e2s

warning signals

ATEX
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E2S is one of the world's leading independent signalling manufacturers with more than 190 products types and an annual production volume of over 175,000 units. We specialise in the design, development and manufacture of high performance electronic sounders, PA loudspeakers, intelligent voice annunciators and beacons for industrial, marine and hazardous environments.

We design and manufacture a wide range of intrinsically safe and explosion proof units at our London facility. We believe our customers should have complete faith in our products and have made substantial investment in achieving worldwide product accreditations as well as the ISO9001: 2008 approval.

To make our products as widely available as possible and to provide local technical support, we have created a valued network of distributors and system integrators in Europe, the Middle East, Far East, Australasia, Africa and the USA.

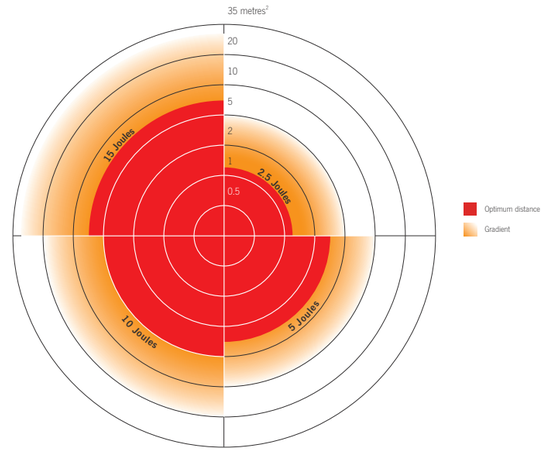
We also support and distribute our entire range of products from our US facility in Houston, Texas.

Can't find exactly what you want in the catalogue? We have a long history of manufacturing products to specific requirements including alarm tone frequencies, tone patterns, stage configurations and housing colours. Simply tell us what you need.

You can find out more at **www.e2s.com**, which contains product certification, installation instructions and advice on choosing the correct signalling device for your application. If you'd still like to know more or have any questions then please call our London, UK sales office on **+44 (0)20 8743 8880** or our Houston, US sales office on **+1 281 377 4401**

Basics of light

Beacons, flash-alarms or strobes are widely used, often to reinforce an audible warning signal. With a wide variety of luminous sources to choose from, selecting the correct one will depend on a number of factors such as the type, brightness, range, situation or operation of the beacon.



What types and modes of light are available?

- **Rotating** – An electric motor drives a parabolic reflector around the light source (halogen) on a vertical axis to create a powerful beam of light travelling through 360°.
- **Filament & halogen bulb** – Usually operated with an additional circuit, to give a steady output or more effective blinking output. Filament light bulbs are relatively low cost and give adequate performance, which can be enhanced with a prismatic lens. They have a short life, shortened further by vibration.
- **Xenon (strobe) tube** – Brilliant flashes of light, which can be enhanced through a freznel lens. The tube life is typically 5 to 8 million flashes after which light output is reduced by approximately 70%
- **L.E.D.** Unlike the filament bulb and the xenon tube, LEDs emit only one frequency of light (i.e. one colour) and cannot yet manage the brightness of a xenon tube. However, they only require a relatively low current and have a very long lifetime, giving an effective solution where an indication or status is required.
- **Flashing** – The light source flashes at regular intervals typically one to three times a second.
- **Flip Flop** – Two beacons operating together flash alternatively to give the illusion of light switching from one beacon to the other for a more effective display.
- **Synchronized** – The flash of multiple beacons set at the same rate and duration. Controlled by internal circuitry in each beacon.

Tube & Bulb life data / information

Xenon tube manufacturers all supply tube life data. E2S reports effective life until light output is less than 70%. Halogen and Incandescent Bulb life is harder to predict as there are no industry standards for measurement. Ambient conditions (e.g. voltage & vibration), duty cycles and improper handling can also significantly affect bulb life.

How bright is a light?

To compare different types of beacon, it may help to understand the three most commonly used measures of intensity.

PEAK CANDELA or PEAK CANDLEPOWER.

- A unit of luminous intensity used to measure the maximum light intensity generated by a flashing light. Not a measurement the human eye can use to judge brightness.
- Doesn't directly compare two warning lights.

CANDELA SECONDS or CANDLEPOWER SECONDS.

- Measures the actual light energy contained in a pulse of light added over a period of time.
- Used to specify the minimum requirements of light output from a flashing light.
- Flash energy is relatively accurate and fair way of comparing radically different types of lights such as incandescent rotators and xenon strobe lights.

EFFECTIVE CANDELA or EFFECTIVE CANDLEPOWER.

- Based on candela seconds.
- Equates the brightness of a flashing light source to the brightness of a steady source. So, if a flashing light has an effective candela rating of 100 then it will be visible at the same distance as a 100 candela steady source.
- Predicts the visible range of flashing lights verses steady burn light sources.

What's the best site?

All round light dispersion should be the first consideration when installing a beacon. As light travels in straight lines, the beacon will be far more effective if it's positioned in the line of sight rather than relying on reflections.

Other considerations include:

- Free air movement needed around the beacon to prevent overheating.
- Vibration should be avoided, particularly with filament bulb beacons.
- Requirement for impact protection. e.g. lens guard.

Some beacons (particularly larger types) emit the light from the side as opposed to the top of the enclosure. If these are wall mounted with the lens 90° to the wall, most of the effective light will be emitted up to the ceiling and down to the floor and not across the area to be covered. The illustration shows the benefits of correct mounting.

Beacon effectiveness & range

The diagram above illustrates the effective 360° coverage for beacons in an industrial environment. According to the inverse square law, the intensity of a beacon is reduced by 25% if the viewing distance is doubled

How much does lens colour effect the intensity of a light source?

Clear	Yellow	Amber	Red	Blue	Green
100%	86%	51%	15%	12%	15%

Please note all the above information is for guidance only and does NOT guarantee performance or coverage.

IEC 73 colours

These are the colours needed for lights and buttons to conform to the machine directive.

- **RED** – Danger Act Now
  Danger of live or unguarded moving machinery or essential equipment in protected area.
- **AMBER** – Warning, Proceed with Care
  Temperature or pressure different from normal level.
- **GREEN** – Safety Precaution: Go Ahead
  Checks complete, machine about to start.
- **BLUE** – Site Specified
  Pre-set ready or remote control.
- **CLEAR** – No specific Meaning
  Could confirm an earlier message.

Useful terms

Luminous intensity: symbol, I; unit, candela (cd). Measure of the power of a light source. Sometimes referred to as brightness.

Luminous flux: symbol, F; unit, lumen (lm). Measure of the flow or amount of light emitted from a source.

Illuminance: symbol, E; unit, lux (lx) or lm/m². Measure of the amount of light falling on a surface. It is also referred to as illumination.

Luminous efficacy: symbol, K; unit, lumen per watt (lm/W). Ratio of luminous flux to electrical power input. It could be thought of as the ' efficiency' of the light source.

Coefficient of utilization (CU): no unit. The amount of useful light will depend on the lamp output, the reflectors and/or diffusers, position, colour of walls and ceilings, etc. The lighting designer will combine all of these considerations to determine a figure for any lighting calculations.

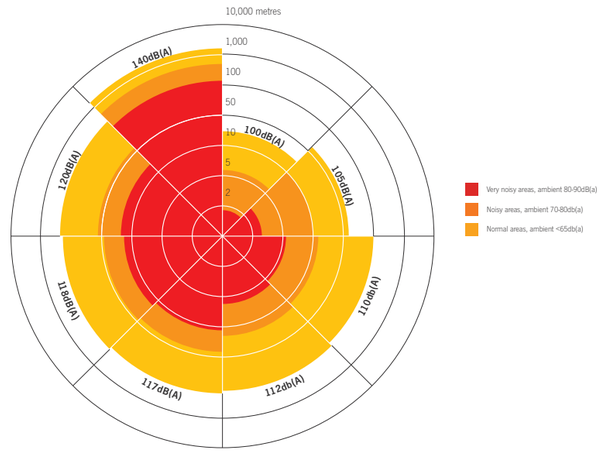
Maintenance factor (MF): Because dirt and ageing can both cause loss of light, it's useful to take a maintenance factor into account. For example, a new 80W fluorescent lamp with a lumen output of 5700lm falls to 5200lm after 4 months, and remains at that level. The light output has decreased by: 5200 / 5700 = 0.9

This value, 0.9, is the maintenance factor. It should not be allowed to fall below 0.8 by regular cleaning.

Basics of sound

E2S manufacture an extensive range of alarm horns or sounders suitable for many applications.
The efficiency of any audible signaling device depends on:

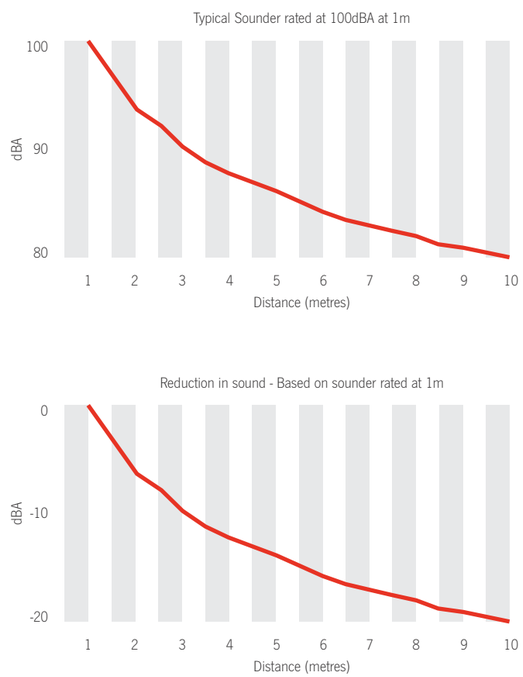
- The size and / or distance of the area to be covered
- The background noise
- The pattern & frequency of tone



How do I calculate the effective distance and coverage of an alarm sounder?

Loudness decreases as the listener gets further from the source of the sound, mainly due to "divergence". The intensity decreases because the energy is spread over a larger area. It decreases inversely with the square of the distance from the source at a rate of 6dB for each doubling of the distance. So the sound output from an alarm rated at 106dBA) will travel twice as far as a sounder rated at 100dB(A). If a sounder is rated at 100dB(A) at 1 metre, at two metres it will be 94dB(A), at 4 metres it will be 88dB(A) and so on.

Distance (metres)	Reduction (dB(A))
1	0
2 (1m doubled)	-6
4 (2m doubled)	-12
8	-18
16	-24
32	-30
64	-36
128	-42
256	-48
512	-54



How ambient background noise impacts on the effectiveness of the sounder

Note: The effective distance of a sounder is when the calculated dB(A) reaches at least 5dB(A) above the known ambient background noise. For example the effective distance of a 100dB(A)@1 metre sounder in an ambient noise of 65dB(A) is the distance at which the sounder output level reduces to 70 dB(A) i.e. 100 dB – 30 dB = 70dB. From the above table (and using the inverse square rule) a reduction of 30 dB means the sounder has an effective 70dB distance of 32 metres.

A 120dB(A) @ 1 metre sounder has a 70dB distance of approximately 300 metres i.e. ten times the effective distance and, more importantly 100 times the coverage area.

Remember

- In the open, a sounder will spread in all directions. In an enclosed space some of the sound will be reflected and increase the sound level.
- Wall-mounted sounder is positioned near a ceiling, more sound will be reflected. The same is true for a ceiling mounted sounder near a wall.
- A sounder mounted on a wall is more effective than one mounted on a pillar.
- Sounders should be sited to avoid immediate obstacles, ideally at a height of approx. 2 to 2.5 metres.
- **Synchronized** sounders will give a more effective overall effect.
- Personnel may be wearing ear protection.

Sound Output Attenuation: Frequency and Tone Pattern

Sound output is also affected by the frequency of the sound. Lower frequencies tend to travel further, penetrate structures better and are less likely to be attenuated by obstructions. A further adjustment to the range of a sounder may be made according to the frequency of the tone as shown below.

Frequency of sounder	Adjustment
Up to 500Hz	0dBA
500Hz to 1000Hz	-3dBA
1000Hz to 2000Hz	-5dBA

However

Perception of a tone is not entirely dependent on frequency and sound level. An output with differing frequencies and/or temporal pattern will have a more distinct sound. This can be useful in areas of background noise where hearing protection may be worn. Usually two-tone frequencies, intermittent, ramp-up frequencies or ramp-down frequencies are the most effective.

How many Sounders do I need?

When the area to be covered is large and / or noisy, designers often add more sounders. This could lead to an inadequate coverage, if the alarm sounders were positioned incorrectly or require the addition of more sounders to achieve the bare minimum alarm level.

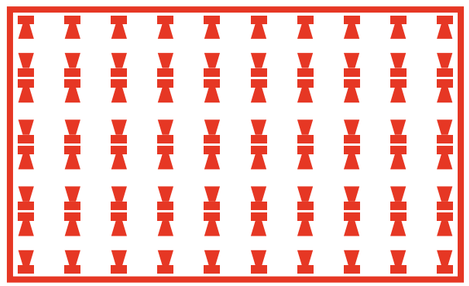
Example:
Question: A 30m by 20m room, with very little background noise (approx. 65dB(A)), is satisfactorily covered by a 100dB(A) sounder with a 70dB(A) range of approximately 30m. How many sounders would you need if heavy machinery meant the background noise was 85dB(A)?

Answer: One! If the background noise increases by 20dB, install a sounder 20dB louder i.e. a sounder rated at 120dB(A). This simple principle is often forgotten in the need to cover large and noisy areas.

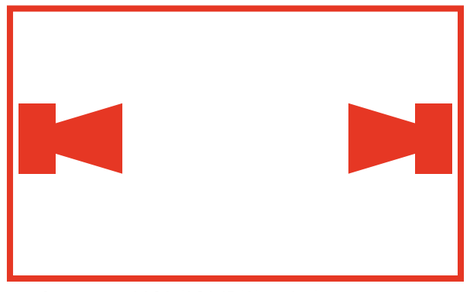
The effective *distance* of a 100 dB(A) sounder in a very noisy environment is 1.8m, the distance for a 120 dB(A) sounder is approx 18m (10 times the distance).

Note: Alarm sounders that are too loud may be dangerous and cause panic, discomfort and make communication very difficult. As guidance, the overall alarm level should be a maximum of 10 to 15 dB(A) over the ambient background noise.

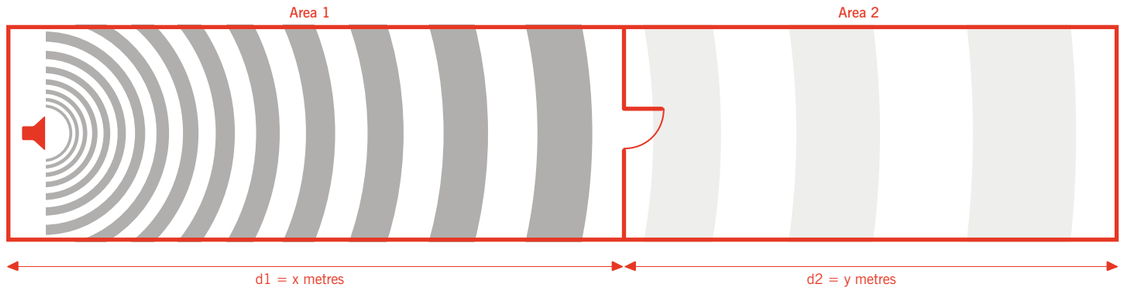
To achieve 90bB(A) in an area 50 x 30m



Either fit eighty A100 (100dB(A) at 1m) units...



...or fit just two A121 (121dB(A) at 1m) units



-20dB(A) Normal Door
-30dB(A) Fire Door

More Design Considerations

Sounders aren't generally effective at an output lower than 65 to 70dB(A) or less than 5dB above the ambient, background noise. Additional sounders or louder sounders may be necessary after calculating the maximum distance and coverage required. Any adjustment according to the output frequency should also be factored in.

Internal fire doors attenuate sound by at least 30dB, and normal doors at least 20dB. It's advisable that any sounder isn't required to be heard through more than one partition.

In the above example;
The attenuation caused by distance d1, the door & partition and distance d2 must be calculated (with an adjustment for tone frequency). The final dB(A) level should be not less than 65 to 70dB(A) or not less than 5dB above the background level in area 2.

Care should be taken not to use a sounder with too higher output in area 1 simply to achieve an acceptable level in area 2 as this may make levels in area 1, particularly close to the sounder, unacceptably loud.

Sound Output of Multiple Sounders

Two sounders together with an equal output increases the total output by 3dB. So two 100 dB(A) sounders together will provide 103dB(A) total.

Four 100dB(A) sounders will deliver 106dB(A) in total. It's important to establish the most suitable sounder at the design stage as simply adding more of the same sounders may only increase an overall alarm level by a few dB.

Disaster warning / Wide area signaling

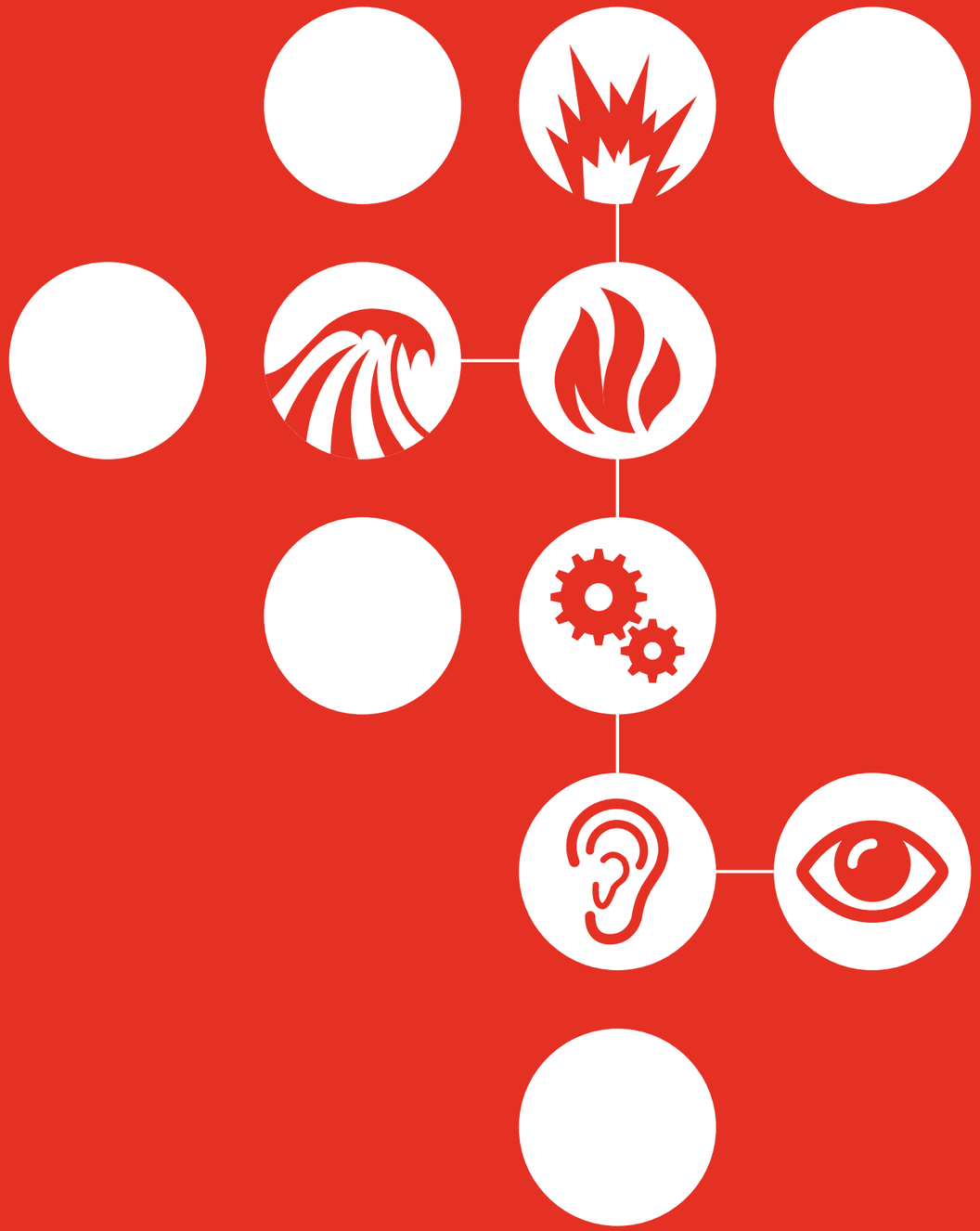
Large sounders with high outputs of typically 140dB(A) and above have additional considerations such as:

- Attenuation caused by ground effects, barriers such as buildings
- Vertical temperature gradients
- atmospheric refraction
- sound absorption in the atmosphere
- people's perception
- building construction

It is important to realise predicting coverage can only be an estimate. A combination of these factors attenuating sound in the atmosphere, is both complicated and unpredictable.

Strong winds will influence the effectiveness of the sound coverage. It will tend to make the sound travel further in the direction it is blowing, i.e. in the same direction as gas will be blown in the event of a leak.

In general, disaster warning sounders should be mounted horizontally 10 to 15 metres above the ground, preferably at the highest point on the site to be covered (although not so high that the sound travels over the top of the area). As a general guide, take the height of any obstruction within 50m and keep the sounder at least 2m higher than this for best sound coverage - ideally the source to target should be aimed or "line of sight".



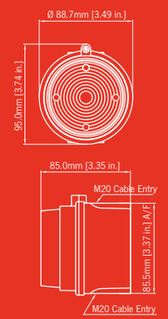
Hazardous Area Signalling

Section index

IS-mB1 IS-minialite

The IS-mB1 is a compact beacon with an array of six high output L.E.D's. Approvals include ATEX, IECEx and GOST-R for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The IS-mB1 is suitable for all intrinsically safe signalling applications including fire, security and process control.



Part codes:

IS-mB1-R/[x]

ATEX / IECEx / FM	
II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)	
IS Class I, Zone 0, AEx ia IIC T4	
IS Class I, Division 1, Groups A, B, C, D	

GOST-R	
0ExiaIICT4 IP65 -40° to +60°C	
[x]: Lens colour:	A: Amber R: Red B: Blue G: Green C: Clear (white L.E.D.)

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:
Uo : 28VDC Io : 660mA Po : 1.2W

Specification:

Light source:	Array of 6 high intensity L.E.D's.
L.E.D. colours:	Red, Amber, Blue, Green & Clear
Flash modes:	Double flash at 2Hz and 1Hz
Effective candela:	23cd* - measured ref. to I.E.S.
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP65
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS & PC
Housing colour:	RAL3000 Red
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C

*All candela data is representative of performance with amber lens at optimum voltage.

Features:

- Input overload and reverse current protection
- End of line resistor certified
- Prismatic lens optimises L.E.D effectiveness

Approvals:

- ATEX certificate: SIRA 05ATEX2084X, EN 60079-0 : 2006,EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 06.0045X, IEC 60079-0 : 2004, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved Class 3600 1998, Class 3610 1999, Class 3810 2005
- GOST-R certificate: POCC GB.JB05.B03365

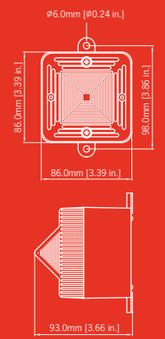
GOST-R

IS-L101L L.E.D. Beacon

Intrinsically Safe L.E.D Beacon

The IS-L101L unit is an intrinsically safe field mounting beacon which provides a bright flashing warning signal. The unit can be used independently or combined with an IS-A105N 49 alarm sounder. Combination units can utilise a common zener barrier or galvanic isolator and may be coupled together or mounted seperately.

With the IS-A105N the alarm accept function can be utilised. By closing a pair of external contacts (i.e push switch) the operator may silence the alarm for set periods between 5 seconds and 2 hours. If after the preset time the alarm condition still exists the sounder will activate again.



Part codes:

IS-L101L-R/[x]

ATEX / IECEx / FM
II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)
IS Class I, Zone 0, AEx ia IIC T4 Ta= +60°C
IS Class I, Division 1, Groups A, B, C, D T4

GOST-R
0ExiaIICT4 IP65 -40° to +60°C

[x]: Lens colour:	A: Amber B: Blue G: Green R: Red

May be powered from any certified Zener barrier or galvanic isloator whose output parameters do not exceed :

Uo : 28VDC	Io : 660mA	Po : 1.2W

Specification:

Light source:	Array of 6 high intensity L.E.D's.
L.E.D. colours:	Red, Amber, Blue & Green
Standalone mode:	2Hz (2 double flashes per second)
Effective candela:	48cd* - measured ref. to I.E.S.
With IS-A105N:	On : 1 Hz (1 double flash per second) Silenced: 2 Hz (2 double flashes per second) (alarm accepted)
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	Stand alone: 25mA typical With IS-A105N: 35mA typical
Ingress protection:	IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS & PC
Housing colour:	RAL3000 Red
Fixings:	Stainless Steel
Cable entries:	1 x M20 clearance gland knockout.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight:	0.40Kg

*All candela data is representative of performance with amber lens at optimum voltage.

Features:

- Input overload and reverse current protection
- Prismatic lens optimises L.E.D effectiveness

Approvals:

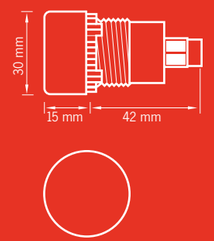
- ATEX certificate: SIRA 04ATEX2302X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 04.0039X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999, Class 3810 2005, IEC 60529 : 1989
- GOST-R certificate: POCC GB.JB05.B03365

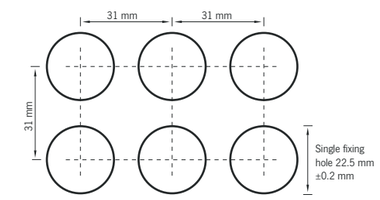
GOST-R

IS-pB1 Panel Mount Indicator

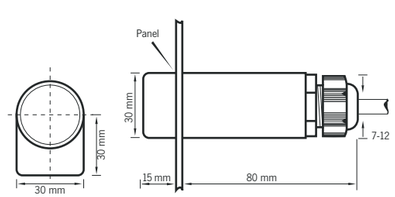
The IS-pB1 is a compact, panel mount L.E.D. indicator providing reliable cost-effective visual status indication in all hazardous areas. Each IS-pB1 contains a group of high efficiency light emitting diodes mounted behind a coloured diffuser to produce a bright, uniform output with a typical life greater than ten years.

All models contain a 20mA current regulator which maintains constant brilliance and provides protection against excess voltages.





Fixing centres for maximum packing density.
Special tool may be required to tighten fixing nuts when minimum spacing is used.



Part codes:

IS-pB1 - [x]	
ATEX	II 1G Ex ia IIC T4
IECEx	Ga Ex ia IIC T4
FM	CL I: Div 1: GP A B C & D: T4 @ 60°C CL I: Div 2: GP A B C & D: T4 @ 60°C
[x]: L.E.D. colour:	A: Amber R: Red B: Blue G: Green W: White

One or two IS-pB1 lamps may be powered from any Ex ia IIC certified Zener barrier or galvanic isolator whose output safety parameters do not exceed:

Uo 30V dc	Po 1.3W at 40°C	Po 1.2W at 60°C

(e.g. 28V, 300 or 28V, 234 Zener barrier or galvanic isolator)
Gas groups IIA, IIB or IIC
Location Zone 0, 1 or 2

Up to four IS-pB1 lamps may be powered from any certified Ex ia IIB Zener barrier or galvanic isolator whose output safety parameters do not exceed:

Uo 30V dc	Po 1.3W at 40°C

Gas groups IIA or IIB
Location Zone 0, 1 or 2

Accessories:

IS-pB1-LEG	Legend Plate
IS-pB1-RSA	Rear Sealing Assembly IP65

Specification:

Operating voltage:	14-30V dc
Reverse voltage:	60V max.
Current:	18 to 22mA
Output:	Typical at 150mm:
Red	190 lux
Amber	150 lux
Green	250 lux
Blue	150 lux
White	300 lux
Ingress protection:	Front IP66 - Rear IP20 - see accessories for optional IP65 rear sealing assembly.
Rating:	Continuous
Housing material:	Nylon 6
Lens material:	Polycarbonate
Mounting:	Panel mount - 22.5mm
Terminals:	Screw clamp for 1.5mm2
Operating temp:	-20 to 60°C
Storage temp:	-40 to 85°C
Relative humidity:	5 to 95% non condensing

Features:

- Two lamps may be powered from a single IIC intrinsically safe Zener barrier or galvanic isolator and up to four lamps from a IIB device.
- Red, amber, green, blue and white comply with the indicator light colour requirements specified in IEC204-1, allowing all plant conditions to be annunciated.
- Mounting is via a single industry standard 22.5mm diameter hole.

Approvals:

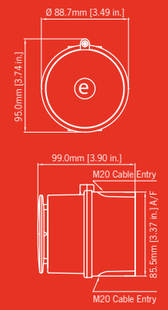
- ATEX certificate: ITS 13ATEX27822X, EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-26 : 2007
- IECEx certificate: IECEx ITS 08.0030X, IEC 60079-0 : 2007-10, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM file: 3022662
  3610: Entity, 3611: Nonincendive

IS-mA1 IS-minialarm

The IS-mA1 is a compact, 100dB(A) alarm sounder. Approvals include ATEX, IECEx and GOST-R for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The IS-mA1 is suitable for all intrinsically safe signalling applications including fire, security and process control.

The IS-mA1M version is also available for Group I mining environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

IS-mA1-R

ATEX / IECEx / FM

- II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)
- IS Class I, Zone 0, AEx ia IIC T4
- IS Class I, Division 1, Groups A, B, C, D

GOST-R

- 0ExiaIICT4 IP65 -40° to +60°C

ATEX [Group I]

IS-mA1M-R

- I M1 Ex ia I Ma (-40°C <=Ta<= +60°C)

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:

Uo: 28VDC Io: 93mA Po: 660mW

Specification:

Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	40m @ 1KHz
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP65
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C

Features:

- Input overload and reverse current protection
- End of line resistor certified
- Auto synchronised sound output
- Available with custom tone configurations and frequencies.

Approvals:

- ATEX certificate: SIRA05ATEX2084X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 06.0045X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999, Class 3810 2005
- VdS approved to EN54-3 (CPD 89/106/EEC)
- GOST-R certificate: POCC GB.JB05.B03365

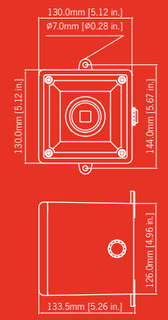
GOST-R

0786-CPD-20338

IS-A105N Alarm Sounder

The IS-A105N is a high output, 105dB(A) alarm sounder. Approvals include ATEX, IECEx and GOST-R for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The IS-A105N is suitable for all intrinsically safe signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

IS-A105N-[x]

ATEX / IECEx / FM

- II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)
- IS Class I, Zone 0, AEx ia IIC T4 Ta = +60°C
- IS Class I, Division 1, Groups A, B, C, D T4

GOST-R

- 0ExiaIICT4 IP66 -40° to +60°C

[x] : Housing colour: R: Red G: Grey W: White

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :

Uo : 28VDC Io : 93mA Po : 660mW

Specification:

Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	0.75kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Input overload and reverse current protection
- Auto synchronised sound output
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with custom tone configurations and frequencies.

Approvals:

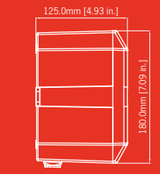
- ATEX certificate: SIRA 04ATEX2301X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 04.0038X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999, Class 3810 2005, IEC 60529 : 1989
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

IS-D105 Alarm Horn

Intrinsically Safe alarm horn.

The IS-D105 unit is an intrinsically safe field mounting alarm horn with ATEX & IECEx approval which provides a loud audible signal. There is a choice of 49 alarm tones with 2 remotely selectable alarm stages. The enclosure is marine grade aluminium with a phosphate and powder coat finish for durability in the harshest of environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

IS-D105-x

ATEX / IECEx

II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)

[x] : Enclosure colour R: Red, G: Grey

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :

Uo : 28VDC Io : 93mA Po : 660mW

Specification:

Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP66
Rating:	Continuous
Enclosure material:	A1-Si12 Marine Grade Aluminium
Housing colour:	RAL3000 Red or RAL7038 Grey
Fixings:	Stainless Steel
Cable entries:	2 x M20
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	1.60kg

Features:

- Input overload and reverse current protection
- Marine grade aluminium enclosure
- Auto synchronised sound output
- External mounting lugs
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with custom tone configurations and frequencies.

Approvals:

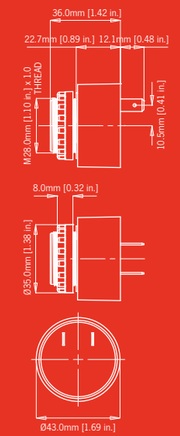
- ATEX certificate: SIRA 04ATEX2301X, ATEX certificate: SIRA 04ATEX2302X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 04.0038X, IECEx certificate: IECEx SIR 04.0039X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006

IS-pA1 Panel Mount Sounder

Intrinsically Safe Panel Mount Sounder

The IS-pA1 is a compact, panel mount 90dB(A) alarm sounder.

Producing a high frequency continuous tone, the IS-pA1 can be pulsed to produce different sounds. Utilising the supplied threaded lock nut the IS-pA1 mounts into a 28mm hole - ideal for applications in control panels where a fault indication or other process alarm is required.



Part codes:

ATEX / IECEx	
IS-pA1-G	
II 1G Ex ia IIB T6 Ga (-30°C <=Ta<= +60°C)	

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:

Uo : 40VDC	Io : 660mA	Po : 1.3W (T1-T4)
		Po : 0.6W (T5)
		Po : 0.3W (T6)

Specification:

Nominal output:	89.6dB(A) @ 1m +/- 3dB
No. of tones:	1 - continuous tone
Frequency:	2600Hz
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	12mA typical when powered from 24v supply Zener barrier
Ingress protection:	IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL7038 Grey
Mounting:	Panel mount - 28.5mm
Terminals:	Spade terminals
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C

Features:

- Input overload and reverse current protection.

Approvals:

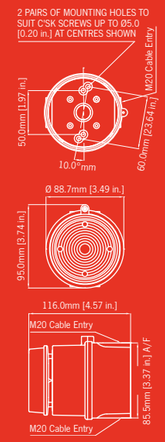
- ATEX certificate: SIRA 10ATEX2137X, EN 60079-0 : 2009, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 10.0073X, IEC 60079-0 : 2007,IEC 60079-11 : 2006, IEC 60079-26 : 2006
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

IS-mC1 IS-minialert

The IS-mC1 is a compact combined 100dB(A) alarm sounder and L.E.D. beacon - only one Zener barrier or galvanic isolator required to run both sounder & beacon or alternatively the unit can be operated as individual signals.

Approvals include ATEX, IECEx and GOST-R for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Alarm sounder:	
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	40m @ 1KHz
L.E.D. Beacon:	
Light source:	Array of 6 high intensity L.E.D's.
L.E.D. colours:	Red, Amber, Blue, Green & Clear
Flash modes:	Double flash at 2Hz and 1Hz
Effective candela:	23cd* - measured ref. to I.E.S.
General:	
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Combined current:	approx: 30mA typical when powered from 24v supply via 28v 300Ohm Zener barrier.
Ingress protection:	IP65
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS & PC
Housing colour:	RAL3000 Red
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C

*All candela data is representative of performance with amber lens at optimum voltage.

Part codes:

IS-mC1-R/[x]

ATEX / IECEx / FM

- II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)
- IS Class I, Division 1, Groups A, B, C, D T4
- IS Class I, Zone 0, AEx ia IIC T4 Ta = +60°C

GOST-R

- 0ExialICT4 IP65 -40° to +60°C

[x]: Lens colour:	A: Amber B: Blue G: Green R: Red C: Clear (white L.E.D.)

Combined or Sounder only:
May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :

Uo: 28vdc Io: 93mA Po: 660mW

Beacon only:
May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :

Uo: 28vdc Io: 660mA Po: 1.2W

Features:

- Input overload and reverse current protection
- End of line resistor certified
- Auto synchronised sound output
- Prismatic lens optimises L.E.D effectiveness
- Available with custom tone configurations and frequencies

Approvals:

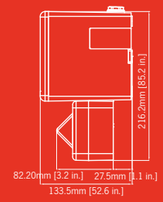
- ATEX certificate: SIRA05ATEX2084X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 06.0045X, IEC 60079-0 : 2004, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999 Class 3810 2005
- GOST-R certificate: POCC GB.JB05.B03365

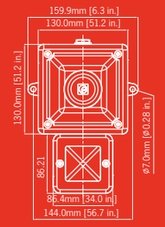
GOST-R

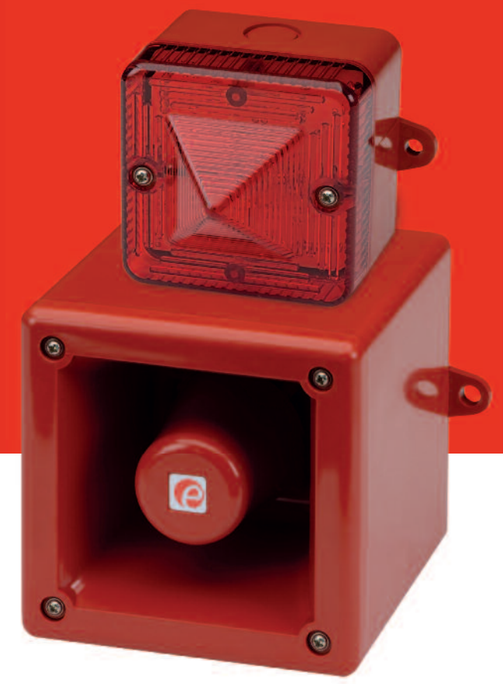
IS-A105N+IS-L101L Combination

Intrinsically Safe combination L.E.D beacon/light & alarm horn.

The IS-A105N+IS-L101L unit is an intrinsically safe field mounting combined alarm horn with L.E.D. beacon/light which provides a a loud audible and bright flashing visual signal utilising a common zener barrier or galvanic isolator. The alarm horn features an alarm accept function - by closing a pair of external contacts (i.e push switch) the operator may silence the alarm for set periods between 5 seconds and 2 hours. If after the preset time the alarm condition still exists the sounder will activate again. Certified for use in application requiring Ex ia or Class I Div 1 equipment the IS-A105N+IS-L101L is a globally accepted solution to fire or process control signalling.







Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder/horn:	
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Beacon/light:	
Light source:	Array of 6 high intensity L.E.D's
L.E.D. colours:	Red, Amber, Blue & Green
Standalone mode:	2Hz (2 double flashes per second)
Effective candela:	48cd* - measured ref. to I.E.S.
Flash rate:	On: 1 Hz (1 double flash per second) Silenced: 2 Hz (2 double flashes per second) (alarm accepted)
General:	
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	1.15kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*All candela data is representative of performance with amber lens at optimum voltage.

Part codes:

IS-A105N-R

IS-L101L-R/[x]

ATEX / IECEx / FM
II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)
IS Class I, Zone 0, AEx ia IIC T4 Ta = +60°C
IS Class I, Division 1, Groups A, B, C, D T4

GOST-R
0ExialICT4 IP65 -40° to +60°C

[x] : L.E.D. colour R: Red, A: Amber, B: Blue, G: Green

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :
Uo : 28VDC Io : 93mA Po : 1.2W

Features:

- Input overload and reverse current protection
- Prismatic lens optimises L.E.D effectiveness
- Auto synchronised sound output
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with custom tone configurations and frequencies.

Approvals:

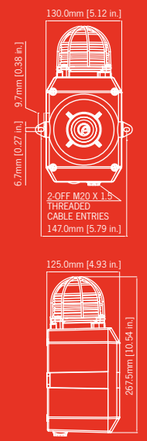
- ATEX certificate: SIRA 04ATEX2301X, ATEX certificate: SIRA 04ATEX2302X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 04.0038X, IECEx certificate: IECEx SIR 04.0039X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999, Class 3810 2005, IEC 60529 : 1989
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

IS-DL105L Combination

Intrinsically Safe combination L.E.D beacon/light & alarm horn.

The IS-DL105L unit is an intrinsically safe field mounting combined alarm horn with L.E.D. beacon/light which provides a a loud audible and bright flashing visual signal utilising a common zener barrier or galvanic isolator. The alarm horn features an alarm accept function - by closing a pair of external contacts (i.e push switch) the operator may silence the alarm for set periods between 5 seconds and 2 hours. If after the preset time the alarm condition still exists the sounder will activate again. Certified for use in application requiring Ex ia equipment to ATEX & IECEx the IS-DL105L is a globally accepted solution to fire or process control signalling.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder/horn:	
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A);
	Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz

Beacon/light:	
Light source:	Array of 6 high intensity L.E.D's
L.E.D. colours:	Red, Amber, Blue & Green
Effective candela:	48cd* - measured ref. to I.E.S.
Standalone mode:	2Hz (2 double flashes per second)
Flash rate:	On : 1 Hz (1 double flash per second) Silenced: 2 Hz (2 double flashes per second) (alarm accepted)

General:	
Voltage:	16-28vdc via Zener barrier or galvanic isolator
Current:	25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier
Ingress protection:	IP66
Rating:	Continuous
Enclosure material:	A1-Si12 Marine Grade Aluminium
Housing colour:	RAL3000 Red or RAL7038 Grey
Fixings:	Stainless Steel
Cable entries:	2 x M20
Terminals:	0.5 to 2.5mm²
Operating temp:	-40° to +60°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	2.10kg

*All candela data is representative of performance with clear lens at optimum voltage.

Part codes:

IS-DL105L-[x]/[y]

ATEX / IECEx

II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C)

[x] : Enxclosure colour: R: Red, G: Grey

[y] : L.E.D. colour R: Red, A: Amber, B: Blue, G: Green

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed :

Uo : 28VDC Io : 93mA Po : 1.2W

Features:

- Input overload and reverse current protection
- Prismatic lens optimises L.E.D effectiveness
- Marine grade aluminium enclosure
- Auto synchronised sound output
- External mounting lugs
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with custom tone configurations and frequencies.

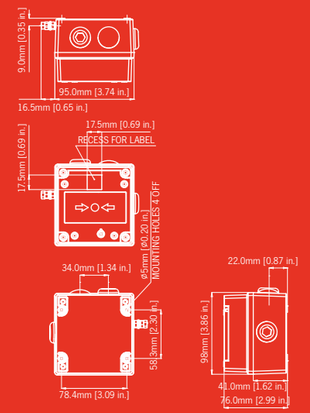
Approvals:

- ATEX certificate: SIRA 04ATEX2301X, ATEX certificate: SIRA 04ATEX2302X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 04.0038X, IECEx certificate: IECEx SIR 04.0039X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006

IS-CP4A/B-BG Break Glass Call Point

The IS-CP4A-BG and IS-CP4B-BG break glass manual call points are approved for Zones 0, 1, 2, 21 & 22 requiring intrinsically safe equipment for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The IS-CP4 range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	IS-CP4A-BG IS-CP4B-BG
Terminals:	ST: Standard DR: DIN rail (only on IS-CP4B)
Lift Flap:	LF: Lift Flap NF: No Flap (default)
Duty Label:	NL: No label (default) DL: Duty Label Specify content when ordering.
Colour:	RD: Red (default) Contact sales for other colour options
E.O.L Resistor:	ExxxR: xxx: Res. value e.g.: E470R Only available on IS-CP4B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on IS-CP4B version

e.g. IS-CP4A-BG-ST-LF-NL-RD
: IS-CP4A Break glass call point with standard terminals, lift flap and no duty label. Red housing

e.g. IS-CP4B-BG-DR-NF-NL-RD-24V-E470R
: IS-CP4B Break glass call point with DIN rail terminals, no lift flap, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

Versions:

IS-CP4A-BG

Category:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°v C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	N
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

IS-CP4B-BG

Category:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	Y
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom
	1 x M20 Left/Right
Weight:	0.8Kg

Specification:

IS-CP4A-BG:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°C Db IP66
IS-CP4B-BG:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Stainless Steel lift flap
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

- ATEX certificate: SIRA 09ATEX2287X, IEC 60079-0:2007 Ed 5, EN 60079-11:2007, EN 60079-26:2007, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0122X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2006 Edition: 2, IEC 61241-1:2004 Edition: 1
- GOST-R certificate: POCC GB.JB05.B03365

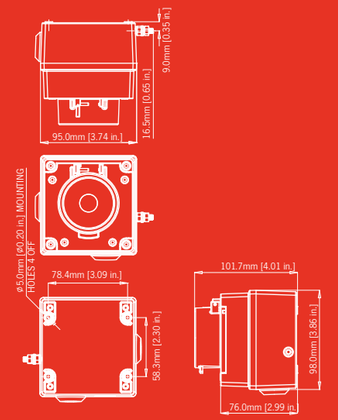
GOST-R

IS-CP4A/B-PB Push Button Call Point

The IS-CP4A-PB and IS-CP4B-PB push button manual call points are approved for Zones 0, 1, 2, 21 & 22 requiring intrinsically safe equipment for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The product is user resettable by rotating the push button.

The IS-CP4 range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	IS-CP4A-PB IS-CP4B-PB
Terminals:	ST: Standard DR: DIN rail (only on IS-CP4B)
Lift Flap:	LF: Lift Flap NF: No Flap (default)
Duty Label:	NL: No label (default) DL: Duty Label Specify content when ordering.
Colour:	RD: Red (default) Contact sales for other colour options
E.O.L Resistor:	ExxxR: xxx: Res. value e.g.: E470R Only available on IS-CP4B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on IS-CP4B version

e.g. IS-CP4A-PB-ST-NL-RD
: IS-CP4A Push Button call point with standard terminals and no duty label. Red housing

e.g. IS-CP4B-PB-DR-NL-RD-E470R
: IS-CP4B Push Button call point with DIN rail terminals, no duty label, with a 470 Ohm end of line resistor. Red housing.

Versions:

IS-CP4A-PB

Category:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°v C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	N
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

IS-CP4B-PB

Category:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	Y
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

Specification:

IS-CP4A-PB:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°C Db IP66
IS-CP4B-PB:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

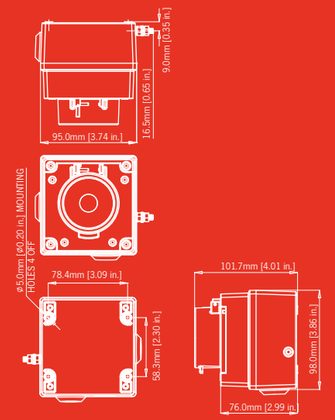
- ATEX certificate: SIRA 09ATEX2287X, IEC 60079-0:2007 Ed 5, EN 60079-11:2007, EN 60079-26:2007, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0122X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2006 Edition: 2, IEC 61241-1:2004 Edition: 1
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

IS-CP4A/B-PT Tool Reset Call Point

The IS-CP4A-PT and IS-CP4B-PT push button, tool resettable, manual call points are approved for Zones 0, 1, 2, 21 & 22 requiring intrinsically safe equipment for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The push button is user resettable via the use of the special key supplied with the unit. The IS-CP4 range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	IS-CP4A-PT IS-CP4B-PT
Terminals:	ST: Standard DR: DIN rail (only on IS-CP4B)
Lift Flap:	LF: Lift Flap NF: No Flap (default)
Duty Label:	NL: No label (default) DL: Duty Label Specify content when ordering.
Colour:	RD: Red (default) Contact sales for other colour options
E.O.L Resistor:	ExxxR: xxx: Res. value e.g.: E470R Only available on IS-CP4B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on IS-CP4B version

e.g. IS-CP4A-PT-ST-NL-RD
: IS-CP4A Tool Reset call point with standard terminals, no duty label. Red housing

e.g. IS-CP4B-PT-DR-NL-RD-E470R
: IS-CP4B Tool Reset call point with DIN rail terminals, no duty label, with a 4700hm end of line resistor. Red housing.

Versions:

IS-CP4A-PT

Category:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°v C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	N
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

IS-CP4B-PT

Category:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +55°C
Input Parameters:	Ui = 30V Ii = 500mA Pi = 1.1W Ci = 0 Li = 0
Monitoring Resistors:	Y
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

Specification:

IS-CP4A-PT:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°C Db IP66
IS-CP4B-PT:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

- ATEX certificate: SIRA 09ATEX2287X, IEC 60079-0:2007 Ed 5, EN 60079-11:2007, EN 60079-26:2007, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0122X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2006 Edition: 2, IEC 61241-1:2004 Edition: 1
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

BEx Plated Assemblies

The BEx range of beacons can be configured to create sets of status lights suitable for onshore and offshore applications.

Mounted onto a stainless steel backplate, E2S can offer up to 5 different components complete with the option of Exe Junction Box to make installation easier. Status lights utilise a high power L.E.D. solution which gives good light output and long life, which is important for continuous operation. Warning beacons normally use xenon strobe technology which is available in 5, 10, 15 and 21J outputs (up to 485 Cd) and which give effective warning in all conditions.

Plated assembly components:

Part Code:	Approval:	Classification:
BExBG05D 5 Joule Xenon Beacon	ATEX/IECEx	I 2G Ex d IIC T4 Ta. -50°C to +70°C II 2G Ex d IIC T5 Ta. -50°C to +55°C II 2G Ex d IIC T6 Ta. -50°C to +40°C II 2D Ex tD A21 IP67 T115°C based on max. Ta. 70°C
	GOST-R	1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBG10D/15D 10/15 Joule Xenon Beacon	ATEX/IECEx	II 2G Ex d IIC T4 Ta. -50°C to +70°C II 2G Ex d IIC T5 Ta. -50°C to +40°C II 2D Ex tD A21 IP67 T125°C based on max. Ta. 70°C
	GOST-R	1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBG21D 21 Joule Xenon Beacon	ATEX/IECEx	II 2G Ex d IIC T3 Ta. -50°C to +70°C II 2G Ex d IIC T4 Ta. -50°C to +55°C II 2D Ex tD A21 IP67 T200°C based on max. Ta. 70°C
	GOST-R	1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBGL1D L.E.D Array Beacon	ATEX/IECEx	II 2G Ex d IIC T4 Ta. -50° to +70°C II 2G Ex d IIC T5 Ta. -50° to +40°C II 2D Ex tD A21 IP67 T120 Ta. +70°C based on max. Ta. 70°C
	GOST-R	1ExdIICT5 Ta. -50° to +55°C 1ExdIICT4 Ta. -50° to +40°C DIP A21 Ta T4
BExS110D 110dB(A)	ATEX/IECEx	II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
Alarm Sounder	GOST-R	1ExdIICT4 Ta. -50° to +55°C
BExS120D 117dB(A)	ATEX/IECEx	II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
Alarm Sounder	GOST-R	1ExdIICT4 Ta. -50° to +55°C

Please contact the E2S sales department with your specific requirements.

The BEx range is manufactured from marine grade LM6 Aluminium Alloy which has been chromated and powder coated offering superb resistant to corrosion even under the most severe operating conditions. Standard sets are certified ATEX EX II 2G Exd IIB T4 but other options are available for higher gas groups, temperature ratings and approvals.

