

# BExCS110-05 Omni-directional Horn & Strobe

**Flameproof BExCS110-05-R omni-directional combination alarm horn sounder and Xenon strobe beacon for Zone 1, 2, 21 & 22. Approved to IECEx, ATEX, Ex EAC and INMETRO standards.**

The radial horn on the compact BExCS110-05-R distributes the audible warning signal omni-directionally allowing the visual signal to be orientated optimally. The alarm horn & Xenon beacon may be connected from a single power supply for simultaneous operation or from separate supplies for independent operation. The BEx range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium with a chromate and powder coat finish. All models have dual cable entries, large termination areas, containing in & out terminals, and an ingress protection of IP66/67.

## Features

- Omni-directional sound output.
- Marine grade, corrosion proof, LM6 aluminium enclosure
- 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
- 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.
- 120 candela effective light intensity.
- UV stable PC, field replaceable, colour lens filters.
- 'Stage Programmable' version available with 45 alarm tones and 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
- INMETRO certificate: 16IEEx-0034
- PESO CCOE certified: P471505
- UKCA certificate: UL22UKEX2639X

## Coding

- II 2G Ex db IIB T5 Gb Ta. -50°C to +40°C
- II 2G Ex db IIB T4 Gb Ta. -50°C to +70°C
- II 2D Ex tb IIIC T110°C Db Ta. -50°C to +55°C
- II 2D Ex tb IIIC T125°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 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 - calculated from energy (J)
Eff. Intensity:	250 cd - calculated from energy (J)
Peak Candela:	39,463 cd* - measured ref. to I.E.S.
Eff. Intensity:	120 cd* - measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life:	Emissions reduced to 70% after 5 million flashes
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 - 2.5mm <sup>2</sup> (20-14 AWG)
Enclosure volume:	<2 litres
Line monitoring:	Blocking diode included 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	

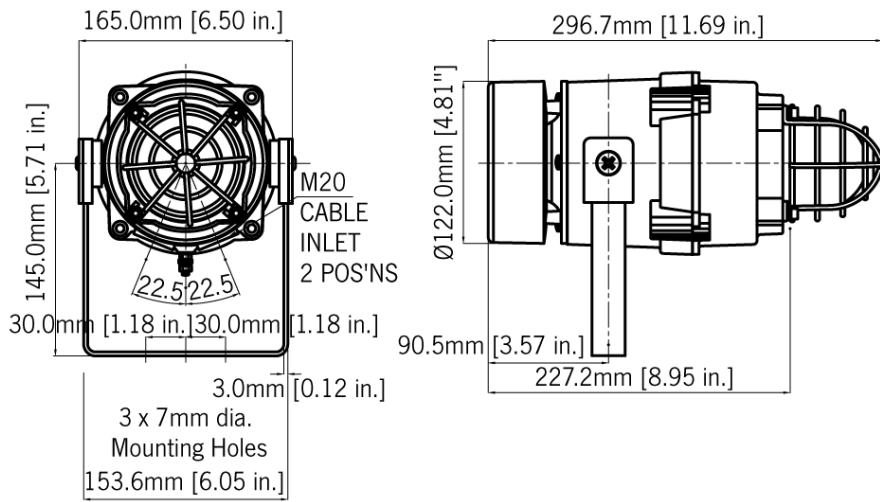
## Part Codes

Part Code:	Identifier:	Description:
Product type:	BExCS11005	Explosion proof Alarm Horn Sounder & 5J Xenon
Type:	DPR	Ex d, UV stable PC Colour Lens, Radial Omni-directional Horn
Voltage:	DC012 DC024 DC048 AC115 AC230	12V dc 24V dc 48V dc 115V ac 240V ac
Cable entries:[e]	A B C D E F G	2 x M20x1.5mm 2 x 1/2" NPT - adaptors 2 x 3/4" NPT - adaptors 2 x M25x1.5mm - adaptors 1 x 1/2" NPT - adaptor 1 x 3/4" NPT - adaptor 1 x M25x1.5mm - adaptor
Stopping plug/ adaptor material: [m]	B N S	Brass Nickel Plated Stainless Steel
Bracket/Guard matl & tag: [s]	1 2 3 4	A2 304 Stainless Steel A4 316 Stainless Steel A2 304 St/St with Equip. Tag A4 316 St/St with Equip. Tag
Product version: [v]	A1 P1 T1	Default - IECEx, ATEX, Ex EAC & INMETRO Stage programmable Tropicalised
Enclosure colour: [x]	R S	Red Special - contact E2S
Lens colour: [y]	A, B, C, G M, R, Y	Amber, Blue, Clear, Green Magenta, Red, Yellow
Accessories:	SP65-0001- A4 SP65-0003- A4	Pole Mount Bracket Kit St/St A4 (316) Sunshade - St/St A4 (316)

