapor is the temperature at which the substance will ignite without any external heat source. The exact temperature value determined depends on the laboratory test conditions and apparatus. Such temperatures for common substances are:

Gas	Temperature
Methane	580 °C
Hydrogen	560 °C
Propane	493 °C
Ethylene	425 °C
Acetylene	305 °C
Naphtha	290 °C
Carbon Disulfide	102 °C

The surface of a high pressure steam pipe may be above the autoignition temperature of some fuel/air mixtures. Auto-ignition temperatures

### Auto-ignition Temperatures (dust)

The auto-ignition temperature of a dust is usually higher than that of vapours & gases. Examples for common materials are:

Substance	Temperature
Sugar	460 °C
Wood	340 °C
Flour	340 °C
Grain Dust	300 °C
Tea	300 °C



## SELECTION & APPLICATION

# MOFLASH

### Type of Protection

To ensure safety in a given situation, equipment is placed into protection level categories according to manufacture method and suitability for different situations. Category 1 is the highest safety level and Category 3 the lowest. Although there are many types of protection, a few are detailed below:

Ex Code	Description	Standard	Location	Use	
Flameproof	d	Equipment construction is such that it can withstand an internal explosion and provide relief of the external pressure via flamegap(s) such as the labyrinth created by threaded fittings or machined flanges. The escaping (hot) gases must sufficiently cool down along the escape path that by the time they reach the outside of the enclosure not to be a source of ignition of the outside, potentially ignitable surroundings. Equipment has flameproof gaps (max 0.006" (150 um)propane/ ethylene, 0.004" (100 um)acetylene/hydrogen)	IEC/EN 60079-1	Zone 1 if gas group & temp. class correct	Motors, lighting, junction boxes, electronics
Increased Safety	e	Equipment is very robust and components are made to a high quality	IEC/EN 60079-7	Zone 2 or Zone 1	Motors, lighting, junction boxes
Oil Filled	o	Equipment components are completely submerged in oil	IEC/EN 60079-6	Zone 2 or Zone 1	Switchgear
Sand/Powder/ Quartz Filled	q	Equipment components are completely covered with a layer of Sand, powder or quartz	IEC/EN 60079-5	Zone 2 or Zone 1	Electronics, telephones, chokes
Encapsulated	m	Equipment components of the equipment are usually encased in a resin type material	IEC/EN 60079-18	Zone 1 (Ex mb) or Zone 0 (Ex ma)	Electronics (no heat)
Pressurised/ purged	p	Equipment is pressurised to a positive pressure relative to the surrounding atmosphere with air or an inert gas, thus the surrounding ignitable atmosphere can not come in contact with energized parts of the apparatus. The overpressure is monitored, maintained and controlled.	IEC/EN 60079-2	Zone 1 (px or py), or zone 2 (pz)	Analysers, motors, control boxes, computers
Intrinsically safe	i	Any arcs or sparks in this equipment has insufficient energy (heat) to ignite a vapour Equipment can be installed in ANY housing provided to IP54. A 'Zener Barrier' or 'opto isol' or 'galvanic' unit may be used to assist with certification. A special standard for instrumentation is IEC/EN 60079-27, describing requirements forFieldbusIntrinsically Safe Concept (FISCO) (zone 0, 1 or 2)	IEC/EN 60079-25 IEC/EN 60079-11 IEC/EN60079-27	'ia': Zone 0 & 'ib': Zone 1 'ic: zone 2	Instrumentation, measurement, control
Non Incendive	n	Equipment is non-incendive or non-sparking. A special standard for instrumentation is IEC/EN 60079-27, describing requirements forFieldbus Non-Incendive Concept (FNICO) (zone 2)	IEC/EN 60079-15 IEC/EN 60079-27	Zone 2	Motors, lighting, junction boxes, electronic equipment
Special Protection	s	This method, being by definition special, has no specific rules. In effect it is any method which can be shown to have the required degree of safety in use. Much early equipment having Ex s protection was designed with encapsulation and this has now been incorporated into IEC 60079-18 [Ex m]. Ex s is a coding referenced in IEC 60079-0. The use of EPL and ATEX Category directly is an alternative for "s" marking. The IEC standard EN 60079-33 is made public and is expected to become effective soon, so that the normal Ex certification will also be possible for Ex-s	IEC/EN 60079-33	Zone depending upon	As its certification states

The types of protection are subdivided into several sub classes, linked to EPL: ma and mb, px, py and pz, ia, ib and ic. The a subdivisions have the most stringent safety requirements, taking into account more the one independent component faults simultaneously.

### Multiple Protection

Many items of EEx rated equipment will employ more than one method of protection in different components of the apparatus. These would be then labeled with each of the individual methods. For example a socket outlet labeled EEx'de' might have a case made to EEx 'e' and switches that are made to EEx 'd'.





INDUSTRIAL  
MATERIALS HANDLING  
PROCESS CONTROL & STATUS INDICATION  
MARINE  
FIRE & SECURITY  
EXPLOSION PROOF  
AUTOMOTIVE  
ICAO OBSTACLE MARKING



## Visual Signals - Industrial FLASHING FILAMENT BEACONS

### Industrial Flashing Filament Beacons > FF125 DIN & FFA125 Series

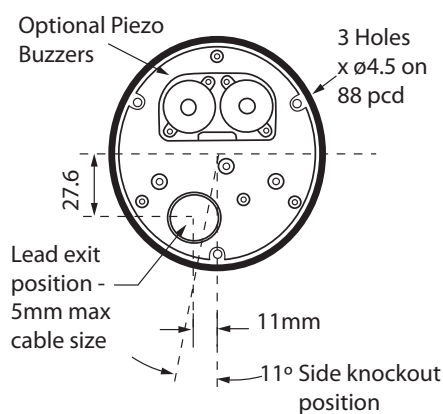
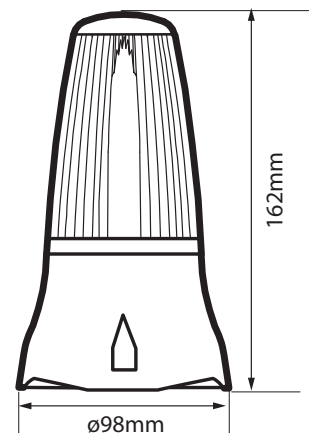
#### Product overview

The FF125 DIN and FFA125 series are suitable for security, process control & generally light industrial signalling applications.

These beacons are of the flashing mode type (single stage alarm). Once the beacon is energised the internal electronics will cycle the

Incandescent lamp through a 1Hz on/off sequence. The design allows for termination inside the enclosure via an M12 sealing grommet in the base.

The FFA version incorporates two piezo buzzers situated in the base of the unit that are synchronised to the flash rate (the buzzers cannot be controlled independently of the light) offering a combined audible & visual warning device.



#### Features

- Continuously rated
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### FF125 DIN & FFA125 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
FF125-90	12v Dc ---	Ba15d x 21w	1.75 A
FF125-91	24v Dc ---	Ba15d x 21w	0.88 A
FF125-92	115v Ac ~	Ba15d x 15w	0.13 A
FF125-93	230v Ac ~	Ba15d x 15w	0.07 A
<b>For Audible Option</b>			
FFA125-80	12v Dc ---	Ba15d x 21w	1.80 A
FFA125-81	24v Dc ---	Ba15d x 21w	0.90 A
FFA125-82	115v Ac ~	Ba15d x 15w	0.15 A
FFA125-83	230v Ac ~	Ba15d x 15w	0.08 A

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



**Kg** 0.25

**50/60 Hz**

**°C** -25+55

**IP** 65

**FPM** 60

**dB** 90

APPROVALS and  
CONFORMITIES



# Visual Signals - Industrial

## FLASHING FILAMENT BEACONS



FF201/200



FF401/400

### Industrial Flashing Filament Beacons > FF201/200 & FF401/400 Series

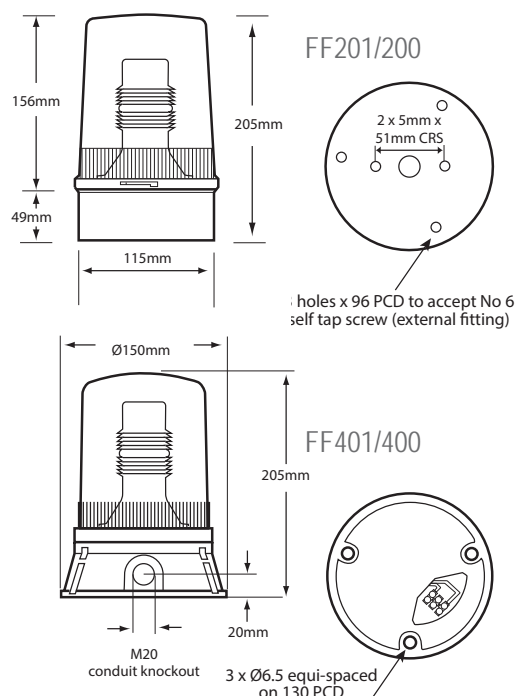
#### Product overview

The FF201/200 & FF401/400 series are suitable for security, process control and industrial applications where a more robust and powerful signal is required.

These beacons are of the flashing mode type (single stage alarm).

Once the beacon is energised the internal electronics will cycle the Incandescent/halogen lamp through a 1Hz on/off sequence.

The design allows for termination inside the enclosure through the base. The 15w and 21w units incorporate a Fresnel lens to maximise light intensity.



#### Features

- Continuously rated
- FF201/200: Suitable for surface, conduit box or wall mounting
- FF401/400: Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 point fix (FF201/200)  
3 point fix (FF401/400)
- FF401/400: M20 conduit side entry or bottom cable entry
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### FF201/200 & FF401/400 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
FF201-84	12v Dc ---	Ba15d x 21w	1.75 A
FF201-85	24v Dc ---	Ba15d x 21w	0.88 A
FF201-88	12v Dc ---	H1 x 55w	4.70 A
FF201-89	24v Dc ---	H1 x 70w	3.00 A
FF200-86	115v Ac ~	Ba15d x 15w	0.13 A
FF200-87	230v Ac ~	Ba15d x 15w	0.07 A
FF401-84	12v Dc ---	Ba15d x 21w	1.75 A
FF401-85	24v Dc ---	Ba15d x 21w	0.88 A
FF401-88	12v Dc ---	H1 x 55w	4.70 A
FF401-89	24v Dc ---	H1 x 70w	3.00 A
FF400-86	115v Ac ~	E14 x 60w	0.55 A
FF400-87	230v Ac ~	E14 x 60w	0.29 A

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

01 02 03 04 05

Kg 0.70 FF201/200  
0.80 FF401/400

50/60 Hz

°C -25+55

IP 65

FPM 60

INDUSTRIAL

APPROVALS and  
CONFORMITIES





# Visual Signals - Industrial

## STATIC FILAMENT BEACONS

SF201/200



SF401/400



### Industrial Static Filament Beacons > SF201/200 & SF401/400 Series

#### Product overview

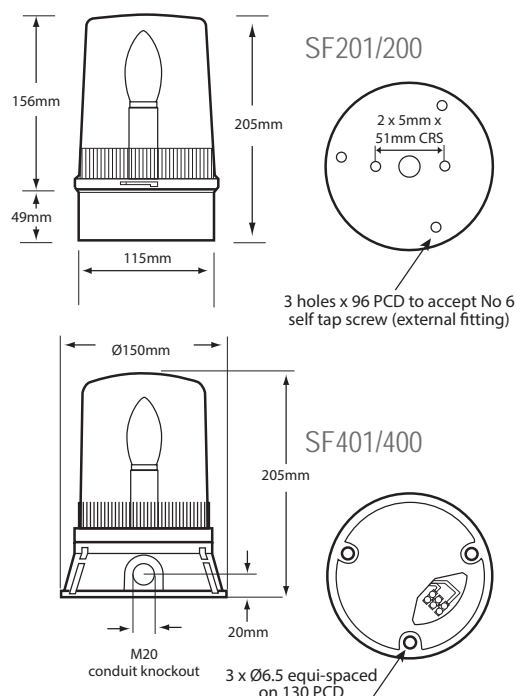
The SF201/200 & SF401/400 series are suitable for security, process control and industrial applications.

These beacons are of the Static mode type (single stage alarm).

Once the beacon is energised the Incandescent/Halogen lamp will stay

permanently on. An advantage of this type of beacon is that it can be controlled via a remote source (ie control panel / plc etc ) giving the beacon greater flexibility and offering a (flashing) second stage alarm.

The design allows for termination inside the enclosure through the base. The lower wattage units incorporate a Fresnel lens to maximise light intensity.



### SF201/200 & SF401/400 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
SF201-62	12v Ac/Dc ~	H1 x 55w	4.60 A
SF201-63	24v Ac/Dc ~	H1 x 70w	2.90 A
SF201-05	12v Ac/Dc ~	Ba15d x 48w	4.00 A
SF201-06	24v Ac/Dc ~	Ba15d x 48w	2.00 A
SF201-07	48v Dc ---	Ba15d x 35w	0.65 A
SF200-08	115v Ac ~	Ba15d x 60w	0.55 A
SF200-09	230v Ac ~	Ba15d x 60w	0.29 A
FL200-09	230v Ac ~	E27 x 9w (Fluorescent)	---
SF401-62	12v Ac/Dc ~	H1 x 55w	4.60 A
SF401-63	24v Ac/Dc ~	H1 x 70w	2.90 A
SF401-05	12v Ac/Dc ~	Ba15s x 48w	4.00 A
SF401-06	24v Ac/Dc ~	Ba15s x 48w	2.00 A
SF401-07	48v Dc ---	Ba15d x 35w	0.65 A
SF400-08	115v Ac ~	E14 x 60w	0.55 A
SF400-09	230v Ac ~	E14 x 60w	0.29 A

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



#### Features

- Continuously rated
- SF201/200: Suitable for surface, conduit box or wall mounting
- SF401/400: Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 point fix (SF201/200)  
3 point fix (SF401/400)
- SF401/400: M20 conduit side entry or bottom cable entry
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

Kg 0.76 SF201/200  
0.71 SF401/400

50/60 Hz

°C -25+55

IP 65



APPROVALS and  
CONFORMITIES





# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS



### Industrial LED Dual Function > LED80 Series

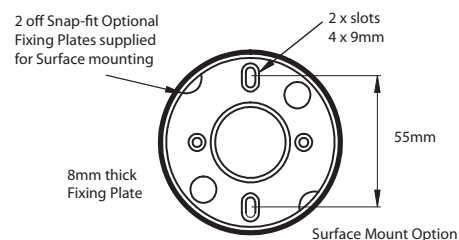
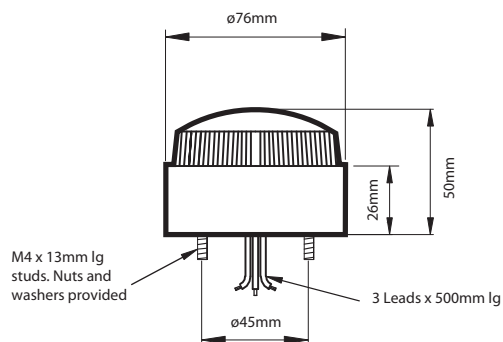
#### Product overview

The LED80 incorporates 12 ultra bright Surface Mount LEDs offering an economic solution for a wide range of general signalling solutions.

Ideally suited for local indication the beacon is controlled by either two wires (flashing mode) or three wires (static mode).

The beacons are supplied fully assembled and ready for immediate installation.

The unit offers two mounting options, either Stud Mount or Surface Mounting using the two piece fixing plate supplied. One plate is fixed to the appropriate surface the other to the beacon, the two plates then 'Snap Fit' together.



### LED80 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:	
LED80-02	10-100v Dc ---	LED Array	90 mA 200 mA	Flashing Static at 24v Dc ---
LED80-04	115/230v Ac ~	LED Array	20 mA	

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



#### Features

- LED long life
- Extra bright
- Continuously rated
- Wide operating voltage
- 120° prime light output from vertical axis
- Dustproof & submersible in water

#### Material

UV Stable Polycarbonate  
Lens and Body

Kg 0.14

°C -20+55

IP 67

FPM 60

INDUSTRIAL

FIRE

APPROVALS and  
CONFORMITIES



MARINE



LED100

## Visual Signals - Industrial LED ECO BEACONS

### Industrial LED ECO Beacons > LED100 Series

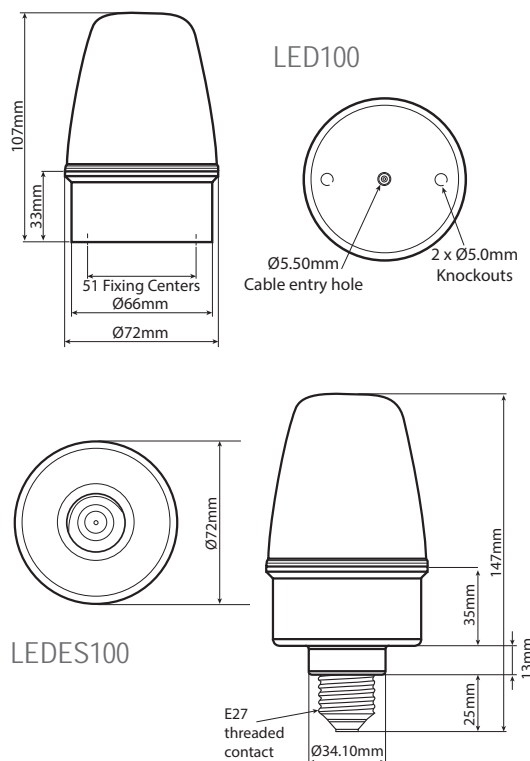
#### Product overview

The LED100 economy series is suitable for light commercial & industrial signalling applications where local indication is required.

These beacons have two selectable stages of alarm, flashing or continuous (static) mode, selectable by a jumper link on the PCB. The design also allows for a third wire connection giving flexibility to switch from a pre-set static mode to flashing (Not ES Version).

The LED ECO range has been designed predominantly to offer a cost effective solution against more traditional incandescent types of lamps, whether through new plant and machinery installations or existing facility upgrades. The design allows for termination inside the enclosure through the base (Not ES Version).

The ES Version has an E27 Edison Screw Cap fitted into the base of the beacon. This design lends itself for use in temporary signalling locations where a warning or hazard is not normally present, or has the ability to be installed in an area using existing electrical lighting points, avoiding any additional wiring.



### LED100 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
LED100-01	8-20v Ac/Dc ~	8 SMT LEDs	430mA •
LED100-02	20-30v Ac/Dc ~	8 SMT LEDs	110mA ••
LED100-03	48v Ac ~	8 SMT LEDs	tba
LED100-05	40-380v Dc --- 85-280v Ac ~	8 SMT LEDs	35mA •••
<b>ES Version</b>			
LEDES100-05	40-380v Dc --- 85-280v Ac ~	8 SMT LEDs	35mA

• at 12v Dc

•• at 24v Dc

••• at 230v Ac

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

01 02 04

#### Features

- Continuously rated
- LED long life
- Low current consumption
- Suitable for surface, conduit box or wall mounting
- Optional wall bracket & guard available (except ES version) - see accessories
- 2 point fix
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

Kg 0.11 LED100  
0.145 LEDES100

50/60 Hz

°C -25+55

IP 65

FPM 160

INDUSTRIAL

APPROVALS and  
CONFORMITIES





## Visual Signals - Industrial LED ECO BEACONS

### Industrial LED ECO Beacons > LEDD & LEDA 100 Series

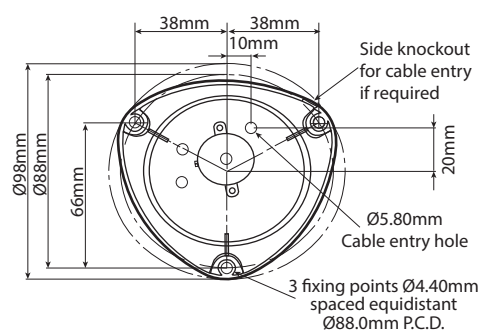
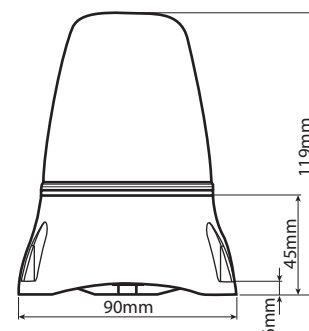
#### Product overview

The LEDD & LEDA 100 economy series are suitable for light commercial & industrial signalling applications where local indication is required. These beacons have two selectable stages of alarm, flashing or continuous (static) mode, selectable by a jumper link on the PCB. The design also allows for a third wire connection giving flexibility to switch from a pre-set static mode to flashing.

The LED ECO range has been designed predominantly to offer a cost effective solution against more traditional

incandescent types of lamps, whether through new plant and machinery installations or existing facility upgrades. The design allows for termination inside the enclosure through the base of the beacon enclosure.

The LEDA version incorporates one piezo buzzer situated in the base of the unit that is synchronised to the flash rate (the buzzer cannot be controlled independently of the light) offering a combined audible & visual warning signal.



### LEDD & LEDA 100 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
LEDD100-01	8-20v Ac/Dc ~	8 SMT LEDs	430mA •
LEDD100-02	20-30v Ac/Dc ~	8 SMT LEDs	110mA ••
LEDD100-03	48v Ac ~	8 SMT LEDs	tba
LEDD100-05	40-380v Dc --- 85-280v Ac ~	8 SMT LEDs	35mA •••
LEDA100-01	8-20v Ac/Dc ~	8 SMT LEDs	430mA •
LEDA100-02	20-30v Ac ~	8 SMT LEDs	110mA ••
LEDA100-03	48v Ac ~	8 SMT LEDs	tba
LEDA100-05	40-380v Dc --- 85-280v Ac ~	8 SMT LEDs	35mA •••

• at 12v Dc

•• at 24v Dc

••• at 230v Ac

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

01 02 04

#### Features

- Continuously rated
- LED long life
- Low current consumption
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

Kg 0.14

50/60 Hz

°C -25+55

IP 65

FPM 160

dB 80

APPROVALS and  
CONFORMITIES



INDUSTRIAL

# Visual Signals - Industrial

## LED ECO BEACONS



### Industrial LED ECO Beacons > LEDS 100 Series

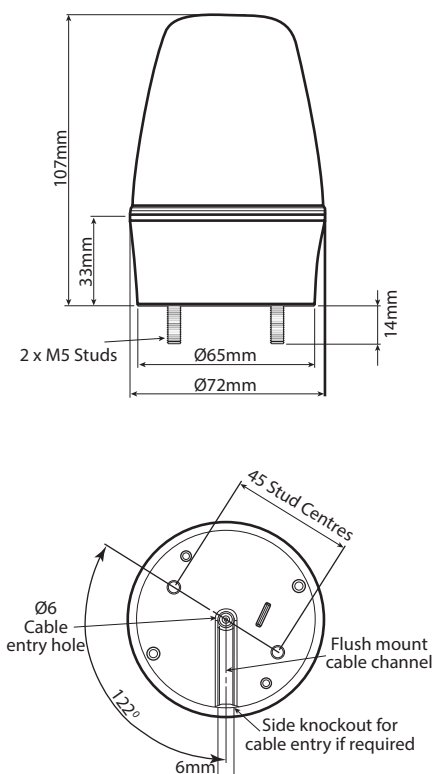
#### Product overview

The LEDS 100 economy series is suitable for light commercial & industrial signalling applications where local indication is required.

These beacons have two selectable stages of alarm, flashing or continuous (static) mode, selectable by a jumper link on the PCB. The design also allows for a third wire connection giving flexibility to switch from a pre-set static mode to flashing.

The LED ECO range has been designed predominantly to offer a cost effective solution against more traditional incandescent types of lamps, whether through new plant and machinery installations or existing facility upgrades.

This design allows for termination inside the enclosure through the base of the beacon, either from directly below or using a 6mm cabling channel at 90° to the base for surface cabling. The LEDS version incorporates two mounting studs 2 x 5mm on 45mm centres.



#### Features

- Continuously rated
- LED long life
- Low current consumption
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 stud fix
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### LEDS 100 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
LEDS100-01	8-20v Ac/Dc ~	8 SMT LEDs	430mA •
LEDS100-02	20-30v Ac/Dc ~	8 SMT LEDs	110mA ••
LEDS100-03	48v Ac ~	8 SMT LEDs	tba
LEDS100-05	40-380v Dc --- 85-280v Ac ~	8 SMT LEDs	35mA •••

• at 12v Dc

•• at 24v Dc

••• at 230v Ac

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

01 02 04

Kg 0.14

50/60 Hz

°C -25+55

IP 65

FPM 160

INDUSTRIAL

APPROVALS and  
CONFORMITIES





# Visual Signals - Industrial

## LED ECO BEACONS



### Industrial LED ECO Beacons > LED-TLM Series

#### Product overview

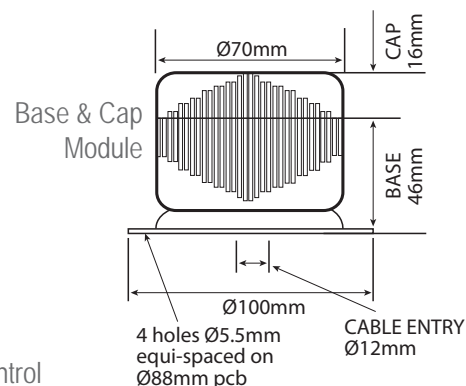
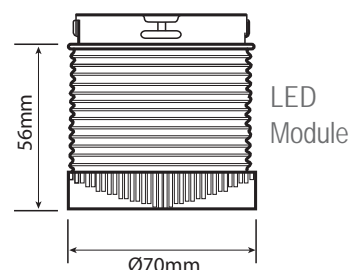
The LED Tower Light Module series is ideally suited for status indication in light commercial & industrial signalling applications where a local signal is required. These beacons have two selectable stages of alarm, flashing or continuous (static) mode, selectable by a slide switch on the PCB.

The LED TLM ECO range has been designed predominantly to offer a cost effective solution against more traditional incandescent types of lamps, whether through new plant

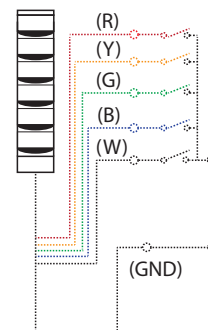
and machinery installations or existing facility upgrades.

The design is modular and is easily assembled. Colour modules are supplied with quick fix termination that simply push into male terminal in the module below to make a connection. Customer connections are into the base unit only.

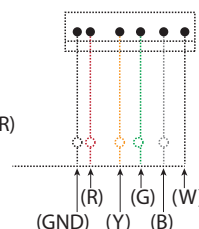
Audible modules are also available. The two ECO sounders units (Dc or Ac) offer up to 100dB and are either continuous or pulsed tone and rated at IP54. An additional high output sounder unit offers up to a 120dB and is either continuous or pulsed tone and is rated at IP65. Data sheets available.



#### Control Termination



#### Base Termination



#### Features

- Continuously rated
- LED long life
- Low current consumption
- Suitable for surface mounting
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### LED-TLM Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
LED-TLM-02	24v Dc ---	18 SMT LEDs	45mA
LED-TLM-04	85-275v Ac ~	18 SMT LEDs	75mA
LED-TLM-AUD-02	24v Dc ---	n/a	55mA
LED-TLM-AUD-04	85-275v Ac ~	n/a	20mA
LED-TLM-BC	Mounting Base and Cap		

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 0.70 (Light Module)  
0.12 (Base & Cap)

50/60 Hz

°C -25+55

IP 65

FPM 60

dB 100 Dc  
100/120 Ac

APPROVALS and  
CONFORMITIES



# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS



### Industrial LED Multi Functional Beacons > LEDD & LEDA 125 Series

#### Product overview

The LEDD and LEDA125 series are suitable for security, process control & industrial applications, where low maintenance and long life are the pre-requisite requirement.

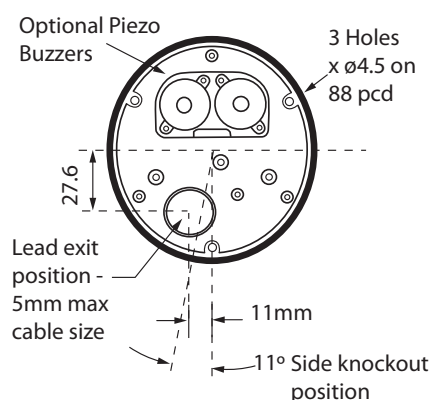
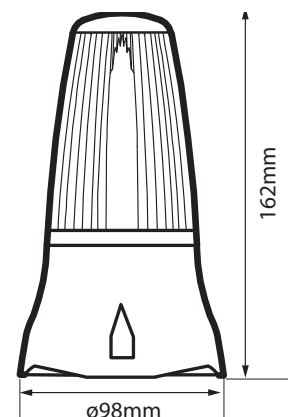
These beacons offer a three stage alarm option, selected by a jumper link on the PCB:

1. Continuous mode
2. Flashing mode at 1Hz
3. Flashing mode at 2Hz

An advantage of the Continuous mode is that it can be controlled via a remote

source (ie. control panel / plc etc ) offering the potential of remote flash option. The design for the DC unit allows for termination inside the enclosure via an M12 sealing grommet in the base. The AC units are supplied with a 1 metre flying lead.