Features:

- Multi Function L.E.D.
  - Status Light mode
  - Flashing modes
  - Rotating modes
- Xenon Strobe
  5, 10, 15 and 21J versions
- Alarm Sounders
  110dB(A) and 117dB(A) versions
- Junction Box
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

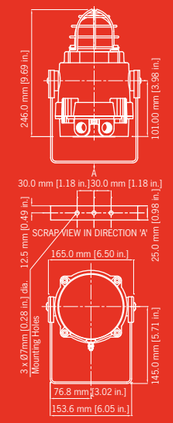
INMETRO

BExBG21 Xenon Beacon

The flameproof BExBG21 Xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExBG21 21 Joule beacons are ideal for general signalling duties whilst their robust construction makes installation in the harshest of environments possible. The BExBG21 has three distinct user selectable flash patterns and for units with DC operating voltages a second stage flash pattern can be selected remotely. Additional features include a stainless steel guard and stainless steel mounting bracket as standard.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExBG21D**	ATEX / IECEx: II 2G Ex d IIC T4 Ta. -50°C to +55°C II 2G Ex d IIC T3 Ta. -50°C to +70°C II 2D Ex tD A21 IP67 T200 based on a max. Ta. of 70°C

** = Voltage & lens colour reference:

Voltage options:	24DC, 48DC, 115AC, 230AC		
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red	-CL (Clear) -YW (Yellow)

e.g: BExBG21D115AC-AM

Current consumption:

Version:		Voltage:	Current:
24V dc		20-28V dc	1.2A
48V dc		42-54V dc	600mA
115V ac	50/60Hz	+/-10%	560mA
230V ac	50/60Hz	+/-10%	280mA

Flash patterns:

Pattern:	Type:	Stg 2 (DC)
SF	Single flash - 1Hz (both flash tubes operate together)	AF
AF	Alternate flash - 2Hz (tubes flash alternately - 0.5sec gap)	SF
DF	Double strike flash - 1Hz (first tube flash followed by second)	SF

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	21 Joules
Flash rate:	1Hz, 2Hz & double strike 1Hz
Peak Candela:	2,100,000 cd - calc. from energy (J)
Effective candela:	1,050 cd - calc. from energy (J)
Peak Candela:	110,780 cd* - measured ref. to I.E.S.
Effective candela:	485 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	DC: 2.65kg AC: 2.95kg

*All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

- ATEX certificate: KEMA 0ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- Inmetro certificate: 10-IEx-0010
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

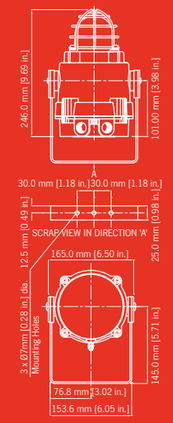
INMETRO

BExBGL1 L.E.D. Beacon

The flameproof BExBGL1 L.E.D. beacon is suitable for Zone 1, 2, 21 & 22 applications.

With an array of 32 high output L.E.D.s the BExBGL1 unit is a multi-functional beacon suitable for all signalling applications. The robust construction makes installation in the harshest of environments possible. Additional features include UV stable prismatic lens, stainless steel guard and mounting bracket as standard. Multi-function: The BExBGL1 features a total of 9 modes of operation: 4 rotating effect modes, 4 flashing modes and a steady mode for use in indicator / status applications. Based on the mode selected the user can also select two alternative L.E.D. modes remotely.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas and an ingress protection of IP66/67.



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExBGL1D**	ATEX/IECEx: II 2G Ex d IIC T4 Ta. -50° to +70°C II 2G Ex d IIC T5 Ta. -50° to +40°C II 2D Ex tD A21 IP67 T120 Ta. +70°C (based on max. Ta. 70°C)
	GOST-R: 1ExdIICT5 Ta. -50° to +55°C 1ExdIICT4 Ta. -50° to +40°C DIP A21 Ta T4

** = Voltage & lens colour reference:

Voltage options:	24DC (10-50V dc), 115AC, 230AC, 24AC		
Lens colour options:	-AM (Amber) -RD (Red)	-BL (Blue) -YW (Yellow)	-GN (Green)
e.g: BExBGL1D230AC-AM			

Current consumption:

Version:		Voltage:	Current:
24V dc		10-50V dc	400mA
48V dc		10-50V dc	230mA
24V ac	50Hz/60Hz	+/-10%	812mA
115V ac	50Hz/60Hz	+/-10%	140mA
230V ac	50Hz/60Hz	+/-10%	70mA

Flash patterns:

Stage 1: [On board]	Stage 2: [Remote]	Stage 3: [Remote]
All L.E.D's on	Alt Side Flash 1:1 2Hz	2x Flash 2Hz
Rotating: Fast 1	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 2	2x Flash 2Hz	All L.E.D's on
Rotating: Slow 1	Alt Side Flash 1:1 2Hz	All L.E.D's on
Rotating: Slow 2	2x Flash 1Hz	All L.E.D's on
Double Flash 1Hz	Alt Side Flash 1:1 2Hz	All L.E.D's on
1x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
2x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Alt Side Flash 1:1 2Hz	Rotating: Fast 2	All L.E.D's on

Specification:

Light source:	Array of 32 high output L.E.D.s
Effective Candela:	11cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Green, Red & Yellow
Voltages DC:	10-50V dc
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free
	LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm
	0.5w res. or diode (dc versions).
Weight :	DC:2.45kg AC: 2.75kg

*All candela data is representative of performance with red lens at optimum voltage.

Features:

- Glass dome with optically enhanced prismatic PC lens
- Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

- ATEX certificate: KEMA 00ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0010

GOST-R

INMETRO

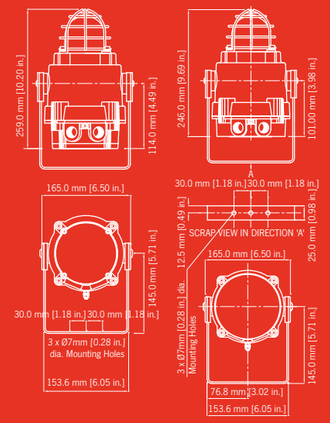
BExBG05 Xenon Beacon

The flameproof BExBG05 Xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExBG05 5 Joule beacons are ideal for general signalling duties whilst their robust construction makes installation in the harshest of environments possible. Additional features include automatic synchronisation on multi-beacon systems and stainless steel guard and mounting bracket as standard.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

Ex de version



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExBG05D**	ATEX / IECEx: II 2G Ex d IIC T4 Ta. -50°C to +70°C II 2G Ex d IIC T5 Ta. -50°C to +55°C II 2G Ex d IIC T6 Ta. -50°C to +40°C II 2D Ex tD A21 IP67 T115°C based on max. Ta. 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBG05E**	ATEX / IECEx: II 2G Ex de IIC T4 Ta. -50°C to +70°C II 2G Ex de IIC T5 Ta. -50°C to +55°C II 2G Ex de IIC T6 Ta. -50°C to +40°C II 2D Ex tD A21 IP66 T115°C based on max. Ta. 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage & lens colour reference:

Voltage options:	12DC, 24DC, 48DC, 115AC, 230AC		
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red)	-CL (Clear) -YW (Yellow)
e.g: BExBG05D115AC-AM			

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	750mA
24V dc		20-28V dc	300mA
48V dc		42-54V dc	180mA
115V ac	50Hz/60Hz	+/-10%	140mA
230V ac	50Hz/60Hz	+/-10%	55mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	34,812 cd* - measured ref. to I.E.S.
Effective candela:	105 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	BG05D : IP66/67 BG05E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	DC: 2.45kg AC: 2.75kg

*All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronisation on multi-beacon system.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).

Approvals:

- ATEX certificate: KEMA 00ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 60079-7 : 2003, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Inmetro certificate: 10-IEx-0010

GOST-R

INMETRO

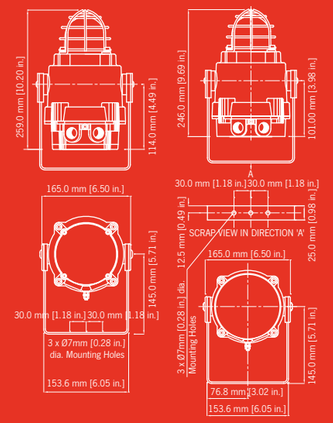
BExBG10 Xenon Beacon

The flameproof BExBG10 xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExBG10 10 Joule beacons are ideal for general signalling duties whilst their robust construction makes installation in the harshest of environments possible. Additional features include automatic synchronisation on multi-beacon systems and stainless steel guard and mounting bracket as standard.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

Ex de version



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExBG10D**	ATEX / IECEx: II 2G Ex d IIC T4 Ta. -50°C to +70°C II 2G Ex d IIC T5 Ta. -50°C to +40°C II 2D Ex tD A21 IP67 T125°C based on max. Ta. 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBG10E**	ATEX / IECEx: II 2G Ex de IIC T4 Ta. -50°C to +70°C II 2G Ex de IIC T5 Ta. -50°C to +40°C II 2D Ex tD A21 IP66 T125°C based on max.Ta 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage & lens colour reference:

Voltage options:	12DC, 24DC, 48DC, 115AC, 230AC		
Lens colour options:	-AM (Amber)	-BL (Blue)	-CL (Clear)
	-GN (Green)	-RD (Red)	-YW (Yellow)
e.g: BExBG10D115AC-AM			

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	1.45A
24V dc		20-28V dc	660mA
48V dc		42-54V dc	340mA
115V ac	50Hz/60Hz	+/-10%	250mA
230V ac	50Hz/60Hz	+/-10%	110mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	10 Joules (10Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	1,000,000 cd - calc. from energy (J)
Effective candela:	500 cd - calc. from energy (J)
Peak Candela:	79,531 cd* - measured ref. to I.E.S.
Effective candela:	346 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	BG10D : IP66/67 BG10E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	DC: 2.45kg AC: 2.75kg

*All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronisation on multi-beacon system.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).

Approvals:

- ATEX certificate: KEMA 00ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 60079-7 : 2003, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Inmetro certificate: 10-IEx-0010

GOST-R

INMETRO

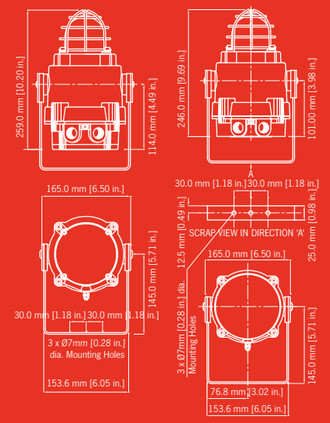
BExBG15 Xenon Beacon

The flameproof BExBG15 xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExBG15 15 Joule beacons are ideal for general signalling duties whilst their robust construction makes installation in the harshest of environments possible. Additional features include automatic synchronisation on multi-beacon systems and stainless steel guard and mounting bracket as standard.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

Ex de version



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExBG15D**	ATEX / IECEx: II 2G Ex d IIC T4 Ta. -50°C to +70°C II 2G Ex d IIC T5 Ta. -50°C to +40°C II 2D Ex tD A21 IP67 T125°C based on max. Ta. 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4
BExBG15E**	ATEX / IECEx: II 2G Ex de IIC T4 Ta. -50°C to +70°C II 2G Ex de IIC T5 Ta. -50°C to +40°C II 2D Ex tD A21 IP66 T125°C based on max. Ta. 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage & lens colour reference:

Voltage options:	24DC, 48DC, 115AC, 230AC		
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red)	-CL (Clear) -YW (Yellow)
e.g: BExBG15D115AC-AM			

Current consumption:

Version:		Voltage:	Current:
24V dc		20-28V dc	860mA
48V dc		42-54V dc	480mA
115V ac	50Hz/60Hz	+/-10%	360mA
230V ac	50Hz/60Hz	+/-10%	170mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	15 Joules (15Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	1,500,000 cd - calc. from energy (J)
Effective candela:	750 cd - calc. from energy (J)
Peak Candela:	94,748 cd* - measured ref. to I.E.S.
Effective candela:	444 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	BG15D : IP66/67 BG15E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	DC:2.45kg AC: 2.75kg

*All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronisation on multi-beacon system.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).

Approvals:

- ATEX certificate: KEMA 00ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 60079-7 : 2003, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Inmetro certificate: 10-IEx-0010

GOST-R

INMETRO

BExCBG05-05 Dual Xenon Beacon

The flameproof BExCBG05-05 dual xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExCBG05-05D dual 5 Joule beacons are ideal for general signalling duties whilst their robust construction makes installation in the harshest of environments possible. The beacons may be connected from a single supply for simultaneous operation or from separate supplies for independent operation. Additional features include automatic synchronisation on multi-beacon systems and stainless steel guard and mounting bracket as standard.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas and an ingress protection of IP67.

Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExCBG0505D**	ATEX/IECEx: II 2G Ex d IIB T4 Ta. -50°C to +70°C II 2G Ex d IIB T5 Ta. -50°C to +55°C II 2D Ex tD A21 IP67 T115°C based on max. Ta. of +70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C DIP A21 TA T4

** = Voltage & lens colour reference:

Voltage options:	12DC, 24DC, 48DC, 115AC, 230AC		
Lens colour options: [specify two]	-A (Amber) -G (Green)	-B (Blue) -R (Red)	-C (Clear) -Y (Yellow)

e.g: BExCBG0505D115AC-A/R

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	750mA
24V dc		20-28V dc	300mA
48V dc		42-54V dc	180mA
115V ac	50Hz/60Hz	+/-10%	140mA
230V ac	50Hz/60Hz	+/-10%	55mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	5 Joules x 2 (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	2 x 500,000 cd - calc. from energy (J)
Effective candela:	2 x 250 cd - calc. from energy (J)
Peak Candela:	2 x 34,812 cd* - measured ref. to I.E.S.
Effective candela:	2 x 105 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	DC: 4.00kg AC: 4.35kg

*All candela data is representative of performance with clear lens at optimum voltage.

Features:

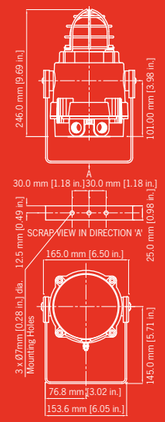
- Automatic synchronisation on multi-beacon system.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

- ATEX certificate: KEMA 01ATEX2222X, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0024, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

BExTBG05 Telephone Beacon



The flameproof xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

The BExTBG05 5 Joule units are telephone initiated beacons. Their robust construction makes installation in the harshest of environments possible. Additional features include stainless steel lens guard and stainless steel mounting bracket as standard. The ring tone detect circuit senses the ringing voltage on the telephone line and switches the supply (115V ac or 230V ac) to enable the beacon until the telephone is answered.

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas and an ingress protection of IP66/67.

Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExTBG05D**	ATEX / IECEx: II 2G Ex d IIC T4 Ta -50°C to +70°C II 2G Ex d IIC T5 Ta -50°C to +55°C II 2G Ex d IIC T6 Ta -50°C to +40°C II 2D Ex tD A21 IP67 T115°C based on max. Ta. 70°C GOST-R: 1ExdIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage & lens colour reference:

Voltage options:	115AC, 230AC		
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red)	-CL (Clear) -YW (Yellow)

e.g: BExTBG05D115AC-AM

Current consumption:

Version:		Voltage:	Current:
115V ac	50Hz/60Hz	+/-10%	140mA
230V ac	50Hz/60Hz	+/-10%	55mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	34,812 cd* - measured ref. to I.E.S.
Effective candela:	105 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages AC:	115vac; 230vac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Tube life :	Emissions are reduced to 70% after 8 million flashes
Weight :	2.75kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

- ATEX certificate: KEMA 00ATEX2006, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0002, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Inmetro certificate: 10-IEx-0010

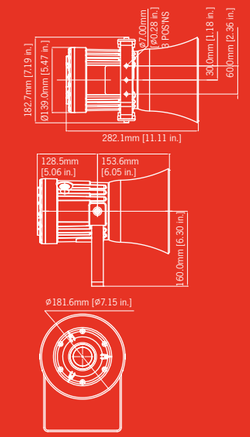
GOST-R
INMETRO

GNExS1 Alarm Sounder

The flameproof GNExS1 alarm sounder is suitable for Zone 1 & Zone 2 applications - certified to ATEX and IECEx.

Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 45 alarm tones and 4 remotely selectable stages. The alarm tone frequencies for the first 2 stages are independently selectable. The GNEx range features enclosures manufactured from GRP (glass reinforced polyester), moulded in natural red, but also available in other colours.

The re-entrant flare horn is high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.



Tone table

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Any Stg 1 tone	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 5	2400Hz Continuous	Any Stg 1 tone	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 7	2400/2900Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Any Stg 1 tone	Tone 2	Tone 38
Tone 10	2400/2900Hz @ 2Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 11	1000Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 13	2400Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 15	800Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 16	660Hz 150mS on, 150mS off Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 45
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Any Stg 1 tone	Tone 5	Tone 29
Tone 20	660Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 21	554Hz/440Hz @ 1Hz Alternating	Any Stg 1 tone	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 25	2400/2900Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 26	Bell	Any Stg 1 tone	Tone 15	Tone 34
Tone 27	554Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 28	440Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 29	800/1000Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 30	300Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 31	660/1200Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 29
Tone 32	Two tone chime.	Any Stg 1 tone	Tone 15	Tone 45
Tone 33	745Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Any Stg 1 tone	Tone 45	Tone 37
Tone 35	420Hz @ 0.625 sec Australian Alert	Any Stg 1 tone	Tone 5	Tone 34
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Any Stg 1 tone	Tone 5	Tone 45
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Any Stg 1 tone	Tone 45	Tone 38
Tone 38	2000Hz Continuous	Any Stg 1 tone	Tone 45	Tone 37
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 17	Tone 37
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 38
Tone 41	Motor Siren - slow rise to 1200 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 44	Motor Siren - slow rise to 2400 Hz	Any Stg 1 tone	Tone 5	Tone 34
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Any Stg 1 tone	Tone 34	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Code:	Description:
GNExS1	S1 alarm sounder
DC024	24vdc (10-30vdc)
DC048	48vdc (35-60vdc)
AC230	230vac (100-260vac/dc)
-N	No stopping plug (default)
-B	Brass stopping plug
-S	Stainless steel stopping plug
-P	Nickel plated brass stopping plug
-1	Mounting bracket 304 stainless steel (A2) (default)
-2	Mounting bracket 316 stainless steel (A4)
-A-1	Approval to ATEX & IECEx (default)
-R	Housing colour Red (default)
-S	Other housing colour - please specify

Example:
GNExS1DC024-B-1-A-1-R
GNExS1 24vdc with brass stopping plug, 304 stainless steel mounting bracket, approved to ATEX & IECEx in a red housing.

Current consumption:

Version:	Voltage:	Current:
24V dc	10-30vdc	140mA @ 24vdc
48V dc	38-60vdc	73mA @ 48vdc
115V ac/dc 50/60Hz	100-260 vac/dc	86mA @ 115vac
230V ac/dc 50/60Hz	100-260 vac/dc	75mA @ 230vac

Current at nominal voltage

Specification:

Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	24vdc (10-30vdc), 48vdc (38-60vdc)
Voltages AC:	230vac (100-260vac/dc)
Stage switching:	Negative or positive
Ingress protection:	IP66/67
Housing material:	GRP
Colour:	RAL3000 Red (others available on request)
Flare:	High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries:	Dual M20 ISO
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.00kg AC: 3.20kg

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals.
- Independently selectable tones for 1st & 2nd stages.
- Safety-integrity suitability: SIL2

Approvals:

- ATEX certificate: SIRA 13ATEX1139X
  EN 60079-0 : 2012, EN 60079-1 : 2007
- IECEx certificate: IECEx SIR 13.0029X
  IEC 60079-0 : 2011 (Ed6), IEC 60079-1 : 2007 (Ed6)

Coding:

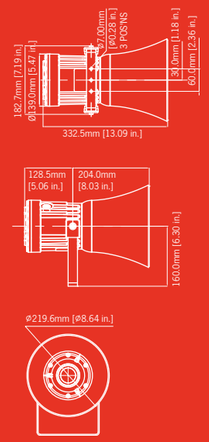
- II 2G Ex d IIC T4 Ta. -60° to +50°C
- II 2G Ex d IIC T3 Ta. -60° to +70°C
- II 2G Ex d IIB T6 Ta. -60° to +50°C
- II 2G Ex d IIB T5 Ta. -60° to +65°C
- II 2G Ex d IIB T4 Ta. -60° to +70°C

GNExS2 Alarm Sounder

The flameproof GNExS2 alarm sounder is suitable for Zone 1 & Zone 2 applications - certified to ATEX and IECEx.

Sound level ouputs are up to 123dB(A) at 1 metre with a choice of 45 alarm tones and 4 remotely selectable stages. The alarm tone frequencies for the first 2 stages are independently selectable. The GNEx range features enclosures manufactured from GRP (glass reinforced polyester), moulded in natural red, but also available in other colours.

The re-entrant flare horn is high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.



Tone table

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Any Stg 1 tone	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 5	2400Hz Continuous	Any Stg 1 tone	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 7	2400/2900Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Any Stg 1 tone	Tone 2	Tone 38
Tone 10	2400/2900Hz @ 2Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 11	1000Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 13	2400Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 15	800Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 16	660Hz 150mS on, 150mS off Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 45
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Any Stg 1 tone	Tone 5	Tone 29
Tone 20	660Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 21	554Hz/440Hz @ 1Hz Alternating	Any Stg 1 tone	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 25	2400/2900Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 26	Bell	Any Stg 1 tone	Tone 15	Tone 34
Tone 27	554Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 28	440Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 29	800/1000Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 30	300Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 31	660/1200Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 29
Tone 32	Two tone chime.	Any Stg 1 tone	Tone 15	Tone 45
Tone 33	745Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Any Stg 1 tone	Tone 45	Tone 37
Tone 35	420Hz @ 0.625 sec Australian Alert	Any Stg 1 tone	Tone 5	Tone 34
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Any Stg 1 tone	Tone 5	Tone 45
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Any Stg 1 tone	Tone 45	Tone 38
Tone 38	2000Hz Continuous	Any Stg 1 tone	Tone 45	Tone 37
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 17	Tone 37
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 38
Tone 41	Motor Siren - slow rise to 1200 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 44	Motor Siren - slow rise to 2400 Hz	Any Stg 1 tone	Tone 5	Tone 34
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Any Stg 1 tone	Tone 34	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Code:	Description:
GNExS2	S2 alarm sounder
DC024	24vdc (10-30vdc)
DC048	48vdc (35-60vdc)
AC230	230vac (100-260vac)
-N	No stopping plug (default)
-B	Brass stopping plug
-S	Stainless steel stopping plug
-P	Nickel plated brass stopping plug
-1	Mounting bracket 304 stainless steel (A2) (default)
-2	Mounting bracket 316 stainless steel (A4)
-A-1	Approval to ATEX & IECEx (default)
-R	Housing colour Red (default)
-S	Other housing colour - please specify

Example:
GNExS2DC024-B-1-A-1-R
GNExS2 24vdc with brass stopping plug, 304 stainless steel mounting bracket, approved to ATEX & IECEx in a red housing.

Current consumption:

Version:	Voltage:	Current:
24V dc	10-30vdc	811mA @ 24vdc
48V dc	38-60vdc	434mA @ 48vdc
115V ac 50/60Hz	100-230vac	297mA @ 115vac
230V ac 50/60Hz	100-230vac	196mA @ 230vac

Current at nominal voltage

Specification:

Maximum output:	123dB(A) @ 1 metre
Nominal output:	117dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Max. 117dB(A); Min. 108dB(A) - Tone 2
Effective range:	200m @ 1KHz
Voltages DC:	24vdc (10-30vdc), 48vdc (38-60vdc)
Voltages AC:	230vac (100-260vac)
Stage switching:	Negative or positive
Ingress protection:	IP66/67
Housing material:	GRP
Colour:	RAL3000 Red (others available on request)
Flare:	High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries:	Dual M20 ISO
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.35kg AC: 3.55kg

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals.
- Independently selectable tones for 1st & 2nd stages.

Approvals:

- ATEX certificate: SIRA 13ATEX1139X
  EN 60079-0 : 2012, EN 60079-1 : 2007
- IECEx certificate: IECEx SIR 13.0029X
  IEC 60079-0 : 2011 (Ed6), IEC 60079-1 : 2007 (Ed6)

Coding:

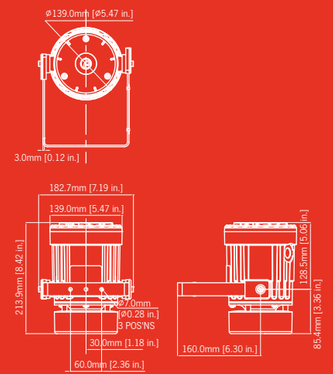
- II 2G Ex d IIC T4 Ta. -60° to +50°C
- II 2G Ex d IIC T3 Ta. -60° to +58°C
- II 2G Ex d IIB T6 Ta. -60° to +50°C
- II 2G Ex d IIB T5 Ta. -60° to +58°C

GNExS1-R Omni-directional Alarm Sounder

The flameproof GNExS1-R alarm sounder with a unique radial horn. Suitable for Zone 1 & Zone 2 applications - certified to ATEX and IECEx.

The unique radial horn on the compact GNExS1-R distributes the warning signal omni-directionally. Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 45 alarm tones and 4 remotely selectable stages. The alarm tone frequencies for the first 2 stages are independently selectable. The GNEx range features enclosures manufactured from GRP (glass reinforced polyester), moulded in natural red, but also available in other colours.

The omni-directional flare horn is high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.



Tone table

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Any Stg 1 tone	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 5	2400Hz Continuous	Any Stg 1 tone	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 7	2400/2900Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Any Stg 1 tone	Tone 2	Tone 38
Tone 10	2400/2900Hz @ 2Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 11	1000Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Any Stg 1 tone	Tone 5	Tone 45
Tone 13	2400Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 15	800Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 16	660Hz 150mS on, 150mS off Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 45
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Any Stg 1 tone	Tone 5	Tone 45
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Any Stg 1 tone	Tone 5	Tone 29
Tone 20	660Hz Continuous	Any Stg 1 tone	Tone 5	Tone 34
Tone 21	554Hz/440Hz @ 1Hz Alternating	Any Stg 1 tone	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 34
Tone 25	2400/2900Hz @ 50Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 26	Bell	Any Stg 1 tone	Tone 15	Tone 34
Tone 27	554Hz Continuous	Any Stg 1 tone	Tone 5	Tone 29
Tone 28	440Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 29	800/1000Hz @ 7Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 45
Tone 30	300Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 31	660/1200Hz @ 1Hz Sweeping	Any Stg 1 tone	Tone 5	Tone 29
Tone 32	Two tone chime.	Any Stg 1 tone	Tone 15	Tone 45
Tone 33	745Hz @ 1Hz Intermittent	Any Stg 1 tone	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Any Stg 1 tone	Tone 45	Tone 37
Tone 35	420Hz @ 0.625 sec Australian Alert	Any Stg 1 tone	Tone 5	Tone 34
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Any Stg 1 tone	Tone 5	Tone 45
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Any Stg 1 tone	Tone 45	Tone 38
Tone 38	2000Hz Continuous	Any Stg 1 tone	Tone 45	Tone 37
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Any Stg 1 tone	Tone 17	Tone 37
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Any Stg 1 tone	Tone 27	Tone 38
Tone 41	Motor Siren - slow rise to 1200 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Any Stg 1 tone	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Any Stg 1 tone	Tone 5	Tone 45
Tone 44	Motor Siren - slow rise to 2400 Hz	Any Stg 1 tone	Tone 5	Tone 34
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Any Stg 1 tone	Tone 34	Tone 37

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Code:	Description:
GNExS1R	S1 alarm sounder with radial horn
DC024	24vdc (10-30vdc)
DC048	48vdc (35-60vdc)
AC230	230vac (100-260vac/dc)
-N	No stopping plug (default)
-B	Brass stopping plug
-S	Stainless steel stopping plug
-P	Nickel plated brass stopping plug
-1	Mounting bracket 304 stainless steel (A2) (default)
-2	Mounting bracket 316 stainless steel (A4)
-A-1	Approval to ATEX & IECEx (default)
-R	Housing colour Red (default)
-S	Other housing colour - please specify

Example:
GNExS1RDC024-B-1-A-1-R
GNExS1 24vdc with brass stopping plug, 304 stainless steel mounting bracket, approved to ATEX & IECEx in a red housing.

Current consumption:

Version:	Voltage:	Current:
24V dc	10-30vdc	140mA @ 24vdc
48V dc	38-60vdc	73mA @ 48vdc
115V ac/dc 50/60Hz	100-260 vac/dc	86mA @ 115vac
230V ac/dc 50/60Hz	100-260 vac/dc	75mA @ 230vac

Specification:

Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	24vdc (10-30vdc), 48vdc (38-60vdc)
Voltages AC:	230vac (100-260vac/dc)
Stage switching:	Negative or positive
Ingress protection:	IP66/67
Housing material:	GRP
Colour:	RAL3000 Red (others available on request)
Flare:	High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries:	Dual M20 ISO
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.35kg AC: 3.55kg

Features:

- Omni-directional sound output.
- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals.
- Independently selectable tones for 1st & 2nd stages.
- Safety-integrity suitability: SIL2

Approvals:

- ATEX certificate: SIRA 13ATEX1139X
  EN 60079-0 : 2012, EN 60079-1 : 2007
- IECEx certificate: IECEx SIR 13.0029X
  IEC 60079-0 : 2011 (Ed6), IEC 60079-1 : 2007 (Ed6)

Coding:

- II 2G Ex d IIC T4 Ta. -60° to +50°C
- II 2G Ex d IIC T3 Ta. -60° to +70°C
- II 2G Ex d IIB T6 Ta. -60° to +50°C
- II 2G Ex d IIB T5 Ta. -60° to +65°C
- II 2G Ex d IIB T4 Ta. -60° to +70°C

BExS110 / BExDS110 Alarm Sounders

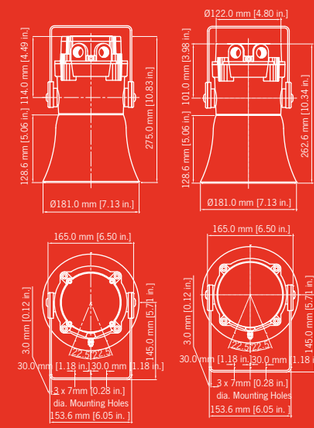
The flameproof BExS110 alarm sounders are suitable for Zone 1 & Zone 2 applications and the BExDS110 sounders also for Zone 21 & 22.

Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated.

The re-entrant flare horns are high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

For fire applications the BExS110D 24V dc siren is CPD EN89/106/EEC compliant (EN54-3 tested).

Ex de version



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Current consumption:

Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	265mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+10/-10%	110mA
230V ac	50/60Hz	+10/-10%	56mA

Part codes:

Part Code:	Classification:
BExS110D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExS110E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C
BExDS110D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4
BExDS110E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP66 T115 based on a max. Ta. of 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version
Add '-M' to part number for MED approved version (24V dc only)

Specification:

Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative or positive
Ingress protection:	S110D : IP66/67 S110E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExS110 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDS110 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.00kg AC: 3.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 99ATEX6312, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 60079-7 : 2003, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- VdS certificate: G206011
- CPD certificate: 0786-CPD-20225
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009
- Marine Equipment Directive (MED) Certificate: 19 702 - 11 HH

GOST-R
G206011
INMETRO
0786-CPD-20225

BExS120 / BExDS120 Alarm Sounders

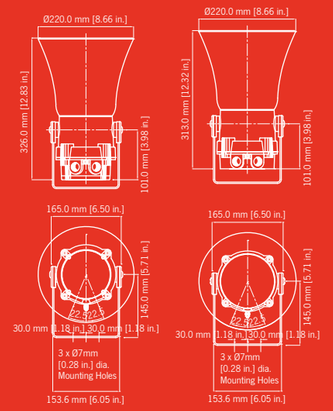
The flameproof BExS120 alarm sounders are suitable for Zone 1 & Zone 2 applications and the BExDS120 sounders also for Zone 21 & 22.

Sound level ouputs are up to 123dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated.

The re-entrant flare horns are high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

For fire applications the BExS120D 24V dc siren is CPD EN89/106/EEC compliant (EN54-3 tested).

Ex de version



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Current consumption:

Version:		Voltage:	Current:
12V dc		+/-25%	850mA
24V dc		+/-25%	800mA
48V dc		+/-25%	4200mA
115V ac	50/60Hz	+10/-10%	180mA
230V ac	50/60Hz	+10/-10%	90mA

Part codes:

Part Code:	Classification:
BExS120D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExS120E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C
BExDS120D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 TaT4
BExDS120E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP66 T115 based on a max. Ta. of 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version

Specification:

Maximum output:	121dB(A) @ 1 metre
Nominal output:	117dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 117dB(A); Min. 108dB(A) - Tone 2
Effective range:	200m @ 1KHz
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative or positive
Ingress protection:	S120D : IP66/67 S120E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExS120 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDS120 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.20kg AC: 3.40kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 99ATEX6312, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 60079-7 : 2003, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- VdS certificate: G206011
- CPD certificate: 0786-CPD-20225
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009

GOST-R

G206011

INMETRO

0786-CPD-20225

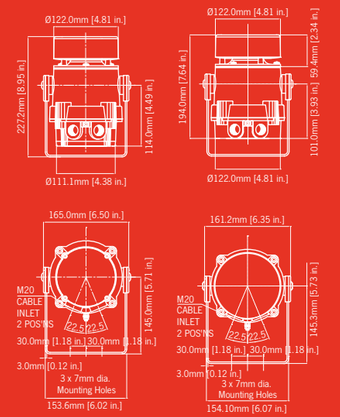
BExS110-R Omni-directional Alarm Sounders

The flameproof BExS110-R alarm sounder is suitable for Zone 1 & Zone 2 applications and the BExDS110-R sounder also for Zone 21 & 22.

Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. The unique radial horn on the compact BExS110-R distributes the warning signal omni-directionally. The radial horn is manufactured from high impact, fire retardant ABS.

All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

Ex de version



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Current consumption:

Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	365mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+10/-10%	110mA
230V ac	50/60Hz	+10/-10%	56mA

Part codes:

Part Code:	Classification:
BExS110DR**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExS110ER**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C
BExDS110DR**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4
BExDS110ER**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP66 T115 based on a max. Ta. of 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version

Specification:

Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative or positive
Ingress protection:	S110D : IP66/67 S110E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExS110 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDS110 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).
Weight :	DC: 3.00kg AC: 3.20kg

Features:

- Omni-directional sound output.
- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- IN & OUT terminals (Ex de version only).
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 99ATEX6312,
  EN 60079-0 : 2006, EN 60079-1 : 2007,
  EN 60079-7 : 2003, EN 61241-0 : 2006,
  EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003,
  IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6),
  IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1),
  IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009

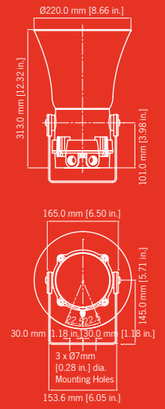
GOST-R

INMETRO

BExH120 / BExDH120 ‘Hootronic’ Siren

The flameproof BExH120 ‘Hootronic’ Siren is suitable for Zone 1 & 2 applications. The BExH120D authentically reproduces the traditional sounds of electro-mechanical devices whilst providing a significantly higher level of performance and reliability. The BExDH120 variant is also suitable for Zone 21 & 22.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way. With output levels of up to 117.5dB(A) at 1 metre the BExH120 surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Assemblies:
The products from the BEx range are available as multiple unit assemblies with and without junction boxes. See the BExP data sheet for further info.

Part codes:

Part Code:	Classification:
BExH120D**-G Grey Housing & horn	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50 to +70°C II 2G Ex d IIC T4 Ta. -50 to +55°C
BExH120D**-R Red Housing & Horn	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50 to +70°C
BExDH120D**-G Grey Housing & Black Horn	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
BExDH120D**-R Red Housing & Black Horn	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
** = Voltage reference:	
Options:	24DC, 115AC, 230AC

Current consumption:

Voltage:		Max. I/P Volts:	Current:
24V dc		30V dc	400mA
115V ac	50/60Hz	126.5V ac	130mA
230V ac	50/60Hz	253V ac	65mA

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Nominal output:	117.5dB(A) @ 1m +/- 3dB - Tone 4.
No. of tones:	5
No. of stages:	3
Volume control:	Yes
Effective range:	200m @ 1KHz
Voltages DC:	24vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion
Colour:	RAL3000 Red or RAL7038 Grey (others available on request)
BExH120 flare:	High impact UL94 V0 & 5VA FR ABS
BExDH120 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug included)
Terminals:	0.5 to 4.0mm² cables.
Weight :	DC: 3.20kg AC: 3.40kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- Sound level ouputs up to 117.5dB(A) at 1 metre with a choice of 5 alarm sounds combining the signalling power of mutliple electro-mechanical products in one unit:
  1. Industrial Claxon
  2. High Frequency Mechanical Siren
  3. Medium Frequency Mechanical Siren
  4. Electro Mechanical Buzzer
  5. Mechanical Bell

Approvals:

- ATEX certificate: KEMA 99ATEX6312, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009
- GOST-R certificate: POCC GB.JB05.B03365

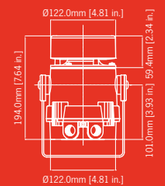
GOST-R

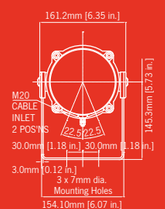
INMETRO

BExH120-R Signalling Bell

The flameproof BExH120-R 'Belltronic' Signalling Bell is suitable for Zone 1 & 2 applications. The BExH120-R authentically reproduces the traditional sound of a electro-mechanical bell whilst providing a significantly higher level of performance and reliability. The BExDH120-R variant is also suitable for Zone 21 & 22.

With output levels of up to 106dB(A) at 1 metre the BExH120-R surpasses legacy electro-mechanical bells in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.





Part codes:

Part Code:	Classification:
BExH120DR**-G Grey Housing & Red Gong	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50 to +70°C II 2G Ex d IIC T4 Ta. -50 to +55°C
BExH120DR**-R Red Housing & Red Gong	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50 to +70°C II 2G Ex d IIC T4 Ta. -50 to +55°C
BExDH120DR**-G Grey Housing & Black Gong	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
BExDH120DR**-R Red Housing & Black Gong	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C

** = Voltage reference:

Options:	24DC, 115AC, 230AC

Current consumption:

Voltage:		Current:
24V dc		400mA
115V ac	50/60Hz	130mA
230V ac	50/60Hz	65mA

Specification:

Nominal output:	106dB(A) @ 1m +/- 3dB
Volume control:	Yes
Voltages DC:	24vdc
Voltages AC:	115vac; 230vac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion
Colour:	RAL3000 Red or RAL7038 Grey (others available on request)
BExH120-R flare:	High impact UL94 V0 & 5VA FR ABS
BExDH120-R flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Weight :	DC: 3.20kg AC: 3.40kg

Features:

- Digitally stored mechanical bell sound.
- Continuously rated.
- Maintenance free.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

- ATEX certificate: KEMA 99ATEX6312, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

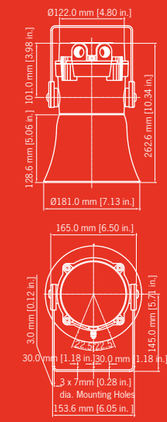
INMETRO

BExTS110 / BExDTS110 Telephone Sounders

The flameproof BExTS110 telephone initiated sounders are suitable for Zone 1 & Zone 2 applications and the BExDTS110 version also for Zone 21 & 22.

Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones. The ring-tone circuit senses the ringing voltage on the telephone line and swtiches the supply onto signal until the telephone is answered. The sound can be continuous or it can follow the telephone ring (selectable option).

The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. The re-entrant flare horns are high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas and an ingress protection of IP66/67.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Part Code:	Classification:
BExTS110D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExDTS110D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4

** = Voltage reference:

Options:	115AC, 230AC

Current consumption:

Version:		Voltage:	Current:
115V ac	50Hz/60Hz	+/-10%	110mA
230V ac	50Hz/60Hz	+/-10%	56mA

Specification:

Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
Effective range:	100m @ 1KHz
Voltages AC:	115vac; 230vac
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExTS110 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDTS110 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug included)
Terminals:	0.5 to 4.0mm² cables.
Weight :	3.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- Telephone line ringing voltage switches power (115vac or 230vac) to enable sounder to operate.

Approvals:

- ATEX certificate: KEMA 99ATEX6312, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009

GOST-R

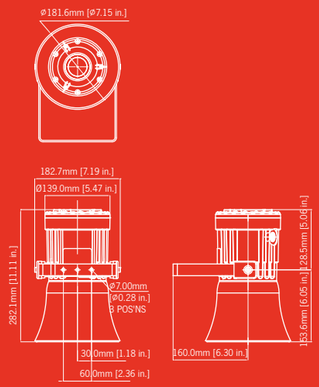
INMETRO

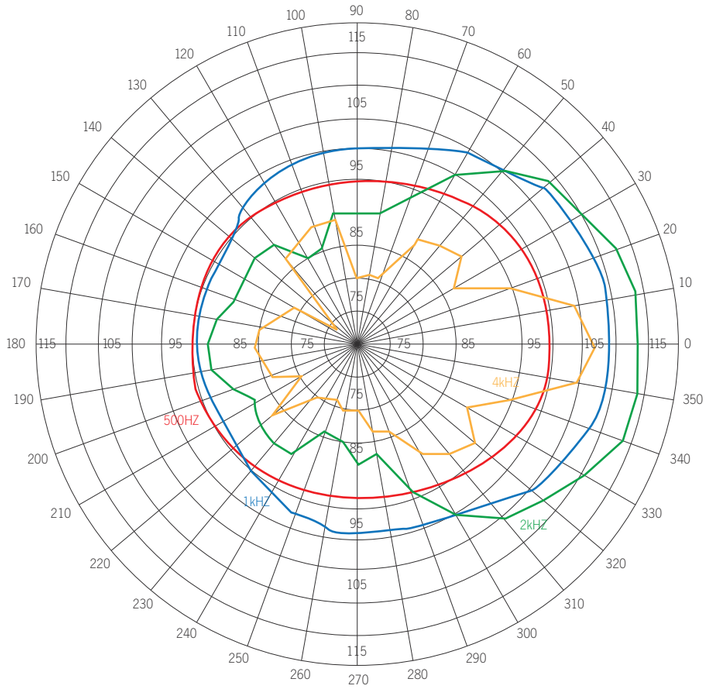
GNExL1 PA Loudspeaker

The flameproof GNExL1 PA loudspeaker is suitable for Zone 1 & Zone 2 applications.

The GNEx range features enclosures manufactured from GRP (glass reinforced polyester), moulded in natural red, but also available in other colours.

The re-entrant flare horn is high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.





Part codes:

Code:	Description:
GNExL1	15W PA Loudspeaker
V100	70/100V line transformer
R008	8 Ohm low impedance
R016	16 Ohm low impedance
-N	No stopping plug (default)
-B	Brass stopping plug
-S	Stainless steel stopping plug
-P	Nickel plated brass stopping plug
-1	Mounting bracket 304 stainless steel (A2) (default)
-2	Mounting bracket 316 stainless steel (A4)
-A-1	Approval to ATEX & IECEx (default)
-R	Housing colour Red (default)
-S	Other housing colour - please specify

Example:
GNExL1V100-B-1-A-1-R
GNExL1 70/100V lne transformer version with brass stopping plug, 304 stainless steel mounting bracket, approved to ATEX & IECEx in a red housing.

Specification:

SPL:	102dB +/-3dB @ 1w @ 1m - Pink 113dB +/-3dB @ 15w (rated) @ 1m
Rated power:	15 Watts RMS
70v line tappings:	15w / 7.5w / 3w / 1w
100v line tappings:	15w / 7.5w / 3w / 1w
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	120° @ 1kHz & 32° @ 4kHz
Frequency range:	400Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer) 470µF Capacitor (Low impedance)
Ingress protection:	IP66/67
Housing material:	GRP
Colour:	RAL3000 Red (others available on request)
BExL15 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries:	Dual M20 ISO
Terminals:	0.5 to 4.0mm² cables.
Weight :	70/100V line: 3.8kg Low imp.: 3.45kg

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals

Approvals:

- ATEX certificate: SIRA 13ATEX1139X
  EN 60079-0 : 2012, EN 60079-1 : 2007
- IECEx certificate: IECEx SIR 13.0029X
  IEC 60079-0 : 2011 (Ed6), IEC 60079-1 : 2007 (Ed6)

Coding:

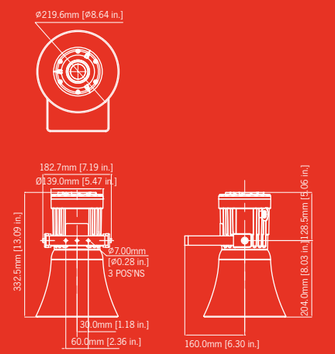
- II 2G Ex d IIC T4 Ta. -60° to +50°C
- II 2G Ex d IIC T3 Ta. -60° to +70°C
- II 2G Ex d IIB T6 Ta. -60° to +50°C
- II 2G Ex d IIB T5 Ta. -60° to +65°C
- II 2G Ex d IIB T4 Ta. -60° to +70°C

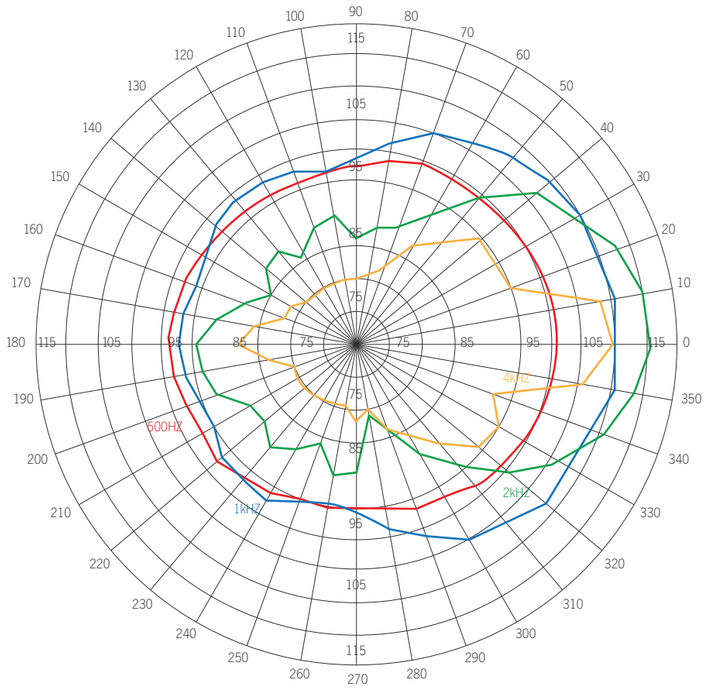
GNExL2 PA Loudspeaker

The flameproof GNExL2 PA loudspeaker is suitable for Zone 1 & Zone 2 applications.

The GNEx range features enclosures manufactured from GRP (glass reinforced polyester), moulded in natural red, but also available in other colours.

The re-entrant flare horn is high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals and an ingress protection of IP66/67.





Part codes:

Code:	Description:
GNExL2	25W PA Loudspeaker
V100	70/100V line transformer
R008	8 Ohm low impedance
R016	16 Ohm low impedance
-N	No stopping plug (default)
-B	Brass stopping plug
-S	Stainless steel stopping plug
-P	Nickel plated brass stopping plug
-1	Mounting bracket 304 stainless steel (A2) (default)
-2	Mounting bracket 316 stainless steel (A4)
-A-1	Approval to ATEX & IECEx (default)
-R	Housing colour Red (default)
-S	Other housing colour - please specify

Example:
GNExL2V100-B-1-A-1-R
GNExL2 70/100V lne transformer version with brass stopping plug, 304 stainless steel mounting bracket, approved to ATEX & IECEx in a red housing.

Specification:

SPL:	105dB +/-3dB @ 1w @ 1m - Pink
	119dB +/-3dB @ 25w (rated) @ 1m
Rated power:	25 Watts RMS
70v line tappings:	25w / 12.5w / 6w / 2w tappings
100v line tappings:	25w / 12.5w / 6w / 2w tappings
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	130° @ 1kHz & 32° @ 4kHz
Frequency range:	300Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer) 470µF Capacitor (Low impedance)
Ingress protection:	IP66/67
Housing material:	GRP
Colour:	RAL3000 Red (others available on request)
Horn flare:	High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries:	Dual M20 ISO
Terminals:	0.5 to 4.0mm² cables.
Weight :	70/100V line: 4.3kg Low imp.: 3.95kg

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals

Approvals:

- ATEX certificate: SIRA 13ATEX1139X
  EN 60079-0 : 2012, EN 60079-1 : 2007
- IECEx certificate: IECEx SIR 13.0029X
  IEC 60079-0 : 2011 (Ed6), IEC 60079-1 : 2007 (Ed6)

Coding:

- II 2G Ex d IIC T4 Ta. -60° to +50°C
- II 2G Ex d IIC T3 Ta. -60° to +65°C
- II 2G Ex d IIB T6 Ta. -60° to +50°C
- II 2G Ex d IIB T5 Ta. -60° to +65°C

BExL15 / BExDL15 PA Loudspeakers

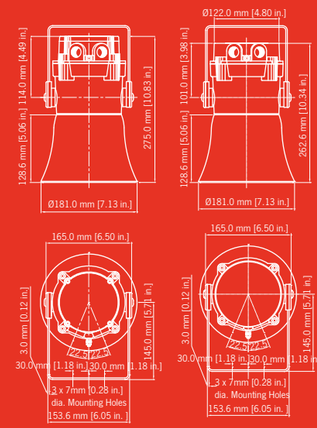
The flameproof BExL15 PA loudspeakers are suitable for Zone 1 & Zone 2 applications and the BExDL15 sounders also for Zone 21 & 22.

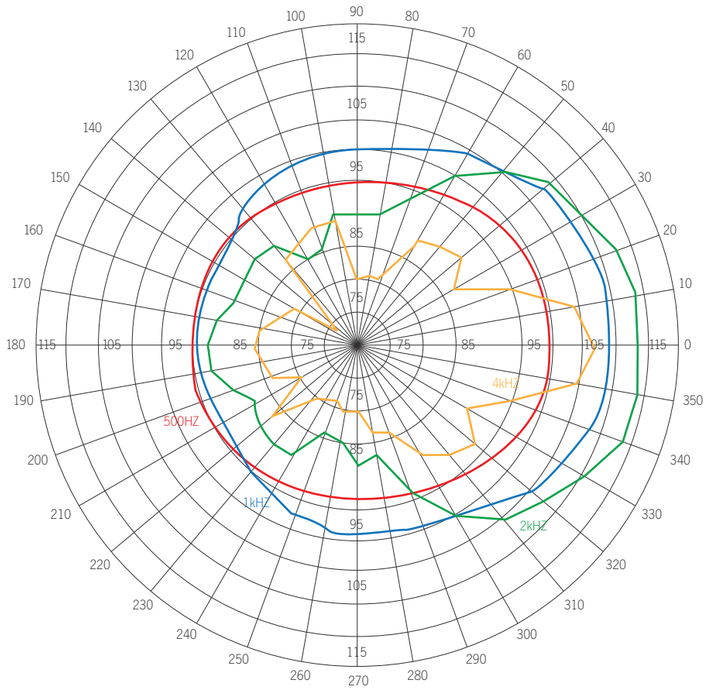
The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated.

The re-entrant flare horns are high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

An independent test report is available on request, or online, detailing the performance of the BEx loudspeaker range.

Ex de version





Part codes:

Part Code:	Classification:
BExL15D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExL15E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C
BExDL15D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4
BExDL15E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP66 T115 based on a max. Ta. of 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

**** = type reference:

Options:	70V	70V Line transformer
	100V	100V Line transformer
	8R	8 Ohm low impedance
	16R	16 Ohm low impedance

e.g: BExL15D100V

Specification:

SPL:	102dB +/-3dB @ 1w @ 1m - Pink 113dB +/-3dB @ 15w (rated) @ 1m
Rated power:	15 Watts RMS
70v line tappings:	15w / 7.5w / 3w / 1w (z=336.67 Ohms /653.33 Ohms / 1.6k Ohms / 4.9k Ohms)
100v line tappings:	15w / 7.5w / 3w / 1w (z=666.87 Ohms /1.34k Ohms / 3.34k Ohms / 10k Ohms)
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	120° @ 1kHz & 32° @ 4kHz
Frequency range:	400Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer) 470µF Capacitor (Low impedance)
Ingress protection:	L15D : IP66/67 L15E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExL15 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDL15 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Weight :	70/100V line: 3.45kg Low imp.: 3.10kg

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals (Ex de version only).

