

# D1xC1X10R 110dB(A) Radial Alarm & 10J Strobe

The D1xC1X10R is a globally certified alarm horn sounder with a compact, omni-directional horn and combined with a 10 Joule Xenon strobe beacon. The robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure is approved for Class I Div 1, Zone 1, IECEx and ATEX Zone 1, 2, 21 & 22 explosion proof signalling applications.

Featuring 64 alarm tones, each of the 4 stage/channels can be remotely activated. Class D amplification provides a high sound output with a choice of two power modes. The threaded flameproof joint, multiple cable entries and duplicated, pluggable termination simplifies both installation and routine maintenance. The 24Vdc version is approved for public (alarm horn) and private mode fire alarm use. SIL1 & SIL2 compliant to IEC61508 (2010) as standard.

## Features

- Maximum sound pressure level output of 110dB(A)
- Choice of 64 alarm tone frequencies
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Automatic synchronisation on multi-beacon & sounder systems
- User selectable strobe flash rates
- Field replaceable lens colour filter
- Ratchet adjustable 316 stainless steel bracket
- Available with custom tone configurations and frequencies
- Robust corrosion proof aluminium enclosure
- Duplicate cable terminations
- UL464 / CAN/ULC-S525 & UL1638 / CAN/ULC-S526

## Approvals

- UL/cUL/ULC File ref: E230764
- IECEx Certificate: IECEx ULD 19.0008X
- ATEX Certificate: DEMKO 19 ATEX 2141X
- CSFM listing: 7136-2279:0506
- UKCA certificate: UL21UKEX2132X
- INMETRO IEx 24.0158X

## Coding

- NEC Class / Zone  
Class I Zone 1 IIC T3C Gb Ta -55°C to +85°C  
Class I Zone 1 IIC T4 Gb Ta -55°C to +70°C (T4A: +55°C)
- CEC Class / Zone  
Class I Zone 1 IIC T4A Gb Ta -55°C to +55°C
- NEC Class / Div  
Class I Div 1 ABCD T3C Ta -55°C to +85°C  
Class I Div 1 ABCD T4 Ta -55°C to +70°C (T4A: +55°C)
- CEC Class / Div  
Class I Div 1 ABCD T4A Ta -55°C to +55°C
- IECEx / ATEX  
II 2G Ex db IIC T3 Gb Ta -55°C to +75°C  
II 2G Ex db IIC T4 Gb Ta -55°C to +65°C  
II 2D Ex tb IIIC T137°C Db Ta -55°C to +75°C  
See product manual for full voltage specific coding.



Specification

Alarm Horn:

|                  |                                                                |
|------------------|----------------------------------------------------------------|
| Maximum output:  | 110dB(A) @ 1 metre [101dB(A) @ 10ft/3m]                        |
| Nominal output:  | 105dB(A) @ 1m +/- 3dB - Tone 4 [96dB(A) @ 10ft/3m]             |
| No. of tones:    | 64 (UK00A / PFEER compliant)                                   |
| No. of stages:   | 4                                                              |
| Volume control:  | Full range                                                     |
| Effective range: | 125m/410ft @ 1KHz                                              |
| Voltages DC:     | 24Vdc (20-28Vdc)                                               |
| Voltages AC:     | 110-120Vac, 220-240Vac                                         |
| Stage switching: | DC units: negative or positive<br>AC units: common supply line |

Strobe Beacon:

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Energy:              | 10 Joules (10Ws)                                                              |
| Flash rates:         | Option 1: 1Hz (60 fpm)<br>Option 2: 1.5Hz (90 fpm)<br>Option 3: Double Strike |
| Peak Candela:        | 1,000,000 cd - calculated from energy (J)                                     |
| Effective Intensity: | 500 cd - calculated from energy (J)                                           |
| Peak Candela:        | 85,544 cd* - measured ref. to I.E.S.                                          |
| Effective Intensity: | 260 cd* - measured ref. to I.E.S.                                             |
| Lens colours:        | Amber, Blue, Clear, Green, Magenta, Red & Yellow                              |
| Tube life :          | Emissions reduced to 70% > 5 million flashes                                  |