The LEDA version incorporates two piezo buzzers situated in the base of the unit that are synchronised to the light mode (the buzzers can be controlled separately of the light on the DC version Only) offering a combined audible & visual warning device.



### LEDD & LEDA 125 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:				
			01	02	03	04	05
LEDD125-02	24v Dc ---	48 LEDs	150 mA	170 mA	170 mA	170 mA	170 mA
LEDD125-03	115v Ac ~	48 LEDs	60 mA	60 mA	60 mA	60 mA	60 mA
LEDD125-04	230v Ac ~	48 LEDs	40 mA	40 mA	40 mA	40 mA	40 mA

#### For Audible Option

LEDA125-02	24v Dc ---	48 LEDs	155 mA	175 mA	175 mA	175 mA	175 mA
LEDA125-03	115v Ac ~	48 LEDs	60 mA	60 mA	60 mA	60 mA	60 mA
LEDA125-04	230v Ac ~	48 LEDs	40 mA	40 mA	40 mA	40 mA	40 mA

Note: The technical specification listed above will only come into standard manufacture in the 2nd quarter of 2013.  
For current standard specification for these beacons go to our website.

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



#### Features

- Continuously rated
- LED long life and extra bright
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- 360° light output around the vertical axis.
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

Kg 0.57 Ac  
0.33 Dc

50/60 Hz

°C -20+45

IP 65

FPM 60/120

dB 90

APPROVALS and  
CONFORMITIES



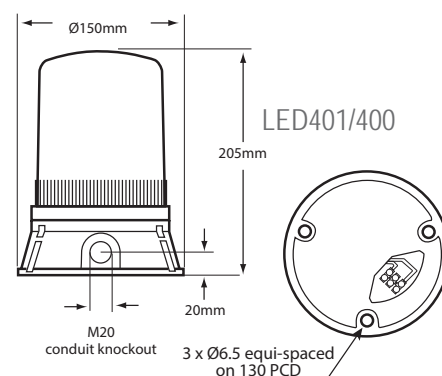
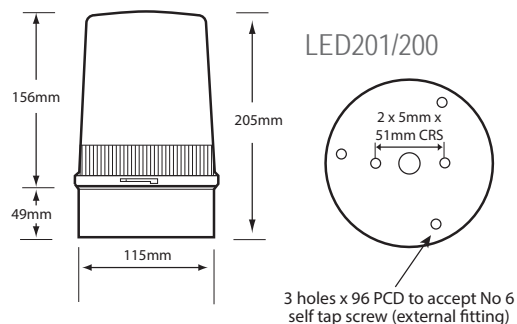
# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS

LED201/200



LED401/400



## Industrial LED Flashing Rotating Static Beacons > LED201/200 & LED401/400 Series

### Product overview

The LED201/200 and LED401/400 series are suitable for security, process control & industrial applications, where low maintenance and long life are the pre-requisite requirement.

These beacons offer a four stage alarm option, selected by a four way switch on the PCB:

1. Continuous mode
2. Flashing mode at 1Hz
3. Rotating mode: Twin column
4. Rotating mode: single column

An advantage of the continuous mode is that it can be controlled via a remote source (ie. control panel / plc etc) offering the potential of a remote flashing option. The design allows for termination inside the enclosure through the base.

### Features

- Continuously rated
- LED long life and extra bright
- LED201/200: Suitable for surface, conduit box or wall mounting
- LED401/400: Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- LED401/400: M20 conduit side entry or bottom cable entry.
- 360° light output around the vertical axis.
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

## LED201/200 & LED401/400 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:		
			Flashing	Rotating	Static
LED201-02	24v Dc ---	144 LEDs	0.25	0.20 ••	0.50 A
LED200-04 •	115/230v Ac ~	144 LEDs	0.09/0.05	0.12/0.06 ••	0.17/0.10 A
LED401-02	24v Dc ---	144 LEDs	0.25	0.20 ••	0.50 A
LED400-04 •	115/230v Ac ~	144 LEDs	0.09/0.05	0.12/0.06 ••	0.17/0.10 A

- Pre-set to 230v Ac ~ •• 2 Bar Rotating

Note: Current consumption is an average over a 60 second cycle

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 1.0 Ac  
0.6 Dc

50/60 Hz

°C -20+45

IP 65

FPM 60

RPM 140

APPROVALS and  
CONFORMITIES



# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS



### Industrial LED Beacons > LED450 Series

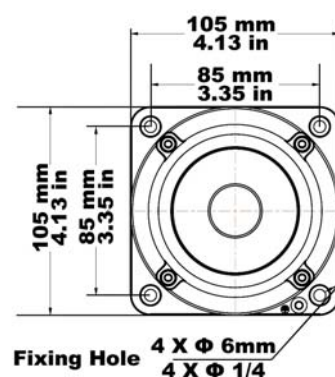
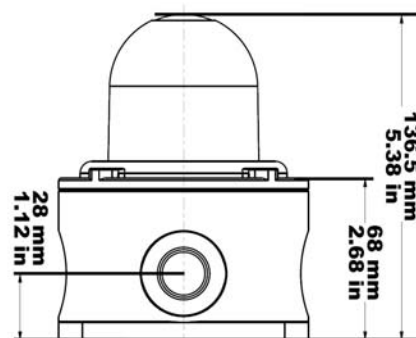
#### Product overview

The LED450 series is suitable for Industrial & Marine signalling applications where a visual signal is required to operate in very harsh environmental conditions.

The beacons incorporate an ultra bright LED array and offers a three stage alarm option.

The unit has a multiple flash rate setting, that can be set at installation, that ranges from 60 flashes per minute up to 120 flashes per minute to create a more noticeable warning signal to the human eye. A rotating light mode and a static (steady on) mode are also available.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments. Design allows for termination in the base.



#### Features

- LED long life
- Continuously rated
- High light output
- Suitable for surface or wall mounting
- Supplied as standard with 1 x M20 threaded side cable entry with provision for up to 4 supplied to special order
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable, Flame retardent polycarbonate

### LED450 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
LED450-18	12-48v Dc ---	LED 10W	1.1/0.53/0.24 A
LED450-22	100-240v Ac ~	LED 10W	0.08 A •

• at 230v Ac~

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 0.5

50/60 Hz

°C -40+70

IP 66

FPM 60x180

MARINE

APPROVALS and  
CONFORMITIES



INDUSTRIAL



# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS



### E-Flare Battery Operated > LED Portable Beacon

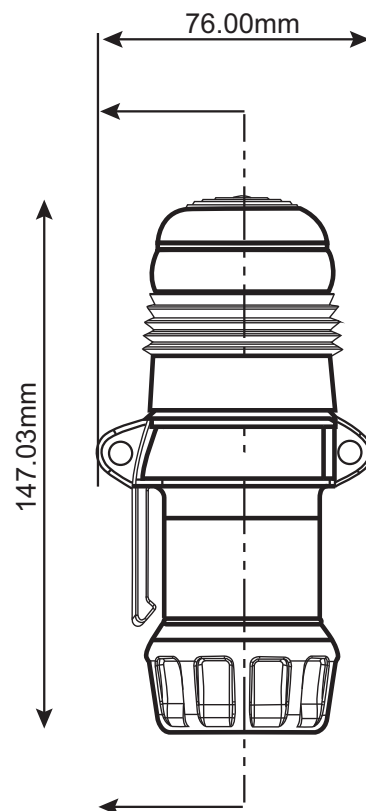
#### Product overview

Suitable for a wide range of applications the E-Flare beacon has been designed with versatility in mind. The unit provides a highly visible warning zone, day or night.

These beacons are single colour only and incorporate a failsafe activation switch to prevent

accidental turn on or off and come with a range of accessories.

The EF350 beacon is an economy option, powered by four 'AA' Cell Alkaline batteries (not supplied) that will provide at least 30 hours of peak brightness operation and comes with a lanyard (as standard) for hanging/wearing the unit.



### LED Portable Beacon > Ordering Information

Code No:	Voltage:	Light Source:
LED-P-EF350-01 (Amber)	3v Dc ---	4 LEDs
LED-P-EF350-01B (Amber Pk 12)	3v Dc ---	4 LEDs
LED-P-EF350-02 (Red)	3v Dc ---	4 LEDs
LED-P-EF350-02B (Red Pk 12)	3v Dc ---	4 LEDs

#### Accessories



50170	50172	50173	50174	50175	50176	50177	50178
Standard Base	Magnetic Clip	Cone Clip	Magnetic Base	Flotation Collar	Suction Cup	Daylight Hood	Carry Bag

#### Features

- Continuously rated
- LED long life
- Shock resistant
- Ultra quick installation
- Versatile accessory options
- 360° light output around the vertical axis
- Special bulk pack pricing
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Body

**Kg** 0.16

**°C** -20+50

**IP** 66

**FPM** 160

**INDUSTRIAL**

**AUTOMOTIVE**

**MARINE**

APPROVALS and  
CONFORMITIES



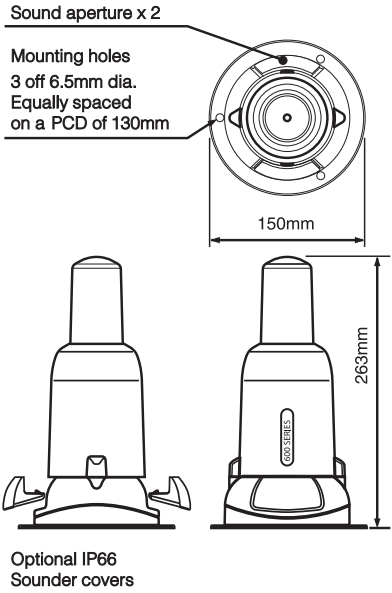


## Audible + Visual > Tri-Colour LED PLC Controllable Beacon

### Product overview

The Spectrum 600 Series utilises ultra-bright, tri-colour LEDs in one enclosure producing amber, green and red light in conjunction with two synchronised piezo sounders. The beacon is a cost-effective alternative to traditional stacking beacons and other process indication applications where multiple signal outputs, long life and low power consumption are

required. The Spectrum 600 comes totally assembled and ready for immediate installation. In addition, the enclosure incorporates a high Ingress Protection (IP) rating and is manufactured from a tough, UV stable polycarbonate plastic that makes the beacon suitable for harsh industrial and marine environments. The Spectrum 600 requires external input signals for it to function. If no PLC (or similar) is available, then the Spectrum Interface Unit gives the end user a control option.



## Spectrum 600 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:	
			Amber	Red/Green
LEDA600-01	24v Dc/230v Ac	Tri-Colour LED	350 mA	250 mA
LEDA600-03	24v Dc/115v Ac	Tri-Colour LED	350 mA	250 mA
50165 Interface	230v Ac ~		@ 24v Dc	
50166 Mounting Pole				
50004 Right-angled Wall Bracket				


### Features

- Three colours in one housing  
- **amber** **red** **green**
- 360° visibility
- LED long life and low power
- Combined beacon & piezo sounders
- 28 signal options
- PLC controllable
- Optional interface unit for non PLC operation
- Ethernet compatible
- Tough, UV stable polycarbonate housing
- IP66,67 69k

### Material

UV Stable Polycarbonate Plastic

**Kg** 0.85

 **50/60 Hz**

 **°C -35+55**

**IP 66 67 69k**

 **FPM 60x90**

**dB 90**

 **INDUSTRIAL**

 **MARINE**

APPROVALS and  
CONFORMITIES



## The Control Signal

The Control Signal must consist of a 5-bit word, which has to be assembled and transmitted in parallel mode to the Spectrum Beacon. The colour, flash frequency

and sound are independent of one another but a colour signal is necessary for the control word to be accepted, thus any word beginning with OO will not be accepted.

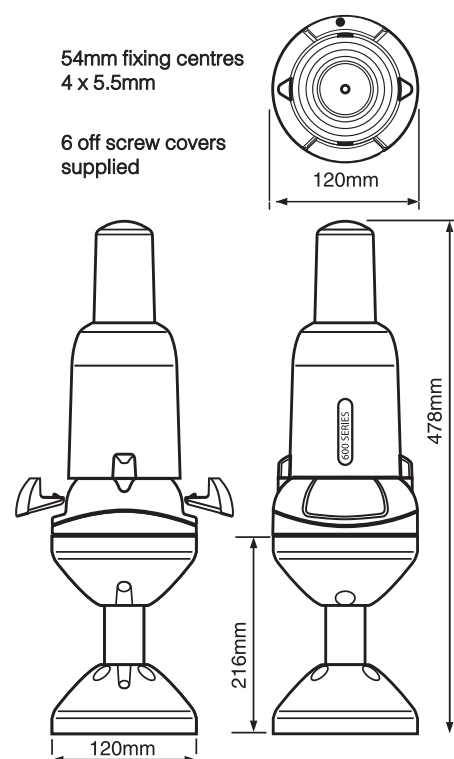
## 50165 Interface Unit (optional)

for further information download the Interface Datasheet from the website

The Interface Unit contains seven electrically isolated prioritised channels. Each channel accepts 24-230v Ac or 12-48v Dc input. A pre-selected audio and/or visual signal is supplied for each of the seven channels. In the event of no signal being applied, the beacon displays continuous green. The operating voltage for the unit is 230v Ac. The design allows for a 12v Dc auxiliary power supply for use in volt free applications. Additionally, the unit incorporates a battery back-up (not supplied) sufficient to maintain the unit for 12 hours in case of mains failure. Provision is made for mains failure to be signalled from the interface unit (device not supplied). The unit is supplied complete with mounting plate and cover. This can be installed either inside an existing enclosure or into a standard weatherproof 'Fibox' IP67 mounting box (ref: MNX PCM200/63 G).

## Technical Specification

<b>Type:</b>	LEDA600-01 LEDA600-03	24v Dc or 230v Ac 24v Dc or 115v Ac
<b>Light Source:</b>	Ultra-bright Tri-colour LEDs Amber 3.9 Effective Candela (390 mcd) Green 6.2 Effective Candela (620 mcd) Red 4.4 Effective Candela (440 mcd)	
<b>Signal Options:</b>	Continuous On Slow Flash 60 fpm Rapid Flash 1 90 fpm (0.11sec ON, 0.23sec OFF) Rapid Flash 2 90 fpm (0.23sec ON, 0.11sec OFF)	
<b>Sounder Type:</b>	Electronic Piezo Sounders x 2: 20mA dB@1m 90dB $\pm$ 3dB (horn covers not installed) Frequency 3.1Hz $\pm$ 500Hz Visual and audible signalling options can be combined - audible signal synchronised with beacon flash.	
<b>Operating Temp:</b>	-35°C to 55°C	Weight: 0.85kg
<b>Enclosure Material:</b>	UV Stable Polycarbonate Plastic	
<b>Ingress Protection:</b>	IP65 & IP67 as standard as one enclosure. IP66 with sounder covers fitted. Sounder covers can be fitted (snap-fixed) or permanently (adhered) into place. Sounder covers supplied as standard.	
<b>Beacon Control:</b>	The beacon is supplied with flying leads 2 x 1 metre. 4 core power cables and 6 core signal cables. For further information download the Technical Datasheet from the website.	



### Mounting Options

The beacon has three mounting options:

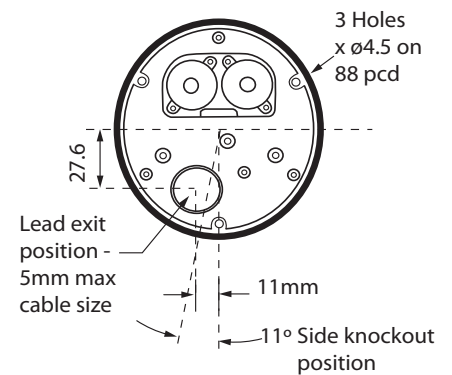
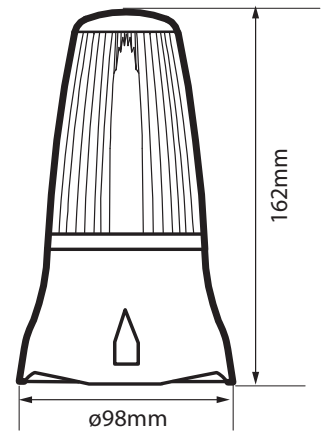
Surface Mount Plate  
(3 point DIN fix) fitted as standard.  
Side knockouts x 2 cabling in/out  
(15mm x 10mm).

Foot and Pole Mount (50166)

Right Angled Wall Bracket (50004)

# Visual Signals - Industrial

## LIGHT EMITTING DIODE BEACONS



### LED Tri-Colour Visual & Audible Beacon > LEDA125-01 PLC Controllable Series

#### Product overview

The LEDA125-01 offers maximum flexibility in terms of visual and audible requirements.

The beacon can produce 3 colours, Amber, Green and Red in conjunction with an audible signal. Two piezo sounders situated in the base of the unit can be

synchronised with any colour and flash rate required. The unit requires high or low voltage inputs to function (plc / relays etc).

Ideally suited to status control the beacon is a cost effective alternative to the traditional tower light. An M12 sealing grommet in the base allows for cable entry and termination inside the enclosure. Maximum cable size is 5mm.

#### Features

- Continuously rated
- LED long life and extra bright
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### LEDA125-01 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:	
LEDA125-01	24v Dc ---	48 SM LEDs	Amber Green/Red	350mA 250mA

**Kg** 0.33

**°C** -20+45

**IP** 65

**dB** 90

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES



R201/200



RA201/200



## Visual Signals - Industrial

### ROTATING BEACONS

## Industrial Rotating Beacons > R201/200 & RA201/200 Series

### Product overview

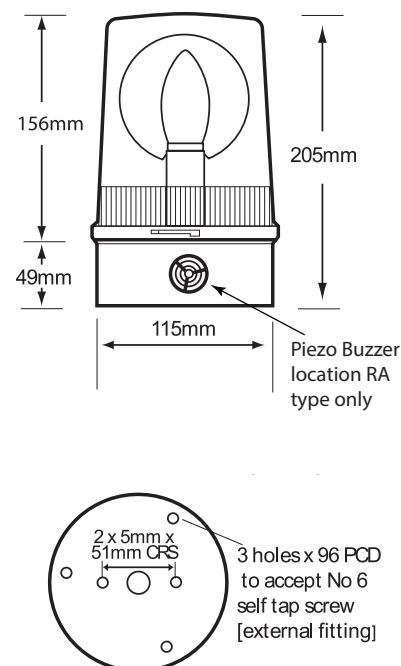
The R201/200 & RA201/200 series offer a cost effective, single stage alarm, suitable for a wide range of applications where a powerful & commanding signal is required.

It incorporates a parabolic reflector which, when energised, revolves around a continuously illuminated lamp. This creates a powerful beam of light that sweeps through 360 degrees. The

reflector is driven by a twin belt drive system that is powered by a series wound motor for 'AC' units and a permanent magnet motor for 'DC' units. The design allows for termination inside the enclosure through the base.

The RA201/200 series incorporates a piezo buzzer on the side of the base that is automatically activated when the light source is energised.

Independent buzzer control can be made to order.



## R201/200 & RA201/200 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
R201-13	12v Dc ---	H1 x 55w	4.70 A
R201-14	24v Dc ---	H1 x 70w	3.00 A
R201-29 •	24v Dc ---	Ba15s x 10w	0.60 A
R201-61 •	24v Dc ---	Ba15d x 21w	0.95 A
R201-63	24v Dc ---	Ba15d x 48w	2.00 A
R201-64	48v Dc ---	Ba15d x 35w	0.75 A
R200-03	24v Ac ~	Ba15d x 48w	2.00 A
R200-02	48v Ac ~	Ba15d x 35w	0.75 A
R200-04	115v Ac ~	Ba15d x 60w	0.55 A
R200-05	230v Ac ~	Ba15d x 60w	0.29 A

### For Audible Option

RA201-20	12v Dc ---	H1 x 55w	4.70 A
RA201-21	24v Dc ---	H1 x 70w	3.00 A
RA201-64	48v Dc ---	Ba15d x 35w	0.75 A
RA200-03	24v Ac ~	Ba15d x 48w	2.00 A
RA200-02	48v Ac ~	Ba15d x 35w	0.75 A
RA200-24	115v Ac ~	Ba15d x 60w	0.55 A
RA200-25	230v Ac ~	Ba15d x 60w	0.29 A

• Diode Polarised for Fire Alarm Systems

MB - Magnetic Base

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



### Features

- Continuously rated
- Suitable for surface, conduit box or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 point fix
- Magnetic base versions available
- Low current consumption options
- 360° light output around the vertical axis
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Mounting Base

Kg 0.83 R201/200  
0.86 RA201/200

50 Hz

°C -10+55

IP 65

RPM 160 Dc

RPM 120 Ac

APPROVALS and  
CONFORMITIES



dB 95 RA201/200



INDUSTRIAL



FIRE



# Visual Signals - Industrial

## ROTATING BEACONS



### Industrial Rotating Beacons > R401/400 Series

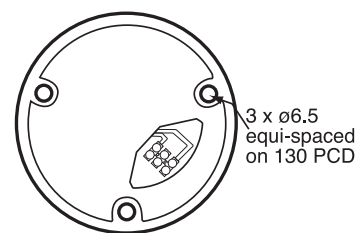
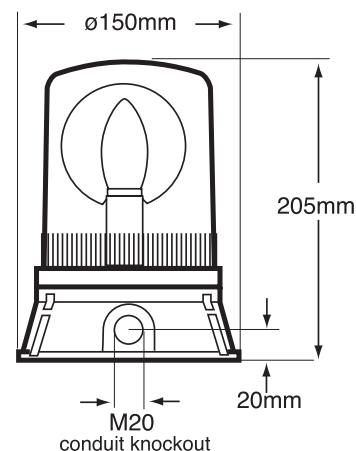
#### Product overview

The R401/400 series beacon is a cost effective, single stage alarm, suitable for a wide range of applications where a powerful & commanding signal is required.

It incorporates a parabolic reflector which, when energised, revolves around a continuously illuminated

lamp. This creates a powerful beam of light that sweeps through 360 degrees.

The reflector is driven by a twin belt drive system that is powered by a series wound motor for 'AC' units and a permanent magnet motor for 'DC' units. The design allows for termination inside the enclosure through the base.



### R401/400 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
R401-13	12v Dc ---	H1 x 55w	4.70 A
R401-14	24v Dc ---	H1 x 70w	3.00 A
R401-29 •	24v Dc ---	Ba15s x 10w	0.60 A
R401-60	12v Dc ---	Ba15d x 21w	1.85 A
R401-61 •	24v Dc ---	Ba15d x 21w	0.95 A
R401-62	12v Dc ---	Ba15d x 48w	4.00 A
R401-63	24v Dc ---	Ba15d x 48w	2.00 A
R401-64	48v Dc ---	Ba15d x 35w	0.75 A
R400-03	24v Ac ~	Ba15d x 48w	2.00 A
R400-02	48v Ac ~	Ba15d x 35w	0.75 A
R400-04	115v Ac ~	E14 x 60w	0.55 A
R400-05	230v Ac ~	E14 x 60w	0.29 A

• Diode Polarised for Fire Alarm Systems

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



#### Features

- Continuously rated
- Suitable for surface and wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- M20 conduit side entry or bottom cable entry
- Low current consumption options
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Mounting Base

**Kg** 0.98

~ 50 **Hz**

°C -10+55

**IP** 65

**RPM** 160 **Dc**

**RPM** 120 **Ac**

APPROVALS and  
CONFORMITIES



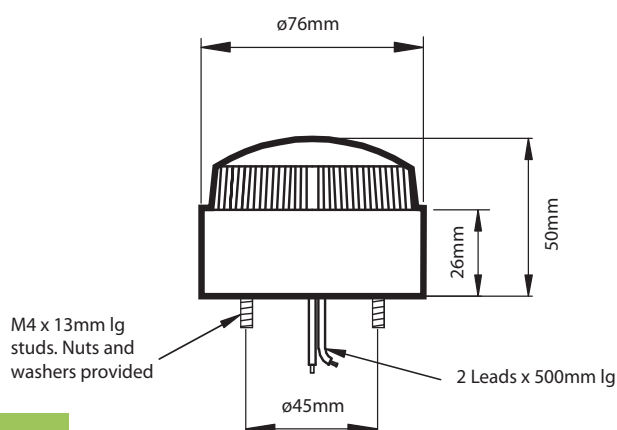
**FIRE**



**INDUSTRIAL**

# Visual Signals - Industrial

## XENON BEACONS



## Industrial Xenon Beacons > X80 Series

### Product overview

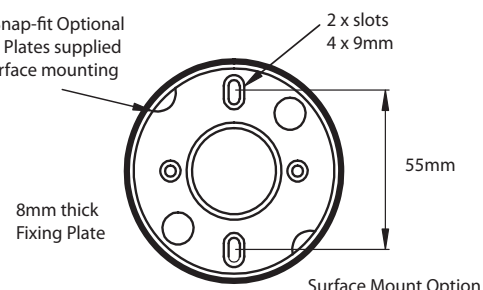
The X80 is a flashing mode type of beacon (single stage alarm) suitable for a wide range of 'local' signalling applications where a low cost and energy efficient solution is required.

Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white light by ionizing and

then discharging a large current through the xenon gas.

The unit comes fully assembled and ready for installation and has two mounting options, stud mount or surface mount using a two piece fixing plate supplied. One plate is fixed to the appropriate surface the other to the beacon, the two plates then 'snap fit' together.

2 off Snap-fit Optional Fixing Plates supplied for Surface mounting



## X80 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X80-01	18-30v Dc ---	Xenon 1.0 J	40 mA •
X80-02	10-100v Dc --- 20-72v Ac ~	Xenon 2.0 J	110 mA •
X80-04	115-230v Ac ~	Xenon 2.0 J	100 / 50 mA

- Average running current at 24v Dc over a 60 second cycle

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



### Features

- Continuously rated
- Wide operating voltage
- 120° prime light output from vertical axis
- Dustproof and submersible in water

### Material

UV Stable Polycarbonate Lens  
UV Stable Polycarbonate Base

Kg 0.13

°C -20+55

IP 67

FPM 60/65

INDUSTRIAL

FIRE

APPROVALS and  
CONFORMITIES



# Visual Signals - Industrial

## XENON BEACONS



X125 Series

X125 ES Version

## Industrial Xenon Beacons > X125 Series

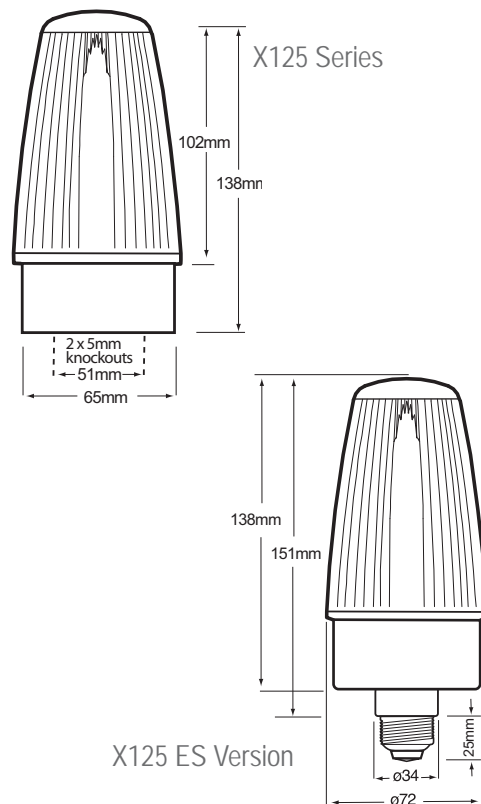
### Product overview

The X125 series are suitable for security, process control and light industrial applications where a lower cost and energy efficient solution is required.

These beacons are of the flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white light by ionizing and then discharging a large

current through the xenon gas. The design allows for termination inside the enclosure through the base (except ES version).

The ES version has an ES27 Edison Screw cap fitted into the base of the beacon. This design lends itself for use in temporary signalling locations where a warning or hazard is not normally present, or has the ability to be installed in an area using existing electrical lighting points, avoiding any additional wiring.



X125 ES Version

### Features

- Continuously rated
- Suitable for surface, conduit box or wall mounting (except ES version)
- Optional wall bracket & guard available - see accessories
- 2 point fix
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

## X125 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X125-Ac/Dc	10-100v Dc --- 20-72v Ac ~	Xenon 2.0 J	130 mA •
X125-55	115v Ac ~	Xenon 2.3 J	30 mA
X125-56	230v Ac ~	Xenon 2.7 J	21 mA
<b>ES Version</b>			
X125ES-51	115v Ac ~	Xenon 2.3 J	30 mA
X125ES-52	230v Ac ~	Xenon 2.7 J	21 mA

- At 24v Dc ---

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



**Kg** 0.17 X125  
0.20 X125ES

50/60 Hz

°C -25+55

IP 65

FPM 60

INDUSTRIAL

APPROVALS and  
CONFORMITIES



# Visual Signals - Industrial

## XENON BEACONS



### Industrial Xenon Beacons > X125 DIN Base Series

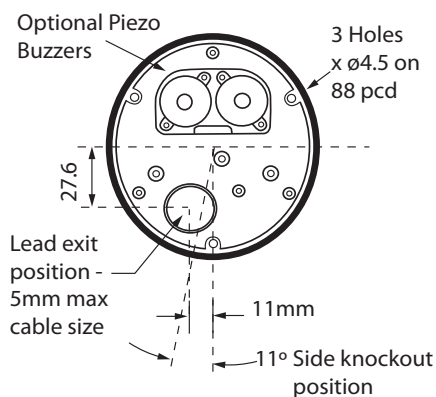
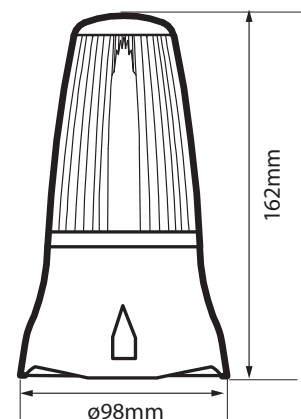
#### Product overview

The X125 DIN base series are suitable for security, process control & generally light industrial signalling applications.