Approvals:

- ATEX certificate: KEMA 99ATEX6312,
  EN 60079-0 : 2006, EN 60079-1 : 2007,
  EN 60079-7 : 2003, EN 61241-0 : 2006,
  EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003,
  IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6),
  IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1),
  IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009

GOST-R

INMETRO

BExL25 / BExDL25 PA Loudspeakers

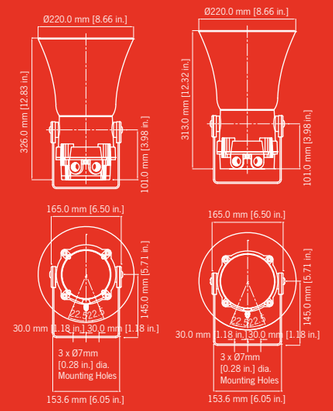
The flameproof BExL25 PA loudspeakers are suitable for Zone 1 & Zone 2 applications and the BExDL25 sounders also for Zone 21 & 22.

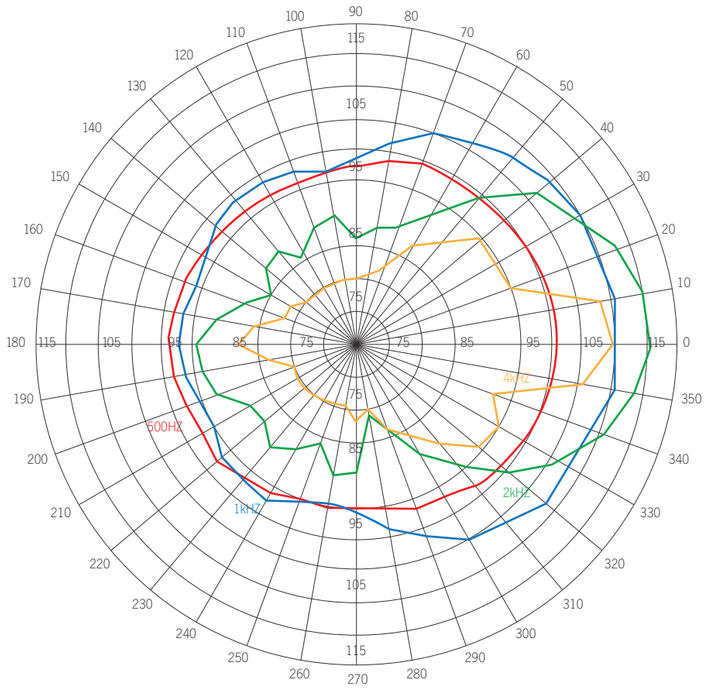
The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated.

The re-entrant flare horns are high impact, fire retardant ABS. All models have two M20 cable entries, large termination areas containing in & out terminals (Ex de version only) and an ingress protection of IP66/67 (Ex d) and IP66 (Ex de).

An independent test report is available on request, or online, detailing the performance of the BEx loudspeaker range.

Ex de version





Part codes:

Part Code:	Classification:
BExL25D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C
BExL25E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C
BExDL25D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C II 2G Ex d IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP67 T115 based on a max. Ta. of 70°C
	GOST-R: 1ExdIICT4 Ta. -50° to +55°C T100°C DIP A21 Ta T4
BExDL25E**	ATEX / IECEx: II 2G Ex de IIB T4 Ta. -50° to +70°C II 2G Ex de IIC T4 Ta. -50° to +55°C II 2D Ex tD A21 IP66 T115 based on a max. Ta. of 70°C
	GOST-R: 2ExdeIICT4 Ta. -50° to +55°C DIP A21 Ta T4

**** = type reference:

Options:	70V	70V Line transformer
	100V	100V Line transformer
	8R	8 Ohm low impedance
	16R	16 Ohm low impedance

e.g: BExL25D100V

Specification:

SPL:	105dB +/-3dB @ 1w @ 1m - Pink 119dB +/-3dB @ 25w (rated) @ 1m
Rated power:	25 Watts RMS
70v line tappings:	25w / 12.5w / 6w / 2w tappings (z=196 Ohms /392 Ohms / 816.67 Ohms / 2.45k Ohms)
100v line tappings:	25w / 12.5w / 6w / 2w tappings (z=400 Ohms /800 Ohms / 1.67k Ohms / 5k Ohms)
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	130° @ 1kHz & 32° @ 4kHz
Frequency range:	300Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer) 470µF Capacitor (Low impedance)
Ingress protection:	L25D : IP66/67 L25E : IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish - anti-corrosion.
Colour:	RAL3000 Red (others available on request)
BExL25 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDL25 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Weight :	70/100V line: 3.95kg Low imp.: 3.56kg

Features:

- Very large termination area.
- Ratchet adjustable stainless steel ‘U’ bracket.
- IN & OUT terminals (Ex de version only).

Approvals:

- ATEX certificate: KEMA 99ATEX6312,
  EN 60079-0 : 2006, EN 60079-1 : 2007,
  EN 60079-7 : 2003, EN 61241-0 : 2006,
  EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0003,
  IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6),
  IEC 60079-7 : 2001 (Ed3), IEC 61241-0 : 2004 (Ed1),
  IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1
- Inmetro certificate: 10-IEx-0009

GOST-R

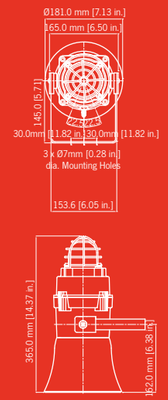
INMETRO

BExCS110-05 / BExDCS110-05

Combination Alarm

The flameproof BExCS110-05 combination alarm sounders and Xenon beacons are suitable for Zone 1 & Zone 2 applications and the BExDCS110-05 versions also for Zone 21 & 22.

Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Part codes:

Part Code:	Classification:
BExCS11005D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C
BExDCS11005D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. –50°C to. +70°C II 2D Ex tD A21 IP67 T115°C based on max Ta. of +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C DIP A21 Ta T5

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version

Current consumption:

Alarm Sounder Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	265mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+/-10%	110mA
230V ac	50/60Hz	+/-10%	56mA

Xenon Beacon Version:		Voltage:	Current:
12V dc		10-14V	750mA
24V dc		20-28V	300mA
48V dc		42-54V	180mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Specification:

Sounder/Horn:	
Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative or positive
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	34,812 cd* - measured ref. to I.E.S.
Effective candela:	105 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes
General:	
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated
BExCS110-05 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDCS110-05 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Weight :	DC: 4.80kg AC: 5.00kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronisation on multi-beacon & sounder systems.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Ratchet adjustable stainless steel 'U' bracket.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 01ATEX2223X, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0025, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365

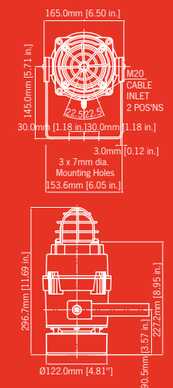
GOST-R

BExCS110-05-R / BExDCS110-05-R

Omni-directional Alarm Sounder & Xenon Combination

The flameproof BExCS110-05-R combination alarm sounder and Xenon beacon with omni-directional horn is suitable for Zone 1 & Zone 2 applications and the BExDCS110-05-R version also for Zone 21 & 22.

The unique radial horn on the compact BExCS110-05-R distributes the audible warning signal omni-directionally allowing the visual signal to be orientated optimally. Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Part codes:

Part Code:	Classification:
BExCS11005DR**	ATEX / IECEx:
	II 2G Ex d IIB T4 Ta. -50° to +70°C
	GOST-R:
	1ExdIIBT4 Ta. -50° to +55°C
BExDCS11005DR**	ATEX / IECEx:
	II 2G Ex d IIB T4 Ta. –50°C to. +70°C
	II 2D Ex tD A21 IP67 T115°C based on max Ta. of +70°C
	GOST-R:
	1ExdIIBT4 Ta. -50° to +55°C
	DIP A21 Ta T5

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version

Current consumption:

Alarm Sounder Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	265mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+/-10%	110mA
230V ac	50/60Hz	+/-10%	56mA

Xenon Beacon Version:		Voltage:	Current:
12V dc		10-14V	750mA
24V dc		20-28V	300mA
48V dc		42-54V	180mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Specification:

Sounder/Horn:	
Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Stage switching:	Negative or positive
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	34,812 cd* - measured ref. to I.E.S.
Effective candela:	105 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes
General:	
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6
Housing finish:	Phosphated & powder coated
BExCS110-05 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDCS110-05 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Weight :	DC: 4.80kg AC: 5.00kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Omni-directional sound output.
- Automatic synchronisation on multi-beacon & sounder systems.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-beacon systems.
- Xenon tubes mechanically secured against shock & vibration
- Ratchet adjustable stainless steel 'U' bracket.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 01ATEX2223X, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0025, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365

GOST-R

BExCS110-L1 / BExDCS110-L1

Sounder & L.E.D

The flameproof BExCS110-L1 combination alarm sounders and high output L.E.D. beacons are suitable for Zone 1 & Zone 2 applications. The BExDCS110-L1 is suitable for Zone 1, 2, 21 & 22 applications.

The BExCS110-L1 features sound level ouputs of up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The beacon contains an array of 32 high output, multi-function L.E.D.s. with a total of 9 modes of operation - 4 rotating effect modes, 4 flashing modes and a steady mode for use in indicator / status applications. Based on the mode selected the user can also select two alternative L.E.D. modes remotely.

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Flash patterns:

Mode: Stage 1:	[on board]	Stage 2: [Remote]	Stage 3: [Remote]
1	All L.E.D's on	Mode: 9	Mode: 6
2	Rotating: Slow1	Mode: 9	Mode: 1
3	Single Strike Flash: 2Hz	Mode: 7	Mode: 1
4	Rotating: Fast 1	Mode: 3	Mode: 1
5	Rotating: Slow 2	Mode: 6	Mode: 1
6	Double Strike Flash: 1Hz	Mode: 7	Mode: 1
7	Rotating: Fast 2	Mode: 8	Mode: 1
8	Double Strike Flash: 2Hz	Mode: 9	Mode: 1
9	Alternate Side Flash: 2Hz	Mode: 7	Mode: 1

Part codes:

Part Code:	Classification:
BExCS110L1D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C
BExDCS110L1D**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50°C to. +70°C II 2D Ex tD A21 IP67 T115°C based on max Ta. of +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C DIP A21 Ta T5

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC
Add '-P' to part number for Programmable version	

Current consumption:

Alarm Sounder Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	265mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+/-10%	110mA
230V ac	50/60Hz	+/-10%	56mA

L.E.D. Beacon Version:		Voltage:	Current:
12V dc		10-50V	750mA
24V dc		10-50V	400mA
48V dc		10-50V	210mA
115V ac	50/60Hz	+/-10%	135mA
230V ac	50/60Hz	+/-10%	65mA

Specification:

Sounder/Horn:	
Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12V dc; 24V dc; 48V dc
Voltages AC:	115V ac; 230V ac
Stage switching:	Negative or positive
L.E.D. Beacon:	
Light source:	Array of 32 high output L.E.D.s
Effective Candela:	11cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Green, Red & Yellow
Voltages DC:	10-50V dc
Voltages AC:	115V ac; 230V ac
General:	
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated
BExCS110-L1 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDCS110-L1 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug included)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Weight :	5.00kg

*Candela measurements representative of performance with red lens at optimum voltage.

Features:

- Glass dome with optically enhanced prismatic PC lens
- Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- The sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- ATEX certificate: KEMA 01ATEX2223X, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0025, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1

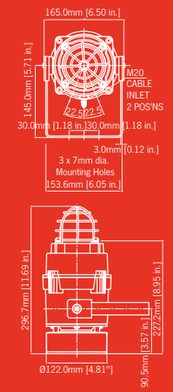
GOST-R

BExCS110L1-R / BExDCS110-L1-R

Omni-directional Alarm Sounder & L.E.D. Combination

The flameproof BExCS110-L1-R combination omni-directional alarm sounder and high output L.E.D. beacon is suitable for Zone 1 & Zone 2 applications. The BExDCS110-L1-R is suitable for Zone 1, 2, 21 & 22 applications.

The unique radial horn on the compact BExCS110-L1-R distributes the audible warning signal omni-directionally allowing the visual signal to be orientated optimally. Sound level ouputs are up to 117dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The beacon contains an array of 32 high output, multi-function L.E.D.s. with a total of 9 modes of operation - 4 rotating effect modes, 4 flashing modes and a steady mode for use in indicator / status applications.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Continuous 1000Hz Toxic Gas Alarm	Tone 31	Tone 11
Tone 2	Alternating 800/1000Hz at 0.25s intervals	Tone 17	Tone 5
Tone 3	Slow Whoop 500/1200Hz at 0.3Hz with 0.5s gap repeated	Tone 2	Tone 5
Tone 4	Sweeping 800/1000 at 1Hz	Tone 6	Tone 5
Tone 5	Continuous at 2400Hz	Tone 3	Tone 27
Tone 6	Sweeping 2400/2900Hz at 7Hz	Tone 7	Tone 5
Tone 7	Sweeping 2400/2900Hz at 1Hz	Tone 10	Tone 5
Tone 8	Siren 500/1200/500Hz at 0.3Hz	Tone 2	Tone 5
Tone 9	Sawtooth 1200/500Hz at 1Hz	Tone 15	Tone 2
Tone 10	Alternating 2400/2900Hz at 2Hz	Tone 7	Tone 5
Tone 11	Intermittent 1000Hz at 0.5Hz General alarm	Tone 31	Tone 1
Tone 12	Alternating 800/1000Hz at 0.875Hz	Tone 4	Tone 5
Tone 13	Intermittent 2400Hz at 1Hz	Tone 15	Tone 5
Tone 14	Intermittent 800Hz 0.25s on 1s off	Tone 4	Tone 5
Tone 15	Continuous at 800Hz	Tone 2	Tone 5
Tone 16	Intermittent 660Hz 150mS on, 150mS off	Tone 18	Tone 5
Tone 17	Alternating 544Hz (100mS)/440Hz(400mS)	Tone 2	Tone 27
Tone 18	Intermittent 660Hz 1.8s on, 1.8s off	Tone 2	Tone 5
Tone 19	1400Hz to 1600Hz sweep up over 1s - 1600Hz to 1400Hz sweep down over 0.5s	Tone 2	Tone 5
Tone 20	Continuous 660Hz	Tone 2	Tone 5
Tone 21	Alternating 554/440Hz at 1Hz	Tone 2	Tone 5
Tone 22	Intermittent 554Hz at 0.875Hz	Tone 2	Tone 5
Tone 23	800Hz pulsing at 2Hz	Tone 6	Tone 5
Tone 24	Sweeping 800/1000Hz at 50Hz	Tone 29	Tone 5
Tone 25	Sweeping 2400/2900Hz at 50Hz	Tone 29	Tone 5
Tone 26	Simulated bell sound	Tone 2	Tone 1
Tone 27	Continuous 554Hz	Tone 26	Tone 5
Tone 28	Continuous 440Hz	Tone 2	Tone 5
Tone 29	Sweeping 800/1000Hz at 7Hz	Tone 7	Tone 5
Tone 30	420Hz repeating 0.625s on, 0.625s off Australian alert signal	Tone 32	Tone 5
Tone 31	1200/500Hz at 1 Hz Prepare to Abandon Platform	Tone 11	Tone 1
Tone 32	Sweeping 500/1200Hz 3.75s on, 0.25s off 15Hz	Tone 26	Tone 1

Country specific or custom tone configurations and alarm frequencies are available upon request.

Flash patterns:

Mode: Stage 1:	[on board]	Stage 2: [Remote]	Stage 3: [Remote]
1	All L.E.D's on	Mode: 9	Mode: 6
2	Rotating: Slow1	Mode: 9	Mode: 1
3	Single Strike Flash: 2Hz	Mode: 7	Mode: 1
4	Rotating: Fast 1	Mode: 3	Mode: 1
5	Rotating: Slow 2	Mode: 6	Mode: 1
6	Double Strike Flash: 1Hz	Mode: 7	Mode: 1
7	Rotating: Fast 2	Mode: 8	Mode: 1
8	Double Strike Flash: 2Hz	Mode: 9	Mode: 1
9	Alternate Side Flash: 2Hz	Mode: 7	Mode: 1

Part codes:

Part Code:	Classification:
BExCS110L1DR**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C
BExDCS110L1DR**	ATEX / IECEx: II 2G Ex d IIB T4 Ta. –50°C to. +70°C II 2D Ex tD A21 IP67 T115°C based on max Ta. of +70°C
	GOST-R: 1ExdIIBT4 Ta. -50° to +55°C DIP A21 Ta T5

** = Voltage reference:

Options:	12DC, 24DC, 48DC, 115AC, 230AC

Add '-P' to part number for Programmable version

Current consumption:

Alarm Sounder Version:		Voltage:	Current:
12V dc		+/-25%	195mA
24V dc		+/-25%	265mA
48V dc		+/-25%	130mA
115V ac	50/60Hz	+/-10%	110mA
230V ac	50/60Hz	+/-10%	56mA

L.E.D. Beacon Version:		Voltage:	Current:
12V dc		10-50V	750mA
24V dc		10-50V	400mA
48V dc		10-50V	210mA
115V ac	50/60Hz	+/-10%	135mA
230V ac	50/60Hz	+/-10%	65mA

Specification:

Sounder/Horn:	
Maximum output:	117dB(A) @ 1 metre
Nominal output:	110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 110dB(A); Min. 72dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	12V dc; 24V dc; 48V dc
Voltages AC:	115V ac; 230V ac
Stage switching:	Negative or positive
L.E.D. Beacon:	
Light source:	Array of 32 high output L.E.D.s
Effective Candela:	11cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Green, Red & Yellow
Voltages DC:	10-50V dc
Voltages AC:	115V ac; 230V ac
General:	
Ingress protection:	IP66/67
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated
BExCS110-L1 flare:	High impact UL94 V0 & 5VA FR ABS (Red)
BExDCS110-L1 flare:	Anti-Static High impact ABS (Black)
Cable entries:	Dual M20 ISO (one stopping plug inc)
Terminals:	0.5 to 4.0mm² cables.
Line monitoring :	Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode (dc versions).
Weight :	5.00kg

*Candela measurements representative of performance with red lens at optimum voltage.

Features:

- Omni-directional sound output.
- Glass dome with optically enhanced prismatic PC lens.
- Stainless Steel guard.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- The sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

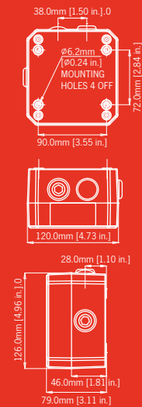
Approvals:

- ATEX certificate: KEMA 01ATEX2223X, EN 60079-0 : 2006, EN 60079-1 : 2007, EN 61241-0 : 2006, EN 61241-1 : 2004
- IECEx certificate: IECEx KEM 10.0025, IEC 60079-0 : 2004 (Ed4), IEC 60079-1 : 2007 (Ed6), IEC 61241-0 : 2004 (Ed1), IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B03365
- Safety-integrity suitability: SIL1

GOST-R

GNExCP6A-BG Break Glass Call Point

The GNExCP6A manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6A
Version:	BG: Break Glass
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black

e.g: GNExCP6A-BG-S-N-N-N-RD
: GNExCP6A call point - Break Glass type - Single Pole switch - Nylon stopping plugs - No LIft flap - No duty label required - Red colour housing

Versions:

GNExC6PA

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight:	0.8Kg

Specification:

GNExCP6A:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.
Test:	Test key facility
Weight:	1.2Kg

For applications requiring monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6B-BG version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- Metalised polyester or stainless steel “Duty” label.

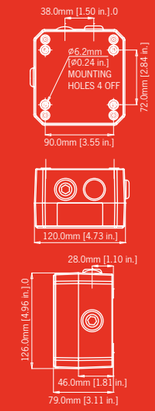
Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1

GNExCP6B-BG Break Glass Call Point

The GNExCP6B manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. All types are available with EOL or series resistors, diode or Zener diodes or an L.E.D. indicator and also with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6B
Version:	BG: Break Glass
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black
Nominal Voltage dc:	48 / 24 / 12 / 06
EOL Module:	ExxxR: Resistor e.g.470 Ohm = E470R ED1: Diode IN4007: ED1 ExxxZ: Zener e.g. 5.1V = E5V1Z
Series Module:	SxxxR: Resistor e.g. 2.2K Ohm = S2K2R ED1: Diode IN4007: ED1 SxxxZ: Zener e.g.12V = S12VZ L.E.D.: LED

e.g.: GNExCP6B-BG-S-N-S-L-N-RD-24-E470R-S10KR
: GNExCP6B call point - Break Glass type - Single Pole switch - Nylon stopping plugs - Standard terminals - Lift flap - No duty label - Red housing - 24V - 470R E.O.L resistor - 10K Series resistor

* Note: When ordering GNExCP6B units with DPCO double pole switches, DIN Rail type terminals must be specified. Please contact sales to discuss available configurations of EOL or series resistors and diodes when using DPCO.

Versions:

The GNExCP6B call point can contain a maximum of two resistor or diode E.O.L. or series modules. The L.E.D. indicator can be combined with an EOL resistor or diode.

Resistors:

Nominal Voltage:	Max Voltage:	Min. Series Value:	Max Current:
48V	56V	1K8	0.75A
24V	28V	470R	1.00A
12V	15V	120R	1.00A
6V	9V	47R	1.00A

Zener Diodes:

Zener Voltage:	Max Input Volt.:	Max Current:
3.3V	56V dc	230mA
4.7V	56V dc	162mA
5.1V	56V dc	149mA
5.6V	56V dc	136mA
6.2V	56V dc	122mA
6.8V	56V dc	112mA
10V	56V dc	76mA
12V	56V dc	63mA

Diodes:

Max Voltage:	Max Current:
<56V dc	0.75A
<50V dc	1.00A

Specification:

GNExCP6B:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T80°C Db IP66
Ambient:	Ta = -40°C to +50°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² / 8 x 2.5mm²
Test:	Test key facility
Weight:	1.2Kg

For applications that do not require monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6A-BG version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- DIN rail mounted terminal blocks: 8 x 2.5mm².
- Metalised polyester or stainless steel “Duty” label.
- Series and/or End of Line resistors, diodes & Zener diodes
- Indicator L.E.D..

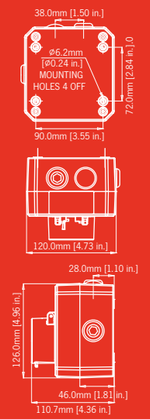
Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1

GNExCP6A-PB Push Button Call Point

The GNExCP6A manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6A
Version:	PB: Push Buttons
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black

e.g: GNExCP6A-BG-S-N-N-N-RD
: GNExCP6A call point - Break Glass type - Single Pole switch - Nylon stopping plugs - No LIft flap - No duty label required - Red colour housing

Versions:

GNExC6PA

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right

Specification:

GNExCP6A:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.
Weight:	1.3Kg

For applications requiring monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6B-PB version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- Metalised polyester or stainless steel “Duty” label.

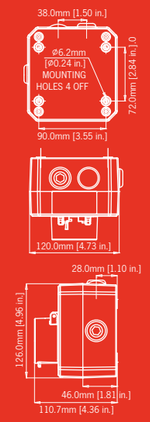
Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1

GNExCP6B-PB Push Button Call Point

The GNExCP6B manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. All types are available with EOL or series resistors, diode or Zener diodes or an L.E.D. indicator and also with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6B
Version:	PB: Push Button
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black
Nominal Voltage dc:	48 / 24 / 12 / 06
EOL Module:	ExxxR: Resistor e.g.470 Ohm = E470R ED1: Diode IN4007: ED1 ExxxZ: Zener e.g. 5.1V = E5V1Z
Series Module:	SxxxR: Resistor e.g. 2.2K Ohm = S2K2R ED1: Diode IN4007: ED1 SxxxZ: Zener e.g.12V = S12VZ L.E.D.: LED

e.g.: GNExCP6B-PB-S-N-S-N-RD-24-E470R-S10KR
: GNExCP6B call point - Push Button type - Single Pole switch - Nylon stopping plugs - Standard terminals - No duty label - Red housing - 24V - 470R E.O.L resistor - 10K Series resistor

* Note: When ordering GNExCP6B units with DPCO double pole switches, DIN Rail type terminals must be specified. Please contact sales to discuss available configurations of EOL or series resistors and diodes when using DPCO.

Versions:

The GNExCP6B call point can contain a maximum of two resistor or diode E.O.L. or series modules. The L.E.D. indicator can be combined with an E.O.L. resistor or diode.

Resistors:

Nominal Voltage:	Max Voltage:	Min. Series Value:	Max Current:
48V	56V	1K8	0.75A
24V	28V	470R	1.00A
12V	15V	120R	1.00A
6V	9V	47R	1.00A

Zener Diodes:

Zener Voltage:	Max Input Volt.:	Max Current:
3.3V	56V dc	230mA
4.7V	56V dc	162mA
5.1V	56V dc	149mA
5.6V	56V dc	136mA
6.2V	56V dc	122mA
6.8V	56V dc	112mA
10V	56V dc	76mA
12V	56V dc	63mA

Diodes:

Max Voltage:	Max Current:
<56V dc	0.75A
<50V dc	1.00A

Specification:

GNExCP6B:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T80°C Db IP66
Ambient:	Ta = -40°C to +50°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² / 8 x 2.5mm²
Weight:	1.3Kg

For applications that do not require monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6A-PB version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- DIN rail mounted terminal blocks: 8 x 2.5mm².
- Metalised polyester or stainless steel “Duty” label.
- Series and/or End of Line resistors, diodes & Zener diodes
- Indicator L.E.D.

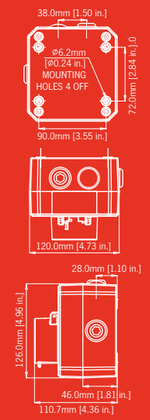
Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1

GNExCP6A-PT Tool Reset Call Point

The GNExCP6A manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6A
Version:	PT: Tool Reset
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black

e.g: GNExCP6A-BG-S-N-N-N-RD
: GNExCP6A call point - Break Glass type - Single Pole switch - Nylon stopping plugs - No LIft flap - No duty label required - Red colour housing

Versions:

GNExC6PA

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right

Specification:

GNExCP6A:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
Ambient:	Ta = -40°C to +55°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.
Weight:	1.3Kg

For applications requiring monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6B-PT version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- Metalised polyester or stainless steel “Duty” label.

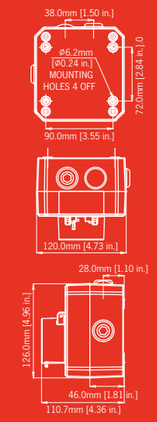
Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1

GNExCP6B-PT Tool Reset Call Point

The GNExCP6B manual call points are available as break glass, push button or tool reset versions. They are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. All types are available with EOL or series resistors, diode or Zener diodes or an L.E.D. indicator and also with either single or double pole change over switches. All versions are certified to ATEX and IECEx standards.



Part Codes:

Type:	GNExCP6B
Version:	PT: Tool Reset
Switch Type:	S: SPCO D: DPCO
Stopping plug Type:	N: Nylon B: Brass S: St/St
Lift Flap:	N: No flap L: Lift flap
Duty Label:	N: Not required P: Metalisedpolyester (self adhesive) S: St/St
Body Colour:	RD: Red BL: Blue GN: Green YW: Yellow RW: Red/White YB: Yellow/Black BK: Black
Nominal Voltage dc:	48 / 24 / 12 / 06
EOL Module:	ExxxR: Resistor e.g.470 Ohm = E470R ED1: Diode IN4007: ED1 ExxxZ: Zener e.g. 5.1V = E5V1Z
Series Module:	SxxxR: Resistor e.g. 2.2K Ohm = S2K2R ED1: Diode IN4007: ED1 SxxxZ: Zener e.g.12V = S12VZ L.E.D.: LED

e.g.: GNExCP6B-PT-S-N-S-N-RD-24-E470R-S10KR
: GNExCP6B call point - Tool Reset type - Single Pole switch - Nylon stopping plugs - Standard terminals - No duty label - Red housing - 24V - 470R E.O.L resistor - 10K Series resistor

* Note: When ordering GNExCP6B units with DPCO double pole switches, DIN Rail type terminals must be specified. Please contact sales to discuss available configurations of EOL or series resistors and diodes when using DPCO.

Versions:

The GNExCP6B call point can contain a maximum of two resistor or diode E.O.L. or series modules. The L.E.D. indicator can be combined with an E.O.L. resistor or diode.

Resistors:

Nominal Voltage:	Max Voltage:	Min. Series Value:	Max Current:
48V	56V	1K8	0.75A
24V	28V	470R	1.00A
12V	15V	120R	1.00A
6V	9V	47R	1.00A

Zener Diodes:

Zener Voltage:	Max Input Volt.:	Max Current:
3.3V	56V dc	230mA
4.7V	56V dc	162mA
5.1V	56V dc	149mA
5.6V	56V dc	136mA
6.2V	56V dc	122mA
6.8V	56V dc	112mA
10V	56V dc	76mA
12V	56V dc	63mA

Diodes:

Max Voltage:	Max Current:
<56V dc	0.75A
<50V dc	1.00A

Specification:

GNExCP6B:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T80°C Db IP66
Ambient:	Ta = -40°C to +50°C
Ingress protection:	IP66
Housing material:	GRP - glass reinforced polyester (UV stable)
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² / 8 x 2.5mm²
Weight:	1.3Kg

For applications that do not require monitoring resistors, diodes or inidcator L.E.D.'s please see the GNExCP6A-PT version.

Options:

- Alternative housing colours are available to meet specific requirements.
- Single or double pole c/o switch.
- DIN rail mounted terminal blocks: 8 x 2.5mm².
- Metalised polyester or stainless steel “Duty” label.
- Series and/or End of Line resistors, diodes & Zener diodes
- Indicator L.E.D.

Approvals:

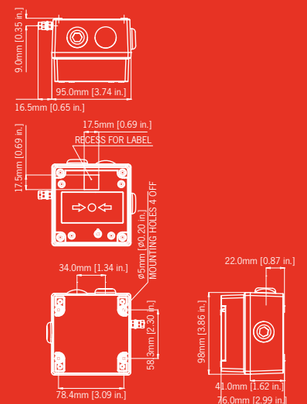
- ATEX certificate: Sira 09ATEX3286X,
  IEC 60079-0:2007 Ed 5, EN 60079-1:2004,
  EN 60079-7:2007, IEC 60079-18:2009 Ed 3,
  EN 61241-1:2004

- IECEx certificate: IECEx SIR 09.0121X,
  IEC 60079-0:2007-10 Edition: 5,
  IEC 60079-1:2003 Edition: 5,
  IEC 60079-18:2009 Edition: 3,
  IEC 60079-7:2006-07 Edition: 4,
  IEC 61241-1:2004 Edition: 1

BExCP3A/B-BG Break Glass Call Point

The BExCP3A-BG and BExCP3B-BG break glass manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The BEx range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	BExCP3A-BG BExCP3B-BG
Terminals:	ST: Standard DR: DIN Rail
Lift Flap:	NF: No flap (default) LF: Lift flap
Duty Label:	NL: No Label (default) DL: Duty Label Specify content when ordering
Colour:	RD: Red Contact sales for other colour options
Nominal Voltage:	48V / 24V / 12V / 6V System Voltage only required on BExCP3B version
EOL Resistor:	ExxxR: xxx Res. value e.g.: E470R Only available on BExCP3B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on BExCP3B version

e.g. BEx-CP3A-BG-ST-LF-NL-RD
: BEx-CP3A Break glass call point with standard terminals, lift flap and no duty label. Red housing

e.g. BEx-CP3B-BG-DR-NF-NL-RD-24V-E470R
: BEx-CP3B Break glass call point with DIN rail terminals, no lift flap, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

Versions:

BExCP3A-BG

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

BExCP3B-BG

Category:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +50°C
Voltage:	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

Nominal Voltage:	Max Voltage:	Min. E.O.L. Series Value:
48V	56V	1K8
24V	28V	470R
12V	15V	120R
6V	9V	47R

Specification:

BExCP3A-BG:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
BExCP3B-BG:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C (+50°C for BExCP3B)
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Stainless Steel lift flap
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1
- Inmetro certificate: 10-IEx-0011X
- GOST-R certificate: POCC GB.JB05.B03365
- Complies with design requirements of EN54-11

GOST-R

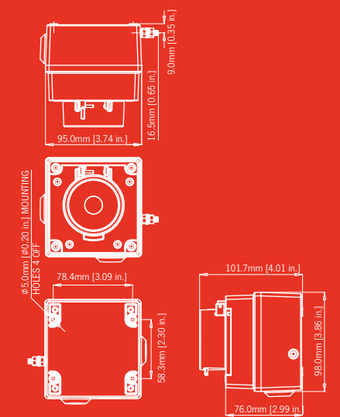
INMETRO

BExCP3A/B-PB Push Button Call Point

The BExCP3A-PB and BExCP3B-PB push button manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The product is user resettable by rotating the push button.

The BEx range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	BExCP3A-PB BExCP3B-PB
Terminals:	ST: Standard DR: DIN Rail
Lift Flap:	NF: No flap (default) LF: Lift flap
Duty Label:	NL: No Label (default) DL: Duty Label Specify content when ordering
Colour:	RD: Red Contact sales for other colour options
Nominal Voltage:	48V / 24V / 12V / 6V System Voltage only required on BExCP3B version
EOL Resistor:	ExxxR: xxx Res. value e.g.: E470R Only available on BExCP3B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on BExCP3B version

e.g. BExCP3A-PB-ST-NL-RD
: BEx-CP3A Push Button call point with standard terminals and no duty label. Red housing

e.g. BExCP3B-PB-DR-NL-RD-24V-E470R
: BEx-CP3B Push Button call point with DIN rail terminals, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

Versions:

BExCP3A-PB

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

BExCP3B-PB

Category:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +50°C
Voltage:	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

Nominal Voltage:	Max Voltage:	Min. E.O.L. Series Value:
48V	56V	1K8
24V	28V	470R
12V	15V	120R
6V	9V	47R

Specification:

BExCP3A-PB:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
BExCP3B-PB:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C (+50°C for BExCP3B)
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1
- Inmetro certificate: 10-IEx-0011X
- GOST-R certificate: POCC GB.JB05.B03365

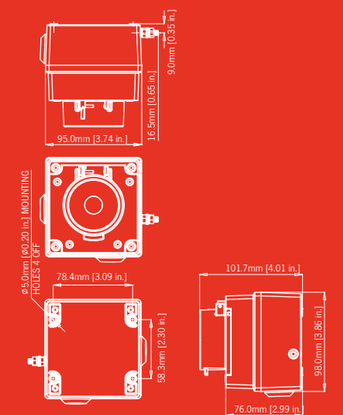
GOST-R

INMETRO

BExCP3A/B-PT Tool Reset Call Point

The BExCP3A-PT and BExCP3B-PT push button, tool resettable manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The push button is user resettable via the use of the special key supplied with the unit. The BEx range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.



Part Codes:

Type:	BExCP3A-PT BExCP3B-PT
Terminals:	ST: Standard DR: DIN Rail
Lift Flap:	NF: No flap (default) LF: Lift flap
Duty Label:	NL: No Label (default) DL: Duty Label Specify content when ordering
Colour:	RD: Red Contact sales for other colour options
Nominal Voltage:	48V / 24V / 12V / 6V System Voltage only required on BExCP3B version
EOL Resistor:	ExxxR: xxx Res. value e.g.: E470R Only available on BExCP3B version
Series Resistor:	SxxxR: xxx: Res. value e.g.: S2K2R Only available on BExCP3B version

e.g. BExCP3A-PT-ST-NL-RD
: BEx-CP3A Tool Reset call point with standard terminals and no duty label. Red housing

e.g. BExCP3B-PT-DR-NL-RD-24V-E470R
: BEx-CP3B Tool Reset call point with DIN rail terminals, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

Versions:

BExCP3A-PT

Category:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66 Ta = -40°C to +55°C
Voltage:	250V ac Max. 50V dc Max.
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm²
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

BExCP3B-PT

Category:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66 Ta = -40°C to +50°C
Voltage:	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A
Switch rating:	5.0A Max. 1.0A Max.
Monitoring Resistors:	No
Terminals:	6 x 4mm² or 8 x 2.5mm² DIN rail
Cable entries:	2 x M20 Top/Bottom 1 x M20 Left/Right
Weight: 0.8Kg	

Nominal Voltage:	Max Voltage:	Min. E.O.L. Series Value:
48V	56V	1K8
24V	28V	470R
12V	15V	120R
6V	9V	47R

Specification:

BExCP3A-PT:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
BExCP3B-PT:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C (+50°C for BExCP3B)
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm² cables.

Options:

- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm²
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1
- Inmetro certificate: 10-IEx-0011X
- GOST-R certificate: POCC GB.JB05.B03365

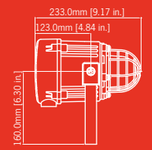
GOST-R
INMETRO

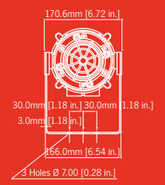
E2xB05 Xenon Strobe Beacon

The hazardous area E2xB05 Xenon strobe beacon is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

The E2xB05 is a 5 Joule Xenon strobe beacon with a 1Hz (60 fpm) flash rate.

The E2x range features enclosures manufactured from lightweight, high performance PPS which, with its corrosion proof properties, is suitable for the harshest of environments.





Part codes:

Part Code:	Classification:
ATEX version:	
E2xB05EG**	II 3G EEx nA nL IIC T2 (Tamb -20°C to +55°C) II 3G EEx nA nL IIC T3 (Tamb -20°C to +40°C)
UL version:	
E2xB05UL**	Class I, Div 2, Grps A,B,C,D T2D (215°C) at +55°C Class I, Div 2, Grps A,B,C,D T3 (200°C) at +40°C Class II, Div 2, Grps F & G T5 (100°C) at +55°C Class II, Div 2, Grps F & G T6 (85°C) at +40°C Class III, Div 1, T5 (100°C) at +55°C Class III, Div 1, T6 (85°C) at +40°C

** = Voltage & lens colour reference:

Voltage options: 12DC, 24DC, 48DC, 115AC, 230AC			
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red)	-CL (Clear) -YW (Yellow)
e.g: E2xB05EG115AC-AM			
Replacement Xenon flash tube: FTASSYE2X			

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	520mA
24V dc		20-28V dc	275mA
48V dc		42-58V dc	145mA
115V ac	50/60Hz	+/-10%	80mA
230V ac	50/60Hz	+/-10%	30mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	31,950 cd* - measured ref. to I.E.S.
Effective candela:	101 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12vdc; 24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable gland entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable gland entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	1.48kg

* All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Stainless Steel dome guard as standard
- Xenon tube mechanically secured against vibration & shock.
- User replaceable Xenon tube assembly.

Approvals:

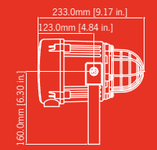
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E245313

E2xB10 Xenon Strobe Beacon

The hazardous area E2xB10 Xenon strobe beacon is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

The E2xB10 is a 10 Joule Xenon strobe beacon with a 1Hz (60 fpm) flash rate.

The E2x range features enclosures manufactured from lightweight, high performance PPS which, with its corrosion proof properties, is suitable for the harshest of environments.



Part codes:

Part Code:	Classification:
ATEX version:	
E2xB10EG**	II 3G EEx nA nL IIC T2 (Tamb -20°C to +55°C)
UL version:	
E2xB10UL**	Class I, Div 2, Grps A,B,C,D T2A (280°C) at +55°C Class II, Div 2, Grps F & G T4A (120°C) at +55°C Class II, Div 2, Grps F & G T5 (100°C) at +40°C Class III, Div 1, T4A (120°C) at +55°C Class III, Div 1, T5 (100°C) at +40°C

** = Voltage & lens colour reference:

Voltage options:	24DC, 48DC, 115AC, 230AC		
Lens colour options:	-AM (Amber) -GN (Green)	-BL (Blue) -RD (Red)	-CL (Clear) -YW (Yellow)
e.g: E2xB10EG230AC-RD			
Replacement Xenon flash tube: FTASSYE2X			

Current consumption:

Version:		Voltage:	Current:
24V dc		20-28V dc	560mA
48V dc		42-58V dc	260mA
115V ac	50/60Hz	+/-10%	185mA
230V ac	50/60Hz	+/-10%	107mA

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Specification:

Energy:	10 Joules (10Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	1,000,000 cd - calc. from energy (J)
Effective candela:	500 cd - calc. from energy (J)
Peak Candela:	57,270 cd* - measured ref. to I.E.S.
Effective candela:	255 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable gland entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable gland entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	1.48kg

* All candela data is representative of performance with clear lens at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Stainless Steel dome guard as standard
- Xenon tube mechanically secured against vibration/shock.
- User replaceable Xenon tube assembly.

Approvals:

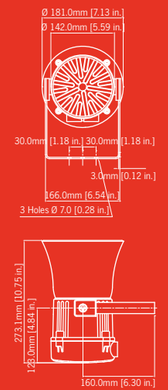
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E245313

E2xS112 Alarm Sounder/Horn

The hazardous area E2xS112 alarm sounder is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

With a nominal sound level output of 116dB(A) at 1 metre and a choice of 45 alarm tones and 3 remotely selectable stages the E2xS112 alarm sounder horn is suitable for all general signalling duties.

The E2x range features enclosures manufactured from lightweight, corrosion proof PPS and high impact, fire retardant ABS re-entrant flare horns; both of which are suitable for the harshest of environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Part Code:	Classification:
ATEX version:	
E2xS112EG**	II 3G EEx nA nL IIC T4 (Tamb -20°C to +55°C)
UL version:	
E2xS112UL**	Class I, Div 2, Grps A,B,C,D T3C (160°C) at +55°C Class I, Div 2, Grps A,B,C,D T4 (135°C) at +40°C Class II, Div 2, Grps F & G T6 (85°C) at +55°C Class III, Div 1, T6 (85°C) at +55°C

** = Voltage reference:

Options:	24DC, 48DC, 115AC, 230AC
e.g: E2xS112UL24DC	

Current consumption:

Version:		Voltage:	Current:
24V dc		10-30vdc	284mA
48V dc		38-58vdc	146mA
115V ac	50/60Hz	+/-10%	104mA
230V ac	50/60Hz	+/-10%	54mA

Specification:

Maximum output:	116dB(A) @ 1 metre
Nominal output:	113dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 113dB(A); Min. 105dB(A) - Tone 2
Effective range:	100m @ 1KHz
Voltages DC:	24vdc (10-30vdc); 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	DC: 2.5kg AC: 3.00kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

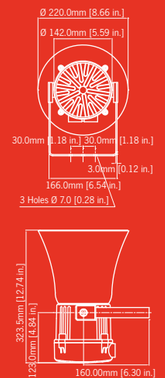
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E230764

E2xS121 Alarm Sounder/Horn

The hazardous area E2xS121 alarm sounder is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

With a maximum sound level output of 121dB(A) at 1 metre and a choice of 45 alarm tones and 3 remotely selectable stages the E2xS121 alarm sounder horn is suitable for all signalling applications with high ambient noise levels.

The E2x range features enclosures manufactured from lightweight, corrosion proof PPS and high impact, fire retardant ABS re-entrant flare horns; both of which are suitable for the harshest of environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Part Code:	Classification:
ATEX version:	
E2xS121EG**	II 3G EEx nA nL IIC T4 (Tamb -20°C to +55°C)
UL version:	
E2xS121UL**	Class I, Div 2, Grps A,B,C,D T3C (160°C) at +55°C Class I, Div 2, Grps A,B,C,D T4 (135°C) at +40°C Class II, Div 2, Grps F & G T6 (85°C) at +55°C Class III, Div 1, T6 (85°C) at +55°C

** = Voltage reference:

Options:	24DC, 48DC, 115AC, 230AC

Current consumption:

Version:		Voltage:	Current:
24V dc		10-30vdc	280mA
48V dc		38-58vdc	215mA
115V ac	50/60Hz	+/-10%	142mA
230V ac	50/60Hz	+/-10%	76mA

Specification:

Maximum output:	121dB(A) @ 1 metre
Nominal output:	117dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 117dB(A); Min. 111dB(A) - Tone 2
Effective range:	200m @ 1KHz
Voltages DC:	24vdc (10-30vdc); 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable gland entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable gland entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	DC: 2.75kg AC: 3.25kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.

Approvals:

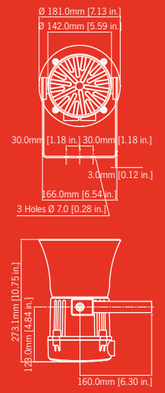
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E230764

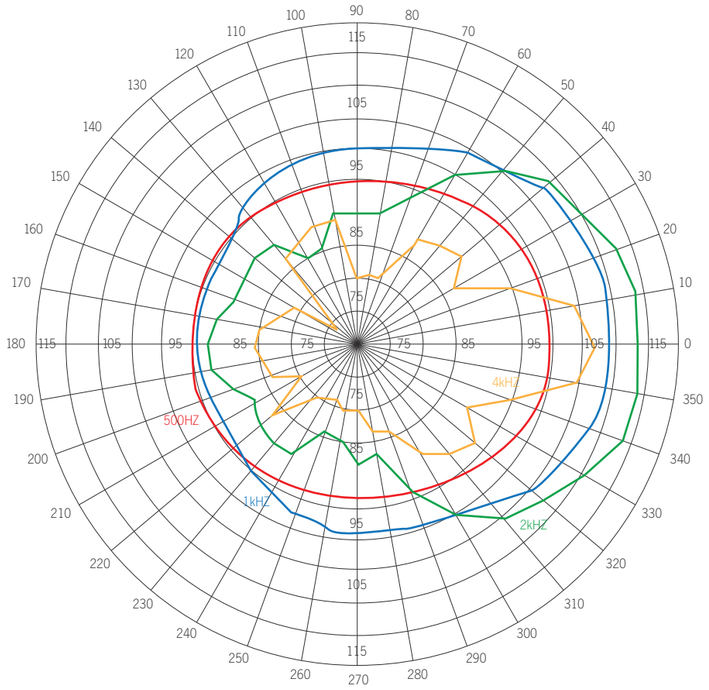
E2xL15 PA Loudspeakers

The hazardous area E2xL15 PA loudspeaker is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

The E2xL15 is available with either a 70V or 100V line transformer or as a low impedance loudspeaker.

The E2x range features enclosures manufactured from lightweight, corrosion proof PPS and high impact, fire retardant ABS re-entrant flare horns; both of which are suitable for the harshest of environments.





Part codes:

Part Code:	Classification:
ATEX version:	
E2xL15EG**	II 3G EEx nA IIC T4 (Tamb -20°C to +55°C)
UL version:	
E2xL15UL**	Class I, Div 2, Grps A,B,C,D T4 (135°C) at +55°C Class I, Div 2, Grps A,B,C,D T4A (120°C) at +40°C Class II, Div 2, Grps F & G T6 (85°C) at +55°C Class III, Div 1, T6 (85°C) at +40°C

** = Type reference:

Options:	70V	70V Line transformer
	100V	100V Line transformer
	8R	8 Ohm low impedance
	16R	16 Ohm low impedance

e.g: E2xL15UL100V

Specification:

SPL:	108dB +/-3dB @ 1w @ 1m (Pink) 118dB +/-3dB @ 15w @ 1m (Rated)
Rated power:	15 Watts RMS
70v line tappings:	15w / 7.5w / 3w / 1w (z=336.67 Ohms / 653.33 Ohms / 1.6k Ohms / 4.9k Ohms)
100v line tappings:	15w / 7.5w / 3w / 1w (z=666.87 Ohms /1.34k Ohms / 3.34k Ohms / 10k Ohms)
Low impedence:	8 Ohm (I/P: 10.95V) or 16 Ohm (I/P: 15.49V)
Dispersion:	120° @ 1kHz & 32° @ 4kHz
Frequency range:	400Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer)
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	Low impedance: 2.5kg Transformer: 3.00kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Transformer type fitted with thermal fuse
- Complies with BS5839 part 8

Approvals:

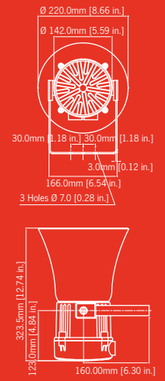
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E230764

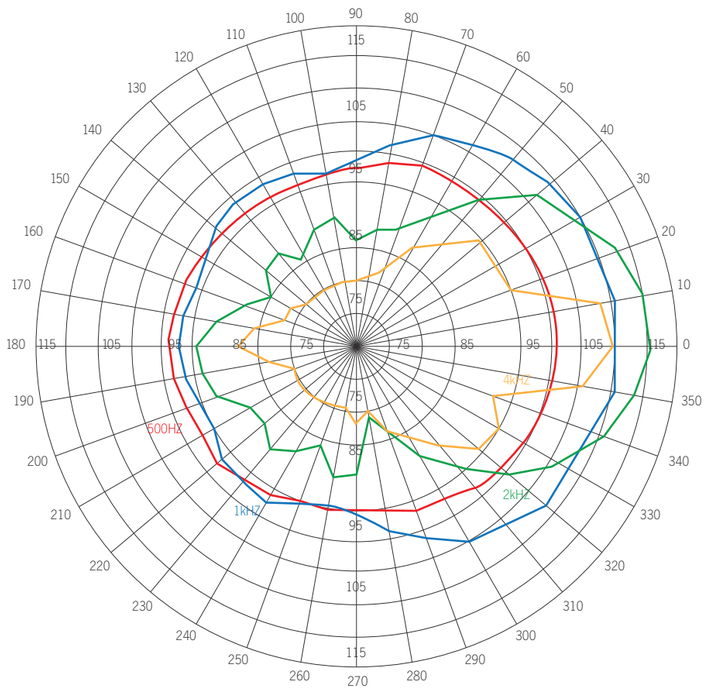
E2xL25 PA Loudspeakers

The hazardous area E2xL25 PA loudspeaker is UL approved for Class I Div 2 applications.

The E2xL25 is available with either a 70V or 100V line transformer or as a low impedance loudspeaker.

The E2x range features enclosures manufactured from lightweight, corrosion proof PPS and high impact, fire retardant ABS re-entrant flare horns; both of which are suitable for the harshest of environments.





Part codes:

Part Code:	Classification:
UL version:	
E2xL25UL**	Class I, Div 2, Grps A,B,C,D T2C (230°C) at +55°C Class I, Div 2, Grps A,B,C,D T2D (215°C) at +40°C Class II, Div 2, Grps F & G T5 (100°C) at +55°C Class II, Div 2, Grps F & G T6 (85°C) at +40°C Class III, Divs 1 & 2, T5 (100°C) at +55°C Class III, Divs 1 & 2, T6 (85°C) at +40°C

** = Type reference:

Options:	70V	70V Line transformer
	100V	100V Line transformer
	8R	8 Ohm low impedance
	16R	16 Ohm low impedance

e.g: E2xL25UL100V

Specification:

SPL:	111dB +/-3dB @ 1w @ 1m - Pink 124dB +/-3dB @ 25w (rated) @ 1m
Rated power:	25 Watts RMS
70v line tappings:	25w / 12.5w / 6w / 2w tappings (z=196 Ohms / 392 Ohms / 816.67 Ohms / 2.45k Ohms)
100v line tappings:	25w / 12.5w / 6w / 2w tappings (z=400 Ohms / 800 Ohms / 1.67k Ohms / 5k Ohms)
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	130° @ 1kHz & 32° @ 4kHz
Frequency range:	300Hz to 8000 Hz
DC Line monitoring:	2.2µF Capacitor (Transformer)
Ingress protection:	UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable gland entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable gland entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	Low impedance: 2.75kg Transformer: 3.25kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Transformer type fitted with thermal fuse
- Complies with BS5839 part 8

Approvals:

- UL File ref: E230764

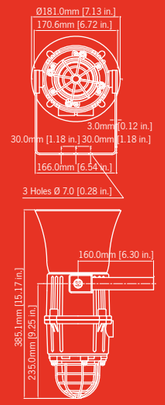
E2xCS112-5

Combined Alarm Sounder and Xenon Strobe Beacon

The hazardous area E2xCS112-5 combined alarm sounder and Xenon strobe beacon is ATEX certified for Zone 2 and also UL approved for Class I Div 2 applications.