## Current Consumption

Current consumption: Alarm Sounder Xenon Beacon

Version:	Voltage:	Current:	Voltage:	Current:
12V dc	+/-25%	195mA	10-14V	750mA
24V dc	+/-25%	265mA	20-28V	300mA
48V dc	+/-25%	130mA	42-54V	180mA
115V ac 50/60Hz	+/-10%	110mA	+/-10%	140mA
230V ac 50/60Hz	+/-10%	56mA	+/-10%	55mA



## Tone table

### S 1 Description

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

# 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)  
1.5Hz flash (90 fpm)  
2Hz flash (120 fpm)  
Double strike flash  
Triple strike flash  
High Power Steady  
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 - 2.5mm<sup>2</sup> (20-14 AWG)

Enclosure volume: <2 litres

Line monitoring: Blocking diode included  
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 DC048 AC115 AC230	24V dc 48V dc 115V ac 240V ac
Cable entries:[e]	A B C D E F G	2 x M20x1.5mm 2 x 1/2" NPT - adaptors 2 x 3/4" NPT - adaptors 2 x M25x1.5mm - adaptors 1 x 1/2" NPT - adaptor 1 x 3/4" NPT - adaptor 1 x M25x1.5mm - adaptor
Stopping plug/ adaptor material: [m]	B N S	Brass Nickel Plated Stainless Steel
Bracket/Guard matl & tag: [s]	1 2 3 4	A2 304 Stainless Steel A4 316 Stainless Steel A2 304 St/St with Equip. Tag A4 316 St/St with Equip. Tag
Product version: [v]	A1 P1 T1	Default - IECEx & ATEX Stage programmable - IECEx & ATEX Tropicalised - IECEx & ATEX
Enclosure colour: [x]	R S	Red Special - contact E2S
Lens colour: [y]	A, B, C G, M, R, Y	Amber, Blue, Clear Green, Magenta, Red, Yellow
Accessories:	SP65-0001-A4 SP65-0003-A4	Pole Mount Bracket Kit St/St A4 (316) Sunshade - St/St A4 (316)

## Multi-function patterns

Stage 1: [On board]	Stage 2: [Remote activation]	Stage 3: [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

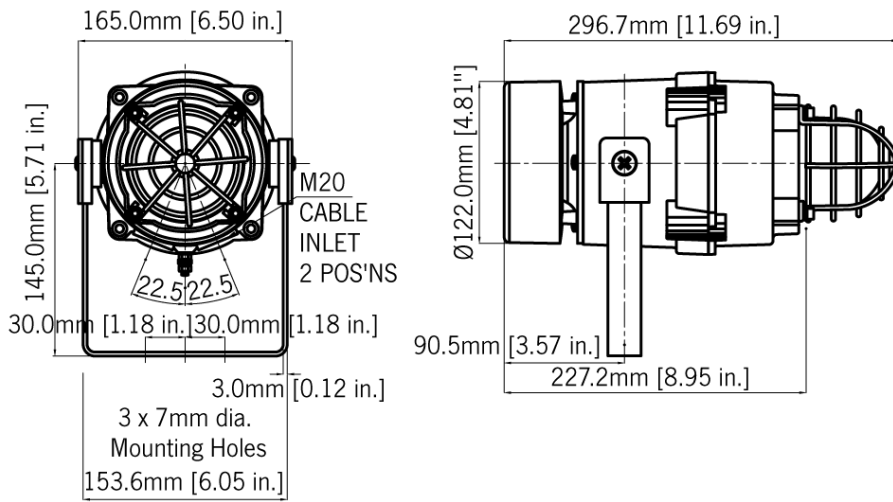
Note: Remote second and third stage on DC units only

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

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T 6 Sweeping 2400/2900Hz at 7Hz	T 7	T 5
T 7 Sweeping 2400/2900Hz at 1Hz	T 10	T 5
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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