1-23-055 / D1x: Aluminium explosion/flameproof

# D1xC1X05R 110dB(A) Radial Alarm & 5J Strobe

**The D1xC1X05R is a globally certified alarm horn sounder with a compact, omni-directional horn and combined with a 5 Joule Xenon strobe beacon. The robust Type 4/4X, IP66/67 marine grade, corrosion proof aluminium enclosure is approved for Class I & II Div 1, Zone 1 & 20, IECEx and ATEX 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 at optimum operating current. The threaded flameproof joint, multiple cable entries and duplicated, pluggable termination simplifies both installation and routine maintenance. The 24Vdc Class I version is approved for public (alarm horn) and private mode fire alarm use (strobe beacon). SIL1 & 2 compliant to IEC61508 (2010).

## Features

- Maximum sound pressure level output of 110dB(A)
- Automatic synchronisation on multi-beacon & sounder systems
- 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 T4 Gb Ta -55°C to +85°C
  Class I Zone 1 IIC T4A Gb Ta -55°C to +80°C
  Class I Zone 1 IIC T5 Gb Ta -55°C to +60°C (T6: +45°C)
- CEC Class / Zone
  Class I Zone 1 IIC T5 Gb Ta -55°C to +55°C (T6: +45°C)
- NEC Class / Div
  Class I Div 1 ABCD T4 Ta -55°C to +85°C
  Class I Div 1 ABCD T4A Ta -55°C to +80°C
  Class I Div 1 ABCD T5 Ta -55°C to +60°C (T6: +45°C)
- CEC Class / Div
  Class I Div 1 ABCD T5 Ta -55°C to +55°C (T6: +45°C)
- IECEx / ATEX
  II 2G Ex db IIC T4/T5 Gb Ta -55°C to +75°C
  II 2G Ex db IIC T5 Gb Ta -55°C to +55°C
  II 2G Ex db IIC T6 Gb Ta -55°C to +40°C (DC only)
  II 2D Ex tb IIIC T115°C Db Ta 55°C to +75°C
- NEC Class / Zone – Product version: D
  Class II Zone 20 IIIB T4A Gb Ta -55°C to +70°C
- NEC Class / Div – Product version: D
  Class II Div 1 Group FG T4A Ta -55°C to +70°C
  See product manual for full voltage specific coding.





## Specification

| Alarm Horn: | |
|---|---|
| Maximum output: | 110dB(A) @ 1 metre [101dB(A) @ 10ft/3m]<br>Class II version: 94dB(A) @ 1 metre [85dB(A) @ 10ft/3m] |
| Nominal output: | 105dB(A) @ 1m +/- 3dB – Tone 4 [96dB(A) @ 10ft/3m]<br>Class II version: 90dB(A) @ 1 metre [81dB(A) @ 10ft/3m] |
| No. of tones: | 64 (UKOOA / 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: | 5 Joules (5Ws) |
| Flash rates: | Option 1: 1Hz (60 fpm)<br>Option 2: 1.5Hz (90 fpm)<br>Option 3: Double Strike |
| Eff. Intensity: | 143 cd* – measured ref. to I.E.S. |
| Peak Candela: | 46,976 cd* – measured ref. to I.E.S. |
| Eff. Intensity: | 250 cd – calculated from energy (J) |
| Peak Candela: | 500,000 cd – calculated from energy (J) |
| 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: | 1×1/2"NPT & 2xM20 – thread adaptors available |
| Terminals: | 0.5 – 2.5mm² (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: | D1xC1X05 | Combined Alarm Horn & Xenon Strobe |
| Horn type: | R | Omni-directional radial horn |
| Voltage: | DC024 | 20-28V dc |
| | AC115 | 110-120Vac |
| | AC230 | 220-240Vac |
| Cable entries:[e] | A | 2 x M20x1.5mm & 1 × 1/2"NPT |
| | B | 2 × 1/2"NPT – adaptors |
| | C | 2 × 3/4"NPT – adaptors |
| | D | 2 x M25x1.5mm – adaptors |
| | F | 1 × 3/4"NPT – adaptor |
| | G | 1 x M25x1.5mm – adaptor |
| | Note: | All entries, excluding thread adaptors, supplied with stopping plugs installed. |
| Stopping plug/ adaptor material: [m] | B | Brass |
| | N | Nickel Plated |
| | S | Stainless Steel |
| Bracket/Guard material: [s] | 1 | U bracket A4 316 Stainless Steel |
| | 3 | U bracket A4 316 St/St with Equip. Tag |
| | 5 | U bracket A4 316 St/St with Equip. Tag & Duty Label |
| | 6 | Surface bracket A4 316 SS |
| | 7 | Surface bracket A4 316 SS with Equip. Tag |
| | 8 | Surface bracket A4 316 SS with Equip. Tag & Duty Label |
| Product version: [v] | A | UL, cUL, ULC, IECEx, ATEX, PESO, CSFM, |
| | D | INMETRO – SIL1 & SIL2 Class II – UL, cUL |
| Product option: [o] | 1 | Standard product |
| | Z | Custom alarm tone software – contact E2S |
| | X | Custom configuration – contact E2S |
| | Y | Stage control Config. 4 or 8 |
| Enclosure colour: [x] | G | Grey |
| | R | Red |
| | S | Special colour – contact E2S |
| Lens colour: [y] | A | Amber |
| | B | Blue |
| | C | Clear |
| | G | Green |
| | M | Magenta |
| | R | Red |
| | Y | Yellow |