These beacons are of the Flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white

light by ionizing and then discharging a large current through the xenon gas. The design allows for termination inside the enclosure via an M12 sealing grommet in the base.

The XA version incorporates two piezo buzzers situated in the base of the unit that can either be synchronised to the flash rate or controlled independently of the light offering a combined audible & visual warning device.



#### Features

- Continuously rated
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessory page
- 3 point fix
- 360° light output around the vertical axis
- 180° light output around the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### X125 DIN Base Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X125-64	10-100v Dc --- 20-72v Ac ~	Xenon 2.0 J	130 mA •
X125-62	115v Ac ~	Xenon 2.3 J	30 mA
X125-63	230v Ac ~	Xenon 2.7 J	21 mA
<b>Audible Option</b>			
XA125-63	230v Ac ~	Xenon 2.7 J	120mA ••

- at 24v Dc ---

- With both audible & visual signals operating at the same time

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



**Kg** 0.25 X125  
0.34 XA125

50/60 Hz

°C -25+55

IP 65

FPM 60

INDUSTRIAL

APPROVALS and  
CONFORMITIES



**dB** 90 XA125



## Acoustic & Visual Signals - Industrial

# XENON BEACONS

### Industrial Acoustic & Xenon Beacons > X194 Combination Series

#### Product overview

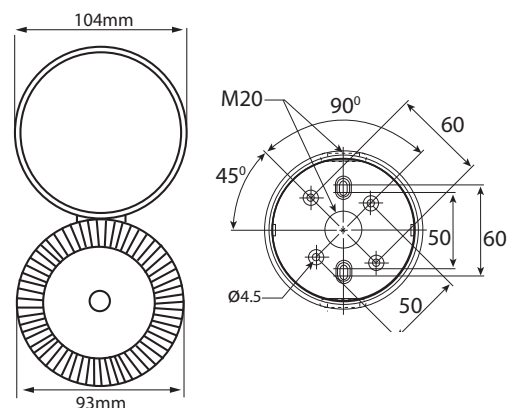
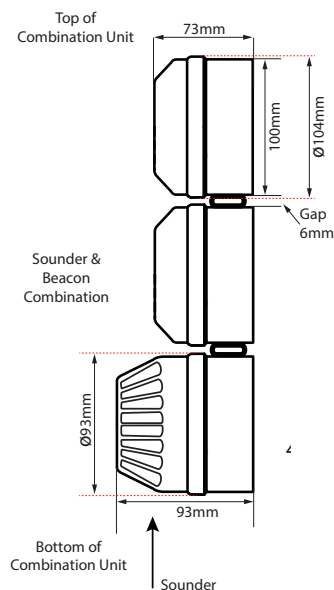
The X194 combination series is suitable for status indication, process control & industrial applications.

These units offer a versatile range of multi signalling combinations. Beacons are fitted together to give up to five different colour sequences with the addition of an audible option giving a possible six stage alarm device.

The Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white light by ionizing and then discharging a large current through the xenon gas.

The design allows for termination in the uppermost beacon through an M20 knockout either through top or rear of the enclosure.

All signals can be controlled independently from each other.



### X194 Combination Series > Ordering Information

Code No: Description: Voltage: Light Source: Current:

X194-02RD	Beacon only, Red Back Box	18-28v Dc ---	Xenon 2.5 J	180 mA
X194-02RS	Beacon / Sounder Red	18-28v Dc ---	Xenon 2.5 J	200 mA •
X194-02WH	Beacon only, White Back Box	18-28v Dc ---	Xenon 2.5 J	180 mA
X194-02WS	Beacon / Sounder White	18-28v Dc ---	Xenon 2.5 J	200 mA •

- Set at BS fire tone 104 dB

X194-05RD	Beacon only, Red Back Box	180-265v Ac ~	Xenon 5.0 J	110 mA
X194-05RS	Beacon / Sounder Red	180-265v Ac ~	Xenon 5.0 J	130 mA •
X194-05WH	Beacon only, White Back Box	180-265v Ac ~	Xenon 5.0 J	110 mA
X194-05WS	Beacon / Sounder White	180-265v Ac ~	Xenon 5.0 J	130 mA •

Eg X194-02RS-01-02-04 Part code follows colour sequence order from sounder (last digit dictates top position)  
(24v Dc Unit, Red Sounder & Back Box + Amber, Red, Green beacons with Red Back Boxes)

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



#### Features

- Continuously rated
- Suitable for wall mounting
- 120° prime light output above the vertical axis for the beacons
- Sounder has 32 selectable tones
- Red (RD) or White (WH) back box colour choice
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
VO Rated ABS Back Box

Kg 0.21 each Sounder  
0.22 each Beacon

50/60 Hz

°C -25+55

IP 65

FPM 60

INDUSTRIAL

APPROVALS and  
CONFORMITIES



dB 100-111

FIRE



# Visual Signals - Industrial

## XENON BEACONS



X195 & X197  
Deep Base Option



X195 Shallow Base Option

## Industrial Xenon Beacons > X195 / X197 Series

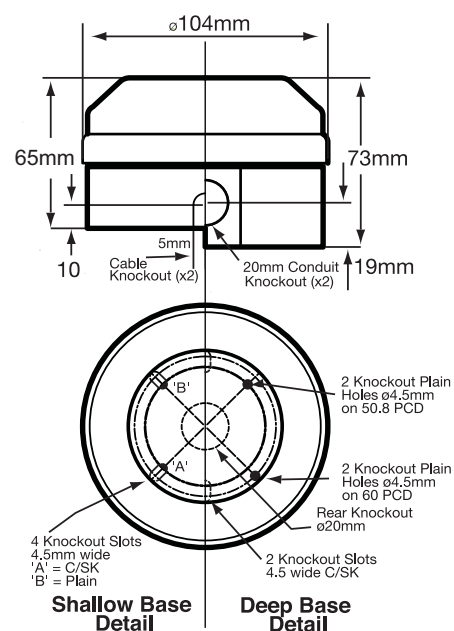
### Product overview

The X195 and X197 are suitable for security, process control & general industrial signalling applications.

These beacons are of the Flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white light by ionizing and then discharging a large current through the xenon gas. The design allows for

termination inside the enclosure. The X195 deep base version offers 2 x M20 side knockouts and 1 x M20 rear. The shallow base (low profile version) allows for cable entry of up to 5mm on the side of the unit (x2) and 1 x M20 knockout at the rear.

The X197 high power version only allows for internal connection via the M20 rear knockout. Due to the power rating the unit has a rated 'On' time of 2 hours in any six (see technical data sheet).



## X195 / X197 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
<b>5 Joules Version</b>			
X195-02WH-SB	15-28v Ac/Dc ~	Xenon 5.0 J	310 mA
X195-02WH	15-28v Ac/Dc ~	Xenon 5.0 J	310 mA
X195-05WH-SB	180-265v Ac ~	Xenon 5.0 J	110 mA
X195-05WH	180-265v Ac ~	Xenon 5.0 J	110 mA
<b>10 Joules Version</b>			
X197-02WH	24v Dc ---	Xenon 10.0 J	650 mA

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



### Features

- Continuously rated - Not X197
- Suitable for conduit box or wall mounting
- 120° prime light output above the vertical axis
- WH = White back box
- SB = Shallow base
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

Kg 0.25

50 Hz

°C -25+45

IP 65

FPM 60

INDUSTRIAL

APPROVALS and  
CONFORMITIES



FIRE



## Visual Signals - Industrial XENON BEACONS

### Industrial Xenon Beacons > X201-200 & X401-400 Series

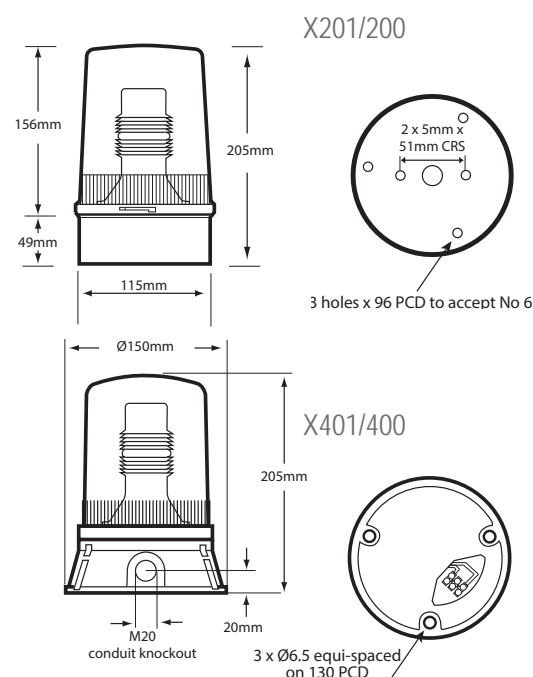
#### Product overview

The X201/200 and X401/400 are suitable for security & general industrial signalling applications where a more robust and powerful signal is required.

These beacons are of the Flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but very bright flash of white

light by ionizing and then discharging a large current through the xenon gas. The design allows for termination inside the enclosure.

This series incorporates an internal Fresnel lens designed to maximise the light intensity and has a double flash option (activated by a slide switch on the PCB) that extends the signal duration making it more noticeable to the human eye. The DC unit is factory set at 24v but a slide switch on the PCB can change it to 12v operation.



#### Features

- Continuously rated
- High light output
- X201/200: Suitable for surface, conduit box or wall mounting
- X401/400: Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 point fix (X201/200)  
3 point fix (X401/400)
- X401/400: M20 conduit side entry or bottom cable entry
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### X201-200 & X401-400 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X201-18 •	12/24v Dc ---	Xenon 10J / 7.5J	1.45 / 0.7 A
X201-19 ••	12/24v Dc ---	Xenon 10J / 7.5J	1.45 / 0.7 A
X200-88	24v Ac ~	Xenon 10J / 7.5J	0.72 A
X200-21	115v Ac ~	Xenon 10J / 7.5J	0.10 A
X200-22	230v Ac ~	Xenon 10J / 7.5J	0.06 A
X401-18 •	12/24v Dc ---	Xenon 10J / 7.5J	1.45 / 0.7 A
X401-19 ••	12/24v Dc ---	Xenon 10J / 7.5J	1.45 / 0.7 A
X400-88	24v Ac ~	Xenon 10J / 7.5J	0.72 A
X400-89 •••	48v Ac ~	Xenon 7J / 5J	0.37 A
X400-21	115v Ac ~	Xenon 10J / 7.5J	0.10 A
X400-22	230v Ac ~	Xenon 10J / 7.5J	0.06 A

- Pre-set at 24v Dc ---
- Diode Polarised for Fire Alarm Systems
- Ambient Temperature Range -25°C to +35°C

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 0.72 X201/200  
0.82 X401/400

50/60 Hz

°C -25+55

IP 65

FPM 60x90

INDUSTRIAL

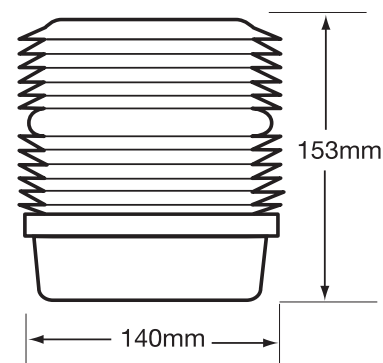
APPROVALS and  
CONFORMITIES



FIRE

# Visual Signals - Industrial

## XENON BEACONS



0.5" NPT Conduit Thread  
2 x 0.2" Ø Drillout  
Fixing Holes on 3.5" PCD

## Industrial Xenon Beacons > X201SD-200S Series

### Product overview

The X201SD-200S series are suitable for security & general industrial signalling applications where a more robust and powerful signal is required.

These beacons are of the Flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but very bright flash of white light by ionizing and then discharging a large current through the xenon gas.

The design allows for termination inside the enclosure. The internal electronics are encapsulated with a resin compound to protect against the harshest of environments, also offering additional protection from vibration.

This range of beacons incorporates a Fresnel design on the outside lens designed to maximise the light intensity and has a double flash as standard on the DC versions, single flash on the AC version.

### Features

- Continuously rated
- High light output
- Very robust construction
- Suitable for surface or wall mounting
- Optional wall bracket (not pre-drilled) & guard available - see accessories
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
Zinc Cast Metal Base

## X201SD-200S Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X201-SD-12	12-48v Dc ---	Xenon 11.0J	1.50 A •
X200S-240	240v Ac ~	Xenon 11.0J	0.05 A

- At 24v Dc ---

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 0.92

50/60 Hz

°C -35+66

IP 66

FPM 60 Ac 120 Dc

MARINE

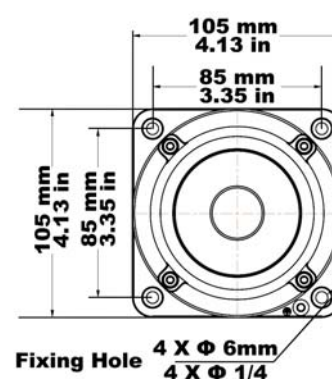
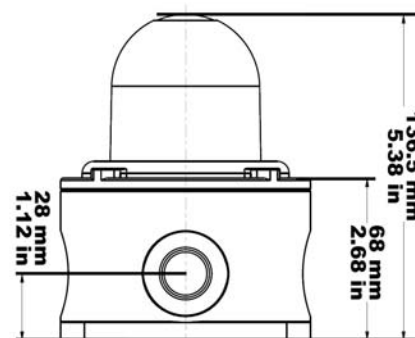
APPROVALS and  
CONFORMITIES



INDUSTRIAL



## Visual Signals - Industrial XENON BEACONS



### Industrial Xenon Beacons > X450 Series

#### Product overview

The X450 series is suitable for Industrial & Marine signalling applications where a visual signal is required to operate in very harsh environmental conditions.

The beacons are of the flashing mode type (single stage alarm). Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but bright flash of white light by ionizing and the discharging a large current through the xenon gas in the tube.

The beacon has multiple flash rate settings, that can be set at installation, that range from 60 flashes per minute up to 180 flashes per minute to create a more noticeable warning signal to the human eye.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments. Design allows for termination in the base.

#### Features

- Continuously rated
- High light output
- Suitable for surface or wall mounting
- Supplied as standard with 1 x M20 threaded side cable entry with provision for up to 4 supplied to special order
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable, Flame Retardant Polycarbonate

### X450 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X450-18	12-48v Dc---	Xenon 10J	0.85/0.49/0.25 A
X450-22	100-240v Ac~	Xenon 10J	0.06 A •

• at 230v Ac~

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Kg 0.5

50/60 Hz

°C -40+70

IP 66

FPM 60x180

MARINE

APPROVALS and  
CONFORMITIES



INDUSTRIAL



# Visual Signals - Industrial

## XENON BEACONS



### Industrial Xenon Beacons > X501/500 Series

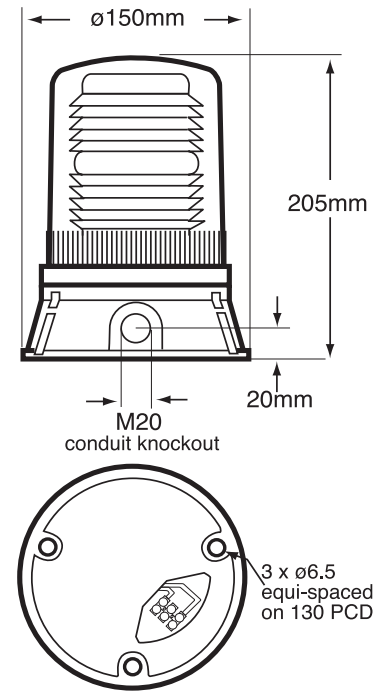
#### Product overview

The X501/500 series are suitable for industrial signalling applications where a very powerful signal is required.

These beacons are of the Flashing mode type (single stage alarm) Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but very bright flash of white light by ionizing and then discharging a large current through the xenon gas. The design allows for termination inside the enclosure.

This range of beacons incorporates an internal Fresnel lens designed to maximise the light intensity and has a double flash option (activated by a jumper link on the PCB) that extends the signal duration making it more noticeable to the human eye.

The DC unit is factory set at 24v but a jumper link on the PCB can change it to 12v operation. The DC version is also supplied with a bi-lateral current limiter that must be used on all installations to protect the PCB from inrush current damage. Due to the power rating of the beacon it is not recommended for use in excess of 12 hours in any 24 hour period.



#### Features

- Rated use only
- Very high light output
- Suitable for surface or wall mounting
- Optional wall bracket & guard available - see accessories
- 3 point fix
- M20 side entry or bottom cable entry
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Plastic Base

### X501/500 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:
X501-18 •	12/24v Dc ---	Xenon 24J / 18J	2.30 / 1.30 A
X500-21	115v Ac ~	Xenon 24J / 18J	0.65 A
X500-22	230v Ac ~	Xenon 24J / 18J	0.40 A

- Pre-set at 24v Dc ---

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



**Kg** 1.25

**50/60 Hz**

**°C** -25+35

**IP** 65

**FPM** 60x90

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES



# Miscellaneous - Industrial

## Brackets, Cage Guards, Domes, Mounts **ACCESSORIES**

### Brackets > 50001>50158

#### 50001 Right Angled Wall Bracket

Suitable for use with 88, 125 & 201/200 series beacons and the LED100 code type.

#### 50004 Right Angled Wall Bracket

Suitable for use with 401/400, 501/500, 600 & X250 series beacons

#### 50006 Pipe Bracket

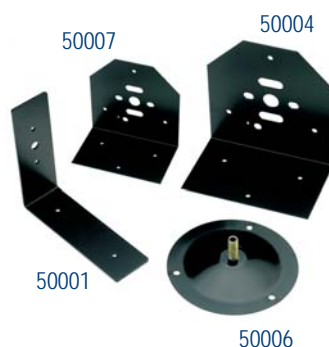
Suitable for use with 401/400, 501/500, 600 & X250 series beacons

#### 50007 Right Angled Wall Bracket

Suitable for use with 125 & 125DIN series beacons and LED100 & LEDD/LEDA100 code types

#### 50158 IP66 Weatherproof Band

Suitable for use with 201/200 series beacons (not shown)



**Note:** Brackets and Cage Guards are not interchangeable at this present time.

#### 100 Series Beacon Lenses

50045 Amber Lens



50046 Red Lens



50048 Green Lens



#### 125 Series Beacon Lenses

50018 Red Lens

50019 Amber Lens

50020 Blue Lens

50021 Green Lens

50022 Clear Lens



#### 201/200, 401/400 & 501/500 Series Beacon Lenses

50064 Amber Lens

50065 Red Lens

50066 Blue Lens

50067 Green Lens

50068 Clear Lens



#### Anti-Vibration Mount

#### 50080 Anti-Vibration Mount

Suitable for use with LED100 code type (not LEDD/LEDA100)  
125 Series (2 point fix)  
201/200 Series



### Cage Guards > 50003>50010

#### 50003 Small Cage Guard

Suitable for use with 100 & 125 series beacons

#### 50003/1 Optional Mounting Plate

Suitable for use with 125 series beacons

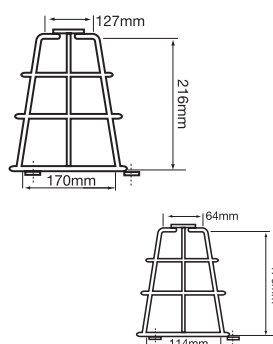


#### 50010 Large Cage Guard

Suitable for use with 201/200, 401/400 & 501/500 series beacons

#### 50010/1 Optional Mounting Plate

Suitable for use with 201/200, 401/400 & 501/500 series beacons



**Note:** Brackets and Cage Guards are not interchangeable at this present time.



AUTOMOTIVE





## Visual Signals - Industrial

# AUTOMOTIVE BEACONS

## Automotive Beacons > Xenon or Rotating Series

### Product overview

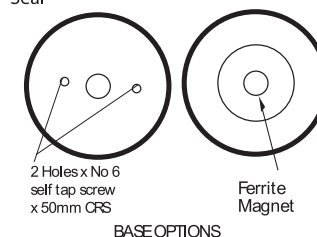
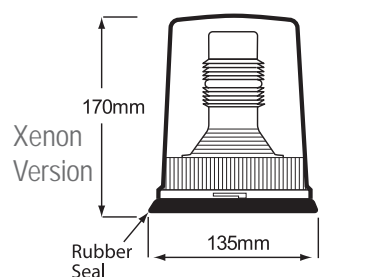
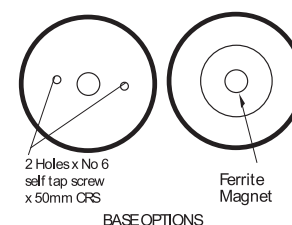
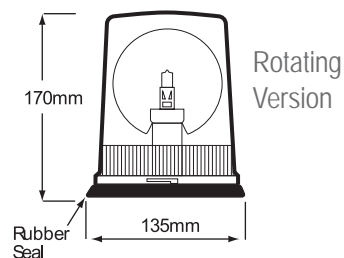
The X88 Series is suitable for automotive & general signalling applications where a more robust and powerful signal is required.

Xenon beacons (sometimes called strobes) are controlled via a PCB and put out a very brief but very bright flash of white light by ionizing and then discharging a large current through the xenon gas. This range of beacons incorporates an internal Fresnel lens designed to maximise the light intensity and has a double flash option (activated by a slide switch on the PCB)

that extends the signal duration making it more noticeable to the human eye.

The DC unit is factory set at 24v but a slide switch on the PCB can change it to 12v operation.

The R88 Series is a cost effective alternative for automotive applications where a powerful & commanding signal is required. It incorporates a parabolic reflector which, when energised, revolves around a continuously illuminated lamp. This creates a powerful beam of light that sweeps through 360 degrees. The reflector is driven by a worm drive system powered by a permanent magnet motor.



## Automotive Beacons > Ordering Information

Code No:	Voltage:	Light Source:	Current:
<b>ROTATING OPTIONS</b>			
R88-34 (MB)	12v Dc ---	H1 x 55w	4.70 A
R88-38 (MB)	24v Dc ---	H1 x 70w	3.00 A
R88-37 (SF)	12v Dc ---	H1 x 55w	4.70 A
R88-39 (SF)	24v Dc ---	H1 x 70w	3.00 A
<b>XENON OPTIONS</b>			
X88-72 • (MB)	12/24v Dc ---	Xenon 8.5 / 6.5J	1.40 / 0.7 A
X88-75 • (SF)	12/24v Dc ---	Xenon 8.5 / 6.5J	1.40 / 0.7 A
• Pre-set to 24v Dc ---			
MB = Magnetic Base      SF = Static Fix			

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



### Features

- Continuously rated
- High light output
- X88: 360° light output around the vertical axis and 180° light output above the horizontal axis
- R88: 360° degree light output around the vertical axis
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate Lens  
Acetal Base with Neoprene Seal

Kg 1.11 MB  
0.67 SF

°C -25+55

IP 65

FPM 60x90 (X)  
RPM 160±30 (R)

AUTOMOTIVE

APPROVALS and  
CONFORMITIES







## OBSTACLE MARKING

# Visual Signals - Obstacle Marking

## 10 Candela BEACONS

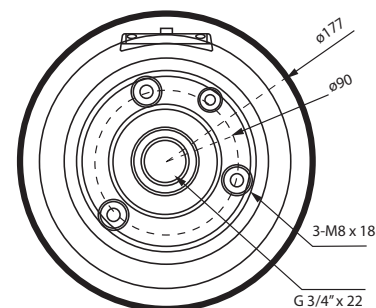
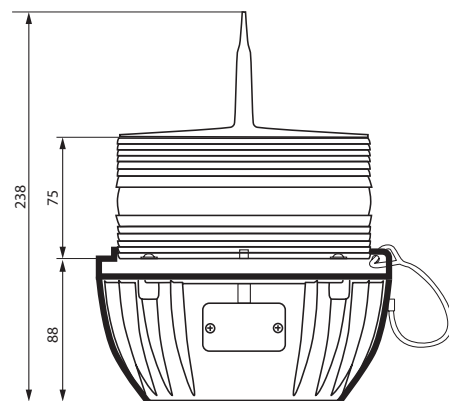


### Obstacle Marking : Low Intensity Mobile Obstacles > 10 Candela

#### Product overview

These portable marking lights are powered by a maintenance free 3.6v Nickel Metal Hydride battery. A mono crystal solar module fitted inside the lens keeps the battery fully charged and can provide enough power to keep the beacon operating non stop for 400 hours

in continuously cloudy and rainy days. A built in photocell switches the beacon on & off at dusk and dawn. The On/Off level is between 70/100 lux and is automatic. The unit incorporates an automatic switch after 18 hours in the dark to protect the battery life.



### 10 Candela > Ordering Information

Code No:	Voltage:	Light Source:	Effective Cd:
OLF-PS-10-02	3.6v / 10AH	LED	10

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

02

#### Features

- Conforms to ICAO Annexe 14 Volume 1, Low Intensity Type A
- LED Long life and low maintenance
- Rugged construction
- 360° light output around the vertical axis
- Dustproof and Weatherproof

#### Material

Cast Aluminium with UV Stable  
Polycarbonate Lens

Kg 2.3

°C -20+80

IP 65

FPM 60

OBSTACLE MARKING

APPROVALS and CONFORMITIES



# Visual Signals - Obstacle Marking

## 40 Candela BEACONS



### Obstacle Marking : Low Intensity Mobile Obstacles > 40 Candela

#### Product overview

This range of beacons has been designed primarily for use on vehicles. There are two mounting options, either a permanent fix by two screws into the base of the beacon or a magnetic base. Both beacons are pulsed through an

internal circuit to generate an On/ Off cycle to product the required flash rate. The typical application is for marking mobile obstacles in or around aerodromes.

Emergency & Security vehicles are designated with Blue lenses and all others shall be Amber. The minimum light output for each colour is 40 Cd.

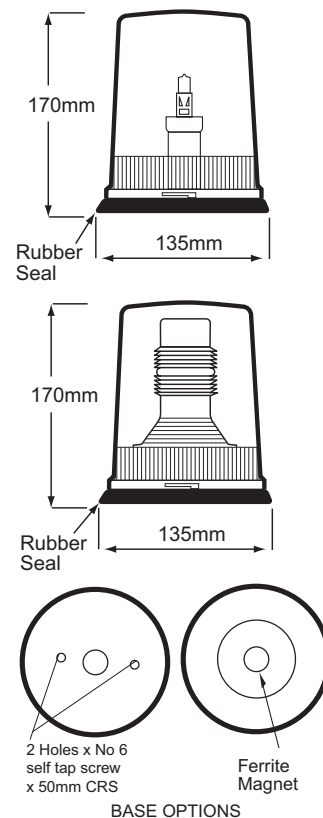
#### 40 Candela > Ordering Information

Code No:	Voltage:	Light Source:	Current:	Effective Cd:
<b>Magnetic Base</b>				
FF98-34-01	12v Dc ---	Ba15d x 21w	1.75 A	40
FF98-38-01	24v Dc ---	Ba15d x 21w	0.88 A	40
FF98-35-03	12v Dc ---	H1 T/H x 70w	4.70 A	40
FF98-40-03	24v Dc ---	H1 T/H x 70w	3.00 A	40
<b>Permanent Fix</b>				
FF98-37-01	12v Dc ---	Ba15d x 21w	1.75 A	40
FF98-39-01	24v Dc ---	Ba15d x 21w	0.88 A	40
FF98-36-03	12v Dc ---	H1 T/H x 55w	4.70 A	40
FF98-41-03	24v Dc ---	H1 T/H x 70w	3.00 A	40

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING

01

03



#### Features

- Conforms to ICAO Annexe 14 Volume 1, Low Intensity Type C
- Magnet base provides a 35 Newton force calculated to provide a fix on flat surfaces of upto 80 MPH (subject to conditions)
- Permanent fix base is supplied with 140mm of flying lead with male & female bullet connectors
- 360° light output around the vertical axis
- 180° light output above the horizontal axis
- Dustproof and Weatherproof

#### Material

UV Stable Polycarbonate Lens  
Acetal Base with Neoprene Cover

Kg 1.00 MB  
0.65 PF

°C -25+55

IP 65

FPM 60

AUTOMOTIVE

OBSTACLE MARKING

APPROVALS and  
CONFORMITIES





## Visual Signals - Obstacle Marking

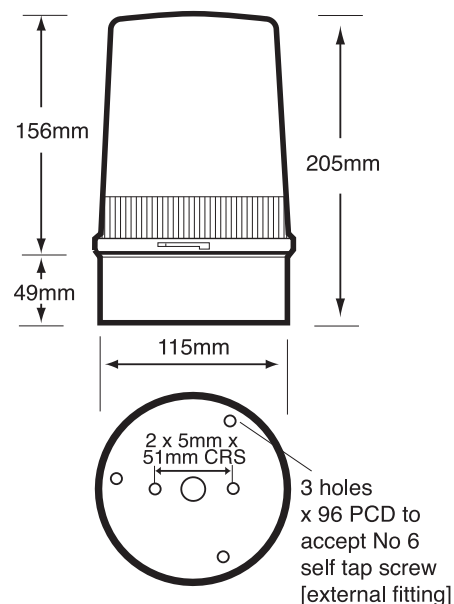
### 10 & 32 Candela BEACONS

## Obstacle Marking: Low Intensity Lights > 10 & 32 Candela Series

### Product overview

This range of Obstacle Lights have been designed to offer a more cost effective option for compliance to the low intensity ICAO regulations. The 10 and 32 Candela both incorporate low consumption Red LED arrays. A power rating of 8 watts for the 10 Cd and 12 watts for the 32Cd

lend themselves for use with photocell control if required. The typical application is marking fixed objects in or around aerodromes where the object is a less extensive one and its height above the surrounding ground is less than 45m. These beacons can be used in conjunction with medium and high intensity lights.