The E2xCS112-5 combines a 116dB(A) alarm sounder with a 5 Joule Xenon strobe beacon providing a complete audio-visual signalling solution whilst reducing the installation time and costs associated with multiple unit installations.

The E2x range features enclosures manufactured from lightweight, corrosion proof PPS and high impact, fire retardant ABS re-entrant flare horns; both of which are suitable for the harshest of environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Effective Candela lens colour factor:

Amber	Blue	Clear	Green	Red	Yellow
0.51	0.12	1.00	0.49	0.15	0.86

Part codes:

Part Code:	Classification:
ATEX version:	
E2xCS1125EG**	II 3G EEx nA nL IIC T2 (Tamb -20°C to +55°C) II 3G EEx nA nL IIC T3 (Tamb -20°C to +40°C)
UL version:	
E2xCS1125UL**	Class I, Div 2, Grps A,B,C,D T2D (215°C) at +55°C Class I, Div 2, Grps A,B,C,D T3 (200°C) at +40°C Class II, Div 2, Grps F & G T6 (85°C) at +40°C Class II, Div 2, Grps F & G T5 (85°C) at +55°C Class III, Div 1, T6 (85°C) at +40°C Class III, Div 1, T5 (100°C) at +55°C

** = Voltage & lens colour reference:

Voltage options:	12DC, 24DC, 48DC, 115AC, 230AC
Lens colour options:	-AM (Amber) -BL (Blue) -CL (Clear) -GN (Green) -RD (Red) -YW (Yellow)

Replacement Xenon flash tube: FTASSYE2X

Current consumption:

	Alarm Sounder		Xenon Beacon	
Version:	**Voltage:**	**Current:**	**Voltage:**	**Current**
24V dc	10-30V dc	284mA	20-28V dc	275mA
48V dc	38-58V dc	146mA	42-58V dc	145mA
115V ac 50/60Hz	+/-10%	104mA	+/-10%	80mA
230V ac 50/60Hz	+/-10%	54mA	+/-10%	30mA

Specification:

Alarm Sounder:	
Maximum output:	116dB(A) @ 1 metre
Nominal output:	113dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 113dB(A); Min. 105dB(A) - Tone 2
Effective range:	100m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	31,950 cd* - measured ref. to I.E.S.
Effective candela:	101 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
General:	
Voltages DC:	24vdc; 48vdc
Voltages AC:	115vac; 230vac
Ingress protection:	ATEX: IP66 & IP67 UL: Type 4, 4X & 13
Housing material:	UL94V0 PPS & ABS
ATEX cable entries:	2 x M20 ISO cable gland entries - with 1 blanking plug.
UL cable entries:	1 x 1/2"NPT cable gland entry
Terminals (ATEX):	0.5 to 4.0mm² - In & Out
Weight :	DC: 3.00Kg AC: 3.50kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Stainless Steel dome guard as standard
- Xenon tube mechanically secured against vibration/shock.
- User replaceable Xenon tube assembly.
- Automatic synchronisation on multi-sounder system.

Approvals:

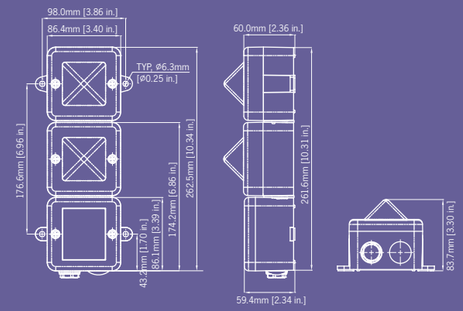
- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E230764

Fire & Industrial Signalling

Section index

STB2 Xenon & L.E.D. Tower with Junction Box

The STB2 is a customisable visual signal featuring a tower of 2 AlertAlight ST-L101X type beacon. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STB2 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.



ST-L101X Xenon Beacon:

Version:		Voltage:	Current:
12V dc/ac		10-14V	500mA/380mA
24V dc/ac		20-28V	250mA/300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

ST-L101H L.E.D. Beacon:

Version:		Voltage:	Current:
DC		10-30V dc	155mA (24V dc)
AC/DC	50/60Hz	90-260V ac/dc	35mA (230V ac)

Part codes:

STB2 Junction box assembly for 2 x L101 beacons

Part Code:	STB2DC[x] STB2AC[x]
Voltage:	12/24Vdc / 115/230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X L101 Xenon Beacon 5J

Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow

ST-L101H L101 L.E.D. Beacon

Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Example: For a tower of two beacons using one Xenon beacon in red plus one L.E.D. beacon in green using a 24Vdc supply in a red housing, order the following part codes:
STB2DCR
ST-L101XDC024R
ST-L101HDC024G

Specification:

General:

Cable entries:	2 x M20 clearance
Ingress Protection:	IP66
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Lens material:	PC
Fixings:	Stainless Steel
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
STB2 Weight:	0.65kg

ST-L101X - Xenon:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes

ST-L101H - L.E.D:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

*Candela measurements representative of performance with clear lens at optimum voltage.

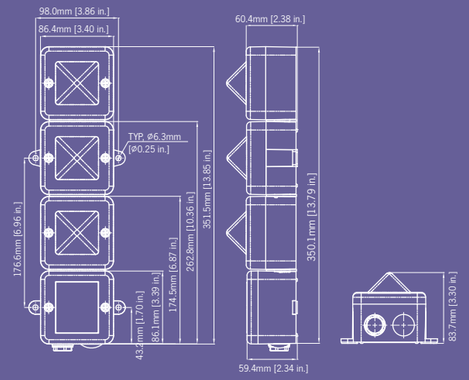
Features:

- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- Available with red, white or grey housing.
- High output L.E.D. unit can be set to steady or flashing.
- Sealed to IP66.
- Tropicalisation available on request.
- Can be combined with Sonora SONF1 audible signal.

CE

STB3 Xenon & L.E.D. Tower with Junction Box

The STB3 is a customisable visual signal featuring a tower of 3 AlertAlight ST-L101X type beacon. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STB3 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.

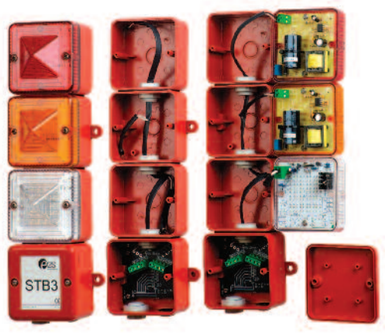


ST-L101X Xenon Beacon:

Version:		Voltage:	Current:
12V dc/ac		10-14V	500mA/380mA
24V dc/ac		20-28V	250mA/300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

ST-L101H L.E.D. Beacon:

Version:		Voltage:	Current:
DC		10-30V dc	155mA (24V dc)
AC/DC	50/60Hz	90-260V ac/dc	35mA (230V ac)



Part codes:

STB3 Junction box assembly for 3 x L101 beacons	
Part Code:	STB3DC[x] STB3AC[x]
Voltage:	12/24Vdc / 115/230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X L101 Xenon Beacon 5J	
Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow

ST-L101H L101 L.E.D. Beacon	
Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Example: For a tower of three beacons using two Xenon beacons, one red, one amber plus one L.E.D. beacon in green using a 24Vdc supply in a red housing, order the following part codes:
STB3DCR
ST-L101XDC024R
ST-L101XDC024A
ST-L101HDC024G

Specification:

General:	
Cable entries:	2 x M20 clearance
Ingress Protection:	IP66
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Lens material:	PC
Fixings:	Stainless Steel
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
STB3 Weight:	0.85kg
ST-L101X - Xenon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes
ST-L101H - L.E.D:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

*Candela measurements representative of performance with clear lens at optimum voltage.

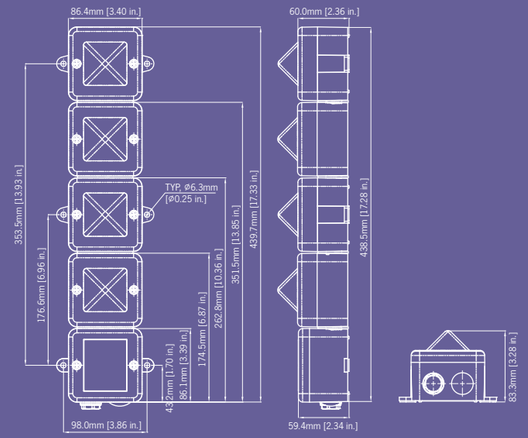
Features:

- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- Available with red, white or grey housing.
- High output L.E.D. unit can be set to steady or flashing.
- Sealed to IP66.
- Tropicalisation available on request.
- Can be combined with Sonora SONF1 audible signal.

CE

STB4 Xenon & L.E.D. Tower with Junction Box

The STB4 is a customisable visual signal featuring a tower of 4 AlertAlight ST-L101X type beacon. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STB4 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.

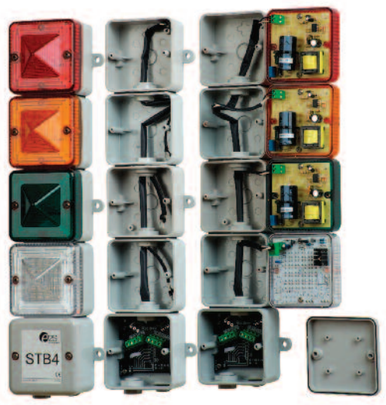


ST-L101X Xenon Beacon:

Version:		Voltage:	Current:
12V dc/ac		10-14V	500mA/380mA
24V dc/ac		20-28V	250mA/300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

ST-L101H L.E.D. Beacon:

Version:		Voltage:	Current:
DC		10-30V dc	155mA (24V dc)
AC/DC	50/60Hz	90-260V ac/dc	35mA (230V ac)



Part codes:

STB4 Junction box assembly for 4 x L101 beacons	
Part Code:	STB4DC[x] STB4AC[x]
Voltage:	12/24Vdc / 115/230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X L101 Xenon Beacon 5J	
Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow
ST-L101H L101 L.E.D. Beacon	
Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Example: For a tower of four beacons using three Xenon beacons, one red, one amber, one clear plus one L.E.D. beacon in green using a 24Vdc supply in a red housing, order the following part codes:
STB4DCR
ST-L101XDC024R
ST-L101XDC024A
ST-L101XDC024C
ST-L101HDC024G

Specification:

General:	
Cable entries:	2 x M20 clearance
Ingress Protection:	IP66
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Lens material:	PC
Fixings:	Stainless Steel
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
STB4 Weight:	1.05kg
ST-L101X - Xenon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes
ST-L101H - L.E.D:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

*Candela measurements representative of performance with clear lens at optimum voltage.

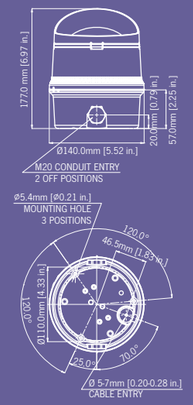
Features:

- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- Available with red, white or grey housing.
- High output L.E.D. unit can be set to steady or flashing.
- Sealed to IP66.
- Tropicalisation available on request.
- Can be combined with Sonora SONF1 audible signal.

CE

B450TLA L.E.D Traffic Light

The B450 series of traffic light beacons are available in single E27 filament lamp, dual E14 filament lamp or high output L.E.D array versions.



Part codes:

Version:	Part code:
10-30V dc	B450TLA030B/[x]
90-230V ac 50/60Hz	B450TLA230B/[x]
[x] = Lens colour:	A: Amber G: Green R: Red Y: Yellow

Note: B450TLA units are supplied with 'clear' lenses to maximise the light output in environments with high ambient light levels.

Mounting brackets:

MB-B450T-S	Mounting bracket kit for a single B450 type unit.
MB-B450T-M	Mounting bracket kit for linked multiple B450 type units.

Note: Multiple unit connector is supplied with each product.

Current consumption:

Version:		Current:
10-30V dc		130mA
90-230V ac	50/60Hz	10-30mA

Specification:

Light source:	High output L.E.D.
Light output:	24 x L.E.D. array
Function:	Permanent
L.E.D. colours:	Amber, Green, Red & Yellow
Effective candela:	89 cd* - measured ref. to I.E.S.
Lens type:	Prismatic
Mounting:	Surface mount (Wall mount bracket available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 177mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 4.0mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Unit is supplied with a clear prismatic lens to optimise visibility in applications with high ambient light levels.

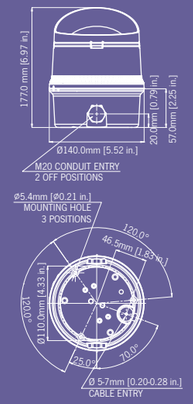
Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B450TSB Filament Lamp Traffic Light

The B450 series of traffic light beacons are available in single E27 filament lamp, dual E14 filament lamp or high output L.E.D array versions.



Part codes:

Version:	Part code:
12-250V	B450TSB250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Note: Filament lamps not included.

Mounting brackets:

MB-B450T-S	Mounting bracket kit for a single B450 type unit.
MB-B450T-M	Mounting bracket kit for linked multiple B450 type units.

Note: Multiple unit connector is supplied with each product.

Filament lamp part codes:

Version:	Wattage:	Type:	Part code:
24V dc	25W	E27	BGS2525C27
115V ac	25W	E27	BGS11025C27
230V ac	25W	E27	BGS24025C27

Note: Filament lamps to be ordered separately.

Specification:

Light source:	Filament Lamp E27
Light output:	25W
Function:	Permanent
L.E.D. colours:	Amber, Blue, Clear, Green, Red & Yellow
Effective candela:	32cd* - measured ref. to I.E.S.
Lens type:	Prismatic
Mounting:	Surface mount (Wall mount bracket available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 177mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 2.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

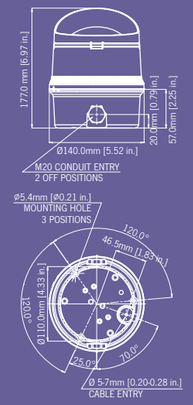
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

CE

B450TDB Dual Filament Lamp Traffic Light

The B450 series of traffic light beacons are available in single E27 filament lamp, dual E14 filament lamp or high output L.E.D array versions.



Part codes:

Version:	Part code:
12-250V	B450TDB250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Note: Filament lamps not included.

Mounting brackets:

MB-B450T-S	Mounting bracket kit for a single B450 type unit.
MB-B450T-M	Mounting bracket kit for linked multiple B450 type units.

Note: Multiple unit connector is supplied with each product.

Filament lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	15W	E14	BB261215E
24V dc	15W	E14	BB263015E
48V dc	15W	E14	BB264815E
115V ac	15W	E14	BB2613015E
230V ac	15W	E14	BB2623515E

Note: Filament lamps to be ordered separately.

Specification:

Light source:	Dual Filament Lamp E14
Light output:	2 x 15W
Function:	Permanent
L.E.D. colours:	Amber, Blue, Clear, Green, Red & Yellow
Effective candela:	24cd* - measured ref. to I.E.S.
Lens type:	Prismatic
Mounting:	Surface mount (Wall mount bracket available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 177mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 2.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

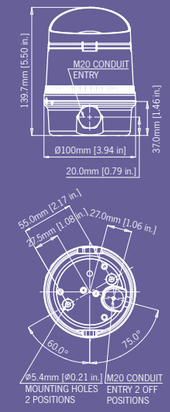
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

CE

B350TLA L.E.D Traffic Light

The B350 series of traffic light beacons are available in single E14 filament bulb or high output L.E.D array versions. The compact housing is ideal for space constrained applications or for mounting directly onto machinery.



Part codes:

Version:	Part code:
10-30V dc	B350TLA030B/[x]
90-230V ac 50/60Hz	B350TLA230B/[x]
[x] = Lens colour:	A: Amber G: Green R: Red Y: Yellow

Note: B350TLA units are supplied with 'clear' lenses to maximise the light output in environments with high ambient light levels.

Mounting brackets:

MB-B350T-S	Mounting bracket kit for a single B350 type unit.
MB-B350T-M	Mounting bracket kit for linked multiple B350 type units

Note: Multiple unit connector is supplied with each product.

Current consumption:

Version:		Current:
10-30V dc		110mA
90-230V ac	50/60Hz	10-30mA

Specification:

Light source:	High output L.E.D.
Light output:	15 x L.E.D. array
Function:	Permanent
L.E.D. colours:	Amber, Green, Red & Yellow
Effective candela:	54 cd* - measured ref. to I.E.S.
Lens type:	Prismatic
Mounting:	Surface mount (Wall mount bracket available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 140mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	350g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Unit is supplied with a clear prismatic lens to optimise visibility in applications with high ambient light levels.

Approvals:

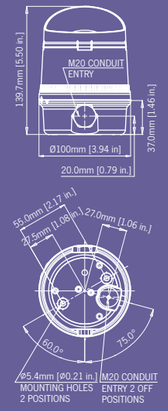
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

CE

B350TSB Filament Lamp Traffic Light

The B350 series of traffic light beacons are available in single E14 filament bulb or high output L.E.D array versions. The compact housing is ideal for space constrained applications or for mounting directly onto machinery.



Part codes:

Version:	Part code:
12-250V	B350TSB250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Note: Filament lamps not included.

Mounting brackets:

MB-B350T-S	Mounting bracket kit for a single B350 type unit.
MB-B350T-M	Mounting bracket kit for linked multiple B350 type units.

Note: Multiple unit connector is supplied with each product.

Filament lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	25W	E14	BB261225E
24V dc	25W	E14	BB263025E
48V dc	25W	E14	BB264825E
115V ac	25W	E14	BB2613025E
230V ac	25W	E14	BB2623525E

Note: Filament lamps to be ordered separately.

Specification:

Light source:	Filament Lamp E14
Light output:	25W
Function:	Permanent
L.E.D. colours:	Amber, Blue, Clear, Green, Red & Yellow
Effective candela:	21cd* - measured ref. to I.E.S.
Lens type:	Prismatic
Mounting:	Surface mount (Wall mount bracket available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 140mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	350g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

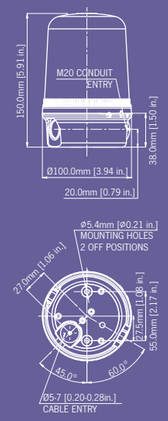
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B300RTH Rotating Beacon [Halogen Bulb]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12V dc	20W	B300RTH012B/[x]
24V dc	20W	B300RTH024B/[x]
115V ac	25W	B300RTH115B/[x]
230V ac	25W	B300RTH230B/[x]
[x] = Lens colour:		A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Spare bulb/lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	20W	G6,35/GY6,35	BJC20W12VCL
24V dc	20W	G6,35/GY6,35	BJC20W24VCL
115V ac	25W	G6,35/GY6,35	BJCD25W120VCL
230V ac	25W	G6,35/GY6,35	BJCD25W230VCL

Current consumption:

Version:		Current:
12V dc		1.72A
24V dc		0.91A
115V ac	50/60Hz	216mA
230V ac	50/60Hz	117mA

Specification:

Light source:	Halogen Lamp G6,35/GY6,35
Light output:	20/25W
Peak Candela:	821 cd
Effective candela:	125cd* - measured ref. to I.E.S.
Rotation speed:	180RPM (+/-30RPM)
Drive life:	>5,000 hrs
Duty cycle:	100%
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

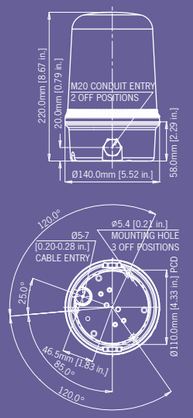
GOST-R

CE

B400RTH Rotating Beacon [Halogen Bulb]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly**.**



Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12V dc	35W	B400RTH012B/[x]
24V dc	35W	B400RTH024B/[x]
48V dc	20W x 2	B400RTH048B/[x]
115V ac	40W	B400RTH115B/[x]
230V ac	40W	B400RTH230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Spare bulb/lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	35W	G6,35/GY6,35	BJC35W12VCL
24V dc	35W	G6,35/GY6,35	BJC35W24VCL
48V dc	20W x 2	G6,35/GY6,35	BJC20W24VCL
115V ac	40W	G6,35/GY6,35	BJCD40W120VCL
230V ac	40W	G6,35/GY6,35	BJCD40W230VCL

Current consumption:

Version:		Current:
12V dc		3.0A
24V dc		1.54A
48V dc		840mA
115V ac	50/60Hz	338mA
230V ac	50/60Hz	186mA

Specification:

Light source:	Halogen Lamp G6,35/GY6,35
Light output:	35/40W
Peak Candela:	1,204 cd
Effective candela:	325cd* - measured ref. to I.E.S.
Rotation speed:	180RPM (+/-30RPM)
Drive life:	>5,000 hrs
Duty cycle:	100%
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	578g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries

Approvals:

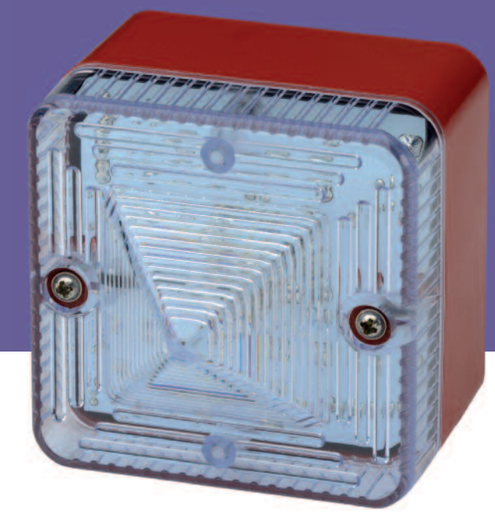
- GOST-R certificate: POCC GB.JB05.H00144.

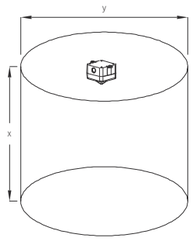
GOST-R

CE

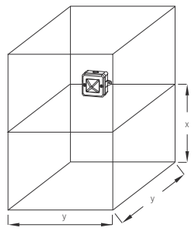
L101X 5 Joule Xenon

The L101X is a compact, robust 5 Joule Xenon strobe beacon ideal for all general signalling applications including fire, security and process control. CPR compliant, approved to EN54-23:2010 for use in fire alarm systems, the L101X also carries GOST approval and cULs approval for general signalling. Featuring an automatically synchronised flash rate of 1Hz (60 flashes per minute) as standard, the DC voltage versions also have user selectable 1.5Hz (90 flashes per minute) and double-strike flash rates.

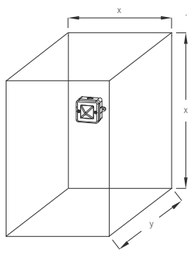




Category C-x-y (Ceiling mounted):
Ceiling mounted, where x is the maximum ceiling height and y the diameter of the cylindrical volume covered by the VAD.



Category W-x-y (Wall mounted):
Wall mounted, where x is the maximum mounting height from the floor and y is the maximum length of the sides of the square floor area covered by the VAD.



Category O-x-y (Open class):
Centrally wall mounted, where x is the max height and width of the wall area covered by the VAD and y is the max depth of the volume covered by the VAD. Or ceiling mounted where x is the max width and length of the floor area covered by the VAD and y is the max ceiling height.

Unit:	Cat. C [Ceiling]	Cat. W [Wall]	Cat. O [Open]	Power
L101XDC024[b][x]/C	C-9-6.8 V=326.9m³	W-2.4-4.8 V=55.3m³	O-4.8-10 V=230.4m³	6W
L101XDC024[b][x]/R	C-3-2.6 V=15.9m³	n/a n/a	O-1.9-3.6 V=13.0m³	6W
L101XDC048[b][x]/C	C-9-7 V=346.4m³	W-2.5-5 V=62.5m³	O-5-10 V=250.0m³	8.4W
L101XDC048[b][x]/R	C-3-3 V=21.2m³	n/a n/a	O-2-4 V=16.0m³	8.4W

L101X Strobe Beacon:

Version:	Voltage:	Current:	Part Code:
12V dc/ac	10-14V	500mA/380mA	L101XDC012[b][x]/[y]
24V dc/ac	20-28V	250mA/300mA	L101XDC024[b][x]/[y]
48V dc	42-52V	175mA	L101XDC048[b][x]/[y]
48V ac	+/-10%	250mA	L101XA0C48[b][x]/[y]
115V ac	+/-10%	70mA	L101XAC115[b][x]/[y]
230V ac	+/-10%	35mA	L101XAC230[b][x]/[y]

Part codes:

[b] = Back box type:	B: standard L101 type M: Multi-purpose type	A: A100 type S: Sonora type
[x] = Housing colour:	G: Grey, R: Red, W: White	
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green, M: Magenta, R: Red, Y: Yellow	

Suffix part number with '-UL' for UL approved version (M: Multi-purpose back box version only).

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm) DC units: Optionally 1.5Hz & double strike
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes

General:

Ingress Protection:	IP66
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Lens material:	PC
Fixings:	Stainless Steel
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	0.20kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Back boxes available with and without mounting lugs.
- Pluggable terminals.
- In and out terminals.
- Multiple, user selectable flash rates.
- User replaceable Xenon tube lamp.
- Tropicalisation available on request.
- Can be stacked to create multi-signal units.
- Can be combined with AlertAlarm & Sonora audible signals.

Approvals:

- CPD approval: 0786-CPD-21247 to EN54-23:2010.
- VdS certificate: G211077 (24 & 48Vdc versions).
- UL approved version available (non-fire alarm use).
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

G211077

0786-CPD-21247

L101FLASHTEL Telephone Initiated Xenon Beacon

The L101FLASHTEL is a compact telephone initiated 5 Joule Xenon beacon. With a Candela output of 196cd the L101FLASHTEL is an effective signal even in applications with high ambient light levels.

Part codes:

L101FLASHTEL[x]/[y]	
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green, M: Magenta, R: Red, Y: Yellow

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
Supply:	230V ac (telephone initiated)
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	PC
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	1 x M20 clearance gland knockouts in back
Terminals:	0.5 to 2.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.20Kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Continuously rated.
- Stainless steel fixings.
- Unit mounted via internal BESA compatible fixing positions.
- Tropicalisation available on request.

Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

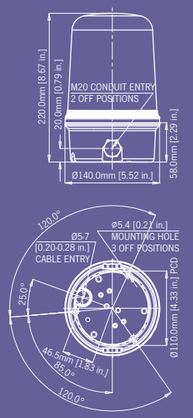
GOST-R

CE

B300STR Xenon Strobe Beacon

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001

Wall bracket

B300TMA001

Pole mount assembly

(140mm)

Part codes:

Version:		Part code:
12V dc/ac	5 Joules	B300STR012B/[x]
24V dc/ac	5 Joules	B300STR024B/[x]
48V dc/ac	5 Joules	B300STR048B/[x]
115V ac	5 Joules	B300STR115B/[x]
230V ac	5 Joules	B300STR230B/[x]
[x] = Lens colour:		A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow

Current consumption:

Version:		Current:
12V dc/ac		500mA/600mA
24V dc/ac		250mA/300mA
48V dc/ac		175mA/250mA
115V ac	50/60Hz	70mA
230V ac	50/60Hz	35mA

Specification:

Light source:	Xenon Strobe
Energy:	5 Joules (5Ws)
Flash frequency:	1Hz
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	49,788 cd* - measured ref. to I.E.S.
Effective candela:	125 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

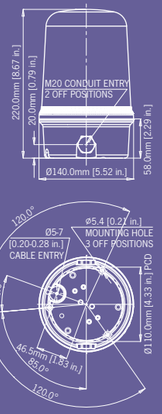
GOST-R

CE

B400STR Xenon Strobe Beacon

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B400RAB001

Wall bracket

B400TMA001

Pole mount assembly

(140mm)

Part codes:

Version:		Part code:
24V dc/ac	15 Joules	B400STR024B/[x]
48V dc/ac	15 Joules	B400STR048B/[x]
115V ac	15 Joules	B400STR115B/[x]
230V ac	15 Joules	B400STR230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Current consumption:

Version:		Current:
24V dc/ac		870mA
48V dc/ac		480mA
115V ac	50/60Hz	400mA
230V ac	50/60Hz	225mA

Specification:

Light source:	Xenon Strobe
Energy:	15 Joules (15Ws)
Flash frequency:	On board selection of 3 flash patterns: (AC versions only) Flash pattern 1: 1x flash 15J @ 1Hz Flash pattern 2: 1x flash 15J @ 1.5Hz Flash pattern 3: 2 x flash 15J + 15J
Peak Candela:	1,500,000 cd - calc. from energy (J)
Effective candela:	750 cd - calc. from energy (J)
Peak Candela:	94,790 cd* - measured ref. to I.E.S.
Effective candela:	500 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	535g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- On board selection of 3 flash patterns:
  1: 1Hz (60fpm)
  2: 1.5Hz (90FPM)
  3: Double Strike

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

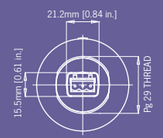
GOST-R

CE

B100STR Panel Mount Xenon Strobe Beacon

The B100 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The panel mount base incorporates a pluggable terminal block ensuring rapid installation and maintenance.



Part codes:

Version:		Part code:
10-30V dc/ac	1 Joule	B100STR030B/[x]
115V ac	1 Joule	B100STR115B/[x]
230V ac	1 Joule	B100STR230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Current consumption:

Version:		Current:
10-30V dc/ac		82mA (24V dc) 145mA (24V ac)
115V ac	50/60Hz	30mA
230V ac	50/60Hz	20mA

Specification:

Light source:	Xenon Strobe
Energy:	1 Joule (1Ws)
Flash frequency:	0.75 Hz
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Peak Candela:	100,000 cd - calc. from energy (J)
Effective candela:	50 cd - calc. from energy (J)
Peak Candela:	59,155 cd* - measured ref. to I.E.S.
Effective candela:	37 cd* - measured ref. to I.E.S.
Mounting:	Panel mount PG29
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm² pluggable
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	93g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

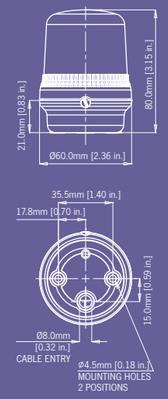
GOST-R

CE

B200STR Xenon Strobe Beacon

The B200 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B200RAB001
Wall bracket

B200TMA001
Pole mount assembly
(140mm)

Part codes:

Version:		Part code:
10-30V dc/ac	1 Joule	B200STR030B/[x]
115V ac	1 Joule	B200STR115B/[x]
230V ac	1 Joule	B200STR230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Current consumption:

Version:		Current:
10-30V dc/ac		82mA (24V dc) 145mA (24V ac)
115V ac	50/60Hz	30mA
230V ac	50/60Hz	20mA

Specification:

Light source:	Xenon Strobe
Energy:	1 Joule (1Ws)
Flash frequency:	0.75 Hz
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Peak Candela:	100,000 cd - calc. from energy (J)
Effective candela:	50 cd - calc. from energy (J)
Peak Candela:	59,155 cd* - measured ref. to I.E.S.
Effective candela:	37 cd* - measured ref. to I.E.S.
Mounting:	Surface mount (right angle or pole mount accessories available)
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	78g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

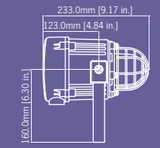
- GOST-R certificate: POCC GB.JB05.H00144.

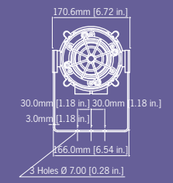
GOST-R

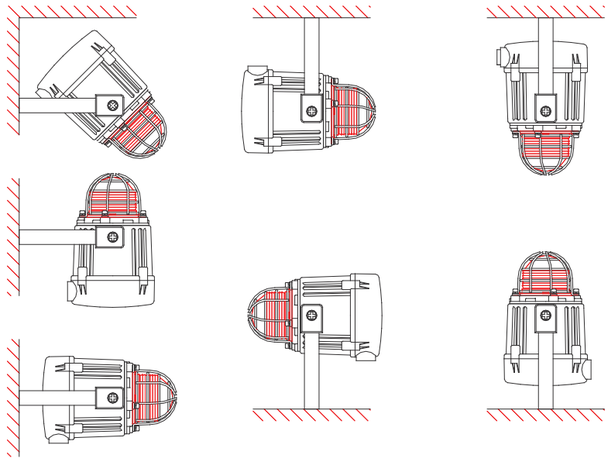
CE

MB005 Xenon Strobe Beacon

The MB005 is a 5 Joule Xenon strobe beacon featuring a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments.







Part codes:

Version:	Part code:
12V dc	MB005DC12G-[xx]
24V dc	MB005DC24G-[xx]
48V dc	MB005DC48G-[xx]
115V ac	MB005AC115G-[xx]
230V ac	MB005AC230G-[xx]
[xx] = Lens colour:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Also available as the MCA112-05 combined alarm sounder and Xenon beacon and the MCL15-05 15W PA Loudspeaker with Xenon beacon.

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	750mA
24V dc		20-28V dc	270mA
48V dc		42-54V dc	180mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Specification:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	16,428 cd* - measured ref. to I.E.S.
Effective candela:	51 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12V dc; 24V dc; 48V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	1.48kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronised flash, or Flip-Flop alternating mode.
- Xenon tube mechanically secured against vibration.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel ‘U’ bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalised as standard.

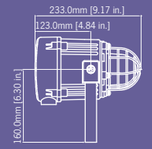
Approvals:

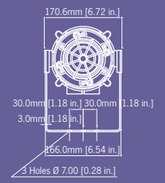
- GOST-R certificate: POCC GB.JB05.H00144.

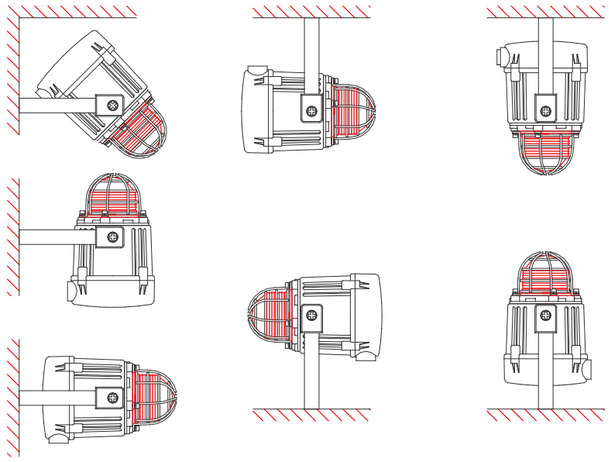
GOST-R

MB010 Xenon Strobe Beacon

The MB010 is a 10 Joule Xenon strobe beacon featuring a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments.







Part codes:

Version:	Part code:
12V dc	MB010DC12G-[xx]
24V dc	MB010DC24G-[xx]
48V dc	MB010DC48G-[xx]
115V ac	MB010AC115G-[xx]
230V ac	MB010AC230G-[xx]
[xx] = Lens colour:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Current consumption:

Version:		Voltage:	Current:
12V dc		10-14V dc	1.45A
24V dc		20-28V dc	660mA
48V dc		42-54V dc	340mA
115V ac	50/60Hz	+/-10%	250mA
230V ac	50/60Hz	+/-10%	110mA

Specification:

Energy:	10 Joules (10Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	1,000,000 cd - calc. from energy (J)
Effective candela:	500 cd - calc. from energy (J)
Peak Candela:	43,920 cd* - measured ref. to I.E.S.
Effective candela:	183 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12V dc; 24V dc; 48V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	1.48kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronised flash, or Flip-Flop alternating mode.
- Xenon tube mechanically secured against vibration.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel ‘U’ bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalised as standard.

Approvals:

- GOST-R approved. Cert: POCC GB.JB05.H00144.

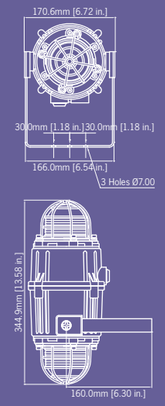
GOST-R

CE

MCB005-05 Dual Xenon Strobe Beacon

The MCB005-05 is a dual 5 Joule Xenon strobe beacon featuring a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments.

The unique design minimises installation time and allows the beacons to be operated simultaneously from the single power source (either in synchronisation or in 'flip-flop' mode) or independently.



Part codes:

Version:	Part code:
12V dc	MCB00505DC12G-[xx]/[yy]
24V dc	MCB00505DC24G-[xx]/[yy]
48V dc	MCB00505DC48G-[xx]/[yy]
115V ac	MCB00505AC115G-[xx]/[yy]
230V ac	MCB00505AC230G-[xx]/[yy]
[xx] / [yy] = Lens colours:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Current consumption (per beacon):

Version:		Voltage:	Current:
12V dc		10-14V dc	750mA
24V dc		20-28V dc	270mA
48V dc		42-54V dc	180mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Specification:

Energy:	5 Joules x 2 (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	2 x 500,000 cd - calc. from energy (J)
Effective candela:	2 x 250 cd - calc. from energy (J)
Peak Candela:	2 x 16,428 cd* - measured ref. to I.E.S.
Effective candela:	2 x 51 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Voltages DC:	12V dc; 24V dc; 48V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guards as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	1.48kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Automatic synchronised flash, or Flip-Flop alternating mode.
- Xenon tubes mechanically secured against vibration.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

L101H High Output L.E.D.

The L101H is a compact, robust L.E.D array beacon ideal for all general signalling applications including status indication, security and process control.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode.

Available in cULs approved version for general signalling use.

L101H L.E.D. Beacon:

Version:		Voltage:	Current:	Part Code:
DC		10-30V dc	155mA (@24V dc)	L101HDC024[b][x]/[y]
AC/DC	50/60Hz	90-260V ac/dc	35mA (@ 230V ac)	L101HAC230[b][x]/[y]

Part codes:

[b] = Back box type:	B: standard L101 type	A: A100 type
	M: Multi-purpose type	S: Sonora type
[x] = Housing colour:	G: Grey, R: Red, W: White	
[y] = L.E.D. colour:	A: Amber, B: Blue, C: Clear (white L.E.D.) G: Green , R: Red	

Note: To maximise output in high ambient light environments the L101H uses clear lenses for all L.E.D colours.

Suffix part number with '-UL' for UL approved version (M: Multi-purpose back box version only)

Specification:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

General:

Ingress Protection:	IP66
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Lens material:	PC
Fixings:	Stainless Steel
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	0.20kg

Features:

- Back boxes available with and without mounting lugs
- Tropicalisation available on request
- Can be stacked to create multi-signal units.
- Can be combined with AlertAlarm & Sonora audible signals

Approvals:

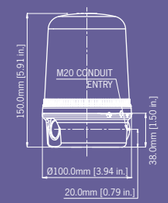
- UL approved version available (non-fire alarm use).
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B300LDA L.E.D Beacon [Multi-function array]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Part code:
10-50V dc	B300LDA050B/[x]
90-230V ac	B300LDA230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Current consumption:

Version:	Current:
10-50V dc	130mA @ 24V dc
90-230V ac 50/60Hz	90mA @ 115V ac 50mA @ 230V ac

Flash patterns:

Stage 1	Stage2 [DC only]
All L.E.D's on	Alternate Side Flash 2Hz
Rotating: Slow1	Alternate Side Flash 2Hz
Single Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 1	Single Strike Flash 2Hz
Rotating: Slow 2	Double Strike Flash 1Hz
Double Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 2	Double Strike Flash 2Hz
Double Strike Flash 1Hz	Alternate Side Flash 2Hz
Alternate Side Flash 2Hz	Rotating: Fast 2

Specification:

Light source:	Array of 16 High output L.E.D.'s
Functions:	4 rotating configurations. 4 flashing configurations. Steady mode for status applications.
Peak candela:	19 cd* - measured ref. to I.E.S.
Effective candela:	19 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear (White L.E.D.), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Total of 9 user selectable operation modes:
  - 4 rotating configurations.
  - 4 flashing configurations.
  - Steady mode for status applications.
- The multi-voltage DC unit also features a remotely selectable 2nd stage flash pattern.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

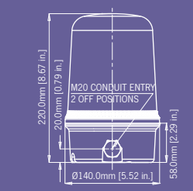
GOST-R

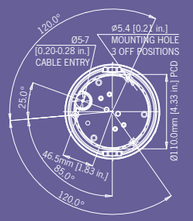
CE

B400LDA L.E.D Beacon [Multi-function array]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.





Flash patterns:

Stage 1: [Selectable on board]	Stage 2: DC only [Remotely selectable]	Stage 3: DC only [Remotely selectable]
All L.E.D's on	Alternate Side Flash 1:1 2Hz	Double Strike Flash 2Hz
Rotating: Fast 1	Rotating: Fast 2	All L.E.D's on
3 Rotating: Fast 2	Double Strike Flash 2Hz	All L.E.D's on
Rotating: Slow 1	Alternate Side Flash 1:1 2Hz	All L.E.D's on
Rotating: Slow 2	Double Strike Flash 1Hz	All L.E.D's on
Double Strike Flash 1Hz	Alternate Side Flash 1:1 2Hz	All L.E.D's on
Single Strike Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Double Strike Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Alternate Side Flash 1:1 2Hz	Rotating: Fast 2	All L.E.D's on

Part codes:

Version:	Part code:
10-50V dc	B400LDA050B/[x]
115V ac	B400LDA115B/[x]
230V ac	B400LDA230B/[x]
[x] = Lens colour:	A: Amber B: Blue C. Clear G: Green R: Red Y: Yellow

Current consumption:

Version:		Current:
10-50V dc		400mA @ 24V dc
115V ac	50/60Hz	140mA
230V ac	50/60Hz	70mA

Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Specification:

Light source:	Array of 32 high output L.E.D.'s
Function:	Total of 9 user selectable operation modes: • 4 rotating configurations. • 4 flashing configurations. • Steady mode for status applications.
Stages:	DC unit: remotely selectable 2nd & 3rd stage pattern.
Peak candela:	30 cd* - measured ref. to I.E.S.
Effective candela:	30 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	845g AC 595g DC

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

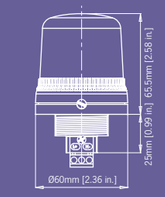
GOST-R

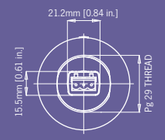
CE

B100LDA Panel Mount L.E.D. permanent beacon

The B100 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The panel mount base incorporates a pluggable terminal block ensuring rapid installation and maintenance.





Part codes:

Version:	Part code:
10-30V dc	B100LDA030B/[x]
90-230V ac	B100LDA230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Current consumption:

Version:		Current:
10-30V dc		80mA
90-230V ac	50/60Hz	32mA

Specification:

Light source:	9 x High power L.E.D's
Lens/L.E.D. colours:	Amber, Blue, Clear (White L.E.D), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Panel mount PG29
Peak candela:	5.5 cd* - measured ref. to I.E.S.
Effective candela:	5.5 cd* - measured ref. to I.E.S.
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm² pluggable
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	93g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

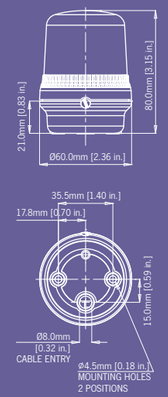
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B200LDA L.E.D. permanent beacon

The B200 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B200RAB001
Wall bracket

B200TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Part code:
10-30V dc	B200LDA030B/[x]
90-230V ac	B200LDA230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow

Current consumption:

Version:	Current:
10-30V dc	80mA
90-230V ac 50/60Hz	32mA

Specification:

Light source:	9 x High power L.E.D's
Lens/L.E.D. colours:	Amber, Blue, Clear (White L.E.D), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Peak candela:	5.5 cd* - measured ref. to I.E.S.
Effective candela:	5.5 cd* - measured ref. to I.E.S.
Mounting:	Surface mount (right angle or pole mount accessories available)
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm^2
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	78g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

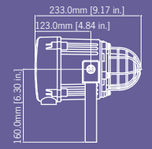
- GOST-R certificate: POCC GB.JB05.H00144.

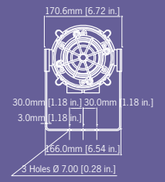
GOST-R

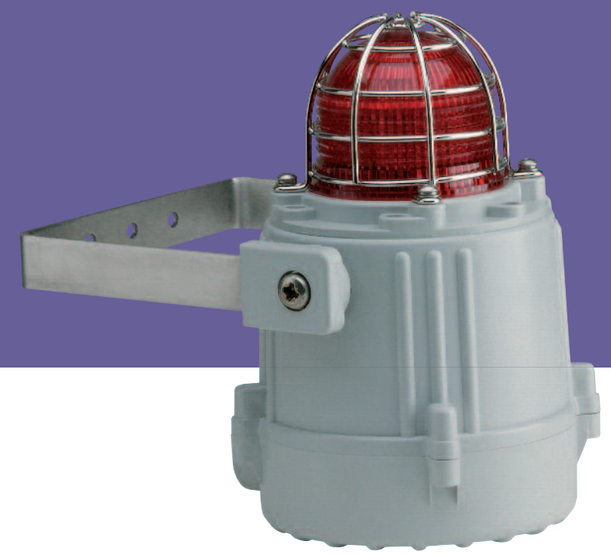
MBL1 Multi-function L.E.D. Beacon

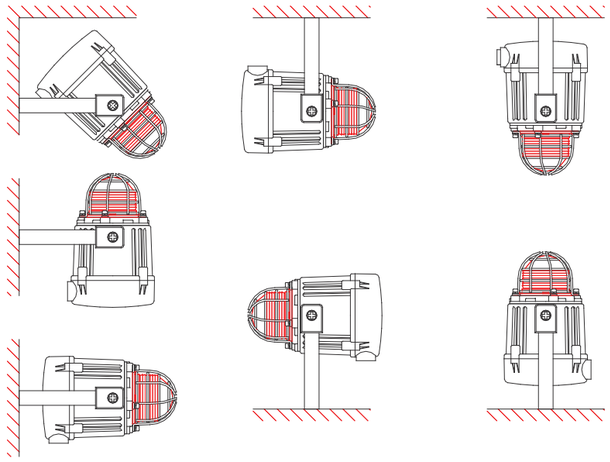
The MBL1 is a multi-function L.E.D. beacon featuring a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments.

The array of 32 high output L.E.D.'s have a total of 9 operating modes; 4 rotating sequences, 4 flashing patterns and a steady mode for indicator or status applications.









Part codes:

Version:	Part code:
24V dc	MBL1DC24G-[xx]
48V dc	MBL1DC24G-[xx]
24V ac	MBL1AC24G-[xx]
115V ac	MBL1AC115G-[xx]
230V ac	MBL1AC230G-[xx]
[xx] = L.E.D. / Lens colour:	AM: Amber, BL: Blue, GN: Green, RD: Red, YW: Yellow

Current consumption:

Version:		Voltage:	Current:
24V dc		10-50V dc	400mA
48V dc		10-50V dc	230mA
24V ac	50/60Hz	+/-10%	380mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	70mA

Flash patterns:

Stage 1: [Selectable on board]	Stage 2: [Remotely selectable]	Stage 3: [Remotely selectable]
All L.E.D's on	Alt Side Flash 1:1 2Hz	2x Flash 2Hz
Rotating: Fast 1	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 2	Double Strike Flash 2Hz	All L.E.D's on
Rotating: Slow 1	Alt Side Flash 1:1 2Hz	All L.E.D's on
Rotating: Slow 2	2x Flash 1Hz	All L.E.D's on
2x Flash 1Hz	Alt Side Flash 1:1 2Hz	All L.E.D's on
1x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
2x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Alt Side Flash 1:1 2Hz	Rotating: Fast 2	All L.E.D's on

Specification:

Light source:	Array of 32 high output L.E.D.s
Peak candela:	11 cd* - measured ref. to I.E.S.
Effective candela:	11 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Green, Red & Yellow
Voltages DC:	10-50V dc
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	1.48kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

Approvals:

- GOST-R approved. Cert: POCC GB.JB05.H00144.

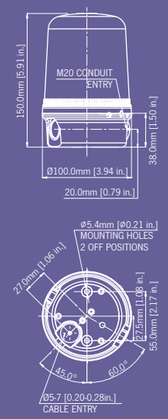
GOST-R

CE

B300SLF Status Beacon [Filament Lamp]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly (140mm)

Part codes:

Version:	Wattage	Part code:
12-250V	25W	B300SLF250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow	

NOTE: Filament lamps not included.

Filament bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	25W	E14	BB261225E
24V dc	25W	E14	BB263025E
48V dc	25W	E14	BB264825E
115V ac	25W	E14	BB2613025E
230V ac	25W	E14	BB2623525E

NOTE: Filament lamps to be ordered separately.

Specification:

Light source:	Filament lamp E14
Light output:	25W
Function:	Permanent
Effective candela:	15cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

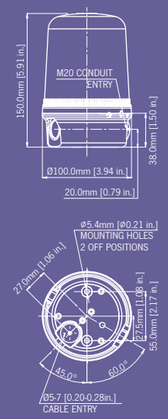
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B300SLH Status Beacon [Halogen Lamp]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage	Part code:
12-250V	20/25W	B300SLH250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow	

NOTE: Halogen lamps not included.

Halogen bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	20W	G6,35/GY6,35	BJC20W12VCL
24V dc	20W	G6,35/GY6,35	BJC20W24VCL
115V ac	25W	G6,35/GY6,35	BJCD25W120VCL
230V ac	25W	G6,35/GY6,35	BJCD25W230VCL

NOTE: Halogen lamps to be ordered separately.

Current consumption:

Version:		Current:
12V dc		1.75A
24V dc		1.1A
48V dc		0.8A
115V ac	50/60Hz	255mA
230V ac	50/60Hz	130mA

Specification:

Light source:	Halogen Lamp G6,35/GY6,35
Light output:	20/25W
Function:	Permanent
Effective candela:	21cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

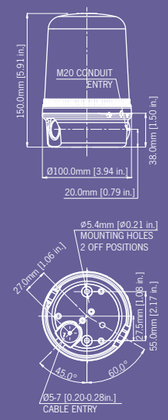
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B300FLF Blinking Beacon [Filament Lamp]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage	Part code:
12V dc	25W	B300FLF012B/[x]
24V dc	25W	B300FLF024B/[x]
48V dc	25W	B300FLF048B/[x]
115V ac	25W	B300FLF115B/[x]
230V ac	25W	B300FLF230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	25W	E14	BB261225E
24V dc	25W	E14	BB263025E
48V dc	25W	E14	BB264825E
115V ac	25W	E14	BB2613025E
230V ac	25W	E14	BB2623525E

Current consumption:

Version:		Current:
12V dc		1.75A
24V dc		1.1A
48V dc		0.8A
115V ac	50/60Hz	255mA
230V ac	50/60Hz	130mA

Specification:

Light source:	Filament lamp E14
Light output:	25W
Flash frequency:	User selectable during installation: 0.5Hz, 1Hz, 2Hz
Effective candela:	15cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- User selectable flash frequencies.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

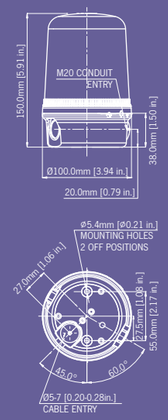
GOST-R

CE

B300FLH Blinking Beacon [Halogen Lamp]

The B300 series is comprised of a Xenon strobe beacon, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B300RAB001
Wall bracket

B300TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage	Part code:
12V dc	20W	B300FLH012B/[x]
24V dc	20W	B300FLH024B/[x]
115V ac	25W	B300FLH115B/[x]
230V ac	25W	B300FLH230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	20W	G6,35/GY6,35	BJC20W12VCL
24V dc	20W	G6,35/GY6,35	BJC20W24VCL
115V ac	25W	G6,35/GY6,35	BJCD25W120VCL
230V ac	25W	G6,35/GY6,35	BJCD25W230VCL

Current consumption:

Version:		Current:
12V dc		1.7A
24V dc		1.0A
115V ac	50/60Hz	208mA
230V ac	50/60Hz	116mA

Specification:

Light source:	Halogen Lamp G6,35/GY6,35
Light output:	20/25W
Flash frequency:	User selectable during installation: 0.5Hz, 1Hz, 2Hz
Effective candela:	21cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 150mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	370g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- User selectable flash frequencies

Approvals:

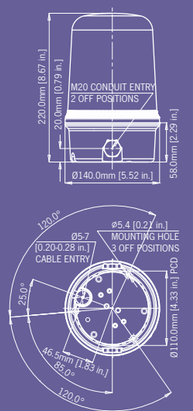
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B400SLF Status Beacon [Filament Lamp]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12-250V	40W	B400SLF250B/[x]
[x]= Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Note: Filament lamp not included.

