

# BExCS110-L2 Omni-directional Alarm Horn & LED Beacon

**The flameproof BExCS110-L2-R combination omni-directional alarm horn sounder and high output LED beacon is suitable for Zone 1, 2, 21 & 22 applications. Approved to IECEx and ATEX standards.**

The unique radial horn on the compact BExCS110-L2-R distributes the audible warning signal omni-directionally allowing the visual signal to be orientated optimally. Sound level outputs are up to 115dB(A) at 1 metre with a choice of 32 alarm tones and 3 remotely selectable stages. The LED beacon contains an array of 4 high output, multi-function L.E.D.s. with a total of 7 modes of operation – 5 flashing modes and 2 steady modes for use in indicator / status applications. DC voltage versions feature three remotely selectable stages enabling multiple warnings to be signalled from one device.

## Features

- Marine grade, corrosion proof, LM6 aluminium enclosure
- 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.
- Very large termination area.
- Dual M20 cable entries – adaptors available.
- Stopping plug included.
- Ratchet adjustable stainless steel 'U' bracket.
- Reverse polarity diode fitted.
- IP66/67 ingress protection.
- 160 candela effective light intensity.
- UV stable PC, field replaceable, colour lens filters.
- 'Stage Programmable' version available with 45 tones & 4 remotely selectable stages.

## Approvals

- IECEx Certificate: KEM 10.0025X
- ATEX Certificate: KEMA 01ATEX2223X
- TR-CU Ex EAC certificate: RU C-GB.HA65.B.01252\_21
- PESO CCOE certified: P471505
- UKCA certificate: UL22UKEX2639X

## Coding

- II 2G Ex db IIB T5 Gb Ta. -50°C to +50°C
- II 2G Ex db IIB T4 Gb Ta. -50°C to +70°C
- II 2D Ex tb IIIC T70°C Db Ta. -50°C to +40°C
- II 2D Ex tb IIIC T85°C Db Ta. -50°C to +55°C
- II 2D Ex tb IIIC T100°C Db Ta. -50°C to +70°C



Specification

|                                                                  |                                                                                                                                                          |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm Horn Sounder:                                              |                                                                                                                                                          |
| Maximum output:                                                  | 115dB(A) @ 1 metre [106dB(A) @ 10ft/3m]                                                                                                                  |
| Nominal output:                                                  | 110dB(A) @ 1m +/- 3dB – Tone 2 [101dB(A) @ 10ft/3m]                                                                                                      |
| No. of tones:                                                    | 32 (UK00A / PFEER compliant)                                                                                                                             |
| No. of stages:                                                   | 3                                                                                                                                                        |
| Volume control:                                                  | Max. 110dB(A); Min. 72dB(A) – Tone 2                                                                                                                     |
| Effective range:                                                 | 100m/328ft @ 1KHz                                                                                                                                        |
| Voltages:                                                        | 24V dc; 48V dc; 115V ac; 230V ac                                                                                                                         |
| Stage switching:                                                 | Negative or positive                                                                                                                                     |
| LED Beacon:                                                      |                                                                                                                                                          |
| Source:                                                          | Array of 4 x High Power Cree® LED's                                                                                                                      |
| Modes:                                                           | 1Hz flash (60 fpm)<br>1.5Hz flash (90 fpm)<br>2Hz flash (120 fpm)<br>Double strike flash<br>Triple strike flash<br>High Power Steady<br>Low Power Steady |
| Eff. Intensity cd:                                               | 87 cd – High Power Steady                                                                                                                                |
| Eff. Intensity cd:                                               | 160 cd – 1Hz flash                                                                                                                                       |
| Voltages:                                                        | 24V dc; 115V ac; 230V ac                                                                                                                                 |
| General:                                                         |                                                                                                                                                          |
| Ingress protection:                                              | IP66/67                                                                                                                                                  |
| Enclosure matl:                                                  | Marine grade copper free LM6 Aluminium                                                                                                                   |
| Enclosure finish:                                                | Chromate & powder coated                                                                                                                                 |
| Horn material:                                                   | High impact UL94 V0 & 5VA FR ABS (Red)                                                                                                                   |
| Cable entries:                                                   | Dual M20 ISO (one stopping plug inc)                                                                                                                     |
| Terminals:                                                       | 0.5 – 2.5mm² (20-14 AWG)                                                                                                                                 |
| Enclosure volume:                                                | <2 litres                                                                                                                                                |
| Line monitoring:                                                 | Blocking diode included<br>EOL Min. 500 Ohm 2w, or 3k3 Ohm 0.5w resistor or diode (DC versions) can be fitted                                            |
| Temperature:                                                     | -50° to +70°C (-58°F to +158°F)                                                                                                                          |
| Relative humidity:                                               | 95% – Additional tropicalisation is recommended for applications where both high relative humidity and high ambient temperatures exist                   |
| Weight:                                                          | DC: 4.80kg/10.56lbs AC: 5.00kg/11lbs                                                                                                                     |
| SPL data +/-3dB(A), Candela with clear lens – at optimum voltage |                                                                                                                                                          |