### Features

- Conforms to ICAO Annexe 14 Volume 1, Low Intensity Type A (10Cd) & Type B (32Cd)
- Continuously rated
- LED long life and extra bright
- Suitable for surface, conduit box or wall mounting
- Optional wall bracket & guard available - see accessories
- 2 point fix
- 360° light output around the vertical axis
- Dustproof and Weatherproof

### Material

UV Stable Polycarbonate  
Lens & Base  
Stainless Steel Sealing Band

## 10 & 32 Candela > Ordering Information

Code No:	Voltage:	Light Source:	Mode:	Current:	Effective Candela:
OLS-02-10-02	24v Ac/Dc ~	LED	Static	0.33 A	10
OLS-03-10-02	48v Ac/Dc ~	LED	Static	0.16 A	10
OLF-02-10-02	24v Ac/Dc ~	LED	Flashing	0.33 A	10
OLS-04-10-02	230v Ac/Dc ~	LED	Static	0.04 A	10
OLF-04-10-02	230v Ac/Dc ~	LED	Flashing	0.04 A	10
OLS-02-32-02	24v Ac/Dc ~	LED	Static	0.50 A	32
OLS-03-32-02	48v Ac/Dc ~	LED	Static	0.24 A	32
OLF-02-32-02	24v Ac/Dc ~	LED	Flashing	0.50 A	32
OLS-04-32-02	230v Ac/Dc ~	LED	Static	0.05 A	32

Kg 0.6

~50/60 Hz

°C -20+45

IP 66

FPM 60/90

OBSTACLE MARKING

APPROVALS and  
CONFORMITIES







**AUDIBLE & VISUAL  
SIGNALS FOR USE IN  
POTENTIALLY EXPLOSIVE  
ATMOSPHERES**



# Visual Signals - Explosion Proof

## GRP BEACON



Lens Guard not  
supplied as standard

## Explosion Proof Beacon > GRP BC150 Series

### Product overview

The BC150 range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

These beacons have a choice of two types of light source: either Xenon (strobe) with multiple flash rate and power ratings or an LED array with three status type indication options and two power ratings. The design allows for termination inside the enclosure.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: Ex d IIC T4~ T6 Gb, Ex tb IIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011),  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- 360° light output around the vertical axis
- Dustproof & Weatherproof

## BC150 Series > Ordering Information

		Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
Standard Product Selection	BC150	A = Amber	X = Xenon	05 = 5J	05 = 5W	DC 12 - 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
		R = RED		10 = 10J							YW = Yellow	
		B = BLUE		15 = 15J							BU = Blue	
		G = Green	L = LED	20 = 20J	10 = 10W	AC 100 - 240v	N = No	N = No	N = No	B = M25	BL = Black	N = No
		C = Clear									OR = Other	
		O = Other										

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required beacon).

BC150											
	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 3.8

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

**GRP**

APPROVALS and  
CONFORMITIES



# Explosion Proof Beacon > GRP BC150 Series

## General Information

EX CODE: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C  
 CERTIFICATION: ATEX (Nemko 14 1011X), IECEx (NEM 14.0007X)  
 CQST (Available on request only)  
 TYPE: Xenon or LED Visual Beacon

Xenon Working Status		Xenon - Flashing			
Flash Rate		Selectable from 60-180 Flashes per Minute			
Power Rating	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max	
Effective Candela	109	293	395	424	

LED Working Status		LED - Flashing / Rotating / Static	
Flash Rate		Selectable from 60-120 Flashes per Minute	
Rotation Rate		Selectable from 60-120 Revolutions per Minute	
Static Mode		Permanently ON (ie Steady)	
Power Rating	5 W	10 W	
Effective Candela	128	312	

### MULTIPLYING FACTOR FOR COLOURED LENSES:

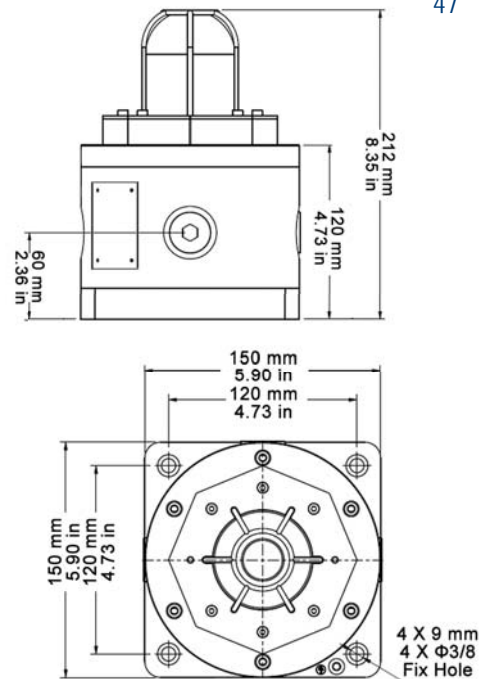
Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL: GRP (Glass Reinforced Plastic)  
 LENS COLOURS: Amber, Red, Blue, Green, Clear or Other (specify)  
 ENCLOSURE COLOUR: Red (RAL3001), Yellow (RAL1003)  
 Blue (RAL5005), Black (RAL9004)  
 WEIGHT: 3.8 Kg / 8.38 lb  
 DIMENSIONS: Length/Width: 150mm / 5.91" Height: 212mm / 8.35"  
 INGRESS PROTECTION: IP 66 & 67  
 AMBIENT TEMPERATURE: -40 to +70  
 HUMIDITY: ≤ 95% RH

### Electrical Specifications

POWER SUPPLY: ≤48v Dc or 100-240v Ac (50/60 Hz)  
 TERMINATION: Accepts upto ≤ 2.5mm<sup>2</sup> incorporating rising clamp protectors  
 CABLE ENTRY: 4 x M20 or M25.  
 For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.



## Accessories

- 50023: Cage Guard (Stainless Steel)
- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above

## BC150 Series > Working Current

### Xenon

ENERGY	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 J	460 mA	280 mA	140 mA	60 mA	35 mA
10 J	850 mA	490 mA	250 mA	100 mA	60 mA
15 J	1200 mA	700 mA	360 mA	140 mA	80 mA
20 J	N/A	960 mA	480 mA	180 mA	110 mA

### LED

POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 W	1100 mA	530 mA	240 mA	160 mA	80 mA



## Audible Signals - Explosion Proof GRP SOUNDER

### Explosion Proof Sounder > GRP SD150 Series

#### Product overview

The SD150 electronic sounder range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

All tones can be pre-set during installation.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

The design allows for termination inside the enclosure.

The sounder is supplied with a mounting bracket as standard.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011),  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- Volume control
- Dustproof & Weatherproof

### SD150 Series > Ordering Information

#### Standard Product Selection

SD150	+	Voltage	Duty Label	Tag Label	Cable Entry	Finish Colour	Telephone Initiated
		DC 12 - 48v	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
		AC 100 - 240v	N = No	N = No	B = M25	YW = Yellow	
						BU = Blue	
						BL = Black	N = No
						OR = Other	

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required sounder).

SD150						
	Voltage	Duty Label	Tag Label	Cable Entry	Finish Colour	Telephone Initiated

**Note:** All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 5.4

**°C** -40+70

**IP** 66/67

**dB** 115\*

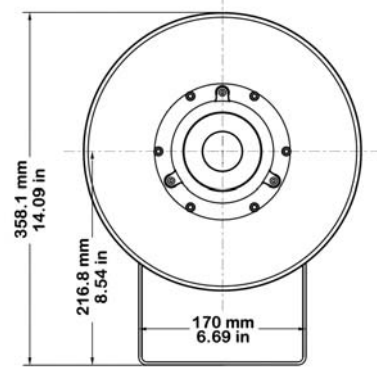
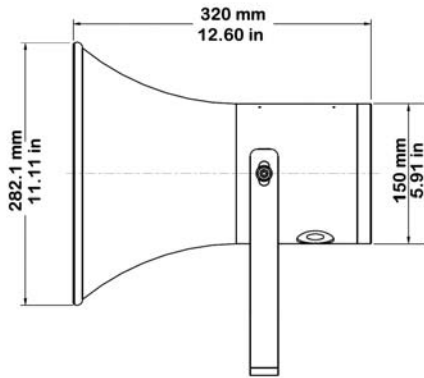
**MARINE**

**INDUSTRIAL**

**GRP**

APPROVALS and  
CONFORMITIES





## Explosion Proof Sounder > GRP SD150 Series

### General Information

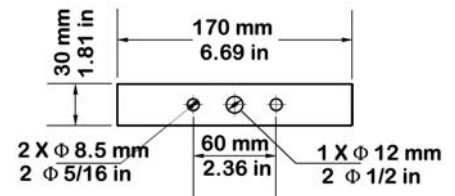
EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1009X), IECEX (NEM14.0005X) CQST (Available on request only)
TYPE:	Electronic Sounder
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3 dB) *
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic) & Bracket: Stainless Steel 316
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
WEIGHT:	5.4 Kg / 11.9 lb
DIMENSIONS:	Length: 320mm / 12.7" See outline drawing for other dimensions
INGRESS PROTECTION:	IP 66 & 67

### Electrical Specifications

POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



### Accessories

- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland  
Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland  
(Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug  
Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above

## SD150 Series > Working Current

12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
910 mA (Max 10W)	960 mA	500 mA	210 mA	100 mA



# Audible Signals - Explosion Proof GRP SOUNDER/BEACON

## Explosion Proof Sounder/Beacon > GRP SB150-1 Series

### Product overview

The SB150-1 electronic combined sounder beacon range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

All tones can be pre-set during installation. In addition, the unit also incorporates a visual warning signal with a choice of two types of light source: either xenon (strobe) with multiple flash rates and power ratings or an LED array with three status type indication options.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

The design allows for termination inside the enclosure. The unit can be bracket mounted only.

### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX:Ex d IIC T4~ T6 Gb  
Ex tb IIIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011),  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- 360° light output around the vertical axis
- Volume control
- Dustproof & Weatherproof

## SB150-1 Series > Ordering Information

	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
Standard Product Selection	A = Amber	X = Xenon	02 = 2J	05 = 5W	DC 12 ~ 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
	R = Red		05 = 5J							YW = Yellow	
	B = Blue		10 = 10J							BU = Blue	
	G = Green	L = LED	15 = 15J	10 = 10W	AC 100-240v	N = No	N = No	N = No	B = M25	BL = Black	N = No
	C = Clear		20 = 20J							OR = Other	

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required sounder beacon).

SB150-1											
Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 6.5

**°C** -40+70

**IP** 66/67

**dB** 115\*

**MARINE**

**INDUSTRIAL**

**GRP**

APPROVALS and  
CONFORMITIES





# Explosion Proof Sounder/Beacon > GRP SB150-1 Series

## General Information

EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1010X), IECEx (NEM 14.0006X) CQST (Available on request only)
TYPE:	Xenon or LED Audible and Visual Signal Warning Device
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3 dB) *

Xenon Working Status		Xenon - Flashing			
Flash Rate		Selectable from 60-180 Flashes per Minute			
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424

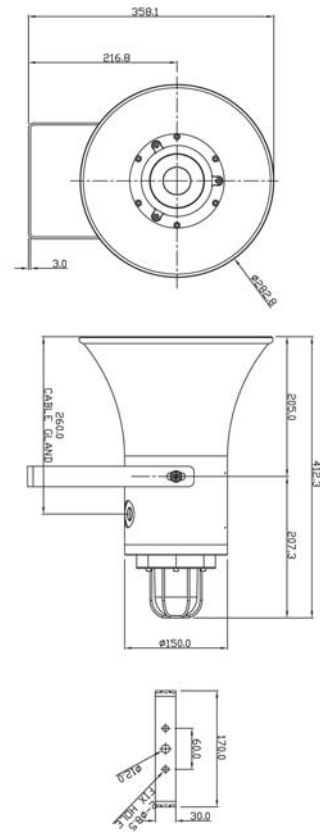
LED Working Status	LED - Flashing / Rotating / Static
Flash Rate	Selectable from 60-120 Flashes per Minute
Rotation Rate	Selectable from 60-120 Revolutions per Minute
Static Mode	Permanently ON (ie Steady)
Power Rating	5 W
Effective Candela	128

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic) Bracket: Stainless Steel 316    Lens: Tempered Glass
LENS COLOURS:	Amber, Red, Blue, Green, Clear or Other (specify)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	6.5 Kg / 14.3 lb
DIMENSIONS:	Length: 413mm / 16.4" No Lens Guard Fitted See outline drawing for other dimensions
INGRESS PROTECTION:	IP 66 & 67
<b>Electrical Specifications</b>	
POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W, Sounder: ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



### Accessories

- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above

## SB150-1 Series > Power Consumption & Working Current

**Power Consumption:** Sounder: 5-20W & LED: 5W

**Working Current:** Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)



SB150-4-P

## Audible & Visual Signals

### GRP COMBINATION UNITS

### WITH ACTIVATION CONTROL

## Explosion Proof Sounder/Beacon > GRP

### SB150-2, 3 & 4 Series

#### Product overview

The SB150-2, 3 & 4 combined sounder beacon range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

The units offer a combined audible & visual warning signal with the option of either a junction box, allowing extra space for ease of installation & final connections. This is particularly helpful if the unit is to be installed into a fire or telecom system where additional cabling is required to monitor external devices or a push button unit for manual activation.

The units are mounted on a heavy duty 316 stainless steel, pre-drilled, mounting plate & the units are pre-wired as standard, so that on the basic model a single input operates both units simultaneously.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G Exd IIC T4 - T6 (incorporating IIA & IIB)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

## SB150-2, 3 & 4 Series > Ordering Information

	Combination Type	Combined With (Optional)	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	
<div>SB150</div> +  Follow the chart (right) to generate your part code.	2 = 1xS, 1xB	J = Junction Box	A = Amber	X = Xenon	02 = 2J	05 = 5W	DC 12 ~ 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes	
	3 = 1xS, 2xB		R = Red		05 = 5J							YW = Yellow		
	4 = 1xS, 3xB		B = Blue		10 = 10J							BU = Blue		
			P = Push Button	G = Green	L = LED	15 = 15J	10 = 10W	AC 100-240v	N = No	N = No	N = No	BL = Black	N = No	
		C = Clear		20 = 20J		OR = Other								
	Note: S= Sounder, B= Beacon													

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required junction box)

SB150													
Combination Type	Combined With	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg**  
10.0 SB150-2  
14.5 SB150-3  
19.0 SB150-4

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

**FIRE**

**GRP**

APPROVALS and  
CONFORMITIES



# Explosion Proof Sounder/Beacon > GRP SB150-2, 3 & 4 Series

## General Information

EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1010X), IECEx (NEM 14.0006X) CQST (Available on request only)
TYPE:	Xenon or LED Audible and Visual Signal Warning Device
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3 dB) *

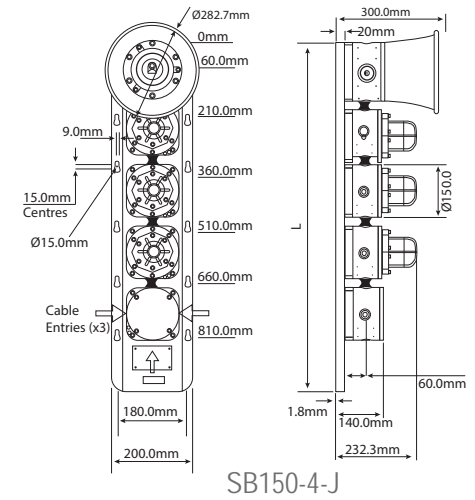
Xenon Working Status			Xenon - Flashing		
Flash Rate			Selectable from 60-180 Flashes per Minute		
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424
LED Working Status		LED - Flashing / Rotating / Static			
Flash Rate		Selectable from 60-120 Flashes per Minute			
Rotation Rate		Selectable from 60-120 Revolutions per Minute			
Static Mode		Permanently ON (ie Steady)			
Power Rating	5 W		10 W		
Effective Candela	128		312		

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic) with 316 Stainless Steel Mounting Bracket Lens: Tempered Glass
LENS COLOURS:	Amber, Red, Blue, Green, Clear or Other (specify)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	SB150-2: 10 Kg / 22 lb, SB150-3: 14.5 Kg / 32 lb SB150-4: 19 Kg / 42 lb
DIMENSIONS:	See outline drawings and table for dimensions.
INGRESS PROTECTION:	IP 66 & 67
<b>Electrical Specifications</b>	
POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W, Sounder: ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



Combination	No Key Slots	'L'
SB150-2	6	450.0
SB150-3 (2J or P)	8	619.0
SB150-4 (3J or P)	10	788.0
SB150-5 (4J or P)	12	957.0

### Accessories

50023:	Cage Guard (Stainless Steel)
50200:	M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 &3, EExde IIC 2 GD Cable ID 11 - 15.5mm OD 14.5 - 21mm Gland for Multi Armoured Cable *
50201:	M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD Cable OD 11 - 15.5mm Gland for Unarmoured Cable *
50202:	M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC) Cable OD 14.5 - 20.5mm Barrier Gland for Steel and Aluminium Armoured Cable *
50203:	M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC) Cable OD 9 - 15mm Barrier Gland for Unarmoured Cable *
50204:	M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC Standard M20 Blanking Plug
50221:	Epoxy Minute Adhesive 24m/l tube One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products  
Note: M25 options available for the above

## SB150-2, 3, & 4 Series > Working Current

### Power Consumption: Sounder: 5-20W & LED: 5W

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

### Working Current: Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)

### LED

POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 W	1100 mA	530 mA	240 mA	160 mA	80 mA



SL150-4-J

# Visual Signals

## GRP COMBINATION UNITS

### WITH ACTIVATION CONTROL

## Explosion Proof Status Lights > GRP SL150 Series

### Product overview

The SL150 status light range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The units offer a visual warning signal with the option of either a junction box, allowing extra space for ease of installation & final connections. This is particularly helpful if the unit is to be installed into a fire or telecom system where additional cabling is required to monitor external devices or a push button unit for manual activation.

The units are mounted on a heavy duty 316 stainless steel, pre-drilled, mounting plate & the units are pre-wired as standard.

### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

## SL150 Series > Ordering Information

	Combination Type	Combined With (Optional)	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
SL150 +	2 = 2xB	J = Junction Box	A = Amber	X = Xenon	02 = 2J	05 = 5W	DC 12 ~ 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
	3 = 3xB		R = Red		05 = 5J							YW = Yellow	
	4 = 4xB		B = Blue		10 = 10J							BU = Blue	
	5 = 5xB *	P = Push Button	G = Green	L = LED	15 = 15J	10 = 10W	AC 100-240v	N = No	N = No	N = No	B = M25	BL = Black	N = No
			C = Clear		20 = 20J							OR = Other	

Note: S= Sounder, B= Beacon

\* Combination Type 5: J or P additions not available with this selection.

MODEL CONFIGURATOR (By using the table above, complete this box sequence to select your required junction box)

SL150													
Combination Type	Combined With	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

Kg 8.9 2 17.4 4  
13.1 3 21.6 5

°C -40+70

IP 66/67

INDUSTRIAL

MARINE

FIRE

GRP

APPROVALS and  
CONFORMITIES



# Explosion Proof Status Lights > GRP SL150 Series

## General Information

EX CODE: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C  
 CERTIFICATION: ATEX and IECEx  
 COST (Available on request only)  
 TYPE: Xenon or LED Visual Signal Warning Device

Xenon Working Status			Xenon - Flashing		
Flash Rate			Selectable from 60-180 Flashes per Minute		
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424

LED Working Status	LED - Flashing / Rotating / Static	
Flash Rate	Selectable from 60-120 Flashes per Minute	
Rotation Rate	Selectable from 60-120 Revolutions per Minute	
Static Mode	Permanently ON (ie Steady)	
Power Rating	5 W	10 W
Effective Candela	128	312

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

**MATERIAL:** Enclosure: GRP (Glass Reinforced Plastic) with 316 Stainless Steel Mounting Bracket

**LENS COLOURS:** Amber, Red, Blue, Green, Clear or Other (specify)

**ENCLOSURE COLOUR:** Red (RAL3001), Yellow (RAL1003)  
 Blue (RAL5005), Black (RAL9004)

**AMBIENT TEMPERATURE:** -40 to +70

**HUMIDITY:** ≤ 95% RH

**WEIGHT:** SL150-A: 8.9 Kg / 19.6 lb, SL150-B: 13.1 Kg / 28.9 lb  
 SL150-C: 17.4 Kg / 38.3 lb, SL150-D: 21.6 Kg / 47.6 lb

**DIMENSIONS:** See outline drawings and table for dimensions.

**INGRESS PROTECTION:** IP 66 & 67

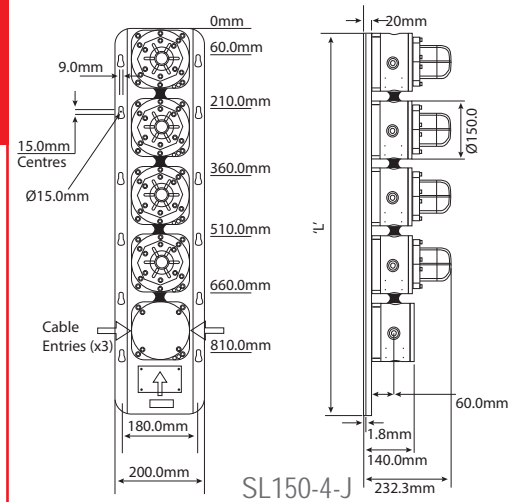
### Electrical Specifications

**POWER SUPPLY:** ≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W,

**TERMINATION:** Accepts upto ≤ 2.5mm<sup>2</sup> incorporating rising clamp protectors

**CABLE ENTRY:** 2 x M20 or M25.  
 For 1/2" or 3/4"NPT requirements, male female adapter glands are available. Contact sales dept for further part codes.

**CURRENT CONSUMPTION:** Sounder 250 mA - 1500 mA (Adjustable by tone selection)



Combination	No Key Slots	'L'
SL150-2	6	450.0
SL150-3 (-2J or P)	8	619.0
SL150-4 (-3J or P)	10	788.0
SL150-5 (-4J or P)	12	957.0

### Accessories

- 50023: Cage Guard (Stainless Steel)
- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
 Cable ID 11 - 15.5mm  
 OD 14.5 - 21mm  
 Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
 Cable OD 11 - 15.5mm  
 Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
 Cable OD 14.5 - 20.5mm  
 Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
 Cable OD 9 - 15mm  
 Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
 Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
 One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products  
 Note: M25 options available for the above

## SL150 Series > Working Current

**Power Consumption:** Sounder: 5-20W & LED: 5W

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

**Working Current:** Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)

### LED

POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 W	1100 mA	530 mA	240 mA	160 mA	80 mA





# Visual Signals - Explosion Proof

## GRP CALL POINT

### Explosion Proof Manual Call Point > GRP CP135 Series

#### Product overview

The CP135 manual call point range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA

output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED.

The design allows for termination inside the unit.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIB +H<sub>2</sub> T4 - T6** (incorporating IIA)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0 EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### CP135 Series > Ordering Information

Standard Product Selection

CP135	+	Switch	Duty Label	Tag Label	Glass Label*	LED Indicator	Features	Cable Entry	Entry	Finish Colour
		<b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>Y</b> = Glass Label (standard)	<b>L</b> = Red & Green	<b>F</b> = Lift Flap	<b>A</b> = M20	<b>T</b> = Top Face	<b>RD</b> = Red
					<b>N</b> = No Glass Label	<b>R</b> = Red	<b>R</b> = Resistor (specify)			<b>YW</b> = Yellow
		<b>D</b> = Double Switch	<b>N</b> = No	<b>N</b> = No	<b>O</b> = Other (specify)	<b>G</b> = Green	<b>D</b> = Diode (specify)	<b>B</b> = M25	<b>B</b> = Bottom Face	<b>BU</b> = Blue
						<b>N</b> = No LED	<b>N</b> = No Features			<b>BL</b> = Black
										<b>OR</b> = Other

\* Standard break glass label wording is: 'Break Glass Press Here'

Follow the chart (right) to generate your part code.

MODEL CONFIGURATOR (By using the table above, complete this box sequence to select your required manual call point).

CP135

Switch

Duty Label

Tag Label

Glass Label\*

LED Indicator

Features

Cable Entry

Entry

Finish Colour

\* Standard break glass label wording is: 'Break Glass Press Here'

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

Kg 1.5

°C -40+70

IP 66

INDUSTRIAL

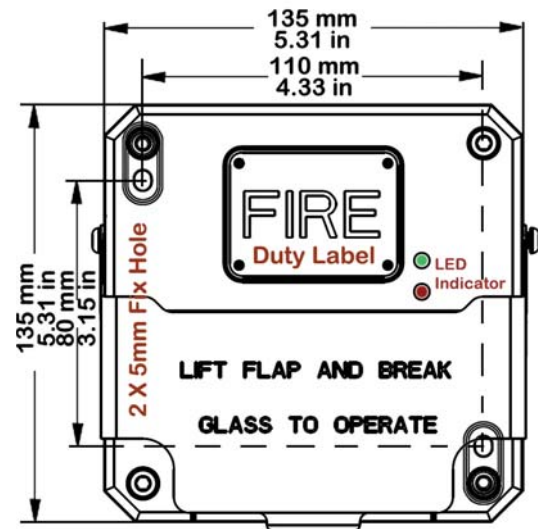
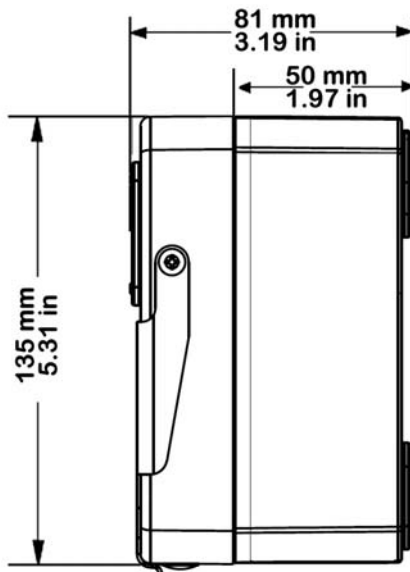
MARINE

FIRE

APPROVALS and CONFORMITIES



GRP



## Explosion Proof Manual Call Point > GRP CP135 Series

### General Information

EX CODE:	Exd IIB+H <sub>2</sub> T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5454X), IECEx (NEM 14.0015X) CQST (Available on request only)
TYPE:	Manual Call Point

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	1.5 Kg / 3.31 lb
DIMENSIONS:	Width/Length: 135mm / 5.31" Height: 80.5mm / 3.17"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above



# Visual Signals - Explosion Proof

## GRP CALL POINT

### Explosion Proof Manual Call Point > GRP CP150 Series

#### Product overview

The CP150 manual call point range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED. The design allows for termination inside the unit.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (Incorporating IIA & IIB)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0 EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### CP150 Series > Ordering Information

Standard Product Selection	CP150 +						
	Switch	Duty Label	Tag Label	LED Indicator	Features	Cable Entry	Finish Colour
	<b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>L</b> = Red & Green <b>R</b> = Red <b>G</b> = Green <b>N</b> = No LED	<b>F</b> = Lift Flap <b>R</b> = Resistor (specify) <b>D</b> = Diode (specify) <b>N</b> = No Features	<b>A</b> = M20 <b>B</b> = M25	<b>RD</b> = Red <b>YW</b> = Yellow <b>BU</b> = Blue <b>BL</b> = Black <b>OR</b> = Other

Follow the chart (right) to generate your part code.

MODEL CONFIGURATOR (By using the table above, complete this box sequence to select your required manual call point).