Filament bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	40W	E14	BG351240E
24V dc	40W	E14	BG352440E
115V ac	40W	E14	B457513040E
230V ac	40W	E14	B457523040E

Note: Filament lamp to be ordered separately.

Current consumption:

Version:		Current:
12V dc		3.1A
24V dc		2.05A
115V ac	50/60Hz	321mA
230V ac	50/60Hz	178mA

Specification:

Light source:	Filament lamp E14
Light output:	40W
Function:	Permanent
Effective candela:	27cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	535g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries.

Approvals:

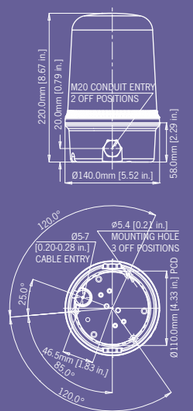
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B400SLH Status Beacon [Halogen Lamp]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12-250V	35/40W	B400SLH250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Note: Halogen lamp not included.

Halogen bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	35W	G6,35/GY6,35	BJC35W12VCL
24V dc	35W	G6,35/GY6,35	BJC35W24VCL
115V ac	40W	G6,35/GY6,35	BJCD40W120VCL
230V ac	40W	G6,35/GY6,35	BJCD40W230VCL

Note: Halogen lamp to be ordered separately.

Current consumption:

Version:		Current:
12V dc		3.1A
24V dc		2.05A
115V ac	50/60Hz	321mA
230V ac	50/60Hz	178mA

Specification:

Light source:	Halogen lamp G6,35 / GY6,35
Light output:	35/40W
Function:	Permanent
Effective candela:	43cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	535g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries

Approvals:

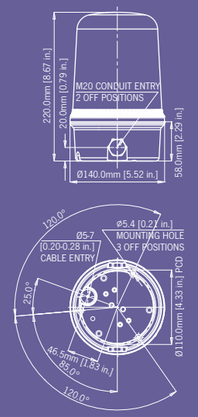
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B400FLF Blinking Beacon [Filament Lamp]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
24V dc	40W	B400FLF024B/[x]
24V ac	40W	B400FLF24AB/[x]
115V ac	40W	B400FLF115B/[x]
230V ac	40W	B400FLF230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
24V dc/ac	40W	E14	BG352440E
115V ac	40W	E14	B457513040E
230V ac	40W	E14	B457523040E

Current consumption:

Version:		Current:
24V dc		2.2A
24V ac		1.5A
115V ac	50/60Hz	320mA
230V ac	50/60Hz	178mA

Specification:

Light source:	Filament lamp E14
Light output:	40W
Flash frequency:	User selectable during installation: 0.5Hz, 1Hz, 2Hz
Effective candela:	29cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet
	2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	535g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

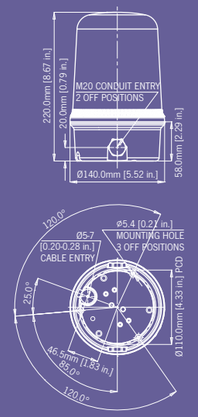
GOST-R

CE

B400FLH Blinking Beacon [Halogen Lamp]

The B400 series comprises Xenon strobe beacons, permanent filament bulb or halogen beacon, blinking filament bulb or halogen beacon, rotating halogen beacon and a multi-function L.E.D. array beacon.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B400RAB001
Wall bracket

B400TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12V dc	35W	B400FLH012B/[x]
24V dc	35W	B400FLH024B/[x]
115V ac	40W	B400FLH115B/[x]
230V ac	40W	B400FLH230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	35W	G6,35/GY6,35	BJC35W12VCL
24V dc	35W	G6,35/GY6,35	BJC35W24VCL
115V ac	40W	G6,35/GY6,35	BJCD40W120VCL
230V ac	40W	G6,35/GY6,35	BJCD40W230VCL

Current consumption:

Version:		Current:
12V dc		3.1A
24V dc		2.05A
115V ac	50/60Hz	321mA
230V ac	50/60Hz	178mA

Specification:

Light source:	Halogen lamp G6,35 / GY6,35
Light output:	35/40W
Flash frequency:	User selectable during installation: 0.5Hz, 1Hz, 2Hz
Effective candela:	34cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 220mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	1.5 mm² flying lead assembly
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	535g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

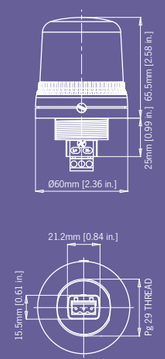
GOST-R

CE

B100SLF Panel Mount Status Beacon [Filament Lamp]

The B100 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The panel mount base incorporates a pluggable terminal block ensuring rapid installation and maintenance.



Part codes:

Version:	Wattage:	Part code:
12-250V	5W	B100SLF250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

NOTE: Filament lamps not included.

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	5W	BA9s	BR10125B
24V dc	5W	BA9s	BR10245B
48V dc	5W	BA9s	BR10485B
115V ac	5W	BA9s	BR101305B
230V ac	5W	BA9s	BR102305B

Specification:

Light source:	Filament lamp BA9s
Light output:	5W
Function:	Permanent
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Effective candela:	5cd* - measured ref. to I.E.S.
Mounting:	Panel mount PG29
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm² pluggable
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	93g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

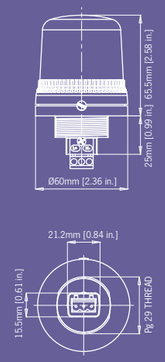
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B100FLF Panel Mount Blinking Beacon [Filament Lamp]

The B100 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The panel mount base incorporates a pluggable terminal block ensuring rapid installation and maintenance.



Part codes:

Version:	Wattage:	Part code:
12V dc	5W	B100FLF012B/[x]
24V dc	5W	B100FLF024B/[x]
48V dc	5W	B100FLF048B/[x]
115V ac	5W	B100FLF115B/[x]
230V ac	5W	B100FLF230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	5W	BA9s	BR10125B
24V dc	5W	BA9s	BR10245B
48V dc	5W	BA9s	BR10485B
115V ac	5W	BA9s	BR101305B
230V ac	5W	BA9s	BR102305B

Current consumption:

Version:		Current:
12V dc		500mA
24V dc		250mA
48V dc		120mA
115V ac	50/60Hz	35mA
230V ac	50/60Hz	25mA

Specification:

Light source:	Filament lamp BA9s
Light output:	5W
Flash frequency:	1Hz
Effective candela:	2cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Panel mount PG29
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm² pluggable
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	93g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

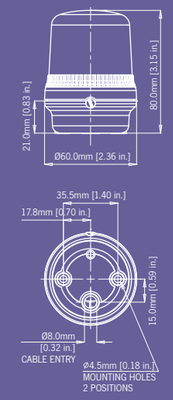
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B200SLF Status Beacon [Filament Lamp]

The B200 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B200RAB001
Wall bracket

B200TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12-250V	5W	B200SLF250B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

NOTE: Filament lamps not included.

Bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	5W	BA9s	BR10125B
24V dc	5W	BA9s	BR10245B
48V dc	5W	BA9s	BR10485B
115V ac	5W	BA9s	BR101305B
230V ac	5W	BA9s	BR102305B

Specification:

Light source:	Filament lamp BA9s
Light output:	5W
Function:	Permanent
Effective candela:	5cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Lens material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	78g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

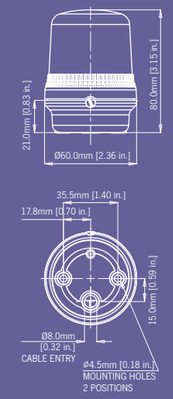
- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

B200FLF Blinking Beacon [Filament Lamp]

The B200 series is comprised of a Xenon strobe beacon, permanent filament bulb, blinking filament bulb and a permanent L.E.D. array beacon version.

The surface mount base can also be supplied with a right angle bracket or with a pole mounted assembly.



Accessories:

B200RAB001
Wall bracket

B200TMA001
Pole mount assembly
(140mm)

Part codes:

Version:	Wattage:	Part code:
12V dc	5W	B200FLF012B/[x]
24V dc	5W	B200FLF024B/[x]
48V dc	5W	B200FLF048B/[x]
115V ac	5W	B200FLF115B/[x]
230V ac	5W	B200FLF230B/[x]
[x] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	5W	BA9s	BR10125B
24V dc	5W	BA9s	BR10245B
48V dc	5W	BA9s	BR10485B
115V ac	5W	BA9s	BR101305B
230V ac	5W	BA9s	BR102305B

Current consumption:

Version:		Current:
12V dc		500mA
24V dc		250mA
48V dc		120mA
115V ac	50/60Hz	35mA
230V ac	50/60Hz	25mA

Specification:

Light source:	Filament lamp BA9s
Light output:	5W
Flash frequency:	1Hz
Effective candela:	2cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Mounting:	Surface mount (right angle or pole mount accessories available)
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
lens material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	78g

*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Bayonet fixing lens.
- Anti-tamper locking screw.
- Stainless steel fixings.

Approvals:

- GOST-R certificate: POCC GB.JB05.H00144.

GOST-R

Lamps / Bulbs & Accessories

Lamps / Bulbs:

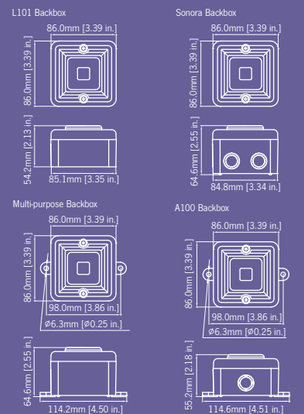
E2S Part Code:	Description:	Spectra product:
BR10125B	12V 5W BA9s	B100SLF B100FLF B200SLF B200FLF
BR10245B	24V 5W BA9s	B100SLF B100FLF B200SLF B200FLF
BR10485B	48V 5W BA9s	B100SLF B100FLF B200SLF B200FLF
BR101305B	115V 5W BA9s	B100SLF B100FLF B200SLF B200FLF
BR102305B	230V 5W BA9s	B100SLF B100FLF B200SLF B200FLF
BB261225E	12V 25W E14	B300SLF B300FLF B350TSB
BB263025E	24V 25W E14	B300SLF B300FLF B350TSB
BB264825E	48V 25W E14	B300SLF B300FLF B350TSB
BB2613025E	115V 25W E14	B300SLF B300FLF B350TSB
BB2623525E	230V 25W E14	B300SLF B300FLF B350TSB
BJC20W12VCL	12V 20W G6,35/GY6,35	B300SLH B300FLH B300RTH
BJC20W24VCL	24V 20W G6,35/GY6,35	B300SLH B300FLH B300RTH
BJCD25W120VCL	115V 25W G6,35/GY6,35	B300SLH B300FLH B300RTH
BJCD25W230VCL	230V 25W G6,35/GY6,35	B300SLH B300FLH B300RTH
BG351240E	12V 40W E14	B400SLF B400FLF
BG352440E	24V 40W E14	B400SLF B400FLF
B457513040E	115V 40W E14	B400SLF B400FLF
B457523040E	230V 40W E14	B400SLF B400FLF
BJC35W12VCL	12V 35W G6,35/GY6,35	B400SLH B400FLH B400RTH
BJC35W24VCL	24V 35W G6,35/GY6,35	B400SLH B400FLH B400RTH
BJCD40W120VCL	115V 40W G6,35/GY6,35	B400SLH B400FLH B400RTH
BJCD40W230VCL	230V 40W G6,35/GY6,35	B400SLH B400FLH B400RTH
BB261215E	12V 15W E14	B450TDB
BB263015E	24V 15W E14	B450TDB
BB264815E	48V 15W E14	B450TDB
BB2613015E	115V 15W E14	B450TDB
BB2623515E	230V 15W E14	B450TDB
BGS2525C27	24V 25W E27	B450TSB
BGS11025C27	115V 25W E27	B450TSB
BGS24025C27	230V 25W E27	B450TSB

Mounting Accessories:

E2S Part Code:	Description:	Spectra product:	
B200RAB001	Right angle bracket for wall mounting	B200	
B300RAB001	Right angle bracket for wall mounting	B300	
B400RAB001	Right angle bracket for wall mounting	B400	
B200TMA001	Pole mounting assembly (140mm)	B200	
B300TMA001	Pole mounting assembly (140mm)	B300	
B400TMA001	Pole mounting assembly (140mm)	B400	

SONF1 Alarm Sounder

The SONF1 is a compact, high output, 100dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant housing ensure the SONF1 is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	SONF1DC24[x]
24V ac	SONF1AC24[x]
115V ac	SONF1AC115[x]
230V ac	SONF1AC230[x]

Suffix part number with '-UL' for UL approved version

A100 back box with mounting lugs:

24V dc	SONF1DC24A[x]
24V ac	SONF1AC24A[x]
115V ac	SONF1AC115A[x]
230V ac	SONF1AC230A[x]
[x] = Housing colour:	G: Grey R: Red W: White

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	13mA
230V ac	50/60Hz	+/-10%	13mA

Specification:

Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Voltages DC:	24V dc (10-30V dc) Reverse polarity diode protection on DC units.
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66 (UL version Type 13 & 3R)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.30kg

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions (standard version) or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

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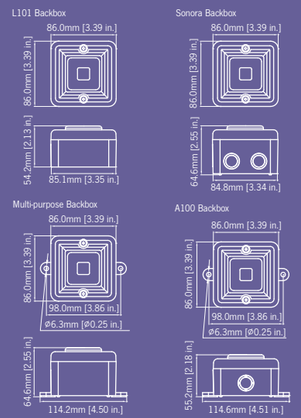
GOST-R

VdS G205054

CE 0786-CPD-20191

SONF1-HO Alarm Sounder

The SONF1-HO is a compact, high output, 105dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant housing ensure the SONF1-HO is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
12V dc	SONF1DC12[x]-H
24V dc	SONF1DC24[x]-H

A100 back box with mounting lugs:

12V dc	SONF1DC12A[x]-H
24V dc	SONF1DC24A[x]-H
[x] = Housing colour:	G: Grey R: Red W: White

Alarm sounder:

Version:	Voltage:	Current:
12V dc	10-18V dc	50mA
24V dc	18-30V dc	80mA

Specification:

Maximum output:	105dB(A) @ 1 metre
Nominal output:	103dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Effective range:	32m @ 1KHz
Voltages DC:	12V dc; 24V dc [Reverse polarity diode protection]
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage tempe:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.30kg

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions (standard version) or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

GOST-R

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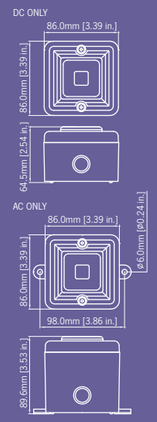
SON2 Alarm Sounder

The SON2 is a compact, high output, 104dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant housing ensure the SON2 is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 26
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	420Hz @ 0.625 sec Australian Alert	Tone 32	Tone 26
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 30	Tone 26

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	SON2DC24[x]
24V ac	SON2AC24[x]
115V ac	SON2AC115[x]
230V ac	SON2AC230[x]
[x] = Housing colour:	G: Grey R: Red W: White

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	20-80mA
24V ac	50/60Hz	+/-10%	25-90mA
115V ac	50/60Hz	+/-10%	24mA
230V ac	50/60Hz	+/-10%	12mA

Specification:

Maximum output:	104dB(A) @ 1 metre
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	3 levels via on board switch
Effective range:	32m @ 1KHz
Voltages DC:	24V dc (10-30V dc) Reverse polarity diode protection on DC units.
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Reverse polarity stage switching on DC units.
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.30kg AC:0.40kg

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Wire to base installation
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

GOST-R

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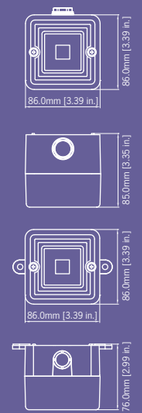
A100 Alarm Sounder

The A100 is a compact, high output, 104dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant housing ensure the A100 is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	A100DC24[x]
48V dc	A100DC48[x]
24V ac	A100AC24[x]
115V ac	A100AC115[x]
230V ac	A100AC230[x]
[x] = Housing colour:	G: Grey R: Red W: White

Suffix part number with '-P' for programmable, 4 stage,45 tone version.

Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	104dB(A) @ 1 metre
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	32m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative
	Reverse polarity stage switching on DC units.
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	3 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.26kg AC:0.37kg

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

GOST-R

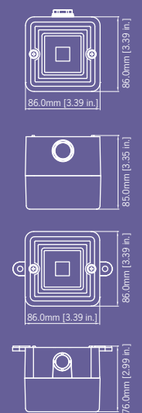
G205121

0786-CPD-20199

A100SONTEL Telephone Initiated Alarm Sounder

The A100SONTEL is a compact, high output, 100dB(A) telephone initiated alarm sounder.

The line powered A100SONTEL has a choice of three alarm tone frequencies.



Part codes:

A100SONTEL[x]	
[x] = Housing colour:	G: Grey R: Red W: White

Tones:

Tone 1	Siren Tone
Tone 2	Alternating tone
Tone 3	Sweeping tone

Specification:

Nominal output:	100dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	Max. 100dB(A); Min. 90dB(A)
Effective range:	32m @ 1KHz
Supply:	Direct power from telephone line (REN 1)
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	3 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 2.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.26kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Tropicalisation available on request.

Approvals:

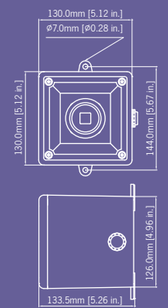
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

CE

A105N Alarm Sounder

The A105N is a high output, 112dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant IP66 housing ensure the A105N is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	A105NDC24[x]
48V dc	A105NDC48[x]
100V dc	A105NDC100[x]
24V ac	A105NAC24[x]
115V ac	A105NAC115[x]
230V ac	A105NAC230[x]
[x] = Housing colour:	G: Grey R: Red W: White

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Suffix part number with '-UL' for UL approved version.
[100V dc unit not available as UL approved]

Suffix part number with '-M' for MED approved version.[24V dc unit only]

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
100V dc		72-120V dc	27mA
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc); 100V dc (72-120V dc) [24V dc units can use 24V ac for single stage apps.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative Positive switching option available Reverse polarity stage switching on DC units.
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	DC: 0.75kg AC:1.00kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB.JB05.H00144.
- Marine Equipment Directive (MED) Certificate: 19 702 - 11 HH

GOST-R

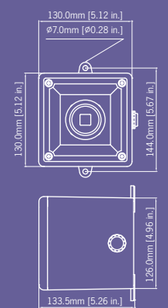
G205121

0786-CPD-20199

A105NSONTEL Telephone Initiated Alarm Sounder

The A105NSONTEL is a compact, high output, 105dB(A) telephone initiated alarm sounder.

The line powered A105NSONTEL has a choice of three alarm tone frequencies.



Tones:

Tone 1	Siren Tone
Tone 2	Alternating tone
Tone 3	Sweeping tone

Part codes:

Version:	
A105NSONTEL[x]	
[x] = Housing colour:	G: Grey R: Red W: White

Specification:

Nominal output:	105dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	Max. 105dB(A); Min. 96dB(A)
Effective range:	60m @ 1KHz
Supply:	Direct power from telephone line (REN 1)
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	3 x M20 clearance gland knockouts
	in side & back
Terminals:	0.5 to 2.5mm² cables.
Operating temp:	-25 to +55°C
Storage tempe:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.75kg

Features:

- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Tropicalisation available on request.

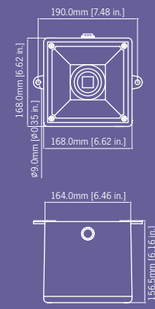
Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

A112N Alarm Sounder

The A112N is a high output, 119dB(A) alarm sounder. High SPL in a robust fire retardant IP66 housing ensure the A112N is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	A112NDC24[x]
48V dc	A112NDC48[x]
110/230V dc	A112NDC110[x]
24V ac	A112NAC24[x]
115V ac	A112NAC115[x]
230V ac	A112NAC230[x]
[x] = Housing colour:	R: Red

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Suffix part number with '-UL' for UL approved version
[110/230V dc unit not available as UL approved]

Suffix part number with '-M' for MED approved version.[24V dc unit only]

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
110/230V dc		90-250V dc	60mA
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc); 110V dc (90-250V dc) [24V dc units can use 24V ac for single stage apps.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or optional positive Reverse polarity stage switching on DC units.
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.80kg AC:2.10kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB.JB05.H00144.
- Marine Equipment Directive (MED) Certificate: 19 702 - 11 HH

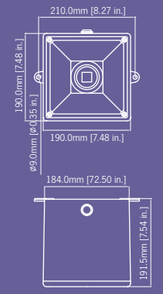
GOST-R

G205121

0786-CPD-20199

A121 Alarm Sounder

The A121 is a very high output, 126dB(A) alarm sounder. High SPL in a robust, fire retardant IP66 housing ensure the A121 is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	A121DC24[x]
48V dc	A121DC48[x]
24V ac	A121AC24[x]
115V ac	A121AC115[x]
230V ac	A121AC230[x]
[x] = Housing colour:	R: Red, G: Grey

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
24V ac	50/60Hz	+/-10%	1000mA
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or optional positive
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

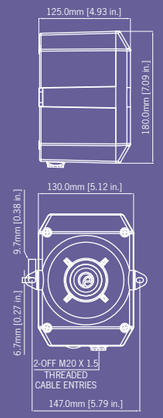
GOST-R

G205121

0786-CPD-20199

D105 Alarm Sounder

The D105 is a high output, 112dB(A) alarm sounder. Low current consumption and high SPL in a robust IP66 housing ensure the D105 is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	D105DC024[x]
48V dc	D105DC048[x]
24V ac	D105AC024[x]
115V ac	D105AC115[x]
230V ac	D105AC230[x]
[x] = Housing colour:	G: Grey R: Red

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc); [24V dc units can use 24V ac for single stage apps.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative Positive switching option available Reverse polarity stage switching on DC units.
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries. Supplied with one stopping plug
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.6kg AC:1.85kg

Features:

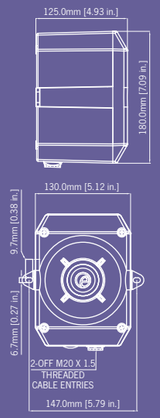
- High output, up to 112dB(A) SPL
- 3 remotely selectable alarm stages
- Choice of 32 alarm tone frequencies
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

D112 Alarm Sounder

The D112 is a high output, 119dB(A) alarm sounder. Low current consumption and high SPL in a robust IP66 housing ensure the D112 is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	D112DC024[x]
48V dc	D112DC048[x]
24V ac	D112AC024[x]
115V ac	D112AC115[x]
230V ac	D112AC230[x]
[x] = Housing colour:	R: Red G: Grey

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc); [24V dc units can use 24V ac for single stage apps.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative Positive switching option available Reverse polarity stage switching on DC units.
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries. Supplied with one stopping plug
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-40 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.6kg AC:1.85kg

Features:

- High output, up to 119dB(A) SPL
- 3 remotely selectable alarm stages
- Choice of 45 alarm tone frequencies
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

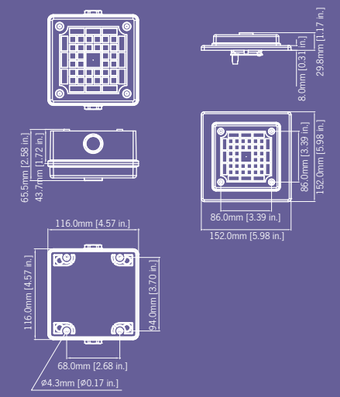
Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

GPH1 & GPH2 Alarm Horn - Buzzer

The GPH series are low profile, high output, 105dB(A) alarm horns designed as a maintenance free, reliable alternative to solenoid type buzzers. Low current consumption and high SPL in a robust, fire retardant housing, ensures the GPH is suitable for all general signalling applications.

The GPH1 is a surface mount version with back box, the GPH2 is a flush mount variant for use in panel mount applications or for use with standard 4" back boxes.



Part codes:

Version	Part code:
GPH1S surface mount:	
24V dc/ac	GPH1SDC24G
115V ac	GPH1SAC115G
230V ac	GPH1SAC230G
GPH2F flush mount:	
24V dc/ac	GPH2FDC24G
115V ac	GPH2FAC115G
230V ac	GPH2FAC230G

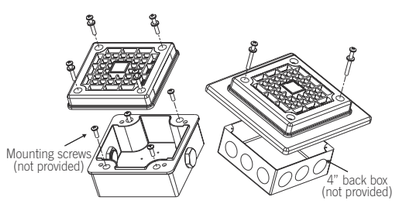
Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	62mA
24V ac	50/60Hz	+/-10%	126mA
115V ac	50/60Hz	+/-10%	40mA
230V ac	50/60Hz	+/-10%	50mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.



GPH1S (surface mount version) GPH2F (flush mount version)

Specification:

Nominal output:	105dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	On board potentiometer
Voltages DC:	24V dc (10-30V dc)
	Reverse polarity diode protection on DC units.
Voltages AC:	115V ac; 230V ac
Ingress protection:	GPH1: IP66 (UL Type 4/4X/13) GPH2: IP54 (UL Type 13/3R)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 clearance
Terminals:	22 - 12AWG (0.5-3mm²)
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.35kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

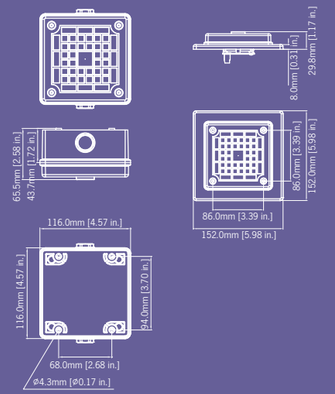
Approvals:

- UL approved.

GPH3 & GPH4 Alarm Horn - Buzzer

The GPH series are low profile, high output, 110dB(A) alarm horns designed as a maintenance free, reliable alternative to solenoid type devices. Featuring a realistic simulated buzzer sound the GPH, with its low current consumption and high SPL in a robust, fire retardant housing, is suitable for all general signalling applications.

The GPH3 is a surface mount version with back box, the GPH4 is a flush mount variant for use in panel mount applications or for use with standard 4" back boxes.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

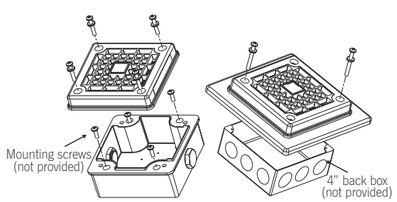
Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version	Part code:
GPH3S surface mount:	
10-30V dc/ac	GPH3SEDC024G
40-260V dc/ac	GPH3SEAC230G
GPH4F flush mount:	
10-30V dc/ac	GPH4FEDC024G
40-260V dc/ac	GPH4FEAC230G

Current consumption:

Version:	Voltage:	Current :
10-30V dc/ac	12V dc	52mA
10-30V dc/ac	24V dc	105mA
40-260V dc/ac	48V dc	42mA
10-30V dc/ac	12V ac 50/60Hz	115mA
10-30V dc/ac	24V ac 50Hz	215mA
40-260V dc/ac	48V ac 50/60Hz	68mA
40-260V dc/ac	115V dc	16mA
40-260V dc/ac	230V dc	8mA
40-260V dc/ac	115V ac 50/60Hz	36mA
40-260V dc/ac	230V ac 50/60Hz	18mA



Specification:

Nominal output:	110dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	On board potentiometer
Voltages DC:	10-30V dc/ac
Voltages AC:	40-260V dc/ac
Ingress protection:	GPH3: IP66 (UL Type 4/4X/13) GPH4: IP54 (UL Type 13/3R)
Housing material:	High impact UL94 V0 (f1) PC
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 clearance
Terminals:	22 - 12AWG (0.5-3mm²)
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.40kg

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

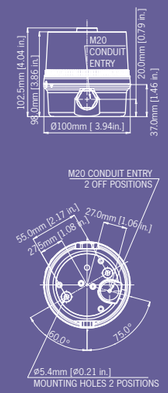
Approvals:

- UL approved.

B300SND Signalling Horn

The B300SND is a compact signalling horn suitable for mounting on machinery or in general signalling applications. The B300SND reproduces the alert sound of traditional electro-mechanical equivalents but without any of the reliability issues. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The B300SND is a component of the Spectra range and can be configured with the B350 or B450 traffic light beacons for complete audio-visual signalling.



Part codes:

Version:	Part code:
12-30V ac/dc	B300SND030G
40-260V ac/dc	B300SND230G

Mounting brackets:

MB-B350T-S	Mounting bracket kit for a single B300SND/B350 type unit.
MB-B350T-M	Mounting bracket kit for linked multiple B300SND/B350 units.

Current consumption:

Version:	Voltage:	Current:
12-30V dc/ac	12V dc	10mA
12-30V dc/ac	24V dc	24mA
40-260V dc/ac	48V dc	15mA
12-30V dc/ac	12V ac 50/60Hz	30mA
12-30V dc/ac	24V ac 50Hz	62mA
40-260V dc/ac	48V ac 50/60Hz	25mA
40-260V dc/ac	115V dc	6mA
40-260V dc/ac	230V dc	3mA
40-260V dc/ac	115V ac 50/60Hz	19mA
40-260V dc/ac	230V ac 50/60Hz	10mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

No. of tones:	3
Output:	98 dB(A) @ 1m
Mounting:	Surface mount (wall bracket available)
Entries:	1 x 5-7mm push through grommet 1 x M20 cable entry
Dimensions:	ø100 x 103mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm^2
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

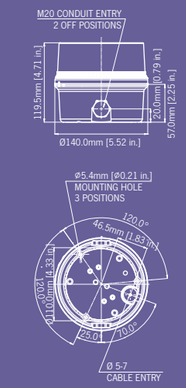
- Bayonet fixing body.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Compatible with B350 and B450 traffic light series

CE

B400SND Signalling Horn

The B400SND is a 110 dB(A) high output signalling horn suitable for a variety of general signalling applications. The B400SND reproduces the alert sound of traditional electro-mechanical equivalents but without any of the reliability issues. In addition to the 'buzzer' type sound the unit features a further two alarm sounds. All first stage sounds have a remotely selectable second stage.

The B400SND is a component of the Spectra range and can be configured with the B350 or B450 traffic light beacons for complete audio-visual signalling.



Part codes:

Version:	Part code:
10-30V ac/dc	B400SND030G
40-260V ac/dc	B400SND230G

Mounting brackets:	
MB-B450T-S	Mounting bracket kit for a single B400SND/B450 type unit.
MB-B450T-M	Mounting bracket kit for linked multiple B400SND/B450 units.

Current consumption:

Version:	Voltage:	Current:
10-30V dc/ac	12V dc	52mA
10-30V dc/ac	24V dc	105mA
40-260V dc/ac	48V dc	42mA
10-30V dc/ac	12V ac 50/60Hz	115mA
10-30V dc/ac	24V ac 50Hz	215mA
40-260V dc/ac	48V ac 50/60Hz	68mA
40-260V dc/ac	115V dc	16mA
40-260V dc/ac	230V dc	8mA
40-260V dc/ac	115V ac 50/60Hz	36mA
40-260V dc/ac	230V ac 50/60Hz	18mA

Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

No. of tones:	3
Output:	110 dB(A) @ 1m
Stages:	Remotely selectable second stage
Mounting:	Surface mount (wall bracket available)
Entries:	1 x 5-7mm push through grommet 2 x M20 cable entry
Dimensions:	ø140 x 120mm
Ingress protection:	IP65
Housing material:	High impact UL94 V0 (f1) PC
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

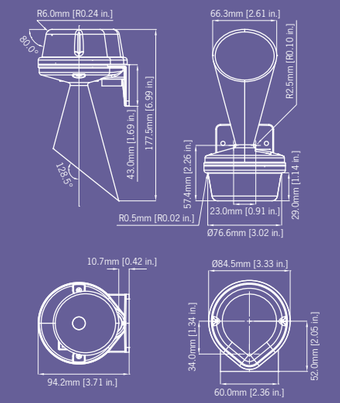
- Bayonet fixing body.
- Anti-tamper locking screw.
- Stainless steel fixings.
- Multiple cable entries
- Compatible with B350 and B450 traffic light series

CE

H100T Signalling Horn with Trumpet

The H100 series contains two variants of signalling horn, the H100T with trumpet horn and the compact H100B without trumpet horn. Both electronic signals authentically reproduce the alert sound of traditional electro-mechanical units but without any of the reliability issues.

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installations. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.



Part codes:

Version:	Part code:
12-30V ac/dc	H100T030G
40-260V ac/dc	H100T230G

Current consumption:

Version:	Voltage:	Current:
12-30V dc/ac	12V dc	10mA
12-30V dc/ac	24V dc	24mA
40-260V dc/ac	48V dc	15mA
12-30V dc/ac	12V ac 50/60Hz	30mA
12-30V dc/ac	24V ac 50Hz	62mA
40-260V dc/ac	48V ac 50/60Hz	25mA
40-260V dc/ac	115V dc	6mA
40-260V dc/ac	230V dc	3mA
40-260V dc/ac	115V ac 50/60Hz	19mA
40-260V dc/ac	230V ac 50/60Hz	10mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

No. of tones:	3
Output:	100 dB(A) @ 1m
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Dimensions:	177.5 x 94.2mm
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	148g

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Volume control
- Stainless steel fixings.

Approvals:

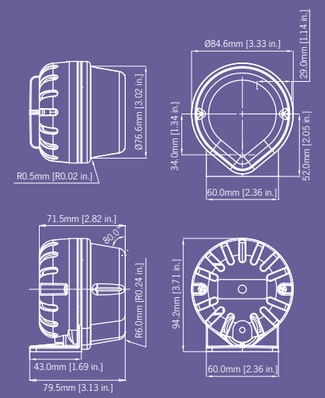
- GOST-R approved.
  Cert: POCC GB.JB05.H00144.

GOST-R

H100B Signalling Horn

The H100 series contains two variants of signalling horn, the H100T with trumpet horn and the compact H100B without trumpet horn. Both electronic signals authentically reproduce the alert sound of traditional electro-mechanical units but without any of the reliability issues.

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installation types. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.



Part codes:

Version:	Part code:
12-30V ac/dc	H100B030G
40-260V ac/dc	H100B230G

Current consumption:

Version:	Voltage:	Current:
12-30V dc/ac	12V dc	10mA
40-260V dc/ac	24V dc	24mA
40-260V dc/ac	48V dc	15mA
12-30V dc/ac	12V ac 50/60Hz	30mA
12-30V dc/ac	24V ac 50Hz	62mA
40-260V dc/ac	48V ac 50/60Hz	25mA
40-260V dc/ac	115V dc	6mA
40-260V dc/ac	230V dc	3mA
40-260V dc/ac	115V ac 50/60Hz	19mA
40-260V dc/ac	230V ac 50/60Hz	10mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

No. of tones:	3
Output:	100 dB(A) @ 1m
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Dimensions:	79.5 x 94.2mm
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	118g

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Volume control
- Stainless steel fixings.

Approvals:

- GOST-R approved.
  Cert: POCC GB.JB05.H00144.

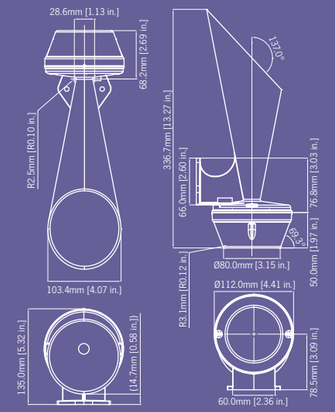
GOST-R

H110T Signalling Horn with Trumpet

The H110T is a very high output electronic signal horn capable of generating a traditional 'buzzer' warning tone traditionally associated with electro-mechanical signals.

With an output of 110dB(A) the H110T is ideal for all general signalling applications and the ingress protection rating of IP65 means it is suitable for indoor and outdoor installations.

In addition to the 'buzzer' type sound the unit features a further two alarm tones. The first stage sounds also have a remotely selectable second stage.



Part codes:

Version:	Part code:
10-30V ac/dc	H110T030G
40-260V ac/dc	H110T230G

Current consumption:

Version:	Voltage:	Current:
10-30V dc/ac	12V dc	52mA
10-30V dc/ac	24V dc	105mA
40-260V dc/ac	48V dc	42mA
10-30V dc/ac	12V ac 50/60Hz	115mA
10-30V dc/ac	24V ac 50Hz	215mA
40-260V dc/ac	48V ac 50/60Hz	68mA
40-260V dc/ac	115V dc	16mA
40-260V dc/ac	230V dc	8mA
40-260V dc/ac	115V ac 50/60Hz	36mA
40-260V dc/ac	230V ac 50/60Hz	18mA

Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request..

Specification:

No. of tones:	3
Output:	110 dB(A) @ 1m
Stages:	Remotely selectable second stage
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Dimensions:	336.7 x 135 mm
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	341g

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Volume control
- Stainless steel fixings.

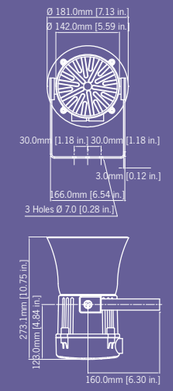
Approvals:

- GOST-R approved.
  Cert: POCC GB.JB05.H00144.

GOST-R

MA112 Alarm Sounder

The MA112 is a high output, 119dB(A) alarm sounder. With a robust, fire retardant, IP66 & IP67 housing, the MA112 is particularly suitable for harsh environments with high ambient noise levels.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	MA112DC24G
48V dc	MA112DC48G
24V ac	MA112AC24G
115V ac	MA112AC115G
230V ac	MA112AC230G

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or positive Reverse polarity stage switching on DC units.
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.50kg AC:3.00kg

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

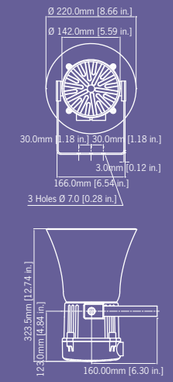
Approvals:

- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

GOST-R

MA121 Alarm Sounder

The MA121 is a very high output, 126dB(A) alarm sounder. With a high SPL in a robust, fire retardant IP66 & IP67 housing, the MA121 is particularly suitable for harsh environments with high ambient noise levels.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	MA121DC24G
48V dc	MA121DC48G
24V ac	MA121AC24G
115V ac	MA121AC115G
230V ac	MA121AC230G

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
24V ac	50/60Hz	+/-10%	1000mA
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

Specification:

Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or positive Reverse polarity stage switching on DC units.
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.50kg AC:3.00kg

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB.JB05.H00144.

GOST-R

E2S22D ø22mm Buzzers & Pilot Lights

The E2S-22D range includes buzzers, combination units and pilot lights featuring super bright multichip L.E.Ds. Ingress protection to IP65, low current consumption and unsurpassed reliability under extreme conditions are all standard features of the E2S-22D range.

The range utilises screw terminals with wire guards for ease of installation and the ability to daisy chain the lights into an array.

Buzzer:
E2S22DBZ
80 db at 10cm;
Current : 15-30mA;

Flashing pilot light:
E2S22DFS
Flash Rate: 2Hz;
Current : 15-30mA;

Combination:
E2S22DBF
80 db at 10 cm;
Current : 18-80mA;

Pilot lights:
E2S22D
Low voltage DC/AC:
Current : 20-80mA;
High voltage DC/AC:
Current : 18-25mA;

Buzzer:	80dB @ 10cm Current: 15-30mA
E2S22DBZ24V	24V dc/ac Buzzer
E2S22DBZ48V	48V dc/ac Buzzer
E2S22DBZ130V	110-130V ac/dc Buzzer
E2S22DBZ230V	230V ac Buzzer

Flashing Pilot Light:	Flash rate: 2Hz Current: 15-30mA
E2S22DFS24V	24V ac/dc 2x LED Red
E2S22DFS48V	48V ac/dc 2x LED Red
E2S22DFS130V	110-130V ac/dc 2x LED Red
E2S22DFS230V	230V ac 2x LED Red

Combination:	80dB @ 10cm With Red L.E.D.
E2S22DBF24V	24V ac/dc Buzzer & 2x LED Red Io: 20-80mA
E2S22DBF48V	48V ac/dc Buzzer & 2x LED Red Io: 20-80mA
E2S22DBF130V	110-130V ac/dc Buzzer & 2x LED Red Io: 18-30mA
E2S22DBF230V	230V ac Buzzer & 2x LED Red Io: 18-30mA

E2S22DMT	Mounting Tool for E2S-22D L.E.D. Pilot Lights
E2S22DLBHF25X18	E2S-22D Label holder 25x18mm
E2S22DLBHF25X10	E2S-22D Label holder 25x10mm

Pilot Light:	Red	
E2S22D12VR	12V ac/dc <80mA	12-chips Super-Bright
E2S22D24VR	24V ac/dc <80mA	12-chips Super-Bright
E2S22D48VR	48V ac/dc <20mA	12-chips Super-Bright
E2S22D130VR	110-130V ac/dc 25mA Max	12-chips Super-Bright
E2S22D230VR	230V ac 25mA Max	12-chips Super-Bright

Pilot Light:	Amber	
E2S22D12VA	12V ac/dc <80mA	12-chips Super-Bright
E2S22D24VA	24V ac/dc <80mA	12-chips Super-Bright
E2S22D48VA	48V ac/dc <20mA	12-chips Super-Bright
E2S22D130VA	110-130V ac/dc 25mA Max	12-chips Super-Bright
E2S22D230VA	230V ac 25mA Max	12-chips Super-Bright

Pilot Light:	Green	
E2S22D12VG	12V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D24VG	24V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D48VG	48V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D130VG	110-130V ac/dc 25mA Max	1-chip InGAN Ultra Super-Bright
E2S22D230VG	230V ac 25mA Max	1-chip InGAN Ultra Super-Bright

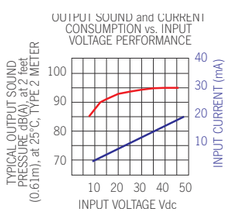
Pilot Light:	Blue	
E2S22D12VB	12V ac/dc <20mA	2-chip InGAN Ultra Super-Bright
E2S22D24VB	24V ac/dc <20mA	2-chip InGAN Ultra Super-Bright
E2S22D48VB	48V ac/dc <20mA	2-chip InGAN Ultra Super-Bright
E2S22D130VB	110-130V ac/dc 25mA Max	2-chip InGAN Ultra Super-Bright
E2S22D230VB	230V ac 25mA Max	2-chip InGAN Ultra Super-Bright

Pilot Light:	White	
E2S22D12VW	12V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D24VW	24V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D48VW	48V ac/dc <20mA	1-chip InGAN Ultra Super-Bright
E2S22D130VW	110-130V ac/dc 25mA Max	1-chip InGAN Ultra Super-Bright
E2S22D230VW	230V ac 25mA Max	1-chip InGAN Ultra Super-Bright

E2S28D ø28mm Buzzers - Panel Mount Indicators

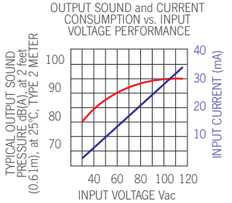
The E2S-28D range consists of the highest quality FloydBell continuous tone and dual tone panel mounted piezo buzzers.

The built-in volume control provides variable attenuation up to 20dB(A). The terminals are standard 6.35mm/0.25" quick-connect blades for push-on or direct solder attachment.



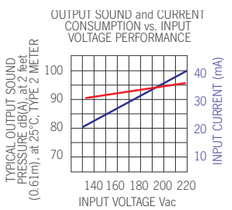
E2S28DMC948:

Operating Mode:	Continuous Tone
Operating Voltage:	9-48 V dc
Nom. Operating Voltage:	48 V dc
Operating Frequency:	2900±250 Hz.
Typical Operating Current:	5 mA at 9 V dc, 20 mA at 48 V dc
Output:	95±5 dB(A) at 48 Vdc at 24 inches (61 cm), at 25°C



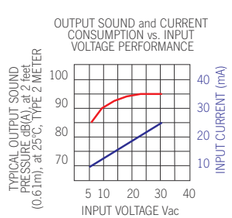
E2S28DMC201:

Operating Mode:	Continuous Tone
Operating Voltage:	30-120 V ac
Nom. Operating Voltage:	110 V ac
Operating Frequency:	2900±250 Hz.
Typical Operating Current:	7 mA at 30 V ac, 40 mA at 120 V ac
Output:	95±5 dB(A) at 130 Vac at 24 inches (61 cm), at 25°C



E2S28DMC301:

Operating Mode:	Continuous Tone
Operating Voltage:	130-220 V ac
Nom. Operating Voltage:	220 V ac
Operating Frequency:	2900±250 Hz.
Typical Operating Current:	20 mA at 130 V ac, 40 mA at 220 V ac
Output:	95±5 dB(A) at 220 Vac at 24 inches (61 cm), at 25°C



E2S28DMB530:

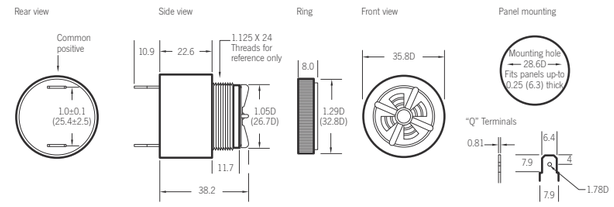
Operating Mode:	Dual Function Beep/Continuous Tone
Operating Voltage:	5-30 V dc
Nom. Operating Voltage:	30 V dc
Operating Frequency:	2900±250 Hz.
Typical Operating Current:	2 mA at 5 V dc, 20 mA at 30 V dc
Output:	95±5 dB(A), at 30 Vdc at 24 inches (61 cm), at 25°C

Specification:

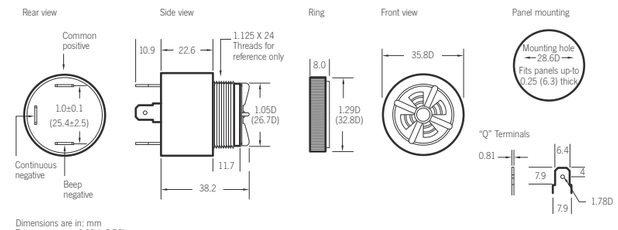
Tones:	**Continuous or Beep tone**
Frequency:	2900±250 Hz.
Termination:	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
Termination Strength:	Pull test with a maximum of 22 pounds (10 kg) load
Surge Voltage	20% over maximum rated voltage < 5 minutes.
Materials:	Case- Plastic “NORYL® N-190”, Flame Retardant, UL 94-VO, Black
Internal Circuit:	Audio-oscillator and piezoelectric driver
Potting:	2 parts epoxy resin or silicone, black
Diaphragm:	Stainless Steel 304
Durability:	Withstand exposure to salt spray per ASTM B117
Operating temp:	-20°C to +65°C.
Storage temp:	-40°C to +85°C.
Relative humidity:	95% relative humidity +40°C continuously for 100 hrs.
Vibration:	Withstands vibration between 0 and 55 Hz. on all axes.

Features:

- UL recognised part.
- Volume control.
- Stainless steel diaphragm.