Part Codes

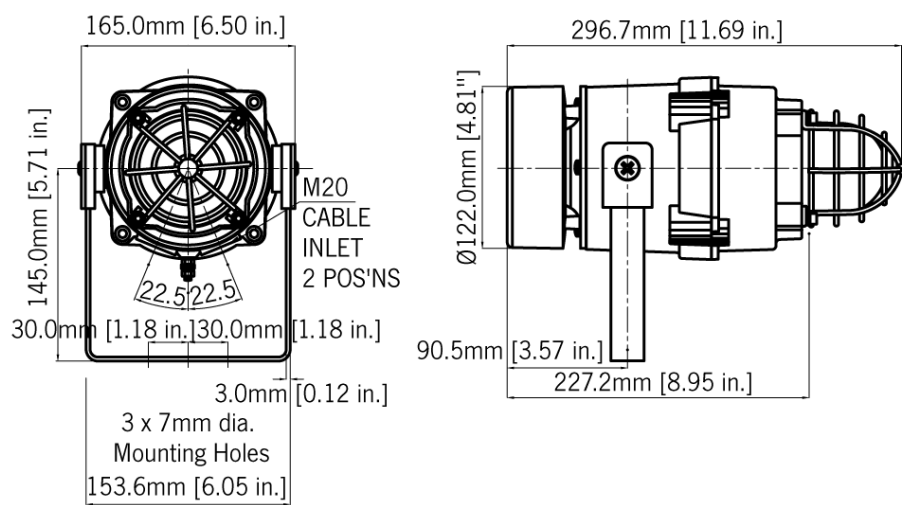
| Part Code:                          | Identifier:                      | Description:                                                                                                                                                                   |
|-------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product type:                       | BExCS110L2                       | Explosion proof Alarm Horn Sounder & LED                                                                                                                                       |
| Type:                               | DPR                              | Ex d, UV stable PC Colour Lens Radial Omni-directional Horn                                                                                                                    |
| Voltage:                            | DC024<br>DC048<br>AC115<br>AC230 | 24V dc<br>48V dc<br>115V ac<br>240V ac                                                                                                                                         |
| Cable entries:[e]                   | A<br>B<br>C<br>D<br>E<br>F<br>G  | 2 x M20x1.5mm<br>2 × 1/2" NPT – adaptors<br>2 × 3/4" NPT – adaptors<br>2 x M25x1.5mm – adaptors<br>1 × 1/2" NPT – adaptor<br>1 × 3/4" NPT – adaptor<br>1 x M25x1.5mm – adaptor |
| Stopping plug/<br>adaptor material: | B<br>N<br>S                      | Brass<br>Nickel Plated<br>Stainless Steel                                                                                                                                      |
| Bracket/Guard<br>matl & tag: [s]    | 1<br>2<br>3<br>4                 | A2 304 Stainless Steel<br>A4 316 Stainless Steel<br>A2 304 St/St with Equip. Tag<br>A4 316 St/St with Equip. Tag                                                               |
| Product version: [v]                | A1<br>P1<br>T1                   | Default – IECEx & ATEX<br>Stage programmable – IECEx & ATEX<br>Tropicalised – IECEx & ATEX                                                                                     |
| Enclosure colour: [x]               | R<br>S                           | Red<br>Special – contact E2S                                                                                                                                                   |
| Lens colour: [y]                    | A, B, C<br>G, M, R, Y            | Amber, Blue, Clear<br>Green, Magenta, Red, Yellow                                                                                                                              |
| Accessories:                        | SP65-0001-A4<br>SP65-0003-A4     | Pole Mount Bracket Kit 2" St/St A4 (316)<br>Sunshade – St/St A4 (316)                                                                                                          |

Multi-function patterns

| Stage 1:<br>[On board]                               | Stage 2:<br>[Remote activation] | Stage 3:<br>[Remote activation] |
|------------------------------------------------------|---------------------------------|---------------------------------|
| Steady High Power                                    | Flashing 1Hz                    | Triple Strike                   |
| Steady Low Power                                     | Flashing 1Hz                    | Triple Strike                   |
| Flashing 1Hz                                         | 2x Flash 2Hz                    | Triple Strike                   |
| Flashing 1.5Hz                                       | Flashing 2Hz                    | Double Strike                   |
| Flashing 2Hz                                         | Triple Strike                   | Triple Strike                   |
| Double Strike                                        | Steady High Power               | Triple Strike                   |
| Triple Strike                                        | Flashing 2Hz                    | Double Strike                   |
| Note: Remote second and third stage on DC units only |                                 |                                 |
| Double strike: 150ms on, 150ms off x 2, 600ms off    |                                 |                                 |
| Triple strike: 150ms on, 150ms off x 3, 600ms off    |                                 |                                 |

Current Consumption

| Alarm Horn      |          |          |          | LED Beacon         |                   |               |
|-----------------|----------|----------|----------|--------------------|-------------------|---------------|
| Version:        | Voltage: | Current: | Voltage: | Steady High Power: | Steady Low Power: | Flashing 1Hz: |
| 24V dc          | +/-25%   | 265mA    | 18-54V   | 240mA              | 134mA             | 110mA         |
| 115V ac 50/60Hz | +/-10%   | 110mA    | +/-10%   | 95mA               | 78mA              | 90mA          |
| 230V ac 50/60Hz | +/-10%   | 56mA     | +/-10%   | 48mA               | 37mA              | 45mA          |



## Tone table

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