CP150

Switch

Duty Label

Tag Label

LED Indicator

Features

Cable Entry

Finish Colour

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

Kg 4.2

°C -40+70

IP 66

INDUSTRIAL

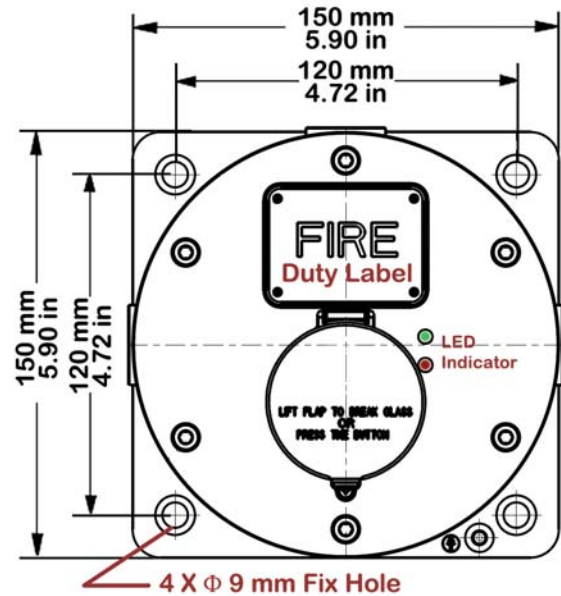
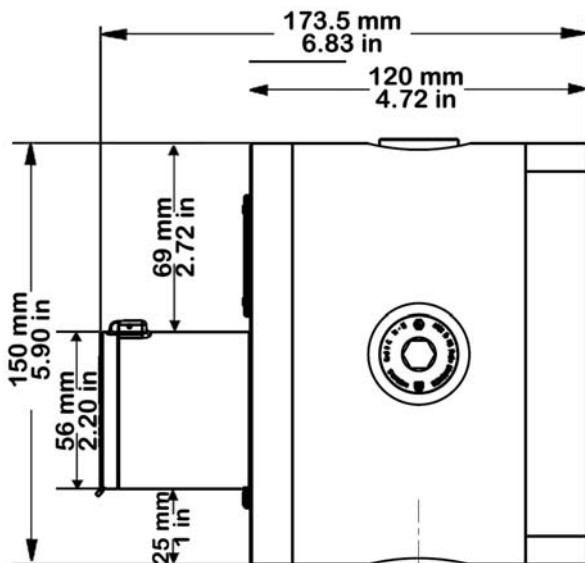
MARINE

FIRE

APPROVALS and CONFORMITIES



GRP



## Explosion Proof Manual Call Point > GRP CP150 Series

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5439X), IECEx (NEM 14.0013X) CQST (Available on request only)
TYPE:	Manual Call Point

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	4.2 Kg / 9.26 lb
DIMENSIONS:	Width/Length: 150mm / 5.91" Height: 164mm / 6.46"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

50200:	M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 &3, EExde IIC 2 GD Cable ID 11 - 15.5mm OD 14.5 - 21mm Gland for Multi Armoured Cable *
50201:	M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD Cable OD 11 - 15.5mm Gland for Unarmoured Cable *
50202:	M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC) Cable OD 14.5 - 20.5mm Barrier Gland for Steel and Aluminium Armoured Cable *
50203:	M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC) Cable OD 9 - 15mm Barrier Gland for Unarmoured Cable *
50204:	M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC Standard M20 Blanking Plug
50221:	Epoxy Minute Adhesive 24m/l tube One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above



## Enclosure - Explosion Proof STAINLESS STEEL **JUNCTION BOX**

### Explosion Proof Junction Box > GRP JB150 Series

#### Product overview

The JB150 junction box range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The enclosures are machined from marine grade glass reinforced plastic (GRP) and are supplied with four pre-drilled conduit entries.

They have been designed to offer maximum space for cable termination with a choice of either an 8 or 10 way terminal block.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### JB150 Series > Ordering Information

Follow the chart (right) to generate your part code.

	Terminal Block	Cable Entry	Finish Colour
<b>JB150</b> +	<b>08</b> = 8 Holes	<b>A = M20</b>	<b>RD = Red</b>
			<b>YW = Yellow</b>
			<b>BU = Blue</b>
	<b>10</b> = 10 Holes	<b>B = M25</b>	<b>BL = Black</b>
			<b>OR = Other</b>

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required junction box)

<b>JB150</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Terminal Block	Cable Entry	Finish Colour

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 3.5

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

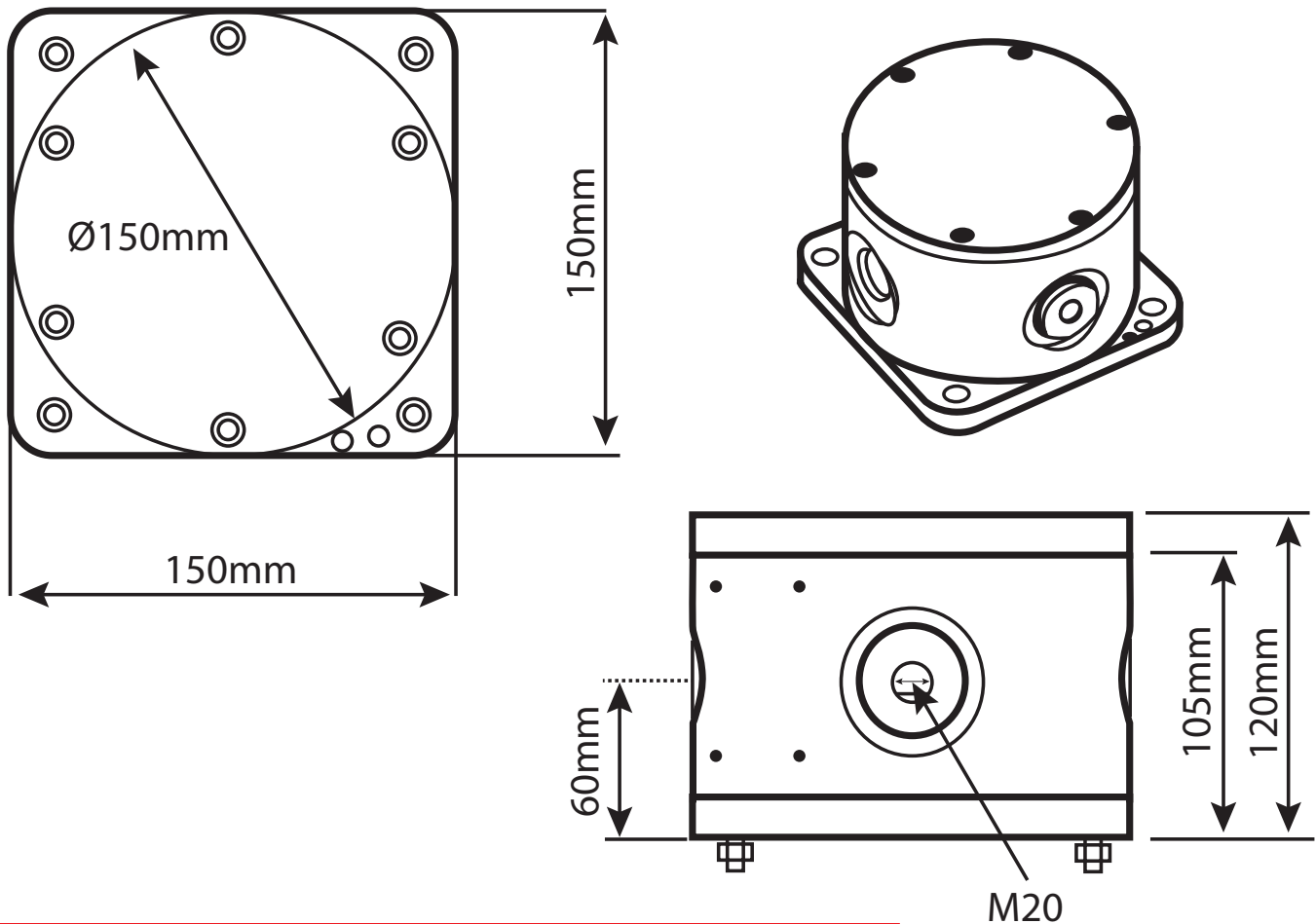
**FIRE**

**GRP**

APPROVALS and  
CONFORMITIES







## Explosion Proof Junction Box > GRP JB150 Series

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX and IECEx
	CQST (Available on request only)
TYPE:	Junction Box

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	3.5 Kg / 7.7 lb
DIMENSIONS:	Width/Length: 125mm / 4.92" Height: 90mm / 3.54"
INGRESS PROTECTION:	IP 66/67

### Electrical Specifications

TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25 For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

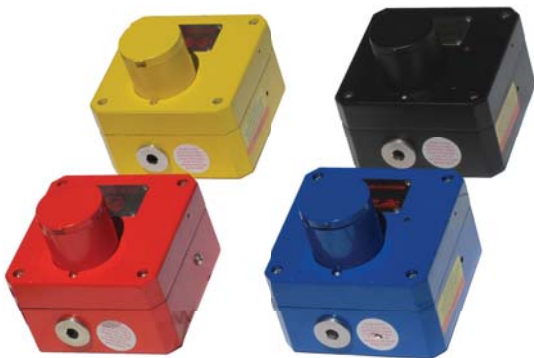
- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above

# Manual Activation Control

## GRP PUSH BUTTON



### Explosion Proof Push Button > GRP PB135 Series

#### Product overview

The PB135 push button range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The unit has the option for either a key reset or self reset. The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED. The design allows for termination inside the unit.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G Exd IIB +H<sub>2</sub> T4 - T6 (incorporating IIA)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0 EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### PB135 Series > Ordering Information

Standard Product Selection

Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Entry	Finish Colour
<b>PB135</b> + <b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>S</b> = Self Reset	<b>L</b> = Red & Green <b>R</b> = Red	<b>F</b> = Lift Flap <b>R</b> = Resistor (specify)	<b>A</b> = M20	<b>T</b> = Top Face	<b>RD</b> = Red <b>YW</b> = Yellow <b>BU</b> = Blue <b>BL</b> = Black <b>OR</b> = Other
<b>D</b> = Double Switch	<b>N</b> = No	<b>N</b> = No	<b>K</b> = Key Reset	<b>G</b> = Green <b>N</b> = No LED	<b>D</b> = Diode (specify) <b>N</b> = No Features	<b>B</b> = M25	<b>B</b> = Bottom Face	

Follow the chart (right) to generate your part code.

MODEL CONFIGURATOR (By using the table above, complete this box sequence to select your required push button).

PB135									
Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Entry	Finish Colour	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

Kg 1.5

°C -40+70

IP 66

INDUSTRIAL

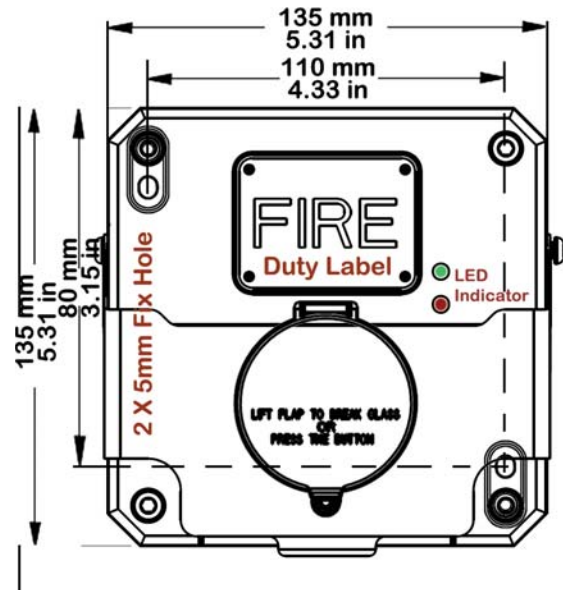
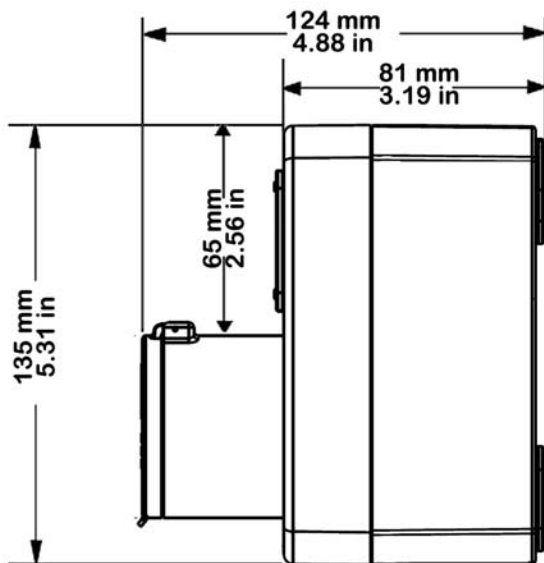
MARINE

FIRE

APPROVALS and CONFORMITIES



GRP



## Explosion Proof Push Button > GRP PB135 Series

### General Information

EX CODE:	Exd IIB +H <sub>2</sub> T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5441X), IECEx (NEM 14.0014X) CQST (Available on request only)
TYPE:	Push Button

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	1.5 Kg / 3.31 lb
DIMENSIONS:	Width/Length: 135mm / 5.31" Height: 80.5mm / 3.17"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

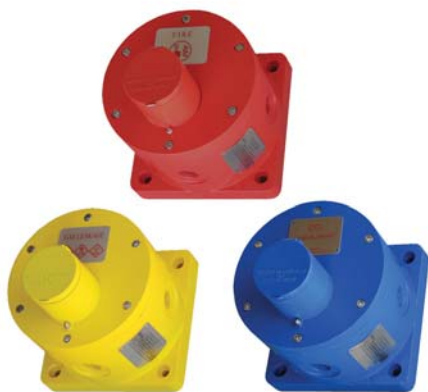
- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 & 3, EEExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EEExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EEExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above

# Visual Signals - Explosion Proof

## GRP PUSH BUTTON



## Explosion Proof Push Button > GRP PB150 Series

### Product overview

The PB150 push button range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The unit has the option for either a key reset or self reset. The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED. The design allows for termination inside the unit.

### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G Exd IIC T4 - T6 (incorporating IIA & IIB)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

## PB150 Series > Ordering Information

Standard  
Product  
Selection

PB150

Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Finish Colour
<b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>S</b> = Self Reset	<b>L</b> = Red & Green <b>R</b> = Red	<b>F</b> = Lift Flap <b>R</b> = Resistor (specify)	<b>A</b> = M20	<b>RD</b> = Red <b>YW</b> = Yellow <b>BU</b> = Blue <b>BL</b> = Black <b>OR</b> = Other
<b>D</b> = Double Switch	<b>N</b> = No	<b>N</b> = No	<b>K</b> = Key Reset	<b>G</b> = Green <b>N</b> = No LED	<b>D</b> = Diode (specify) <b>N</b> = No Features	<b>B</b> = M25	

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required push button).

PB150

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Finish Colour

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 4.2

**°C** -40+70

**IP** 66

**INDUSTRIAL**

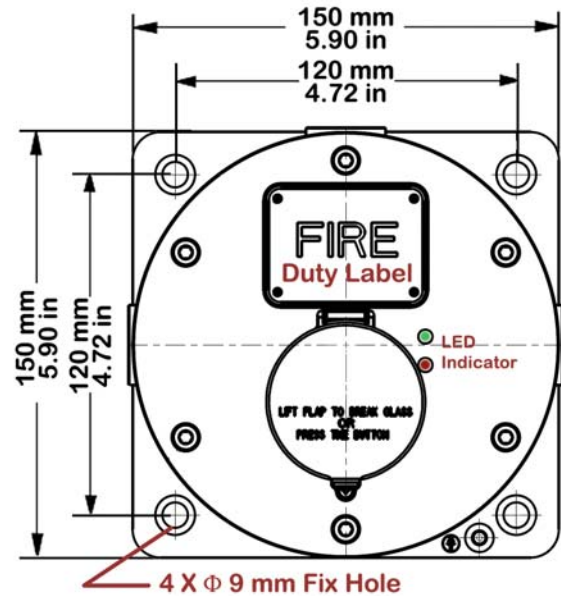
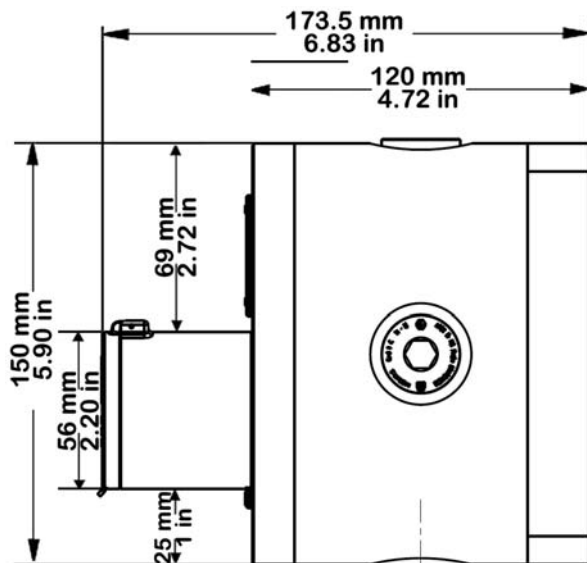
**MARINE**

**FIRE**

APPROVALS and  
CONFORMITIES



**GRP**



## Explosion Proof Push Button > GRP PB150 Series

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5439X), IECEx (NEM 14.0013X) CQST (Available on request only)
TYPE:	Push Button

### Mechanical Specifications

MATERIAL:	Enclosure: GRP (Glass Reinforced Plastic)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	4.2 Kg / 9.26 lb
DIMENSIONS:	Width/Length: 150mm / 5.91" Height: 164mm / 6.46"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

- 50200: M20 E1EX Nickel Plated Brass Gland (Multi Armour Cone) Atex Cat 2 &3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50201: M20 A2EX Nickel Plated Brass Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50202: M20 E1EX-QS Nickel Plated Brass Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50203: M20 A2EX Quick Stop Nickel Plated Brass Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50204: M20 Nickel Plated Brass Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 25mm Thread length for GRP products

Note: M25 options available for the above





Lens Guard not  
supplied as standard

## Visual Signals - Explosion Proof STAINLESS STEEL BEACON

### Explosion Proof Beacon > Stainless Steel BC125 Series

#### Product overview

The BC125 range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

These beacons have a choice of two types of light source: either Xenon (strobe) with multiple flash rate and power ratings or an LED array with three status type indication options and two power ratings. The design allows for termination inside the enclosure.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: Ex d IIC T4~ T6 Gb  
Ex tb IIIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011),  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- 360° light output  
around the vertical axis
- Dustproof & Weatherproof

### BC125 Series > Ordering Information

Follow the chart (right) to  
generate your part code.

	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
BC125 +	A = Amber	X = Xenon	05 = 5J	05 = 5W	DC 12 - 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
	R = Red		10 = 10J							YW = Yellow	
	B = Blue									BU = Blue	
	G = Green	L = LED	15 = 15J	10 = 10W	AC 100 - 240v	N = No	N = No	N = No	B = M25	BL = Black	N = No
	C = Clear		20 = 20J							OR = Other	
	O = Other										

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required beacon).

BC125											
Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 5.4

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

**STAINLESS  
STEEL**

APPROVALS and  
CONFORMITIES



# Explosion Proof Beacon > Stainless Steel BC125 Series

## General Information

EX CODE: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C  
 CERTIFICATION: ATEX (Nemko 14 1011X), IECEx (NEM 14.0007X)  
 CQST (Available on request only)  
 TYPE: Xenon or LED Visual Beacon

Xenon Working Status		Xenon - Flashing			
Flash Rate		Selectable from 60-180 Flashes per Minute			
Power Rating	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max	
Effective Candela	109	293	395	424	

LED Working Status		LED - Flashing / Rotating / Static	
Flash Rate		Selectable from 60-120 Flashes per Minute	
Rotation Rate		Selectable from 60-120 Revolutions per Minute	
Static Mode		Permanently ON (ie Steady)	
Power Rating	5 W	10 W	
Effective Candela	128	312	

### MULTIPLYING FACTOR FOR COLOURED LENSES:

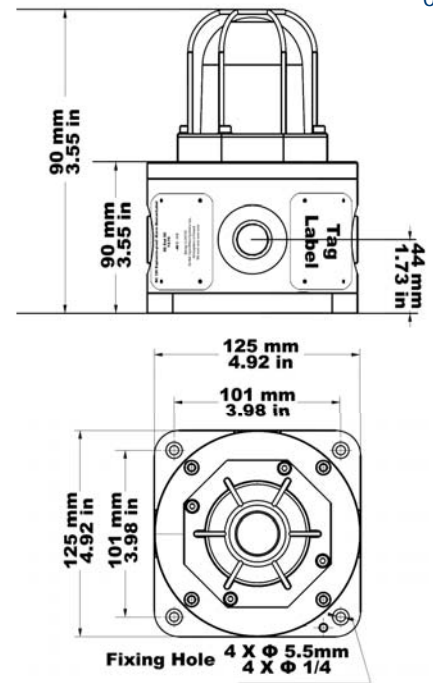
Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL: Enclosure: Stainless Steel 316  
 Lens: Tempered Glass  
 LENS COLOURS: Amber, Red, Blue, Green, Clear or Other (specify)  
 ENCLOSURE COLOUR: Red (RAL3001), Yellow (RAL1003)  
 Blue (RAL5005), Black (RAL9004)  
 WEIGHT: 5.4 Kg / 11.9 lb  
 DIMENSIONS: Length/Width: 125mm / 4.92" Height: 181.2mm / 7.13"  
 INGRESS PROTECTION: IP 66 & 67  
 AMBIENT TEMPERATURE: -40 to +70  
 HUMIDITY: ≤ 95% RH

### Electrical Specifications

POWER SUPPLY: ≤48v Dc or 100-240v Ac (50/60 Hz), ≤25W  
 TERMINATION: Accepts upto ≤ 2.5mm<sup>2</sup> incorporating rising clamp protectors  
 CABLE ENTRY: 4 x M20 or M25.  
 For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.



## Accessories

- 50023: Cage Guard (Stainless Steel)
- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 15mm Thread length for Stainless Steel products

Note: M25 options available for the above

## BC125 Series > Working Current

Xenon						LED					
ENERGY	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac	POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 J	460 mA	280 mA	140 mA	60 mA	35 mA	5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 J	850 mA	490 mA	250 mA	100 mA	60 mA	10 W	1100 mA	530 mA	240 mA	160 mA	80 mA
15 J	1200 mA	700 mA	360 mA	140 mA	80 mA						
20 J	N/A	960 mA	480 mA	180 mA	110 mA						



## Audible Signals - Explosion Proof STAINLESS STEEL SOUNDER

### Explosion Proof Sounder > Stainless Steel SD125 Series

#### Product overview

The SD125 electronic sounder range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

All tones can be pre-set during installation.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

The design allows for termination inside the enclosure.

The sounder is supplied with a mounting bracket as standard.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: Ex d IIC T4~ T6 Gb  
Ex tb IIIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011)  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- Volume control
- Dustproof & Weatherproof

### SD125 Series > Ordering Information

Follow the chart (right) to generate your part code.

	Voltage	Duty Label	Tag Label	Cable Entry	Finish Colour	Telephone Initiated
SD125 +	DC 12 - 48v	Y = Yes	Y = Yes	A = M20	RD = Red YW = Yellow BU = Blue BL = Black OR = Other	Y = Yes N = No
	AC 100 - 240v	N = No	N = No	B = M25		

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required sounder).

SD125						
	Voltage	Duty Label	Tag Label	Cable Entry	Finish Colour	Telephone Initiated

**Note:** All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 6.2

**°C** -40+70

**IP** 66/67

**dB** 115\*

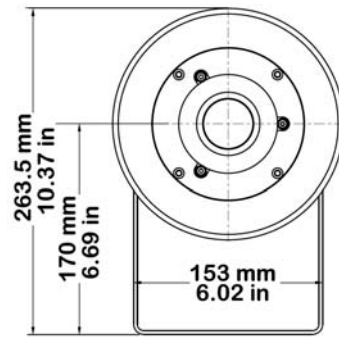
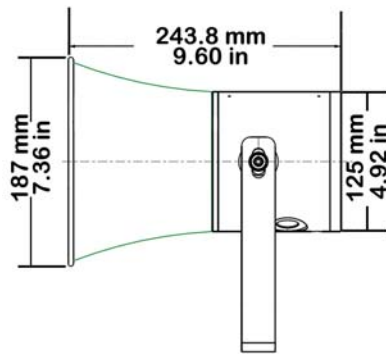
**MARINE**

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**



## Explosion Proof Sounder > Stainless Steel SD125 Series

### General Information

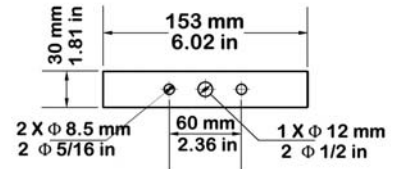
EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1009X), IECEX (NEM14.005X) CQST (Available on request only)
TYPE:	Electronic Sounder
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3dB) *
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH

### Mechanical Specifications

MATERIAL:	Enclosure & Bracket: Stainless Steel 316
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
WEIGHT:	6.2 Kg / 13.7 lb
DIMENSIONS:	Length: 243.8mm / 9.65" See outline drawing for other dimensions
INGRESS PROTECTION:	IP 66 & 67

### Electrical Specifications

POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



Fixing Holes for  
Mounting Bracket

### Accessories

- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland  
Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug  
Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 15mm Thread length for Stainless Steel products

Note: M25 options available for the above

## SD125 Series > Working Current

12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
910 mA (Max 10W)	960 mA	500 mA	210 mA	100 mA



# Audible Signals - Explosion Proof STAINLESS STEEL SOUNDER/BEACON

## Explosion Proof Sounder/Beacon> Stainless Steel **SB125-1 Series**

### Product overview

The SB125-1 electronic combined sounder beacon range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

All tones can be pre-set during installation. In addition, the unit also incorporates a visual warning signal with a choice of two types of light source: either xenon (strobe) with multiple flash rates and power ratings or an LED array with three status type indication options.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

The design allows for termination inside the enclosure. The unit can be bracket mounted only.

### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: Ex d IIC T4~ T6 Gb  
Ex tb IIIC T135°C~T85°C
- Zones 1, 2, 21 & 22
- Conforms to:  
EN 60079-0:2012 (IEC 60079-0:2011),  
EN-60079-1:2007 (IEC 60079-1:2007)  
EN 60079-31:2009 (IEC 60079-31:2008)
- Volume control
- 360° light output around the vertical axis
- Dustproof & Weatherproof

## SB125-1 Series > Ordering Information

SB125-1

+

Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
A = Amber	X = Xenon	02 = 2.5J	05 = 5W	DC 12 - 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
R = Red		05 = 5J							YW = Yellow	
B = Blue		10 = 10J							BU = Blue	
G = Green	L = LED	15 = 15J	10 = 10W	AC 100 - 240v	N = No	N = No	N = No	B = M25	BL = Black	N = No
C = Clear		20 = 20J							OR = Other	

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required sounder beacon).

SB125-1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated

**Note:** All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 8.0

**°C** -40+70

**IP** 66/67

**dB** 115\*

**MARINE**

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**



# Explosion Proof Sounder/Beacon > Stainless Steel **SB125-1 Series**

## General Information

EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1010X), IECEx (NEM 14.0006X) CQST (Available on request only)
TYPE:	Xenon or LED Audible and Visual Signal Warning Device
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3 dB) *

Xenon Working Status			Xenon - Flashing		
Flash Rate			Selectable from 60-180 Flashes per Minute		
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424

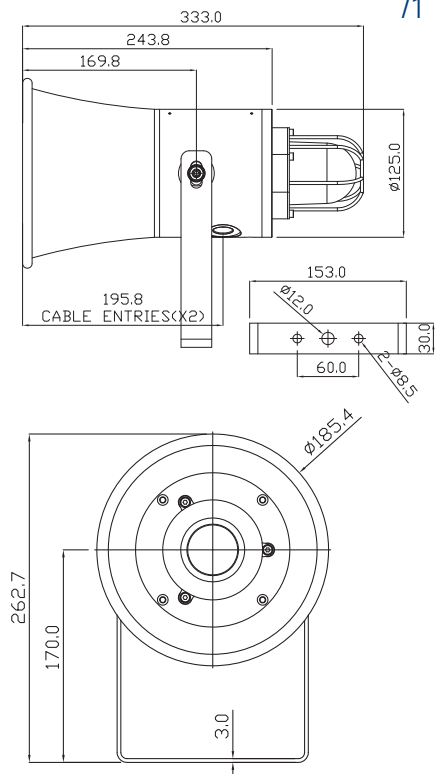
LED Working Status	LED - Flashing / Rotating / Static
Flash Rate	Selectable from 60-120 Flashes per Minute
Rotation Rate	Selectable from 60-120 Revolutions per Minute
Static Mode	Permanently ON (ie Steady)
Power Rating	5 W
Effective Candela	128

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL:	Enclosure & Bracket: Stainless Steel 316 Lens: Tempered Glass
LENS COLOURS:	Amber, Red, Blue, Green, Clear or Other (specify)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	8 Kg / 17.6 lb
DIMENSIONS:	Length: 333mm / 13.1" No Lens Guard Fitted See outline drawing for other dimensions
INGRESS PROTECTION:	IP 66 & 67
<b>Electrical Specifications</b>	
POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W, Sounder: ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



## Accessories

- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland  
Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug  
Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands
- \* 15mm Thread length for Stainless Steel products
- Note: M25 options available for the above

## SB125-1 Series > Power Consumption & Working Current

Power Consumption: Sounder: 5-20W & LED: 5W

Working Current: Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)



SB125-4-P

## Audible & Visual Signals STAINLESS STEEL COMBINATION UNITS WITH ACTIVATION CONTROL

### Explosion Proof Sounder/Beacon > Stainless Steel **SB125-2, 3 & 4 Series**

#### Product overview

The SB125-2, 3 & 4 combined sounder beacon range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The unit incorporates a three stage alarm option with 60 tones to choose from.