General:

|                         |                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Safety Integrity Level: | SIL1 and SIL2 Route 2H IEC61508 (2010)                                                                                                 |
| Ingress protection:     | EN60529: IP66/67<br>UL50E / NEMA250: 4 / 4X / 3R / 13                                                                                  |
| Enclosure material:     | Marine grade aluminium LM6 - copper free                                                                                               |
| Enclosure finish:       | Chromate & powder coated finish<br>ISO 12944-6 CX, C5VH & C5H                                                                          |
| Enclosure colour:       | Red or Grey, custom colours available on request                                                                                       |
| Cable entries:          | 1x1/2"NPT & 2xM20 - thread adaptors available                                                                                          |
| Terminals:              | 0.5 - 2.5mm <sup>2</sup> (20-14 AWG) Pluggable, duplicated terminals                                                                   |
| Grounding stud:         | M5                                                                                                                                     |
| Line monitoring:        | Blocking diode included. EOL Min. 500 Ohm 2W, or 3k3 Ohm 0.5W resistor or diode (DC versions) can be fitted                            |
| Enclosure volume:       | <2 litres                                                                                                                              |
| Installation temp:      | -55 to +85°C [-67° to +185°F]                                                                                                          |
| Storage temp:           | -55 to +85°C [-67° to +185°F]                                                                                                          |
| Relative humidity:      | 99%                                                                                                                                    |
| Vibration test:         | 35Hz for a duration 4Hr (UL464)                                                                                                        |
| Jarring test:           | 3ft/lb Energy (UL464)                                                                                                                  |
| Impact test:            | 3x 5lb (UL464)                                                                                                                         |
| Relative humidity:      | 95% - Additional tropicalisation is recommended for applications where both high relative humidity and high ambient temperatures exist |
| Weight:                 | 4.9kg/10.9lbs                                                                                                                          |

Part Codes

| Part Code:                              | Identifier:                         | Description:                                                                                                                                                                                                                                                                |
|-----------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product type:                           | D1xC1X10                            | Combined Alarm Horn & Xenon Strobe                                                                                                                                                                                                                                          |
| Horn type:                              | R                                   | Omni-directional radial horn                                                                                                                                                                                                                                                |
| Voltage:                                | DC024<br>AC115<br>AC230             | 20-28V dc<br>110-120Vac<br>220-240Vac                                                                                                                                                                                                                                       |
| Cable entries:[e]                       | A<br>B<br>C<br>D<br>F<br>G<br>Note: | 2 x M20x1.5mm & 1 x 1/2"NPT<br>2 x 1/2"NPT - adaptors<br>2 x 3/4"NPT - adaptors<br>2 x M25x1.5mm - adaptors<br>1 x 3/4"NPT - adaptor<br>1 x M25x1.5mm - adaptor<br>All entries, excluding thread adaptors, supplied with stopping plugs installed.                          |
| Stopping plug/<br>adaptor material: [m] | B<br>N<br>S                         | Brass<br>Nickel Plated<br>Stainless Steel                                                                                                                                                                                                                                   |
| Bracket/Guard<br>material: [s]          | 1<br>3<br>5<br><br>6<br>7<br>8      | U bracket A4 316 Stainless Steel<br>U bracket A4 316 St/St with Equip. Tag<br>U bracket A4 316 St/St<br>with Equip. Tag & Duty Label<br>Surface bracket A4 316 SS<br>Surface bracket A4 316 SS with Equip. Tag<br>Surface bracket A4 316 SS<br>with Equip. Tag & Duty Label |
| Product version:                        | A                                   | UL, cUL, ULC, IECEx, ATEX, CSFM, INMETRO -<br>[v]<br>SIL1 & SIL2                                                                                                                                                                                                            |
| Product option:<br>[o]                  | 1<br>Z<br>X<br>Y                    | Standard product<br>Custom alarm tone software - contact E2S<br>Custom configuration - contact E2S<br>Stage control Config. 4 or 8                                                                                                                                          |
| Enclosure colour:<br>[x]                | G<br>R<br>S                         | Grey<br>Red<br>Special colour - contact E2S                                                                                                                                                                                                                                 |
| Lens colour: [y]                        | A<br>B<br>C<br>G<br>M<br>R<br>Y     | Amber<br>Blue<br>Clear<br>Green<br>Magenta<br>Red<br>Yellow                                                                                                                                                                                                                 |

Accessories:

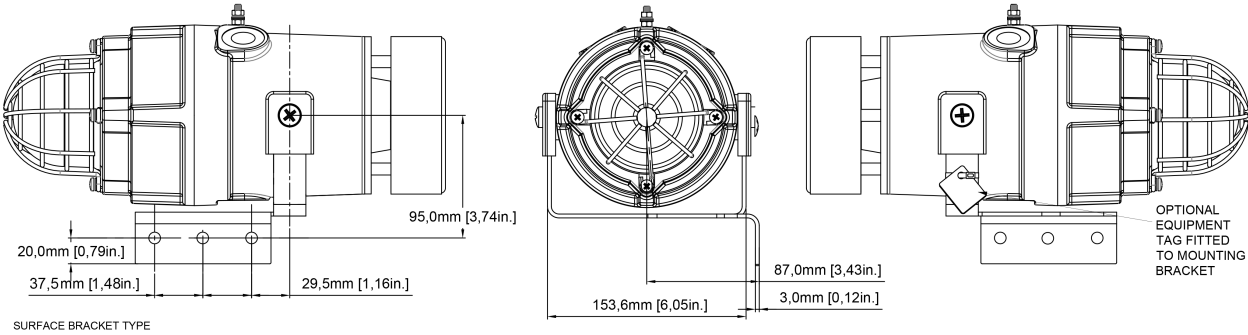
|              |                                       |
|--------------|---------------------------------------|
| SP65-0001-A4 | Pole Mount Bracket Kit St/St A4 (316) |
| SP65-0003-A4 | Sunshade - St/St A4 (316)             |

Stage control:

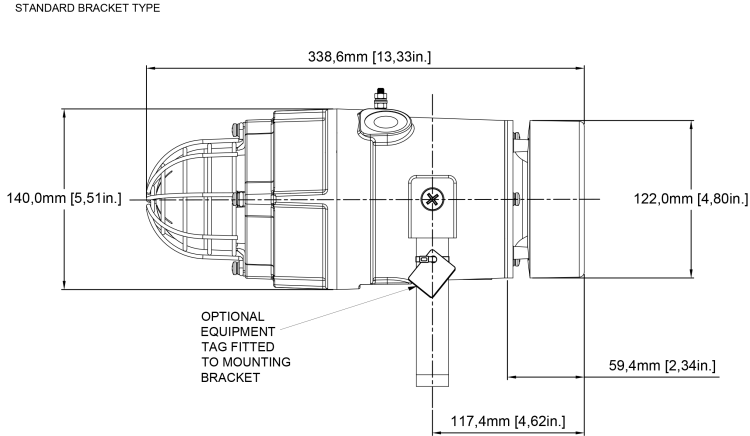
|                                                                                                                                         |                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Please review the installation manual and wiring schematics for remote stage control and EOL resistor monitoring configuration options: |                                                                                                                                         |
| Config. 1 or 5 [DC]:                                                                                                                    | Factory default. Common negative, positive switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only                           |
| Config. 2 or 6 [DC]:                                                                                                                    | User setting. Common positive, negative switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only                              |
| Config. 3 or 7 [DC]:                                                                                                                    | User setting. Common negative, positive switching activation of Alarm Stages 1 & 2 with EOL on both stages. Reverse polarity monitoring |
| Config. 4 or 8 [DC]:                                                                                                                    | Product option 'Y'. Independent activation of Alarm Stages 1 & 2 with EOL on both stages. Forward polarity monitoring                   |
| Config. 1 or 2 [AC]:                                                                                                                    | Factory default. Up to 4 Alarm Stages. Stage 1 activated at power on. Stages 2, 3 and 4 via volt free contacts                          |