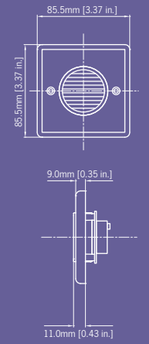
Dimensions are in: mm
Tolerances are: ±0.03 (±0.76) unless otherwise stated



Dimensions are in: mm
Tolerances are: ±0.03 (±0.76) unless otherwise stated

BEDHEAD Alarm Sounder

The BEDHEAD flush mount alarm sounder is a low current consumption device suitable for close proximity signalling in fire and security applications.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8	Tone 5
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1	Tone 8
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	554Hz	Tone 2
Tone 5	1000Hz Continuous - PFEER Toxic Gas	Tone 1	Tone 6
Tone 6	Bell	Tone 1	Tone 8
Tone 7	800/1000Hz @ 7Hz Sweeping	Tone 5	Tone 1
Tone 8	2400/2900Hz @ 50Hz Sweeping	Tone 5	Tone 1
Tone 9	420Hz @ 0.625 sec Australian Alert	Tone 10	Tone 5
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 6	Tone 5

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
24V dc	BEDHEAD[x]
[x] = Housing colour:	R: Red W: White

To order compatible back boxes quote part ref: PLMBBHCTW

Alarm sounder:

Version:	Voltage:	Current:
24V dc	10-30V dc	20-80mA

Specification:

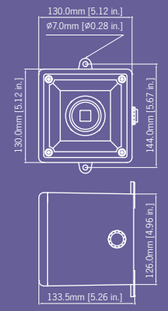
Maximum output:	90dB(A) @ 1 metre
Nominal output:	85dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10
No. of stages:	3
Volume control:	On board potentiometer
Effective range:	10m @ 1KHz
Voltages DC:	24V dc (10-30V dc)
Current consumption:	8mA @ 24V dc
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & white.
Back box:	Compatible with standard back box
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.06kg

GOST-R

CE

A105NAX Appello X User recordable alarm siren

The A105NAX Appello X is the next generation of user recordable alarm sounder capable of storing up to 2 minutes of content. The A105NAX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory. Low current consumption and CD quality reproduction in a robust fire retardant Type 4/4X/3R/13, IP66 housing ensure the A105NAX Appello X is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell Tone 2 Tone 15 Tone 29			
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone	33 745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone	34 1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone	35 420Hz @ 0.625 sec Australian Alert - AS2220	Tone 36	Tone 5	Tone 29
Tone	36 500-1200Hz 3.75sec /0.25sec. Australian Evac. - AS2220	Tone 35	Tone 5	Tone 29
Tone	37 1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone	38 2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone	39 800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone	40 544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 31	Tone 27	Tone 29
Tone	41 Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone	42 Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone	43 1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone	44 Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone	45 1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

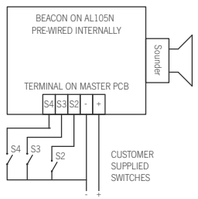
Version:	Part code:
10-30V dc	A105NAXDC024[x]-UL
90-260V ac	A105NAXAC230[x]-UL
[x] = Housing colour:	G: Grey R: Red W: White

Current consumption:

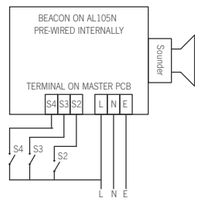
Version:	Voltage:	Current:
24V dc	10-30V dc	256mA*
230V ac	90-260V ac 50/60Hz	124mA*

* current at nominal voltage on Tone 1

DC CIRCUIT WIRING DIAGRAM



AC CIRCUIT WIRING DIAGRAM



Specification:

Voice content output:	101dB(A) @ 1 metre
Music content output:	102dB(A) @ 1 metre
Alarm tone output:	110dB(A) @ 1 metre
No. of alarm tones:	45 (UKOOA/PFEER compliant)
No. of messages:	4 (30 seconds each)
Volume controls:	Independent controls for user recorded content and built-in alarm tones.
Effective range:	60m @ 1KHz
Voltages DC:	24vdc (10-30vdc)
Voltages AC:	90-260vac 50/60Hz
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 0.80kg AC: 1.00kg

Features:

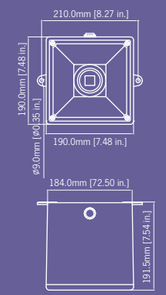
The A105NAX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other A105NAX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

A121AX Appello X User recordable alarm horn

The A121AX Appello X is the next generation of user recordable alarm sounder capable of storing up to 2 minutes of content. The A121AX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory. Low current consumption and CD quality reproduction in a robust fire retardant Type 4/4X/3R/13, IP66 housing ensure the A121AX Appello X is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

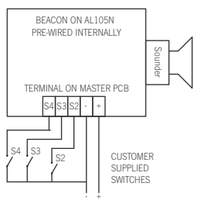
Version:	Part code:
14-30V dc	A121AXDC024[x]-UL
90-260V ac	A121AXAC230[x]-UL
[x] = Housing colour:	G: Grey R: Red

Current consumption:

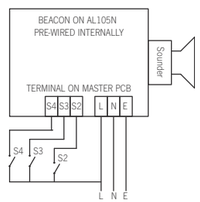
Version:	Voltage:	Current :
24V dc	14-30V dc	1.51A*
230V ac	90-260V ac 50/60Hz	517mA*

* current at nominal voltage on Tone 1

DC CIRCUIT WIRING DIAGRAM



AC CIRCUIT WIRING DIAGRAM



Specification:

Voice content output:	111dB(A) @ 1 metre
Music content output:	112dB(A) @ 1 metre
Alarm tone output:	126dB(A) @ 1 metre
No. of alarm tones:	45 (UKOOA/PFEER compliant)
No. of messages:	4 (30 seconds each)
Volume controls:	Independent controls for user recorded content and built-in alarm tones.
Effective range:	300m @ 1KHz
Voltages DC:	24vdc (14-30vdc)
Voltages AC:	90-260vac 50/60Hz
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red or RAL7038 Grey
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 2.10kg AC: 2.70kg

Features:

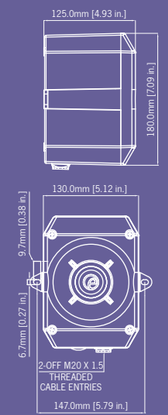
The A121AX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 112dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 126dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other A121AX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

D105AX Appello X User recordable alarm horn

The D105AX Appello X is the next generation of user recordable alarm sounder capable of storing up to 2 minutes of content. The D105AX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory. Low current consumption and CD quality reproduction in a robust die cast aluminium Type 4/4X/3R/13, IP66 housing ensures the D105AX Appello X is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
10-30V dc	D105AXDC024[x]-UL
[x] = Housing colour:	G: Grey R: Red

Current consumption:

Version:	Voltage:	Current :
24V dc	10-30V dc	256mA*

* current at nominal voltage on Tone 1

Specification:

Voice content output:	101dB(A) @ 1 metre
Music content output:	102dB(A) @ 1 metre
Alarm tone output:	110dB(A) @ 1 metre
No. of alarm tones:	45 (UKOOA/PFEER compliant)
No. of messages:	4 (30 seconds each)
Volume controls:	Independent controls for user recorded content and built-in alarm tones.
Effective range:	60m @ 1KHz
Voltages DC:	24vdc (10-30vdc)
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	Marine grade aluminium A1 Si12 Cu
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 x 1.5mm threaded gland entries. Supplied with one stopping plug.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	1.60kg

Features:

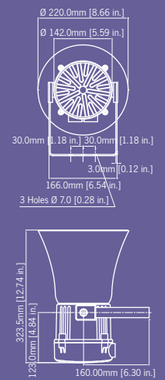
The D105AX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other D105AX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

MV121 Appello X User recordable alarm horn

The MV121 Appello X is the next generation of user recordable alarm sounder capable of storing up to 2 minutes of content. The MV121 records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory. Low current consumption and CD quality reproduction in a robust fire retardant Type 4/4X/3R/13, IP66/67 housing ensure the MV121 Appello X is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description	Stg 2	Stg 3	Stg 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert - AS2220	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac. - AS2220	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

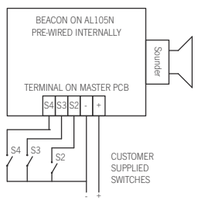
Version:	Part code:
14-30V dc	MV121DC024G-UL
90-260V ac	MV121AC230G-UL

Current consumption:

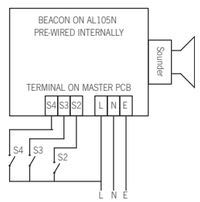
Version:	Voltage:	Current :
24V dc	14-30V dc	1.51A*
230V ac	90-260V ac 50/60Hz	517mA*

* current at nominal voltage on Tone 1

DC CIRCUIT WIRING DIAGRAM



AC CIRCUIT WIRING DIAGRAM



Specification:

Voice content output:	111dB(A) @ 1 metre
Music content output:	112dB(A) @ 1 metre
Alarm tone output:	126dB(A) @ 1 metre
No. of alarm tones:	45 (UKOOA/PFEER compliant)
No. of messages:	4 (30 seconds each)
Volume controls:	Independent controls for user recorded content and built-in alarm tones.
Effective range:	300m @ 1KHz
Voltages DC:	24vdc (14-30vdc)
Voltages AC:	90-260vac 50/60Hz
Ingress protection:	Type 4 / 4X / 3R / 13, IP66/67
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL7038 Grey
Fixings:	Stainless Steel
Cable entries:	2 x M20 threaded gland entries.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 2.10kg AC: 2.70kg

Features:

The MV121 Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 112dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 126dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other MV121 units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

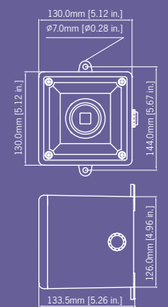
- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

HA105N Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The technology employed in the Hootronic range features the latest in amplifier and digital to analogue conversion technology. The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 112dB(A) at 1 metre the HA105N surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Part codes:

Version	Part code:
24V dc	HA105NDC24[x]
115V ac	HA105NAC115[x]
230V ac	HA105NAC230[x]
[x] = Housing colour:	G: Grey, R: Red

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	185mA*
115V ac	50/60Hz	+/-10%	50mA
230V ac	50/60Hz	+/-10%	25mA

* current at nominal voltage

Specification:

Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 103dB(A) approx.
Effective range:	60m @ 1KHz
Voltages DC:	24V dc (10-30V dc);
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.75kg AC:1.00kg

*SPL data +/-3dB(A). Measured at optimum voltage

Features:

The products in the Hootronic range have 5 user selectable ‘traditional’ sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine ‘tail off’ to sound when alarm is terminated.

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

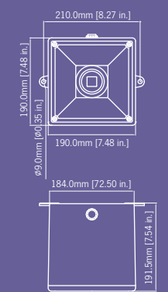
CE

HA121 Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The technology employed in the Hootronic range features the latest in amplifier and digital to analogue conversion technology. The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 121dB(A) at 1 metre the HA121 surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description	Stg 2	Stg 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Part codes:

Version	Part code:
24V dc	HA121DC24[x]
115V ac	HA121AC115[x]
230V ac	HA121AC230[x]
[x] = Housing colour:	G: Grey, R: Red

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

Specification:

Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) approx.
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc);
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts
	in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- GOST-R certificate: POCC GB.JB05. H00144

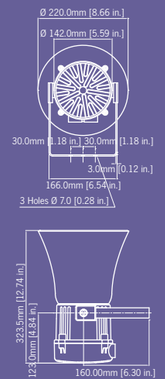
GOST-R

HMA121 Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The technology employed in the Hootronic range features the latest in amplifier and digital to analogue conversion technology. The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 124dB(A) at 1 metre the HMA121 surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description	Stg 2	Stg 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Part codes:

Version	Part code:
24V dc	HMA121DC24G
115V ac	HMA121AC115G
230V ac	HMA121AC230G

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

Specification:

Nominal output:	124dB(A) @ 1m +/- 3dB
No. of tones:	5
No. of stages:	3
Volume control:	Max. 124dB(A); Min. 115dB(A) approx.
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc);
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.50kg AC:3.00kg

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages. Remote switch generates genuine 'tail off' to sound when alarm is terminated.

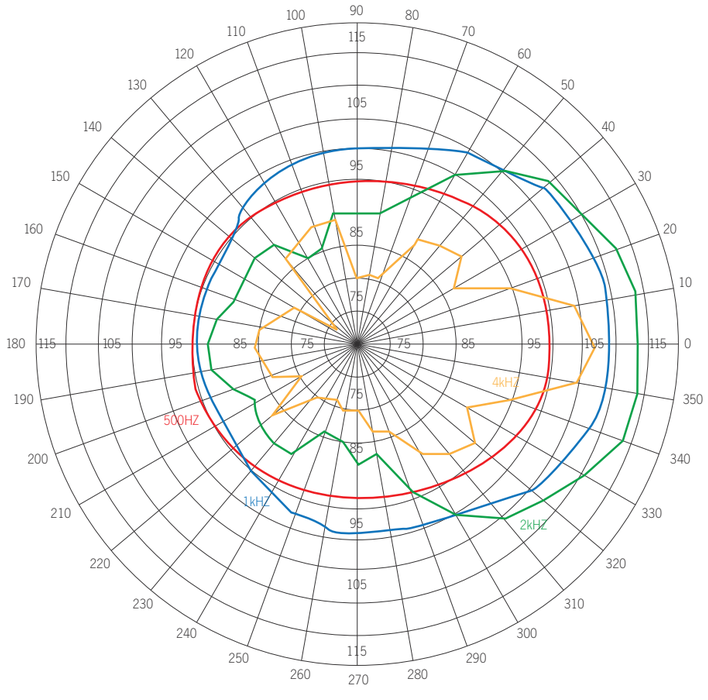
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

CE

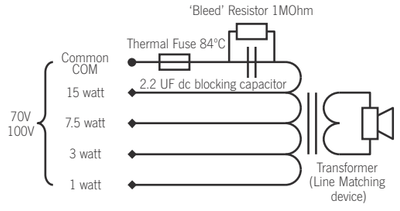
ML15 PA Horn Loudspeaker

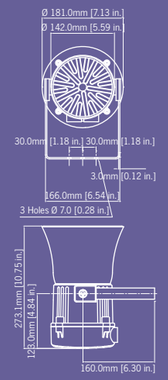
The ML15 15W PA loudspeaker features a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments with high ambient noise levels.



Part codes:

Version:	Part code:
100V Line	ML15W100V
70V Line	ML15W70V
16 Ohm	ML15W16R
8 Ohm	ML15W8R





Specification:

SPL:	108dB +/-3dB @ 1w @ 1m - Pink
	118dB +/-3dB @ 15w (rated) @ 1m
Rated power:	15 Watts RMS
70v line tappings:	15w / 7.5w / 3w / 1w (z=336.67 Ohms / 653.33 Ohms / 1.6kOhms / 4.9kOhms)
100v line tappings:	15w / 7.5w / 3w / 1w (z=666.87 Ohms / 1.34kOhms / 3.34kOhms / 10kOhms)
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	120° @ 1kHz & 32° @ 4kHz
Frequency range:	400Hz to 8000 Hz
DC Line monitoring:	2.2uF Capacitor (Transformer) 470uF Capacitor (Low impedance)
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage tempe:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	70/100V line: 2.60kg
	Low impedance: 2.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

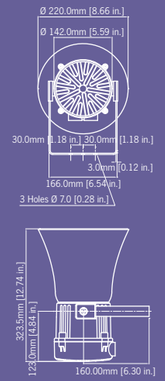
Approvals:

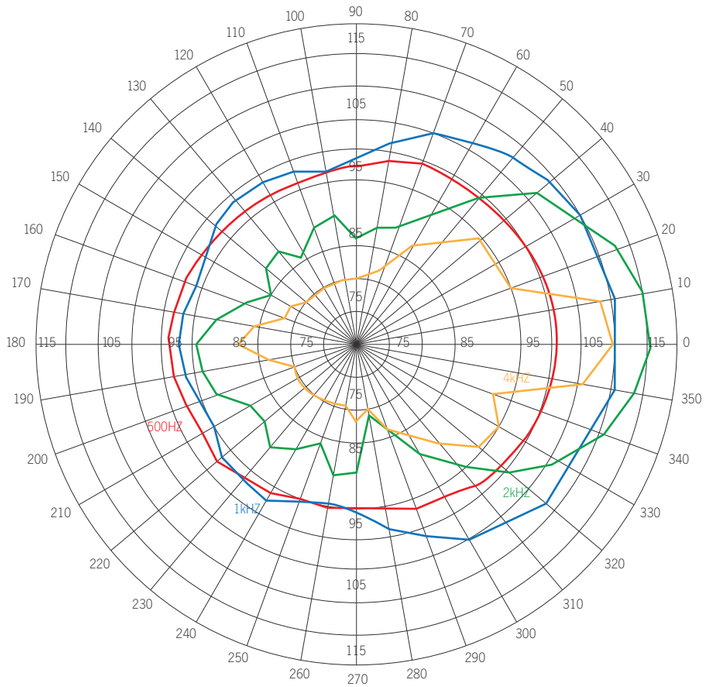
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

ML25 PA Horn Loudspeaker

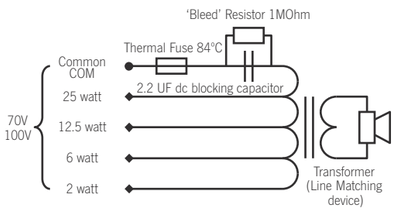
The ML25 25W PA loudspeaker features a robust, fire retardant, IP66 & IP67 housing; suitable for harsh environments with high ambient noise levels.





Part codes:

Version:	Part code:
100V Line	ML25W100V
70V Line	ML25W70V
16 Ohm	ML25W16R
8 Ohm	ML25W8R



Specification:

SPL:	111dB +/-3dB @ 1w @ 1m - Pink
	121dB +/-3dB @ 25w (rated) @ 1m
Rated power:	25 Watts RMS
70v line tappings:	25w / 12.5w / 6w / 2w tappings (z=196 Ohms/392 Ohms/816.67 Ohms/2.45kOhms)
100v line tappings:	25w / 12.5w / 6w / 2w tappings (z=400 Ohms / 800 Ohms / 1.67kOhms / 5kOhms)
Low impedence:	8 Ohm or 16 Ohm
Dispersion:	130° @ 1kHz & 32° @ 4kHz
Frequency range:	300Hz to 8000 Hz
DC Line monitoring:	2.2uF Capacitor (Transformer)
	470uF Capacitor (Low impedance)
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	70/100V line: 3.00kg Low impedance: 2.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

Approvals:

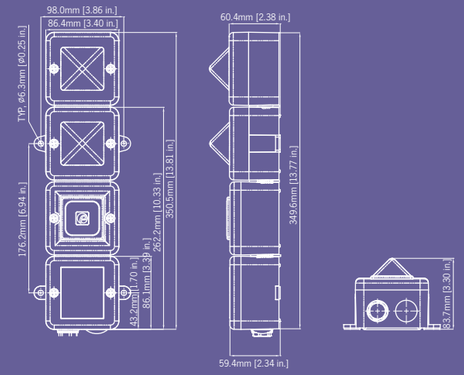
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

CE

STA2 Alarm Sounder, Xenon & L.E.D. Tower with Junction Box

The STA2 is a customisable audio-visual signal featuring a tower of 2 AlertAlight L101 type beacon combined with a SONF1 alarm sounder. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STA2 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

STA2 Junction box assembly for 2 x L101 beacons

Part Code:	STA2DC024[x] STA2AC115[x] STA2AC230[x]
Voltage:	12/24Vdc / 115Vac / 230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X Xenon Beacon 5J

Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow

ST-L101H L.E.D. Beacon

Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Example: For a tower of A SONF1 alarm sounder plus two beacons using one Xenon beacon in red plus one L.E.D. beacon in green using a 24Vdc supply in a red housing, order the following part codes:
STA2DC024R
ST-L101XDC024R
ST-L101HDC024G

Specification:

SONF1 - Alarm Sounder:

Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2 (AC units are single stage)
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Monitoring:	Reverse polarity diode protection on DC units.
Terminals:	0.5 to 1.5mm² cables.

ST-L101X - Xenon:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes

ST-L101H - L.E.D:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

*Candela measurements representative of performance with clear lens at optimum voltage.

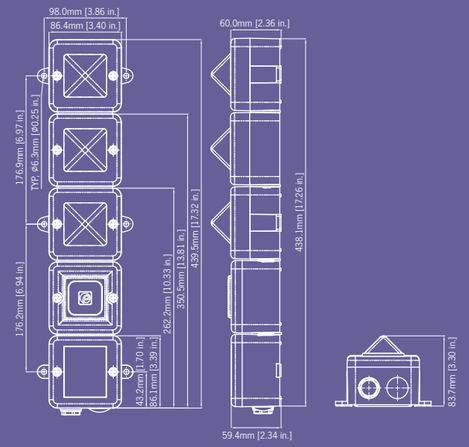
Features:

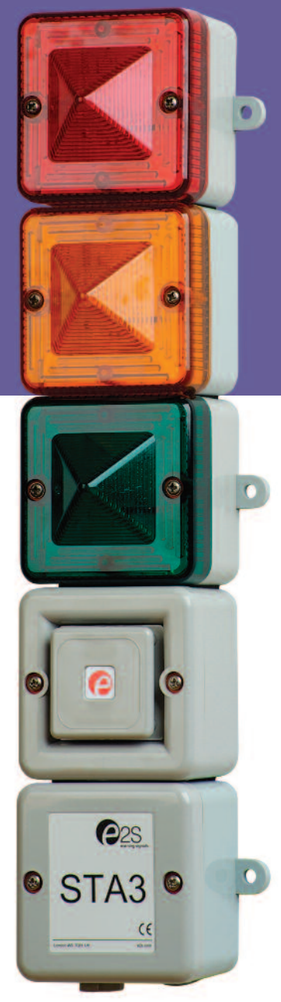
- SONF1 alarm sounder synchronises automatically on multi-unit systems.
- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- High output L.E.D. unit can be set to steady or flashing.
- Available with red, white or grey housing.
- Sealed to IP66.
- Tropicalisation available on request.
- Also available without SONF1 audible signal.

CE
0786-CPD-20338

STA3 Alarm Sounder, Xenon & L.E.D. Tower with Junction Box

The STA3 is a customisable audio-visual signal featuring a tower of 3 AlertAlight L101 type beacon combined with a SONF1 alarm sounder. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STA3 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.





Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

STA3 Junction box assembly for 2 x L101 beacons

Part Code:	STA3DC024[x] STA3AC115[x] STA3AC230[x]
Voltage:	12/24Vdc / 115Vac / 230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X Xenon Beacon 5J

Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow

ST-L101H L.E.D. Beacon

Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Example: For a tower of A SONF1 alarm sounder plus three beacons using two Xenon beacons, one red, one amber plus one L.E.D. beacon in green using a 24Vdc supply in a red housing, order the following part codes:
STA3DC024R
ST-L101XDC024R
ST-L101XDC024A
ST-L101HDC024G

Specification:

SONF1 - Alarm Sounder:

Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2 (AC units are single stage)
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Monitoring:	Reverse polarity diode protection on DC units.
Terminals:	0.5 to 1.5mm² cables.

ST-L101X - Xenon:

Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes

ST-L101H - L.E.D:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

*Candela measurements representative of performance with clear lens at optimum voltage.

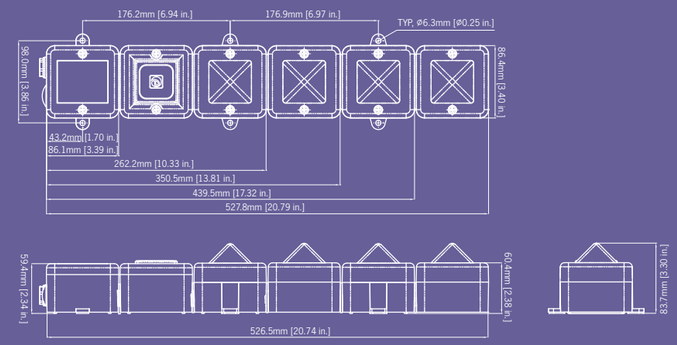
Features:

- SONF1 alarm sounder synchronises automatically on multi-unit systems.
- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- High output L.E.D. unit can be set to steady or flashing.
- Available with red, white or grey housing.
- Sealed to IP66.
- Tropicalisation available on request.
- Also available without SONF1 audible signal.

CE
0786-CPD-20338

STA4 Alarm Sounder, Xenon & L.E.D. Tower with Junction Box

The STA4 is a customisable audio-visual signal featuring a tower of 4 AlertAlight L101 type beacon combined with a SONF1 alarm sounder. Each beacon position can contain either a Xenon or high output L.E.D. light source. The STA4 assembly features a pre-wired junction box and cable loom enabling the end user to determine beacon type and position during installation.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

STA4 Junction box assembly for 4 x L101 beacons	
Part Code:	STA4DC024[x] STA4AC115[x] STA4AC230[x]
Voltage:	12/24Vdc / 115Vac / 230Vac
Housing Colour:	Grey/Red/White

[x]: G=Grey, R=Red, W=White

ST-L101X Xenon Beacon 5J	
Part Code:	ST-L101XDC012[x] ST-L101XDC024[x] ST-L101XAC115[x] ST-L101XAC230[x]
Voltage:	12Vdc / 24Vdc / 115Vac / 230Vac
Lens Colour:	Amber, Blue, Clear, Green, Red, Yellow
ST-L101H L.E.D. Beacon	
Part Code:	ST-L101HDC030[x] ST-L101HAC230[x]
Voltage:	10-30Vdc / 90-260Vac
L.E.D. Colour:	Amber, Blue, Clear, Green, Red

[x]: A=Amber, B=Blue, C=Clear, G=Green, R=Red

Example: For a tower of A SONF1 alarm sounder plus four beacons using two Xenon beacons, one red, one amber plus one clear L.E.D. beacon in one in green using a 24Vdc supply in a red housing, order the following part codes:
STA3DC024R
ST-L101XDC024R
ST-L101XDC024A
ST-L101HDC024C
ST-L101HDC024G

Specification:

SONF1 - Alarm Sounder:	
Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2 (AC units are single stage)
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Monitoring:	Reverse polarity diode protection on DC units.
Terminals:	0.5 to 1.5mm² cables.
ST-L101X - Xenon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Terminals:	0.5 to 4.0mm² cables.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red, Yellow
Tube life :	Emissions are reduced to 70% after 8 million flashes
ST-L101H - L.E.D:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

*Candela measurements representative of performance with clear lens at optimum voltage.

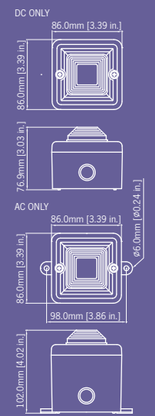
Features:

- SONF1 alarm sounder synchronises automatically on multi-unit systems.
- Multiple configurations of Xenon and L.E.D. beacons.
- Internal cable loom and termination PCB simplifies installation.
- Common negative/neutral supply minimises cabling.
- High output L.E.D. unit can be set to steady or flashing.
- Available with red, white or grey housing.
- Sealed to IP66.
- Tropicalisation available on request.
- Also available without SONF1 audible signal.

CE
0786-CPD-20338

SON4B Alarm Sounder & Filament Lamp Beacon

The SON4B is a compact, high output, 100dB(A) alarm sounder with integral filament lamp beacon. The robust fire retardant housing ensures the SON4B is suitable for all general signalling applications including fire, security and process control.



Alarm sounder & bulb beacon:

Version:		Voltage:	Current:
24V dc		+/-25%	150mA
24V ac	50/60Hz	+/-10%	180mA
115V ac	50/60Hz	+/-10%	50mA
230V ac	50/60Hz	+/-10%	30mA

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8	Tone 5
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1	Tone 8
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	554Hz	Tone 2
Tone 5	1000Hz Continuous - PFEER Toxic Gas	Tone 1	Tone 6
Tone 6	Bell	Tone 1	Tone 8
Tone 7	800/1000Hz @ 7Hz Sweeping	Tone 5	Tone 1
Tone 8	2400/2900Hz @ 50Hz Sweeping	Tone 5	Tone 1
Tone 9	420Hz @ 0.625 sec Australian Alert	Tone 10	Tone 5
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 6	Tone 5

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Stage switching:	Negative
Beacon:	
Light source:	1.3W Filament bulb/lamp
Flash rate:	1 Hz
Effective candela:	6cd* - measured ref. to I.E.S.
Lens / L.E.D.:	Amber, Blue & Red
General:	
Voltages DC:	24V dc
Reverse polarity diode protection on DC units.	
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	DC: 0.30kg AC:0.40kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with amber lens at optimum voltage.

Part codes:

Version:	Part code:
24V dc	SON4BDC24[x]/[y]
24V ac	SON4BAC24[x]/[y]
115V ac	SON4BAC115[x]/[y]
230V ac	SON4BAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber, B: Blue, R: Red

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs (on AC versions) or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

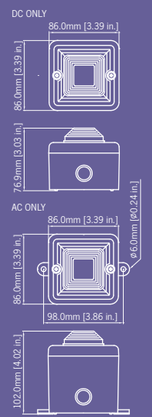
GOST-R

VdS
G207130

CE
0786-CPD-20338

SON4L Alarm Sounder & L.E.D. Beacon

The SON4L is a compact, high output, 100dB(A) alarm sounder with integral L.E.D. array beacon. The robust fire retardant housing ensures the SON4L is suitable for all general signalling applications including fire, security and process control.



Alarm sounder & L.E.D. beacon:

Version:		Voltage:	Current:
12V dc		+/-25%	50mA
24V dc		+/-25%	50mA
48V dc		+/-25%	40mA
24V ac	50/60Hz	+/-10%	60mA
115V ac	50/60Hz	+/-10%	25mA
230V ac	50/60Hz	+/-10%	20mA

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8	Tone 5
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1	Tone 8
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	554Hz	Tone 2
Tone 5	1000Hz Continuous - PFEER Toxic Gas	Tone 1	Tone 6
Tone 6	Bell	Tone 1	Tone 8
Tone 7	800/1000Hz @ 7Hz Sweeping	Tone 5	Tone 1
Tone 8	2400/2900Hz @ 50Hz Sweeping	Tone 5	Tone 1
Tone 9	420Hz @ 0.625 sec Australian Alert	Tone 10	Tone 5
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 6	Tone 5

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Stage switching:	Negative
Beacon:	
Light source:	5 x high intensity L.E.D. array
Flash rate:	2 Hz
Peak Candela:	23.56 cd
Effective candela:	3 cd* - measured ref. to I.E.S.
Lens / L.E.D.:	Amber & Red
General:	
Voltages DC:	12V dc; 24V dc; 48V dc Reverse polarity diode protection on DC units.
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	DC: 0.30kg AC:0.40kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with amber lens at optimum voltage.

Part codes:

Version:	Part code:
12V dc	SON4LDC12[x]/[y]
24V dc	SON4LDC24[x]/[y]
48V dc	SON4LDC48[x]/[y]
24V ac	SON4LAC24[x]/[y]
115V ac	SON4LAC115[x]/[y]
230V ac	SON4LAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber, R: Red

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs (on AC versions) or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

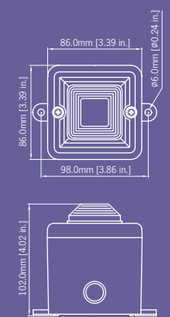
GOST-R

VdS
G207130

CE
0786-CPD-20338

SON4 Alarm Sounder & Xenon Beacon

The SON4 is a compact, high output, 104dB(A) alarm sounder with integral Xenon strobe beacon. The robust fire retardant housing ensures the SON4 is suitable for all general signalling applications including fire, security and process control.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 26
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	420Hz @ 0.625 sec Australian Alert	Tone 32	Tone 26
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 30	Tone 26

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:

Maximum output:	104dB(A) @ 1 metre
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	3 levels via on board switch
Effective range:	32m @ 1KHz
Stage switching:	Reverse polarity stage switching on DC units.

Beacon:

Energy:	0.5 Joules
Flash rate:	1 Hz (60fpm)
Peak Candela:	50,000 cd - calc. from energy (J)
Effective candela:	25 cd - calc. from energy (J)
Peak Candela:	5,038 cd* - measured ref. to I.E.S.
Effective candela:	11 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue & Red

General:

Voltages DC:	24V dc (18-30V dc)
Reverse polarity diode protection on DC units.	
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Weight :	DC: 0.30kg AC:0.40kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with amber lens at optimum voltage.

Part codes:

Version:	Part code:
24V dc	SON4DC24[x]/[y]
24V ac	SON4AC24[x]/[y]
115V ac	SON4AC115[x]/[y]
230V ac	SON4AC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber, B: Blue. G: Green, R: Red, Y: Yellow

Alarm sounder & Xenon beacon:

Version:		Voltage:	Current:
24V dc		18-30V dc	80-110mA
24V ac	50/60Hz	+/-10%	90-135mA
115V ac	50/60Hz	+/-10%	35mA
230V ac	50/60Hz	+/-10%	20mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Wire to base installation
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

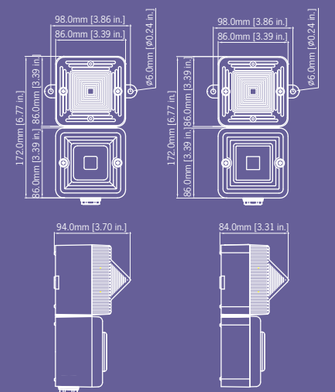
VdS
G207130

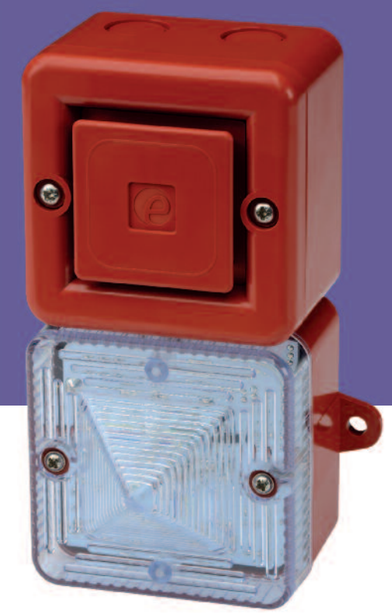
CE
0786-CPD-20338

SONFL1X Alarm Sounder & Xenon Beacon

The SONFL1X features the 100dB(A) SONF1 alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.





Alarm sounder:

Version:		Voltage:	Current :
12V dc		10-30V dc	25mA*
24V dc		10-30V dc	25mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	13mA
230V ac	50/60Hz	+/-10%	13mA

* current at nominal voltage on Tone 2

Xenon Beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12Vdc; 24V dc
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version:	Part code:
12V dc	SONFL1XDC012[x]/[y]
24V dc	SONFL1XDC024[x]/[y]
24V ac	SONFL1XAC024[x]/[y]
115V ac	SONFL1XAC115[x]/[y]
230V ac	SONFL1XAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green M: Magenta, R: Red, Y: Yellow

Suffix part number with '-UL' for UL approved version.

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- SONF1 alarm sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- L101X xenon beacon is VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-H00144

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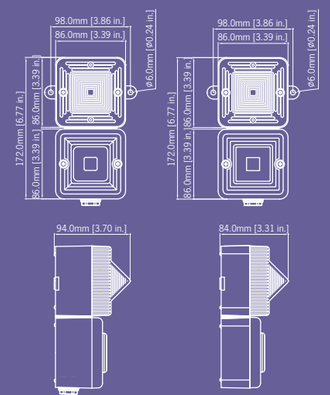
SONFL1H Alarm Sounder & L.E.D. Beacon

The SONFL1H features the 100dB(A) SONF1 alarm sounder combined with the L101H high output L.E.D. beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
115V ac	50/60Hz	+/-10%	13mA
230V ac	50/60Hz	+/-10%	13mA
* current at nominal voltage on Tone 2			

L.E.D. Beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Where applicable following tones are available on AC voltage versions:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 0.25 sec Alternating
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001
Tone 5	1000Hz Continuous - PFEER Toxic Gas
Tone 6	Bell
Tone 7	800/1000Hz @ 7Hz Sweeping
Tone 8	2400/2900Hz @ 50Hz Sweeping
Tone 9	420Hz @ 0.625 sec Australian Alert
Tone 10	500-1200Hz 3.75sec /0.25sec. Australian Evac.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	100dB(A) @ 1 metre
Nominal output:	99dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Volume control:	On board potentiometer
Effective range:	30m @ 1KHz
Beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light.
General:	
Voltages DC:	12Vdc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version:	Part code:
24V dc	SONFL1HDC024[x]/[y]
115V ac	SONFL1HAC115[x]/[y]
230V ac	SONFL1HAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue, W: Clear (White)
	G: Green, R: Red

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- SONF1 sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

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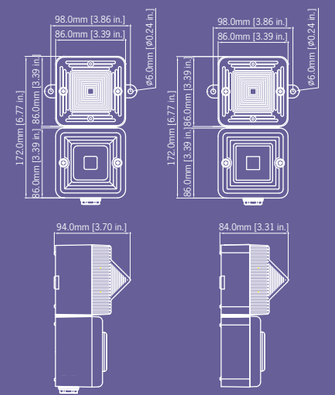
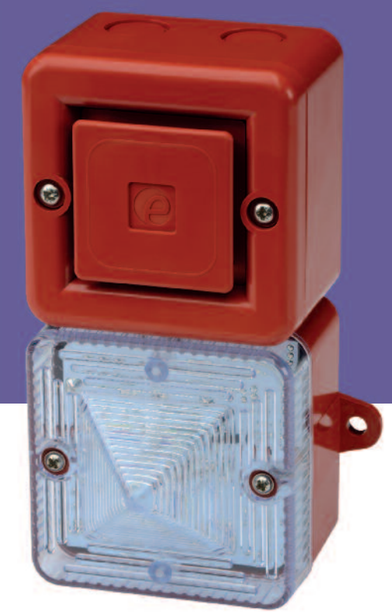
SONFL1X-HO Alarm Sounder & Xenon Beacon

The SONFL1X-HO features the 105dB(A) SONF1-HO alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.





Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	105dB(A) @ 1 metre
Nominal output:	103dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Effective range:	32m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12Vdc; 24V dc
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version:	Part code:
12V dc	SONFL1XDC012[x]/[y]-H
24V dc	SONFL1XDC024[x]/[y]-H
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green M: Magenta, R: Red, Y: Yellow

Alarm sounder:

Version:	Voltage:	Current :
12V dc	10-18V dc	50mA
24V dc	18-30V dc	80mA

Xenon Beacon:

Version:	Voltage:	Current :
12V dc	10-14V dc	500mA
24V dc	20-28V dc	250mA

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- SONF1-HO alarm sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- L101X xenon beacon is VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

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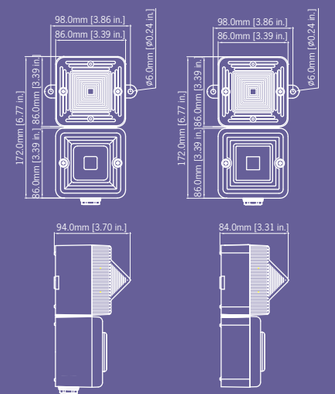
SONFL1H-HO Alarm Sounder & L.E.D. Beacon

The SONFL1H-HO features the 105dB(A) SONF1-HO alarm sounder combined with the L101H high output L.E.D. beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	800/1000Hz @ 0.25 sec Alternating	Tone 8
Tone 2	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 1
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 8
Tone 4	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 9
Tone 5	Bell	Tone 1
Tone 6	800/1000Hz @ 7Hz Sweeping	Tone 8
Tone 7	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 10
Tone 8	1000Hz Continuous - PFEER Toxic Gas	
Tone 9	Continuous 554Hz	
Tone 10	420Hz @ 0.625 sec Australian Alert	

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	105dB(A) @ 1 metre
Nominal output:	103dB(A) @ 1m +/- 3dB - Tone 1
No. of tones:	10 (UKOOA / PFEER compliant)
No. of stages:	2
Effective range:	32m @ 1KHz
Beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light.
General:	
Voltages DC:	12Vdc; 24V dc
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Lens material:	PC
Cable entries:	4 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version:	Part code:
12V dc	SONFL1HDC012[x]/[y]-H
24V dc	SONFL1HDC024[x]/[y]-H
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = L.E.D. colour:	A: Amber, B: Blue, W: Clear (White) G: Green, R: Red

Note: To maximise output in high ambient light environments the SONFL1H-HO uses clear lenses for all L.E.D colours.

Alarm sounder:

Version:	Voltage:	Current :
12V dc	10-18V dc	50mA
24V dc	18-30V dc	80mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Mounting via internal BESA compatible fixing positions or via external mounting lugs.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.

Approvals:

- SONF1-HO sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

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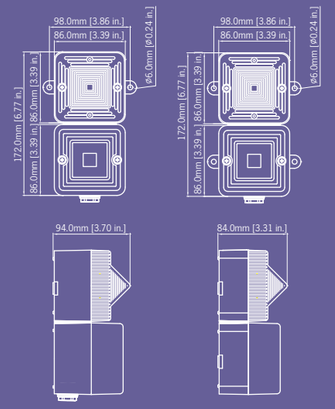
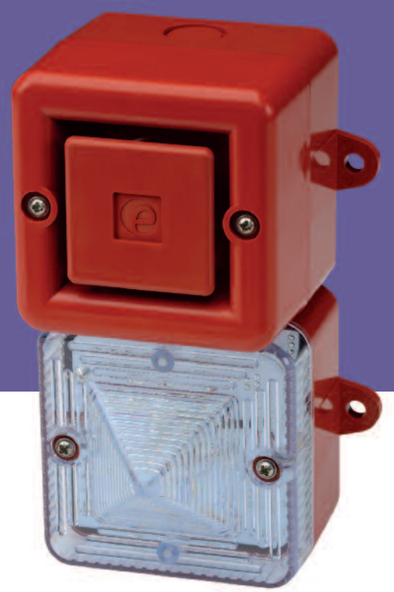
AL100X Alarm Sounder & Xenon Beacon

The AL100X eatures the 104dB(A) A100 alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.





Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	104dB(A) @ 1 metre
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	32m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
[DC units can use 24V ac for single stage applications.]	
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	4 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.46kg AC:0.57kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL100XDC024[x]/[y]
48V dc	AL100XDC048[x]/[y]
24V ac	AL100XAC024[x]/[y]
115V ac	AL100XAC115[x]/[y]
230V ac	AL100XAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green M: Magenta R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

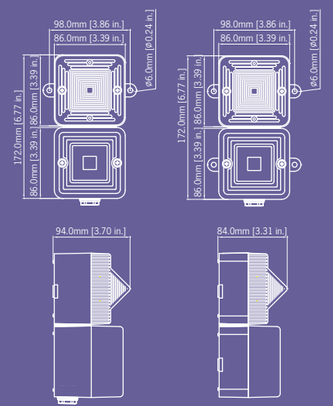
- Alarm sounder (A100) VdS approved to EN54-3 (CPD 89/106/EEC).
- Xenon beacon (L101X) VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL100H Alarm Sounder & L.E.D. Beacon

The AL100H eatures the 104dB(A) A100 alarm sounder combined with the L101H high output L.E.D. beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:

Maximum output:	104dB(A) @ 1 metre
Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	32m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.

Beacon:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light.

General:

Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	4 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.46kg AC:0.57kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL100HDC024[x]/[y]
48V dc	AL100HDC048[x]/[y]
115V ac	AL100HAC115[x]/[y]
230V ac	AL100HAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue. W: White (Clear), G: Green, R: Red,

Note: To maximise output in high ambient light environments the AL100H uses clear lenses for all L.E.D colours.

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

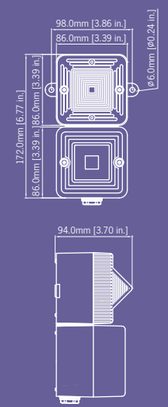
- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL100SONTELFLASH

Telephone Initiated Alarm Sounder & Xenon Beacon

The AL100SONTELFLASH is a compact, high output, 100dB(A) telephone initiated alarm sounder and 5 Joule Xenon beacon.



Specification:

Sounder:	
Nominal output:	100dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	Max. 100dB(A); Min. 90dB(A)
Effective range:	32m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Sounder Supply:	Direct power from telephone line (REN 1)
Beacon Supply:	230V ac (telephone initiated)
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	3 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 2.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.46kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage

Part codes:

Part code:	
AL100SONTELFLASH[x]/[y]	
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green, M: Magenta, R: Red, Y: Yellow

Tones:

Tone 1	Siren Tone
Tone 2	Alternating tone
Tone 3	Sweeping tone

Features:

- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Tropicalisation available on request.

Approvals:

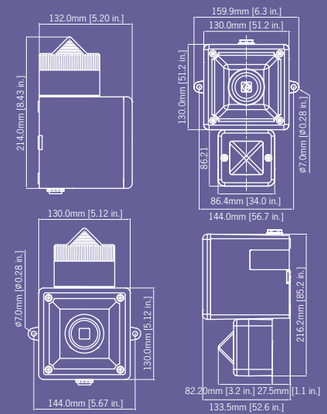
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL105NX Alarm Sounder & Beacon

The AL105NX features the 112dB(A) A105N alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
[DC units can use 24V ac for single stage applications.]	
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.95kg AC:1.20kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL105NXDC024[x]/[y]
48V dc	AL105NXDC048[x]/[y]
24V ac	AL105NXAC024[x]/[y]
115V ac	AL105NXAC115[x]/[y]
230V ac	AL105NXAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, M: Magenta, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-F' for forward facing Xenon beacon.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current :
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

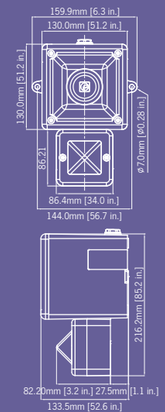
- A105N alarm sounderis VdS approved to EN54-3 (CPD 89/106/EEC).
- Xenon beacon (L101X) VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL105NH Alarm Sounder & L.E.D. Beacon

The AL105NH features the 112dB(A) A105N alarm sounder combined with the L101H high output L.E.D. beacon.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation. The robust, fire retardant IP66 housing ensures the AL105NH is suitable for all general signalling applications.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2*
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light
General:	
Voltages DC:	24V dc (10-30V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 0.95kg AC:1.20kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL105NHDC024[x]/[y]
115V ac	AL105NAHC115[x]/[y]
230V ac	AL105NHAC230[x]/[y]
[x] = Housing colour:	G: Grey, R: Red, W: White
[y] = L.E.D colour:	A: Amber, B: Blue. W: Clear (White) G: Green, R: Red,

Note: To maximise output in high ambient light environments the AL105NH uses clear lenses for all L.E.D colours.

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current :
24V dc		10-30V dc	25mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

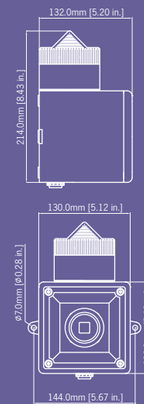
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-B02228

GOST-R

AL105NSONTELFLASH

Telephone Initiated Alarm Sounder & Xenon Beacon

The AL105NSONTELFLASH is a compact, high output, 105dB(A) telephone initiated alarm sounder and 5 Joule Xenon beacon.



Specification:

Sounder:	
Nominal output:	105dB(A) @ 1m +/- 3dB
No. of tones:	3
Volume control:	Max. 105dB(A); Min. 90dB(A)
Effective range:	60m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Opal, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Sounder Supply:	Direct power from telephone line (REN 1)
Beacon Supply:	230V ac (telephone initiated)
Ingress protection:	IP56
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000), grey (RAL7038) & white.
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 2.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	0.95kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Part code:	
AL105NSONTELFLASH[x]/[y]	
[x] = Housing colour:	G: Grey R: Red W: White
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green, M: Magenta, R: Red, Y: Yellow

Tones:

Tone 1	Siren Tone
Tone 2	Alternating tone
Tone 3	Sweeping tone

Features:

- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Tropicalisation available on request.

Approvals:

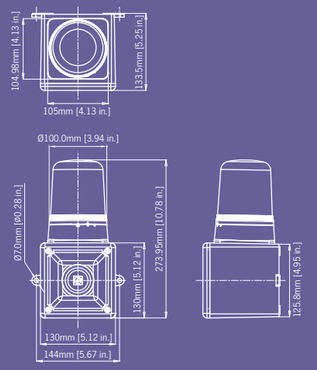
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AB105RTH Alarm Sounder & Rotating Beacon

The AB105RTH combines a compact high output 112dB(A) alarm sounder with a powerful 25W halogen rotating beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Light source:	Halogen Bulb G6,35 / GY6,35.
Light output:	max 25W
Rotation:	180 RPM (+/-30RPM).
Peak Candela:	821 cd
Candela:	125 cd* (effective intensity)
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Drive life:	> 5,000 hrs
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) and grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.00kg AC:1.25kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:	Wattage:
12V dc	AB105RTHDC12[x]/[y]	20W
24V dc	AB105RTHDC24[x]/[y]	20W
115V ac	AB105RTHAC115[x]/[y]	25W
230V ac	AB105RTHAC230[x]/[y]	25W
[x] = Housing colour:	G: Grey R: Red	
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
12/24V dc		10-30V dc	25mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

Rotating beacon:

Version:		Wattage:	Current m:
12V dc		20W	1.72A
24V dc		20W	910mA
115V ac	50/60Hz	25W	216mA
230V ac	50/60Hz	25W	117mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A105N) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

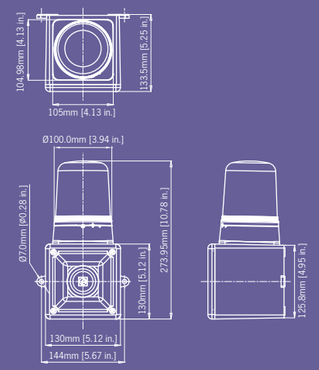
VdS
G205121

CE
0786-CPD-20257

AB105STR Alarm Sounder & Xenon Strobe

The AB105STR combines a compact high output 112dB(A) alarm sounder with a powerful 5J Xenon strobe warning beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	49,788 cd* - measured ref. to I.E.S.
Effective candela:	125 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) and grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm^2 cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.00kg AC:1.25kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	AB105STRDC12[x]/[y]
24V dc	AB105STRDC24[x]/[y]
48V dc	AB105STRDC48[x]/[y]
24V ac	AB105STRAC24[x]/[y]
115V ac	AB105STRAC115[x]/[y]
230V ac	AB105STRAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
12V dc		10-14V dc	25mA*
24V dc		20-28V dc	25mA*
48V dc		42-54V dc	50mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA
24V ac	50/60Hz	+/-10%	40mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA
24V ac	50/60Hz	+/-10%	300mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with synchronised flash.
- Available with multi-frequency function.
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A105N) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

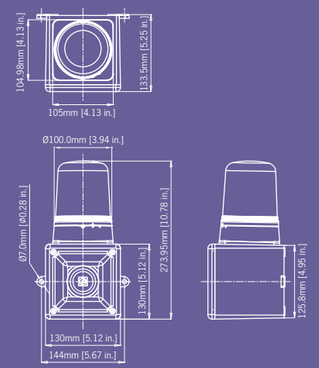
VdS G205121

CE 0786-CPD-20257

AB105LDA Alarm Sounder & L.E.D. Beacon

The AB105LDA combines a compact high output 112dB(A) alarm sounder with a powerful multi-function L.E.D. beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Flash patterns:

Stage 1	Stage2 [DC only]
All L.E.D's on	Alternate Side Flash 2Hz
Rotating: Slow1	Alternate Side Flash 2Hz
Single Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 1	Single Strike Flash 2Hz
Rotating: Slow 2	Double Strike Flash 1Hz
Double Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 2	Double Strike Flash 2Hz
Double Strike Flash 1Hz	Alternate Side Flash 2Hz
Alternate Side Flash 2Hz	Rotating: Fast 2

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative (reverse polarity stage switching on DC units)
Beacon:	
Light source:	Array of 16 multi-function high power L.E.D's
Operating modes:	4 rotating configurations 4 flashing configurations Steady mode for indicator / status applications
Peak candela:	19 cd* - measured ref. to I.E.S.
Effective candela:	19 cd* - measured ref. to I.E.S.
No. of stages:	DC unit also features a remotely selectable 2nd stage flash pattern.
L.E.D /I ens colours:	Amber, Blue, Clear (white L.E.D.s), Green, Red & Yellow
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) and grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage tempe:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.00kg AC:1.25kg

*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AB105LDADC24[x]/[y]
48V dc	AB105LDADC48[x]/[y]
115V ac	AB105LDAAC115[x]/[y]
230V ac	AB105LDAAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] = Lens colour:	A: Amber B: Blue C:Clear G: Green R: Red Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:		Voltage:	Current :
24V dc		10-50V dc	130mA*
48V dc		10-50V dc	130mA*
115V ac	50/60Hz	+/-10%	90mA
230V ac	50/60Hz	+/-10%	50mA

* current at 24V dc

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A105N) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

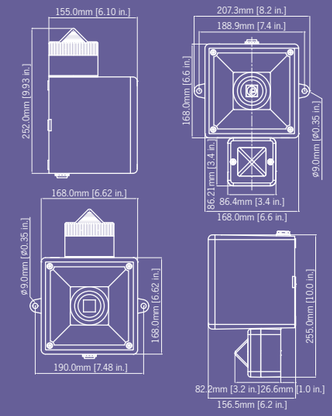
VdS G205121

CE 0786-CPD-20257

AL112NX Alarm Sounder & Xenon Beacon

The AL112NX features the 119dB(A) A112N alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
	[DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.00kg AC:2.30kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	AL112NXDC012[x]/[y]
24V dc	AL112NXDC024[x]/[y]
48V dc	AL112NXDC048[x]/[y]
24V ac	AL112NXAC024[x]/[y]
115V ac	AL112NXAC115[x]/[y]
230V ac	AL112NXAC230[x]/[y]
[x] = Housing colour:	R: Red, G: Grey
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green, M: Magenta R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-F' for forward facing Xenon beacon.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
12/24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

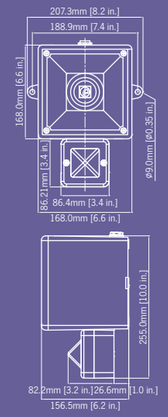
- A112N alarm sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- Xenon beacon (L101X) VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-H0014

GOST-R

AL112NH Alarm Sounder & L.E.D. Beacon

The AL112NH features the 119dB(A) A112N alarm sounder combined with the L101H high output L.E.D. beacon.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate suppli es for independent operation. The robust, fire retardant IP66 housing ensures the AL112NH is suitable for all general signalling applications.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:

Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30Vdc)
Voltages AC:	115V ac; 230V ac
Stage switching:	Negative Reverse polarity stage switching on DC units.

Beacon:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light

General:

Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.00kg AC:2.30kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL112NHDC024[x]/[y]
115V ac	AL112NHAC115[x]/[y]
230V ac	AL112NHAC230[x]/[y]
[x] = Housing colour:	R: Red G: Grey
[y] = Lens colour:	A: Amber, B: Blue. W: Clear (White), G: Green, R: Red

Note: To maximise output in high ambient light environments the AL112NH uses clear lenses for all L.E.D colours.