The units offer a combined audible & visual warning signal with the option of either a junction box, allowing extra space for ease of installation & final connections. This is particularly helpful if the unit is to be installed into a fire or telecom system where additional cabling is required to monitor external devices or a push button unit for manual activation.

The units are mounted on a heavy duty 316 stainless steel, pre-drilled, mounting plate & the units are pre-wired as standard, so that on the basic model a single input operates both units simultaneously.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### SB125-2, 3 & 4 Series > Ordering Information

SB125

+

Combination Type	Combined With (Optional)	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
2 = 1xS, 1xB	J = Junction Box	A = Amber	X = Xenon	02 = 2J	05 = 5W	DC 12 ~ 48v	Y = Yes	Y = Yes	Y = Yes	A = M20	RD = Red	Y = Yes
3 = 1xS, 2xB	P = Push Button	R = Red	L = LED	05 = 5J	10 = 10W	AC 100-240v	N = No	N = No	N = No	B = M25	YW = Yellow	N = No
4 = 1xS, 3xB		B = Blue		10 = 10J							BU = Blue	
		G = Green		15 = 15J							BL = Black	
		C = Clear		20 = 20J							OR = Other	

Note: S= Sounder, B= Beacon

Follow the chart (right) to generate your part code.

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required junction box)

SB125												
Combination Type	Combined With	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg**  
11.9 SB125-2  
16.7 SB125-3  
22.0 SB125-4

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

**FIRE**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**

# Explosion Proof Sounder/Beacon > Stainless Steel **SB125-2, 3 & 4 Series**

## General Information

EX CODE:	Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C
CERTIFICATION:	ATEX (Nemko 14 1010X), IECEx (NEM 14.0006X) COST (Available on request only)
TYPE:	Xenon or LED Audible and Visual Signal Warning Device
SOUNDER:	3 Stage alarm with 60 Selectable tones
POWER RATING:	5-20 Watts Adjustable
SOUND OUTPUT:	Up to 115 dB at 1 metre (+/- 3 dB) *

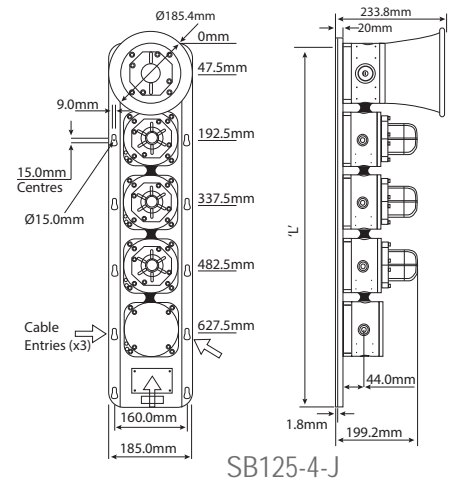
Xenon Working Status			Xenon - Flashing		
Flash Rate			Selectable from 60-180 Flashes per Minute		
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424
LED Working Status		LED - Flashing / Rotating / Static			
Flash Rate		Selectable from 60-120 Flashes per Minute			
Rotation Rate		Selectable from 60-120 Revolutions per Minute			
Static Mode		Permanently ON (ie Steady)			
Power Rating	5 W		10 W		
Effective Candela	128		312		

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

MATERIAL:	Enclosure & Bracket: Stainless Steel 316 Lens: Tempered Glass
LENS COLOURS:	Amber, Red, Blue, Green, Clear or Other (specify)
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	SB125-2: 11.9 Kg / 26.2 lb, SB125-3: 16.7 Kg / 37 lb SB125-4: 22 Kg / 49 lb
DIMENSIONS:	See outline drawings and table for dimensions.
INGRESS PROTECTION:	IP 66 & 67
<b>Electrical Specifications</b>	
POWER SUPPLY:	≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W, Sounder: ≤20W
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	2 x M20 or M25. For 1/2" or 3/4"NPT requirements, male female adapter glands are available. Contact sales dept for further part codes.
CURRENT CONSUMPTION:	Sounder 250 mA - 1500 mA (Adjustable by tone selection)



Combination	No Key Slots	'L'
SB125-2	6	400.0
SB125-3 (2J or P)	8	545.0
SB125-4 (3J or P)	8	690.0
SB125-5 (4J or P)	10	835.0

### Accessories

50023:	Cage Guard (Stainless Steel)
50210:	M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EEExde IIC 2 GD Cable ID 11 - 15.5mm OD 14.5 - 21mm Gland for Multi Armoured Cable *
50211:	M20 A2EX Stainless Steel Gland Atex Cat 2 & 3, EEExde IIC 2 GD Cable OD 11 - 15.5mm Gland for Unarmoured Cable *
50212:	M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC) Cable OD 14.5 - 20.5mm Barrier Gland for Steel and Aluminium Armoured Cable *
50213:	M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC) Cable OD 9 - 15mm Barrier Gland for Unarmoured Cable *
50214:	M20 Stainless Steel Stopping Plug Atex EEExde I/IIC Standard M20 Blanking Plug
50221:	Epoxy Minute Adhesive 24ml tube One tube sufficient for five barrier glands
* 15mm	Thread length for Stainless Steel products
Note:	M25 options available for the above

## SB125-2, 3 & 4 Series > Working Current

### Power Consumption: Sounder: 5-20W & LED: 5W

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

### Working Current: Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)

### LED

POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 W	1100 mA	530 mA	240 mA	160 mA	80 mA



SL125-2-J

# Visual Signals

## STAINLESS STEEL COMBINATION UNITS WITH ACTIVATION CONTROL

### Explosion Proof Status Lights > Stainless Steel SL125 Series

#### Product overview

The SL125 status light range has been approved for use in potentially explosive atmospheres and very harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The units offer a visual warning signal with the option of either a junction box, allowing extra space for ease of installation & final connections. This is particularly helpful if the unit is to be installed into a fire or telecom system where additional cabling is required to monitor external devices or a push button unit for manual activation.

The units are mounted on a heavy duty 316 stainless steel, pre-drilled, mounting plate & the units are pre-wired as standard.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### SL125 Series > Ordering Information

	Combination Type	Combined With (Optional)	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated
<div>SL125</div> +	2 = 2xB	<div>J</div> <div>= Junction Box</div>	<div>A</div> = Amber	<div>X</div> <div>= Xenon</div>	<div>02</div> = 2J	<div>05</div> <div>= 5W</div>	<div>DC</div> <div>12 ~ 48v</div>	<div>Y</div> <div>= Yes</div>	<div>Y</div> <div>= Yes</div>	<div>Y</div> <div>= Yes</div>	<div>A</div> <div>= M20</div>	<div>RD</div> = Red	<div>Y</div> <div>= Yes</div>
	3 = 3xB		<div>R</div> = Red		<div>05</div> = 5J							<div>YW</div> = Yellow	
	4 = 4xB		<div>B</div> = Blue		<div>10</div> = 10J							<div>BU</div> = Blue	
	5 = 5xB*	<div>P</div> <div>= Push Button</div>	<div>G</div> = Green	<div>L</div> <div>= LED</div>	<div>15</div> = 15J	<div>10</div> <div>= 10W</div>	<div>AC</div> <div>100-240v</div>	<div>N</div> <div>= No</div>	<div>N</div> <div>= No</div>	<div>N</div> <div>= No</div>	<div>B</div> <div>= M25</div>	<div>BL</div> = Black	<div>N</div> <div>= No</div>
	<div>C</div> = Clear		<div>20</div> = 20J		<div>OR</div> = Other								

Note: S= Sounder, B= Beacon

\* Combination Type 5: J or P additions not available with this selection.

MODEL CONFIGURATOR (By using the table above, complete this box sequence to select your required junction box)

SL125													
Combination Type	Combined With	Lens Colour	Beacon Type	Power (Xenon)	Power (LED)	Voltage	Duty Label	Tag Label	Lens Guard	Cable Entry	Finish Colour	Telephone Initiated	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 10.2 2 22 4  
15.0 3 25 5

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

**MARINE**

**FIRE**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**

# Explosion Proof Status Lights > Stainless Steel SL125 Series

## General Information

EX CODE: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135°C~T85°C  
 CERTIFICATION: ATEX and IECEx  
 CQST (Available on request only)  
 TYPE: Xenon or LED Visual Signal Warning Device

Xenon Working Status		Xenon - Flashing			
Flash Rate		Selectable from 60-180 Flashes per Minute			
Power Rating	2.5 J (4W) Max	5 J (10W) Max	10 J (15W) Max	15 J (20W) Max	20 J (25W) Max
Effective Candela	67	109	293	395	424

LED Working Status	LED - Flashing / Rotating / Static	
Flash Rate	Selectable from 60-120 Flashes per Minute	
Rotation Rate	Selectable from 60-120 Revolutions per Minute	
Static Mode	Permanently ON (ie Steady)	
Power Rating	5 W	10 W
Effective Candela	128	312

### MULTIPLYING FACTOR FOR COLOURED LENSES:

Amber x 0.51, Red x 0.15, Blue x 0.12, Green x 0.49, Clear x 1

### Mechanical Specifications

**MATERIAL:** Enclosure & Bracket: Stainless Steel 316  
 Lens: Tempered Glass

**LENS COLOURS:** Amber, Red, Blue, Green, Clear or Other (specify)

**ENCLOSURE COLOUR:** Red (RAL3001), Yellow (RAL1003)  
 Blue (RAL5005), Black (RAL9004)

**AMBIENT TEMPERATURE:** -40 to +70

**HUMIDITY:** ≤ 95% RH

**WEIGHT:** SL125-A: 10.2 Kg / 22.5 lb, SL125-B: 15.0 Kg / 33 lb  
 SL125-C: 20.0 Kg / 44 lb, SL125-D: 25.0 Kg / 55 lb

**DIMENSIONS:** See outline drawings and table for dimensions.

**INGRESS PROTECTION:** IP 66 & 67

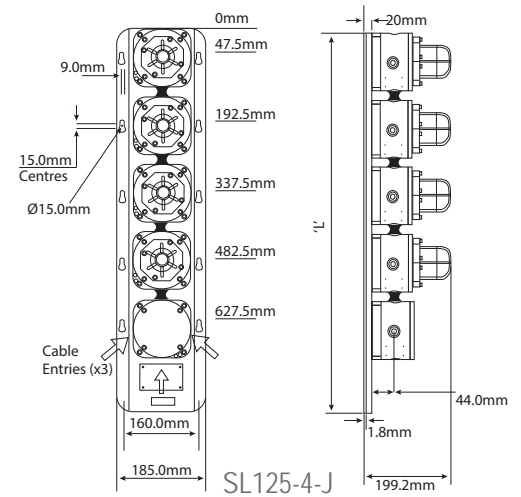
### Electrical Specifications

**POWER SUPPLY:** ≤48v Dc or 100-240v Ac (50/60 Hz), Beacon: ≤25W,

**TERMINATION:** Accepts upto ≤ 2.5mm<sup>2</sup> incorporating rising clamp protectors

**CABLE ENTRY:** 2 x M20 or M25.  
 For 1/2" or 3/4"NPT requirements, male female adapter glands are available. Contact sales dept for further part codes.

**CURRENT CONSUMPTION:** Sounder 250 mA - 1500 mA (Adjustable by tone selection)



Combination	No Key Slots	'L'
SL125-2	6	400.0
SL125-3 (-2J or P)	8	545.0
SL125-4 (-3J or P)	8	690.0
SL125-5 (-4J or P)	10	835.0

### Accessories

- 50023: Cage Guard (Stainless Steel)
- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
 Cable ID 11 - 15.5mm  
 OD 14.5 - 21mm  
 Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland Atex Cat 2 & 3, EExde IIC 2 GD  
 Cable OD 11 - 15.5mm  
 Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
 Cable OD 14.5 - 20.5mm  
 Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
 Cable OD 9 - 15mm  
 Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug Atex EExde I/IIC  
 Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
 One tube sufficient for five barrier glands

\* 15mm Thread length for Stainless Steel products  
 Note: M25 options available for the above

## SL125 Series > Working Current

**Power Consumption:** Sounder: 5-20W & LED: 5W

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	4 W (Max)	10 W (Max)	15 W (Max)	20 W (Max)	25 W (Max)

**Working Current:** Sounder: 250 mA - 1500 mA & LED: 220 mA (Max)

Xenon	2.5 Joule	5 Joule	10 Joule	15 Joule	20 Joule
	160 mA	320 mA	650 mA	1A (Max)	1.4A (Max)

### LED

POWER	12v Dc	24v Dc	48v Dc	110v Ac	220v Ac
5 W	530 mA	260 mA	120 mA	80 mA	40 mA
10 W	1100 mA	530 mA	240 mA	160 mA	80 mA





## Visual Signals - Explosion Proof STAINLESS STEEL CALL POINT

### Explosion Proof Manual Call Point > Stainless Steel CP125 Series

#### Product overview

The CP125 manual call point range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED. The design allows for termination inside the unit.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### CP125 Series > Ordering Information

Follow the chart (right) to generate your part code.

	Switch	Duty Label	Tag Label	LED Indicator	Features	Cable Entry	Finish Colour
CP125 +	<b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>L</b> = Red & Green <b>R</b> = Red	<b>F</b> = Lift Flap <b>R</b> = Resistor (specify)	<b>A</b> = M20	<b>RD</b> = Red <b>YW</b> = Yellow
	<b>D</b> = Double Switch	<b>N</b> = No	<b>N</b> = No	<b>G</b> = Green <b>N</b> = No LED	<b>D</b> = Diode (specify) <b>N</b> = No Features	<b>B</b> = M25	<b>BU</b> = Blue <b>BL</b> = Black <b>OR</b> = Other

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required manual call point).

CP125							
	Switch	Duty Label	Tag Label	LED Indicator	Features	Cable Entry	Finish Colour

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 4.9

**°C** -40+70

**IP** 66

**INDUSTRIAL**

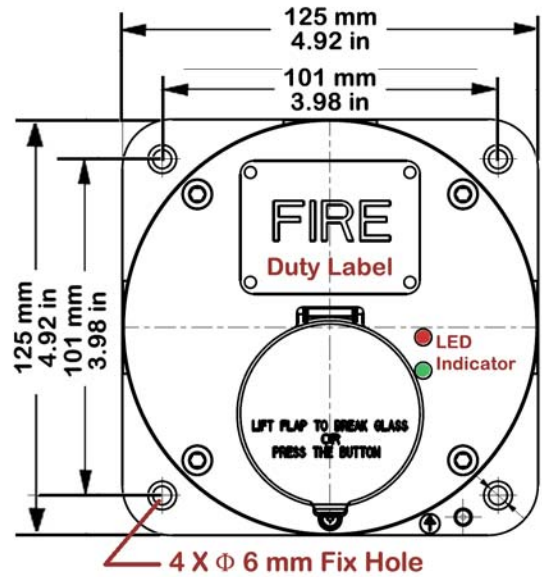
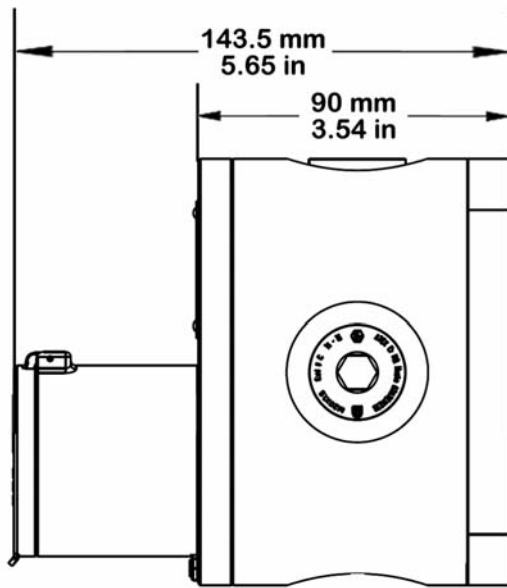
**MARINE**

**FIRE**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**



## Explosion Proof Manual Call Point > Stainless Steel CP125 Series

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5426X), IECEx (NEM 14.0012X) CQST (Available on request only)
TYPE:	Manual Call Point

### Mechanical Specifications

MATERIAL:	Enclosure: Stainless Steel 316
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	4.9 Kg / 10.8 lb
DIMENSIONS:	Width/Length: 125mm / 4.92" Height: 143mm / 5.65"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25 For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland  
Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop  
Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug  
Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 15mm Thread length for Stainless Steel products

Note: M25 options available for the above



## Enclosure - Explosion Proof STAINLESS STEEL **JUNCTION BOX**

### Explosion Proof Junction Box > Stainless Steel **JB125 Series**

#### Product overview

The JB125 junction box range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

The enclosures are machined from marine grade 316 stainless steel and are supplied with four pre-drilled conduit entries.

They have been designed to offer maximum space for cable termination with a choice of either an 8 or 10 way terminal block.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G **Exd IIC T4 - T6** (incorporating IIA & IIB )
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### JB125 Series > Ordering Information

Follow the chart (right) to generate your part code.

JB125	+	Terminal Block	Cable Entry	Finish Colour
		<b>08</b> = 8 Holes	<b>A</b> = M20	<b>RD</b> = Red
				<b>YW</b> = Yellow
				<b>BU</b> = Blue
		<b>10</b> = 10 Holes	<b>B</b> = M25	<b>BL</b> = Black
				<b>OR</b> = Other

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required junction box)

<b>JB125</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Terminal Block	Cable Entry	Finish Colour

**Note:** All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 3.5

**°C** -40+70

**IP** 66/67

**INDUSTRIAL**

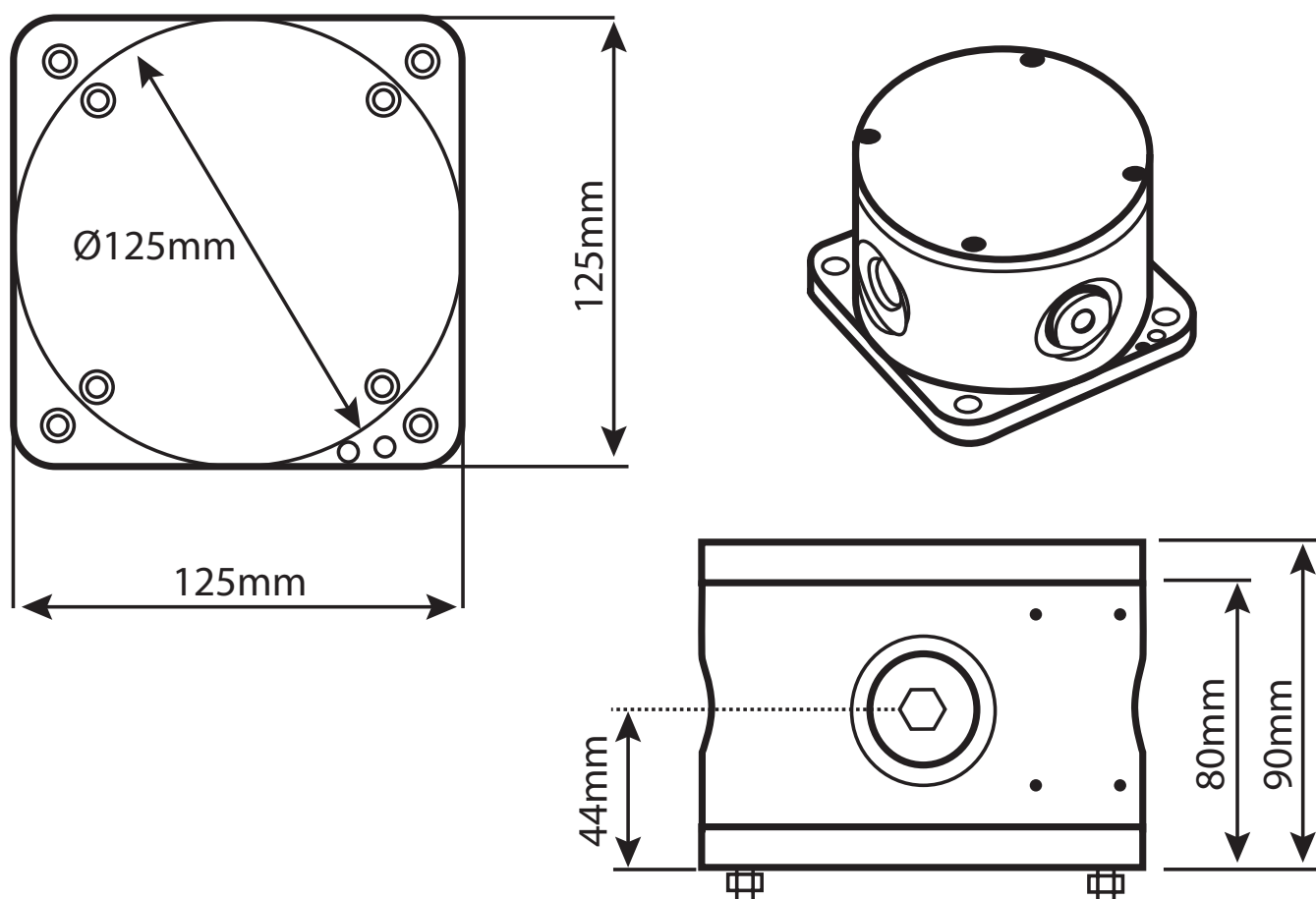
**MARINE**

**FIRE**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**



## Explosion Proof Junction Box> Stainless Steel **JB125 Series**

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5426X), IECEx (NEM 14.0012X) CQST (Available on request only)
TYPE:	Junction Box

### Mechanical Specifications

MATERIAL:	Enclosure: Stainless Steel 316
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	3.5 Kg / 7.7 lb
DIMENSIONS:	Width/Length: 125mm / 4.92" Height: 90mm / 3.54"
INGRESS PROTECTION:	IP 66/67

### Electrical Specifications

TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25 For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

50210:	M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD Cable ID 11 - 15.5mm OD 14.5 - 21mm Gland for Multi Armoured Cable *
50211:	M20 A2EX Stainless Steel Gland Atex Cat 2 & 3, EExde IIC 2 GD Cable OD 11 - 15.5mm Gland for Unarmoured Cable *
50212:	M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC) Cable OD 14.5 - 20.5mm Barrier Gland for Steel and Aluminium Armoured Cable *
50213:	M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC) Cable OD 9 - 15mm Barrier Gland for Unarmoured Cable *
50214:	M20 Stainless Steel Stopping Plug Atex EExde I/IIC Standard M20 Blanking Plug
50221:	Epoxy Minute Adhesive 24m/l tube One tube sufficient for five barrier glands
* 15mm	Thread length for Stainless Steel products
Note:	M25 options available for the above



## Visual Signals - Explosion Proof STAINLESS STEEL PUSH BUTTON

### Explosion Proof Push Button > Stainless Steel PB125 Series

#### Product overview

The PB125 push button range has been approved for use in potentially explosive atmospheres and harsh environmental conditions.

Typical applications are Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations etc.

It is compatible for use with a PLC, DCS and ESD systems via 4-20mA output. It is ideally suited for use in fire alarm systems and an addressable option with diode fitted is available.

The unit has the option for either a key reset or self reset. The range also offers an additional visual LED indication option; red, green (or both) can be fitted. When fault or alarm status arises the green LED will be overridden by the red LED. The design allows for termination inside the unit.

#### Features/Certifications

- Approved by ATEX, IECEx
- CQST (Available on request only)
- ATEX: II 2G Exd IIC T4 - T6 (incorporating IIA & IIB)
- Zones 1, 2, 21 & 22
- Conforms to EN (IEC) 60079-0  
EN (IEC) 60079-1 and EN54
- Dustproof & Weatherproof

### PB125 Series > Ordering Information

Follow the chart (right) to generate your part code.

	Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Finish Colour
PB125 +	<b>S</b> = Single Switch	<b>Y</b> = Yes	<b>Y</b> = Yes	<b>S</b> = Self Reset	<b>L</b> = Red & Green <b>R</b> = Red	<b>F</b> = Lift Flap <b>R</b> = Resistor (specify)	<b>A</b> = M20	<b>RD</b> = Red <b>YW</b> = Yellow <b>BU</b> = Blue
	<b>D</b> = Double Switch	<b>N</b> = No	<b>N</b> = No	<b>K</b> = Key Reset	<b>G</b> = Green <b>N</b> = No LED	<b>D</b> = Diode (specify) <b>N</b> = No Features	<b>B</b> = M25	<b>BL</b> = Black <b>OR</b> = Other

**MODEL CONFIGURATOR** (By using the table above, complete this box sequence to select your required push button).

PB125								
Switch	Duty Label	Tag Label	Reset	LED Indicator	Features	Cable Entry	Finish Colour	

Note: All customers orders will be confirmed in writing. Care should be taken that the correct code has been ordered as be-spoke manufactured products cannot be returned for exchange or credit later.

**Kg** 4.9

**°C** -40+70

**IP** 66

**INDUSTRIAL**

**MARINE**

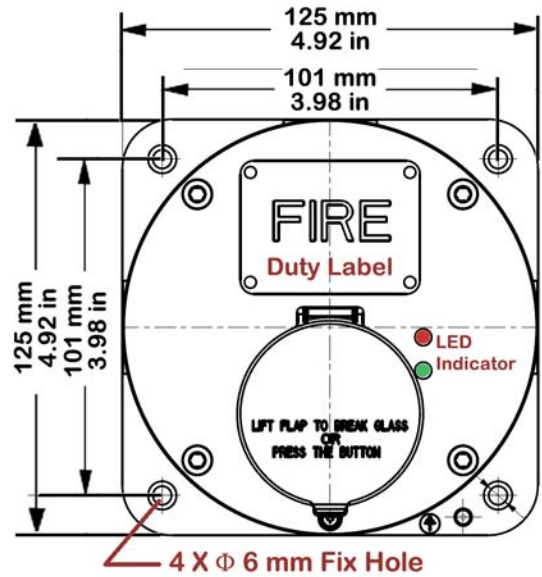
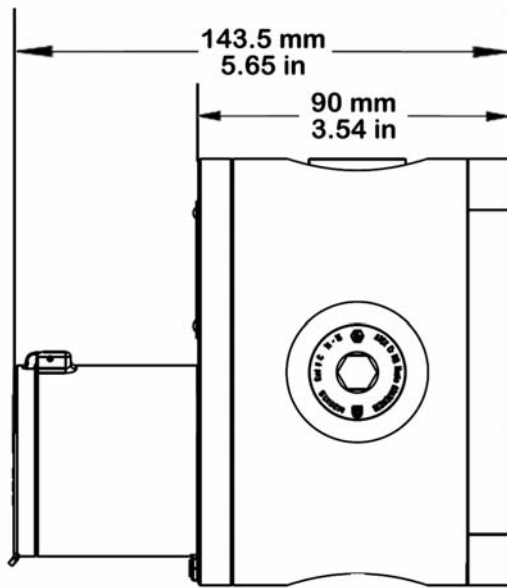
**FIRE**

APPROVALS and  
CONFORMITIES



**STAINLESS  
STEEL**





## Explosion Proof Push Button > Stainless Steel PB125 Series

### General Information

EX CODE:	Exd IIC T4 - T6
CERTIFICATION:	ATEX (Nemko 14 5426X), IECEx (NEM 14.0012X) CQST (Available on request only)
TYPE:	Push Button

### Mechanical Specifications

MATERIAL:	Enclosure: Stainless Steel 316
ENCLOSURE COLOUR:	Red (RAL3001), Yellow (RAL1003) Blue (RAL5005), Black (RAL9004)
AMBIENT TEMPERATURE:	-40 to +70
HUMIDITY:	≤ 95% RH
WEIGHT:	4.9 Kg / 10.8 lb
DIMENSIONS:	Width/Length: 125mm / 4.92" Height: 143mm / 5.65"
INGRESS PROTECTION:	IP 66

### Electrical Specifications

SWITCH RATING:	<b>30v Dc:</b> 6A (Resistive), 6A (Inductive) <b>250v Ac:</b> 11A (Resistive), 6A (Inductive)
OUTPUT:	On-Off Output (NC/NO)
TERMINATION:	Accepts upto ≤ 2.5mm <sup>2</sup> incorporating rising clamp protectors
CABLE ENTRY:	4 x M20 or M25. For 1/2" or 3/4"NPT requirements, male/female adapter glands are available. Contact sales dept for further part codes.