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

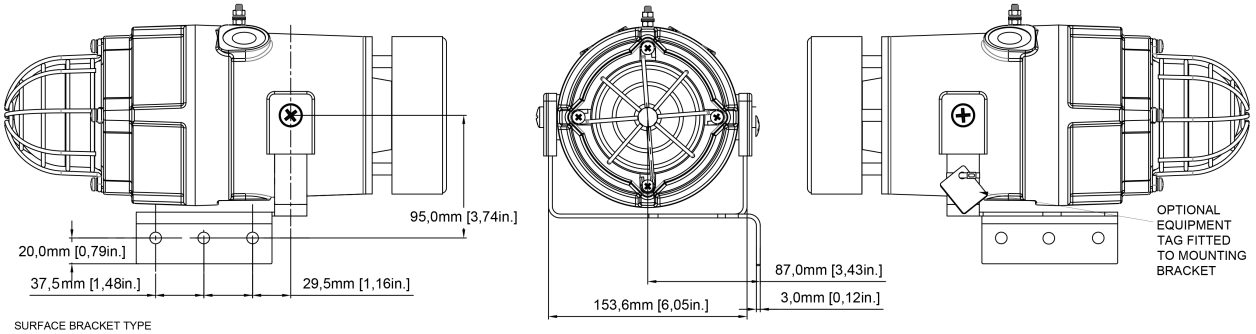
**Stage control:**

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 |

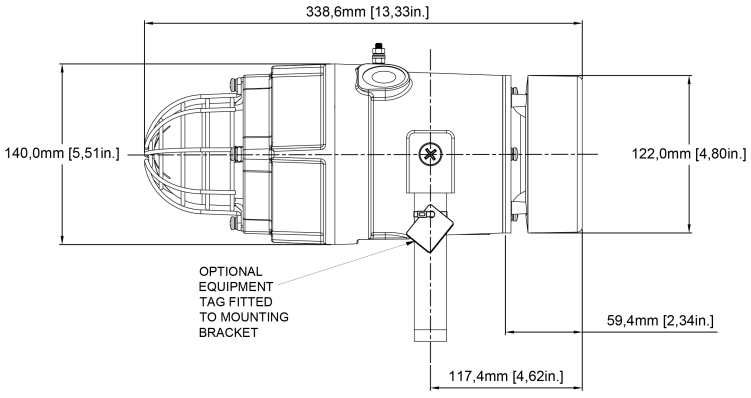
## Current Consumption

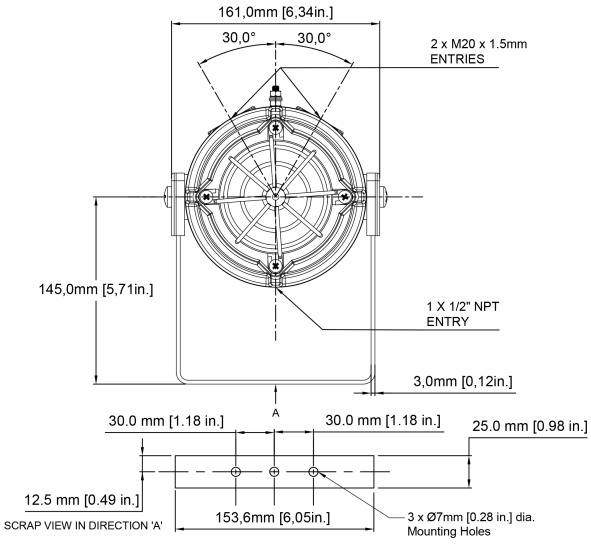
| Nominal Voltage: | Voltage range: | Xenon Strobe Nominal current: | Alarm Horn Nominal current: | Combined Nominal current: | Combined Max. current: | In Rush |
|---|---|---|---|---|---|---|
| 24Vdc | 20-28Vdc | 323mA | 185mA | 508mA | 555mA | 786mA <5ms |
| 115Vac | 110-120Vac 50/60Hz | 129mA | 73mA | 200mA | 264mA | |
| 230Vac | 220-240Vac 50/60Hz | 79mA | 48mA | 127mA | 149mA | |




SURFACE BRACKET TYPE

STANDARD BRACKET TYPE




SCRAP VIEW IN DIRECTION 'A'

| 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 |
| 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 |



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