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

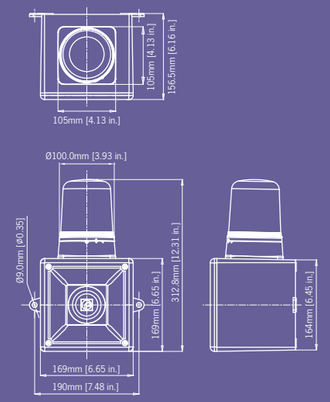
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-B02228

GOST-R

AB112RTH Alarm Sounder & Rotating Beacon

The AB112RTH combines a high output 119dB(A) alarm sounder with a powerful 25W halogen rotating beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min.103dB(A) - Tone 2
Effective range:	125m @ 1KHz
Beacon:	
Light source:	Halogen Bulb G6,35 / GY6,35.
Light output:	max 25W
Rotation:	180 RPM (+/-30RPM).
Peak candela:	821 cd* - measured ref. to I.E.S.
Effective candela:	125 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Drive life:	> 5,000 hrs
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.00kg AC:2.30kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:	Wattage:
12V dc	AB112RTHDC12R/[y]	20W
24V dc	AB112RTHDC24R/[y]	20W
115V ac	AB112RTHAC115R/[y]	25W
230V ac	AB112RTHAC230R/[y]	25W
[y] = Lens colour:		A: Amber B: Blue C:Clear G: Green R: Red Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Rotating beacon:

Version:		Wattage:	Current:
12V dc		20W	1.72A
24V dc		20W	910mA
115V ac	50/60Hz	25W	216mA
230V ac	50/60Hz	25W	117mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A112N) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

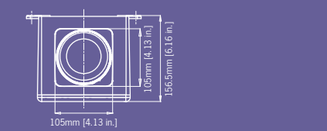
VdS G205121

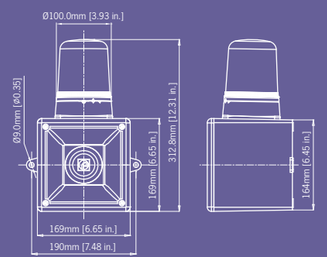
CE 0786-CPD-20257

AB112STR Alarm Sounder & Xenon Strobe

The AB112STR combines a high output 119dB(A) alarm sounder with a powerful 5J Xenon strobe beacon.

The beacon and sounder can be operated from the same power source or controlled individually.





Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min.103dB(A) - Tone 2
Effective range:	125m @ 1KHz

Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak candela:	49,788 cd* - measured ref. to I.E.S.
Effective candela:	125 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes

General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.00kg AC:2.30kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	AB112STRDC12R/[y]
24V dc	AB112STRDC24R/[y]
48V dc	AB112STRDC48R/[y]
115V ac	AB112STRAC115R/[y]
230V ac	AB112STRAC230R/[y]
24V ac	AB112STRAC24R/[y]
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA
24V ac	50/60Hz	+/-10%	500mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA
24V ac	50/60Hz	+/-10%	300mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with synchronised flash.
- Available with multi-frequency function.
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A112N) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

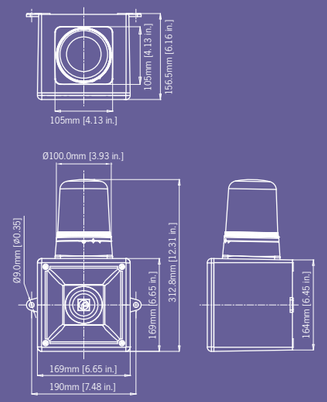
VdS G205121

CE 0786-CPD-20257

AB112LDA Alarm Sounder & L.E.D. Beacon

The AB121LDA combines a heavy duty 126dB(A) alarm sounder with a powerful multi-function L.E.D beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min.112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Beacon:	
Light source:	Array of 32 multi-function high power L.E.D's
Operating modes:	4 rotating configurations
	4 flashing configurations
	Steady mode for indicator / status applications
Peak candela:	19 cd* - measured ref. to I.E.S.
Effective candela:	19 cd* - measured ref. to I.E.S.
No. of stages:	DC unit also features a remotely selectable
	2nd and 3rd stage flash pattern.
L.E.D /lens colours:	Amber, Blue, Clear (white L.E.D.s), Green, Red & Yellow
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lensfixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) & Grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*Candela measurements representative of performance with amber lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AB121LDADC24[x]/[y]
48V dc	AB121LDADC48[x]/[y]
115V ac	AB121LDAAC115[x]/[y]
230V ac	AB121LDAAC230[x]/[y]
[x] = Housing:	G: Grey, R: Red
[y] = Lens:	A: Amber, B: Blue, C: Clear G: Green, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:		Voltage:	Current:
24V dc		10-50V dc	400mA*
48V dc		10-50V dc	400mA*
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	70mA

* current at 24V dc

Flash patterns

Stage 1	Stg2 [DC only]	Stg3 [DC only]
All L.E.D's on	Alt Side Flash 2Hz	2x Flash 2Hz
Rotating: Slow1	Alt Side Flash 2Hz	All L.E.D's on
1x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 1	1x Flash 2Hz	All L.E.D's on
Rotating: Slow 2	2x Flash 1Hz	All L.E.D's on
2x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 2	2x Flash 2Hz	All L.E.D's on
2x Flash 1Hz	Alt Side Flash 2Hz	All L.E.D's on
Alt Side Flash 2Hz	Rotating: Fast 2	All L.E.D's on

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A121) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

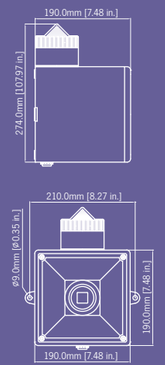
VdS G205121

CE 0786-CPD-20257

AL121X Alarm Sounder & Xenon Beacon

The AL121X features the 126dB(A) A121 alarm sounder combined with the L101X Xenon beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

The 5 Joule Xenon strobe generates over 200 candela of light output. DC versions have multile flash rates selectable udring installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) and grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.30kg AC:2.90kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL121XDC024[x]/[y]
48V dc	AL121XDC048[x]/[y]
24V ac	AL121XAC024[x]/[y]
115V ac	AL121XAC115[x]/[y]
230V ac	AL121XAC230[x]/[y]
[x] = Housing colour:	R: Red, G: Grey
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, G: Green, M: Magenta, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-F' for forward facing Xenon beacon.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
24V ac	50/60Hz	+/-10%	1000mA
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

- Automatic synchronisation on multi-sounder system.
- High output Xenon beacon
- DC voltage units feature multiple flash rates.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- A121 alarm sounder is VdS approved to EN54-3 (CPD 89/106/EEC).
- Xenon beacon (L101X) VdS approved to EN54-23:2010 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL121H Alarm Sounder & L.E.D. Beacon

The AL121H features the 126dB(A) A121 alarm sounder combined with the L101H high output L.E.D. beacon.

The array of 24 Superflux type high output L.E.D's generates over 120 candela of light output and can be user set to either steady of flashing mode. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation. The robust, fire retardant IP66 housing ensures the AL121H is suitable for all general signalling applications.

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:

Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Voltages DC:	24V dc (10-30V dc)
Voltages AC:	115V ac; 230V ac
Stage switching:	Negative Reverse polarity stage switching on DC units.

Beacon:

Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light

General:

Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) and grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.30kg AC:2.90kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AL121HDC024[x]/[y]
115V ac	AL121HAC115[x]/[y]
230V ac	AL121HAC230[x]/[y]
[x] = Housing colour:	R: Red, G: Grey
[y] = Lens colour:	A: Amber, B: Blue, W: Clear (White), G: Green, R: Red

Note: To maximise output in high ambient light environments the AL121H uses clear lenses for all L.E.D colours.

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
24V ac	50/60Hz	+/-10%	1000mA
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Features:

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.
- GOST-R approved. Cert: POCC GB-JB05-B02228

GOST-R

AB121RTH Alarm Sounder & Rotating Beacon

The AB121RTH combines a heavy duty 126dB(A) alarm sounder with a powerful 40W halogen rotating beacon.

The beacon and sounder can be operated from the same power source or controlled individually.

Tone table:

Stage 1	Frequency Description	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert - AS2220	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac. - AS2220	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min.112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Beacon:	
Light source:	Halogen Bulb G6,35 / GY6,35.
Light output:	max 40W
Rotation:	180 RPM (+/-30RPM).
Peak candela:	1,204 cd* - measured ref. to I.E.S.
Effective candela:	325 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Drive life:	> 5,000 hrs
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) & Grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:	Wattage
12V dc	AB121RTHDC12[x]/[y]	35W
24V dc	AB121RTHDC24[x]/[y]	35W
115V ac	AB121RTHAC115[x]/[y]	40W
230V ac	AB121RTHAC230[x]/[y]	40W
[x] = Housing colour:	G: Grey R: Red	
[y] = Lens colour:	A: Amber B: Blue C: Clear G: Green R: Red Y: Yellow	

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
12/24V dc		10-30V dc	950mA*
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

Rotating beacon:

Version:		Wattage:	Current:
12V dc		35W	3.0A
24V dc		35W	1.54A
115V ac	50/60Hz	40W	338mA
230V ac	50/60Hz	40W	186mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A121) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

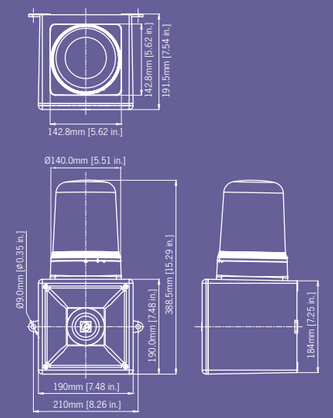
VdS G205121

CE 0786-CPD-20257

AB121STR Alarm Sounder & Xenon Strobe

The AB121STR combines a heavy duty 126dB(A) alarm sounder with a powerful 15J Xenon strobe warning beacon featuring a single, double and triple flash pattern.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert - AS2220	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac. - AS2220	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min.112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Beacon:	
Energy:	15 Joules
Flash pattern 1:	1x flash 15J @ 1Hz
Flash pattern 2:	1x flash 15J @ 1.5Hz
Flash pattern 3:	2 x flash 15J + 15J
Peak Candela:	1,500,000 cd - calc. from energy (J)
Effective candela:	750 cd - calc. from energy (J)
Peak Candela:	94,790 cd* - measured ref. to I.E.S.
Effective candela:	500 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lens fixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) & Grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AB121STRDC24[x]/[y]
48V dc	AB121STRDC48[x]/[y]
115V ac	AB121STRAC115[x]/[y]
230V ac	AB121STRAC230[x]/[y]
[x] = Housing:	G: Grey, R: Red
[y] = Lens:	A: Amber, B: Blue, C:Clear G: Green R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
24V dc		20-28V dc	870mA
48V dc		42-54V dc	480mA
115V ac	50/60Hz	+/-10%	400mA
230V ac	50/60Hz	+/-10%	225mA

* current at 24V dc

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A121) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

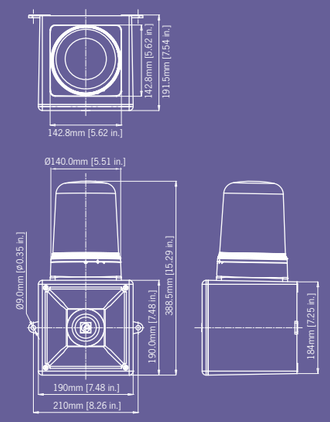
VdS G205121

CE 0786-CPD-20257

AB121LDA Alarm Sounder & L.E.D. Beacon

The AB121LDA combines a heavy duty 126dB(A) alarm sounder with a powerful multi-function L.E.D beacon.

The beacon and sounder can be operated from the same power source or controlled individually.



Tone table:

Stage 1	Frequency Description	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert - AS2220	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac. - AS2220	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	126dB(A) @ 1 metre
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 121dB(A); Min.112dB(A) - Tone 2
Effective range:	300m @ 1KHz
Beacon:	
Light source:	Array of 32 multi-function high power L.E.D's
Operating modes:	4 rotating configurations 4 flashing configurations Steady mode for indicator / status applications
Peak candela:	30 cd* - measured ref. to I.E.S.
Effective candela:	30 cd* - measured ref. to I.E.S.
No. of stages:	DC unit also features a remotely selectable 2nd and 3rd stage flash pattern.
L.E.D /lens colours:	Amber, Blue, Clear (white L.E.D.s), Green, Red & Yellow
General:	
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc)
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP65
Housing material:	High impact UL94 V0 & 5VA FR ABS
Lens material:	UV stable PC UL94 V0 FR Bayonet lensfixing , Anti-tamper locking screw.
Colour:	Red (RAL3000) & Grey (RAL7038)
Cable entries:	2 x M20 clearance gland entries in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*Candela measurements representative of performance with amber lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	AB121LDADC24[x]/[y]
48V dc	AB121LDADC48[x]/[y]
115V ac	AB121LDAAC115[x]/[y]
230V ac	AB121LDAAC230[x]/[y]
[x] = Housing:	G: Grey, R: Red
[y] = Lens:	A: Amber, B: Blue, C: Clear G: Green, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	950mA*
48V dc		35-60V dc	600mA*
115V ac	50/60Hz	+/-10%	240mA
230V ac	50/60Hz	+/-10%	120mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:		Voltage:	Current:
24V dc		10-50V dc	400mA*
48V dc		10-50V dc	400mA*
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	70mA

* current at 24V dc

Flash patterns

Stage 1	Stg2 [DC only]	Stg3 [DC only]
All L.E.D's on	Alt Side Flash 2Hz	2x Flash 2Hz
Rotating: Slow1	Alt Side Flash 2Hz	All L.E.D's on
1x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 1	1x Flash 2Hz	All L.E.D's on
Rotating: Slow 2	2x Flash 1Hz	All L.E.D's on
2x Flash 2Hz	Rotating: Fast 2	All L.E.D's on
Rotating: Fast 2	2x Flash 2Hz	All L.E.D's on
2x Flash 1Hz	Alt Side Flash 2Hz	All L.E.D's on
Alt Side Flash 2Hz	Rotating: Fast 2	All L.E.D's on

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- Alarm sounder (A121) VdS approved to EN54-3 (CPD 89/106/EEC).
- UKOOA/PFEER compliant alarm tones.

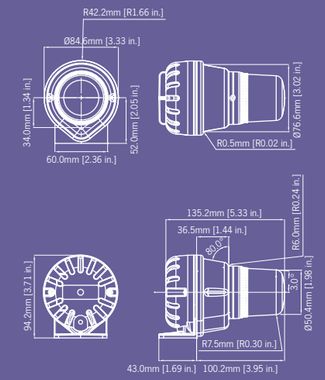
VdS G205121

CE 0786-CPD-20257

H100BX Signal Horn & Xenon Strobe Beacon

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installations. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The H100BX incorporates the H100B with a 1J Xenon strobe beacon. It is available in six lens colours and operatingvoltages from 12V dc to 230V ac.



Part codes:

Version:	Part code:
24V dc/ac	H100BX024G/*
115V ac	H100BX115G/*
230V ac	H100BX230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
24V dc/ac	24V dc	10mA
24V dc/ac	24V ac 50/60Hz	24mA
115V ac	115V ac 50/60Hz	19mA
230V ac	230V ac 50/60Hz	10mA

Beacon current consumption:

Version:	Voltage:	Current:
24V dc/ac	24V dc	82mA
24V dc/ac	24V ac 50/60Hz	145mA
115V ac	115V ac 50/60Hz	30mA
230V ac	230V ac 50/60Hz	20mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Horn:	
No. of tones:	3
Output:	100 dB(A) @ 1m
Beacon:	
Light source:	Xenon Strobe
Energy:	1 Joule (1Ws)
Flash frequency:	0.75 Hz
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Peak Candela:	100,000 cd - calc. from energy (J)
Effective candela:	50 cd - calc. from energy (J)
Peak Candela:	59,155 cd* - measured ref. to I.E.S.
Effective candela:	37 cd* - measured ref. to I.E.S.
General:	
Dimensions:	135.2 x 94.2mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	188g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

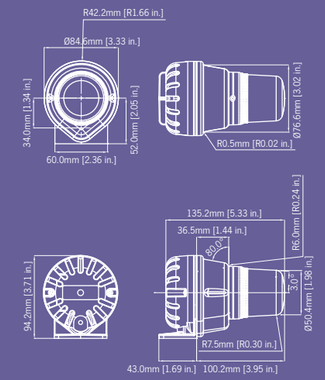
GOST-R

0786-CPD-20338

H100BL Signal Horn & L.E.D. Beacon

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installations. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The H100BL incorporates the H100B with a high output permanent L.E.D. array. It is available in five L.E.D colours and operating voltages from 10V dc to 230V ac.



Part codes:

Version:	Part code:
12-30V dc	H100BL030G/*
90-260V ac/dc	H100BL230G/*
* = Lens colour:	A: Amber, B: Blue, C. Clear, G: Green, R: Red , Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
12-30V dc	12V dc	10mA
12-30V dc	24V dc	24mA
90-260V ac	115V ac 50/60Hz	19mA
90-260V ac	230V ac 50/60Hz	10mA

Beacon current consumption:

Version:	Voltage:	Current:
12-30V dc	12V dc	74mA
12-30V dc	24V dc	80mA
90-260V ac	115V ac 50/60Hz	119mA
90-260V ac	230V ac 50/60Hz	32mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Horn:	
No. of tones:	3
Output:	100 dB(A) @ 1m
Beacon:	
Light source:	9 x High power L.E.D's
Function:	Permanent
Peak candela:	5.5 cd* - measured ref. to I.E.S.
Effective candela:	5.5 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear (White L.E.D), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
General:	
Dimensions:	135.2 x 94.2mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm^2
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	184g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with amber lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

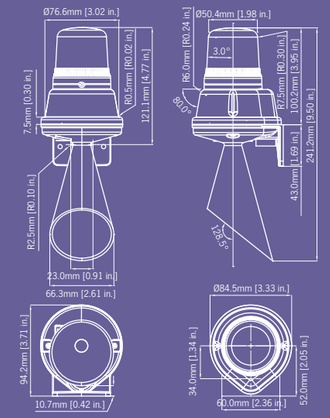
GOST-R

0786-CPD-20338

H100TX Trumpet Horn & Xenon Beacon

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installation types. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The H100TX incorporates the H100T with a 1J Xenon strobe beacon. It is available in six lens colours and operating voltages from 12V dc to 230V ac.



Part codes:

Version:	Part code:
24V dc/ac	H100TX024G/*
115V ac	H100TX115G/*
230V ac	H100TX230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
24V dc/ac	24V dc	10mA
24V dc/ac	24V ac 50/60Hz	24mA
115V ac	115V ac 50/60Hz	19mA
230V ac	230V ac 50/60Hz	10mA

Beacon current consumption:

Version:	Voltage:	Current:
24V dc/ac	24V dc	82mA
24V dc/ac	24V ac 50/60Hz	145mA
115V ac	115V ac 50/60Hz	30mA
230V ac	230V ac 50/60Hz	20mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Horn:	
No. of tones:	3
Output:	100 dB(A) @ 1m
Beacon:	
Light source:	Xenon Strobe
Energy:	1 Joule (1Ws)
Flash frequency:	0.75 Hz
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
Peak Candela:	100,000 cd - calc. from energy (J)
Effective candela:	50 cd - calc. from energy (J)
Peak Candela:	59,155 cd* - measured ref. to I.E.S.
Effective candela:	37 cd* - measured ref. to I.E.S.
General:	
Dimensions:	241.2 x 94.2mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm^2
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	219g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

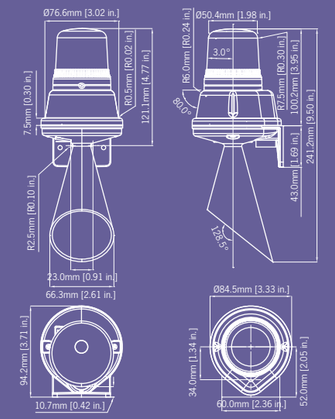
- GOST-R approved.
  Cert: POCC GB-JB05-H00144

GOST-R

H100TL Signal Horn with Trumpet and L.E.D. Beacon

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installations. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The H100TL incorporates the H100T with a high output permanent L.E.D. array. It is available in five L.E.D colours and operating voltages from 10V dc to 230V ac.



Part codes:

Version:	Part code:
12-30V dc	H100TL030G/*
90-260V ac	H100TL230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
12-30V dc	12V dc	10mA
12-30V dc	24V dc	24mA
90-260V ac	115V ac 50/60Hz	19mA
90-260V ac	230V ac 50/60Hz	10mA

Beacon current consumption:

Version:	Voltage:	Current:
12-30V dc	12V dc	74mA
12-30V dc	24V dc	80mA
90-260V ac	115V ac 50/60Hz	119mA
90-260V ac	230V ac 50/60Hz	32mA

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.)

Specification:

Horn:	
No. of tones:	3
Output:	100 dB(A) @ 1m
Beacon:	
Light source:	9 x High power L.E.D's
Function:	Permanent
Peak candela:	5.5 cd* - measured ref. to I.E.S.
Effective candela:	5.5 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear (White L.E.D), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
General:	
Dimensions:	241.2 x 94.2mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	215g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

- GOST-R approved. Cert: POCC GB-JB05-H00144

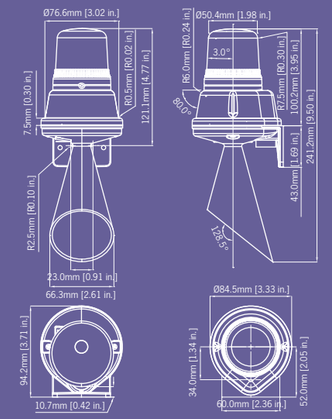
GOST-R

CE

H100TF Trumpet Horn & Filament Lamp Beacon

Rated for continuous use the H100 series is a compact, high output signal suitable for a variety of installations. In addition to the 'buzzer' type sound the unit features a further two alarm sounds.

The H100TF incorporates the H100T with a 5W flashing filament lamp beacon. It is available in six lens colours and operating voltages from 12V dc to 230V ac.



Spare bulb/lamp part codes:

Voltage:	Wattage:	Type:	Part code:
12V dc	5W	BA9s	BR10125B
24V dc	5W	BA9s	BR10245B
115V ac	5W	BA9s	BR101305B
230V ac	5W	BA9s	BR102305B

Tone table:

Stage 1	Frequency Description.
Tone 1	800/1000Hz @ 7Hz Sweeping
Tone 2	Simulated buzzer sound
Tone 3	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
12V dc	H100TF012G/*
24V dc	H100TF024G/*
115V ac	H100TF115G/*
230V ac	H100TF230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
10-30V dc	12V dc	10mA
10-30V dc	24V dc	24mA
115V ac	115V ac 50/60Hz	19mA
230V ac	230V ac 50/60Hz	10mA

Beacon current consumption:

Version:	Voltage:	Current:
12V dc		500mA
24V dc		250mA
115V ac	50/60Hz	35mA
230V ac	50/60Hz	25mA

Specification:

Horn:	
No. of tones:	3
Output:	100 dB(A) @ 1m
Beacon:	
Light source:	Filament lamp BA9s
Light output:	5W
Flash frequency:	1Hz
Effective candela:	2cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
General:	
Dimensions:	241.2 x 94.2mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	219g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

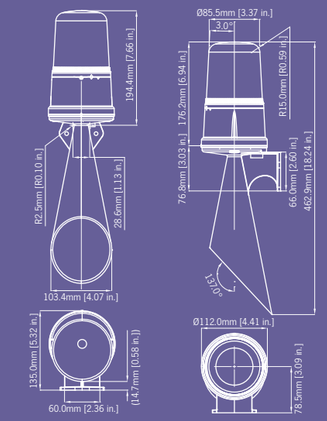
- GOST-R approved.
  Cert: POCC GB-JB05-H00144

GOST-R

H110TR Trumpet Horn & Rotating Beacon

The H110T is a very high output electronic signal horn capable of generating a traditional 'buzzer' warning tone traditionally associated with electro-mechanical signals.

The H110TR incorporates the H110T with a halogen rotating beacon. It is available in six lens colours and operating voltages from 12V dc to 230V ac.



Spare bulb/lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	20W	G6,35/GY6,35	BJC20W12VCL
24V dc	20W	G6,35/GY6,35	BJC20W24VCL
115V ac	25W	G6,35/GY6,35	BJCD25W120VCL
230V ac	25W	G6,35/GY6,35	BJCD25W230VCL

Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Wattage:	Part code:
12V dc	20W	H110TR012G/*
24V dc	20W	H110TR024G/*
115V ac	25W	H110TR115G/*
230V ac	25W	H110TR230G/*
* = Lens colour:		A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
12V dc	12V dc	52mA
24V dc	24V dc	105mA
115V ac	115V ac 50/60Hz	36mA
230V ac	230V ac 50/60Hz	18mA

Beacon current consumption:

Version:	Voltage:	Current:
12V dc	12V dc	1.72A
24V dc	24V dc	910mA
115V ac	115V ac 50/60Hz	216mA
230V ac	230V ac 50/60Hz	117mA

Specification:

Horn:	
No. of tones:	3
Output:	110 dB(A) @ 1m
Stages:	Remotely selectable second stage
Beacon:	
Light source:	Halogen Lamp G6,35/GY6,35
Light output:	20/25W
Peak Candela:	821 cd
Effective candela:	125cd* - measured ref. to I.E.S.
Rotation speed:	180RPM (+/-30RPM)
Drive life:	>5,000 hrs
Duty cycle:	100%
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Plain
General:	
Dimensions:	462.9 x 135mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	678g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

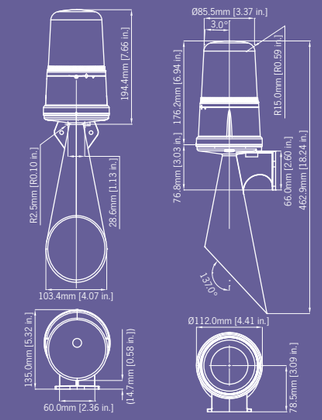
- GOST-R approved.
  Cert: POCC GB-JB05-H00144

GOST-R

H110TX Trumpet Horn & Xenon Strobe Beacon

The H110T is a very high output electronic signal horn capable of generating a traditional 'buzzer' warning tone traditionally associated with electro-mechanical signals.

The H110TX incorporates the H110T with a 5 Joule Xenon strobe beacon. It is available in six lens colours and operating voltages from 12V dc to 230V ac.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

Version:	Part code:
12V dc/ac	H110TX012G/*
24V dc/ac	H110TX024G/*
48V dc/ac	H110TX048G/*
115V ac	H110TX115G/*
230V ac	H110TX230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, M: Magenta, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
12V dc/ac	12V dc	52mA
12V dc/ac	12V ac 50Hz	115mA
24V dc/ac	24V dc	105mA
24V dc/ac	24V ac 50Hz	215mA
48V dc/ac	48V dc	42mA
48V dc/ac	48V ac 50Hz	68mA
115V ac	115V ac 50/60Hz	36mA
230V ac	230V ac 50/60Hz	18mA

Beacon current consumption:

Version:	Voltage:	Current:
12V dc/ac	12V dc	500mA
12V dc/ac	12V ac 50Hz	600mA
24V dc/ac	24V dc	250mA
24V dc/ac	24V ac 50Hz	300mA
48V dc/ac	48V dc	175mA
48V dc/ac	48V ac 50Hz	250mA
115V ac	115V ac 50/60Hz	70mA
230V ac	230V ac 50/60Hz	35mA

Specification:

Horn:	
No. of tones:	3
Output:	110 dB(A) @ 1m
Stages:	Remotely selectable second stage
Beacon:	
Light source:	Xenon Strobe
Energy:	5 Joules (5Ws)
Flash frequency:	1Hz
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	49,788 cd* - measured ref. to I.E.S.
Effective candela:	125 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Lens type:	Prismatic (default) or plain
General:	
Dimensions:	462.9 x 135mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 2.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	638g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.

Approvals:

- GOST-R approved.
  Cert: POCC GB-JB05-H00144

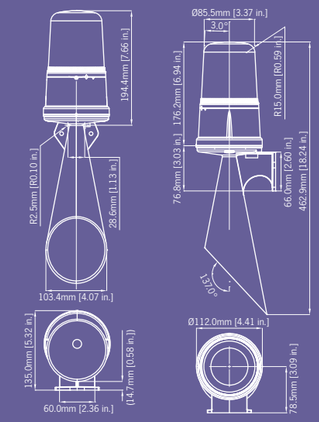
GOST-R

H110TL Trumpet Horn & L.E.D. Beacon

The H110T is a very high output electronic signal horn capable of generating a traditional 'buzzer' warning tone traditionally associated with electro-mechanical signals.

With an output of 110dB(A) the H110T is ideal for all general signalling applications and the ingress protection rating of IP65 means it is suitable for indoor and outdoor installations.

The H110TL incorporates the H110T with a multi-function L.E.D beacon. It is available in five L.E.D colours and operating voltages from 10V dc to 230V ac.



Tone table:

Stage 1	Frequency Description.	Stage 2
Tone 1	Electro-mechanical diaphragm horn sound	Tone 2
Tone 2	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 1
Tone 3	800/1000Hz @ 7Hz Sweeping	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request.

Flash patterns:

Stage 1	Stage2 [DC only]
All L.E.D's on	Alternate Side Flash 2Hz
Rotating: Slow1	Alternate Side Flash 2Hz
Single Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 1	Single Strike Flash 2Hz
Rotating: Slow 2	Double Strike Flash 1Hz
Double Strike Flash 2Hz	Rotating: Fast 2
Rotating: Fast 2	Double Strike Flash 2Hz
Double Strike Flash 1Hz	Alternate Side Flash 2Hz
Alternate Side Flash 2Hz	Rotating: Fast 2

Part codes:

Version:	Part code:
10-30V dc	H110TL030G/*
48V dc	H110TL048G/*
90-260V ac	H110TL230G/*
* = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Horn current consumption:

Version:	Voltage:	Current:
10-30V dc	12V dc	52mA
10-30V dc	24V dc	105mA
48V dc	48V dc	42mA
90-260V ac/dc	115V dc	16mA
90-260V ac/dc	230V dc	8mA
90-260V ac/dc	115V ac 50/60Hz	36mA
90-260V ac/dc	230V ac 50/60Hz	18mA

Beacon current consumption:

Version:	Voltage:	Current:
10-30V dc	12V dc	265mA
10-30V dc	24V dc	130mA
48V dc	48V dc	70mA
90-260V ac/dc	115V dc	17mA
90-260V ac/dc	230V dc	9mA
90-260V ac/dc	115V ac 50/60Hz	90mA
90-260V ac/dc	230V ac 50/60Hz	50mA

Specification:

Horn:	
No. of tones:	3
Output:	110 dB(A) @ 1m
Stages:	Remotely selectable second stage
Beacon:	
Light source:	16 x High power L.E.D's
Peak candela:	19 cd* - measured ref. to I.E.S.
Effective candela:	19 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear (White L.E.D), Green, Red & Yellow
Lens type:	Prismatic (default) or plain
General:	
Dimensions:	462.9 x 135mm
Mounting:	Surface mount
Entries:	1 x 5-7mm push through grommet
Ingress protection:	IP65
Housing material:	High impact ABS (UL94V0 & 5VA)
Lens material:	High impact PC (UL94V0 f1)
Terminals:	0.5 to 1.5mm²
Operating temp:	-25 to +50°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight:	606g

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

- Volume control.
- Stainless steel fixings.
- Bayonet fixing lens.
- Anti-tamper locking screw.
- Multi-functional: 9 user selectable flash patterns.
  - 4 rotating configurations
  - 4 flashing configurations
  - Steady mode for indicator / status applications
- The DC unit also features a remotely selectable 2nd stage flash pattern.

Approvals:

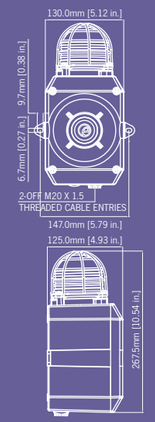
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

CE

DL105X Alarm Sounder & Xenon Beacon

The DL105X is a high output, 112dB(A) alarm sounder with integrated Xenon beacon. Low current consumption and high SPL in a robust IP66 housing ensure the DL105X is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12V dc; 24V dc; 48V dc
[DC units can use 24V ac for single stage applications.]	
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries supplied with one stoppoing plug
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.35kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	DL105XD0C24[x]/[y]
24V dc	DL105XDC024[x]/[y]
48V dc	DL105XDC048[x]/[y]
24V ac	DL105XAC024[x]/[y]
115V ac	DL105XAC115[x]/[y]
230V ac	DL105XAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] - Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
12V dc		10-30V dc	25mA*
24V dc		10-30V dc	25mA*
48V dc		35-60V dc	50mA*
24V ac	50/60Hz	+/-10%	40mA
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	380mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

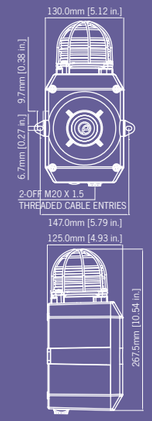
- High output, up to 112dB(A) SPL.
- 3 remotely selectable alarm stages.
- Choice of 32 alarm tone frequencies.
- Automatic synchronisation on multi-sounder system.
- 5 Joule, 200 candela Xenon beacon.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

DL105H Alarm Sounder & L.E.D. Beacon

The DL105H is a high output, 112dB(A) alarm sounder with integrated L.E.D. beacon. Low current consumption and high SPL in a robust IP66 housing ensure the DL105H is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	(Stage 2)	(Stage 3)
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	112dB(A) @ 1 metre
Nominal output:	105dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	32 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 105dB(A); Min. 96dB(A) - Tone 2
Effective range:	60m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Light source:	High intensity L.E.D. array 24 x Superflux type high output L.E.D's
Flash options:	Steady or 2Hz flash mode (on board select)
Effective candela:	176 cd (Green L.E.D.)
L.E.D. colours:	Amber, Blue, White, Green & Red
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.
General:	
Voltages DC:	24V dc (12-30V dc); 48V dc (35-60V dc)
[DC units can use 24V ac for single stage applications.]	
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries
	supplied with one stoppoing plug
Terminals:	0.5 to 1.5mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.35kg

Part codes:

Version:	Part code:
24V dc	DL105HDC024[x]/[y]
48V dc	DL105HDC048[x]/[y]
115V ac	DL105HAC115[x]/[y]
230V ac	DL105HAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] - L.E.D. colour:	A: Amber, B: Blue, W: White, G: Green, R: Red

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Note: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		12-30V dc	25mA*
48V dc		35-60V dc	50mA*
115V ac	50/60Hz	+/-10%	20mA
230V ac	50/60Hz	+/-10%	15mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:		Voltage:	Current:
24V dc		12-30V dc	157mA
48V dc		35-60V dc	55mA
115V ac	50/60Hz	+/-10%	60mA
230V ac	50/60Hz	+/-10%	35mA

Features:

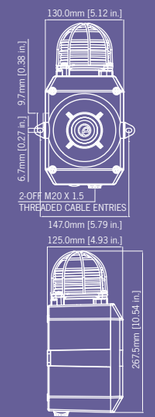
- High output, up to 112dB(A) SPL.
- 3 remotely selectable alarm stages.
- Choice of 32 alarm tone frequencies.
- Automatic synchronisation on multi-sounder system.
- High intensity 120 candela L.E.D. array .
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

DL112X Alarm Sounder & Xenon Beacon

The DL112X is a high output, 119dB(A) alarm sounder with integrated Xenon beacon. Low current consumption and high SPL in a robust IP66 housing ensure the DL112X is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12Vdc; 24V dc; 48V dc [24V dc units can use 24V ac for single stage applications].
Voltages AC:	24V ac; 115V ac; 230V ac
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries supplied with one stoppoing plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.80kg AC:3.10kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	DL112XDC012[x]/[y]
24V dc	DL112XDC024[x]/[y]
48V dc	DL112XDC048[x]/[y]
24V ac	DL112XAC024[x]/[y]
115V ac	DL112XAC115[x]/[y]
230V ac	DL112XAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] - Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Alarm sounder:

Version:		Voltage:	Current:
12V dc		10-30V dc	200mA*
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	380mA
24V dc		20-28V dc	250mA
48V dc		42-54V dc	175mA
24V ac	50/60Hz	+/-10%	300mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

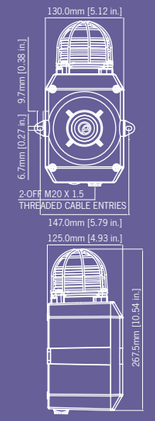
- High output, up to 119dB(A) SPL.
- 3 remotely selectable alarm stages.
- Choice of 45 alarm tone frequencies.
- Automatic synchronisation on multi-sounder system.
- 5 Joule, 200 candela Xenon beacon.
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

DL112H Alarm Sounder & L.E.D. Beacon

The DL112H is a high output, 119dB(A) alarm sounder with integrated L.E.D. beacon. Low current consumption and high SPL in a robust IP66 housing ensure the DL112H is suitable for all general signalling applications including fire, security and process control. The corrosion proof, marine grade aluminium die cast enclosure is phosphated and powder coated providing resilience in the harshest of industrial environments.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Stage switching:	Negative Reverse polarity stage switching on DC units.
Beacon:	
Light source:	High intensity L.E.D. array 24 x Superflux type high output L.E.D's
Flash options:	Steady or 2Hz flash mode (on board select)
Effective candela:	176 cd (Green L.E.D.)
L.E.D. colours:	Amber, Blue, White, Green & Red
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.
General:	
Voltages DC:	24V dc (12-30V dc); 48V dc (35-60V dc) [24V dc units can use 24V ac for single stage applications].
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66, Type 4 / 4X / 3R
Housing material:	Marine grade aluminium A1 Si12 Cu
Colour:	Red (RAL3000), grey (RAL7038)
Cable entries:	2 x M20 x 1.5mm threaded gland entries supplied with one stopping plug
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.80kg AC:3.10kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
24V dc	DL112HDC024[x]/[y]
48V dc	DL112HDC048[x]/[y]
115V ac	DL112HAC115[x]/[y]
230V ac	DL112HAC230[x]/[y]
[x] = Housing colour:	G: Grey R: Red
[y] - L.E.D. colour:	A: Amber, B: Blue, W: White, G: Green, R: Red

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.
Suffix part number with '-UL' for UL approved version.

Lens colour: All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		12-30V dc	200mA*
48V dc		35-60V dc	120mA*
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

L.E.D. beacon:

Version:		Voltage:	Current:
24V dc		12-30V dc	157mA
48V dc		35-60V dc	55mA
115V ac	50/60Hz	+/-10%	60mA
230V ac	50/60Hz	+/-10%	35mA

Features:

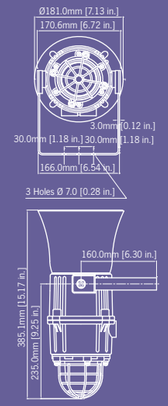
- High output, up to 119dB(A) SPL.
- 3 remotely selectable alarm stages.
- Choice of 45 alarm tone frequencies.
- Automatic synchronisation on multi-sounder system.
- High intensity 120 candela L.E.D. array .
- Continuously rated.
- Stainless steel fixings.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

Approvals:

- UKOOA/PFEER compliant alarm tones.
- UL approved version available.

MCA112-05 Alarm Sounder & Xenon Beacon

The MCA112-05 combines a high output, 119dB(A) alarm sounder with a 5 Joule Xenon beacon. With a robust, fire retardant, IP66 & IP67 housing, the MCA112-05 is particularly suitable for harsh environments with high ambient noise levels. The sounder & beacon can be operated individually or simultaneously.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or positive Reverse polarity stage switching on DC units.
Beacon:	
Energy:	5 Joules(5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	16,428 cd* - measured ref. to I.E.S.
Effective candela:	51 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Weight :	DC: 3.00kg AC:3.50kg

*Candela measurements representative of performance with clear lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	MCA11205DC12G-xx
24V dc	MCA11205DC24G-xx
48V dc	MCA11205DC48G-xx
24V ac	MCA11205AC24G-xx
115V ac	MCA11205AC115G-xx
230V ac	MCA11205AC230G-xx
[xx] = Lens colour:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

Xenon beacon:

Version:		Voltage:	Current:
12V dc		10-14V dc	550mA
24V dc		20-28V dc	300mA
48V dc		42-54V dc	180mA
24V ac	50/60Hz	+/-10%	350mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Features:

- Automatic synchronisation on multi-sounder system.
- Automatic synchronised flash, or Flip-Flop alternating mode.
- Xenon tube mechanically secured against vibration.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations. (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

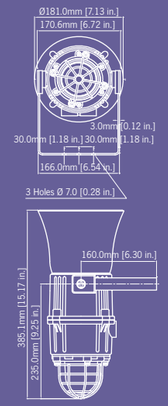
Approvals:

- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

MCA112-L1 Alarm Sounder & L.E.D. Beacon

The MCA112-L1 combines a high output, 119dB(A) alarm sounder with a multi-function L.E.D. beacon. With a robust, fire retardant, IP66 & IP67 housing, the MCA112-L1 is particularly suitable for harsh environments with high ambient noise levels. The sounder & beacon can be operated individually or simultaneously.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Sounder:	
Maximum output:	119dB(A) @ 1 metre
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	45 (UKOOA / PFEER compliant)
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 100dB(A) - Tone 2
Effective range:	125m @ 1KHz
Voltages DC:	24V dc (10-30V dc); 48V dc (35-60V dc) [DC units can use 24V ac for single stage applications.]
Voltages AC:	24V ac; 115V ac; 230V ac
Stage switching:	Negative or positive Reverse polarity stage switching on DC units.
L.E.D. Beacon:	
Light source:	Array of 32 high output L.E.D.s
Peak candela:	11 cd* - measured ref. to I.E.S.
Effective candela:	11 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear (white L.E.D.s) Green, Red & Yellow
Voltages DC:	10-50V dc
Voltages AC:	24V ac;115V ac; 230V ac
General:	
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 3.00kg AC:3.50kg

*Candela measurements representative of performance with red lens at optimum voltage.
*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version:	Part code:
12V dc	MCA112L1DC12G-xx
24V dc	MCA112L1DC24G-xx
48V dc	MCA112L1DC48G-xx
24V ac	MCA112L1AC24G-xx
115V ac	MCA112L1AC115G-xx
230V ac	MCA112L1AC230G-xx
[xx] = L.E.D. / Lens colour:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Suffix part number with '-P' for programmable, 4 stage, 45 tone version.

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	200mA*
48V dc		35-60V dc	120mA*
24V ac	50/60Hz	+/-10%	500mA
115V ac	50/60Hz	+/-10%	100mA
230V ac	50/60Hz	+/-10%	60mA

* current at nominal voltage on Tone 2

L.E.D.:

Version:		Voltage:	Current:
12V dc		10-50V dc	760mA
24V dc		10-50V dc	400mA
48V dc		10-50V dc	210mA
24V ac	50/60Hz	+/-10%	380mA
115V ac	50/60Hz	+/-10%	135mA
230V ac	50/60Hz	+/-10%	65mA

Features:

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations. (in & out for daisy-chain installations).
- Tropicalisation available on request.
- Available with custom tone configurations and frequencies.
- 'Programmable' version available:
  - 45 alarm tones
  - 4 remotely selectable stages
  - Any tone can be assigned to any stage
  - User configurable continuous frequency tone

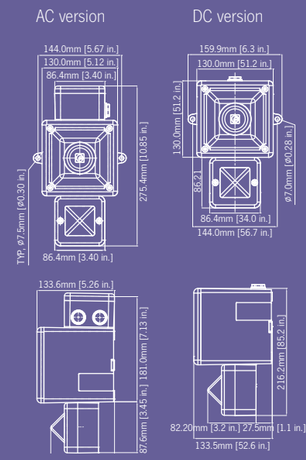
Approvals:

- UKOOA/PFEER compliant alarm tones.
- GOST-R approved. Cert: POCC GB-JB05-H00144

GOST-R

AL105NAXX User recordable Alarm Horn & Xenon Strobe

The AL105NAXX Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a Xenon strobe. The AL105NAXX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

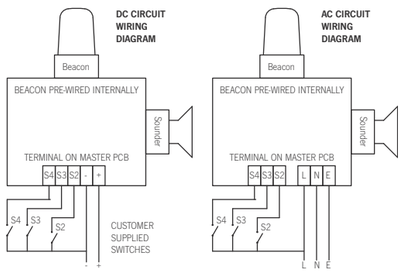
Part codes:

Version:	Voltage:	Part code:
Alarm Xenon	12V dc	AL105NAXXDC012[x]/[y]-UL
Alarm+Xenon	24V dc	AL105NAXXDC024[x]/[y]-UL
Alarm+Xenon	115V ac	AL105NAXXAC115[x]/[y]-UL
Alarm+Xenon	230V ac	AL105NAXXAC230[x]/[y]-UL
[x] = Housing colour:		G: Grey R: Red W: White
[y] = Xenon Lens colour:		A: Amber, B: Blue, C: Clear, G: Green, M: Magenta, R: Red, Y: Yellow

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+Xenon	12V dc	10-14V dc	756mA*
Alarm+Xenon	24V dc	20-28V dc	506mA*
Alarm+Xenon	115V ac 50/60Hz	+/-10%	212mA*
Alarm+Xenon	230V ac 50/60Hz	+/-10%	174mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:	
Voice output:	101dB(A) @ 1 metre
Music output:	102dB(A) @ 1 metre
Alarm output:	110dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	60m @ 1KHz
Xenon beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 1.00kg AC: 1.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

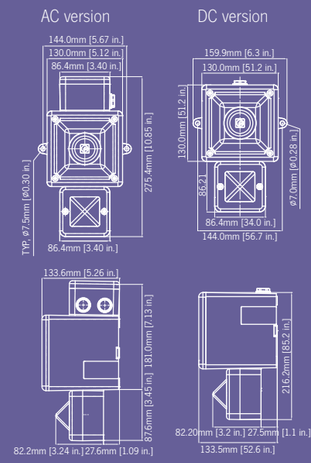
The AL105NAXX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL105NAXX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- 5J Xenon strobe beacon capable of 200cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

AL105NAXH User recordable Alarm Horn & L.E.D. Strobe

The AL105NAXH Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a high output L.E.D. beacon. The AL105NAXH records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

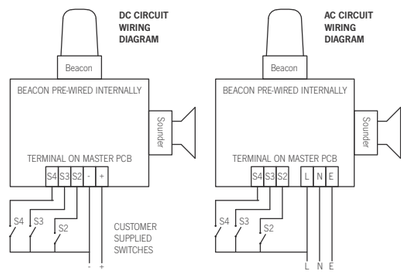
Version:	Voltage:	Part code:
Alarm+L.E.D. UL	10-30V dc	AL105NAXHDC024[x]/[y]-
Alarm+L.E.D. UL	90-260V ac	AL105NAXHAC230[x]/[y]-
[x] = Housing colour:		G: Grey R: Red W: White
[y] = L.E.D colour:		A: Amber B: Blue W: White
		G: Green R: Red

All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+L.E.D.	DC	10-30Vdc	413mA*
Alarm+L.E.D.	AC 50/60Hz	90-260V ac	159mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:

Voice output:	101dB(A) @ 1 metre
Music output:	102dB(A) @ 1 metre
Alarm output:	110dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	60m @ 1KHz
L.E.D. beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high output L.E.D's
Options:	Steady or 2Hz flash mode (on board select)
Effective candela:	176 cd (Green L.E.D.)
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 1.00kg AC: 1.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

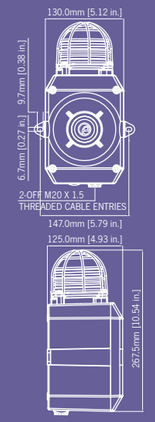
The AL105NAXH Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL105NAX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- L.E.D. beacon with an output of 120cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

DL105AXX User recordable Alarm Horn & Xenon Strobe

The DL105AXX Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a Xenon strobe. The DL105AXX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

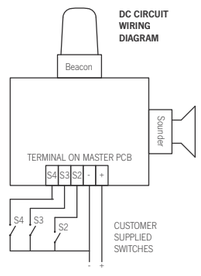
Part codes:

Version:	Voltage:	Part code:
Alarm+Xenon	12V dc	DL105AXXDC012[x]/[y]-UL
Alarm+Xenon	24V dc	DL105AXXDC024[x]/[y]-UL
[x] = Housing colour:		G: Grey R: Red W: White
[y] = Xenon Lens colour:		A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+Xenon	12V dc	10-14V dc	756mA*
Alarm+Xenon	24V dc	20-28V dc	506mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:	
Voice output:	101dB(A) @ 1 metre
Music output:	102dB(A) @ 1 metre
Alarm output:	110dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	60m @ 1KHz
Xenon beacon:	
Energy:	5 Joules (5Ws)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Candela:	200 cd* (effective intensity)
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	Marine grade aluminium A1 Si12 Cu
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 x 1.5mm threaded gland entries. Supplied with one stopping plug.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	2.10kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

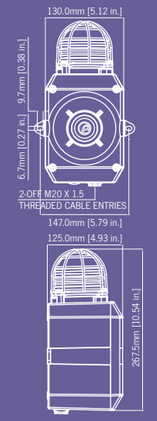
The DL105AXX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL105NAX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- 5J Xenon strobe beacon capable of 200cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

DL105AXH User recordable Alarm Horn & L.E.D. Beacon

The DL105AXH Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a high output L.E.D. beacon. The DL105AXH records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

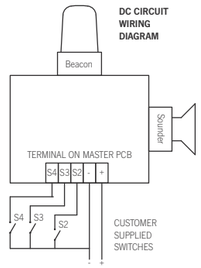
Version:	Voltage:	Part code:
Alarm+L.E.D.	10-30V dc	DL105AXHDC024[x]/[y]-UL
[x] = Housing colour:		G: Grey R: Red W: White
[y] = L.E.D colour:		A: Amber B: Blue W: White G: Green R: Red

All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+L.E.D.	DC	10-30Vdc	413mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:	
Voice output:	101dB(A) @ 1 metre
Music output:	102dB(A) @ 1 metre
Alarm output:	110dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	60m @ 1KHz
L.E.D. beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high output L.E.D's
Options:	Steady or 2Hz flash mode (on board select)
Effective candela:	176 cd (Green L.E.D.)
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	Marine grade aluminium A1 Si12 Cu
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 x 1.5mm threaded gland entries. Supplied with one stopping plug.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	2.10kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Features:

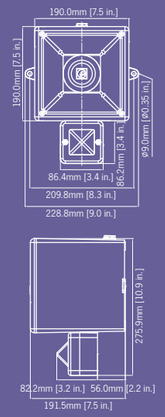
The DL105AXH Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 102dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 110dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL105NAX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- L.E.D. beacon with an output of 120cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

AL121AXX User recordable Alarm Horn & Xenon Strobe

The AL121AXX Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a Xenon strobe. The AL121AXX records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory without any intermediate analogue to digital conversion.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

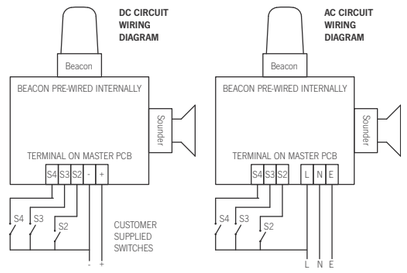
Part codes:

Version:	Voltage:	Part code:
Alarm+Xenon	24V dc	AL121AXXDC024[x]/[y]-UL
Alarm+Xenon	115V ac	AL121AXXAC115[x]/[y]-UL
Alarm+Xenon	230V ac	AL121AXXAC230[x]/[y]-UL
[x] = Housing colour:		G: Grey R: Red W: White
[y] = Xenon Lens colour:		A: Amber B: Blue C: Clear G: Green M: Magenta R: Red Y: Yellow

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+Xenon	24V dc	20-28V dc	1.76A*
Alarm+Xenon	115V ac 50/60Hz	+/-10%	602mA*
Alarm+Xenon	230V ac 50/60Hz	+/-10%	552mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:	
Voice output:	111dB(A) @ 1 metre
Music output:	112dB(A) @ 1 metre
Alarm output:	126dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	300m @ 1KHz
Xenon beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 1.00kg AC: 1.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

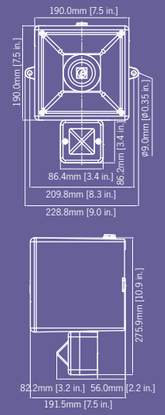
The AL121AXX Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 112dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 126dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL121AXX units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- 5J Xenon strobe beacon capable of 200cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

AL121AXH User recordable Alarm Horn & L.E.D. Beacon

The AL121AXH Appello X is the next generation of user recordable alarm sounder, capable of storing up to 2 minutes of content, combined with a high output L.E.D. beacon. The AL121AXH records, stores and plays back with unsurpassed clarity, user defined voice messages, music or sounds stored directly to non-volatile memory without any intermediate analogue to digital conversion.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3	Stage 4
Tone 1	340 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5	Tone 29
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5	Tone 29
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5	Tone 29
Tone 5	2400Hz Continuous	Tone 3	Tone 20	Tone 29
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5	Tone 29
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5	Tone 29
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2	Tone 29
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5	Tone 29
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5	Tone 29
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5	Tone 29
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5	Tone 29
Tone 15	800Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5	Tone 29
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27	Tone 29
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5	Tone 29
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5	Tone 29
Tone 20	660Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5	Tone 29
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5	Tone 29
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5	Tone 29
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5	Tone 29
Tone 26	Bell	Tone 2	Tone 15	Tone 29
Tone 27	554Hz Continuous	Tone 26	Tone 5	Tone 29
Tone 28	440Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5	Tone 29
Tone 30	300Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5	Tone 29
Tone 32	Two tone chime.	Tone 26	Tone 15	Tone 29
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5	Tone 29
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45	Tone 29
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5	Tone 29
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5	Tone 29
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45	Tone 29
Tone 38	2000Hz Continuous	Tone 34	Tone 45	Tone 29
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17	Tone 29
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27	Tone 29
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5	Tone 29
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5	Tone 29
Tone 43	1200 Hz Continuous	Tone 2	Tone 5	Tone 29
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5	Tone 29
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34	Tone 29

Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

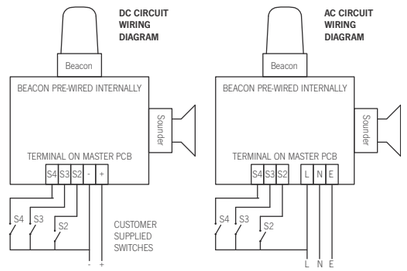
Version:	Voltage:	Part code:
Alarm+L.E.D.	10-30V dc	AL121AXHDC024[x]/[y]-UL
Alarm+L.E.D.	90-260V ac	AL121AXHAC230[x]/[y]-UL
[x] = Housing colour:		G: Grey R: Red W: White
[y] = L.E.D colour:		A: Amber B: Blue C: Clear (White) G: Green R: Red

All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light levels.