### Accessories

- 50210: M20 E1EX Stainless Steel Gland (Multi Armour Cone) Atex Cat 2 & 3, EExde IIC 2 GD  
Cable ID 11 - 15.5mm  
OD 14.5 - 21mm  
Gland for Multi Armoured Cable \*
- 50211: M20 A2EX Stainless Steel Gland  
Atex Cat 2 & 3, EExde IIC 2 GD  
Cable OD 11 - 15.5mm  
Gland for Unarmoured Cable \*
- 50212: M20 E1EX-QS Stainless Steel Gland (Ex d IIC, Ex e IIC, Ex nR IIC, Ex tb IIIC)  
Cable OD 14.5 - 20.5mm  
Barrier Gland for Steel and Aluminium Armoured Cable \*
- 50213: M20 A2EX Quick Stop Stainless Steel Gland (Ex d IIC, Ex nR IIC, Ex tb IIC)  
Cable OD 9 - 15mm  
Barrier Gland for Unarmoured Cable \*
- 50214: M20 Stainless Steel Stopping Plug  
Atex EExde I/IIC  
Standard M20 Blanking Plug
- 50221: Epoxy Minute Adhesive 24m/l tube  
One tube sufficient for five barrier glands

\* 15mm Thread length for Stainless Steel products

Note: M25 options available for the above



## Visual Signals - Explosion Proof BATTERY OPERATED BEACONS

### Explosion Proof > HZ610 LED Portable Beacon

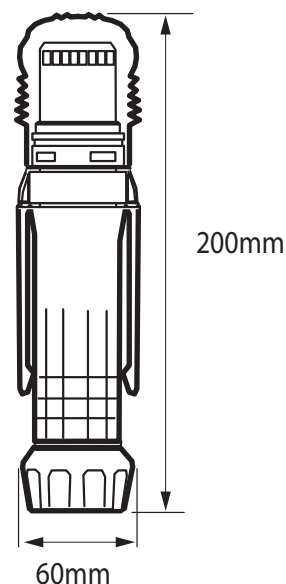
#### Product overview

The HZ610 series portable LED beacon has been designed for use in Zone 2, Potentially Explosive Atmospheres.

The beacon is ideally suited for marking/warning of temporary hazards in an explosion proof environment.

It is of robust construction and can be set for either a Flashing or Static (Steady On) light mode by twisting the lens to the left or to the right.

The beacon comes with a wide range of accessories making the product extremely versatile in a wide range of applications. The beacon requires two 'D' cell Alkaline batteries for operation (not supplied).



### HZ610 Series > Ordering Information

Code No:	Voltage:	Light Source:
<b>Amber</b> LED-P-HZ610-01	3v Dc ---	8 LEDs
<b>Red</b> LED-P-HZ610-02	3v Dc ---	8 LEDs

#### Accessories



50170  
Standard Base



50171  
Magnetic Clip



50174  
Magnetic Base



50176  
Suction Cup



50177  
Daylight Hood



50178  
Carry Bag

#### Features

- LED long life
- Zone 2  II 3G EX 11C T4 Gc
- Low battery indicator
- Shock resistant
- Ultra quick installation
- Versatile accessory options
- 40 hours life
- 360° light output around the vertical axis
- Dustproof & Waterproof

#### Material

UV Stable Polycarbonate Lens  
UV Stable ABS Body

**Kg** 0.35

**°C** -20+50

**IP** 66

**FPM** 160

**MARINE**

**EXPLOSION PROOF**

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES





ACOUSTIC

# Acoustic Signals - Industrial

## PIEZO BUZZERS



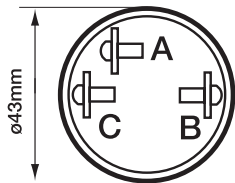
## Acoustic Signals Piezo Buzzers > AE20M Series

### Product overview

The AE20M piezo miniature buzzer range is a compact, low cost audible signalling solution for local indication where very low current consumption may be a requirement. A threaded

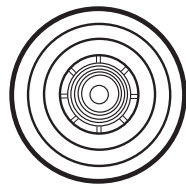
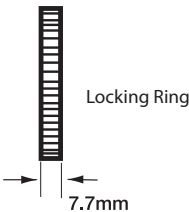
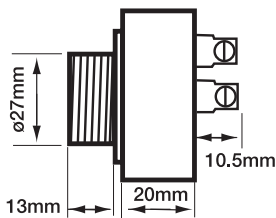
locking ring allows for easy installation for all panel mount installations.

The unit offers a single stage alarm, either a fast pulsed or continuous tone selectable by a three pin connection combination.



Connections for  
115v & 230v  
Tone Terminals  
Pulsed A + B  
Continuous A + C

Connections for  
12v to 48v  
Tone Terminals  
Pulsed B + A  
Continuous B + C



Front View

## AE20M Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:	dB:
AE20M-12	10-20v Dc ---	2900 Hz	25 mA	90
AE20M-24	10-28v Dc ---	2900 Hz	25 mA	85
AE20M-48	6-48v Dc ---	2900 Hz	35 mA	82
AE20M-115	60-120v Ac ~	2900 Hz	25 mA	90
AE20M-230	130-240v Ac ~	2900 Hz	25 mA	90

Frequency +/- 500      dB at prime voltage +/- 3dB

### Features

- Continuously rated
- Economical
- Suitable for panel mounting only
- Two tone sound option
- Wide operating voltage
- Compact design
- Locking ring allows for easy installation

### Material

ABS Plastic

**Kg** 0.08

**Hz** 50/60

**°C** -20+60

**IP** 55

**dB** 80/90

**PULSED OR CONTINUOUS**

APPROVALS and  
CONFORMITIES



**INDUSTRIAL**

# Acoustic Signals - Industrial

## MINATURE BUZZERS

Trumpet Top



Flat Top



## Acoustic Signals Industrial Buzzers > AE30M Series

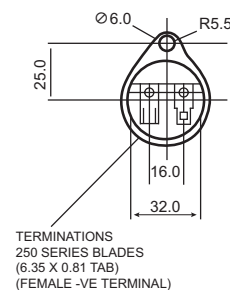
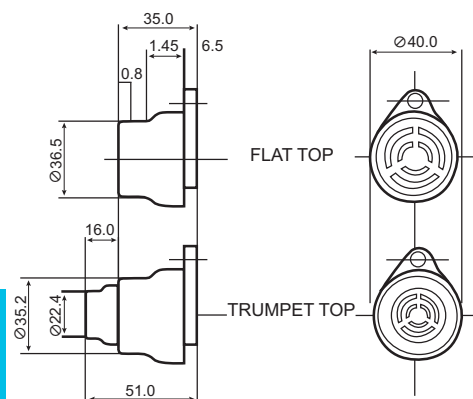
### Product overview

The AE30M Flat top & Trumpet top miniature buzzers are suitable for automotive, security and light industrial applications where local indication is required.

The buzzers offer a single stage alarm and produce a rich, high quality and low frequency signal

when compared to other piezo type alarms.

The slightly lower dB is more than compensated by lower frequency of sound output produced. The single point fix and compact design allows for installation in most locations. The units are colour coded, Black = 12vDc & Red = 24vDc. These products were formerly supplied by Klaxon.



### Features

- Continuously rated
- Economical
- Suitable for panel or surface mounting
- Produces a high quality sound
- Termination by male & female spade terminals
- Wide operating voltage
- Compact design

### Material

ABS Plastic

## AE30M Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
<b>Flat Top</b>			
AE30M-FT-01	6-14v Dc ---	450Hz	30 mA •
AE30M-FT-02	10-28v Dc ---	450Hz	25 mA ••
<b>Trumpet Top</b>			
AE30M-TT-01	6-14v Dc ---	450Hz	30 mA •
AE30M-TT-02	10-28v Dc ---	450Hz	25 mA ••

• at 12v Dc ---      •• at 24v Dc ---  
Frequency +/- 20 Hz      dB at prime voltage +/- 3dB

Kg 0.28

°C -20+60

IP 34

dB 80/90



APPROVALS and  
CONFORMITIES





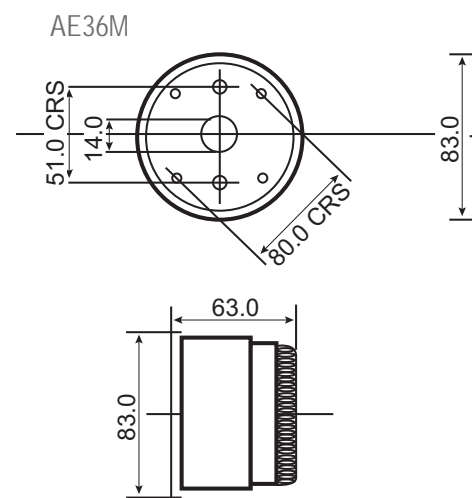
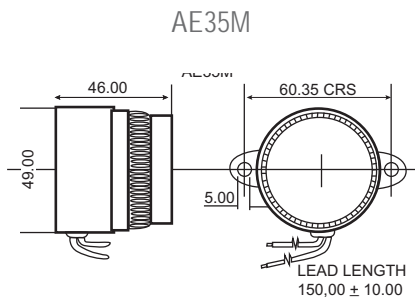
# Acoustic Signals - Industrial

## PIEZO BUZZERS



AE35M

AE36M



## Acoustic Signals Industrial Buzzers > AE35M & AE36M Series

### Product overview

The AE35M (P40) and AE36M (P60) are piezo buzzers designed for use in security, process control and a wide range of industrial applications where a compact but more powerful acoustic signal is required.

The units offer a single stage alarm and can either be pulsed or continuous, selection made by a third wire. The AE35M is installed using the external mounting lugs. The AE36M uses a separate mounting plate where the main buzzer can be snap fitted into place allowing for termination inside the enclosure. These products were formerly supplied by Klaxon.

## AE35M & AE36M Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
AE35M-02	6-28v Dc ---	3200Hz	50 mA •
AE36M-02	6-28v Dc ---	3200Hz	57 mA •

• At 24v Dc ---  
Frequency +/- 500      dB at prime voltage +/- 3dB

### Features

- Continuously rated
- Higher sound output
- Economical
- AE35M: Suitable for panel or surface mounting
- AE36M: Suitable for panel, conduit box or surface mounting
- Wide voltage range

### Material

ABS Plastic

Kg 0.06 AE35M  
0.10 AE36M

°C -20+60

IP 30

dB 98 AE35M  
105 AE36M

INDUSTRIAL

APPROVALS and  
CONFORMITIES



# Acoustic Signals - Industrial

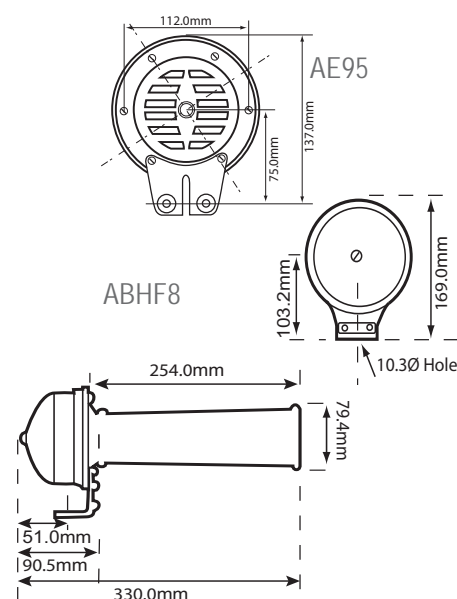
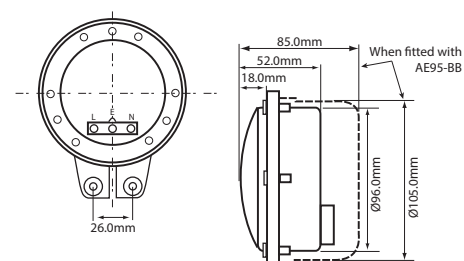
## ELECTRICAL/MECHANICAL BUZZERS



AE95



ABHF8



## Acoustic Signals Industrial Buzzers > AE95 & ABHF8 Series

### Product overview

The AE95 and ABHF8 series are electrical/mechanical buzzers suitable for a wide range of industrial signalling applications where a low frequency and penetrating audible signal is required.

The units offer a single stage alarm, once energised an electromagnet causes the diaphragm to vibrate creating a unique acoustic tone.

They can also be pulsed via a remote source (ie control panel/plc etc) to give an intermittent signal if required.

The AE95 can also be used in automotive applications (reversing alarm/forklift trucks etc) and has an optional back box that will be required for weatherproof applications which allows for termination inside the protected enclosure.

The ABHF8 is a weatherproof unit also suitable for light marine applications (small boats/barges etc) and is encased in a brass enclosure making it suitable for corrosive environments. Design allows for termination inside the enclosure.

### Features

- Rugged construction
- Wide voltage range
- These units are rated 15 mins On max / 1 min Off minimum
- AE95M: Suitable for 2 point automotive fix
- Loud low frequency sound
- ABHF8: Suitable for single point fix
- Dustproof and Weatherproof

### Material

**AE95** Powder Coated Mild Steel

**ABHF8** Powder Coated Mild Steel in a Brass outer enclosure

## AE95 & ABHF8 Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
<b>AE95 Series (AE)</b>			
AE95-05	24/48v Ac/Dc ~	420 Hz	0.8 A
AE95-06	115/230v Ac/Dc ~	420 Hz	0.4/0.2 A
AE95-07 •	24/48v Ac/Dc ~	420 Hz	0.8 A
AE95-08 •	115/230v Ac/Dc ~	420 Hz	0.4/0.2 A
• Fitted with a Weatherproof back box			
<b>ABHF8 Series (AB)</b>			
ABHF8-1437	24/48v Ac/Dc ~	420 Hz	0.80 A
ABHF8-1436	115/230v Ac/Dc ~	420 Hz	0.4/0.2 A

**Kg** 0.70 (AE)  
2.10 (AB)

50/60 Hz

°C -30+60

**IP** 65 AE95-07/08  
ABHF8

**IP** 53 AE95-05/06

ON 15 MINS  
OFF 1 MINS

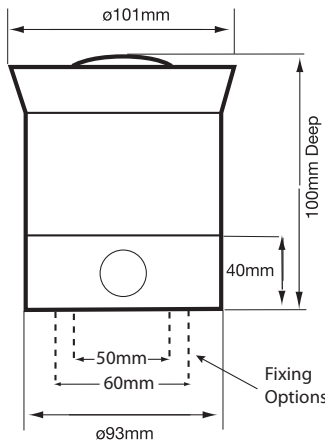
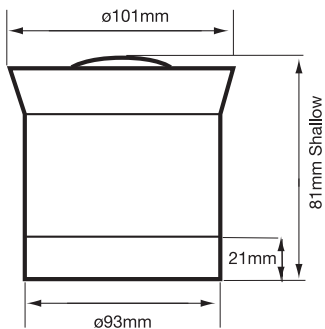
**dB** 111

**INDUSTRIAL**

APPROVALS and  
CONFORMITIES



Acoustic Signals - Industrial  
**ELECTRONIC SOUNDERS**



Acoustic Signals Electronic Sounders >  
**AE40M Series**

Product overview

The AE40M range of electronic sounders are suitable for a wide range of fire and Industrial signalling applications where a low cost, energy efficient and flexible signalling solution is required.

The DC unit offers a two stage alarm with a choice of eight separate

tones, selectable in the unit via a dip switch.

The shallow base design allows for termination inside the enclosure through the rear of the base only. The deep base design allows for termination via two M20 knockouts on the side & two 10mm entries in the rear. The AC unit offers a single stage alarm with a choice of eight separate tones.

AE40M Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
AE40M-24R-SB	10-30v Dc ---	800-2580 Hz	32 mA •
AE40M-24R ••	10-30v Dc ---	800-2580 Hz	32 mA
AE40M-230R ••	98-260v Ac ~	800-2580 Hz	50 mA

• Current at 24v Dc --- •• Deep Base  
Note: Decibels are subject to prime voltage and tone selected

Features

- Continuously rated
- Higher sound output
- Economical
- Suitable for panel, conduit box or surface mounting
- Deep base version - Dustproof and Weatherproof

Material

ABS Plastic

Kg 0.35 DC  
0.40 AC

~ 50/60 Hz

°C -40+70

IP 54/65 ••

dB 95-112

INDUSTRIAL

FIRE

APPROVALS and  
CONFORMITIES



# Acoustic Signals - Industrial

## ELECTRONIC SOUNDER



## Acoustic Signals Electronic Sounder > AE100M Series

### Product overview

The AE100M series is suitable for Industrial & marine signalling applications where an audible signal is required to operate in very harsh environmental conditions.

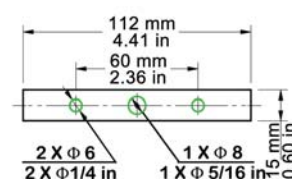
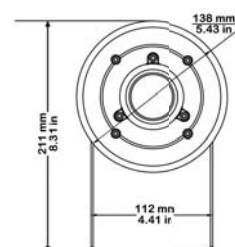
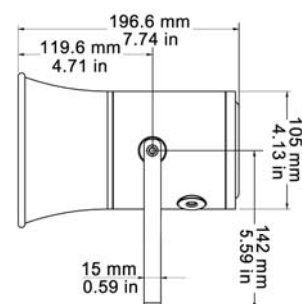
The unit incorporates a three stage alarm option with sixty three tones to choose from which includes four tones that can be recorded or customised by the installer.

All tones can be pre-set during installation.

The units also have the ability to be fitted with a telephone initiation function and can be used as the second ring output indicator for telephones when installed in very noisy environments.

The design allows for termination inside the enclosure.

The sounder is supplied with a mounting bracket as standard.



### Features

- Continuously rated
- Very high sound output
- 5-20 W power consumption
- Termination up to 2.5 mm<sup>2</sup>
- 2 x M20 cable entry options
- Deep base version - Dustproof & Weatherproof

### Material

Enclosure: UV Stable, Flame retardant polycarbonate

Bracket: Stainless 316

## AE100M Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
AE100M-02	12-48v Dc ---	300 - 2900 Hz	0.91 / 0.96 / 0.50 A
AE100M-04	100-240v Ac ~	300 - 2900 Hz	100 mA •

• at 230v Ac ~

Kg 1.5

~ 50/60 Hz

°C -40+70

IP 66

dB 123

INDUSTRIAL

MARINE

APPROVALS and  
CONFORMITIES



## Introduction to EN54 Pt:23

The new European fire standard specifies the minimum performance requirements for Visual Alarm Devices (VADs), removing any ambiguity regarding the light output requirements or system design parameters involved with using light to evacuate buildings.

The standard specifies three different classifications for VADs: Wall, Ceiling & Open. Wall & Ceiling mount categories are specified at designated mounting heights and particular coverage patterns areas.

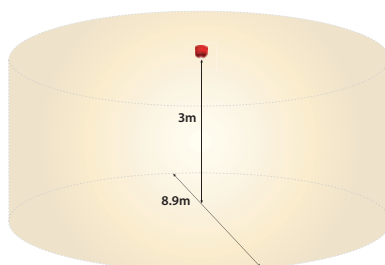
The Open classification allows the manufacturer to specify the coverage volume and coverage shape, and does not restrict mounting height. Pulse Alert Technology is not specified in this way, as it has been designed to exceed the requirements of the more specific device classifications.

Sonos Pulse are available as fire beacons or combined sounder/beacons for wall or ceiling mount. Nexus Pulse are combined sounder/beacons for wall mount only. The choice of a Red or White flash will dictate the final coverage volume.

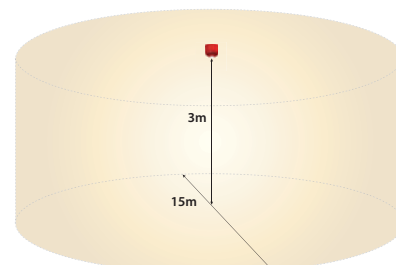
## Ceiling Mount

The coverage volume is classified as a code in the form of C – X – Y where C designates Ceiling classification, X is the maximum mounting height & Y is the diameter of the coverage area. All distances are measured in meters.

Ceiling Mount EN54-23 Coverage



Sonos Red Flash

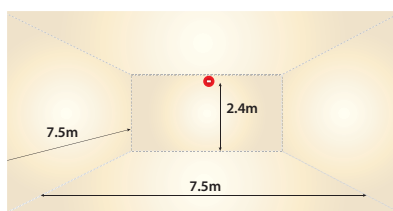


Sonos White Flash

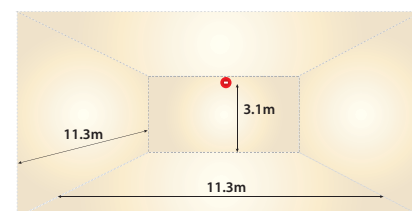
## Wall Mount

The coverage volume is classified as a code in the form of W – X – Y where W designates Wall classification, X is the maximum mounting height & Y is the width & length of the coverage area. All distances are measured in meters.

Wall Mount EN54-23 Coverage

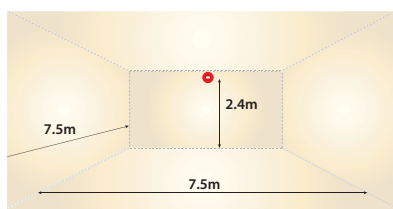


Sonos Red Flash

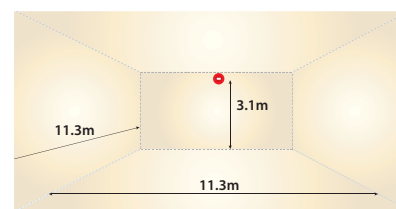


Sonos White Flash

Wall Mount EN54-23 Coverage



Nexus 105/110 Red Flash



Nexus 105/110 White Flash



# Audible & Visual Signals - EN54 Pt:23

## ELECTRONIC SOUNDERS



### Audible & Visual Electronic Sounders > Sonos Pulse Ceiling Series

#### Product overview

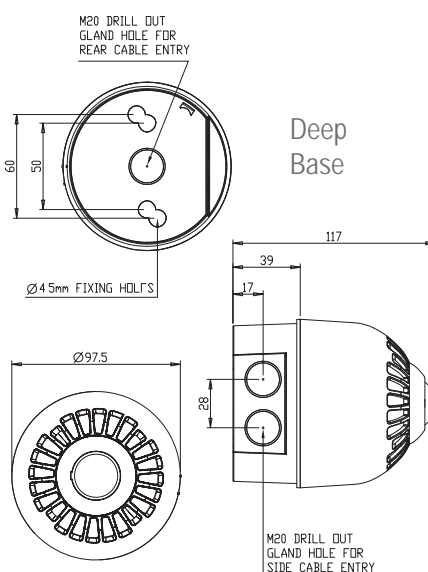
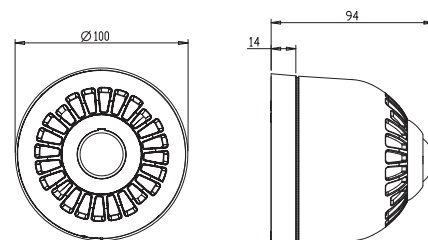
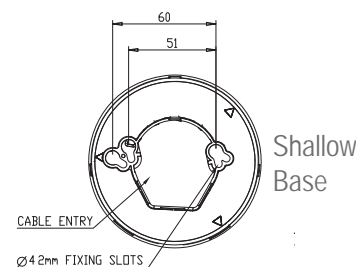
Sonos Pulse Ceiling mounted visual alarm devices are available as fire beacons or combined sounder beacons. The choice of a white or a red flash unit will determine the amount of area that can be covered.

The white flash unit giving the optimum coverage area.

The flash rate is selectable on the unit and will dictate the current consumed. Shallow or Deep base selection dictate ingress protection (IP) levels of the enclosure.

### Sonos Pulse Ceiling: Red or White Flash > Ordering Information

Code No:	Voltage:	Base Type:	Description:	Flash rate at	
				@0.5Hz Current:	@ 1Hz
Beacon					
ESB-5005	17-60v Dc---	Deep Base	White Flash and White Body	20mA	40mA
ESB-5006	17-60v Dc---	Shallow Base	White Flash and White Body	20mA	40mA
ESB-5007	17-60v Dc---	Deep Base	White Flash and Red Body	20mA	40mA
ESB-5008	17-60v Dc---	Shallow Base	White Flash and Red Body	20mA	40mA
ESD-5005	17-60v Dc---	Deep Base	Red Flash and White Body	20mA	40mA
ESD-5006	17-60v Dc---	Shallow Base	Red Flash and White Body	20mA	40mA
ESD-5007	17-60v Dc---	Deep Base	Red Flash and Red Body	20mA	40mA
ESD-5008	17-60v Dc---	Shallow Base	Red Flash and Red Body	20mA	40mA
Sounder/Beacon *					
ESC-5005	17-60v Dc---	Deep Base	White Flash and White Body	25mA	45mA
ESC-5006	17-60v Dc---	Shallow Base	White Flash and White Body	25mA	45mA
ESC-5007	17-60v Dc---	Deep Base	White Flash and Red Body	25mA	45mA
ESC-5008	17-60v Dc---	Shallow Base	White Flash and Red Body	25mA	45mA
ESF-5005	17-60v Dc---	Deep Base	Red Flash and White Body	25mA	45mA
ESF-5006	17-60v Dc---	Shallow Base	Red Flash and White Body	25mA	45mA
ESF-5007	17-60v Dc---	Deep Base	Red Flash and Red Body	25mA	45mA
ESF-5008	17-60v Dc---	Shallow Base	Red Flash and Red Body	25mA	45mA



#### Features

- EN54 Pt:23 Approved
- VDS Approved
- Up to 15m Coverage Volumes
- Synchronised Flash
- No Surge Current
- Wire to base Technology
- Up to 2 x 20mm cable entries
- ABS FR construction
- Dustproof and Weatherproof

**Kg** 0.24 SB  
0.29 DB

**°C** -25+70

**IP** 21 SB  
65 DB

**dB** 97 \*

**FPM** 30/60

**FIRE**

APPROVALS and  
CONFORMITIES





## Audible & Visual Signals - EN54 Pt:23 ELECTRONIC SOUNDERS

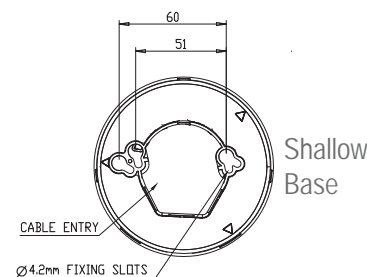
### Audible & Visual Electronic Sounders > Sonos Pulse Wall Series

#### Product overview

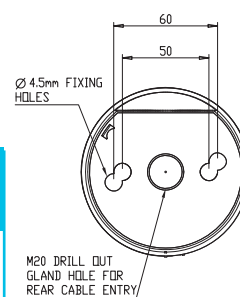
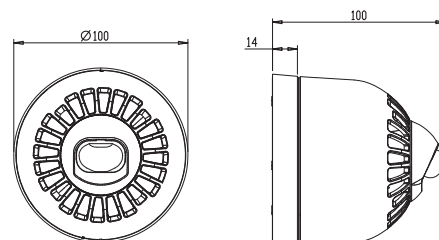
Sonos Pulse Wall mounted visual alarm devices are available as fire beacons or combined sounder beacons. The choice of a white or a red flash unit will determine the amount of area that can be covered.

The white flash unit giving the optimum coverage area.

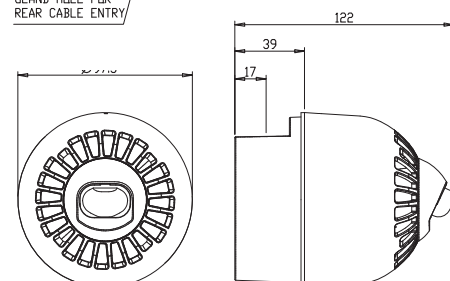
The flash rate is selectable on the unit and will dictate the current consumed. Shallow or Deep base selection dictate ingress protection (IP) levels of the enclosure.