Current Consumption

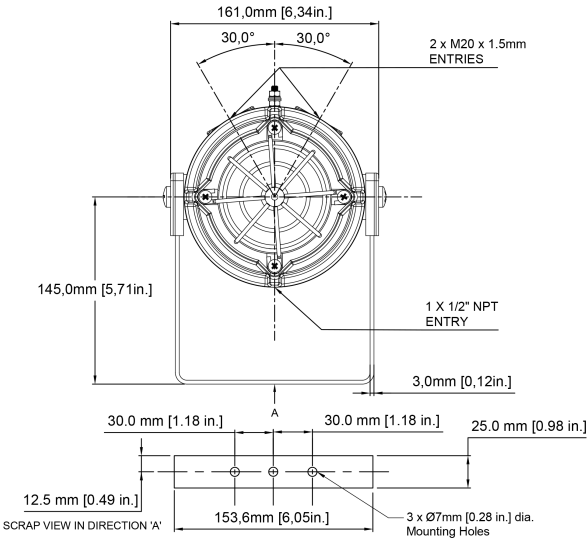
| Nominal Voltage: | Voltage range:        | Xenon Strobe Nominal current: | Alarm Horn Nominal current: | Combined Nominal current: | Combined Max. current: | In Rush    |
|------------------|-----------------------|-------------------------------|-----------------------------|---------------------------|------------------------|------------|
| 24Vdc            | 20-28Vdc              | 673mA                         | 185mA                       | 858mA                     | 1063mA                 | 786mA <5ms |
| 115Vac           | 110-120Vac<br>50/60Hz | 247mA                         | 73mA                        | 317mA                     | 429mA                  |            |
| 230Vac           | 220-240Vac<br>50/60Hz | 120mA                         | 48mA                        | 169mA                     | 227mA                  |            |



SURFACE BRACKET TYPE



STANDARD BRACKET TYPE



| E2S PART NO. | DESCRIPTION                                                          | DATA REFERENCE |
|--------------|----------------------------------------------------------------------|----------------|
| D1xC1X05R    | D1XC1X05R COMBINED 5J BEACON AND S1 SOUNDER WITH RADIAL HORN (Ex d)  | 1.23.055       |
| D1xC1X10R    | D1XC1X10R COMBINED 10J BEACON AND S1 SOUNDER WITH RADIAL HORN (Ex d) | 1.23.065       |
| D1xC2X05R    | D1XC2X05R COMBINED 5J BEACON AND S2 SOUNDER WITH RADIAL HORN (Ex d)  | 1.23.075       |
| D1xC2X10R    | D1XC2X10R COMBINED 10J BEACON AND S2 SOUNDER WITH RADIAL HORN (Ex d) | 1.23.085       |

Tone table

| S 1 | Description                                      | S 2 | S 3 | S 4 |
|-----|--------------------------------------------------|-----|-----|-----|
| T1  | 1000 Continuous PFEER Toxic Gas                  | Any | T2  | T44 |
| T2  | 1200/500 @ 1Hz Sweeping DIN/PFEER P.T.A.P.       | Any | T3  | T44 |
| T3  | 1000 @ 0.5Hz (1s on, 1s off) Intermittent PFE... | Any | T2  | T44 |
| T4  | 1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s NF C 48-265  | Any | T24 | T1  |
| T5  | 544(100mS)/440 (400mS) NF S 32-001               | Any | T19 | T1  |
| T6  | 1500/500 - (0.5s on , 0.5s off) x3 + 1s gap A... | Any | T44 | T1  |
| T7  | 500-1500Hz Sweeping 2 sec on 1 sec off AS4428    | Any | T44 | T1  |
| T8  | 500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) NEN 2575  | Any | T24 | T35 |
| T9  | 1000 (1s on, 1s off)x7 + (7s on, 1s off) IMO ... | Any | T34 | T1  |
| T10 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) IMO ... | Any | T34 | T1  |
| T11 | 420(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 Te... | Any | T1  | T8  |
| T12 | 1000(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 T... | Any | T1  | T8  |
| T13 | 422/775 (0.85 on, 0.5 off) x3 + 1s gap NFPA T... | Any | T1  | T8  |
| T14 | 1000/2000 @ 1Hz - Singapore                      | Any | T3  | T35 |
| T15 | 300 Continuous                                   | Any | T24 | T35 |
| T16 | 440 Continuous                                   | Any | T24 | T35 |
| T17 | 470 Continuous                                   | Any | T24 | T35 |
| T18 | 500 Continuous IMO code 2 (Low)                  | Any | T24 | T35 |
| T19 | 554 Continuous                                   | Any | T24 | T35 |
| T20 | 660 Continuous                                   | Any | T24 | T35 |
| T21 | 800 Continuous IMO code 2 (High)                 | Any | T24 | T35 |
| T22 | 1200 Continuous                                  | Any | T24 | T35 |
| T23 | 2000 Continuous                                  | Any | T3  | T35 |
| T24 | 2400 Continuous                                  | Any | T20 | T35 |
| T25 | 440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent  | Any | T44 | T8  |
| T26 | 470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent   | Any | T44 | T8  |
| T27 | 470 @ 5Hz (0.10s on, 0.10s off) Intermittent     | Any | T44 | T8  |
| T28 | 544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent  | Any | T24 | T8  |
| T29 | 655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent | Any | T44 | T8  |
| T30 | 660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent  | Any | T24 | T8  |
| T31 | 660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent   | Any | T24 | T8  |
| T32 | 745 @ 1Hz (0.50s on, 0.50s off) Intermittent     | Any | T24 | T8  |