Current consumption:

Version:	Voltage:	Range:	Current:
Alarm+L.E.D.	DC	10-30Vdc	1.67A*
Alarm+L.E.D.	AC 50/60Hz	90-260V ac	567mA*

* current at nominal voltage on Tone 1



Specification:

Alarm sounder:

Voice output:	111dB(A) @ 1 metre
Music output:	112dB(A) @ 1 metre
Alarm output:	126dB(A) @ 1 metre
Alarm tones:	x 45 (UKOOA/PFEER compliant)
Messages:	x 4 (30 seconds each)
Controls:	Independent volume controls for user content and alarm tones
Effective range:	300m @ 1KHz
L.E.D. beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high output L.E.D's
Options:	Steady or 2Hz flash mode (on board select)
Effective candela:	176 cd (Green L.E.D.)
General:	
Ingress protection:	Type 4 / 4X / 3R / 13, IP66
Rating:	Continuous
Housing material:	UL94V0 & 5VA FR ABS
Housing colour:	RAL3000 Red, RAL7038 Grey and White
Fixings:	Stainless Steel
Cable entries:	2 x M20 clearance gland entries. Custom configurations also available.
Terminals:	0.5 to 2.5mm²
Operating temp:	-25° to +55°C
Storage temp:	-40° to +70°C
Relative humidity:	90% at 20°C
Weight :	DC: 1.00kg AC: 1.20kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Features:

The AL121AXH Appello user recordable unit enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL's of up to 112dB(A) at 1 metre. This content can be reproduced rep eatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 126dB(A) at 1 metre.

For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other AL121AXH units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable.

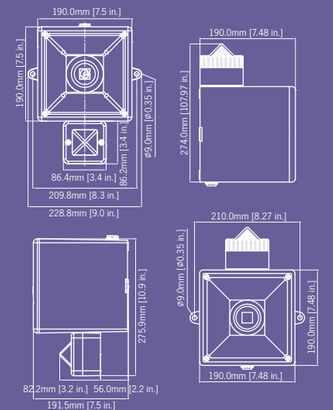
- Direct content storage on non-volatile memory.
- CD quality reproduction.
- Message length: 4 x 30 seconds
- Easy message creation with built in microphone or line-in audio input.
- Volume controls for user content and alarm tones.
- Available with custom tone configurations and frequencies.
- L.E.D. beacon with an output of 120cd*.
- Factory programming of user supplied content also available.
- UL approved for general signalling use.

HAL121X Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 121dB(A) at 1 metre the HAL121X surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Specification:

Hootronic Sounder:	
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) approx.
Effective range:	300m @ 1KHz
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	86,935 cd* - measured ref. to I.E.S.
Effective candela:	200 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP56
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.30kg AC:2.90kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version	Part code:
12V dc	HAL121XDC012[x]/[y][
24V dc	HAL121XDC024[x]/[y]
115V ac	HAL121XAC115[x]/[y]
230V ac	HAL121XAC230[x]/[y]
[x] = Housing colour:	R: Red, G: Grey
[y] = Lens colour:	A: Amber, B: Blue. C: Clear, M: Magenta, G: Green, R: Red, Y: Yellow

Note: Suffix part code with -F for forward facing Xenon beacon orientation.

Alarm sounder:

Version:		Voltage :	Current:
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

Xenon beacon:

Version:		Wattage:	Current:
12V dc		10-14V dc	500mA
24V dc		20-28V dc	250mA
115V ac	50/60Hz	+/-10%	70mA
230V ac	50/60Hz	+/-10%	35mA

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- 5J Xenon strobe - 200cd output.
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

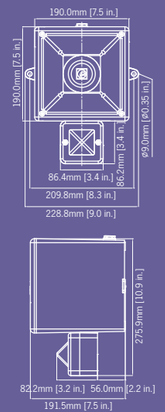
CE

HAL121H Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 121dB(A) at 1 metre the HAL121 surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Specification:

Hootronic Sounder:	
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) approx.
Effective range:	300m @ 1KHz
Beacon:	
Light source:	High intensity L.E.D. array. 24 x Superflux type high ouput L.E.D's
Options:	Steady or 2Hz flash mode (on board selection)
Effective candela:	176 cd (Green L.E.D.)
Terminals:	0.5 to 4.0mm² cables
L.E.D. colours:	Amber Blue, Green, Red and White
Lens colour:	All L.E.D. colours use a Clear lens to maximise output and to ensure the signal is most effective in high ambient light
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP56
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.30kg AC:2.90kg

*SPL data +/-3dB(A). Measured at optimum voltage.

Part codes:

Version	Part code:
24V dc	HAL121HDC024[x]/[y]
115V ac	HAL121HAC115[x]/[y]
230V ac	HAL121HAC230[x]/[y]
[x] = Housing colour:	R: Red, G: Grey
[y] = Lens colour:	A: Amber, B: Blue. W: White, G: Green, R: Red

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

L.E.D. beacon:

Version:	Voltage:	Current:
24V dc	10-30V dc	155mA (@ 24V dc)
115/230V ac 50/60Hz	90-260V ac/dc	35mA (@230V ac)

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- High output L.E.D array
- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

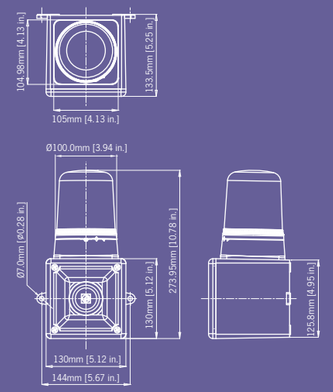
CE

HAB105RTH Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 112dB(A) at 1 metre the HAB105TRH surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Spare bulb/lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	20W	G6,35/GY6,35	BJC20W12VCL
24V dc	20W	G6,35/GY6,35	BJC20W24VCL
115V ac	25W	G6,35/GY6,35	BJCD25W120VCL
230V ac	25W	G6,35/GY6,35	BJCD25W230VCL

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Specification:

Hootronic Sounder:	
Nominal output:	112dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 112dB(A); Min. 103dB(A) approx.
Effective range:	60m @ 1KHz
Beacon:	
Light source:	Halogen Bulb G6,35 / GY6,35.
Light output:	max 25W
Rotation:	180RPM (+/-30RPM).
Peak Candela:	821 cd
Candela:	125 cd* (effective intensity)
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Drive life:	> 5,000 hrs
General:	
Voltages DC:	24V dc (10-30V dc);
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 1.00Kg AC:1.25kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version	Part code:	Wattage:
12V dc	HAB105RTHDC12[x]/[y]	20W
24V dc	HAB105RTHDC24[x]/[y]	20W
115V ac	HAB105RTHAC115[x]/[y]	25W
230V ac	HAB105RTHAC230[x]/[y]	25W
[x] = Housing colour:	G: Grey R: Red	
[y] = Lens colour:	A: Amber, B: Blue, C: Clear, G: Green, R: Red, Y: Yellow	

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	185mA*
115V ac	50/60Hz	+/-10%	50mA
230V ac	50/60Hz	+/-10%	25mA

* current at nominal voltage

Rotating beacon:

Version:		Wattage:	Current:
12V dc		20W	1.72A
24V dc		20W	910mA
115V ac	50/60Hz	25W	216mA
230V ac	50/60Hz	25W	117mA

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

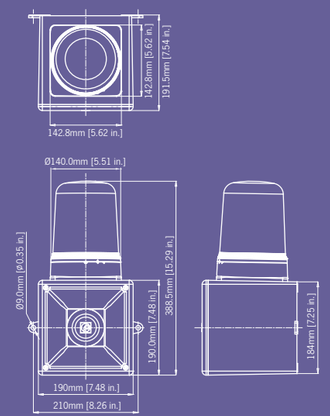
CE

HAB121RTH Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 121dB(A) at 1 metre the HAB121RTH surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Spare bulb/lamp part codes:

Version:	Wattage:	Type:	Part code:
12V dc	35W	G6,35/GY6,35	BJC35W12VCL
24V dc	35W	G6,35/GY6,35	BJC35W24VCL
115V ac	40W	G6,35/GY6,35	BJCD40W120VCL
230V ac	40W	G6,35/GY6,35	BJCD40W230VCL

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Specification:

Hootronic Sounder:	
Nominal output:	121dB(A) @ 1m +/- 3dB - Tone 2
No. of tones:	5
No. of stages:	3
Volume control:	Max. 121dB(A); Min. 112dB(A) approx.
Effective range:	300m @ 1KHz
Beacon:	
Light source:	Halogen Bulb G6,35 / GY6,35.
Light output:	max 40W
Rotation:	180RPM (+/-30RPM).
Peak Candela:	1,204 cd
Candela:	325 cd* (effective intensity)
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Drive life:	> 5,000 hrs
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Red (RAL3000) & grey (RAL7038)
Cable entries:	2 x M20 clearance gland knockouts in side & back
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 2.10kg AC:2.70kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version	Part code:	Wattage:
12V dc	HAB121RTHDC12[x]/[y]	35W
24V dc	HAB121RTHDC24[x]/[y]	35W
115V ac	HAB121RTHAC115[x]/[y]	40W
230V ac	HAB121RTHAC230[x]/[y]	40W
[x] = Housing colour:	G: Grey R: Red	
[y] = Lens colour:	A: Amber, B: Blue, C: Clear G: Green, R: Red, Y: Yellow	

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

Rotating beacon:

Version:		Wattage:	Current:
12V dc		35W	3.0A
24V dc		35W	1.54A
115V ac	50/60Hz	40W	338mA
230V ac	50/60Hz	40W	186mA

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Stainless steel fixings.
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.

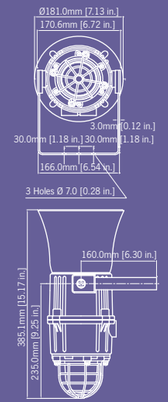
CE

HMCA112-05 Electronic Siren, Buzzer, Claxon & Bell

Applications and users that have traditionally demanded conventional electromechanical claxons, sirens, buzzers and bells can now choose the next generation alternative.

The E2S Hootronic series of products faithfully reproduce the sounds made by legacy electro-mechanical signalling devices but in a modern, reliable and cost effective way.

With output levels of up to 122dB(A) at 1 metre the HMCA112-05 surpasses legacy electro-mechanical devices in performance and effectiveness, it is also continuously rated, requires zero maintenance and the signal quality will not degrade with age.



Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	Industrial Claxon	Tone 3	Tone 5
Tone 2	High Frequency Mechanical Siren	Tone 1	Tone 5
Tone 3	Medium Frequency Mechanical Siren	Tone 1	Tone 5
Tone 4	Electro Mechanical Buzzer	Tone 2	Tone 5
Tone 5	Mechanical Bell	Tone 1	Tone 2

Country specific or custom tone configurations and alarm frequencies are available upon request

Specification:

Hootronic Sounder:	
Nominal output:	122dB(A) @ 1m +/- 3dB
No. of tones:	5
No. of stages:	3
Volume control:	Max. 122dB(A); Min. 113dB(A) approx.
Beacon:	
Energy:	5 Joules (5Ws)
Flash rate:	1Hz (60 fpm)
Peak Candela:	500,000 cd - calc. from energy (J)
Effective candela:	250 cd - calc. from energy (J)
Peak Candela:	16,428 cd* - measured ref. to I.E.S.
Effective candela:	51 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Red & Yellow
Tube life:	Emissions are reduced to 70% after 8 million flashes
General:	
Voltages DC:	12V dc; 24V dc
Voltages AC:	115V ac; 230V ac
Ingress protection:	IP66 & IP67 (Third party tested)
Housing material:	High impact UL94 V0 & 5VA FR ABS
Colour:	Grey (RAL7038)
Cable entries:	2 x M20 supplied with 1 blanking plug
Lens material:	Borosilicate glass dome with PC prismatic lens cover.
Guard:	Stainless Steel dome guard as standard
Terminals:	0.5 to 4.0mm² cables.
Operating temp:	-25 to +55°C
Storage temp:	-40 to +70°C
Relative humidity:	90% at 20°C.
Weight :	DC: 3.00kg AC:3.50kg

*SPL data +/-3dB(A). Measured at optimum voltage.
*Candela measurements representative of performance with clear lens at optimum voltage.

Part codes:

Version	Part code:
12V dc	HMCA11205DC12G-xx
24V dc	HMCA11205DC24G-xx
115V ac	HMCA11205AC115G-xx
230V ac	HMCA11205AC230G-xx
[xx] = Lens colour:	AM: Amber, BL: Blue, CL: Clear, GN: Green, RD: Red, YW: Yellow

Alarm sounder:

Version:		Voltage:	Current:
24V dc		10-30V dc	375mA*
115V ac	50/60Hz	+/-10%	160mA
230V ac	50/60Hz	+/-10%	75mA

* current at nominal voltage

Xenon beacon:

Version:		Wattage:	Current:
12V dc		10-14V dc	550mA
24V dc		20-28V dc	300mA
115V ac	50/60Hz	+/-10%	140mA
230V ac	50/60Hz	+/-10%	55mA

Features:

The products in the Hootronic range have 5 user selectable 'traditional' sounds including:

- Tone 1 : Industrial Claxon
- Tone 2 : High Frequency Mechanical Siren
- Tone 3 : Medium Frequency Mechanical Siren
- Tone 4 : Electro Mechanical Buzzer
- Tone 5 : Mechanical Bell

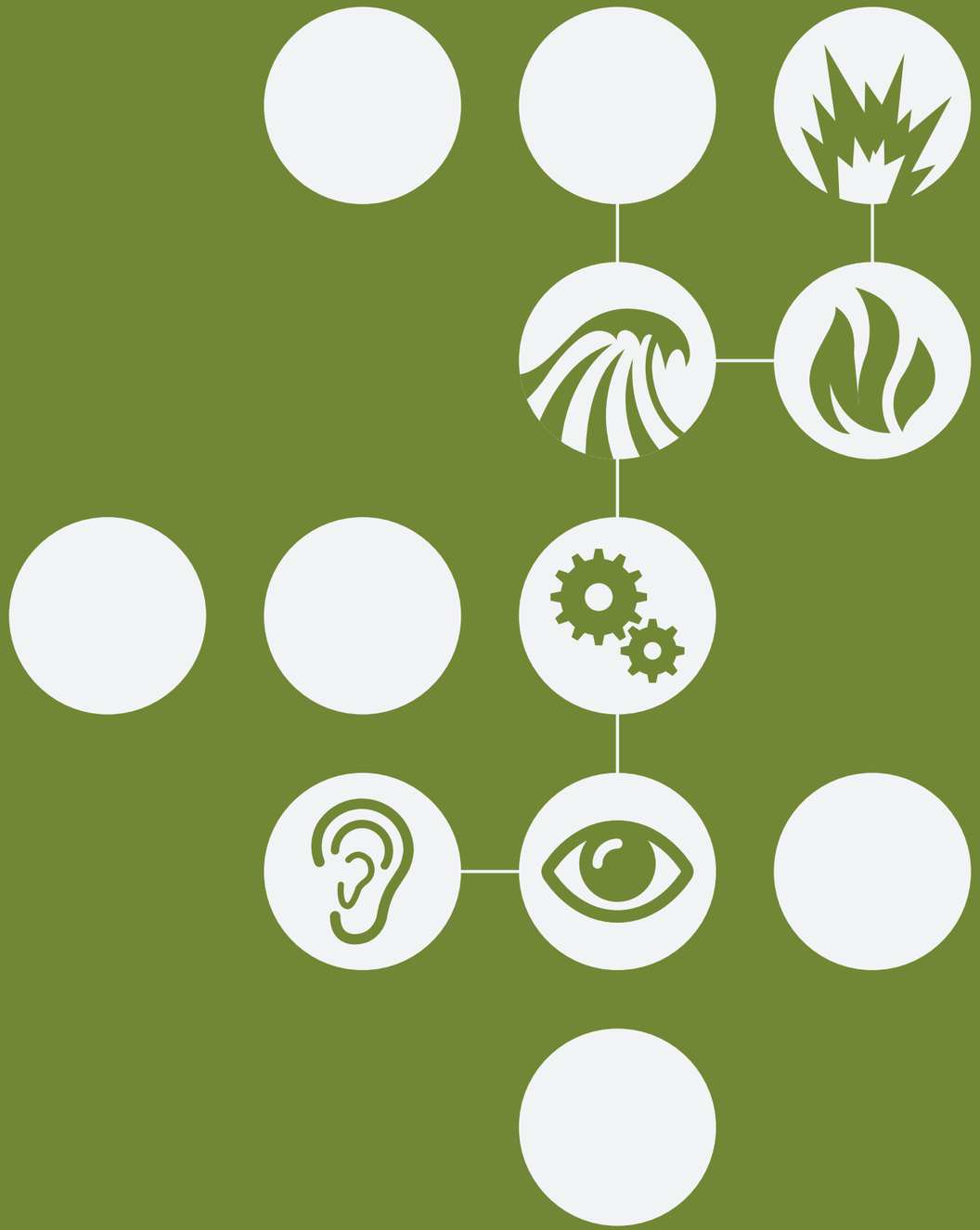
Each of these sounds have two additional, remotely selectable, alarm stages.

Remote switch generates genuine 'tail off' to sound when alarm is terminated.

- Automatic synchronisation on multi-sounder system.
- Continuously rated.
- Large termination area.
- Stainless steel fixings.
- Ratchet adjustable stainless steel 'U' bracket for 360° positioning.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Tropicalisation available on request.
- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

CE



Wide Area Signalling

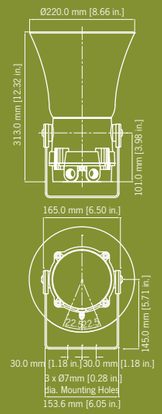
Section index

A131 High level audible warning system

The A131 is a high output 131dB(A) @ 1 metre electronic siren in a compact and easy to install package. Using up to four speakers, it can be mounted in a variety of ways and is ideal as a plant alarm to cover outdoor locations, areas with high background noise or smaller COMAH (Seveso II) applications with sound coverage requirements up to 300m.

Offering a choice of three alarm stages, selected from a choice 45 tones including many national standard tones, it can be incorporated in fire, security and general alarm systems where existing equipment is not powerful enough or the system needs expanding. The speaker horns are suitable for pole or wall mounting and are protected to IP66 which makes them suitable for use in the most arduous locations. They come pre-wired with 10m of cable to ensure a quick installation and can positioned in a variety of ways to suit the application.

E2S has considerable experience in this field and is able to offer full pre and post installation support including assistance with siren selection.



Tone table:

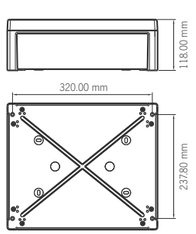
Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

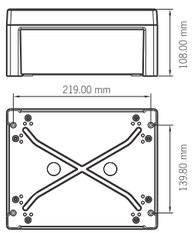
Part codes:

Voltage:	Range:	Part code:	Current:
1 Horn version			
24V dc	18-30V dc	A131DC24G1	3.20A
115V ac	90-264V ac	A131AC230G1	0.78A
230V ac	90-264V ac	A131AC230G1	0.39A
2 Horn version			
24V dc	18-30V dc	A131DC24G2	6.50A
115V ac	90-264V ac	A131AC230G2	1.60A
230V ac	90-264V ac	A131AC230G2	0.78A
3 Horn version			
24V dc	18-30V dc	A131DC24G3	9.80A
115V ac	90-264V ac	A131AC230G3	3.90A
230V ac	90-264V ac	A131AC230G3	1.50A
4 Horn version			
24V dc	18-30V dc	A131DC24G4	13.2A
115V ac	90-264V ac	A131AC230G4	4.20A
230V ac	90-264V ac	A131AC230G4	1.95A

Other voltages available on request.



Multi-horn Control Unit mounting Installation: A131xxxxxG2, G3 & G4



Single Horn Control Unit mounting installation: A131xxxxxG1

Specification:

Horn unit:	
Output:	131dB(A) @ 1m (Tone 2 at nominal voltage +/-3dB(A)) 102db(A) @ 30m
Operating temp:	-20°C to +55°C
Weight:	4.7Kg per horn
Horn body Material:	Aluminium LM6 phosphated & powder coated
Horn flare material:	UL94 V0 & 5VA ABS
Colour:	Grey
Ingress protection:	IP66
Connection:	Supplied with 10m of cable for connection to the control unit as standard. Custom lengths available.
Mounting:	Adjustable U bracket.
Control Panel:	
Input voltage DC:	24V dc (18V dc to 30V dc range)
Input voltage AC:	115 or 230V ac (90V to 264V ac range)
Terminals:	0.5 to 4.0mm² cable
Operating temp:	-20°C to +55°C
Ingress protection:	IP65
Weight :	1.5kg 1 Horn AC unit 2.9Kg 4 Horn AC unit

Features:

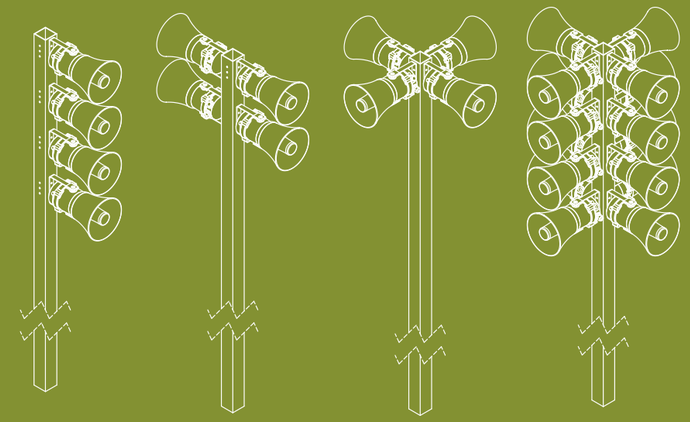
The A131 has the option of battery back up which means it can deliver it's safety warning even in the event of a power failure, for up to 30 days in standby and 30 minutes in alarm.

The siren is operated by push buttons either on the siren control box or via a remote panel or remote contact from another system which can be linked by hard-wire, telephone cables or radio control using telemetry to create a secure communication network.

- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

A131 High level audible warning system

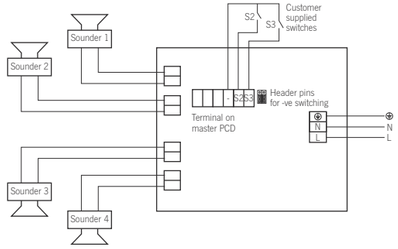


Tone Selection:

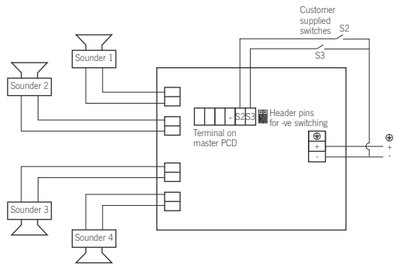
The A131 audible alarm system has the facility to use either +ve or –ve switching to change the tone to the second and third stages. For –ve switching connect the two pin headers on the master pcb to the –ve and centre pins. For +ve switching connect the pin headers to the +ve and the centre pins. To change to the second stage tone, connect either a -ve or +ve supply line to terminal S2 on the master pcb, depending on which switching mode is being usedwhile maintaining the dc supply to the +ve and –ve control unit input terminals. Similarly for the third stage tone, connect a -ve or +ve supply line to terminal S3 on the master pcb. The supply to the S3 terminal will automatically override a supply to the S2 terminal.

To switch the second and third stage tones on the AC units remotely connect the -ve terminal on the six way terminal block on the master pcb to the S2 terminal for the second stage tone and the S3 terminal for the third stage tone.

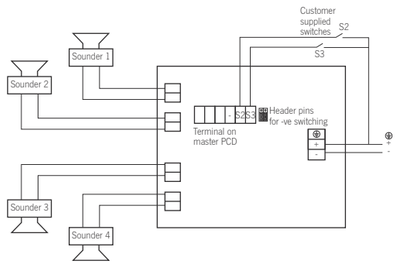
Schematic Circuit:
AC unit with connections for S2 and S3 for second and third stage alarms.

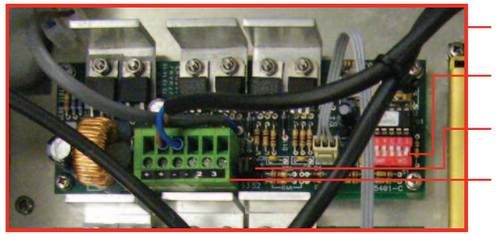


Schematic Circuit:
DC unit with connections for S2 and S3 for second and third stage alarms using negative switching.



Schematic Circuit:
DC unit with connections for S2 and S3 for second and third stage alarms using positive switching.





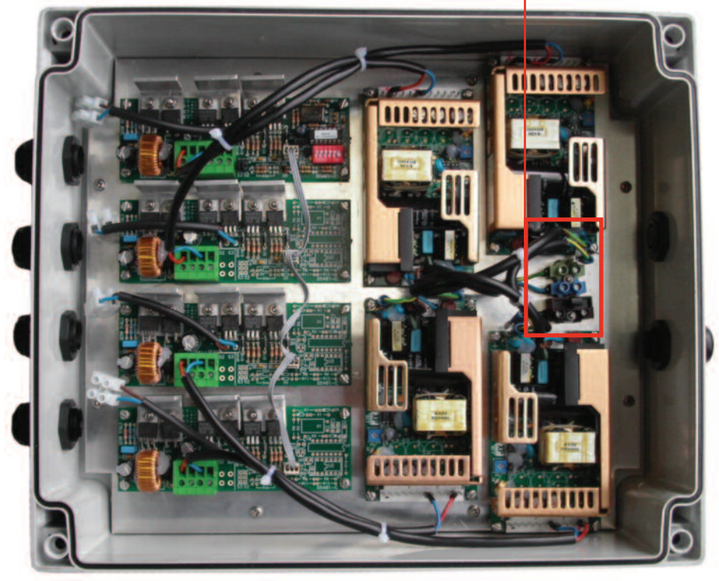
Master control board

Dip switch for tone selection (1 0 0 0 0 0 position shown)

S3 and S2 header pins for -ve and +ve switching (-ve shown)

Terminal on master PCB S2 / S3 connections

Terminal block for customer power input



Horn unit connection 1 to 4 off units

GOST-R

A141 High level audible warning system

The A141 is the latest in a new generation of high output electronic sounders from E2S which are ideal for wide area and disaster warning applications such as COMAH (Seveso II) Alarm, Toxic Gas Release, Fire, Security, Flood Warning, Tsunami Alert and Civil Defence requiring sound coverage up to 750m.

With a choice of 45 standard warning tones including many of the standard international signals the A141 can offer up to 4 different stages of alarm. A “Hootronic” version of the A141 is also available which replicates the traditional signaling sounds of bells, buzzers, sirens and claxons. By re-playing digital recordings of these products, the Hootronic produces the exact sound but without the reliability and rating problems of electro-mechanical devices.

E2S has considerable experience in this field and is able to offer full pre and post installation support including assistance with siren selection.

Tone table:

Stage 1	Frequency Description.	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 27
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34

Country specific or custom tone configurations and alarm frequencies are available upon request.

Specification:

Horn unit:	
Output:	141dB(A) @ 1m (Tone 2 at nominal voltage +/-3dB(A)) 112dB(A) @ 30m
Effective distance:	400 - 700m
Dimensions:	(L) 680 X (H) 425 X (D) 550 mm
Operating temp:	-20°C to +55°C
Weight:	14Kg
Material:	Glass fibre reinforced plastic
Colour:	Grey
Ingress protection:	IP65
Connection:	Supplied with 10m of cable for connection to the control unit as standard. Custom lengths available.
Mounting:	Adjustable U bracket.
Control Panel:	
Input voltage DC:	24V dc (18V dc to 30V dc range)
Input voltage AC:	115 or 230V ac (90V to 264V ac range)
Terminals:	0.5 to 4.0mm² cable
Dimensions:	(L) 344 X (H) 117 X (D) 289mm
Operating temp:	-20°C to +55°C
Ingress protection:	IP65
Weight :	2.9kg

Part codes:

Voltage:	Range:	Part code:	Current:
24V dc	18-30V dc	A141DC24G	13.2A
115V ac	90-264V ac	A141AC230G	4.20A
230V ac	90-264V ac	A141AC230G	1.95A

Other voltages available on request.

Features:

Using four 100W drivers, the A141 produces a powerful sound with an output in excess of 140 dB and is ideal for warning over distances of between 400m and 700m.

The A141 has a lightweight, compact housing designed for easy mounting and is protected to IP65 making it suitable for installation in all locations.

Optional extras include:

- Custom Tones
- Battery Back Up (giving up to 30 minutes of alarm)
- Radio Control

- GOST-R certificate: POCC GB.JB05.H00144

GOST-R

A141 High level audible warning system

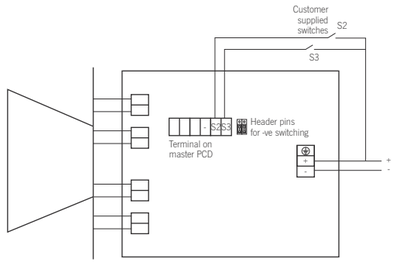
Tone Selection:

The A141 audible alarm system has the facility to use either +ve or –ve switching to change the tone to the second and third stages. For –ve switching connect the two pin headers on the master pcb to the –ve and centre pins. For +ve switching connect the pin headers to the +ve and the centre pins. To change to the second stage tone, connect either a -ve or +ve supply line to terminal S2 on the master pcb, depending on which switching mode is being used while maintaining the dc supply to the +ve and –ve control unit input terminals. Similarly for the third stage tone, connect a -ve or +ve supply line to terminal S3 on the master pcb. The supply to the S3 terminal will automatically override a supply to the S2 terminal.

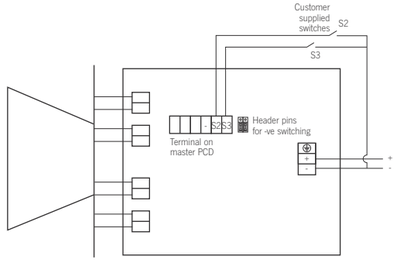
To switch the second and third stage tones on the AC units remotely connect the -ve terminal on the six way terminal block on the master pcb to the S2 terminal for the second stage tone and the S3 terminal for the third stage tone.

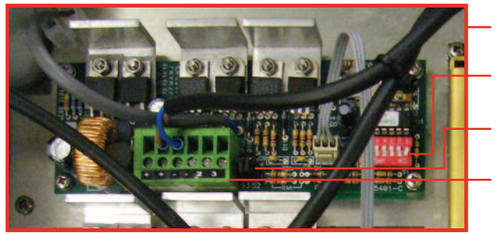
Schematic Circuit:
AC unit with connections for S2 and S3 for second and third stage alarms.

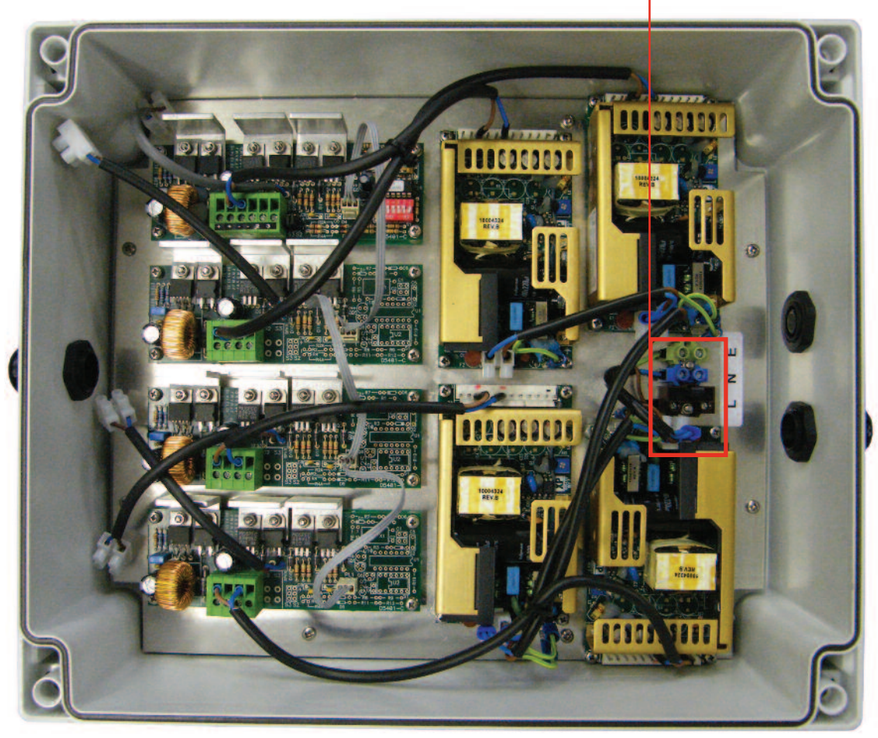
Schematic Circuit:
DC unit with connections for S2 and S3 for second and third stage alarms using negative switching.



Schematic Circuit:
DC unit with connections for S2 and S3 for second and third stage alarms using positive switching.







GOST-R

A151 High level audible warning system

E2S offer a range of solutions for disaster and outdoor warning such as Toxic Gas Release (COMAH, SEVESO II), Flood Warning, Tsunami Alert, Civil Defence, Tornado and Weather Warning and Wide Area Fire and Security Alert

E2S has considerable experience in this field and is able to offer full pre and post installation support including assistance with siren selection.

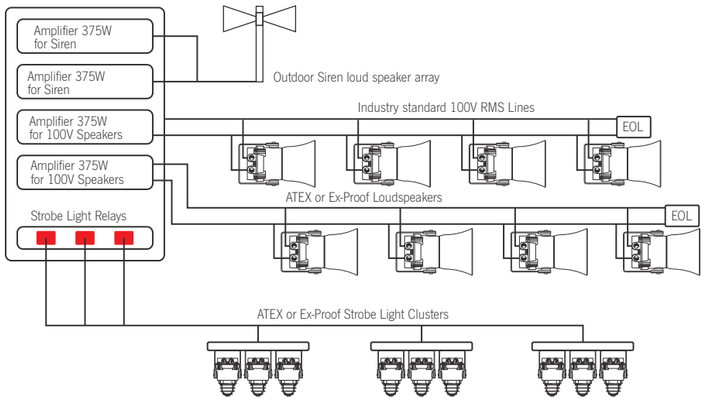
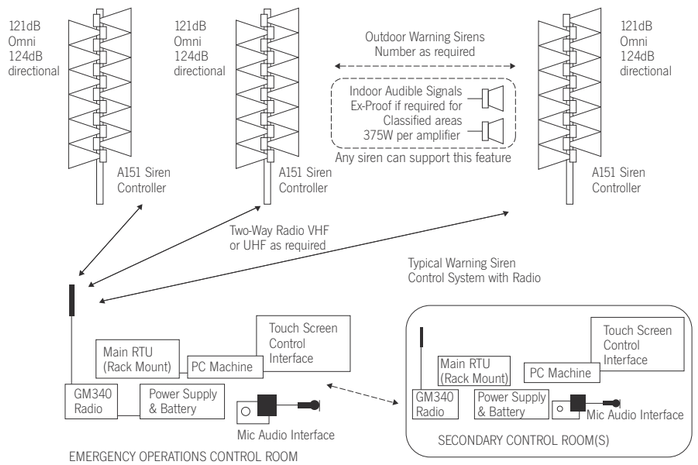
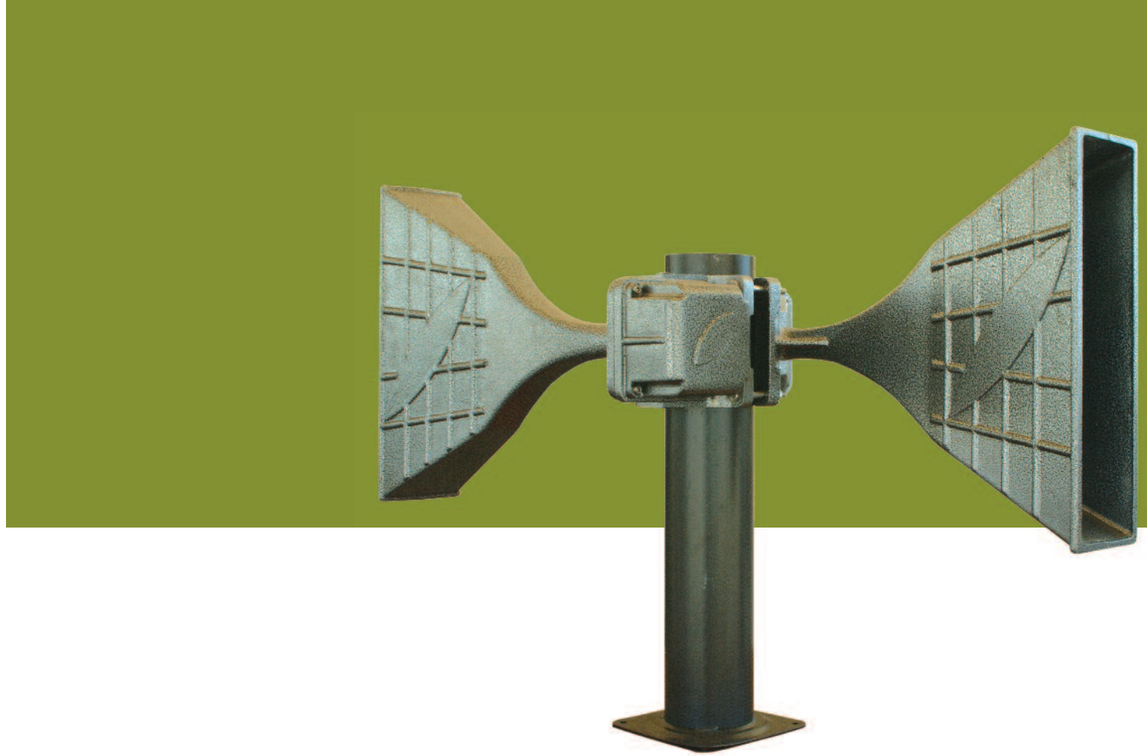


Diagram of Siren Controller with 100V RMS Line Distribution and Strobe Lights.
System Communication and Control is the same for all siren locations
Note. A Siren Controller Station can be configured for 100V Lines only ir required, with the amplifier power necessary.





Outputs of up to 125 dB @ 30m (>150 dB @ 1m) are available in both omni-directional and directional speaker arrays.

A151 Sirens can be configured into complete systems and have the ability to communicate via RS232/485, TCP/IP, Radio Control (VHF, UHF and Tetra) and can be controlled by either LCD control panel or a software solution.

Because many of the applications are critical alarms, it is essential to know the siren is fully functional at all times. The A151 sirens have built fault diagnostics and use a silent test function to check all the key features of the siren at pre-determined time intervals (usually every 3 hours).

A choice of warning tones is available together with the option of pre-recorded or live voice and the same control panels can be used to power 100V line loudspeakers for effective warning inside buildings or areas with high background noise levels.

For applications which do not require fault monitoring, a more basic siren (WPAS) is available.

E2S offer full technical support during the design and commissioning phase of a project. Contact our sales team to see how E2S can fulfil your outdoor warning requirements.

K-SML05/10/15 Motor Driven Sirens

The E2S range of motor driven sirens offer the traditional "air raid" type warning signal designed to give effective warning over wide areas. The powerful low frequency sound is ideal for covering long distances and is instantly recognisable.

The simple, rugged design is low maintenance and offers the lowest cost solution to disaster warning applications such as COMAH (SEVESO II) toxic gas alarms, flood and tsunami warning, security alert, civil defence, tornado and bad weather alert. Using the matching control panel, these sirens can produce up to 3 distinct warning tones and there are a variety of control options to suit customer requirements. Controls can be linked by hard wire, telephone cables or radio control using digital telemetry to create a secure communication network.

E2S has considerable experience in this field and is able to offer full pre and post installation support including assistance with siren selection.

K-SML15

K-SML05

K-SML10

K-SML05 features:
A robust, rugged cast aluminium siren with a very powerful low frequency output. Ideally suited for use in factories, refineries, quarries, construction and industrial sites, as well as both underground and surface mining.

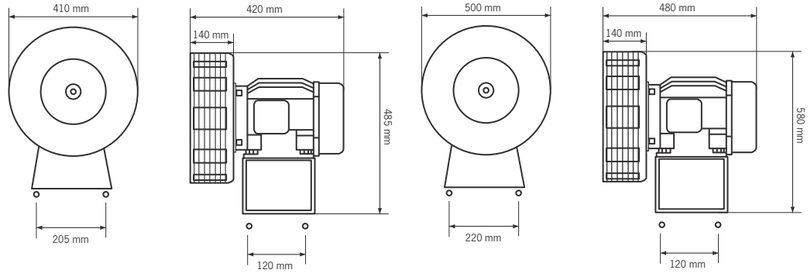
- Maximum Output: 135 db (A) @ 1m
- Tones: Continuous or Wail Tone (when supply is switched on/off)
- Frequency: 560Hz
- 1 Km effective range
- Voltages: 400v 3 Phase
- Motor Power: 2.2kW
- Duty: Continuous
- Enclosure Material: Cast Aluminium
- Colour: Grey, other colours available
- Operating Temperature: -20 to +40°C
- Storage Temperature: -40 to +70°C
- Relative Humidity: 90% at 20°C
- Weight: 50Kg

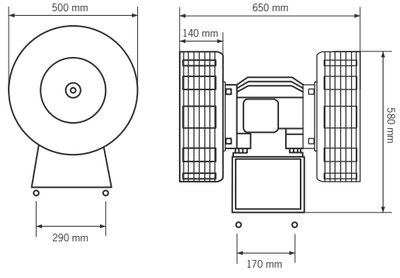
K-SML10 features:
Precision machined aluminium body with all weather enclosed, continuously rated motor. Ideally suited for use in factories, refineries, quarries, construction civil defence and industrial sites, as well as both underground and surface mining.

- Maximum Output: 140 db (A) @ 1m
- Tones: Continuous or Wail Tone (when supply is switched on/off)
- Frequency: 560Hz
- 1.5Km effective range
- Voltages: 400V 3 Phase
- Motor Power: 4kW
- Duty: Continuous
- Enclosure Material: Cast Aluminium
- Colour: Grey, other colours available
- Operating Temperature: -20 to +40°C
- Storage Temperature: -40 to +70°C
- Relative Humidity: 90% at 20°C
- Weight: 68Kg

K-SML15 features:
All weather enclosed motor is ideally suited for outdoor use. This siren would be used for audible warning at refineries, oil rigs, in the event of fires and open-cast mining operations. This precision machined unit produces a powerful dual low frequency sound that is ideal for long distance signalling.

- Maximum Output: 145 db (A) @ 1m
- Tones: Continuous or Wail Tone (when supply is switched on/off)
- Frequency: 560Hz
- 2.5Km effective range
- Voltages: 400V 3 Phase
- Motor Power: 7.5kW
- Duty: Continuous
- Enclosure Material: Cast Aluminium
- Colour: Grey, other colours available
- Operating Temperature: -20 to +40°C
- Storage Temperature: -40 to +70°C
- Relative Humidity: 90% at 20°C
- Weight: 118Kg





Part codes:

Version:	Part code:	SPL:
K-SML05 380V ac	K-SML05AC380G	135dB(A) @ 1m
K-SML10 380V ac	K-SML10AC380G	140dBA() @ 1m
K-SML15 380V ac	K-SML15AC380G	145dB(A) @ 1m

Other voltages available on request.

Product category index

Hazardous Area Signalling

Intrinsic safety: Visual

1-11-010	IS-mB1
1-11-020	IS-L101L
1-11-030	IS-pB1

Intrinsic safety: Audible

1-12-010	IS-mA1
1-12-020	IS-A105N
1-12-030	IS-D105
1-12-040	IS-pA1

Intrinsic safety: Combination

1-13-010	IS-mC1
1-13-020	IS-A105N+IS-L101L
1-13-030	IS-DL105L

Intrinsic safety: Manual Call Points

1-14-010	IS-CP4-BG
1-14-020	IS-CP4-PB
1-14-030	IS-CP4-PT

Explosion/flame proof: Visual

1-21-080	BExPLATED
1-21-090	BExBG21
1-21-100	BExBGL1
1-21-110	BExBG05
1-21-120	BExBG10
1-21-130	BExBG15
1-21-140	BExCBG05-05
1-21-150	BExTBG05

Explosion / flame proof: Audible

1-22-010	GNExS1
1-22-020	GNExS2
1-22-030	GNExS1-R
1-22-040	BExS110
1-22-050	BExS120
1-22-060	BExS110-R
1-22-070	BExH120
1-22-080	BExH120-R
1-22-090	BExTS110
1-22-100	GNExL1
1-22-110	GNExL2
1-22-120	BExL15
1-22-130	BExL25

Explosion / flame proof: Combination

1-23-010	BExCS110-05
1-23-020	BExCS110-05-R
1-23-030	BExCS110-L1
1-23-040	BExCS110-L1-R

Explosion/flame proof: Manual Alarm Call Points

1-24-010	GNExCP6A-BG
1-24-020	GNExCP6B-BG
1-24-030	GNExCP6A-PB
1-24-040	GNExCP6B-PB
1-24-050	GNExCP6A-PT
1-24-060	GNExCP6B-PT
1-24-070	BExCP3-BG
1-24-080	BExCP3-PB
1-24-090	BExCP3-PT

Non-sparking: Visual

1-31-010	E2xB05
1-31-020	E2xB10

Non-sparking: Audible

1-32-010	E2xS112
1-32-020	E2xS121
1-32-030	E2xL15
1-32-040	E2xL25

Non-sparking: Combination

1-34-010	E2xCS112-5

Fire and Industrial Signalling

Visual: Status Lights

2-11-010	STB2
2-11-011	STB3
2-11-012	STB4
2-11-020	B450TLA
2-11-030	B450TSB
2-11-040	B450TDB
2-11-050	B350TLA
2-11-060	B350TSB

Visual: Rotating Beacons/Lamps

2-12-010	B300RTH
2-12-020	B400RTH

Visual: Xenon Strobes

2-13-010	L101X
2-13-020	L101FLASHTEL
2-13-030	B300STR
2-13-040	B400STR
2-13-050	B100STR
2-13-060	B200STR
2-13-070	MB005
2-13-080	MB010
2-13-090	MCB005-05

Visual: L.E.D Array

2-14-010	L101H
2-14-020	B300LDA
2-14-030	B400LDA
2-14-040	B100LDA
2-14-050	B200LDA
2-14-060	MBL1

Visual: Filament Lamp

2-15-010	B300SL
2-15-020	B300SLH
2-15-030	B300FLF
2-15-040	B300FLH
2-15-050	B400SLF
2-15-060	B400SLH
2-15-070	B400FLF
2-15-080	B400FLH
2-15-090	B100SLF
2-15-100	B100FLF
2-15-110	B200SLF
2-15-120	B200FLF

Visual: Accessories

2-16-010	Accessories

Audible: Sounders & horns

2-21-010	SONF1
2-21-020	SONF1-H
2-21-030	SON2
2-21-040	A100
2-21-050	A100SONTEL
2-21-060	A105N
2-21-070	A105NSONTEL
2-21-080	A112N
2-21-090	A121
2-21-100	D105
2-21-110	D112
2-21-120	GPH1 & 2
2-21-130	GPH3 & 4
2-21-140	B300SND
2-21-150	B400SND
2-21-160	H100T
2-21-170	H100B
2-21-180	H110T
2-21-190	MA112
2-21-200	MA121
2-21-210	E2S22D
2-21-220	E2S28D
2-21-230	BEDHEAD

Audible: Voice & User recordable

2-22-010	A105NAX
2-22-020	A121AX
2-22-030	D105AX
2-22-040	MV121

Audible: Electronic Sirens, Bells & Buzzers

2-23-010	HA105N
2-23-020	HA121
2-23-030	HMA121

Audible: Speakers

2-24-010	ML15
2-24-020	ML25

Combined: Sounders & horns with lights

2-31-010	STA2
2-31-011	STA3
2-31-012	STA4
2-31-020	SON4B
2-31-030	SON4L
2-31-040	SON4
2-31-050	SONFL1X
2-31-060	SONFL1H
2-31-070	SONFL1X-H
2-31-080	SONFL1H-H
2-31-090	AL100X
2-31-100	AL100H
2-31-110	AL100SONTELFLASH
2-31-120	AL105NX
2-31-130	AL105NH
2-31-140	AL105NSONTELFLASH
2-31-150	AB105RTH
2-31-160	AB105STR
2-31-170	AB105LDA
2-31-180	AL112NX
2-31-190	AL112NH
2-31-200	AB112RTH
2-31-210	AB112STR
2-31-220	AB112LDA
2-31-230	AL121X
2-31-240	AL121H
2-31-250	AB121RTH
2-31-260	AB121STR
2-31-270	AB121LDA
2-31-280	H100BX
2-31-290	H100BL
2-31-300	H100TX
2-31-310	H100TL
2-31-320	H100TF
2-31-330	H110TR
2-31-340	H110TX
2-31-350	H110TL
2-31-360	DL105X
2-31-370	DL105H
2-31-380	DL112X
2-31-390	DL112H
2-31-400	MCA112-05
2-31-410	MCA112-L1

Combined: Voice & User recordable with lights

2-32-010	AL105NAXX
2-32-020	AL105NAXH
2-32-030	DL105AXX
2-32-040	DL105AXH
2-32-050	AL121AXX
2-32-060	AL121AXH

Combined: Electronic Sirens, Bells & Buzzers with lights

2-33-010	HAL121X
2-33-020	HAL121H
2-33-030	HAB105RTH
2-33-040	HAB121RTH
2-33-050	HMCA112-05

Wide Area Signalling

High Power Electronic Sirens

3-11-010	A131
3-11-020	A141
3-11-030	A151

Motor Driven Sirens

3-21-010	Motor Driven

Product index