Shallow Base



Deep Base



### Sonos Pulse Wall: Red or White Flash > Ordering Information

Code No:	Voltage:	Base Type:	Description:	Flash rate at	
				@0.5Hz Current:	@ 1Hz
Beacon					
ESB-5001	17-60v Dc---	Deep Base	White Flash and White Body	20mA	40mA
ESB-5002	17-60v Dc---	Shallow Base	White Flash and White Body	20mA	40mA
ESB-5003	17-60v Dc---	Deep Base	White Flash and Red Body	20mA	40mA
ESB-5004	17-60v Dc---	Shallow Base	White Flash and Red Body	20mA	40mA
ESD-5001	17-60v Dc---	Deep Base	White Body and Red Flash	20mA	40mA
ESD-5002	17-60v Dc---	Shallow Base	White Body and Red Flash	20mA	40mA
ESD-5003	17-60v Dc---	Deep Base	Red Body and Red Flash	20mA	40mA
ESD-5004	17-60v Dc---	Shallow Base	Red Body and Red Flash	20mA	40mA
Sounder/Beacon *					
ESC-5001	17-60v Dc---	Deep Base	White Flash and White Body	25mA	45mA
ESC-5002	17-60v Dc---	Shallow Base	White Flash and White Body	25mA	45mA
ESC-5003	17-60v Dc---	Deep Base	White Flash and Red Body	25mA	45mA
ESC-5004	17-60v Dc---	Shallow Base	White Flash and Red Body	25mA	45mA
ESF-5001	17-60v Dc---	Deep Base	White Body and Red Flash	25mA	45mA
ESF-5002	17-60v Dc---	Shallow Base	White Body and Red Flash	25mA	45mA
ESF-5003	17-60v Dc---	Deep Base	Red Body and Red Flash	25mA	45mA
ESF-5004	17-60v Dc---	Shallow Base	Red Body and Red Flash	25mA	45mA

#### Features

- EN54 Pt:23 Approved
- VDS Approved
- Up to 15m Coverage Volumes
- Synchronised Flash
- No Surge Current
- Wire to base Technology
- Up to 2 x 20mm cable entries
- ABS FR construction
- Dustproof and Weatherproof

**Kg** 0.24 SB  
0.29 DB

**°C** -25+70

**IP** 21 SB  
65 DB

**dB** 97 \*

**FPM** 30/60

**FIRE**

APPROVALS and  
CONFORMITIES



# Audible & Visual Signals - EN54 Pt:23

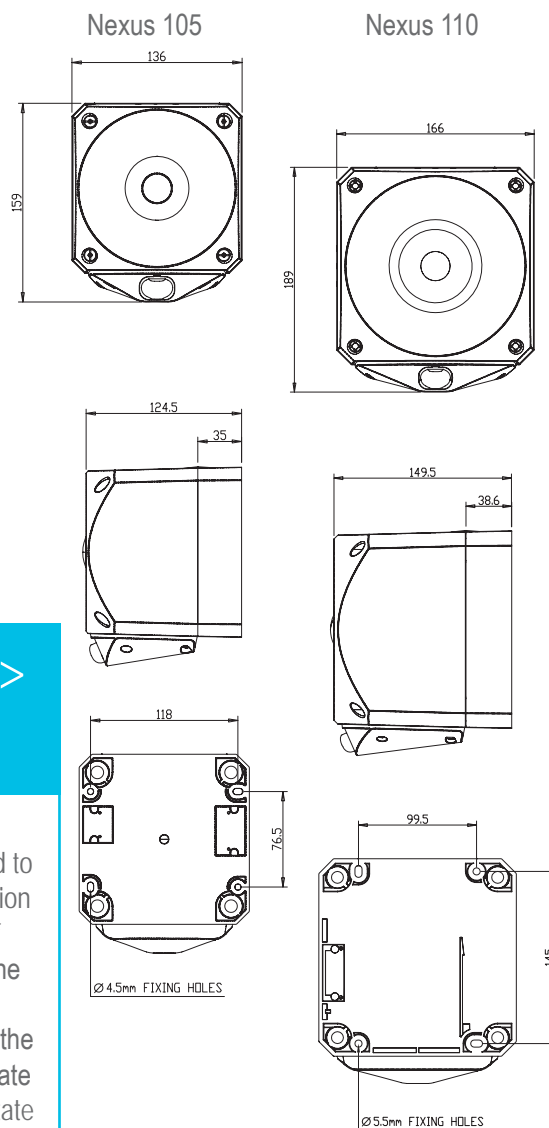
## ELECTRONIC SOUNDERS



Nexus 110



Nexus 105



## Audible & Visual Electronic Sounders > Nexus Pulse Wall Series

### Product overview

The Nexus Pulse Wall mounted Visual Alarm devices are combined sounder beacons designed for fire alarm use. These units have been designed to offer much higher dB outputs to provide audible cover in larger installations.

The enclosures have been designed to offer higher levels of ingress protection (IP) up to marine use. The choice of a white or red flash unit will determine the amount of area that can be covered. The white flash unit giving the optimum coverage area. The flash rate is selectable on the unit and will dictate the current consumed.

## Nexus Pulse Wall: Red or White Flash > Ordering Information

Code No:	Voltage:	Description:	Flash rate at:		Decibel:
			@0.5Hz	@ 1Hz	@1meter
Sounder / Beacon					
ENC-6001	17-60v Dc---	White Flash and Red Body	50mA	70mA	105
END-6001	17-60v Dc---	Red Flash and Red Body	50mA	70mA	105
ENC-6002	17-60v Dc---	White Flash and Red Body	65mA	85mA	110
END-6002	17-60v Dc---	Red Flash and Red Body	65mA	85mA	110

### Features

- EN54 Pt:23 Approved
- Up to 11.3m Coverage Volumes
- Synchronised Flash
- No Surge Current
- Wire to base Technology
- Up to 5 x 20mm cable entries
- ABS FR construction
- Dustproof and Weatherproof

**Kg** 0.8 105  
1.2 110

**°C** -25+70

**IP** 66

**FPM** 30/60

**FIRE**

APPROVALS and  
CONFORMITIES



# Acoustic Signals - Industrial

## ELECTRONIC SOUNDERS



### Electronic Sounders > Klaxon AE105, AE110 & AE120

#### Product overview

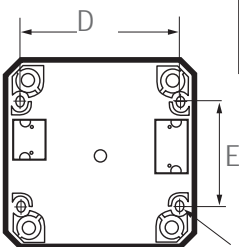
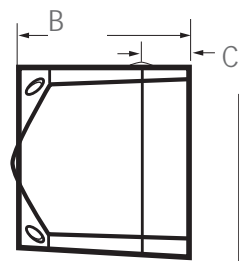
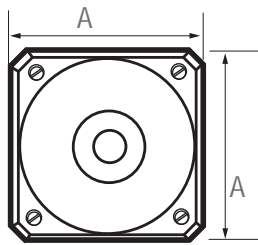
The AE105, 110 & 120 'NEXUS' range of electronic sounders are suitable for a wide range of fire and Industrial signalling applications where a high degree of signalling versatility is required in the environment.

The units offer a three stage alarm with sixty four separate tone options that are automatically synchronised on multi unit

installations, selectable inside the unit via a six way dip switch. The range has been designed to allow a 'first fix' wiring solution. Connections are made in the base during initial wiring phase which results in faster and more reliable installation.

The 'sander head' is then fixed into position using four captive, quarter turn fasteners, giving accurate seal compression for weatherproofing.

There are five cable entry options allowing for termination inside the enclosure.



#### Dimensions (mm)

REF	105	110&120
A	136.2	166.3
B	124.5	149.5
C	35.0	38.6
D	118.0	99.5
E	76.5	145.0
F	5.0	6.0

Note: 105 Fixing detail is shown

Fixing Holes

### AE105, AE110 & AE120 Series > Ordering Information

Code No:	Voltage:	Current:	dB at 1m:
AE105-02MF	10-60v Dc ---	8-40 mA	100-113
AE105-04MF	115/230v Ac ~	40 mA	100-113
AE110-02MF	10-60v Dc ---	10-50 mA	104-116
AE110-03MF	24-48v Ac ~	10-50 mA	104-116
AE110-04MF	115/230v Ac ~	40 mA	104-116
AE120-02MF	10-60v Dc ---	120-550 mA	110-120
AE120-04MF	115/230v Ac ~	200 mA (max)	110-120

Note: Decibels and current are subject to voltage and tone selected

#### Features

- Continuously rated
- Suitable for surface, conduit box or wall mounting
- Wide operating voltage
- Volume control adjustment (-20dB)
- Conforms to EN54-3 Type B for Fire Alarm use (Dc Only)
- Vds & NF approved versions available upon special request only
- Dustproof and Weatherproof

#### Material

Flame Retardant ABS

Kg 0.8, 1.2, 2.0

50/60 Hz

°C -25+55 Ac  
-25+70 Dc

IP 66

MARINE

INDUSTRIAL

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APPROVALS and  
CONFORMITIES





# Visual & Acoustic Signals - Industrial

## ELECTRONIC SOUNDER & BEACON COMBINED

### Electronic Sounder & Beacon Combined Klaxon > AE L/X 105, 110, 120

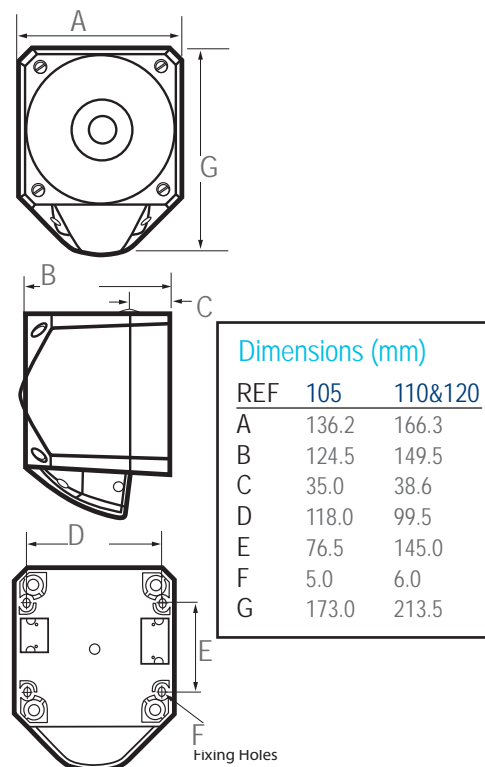
#### Product overview

The AE L/X 105, 110 & 120 'NEXUS' range of electronic sounder/beacons are suitable for a wide range of fire and Industrial signalling applications where a high degree of signalling versatility is required in the environment.

The units offer a three stage alarm with sixty four separate tone options that are automatically synchronised on multi unit installations, selectable inside the unit via a six way dip switch.

The range has been designed to allow a 'first fix' wiring solution. Connections are made in the base during initial wiring phase which results in faster and more reliable installation. The 'sounder head' is then fixed into position using four captive, quarter turn fasteners, giving accurate seal compression for weatherproofing. There are five cable entry options allowing for termination inside the enclosure.

This range offers a choice of either LED or Xenon visual warning. LED being the more power efficient option, Xenon giving a more industrial warning signal.



### AE L/X 105, 110, 120 Series > Ordering Information

Code No:	Voltage:	Light Source:	Current:	dB at 1m:
AEL105-02MF	10-60v Dc ---	LED	26-58 mA •	100-113
AEX105-02MF	10-60v Dc ---	Xenon	358-390 mA •	100-113
AEX105-04MF	115/230v Ac ~	Xenon	110 mA	100-113
AEL110-02MF	10-60v Dc ---	LED	28-68 mA •	104-116
AEX110-02MF	10-60v Dc ---	Xenon	360-400 mA •	104-116
AEX110-04MF	115/230v Ac ~	Xenon	110 mA	104-116
AEL120-02MF	10-60v Dc ---	LED	138-568 mA •	110-120
AEX120-02MF	10-60v Dc ---	Xenon	470-900 mA •	110-120
AEX120-04MF	115/230v Ac ~	Xenon	110 mA	110-120

- Subject to voltage, tone selection and LED beacon set to flash mode.

ADD THE FOLLOWING LENS CODES TO THE PRODUCT WHEN ORDERING



Note: 105 Fixing detail is shown

#### Features

- Continuously rated
- Suitable for surface, conduit box or wall mounting
- Wide operating voltage
- Audible & visual warning signal
- Conforms to EN54-3 Type B for Fire Alarm use (Dc Only)
- Vds & NF approved versions available upon special request only
- Dustproof and Weatherproof

#### Material

Flame Retardant ABS

Kg 0.8, 1.2, 2.0

50/60 Hz

°C -25+55 Ac  
-25+70 Dc

IP 66

FPM 60

INDUSTRIAL

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# Acoustic Signals - Industrial

## POWERFUL SIRENS

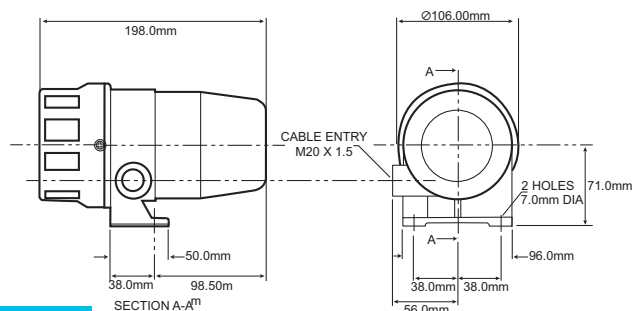
AS100



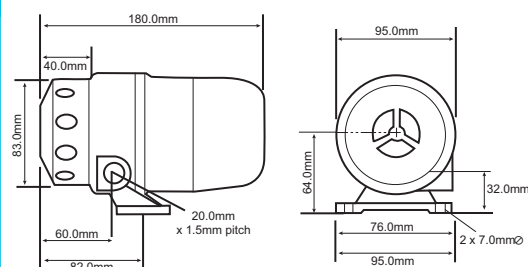
AS200



AS200



AS100



## Acoustic Signals Industrial Sirens > AS100 & AS200 Series

### Product overview

The AS100 & AS200 sirens were designed for a wide range of industrial signalling applications where a powerful high output signal is required.

The sirens incorporate a fractional horse power motor that drives an internal impellor at high RPM forcing air through the slotted front cover creating its unique penetrating sound.

The units offer a single stage alarm when energised but may be pulsed or modulated by simply turning the power on/off to produce the classic 'wailing' siren sound.

The units are of robust construction and suitable for use in harsh environmental conditions.

Design allows for termination inside the enclosure via 1 x M20 conduit entry.

### Features

- Continuously rated
- Suitable for wall or pole mounting
- Omni-directional 360° coverage
- Very high sound output
- Dustproof and Weatherproof (when mounted with impellor below black ABS casing)

### Material

Cast Aluminium Body  
ABS Rotor, Stator and Cover

## AS100 & AS200 Sirens > Ordering Information

Code No:	Voltage:	Frequency:	Current:
<b>AS100 (Klaxon Mono 72)</b>			
AS100-04MF	115v Ac/Dc...	1800 Hz	1 A
AS100-05MF	230v Ac/Dc...	1800 Hz	0.5 A
<b>AS200 (Klaxon Duplo)</b>			
AS200-04MF	115v Ac/Dc...	1600 Hz	2.7 A
AS200-05MF	230v Ac/Dc...	1600 Hz	1.2 A

Kg 1.7 AS100  
2.0 AS200

~ 50/60 Hz

°C -30+45

IP 65

dB 120dB AS100  
127dB AS200



APPROVALS and  
CONFORMITIES



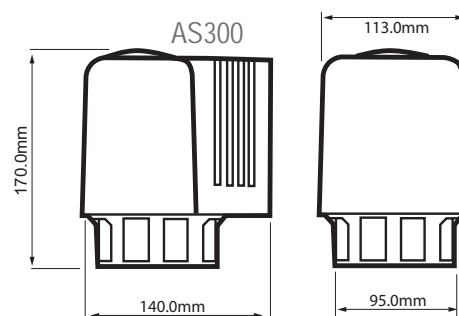
# Acoustic Signals - Industrial

## POWERFUL SIRENS

AS300



AS400



## Acoustic Signals Industrial Sirens > AS300 & AS400 Series

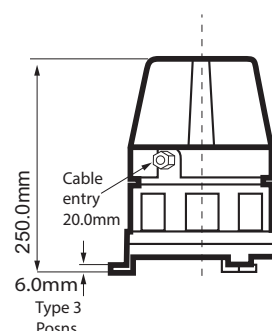
### Product overview

The AS300 & AS400 range of sirens were designed for a wide range of industrial signalling applications where a very powerful high output signal is required.

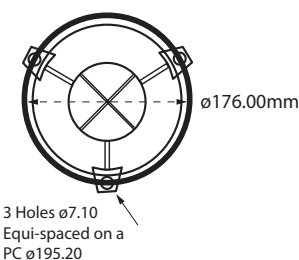
The sirens incorporate a fractional horse power motor that drives an internal impellor at high RPM forcing air through the slotted front cover creating its unique penetrating sound.

The units offer a single stage alarm when energised but may be pulsed or modulated by simply turning the power on/off to produce the classic 'wailing' siren sound. The units are of robust construction and suitable for use in harsh environmental conditions.

The AS400 siren produces a low frequency sound that is ideally suited for signalling over medium size areas. For maximum coverage it is advised that the unit be raised above the surrounding buildings. Design allows for termination inside the enclosure. The AS300 is supplied with a 1m flying lead.



AS400



## AS300 & AS400 Sirens > Ordering Information

Code No:	Voltage:	Frequency:	Current:
<b>AS300 (SuperM)</b>			
AS300-04MF	115v Ac/Dc ~	1680 Hz	2.7A
AS300-05MF	230v Ac/Dc ~	1680 Hz	1.0A
<b>AS350 (Masterblaster)</b>			
AS350-05MF-12 with 12v Trigger Relay	230v Ac/Dc ~	1680 Hz	1.0A
AS400-05MF •	230v Ac/Dc ~	900 Hz	1.4A

### Features

- Continuously rated
- Suitable for wall or pole mounting
- Omni-directional 360° coverage
- Very high sound output
- Dustproof and Weatherproof (when mounted as per instructions)

### Material

#### AS300

ABS Construction

#### AS400

Cast Aluminium Body & Noryl Rotor

Kg 1.8 AS300  
4.5 AS400

50/60 Hz

°C -30+45

IP 55/65 •

dB 127dB AS300  
125dB AS400

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# Acoustic Signals - Industrial

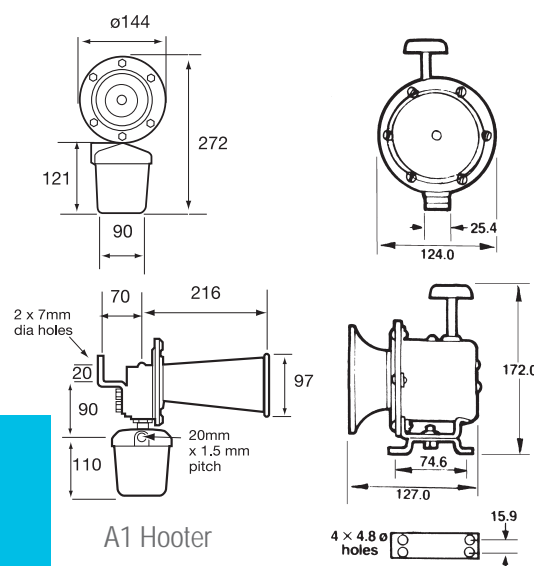
## MANUAL OR MOTOR DRIVEN HOOTERS



A1 Hooter



ES Manual Hooter



A1 Hooter

ES Manual Hooter

## Acoustic Signals Industrial Hooters > ES Manual & A1 Series

### Product overview

The ES is a manually operated hooter producing the unique 'Klaxon' sound for applications where a power supply is unavailable.

Typical applications include small boats, canal barges, mine trucks and fork lift trucks.

The ES gives a powerful sound which, with its low frequency tone, makes it an effective warning device.

The A1 is a powerful motor driven hooter giving the unique 'klaxon' sound.

The high output, low frequency resonating sound gives a powerful warning tone.

With a sound output of 120dB, it can cut through background noise in almost any environment and is ideal for use as a time signalling alarm or process alarm in the noisiest factory.

In addition, the A1 can be used on barges, work boats and dock sides and for other similar marine applications.

### Features

#### A1 Hooter

- Powerful, high output
- 120 dB
- Robust construction
- Weatherproof to IP65

#### ES Manual Hooter

- Manual operation - no power supply required
- Lightweight and compact
- Robust and reliable
- IP54

## ES Manual & A1 Series > Ordering Information

Code No:	Voltage:	Frequency:	Current:
<b>A1 Hooter (A1)</b>			
AHA1-2000	12v Dc ---	420 Hz	5.0 A
AHA1-2001	24v Dc ---	420 Hz	2.30 A
AHA1-2002	48v Dc ---	420 Hz	1.30 A
AHA1-2004	115v Ac ~	420 Hz	0.84 A
AHA1-2003	230v Dc ---	420 Hz	0.80 A
AHA1-2006	230v Ac ~	420 Hz	0.76 A
<b>ES Manual Hooter (ES)</b>			
AHES-1290	n/a	150-350 Hz	n/a

### Material

#### A1 Hooter

Die cast aluminium & Zinc  
Mild Steel  
ABS Plastic

#### ES Manual Hooter

Mild steel

**Kg** 2.0 (A1)  
1.20 (ES)

**50/60Hz** (A1)

**°C -20+66** (A1)

**IP** 65 (A1)  
54 (ES)

**ON 2 MIN**  
**OFF 5 MIN** (A1)

**dB** 120 (A1)  
103 (ES)

APPROVALS and  
CONFORMITIES



**MARINE**



**INDUSTRIAL**

## Acoustic Signals - Industrial

## HIGH SOUND / LOW FREQUENCY AIR HORNS

AP Series



SK Series



## Acoustic Signals Industrial Air Horns &gt; AP and SK Series

## Product overview

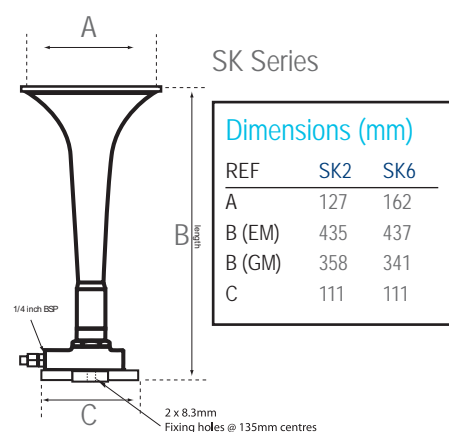
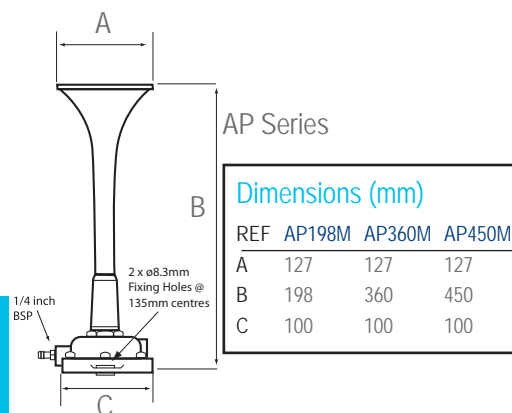
The AP range of air horns are suitable for industrial environments where very high sound and very low frequency outputs are required for signalling over medium to larger size areas.

Operated from a compressed air supply, being non electrical, the units produce the classic 'fog horn' sound.

The SK range of air horns are suitable for marine and very harsh environments where a very high sound and very low frequency outputs are required for signalling over medium to larger size areas.

Operated from a compressed air supply, being non electrical, the units produce the classic 'fog horn' sound.

The SK also offers a mini compressor for locations without a compressed air supply, suitable for SK2 version only.



## Features

- Continuously rated
- Robust construction
- Very high sound output
- Very low frequency tone
- Wide operating air pressure
- Suitable for wall or pole mounting
- Dustproof and Weatherproof

## Material

## AP Series

Aluminium, Brass & Phosphur Bronze

## SK Series

Brass/Phosphur bronze

## AP and SK Series &gt; Ordering Information

Code No:	Air Pressure:	Air Consumption:	Frequency:	dB:
AP198M	55-140 psi	50-133 L/min	660 Hz	125
AP360M	55-140 psi	50-133 L/min	387 Hz	125
AP450M	55-140 psi	50-133 L/min	307 Hz	125

APSK6-GM •	50-100 psi	50-100 L/min	370 Hz	132
APSK2-GM •	10-30 psi	50-100 L/min	370 Hz	120
APSK2-EM •	10-30 psi	50-100 L/min	315 Hz	134
APSK6-EM •	50-100 psi	50-100 L/min	315 Hz	124

Code No:	Air Pressure:	Voltage:	Current:
• APSK-Compressor	14 psi	24v Dc---	36 A

(49mm o/d, 116mm L, 0.41 kg) To obtain optimum dB performance the airhorn may require fine tuning when used with a compressor.

Kg 0.85 (AP) Average  
1.95 (SK) Average

°C -30+70 (AP)

IP 66

ANCHOR MARINE

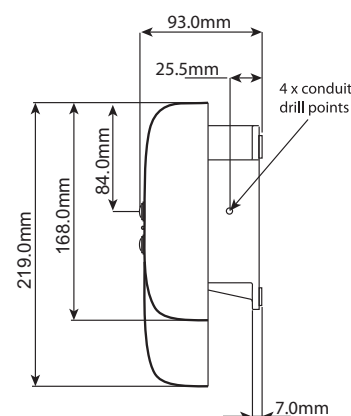
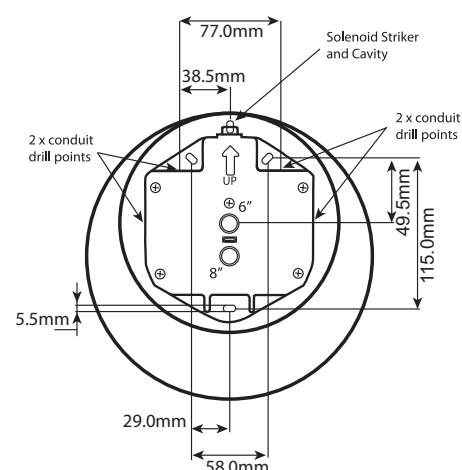
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APPROVALS and  
CONFORMITIES



## Audible Signals - Industrial &amp; Marine

## IP66 BELLS



Note: Moflash Bell must be mounted in this position with the solenoid striker in the upright position. (see top diagram above)

## Acoustic Signals > Industrial & Marine-IP66 Series

### Product overview

The new range of 6" & 8" Solenoid driven bells have been designed and manufactured to withstand harsh environmental conditions, ideally suited heavy duty industrial & marine applications where rugged construction and a high weatherproof classification is required.

The bells produce a rich and clear 'traditional' alarm bell sound free from mechanical clatter.

The design allows for up to 4 x M20 cabling entry knockouts, two from above & one on either side to allow for loop in/loop out cabling applications. Termination is inside the enclosure and caters for 4 x 2.5mm<sup>2</sup> termination. Termination is inside the enclosure. Marine approvals pending.

## Industrial & Marine-IP66 Series > Ordering Information

Code No:	Colour:	Voltage:	Current:
A6BM-12DC	Grey	12v Dc ---	400 mA
A6BM-24DC	Grey	24v Dc ---	210 mA
A6BM-24DCR	Red	24v Dc ---	210 mA
A6BM-24AC	Grey	24v Ac ~	500 mA
A6BM-115AC	Grey	115v Ac ~	110 mA
A6BM-230AC	Grey	230v Ac ~	60 mA
A8BM-24DC	Grey	24v Dc ---	210 mA
A8BM-115AC	Grey	115v Ac ~	110 mA
A8BM-230AC	Grey	230v Ac ~	60 mA

### Features

- 3 point fix with adjustment slots
- Anti Tamper gong bolt
- IEC 60533:1999 approved for installation on ships
- AEN 50130-4:2011 approved for Fire/Security etc
- Dustproof and Weatherproof

### Material

UV Stable Polypropelene Back Box  
Zinc Powder Coated Steel Gong

Kg 1.6 A6 Bell  
2.15 A8 Bell

50/60 Hz

IP 66

dB 106 A6 Bell  
108 A8 Bell

MARINE

INDUSTRIAL

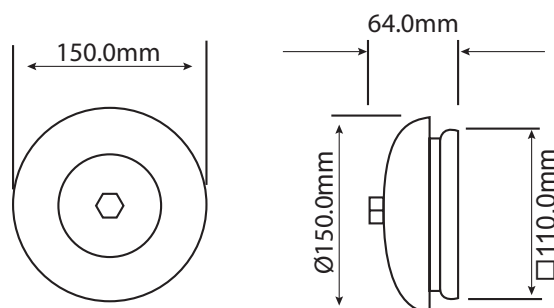
APPROVALS and  
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# Acoustic Signals - Industrial

## ECONOMY BELLS



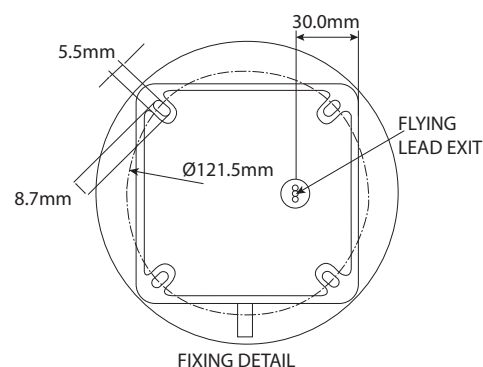
## Acoustic Signals > AB6 Solenoid Series

### Product overview

These traditional type bells produce their distinctive sound by means of a hardened striker powered by a solenoid, repeatedly striking the inside edge of metal gong, producing a loud & clear ringing tone.

They are suitable for light commercial/industrial use where intermittent audible signalling is required in a localised area.

The bells can be mounted on any flat surface utilising either the four mounting holes that are incorporated into the body of the casting or the universal mounting plate and gasket (supplied as standard) that offers multiple fixing location options.



### Features

- Economy signal
- Distinctive sound
- Die-Cast construction
- Universal mounting plate
- Supplied with 150mm flying leads
- Powder coated gong
- IP44

### Material

Steel Gong  
Aluminium Body

## AB6 Solenoid Series > Ordering Information

Code No:	Voltage:	Gong Size:	Current:
AB6-24DC	24v Dc ---	152mm / 6"	80 mA
AB6-115AC	115v Ac ~	152mm / 6"	60 mA
AB6-230AC	230v Ac ~	152mm / 6"	30 mA

**Kg** 1.2

**50/60 Hz**

**IP** 44

**dB** 100 +/- 3

**°C** -20+45

**ON 15 MINS OFF 20 MINS**

APPROVALS and  
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# MOFLASH<sup>®</sup>

## SIGNALLING

Manufacturers of Visual & Audible Signalling Devices



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**Issue 10 Catalogue:** Moflash Signalling Limited reserves the right to modify product specifications without prior notice within our policy of continual product development.