| S 1 | Description                                      | S 2 | S 3 | S 4 |
|-----|--------------------------------------------------|-----|-----|-----|
| T33 | 800 (0.25s on, 1.00s off) Intermittent           | Any | T24 | T8  |
| T34 | 800 @ 2Hz (0.25s on, 0.25s off) IMO code 3.a ... | Any | T24 | T8  |
| T35 | 1000 @ 1Hz (0.50s on, 0.50s off) Intermittent    | Any | T24 | T8  |
| T36 | 2400 @ 1Hz (0.50s on, 0.50s off) Intermittent    | Any | T24 | T8  |
| T37 | 2900 @ 5Hz (0.10s on, 0.10s off) Intermittent    | Any | T24 | T8  |
| T38 | 363/518 @ 1Hz (0.50s/0.50s) Alternating          | Any | T8  | T19 |
| T39 | 450/500 @ 2Hz (0.25s/0.25s) Alternating          | Any | T8  | T19 |
| T40 | 554/440 @ 1Hz (0.50s/0.50s) Alternating          | Any | T24 | T19 |
| T41 | 554/440 @ 0.65Hz (0.76s/0.76s) Alternating       | Any | T8  | T19 |
| T42 | 561/760 @ 0.83Hz (0.60s/0.60s) Alternating       | Any | T8  | T19 |
| T43 | 780/600 @ 0.96Hz (0.52s/0.52s) Alternating       | Any | T8  | T19 |
| T44 | 800/1000 @ 2Hz (0.25s/0.25s) Alternating         | Any | T24 | T19 |
| T45 | 970/800 @ 2Hz (0.25s/0.25s) Alternating          | Any | T8  | T19 |
| T46 | 800/1000 @ 0.875Hz (0.57s/0.57s) Alternating     | Any | T24 | T19 |
| T47 | 2400/2900 @ 2Hz (0.25s/0.25s) Alternating        | Any | T24 | T19 |
| T48 | 500/1200 @ 0.3Hz (1.67s/1.67s) Sweeping          | Any | T24 | T12 |
| T49 | 560/1055 @ 0.18Hz (2.73s/2.73s) Sweeping         | Any | T24 | T12 |
| T50 | 560/1055 @ 3.3Hz (0.15s/0.15s) Sweeping          | Any | T24 | T12 |
| T51 | 600/1250 @ 0.125Hz (4s/4s) Sweeping              | Any | T24 | T12 |
| T52 | 660/1200 @ 1Hz (0.50s/0.50s) Sweeping            | Any | T24 | T12 |
| T53 | 800/1000 @ 1Hz (0.50s/0.50s) Sweeping            | Any | T24 | T12 |
| T54 | 800/1000 @ 7Hz (0.07s/0.07s) Sweeping            | Any | T24 | T12 |
| T55 | 800/1000 @ 50Hz (0.01s/0.01s) Sweeping           | Any | T24 | T12 |
| T56 | 2400/2900 @ 7Hz (0.07s/0.07s) Sweeping           | Any | T24 | T12 |
| T57 | 2400/2900 @ 1Hz (0.50s/0.50s) Sweeping           | Any | T24 | T12 |
| T58 | 2400/2900 @ 50Hz (0.01s/0.01s) Sweeping          | Any | T24 | T12 |
| T59 | 2500/3000 @ 2Hz (0.25s/0.25s) Sweeping           | Any | T24 | T12 |
| T60 | 2500/3000 @ 7.7Hz (0.65s/0.65s) Sweeping         | Any | T24 | T12 |
| T61 | 800Hz Motor Siren                                | Any | T24 | T12 |
| T62 | 1200Hz Motor Siren                               | Any | T24 | T12 |
| T63 | 2400Hz Motor Siren                               | Any | T24 | T12 |
| T64 | Simulated Bell                                   | Any | T21 | T12 |