1-22-140 / Class I Dlv 1 Haz Loc

# D1xS1F Alarm Horn Sounder

**The D1xS1F is a globally approved 117dB(A) alarm horn sounder with re-entrant flare horn. Robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure approved for Class I & II Div 1, Zone 1 & 20, IECEx and ATEX Zone 1 & 2 explosion proof signaling applications.**

Featuring 64 alarm tone sounds, each of the available 4 stage/channels can be remotely triggered. Approved for gas groups ABCD in Class I Division 1, Class I Zone 1 IIC, IECEx/ATEX Zone 1/2 and for dust groups FG in Class II Division 1, Zone 20 IIIB environments. The threaded flameproof joint simplifies both installation and routine maintenance. The 24V dc version is approved for public mode fire alarm use and the 110-240V ac version for general signaling use. SIL1 compliant to IEC 61508 (2010).

## Features

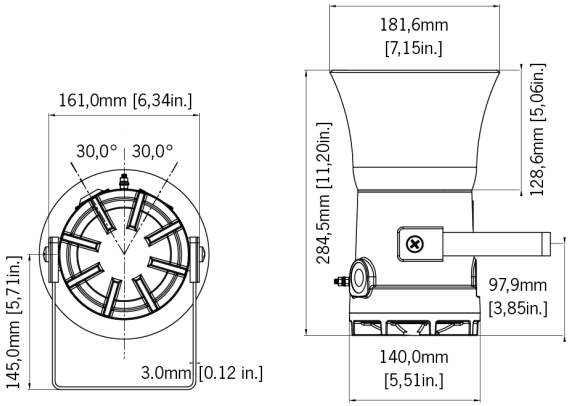
- High output, up to 117dB(A)
- Public mode fire alarm use
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Choice of 64 alarm tone frequencies
- Automatic synchronisation on multi-sounder system
- Continuously rated
- Compact form factor
- Robust corrosion proof aluminium enclosure
- Stainless steel fixings
- Triple cable entries
- Duplicate cable terminations (in & out for daisy-chain installations)
- Available with custom tone configurations and frequencies
- SIL1 compliant to IEC 61508 (2010)

## Approvals

- UL/cUL File ref: E230764
- IECEx Certificate: IECEx ULD 19.0008X
- ATEX Certificate: DEMKO 19 ATEX 2141X
- CSFM listing: 7136-2279:0506

## Coding

- **A1: Gas version**
  NEC / CEC:
  Class I Div 1 ABCD T6 Ta -40°C to +70°C
  Class I Div 2 ABCD T6 Ta -40°C to +70°C
  Class I Zone 1, 2 IIC T6 Ta -40°C to +70°C
  24V dc version is approved for public mode fire alarm use
  IECEx / ATEX:
  Ex db IIC T5 Gb Ta -40°C to +75°C
  Ex db IIC T6 Gb Ta -40°C to +70°C
- **D1: Dust version**
  NEC / CEC:
  Class II Div 1 FG T6 Ta -40°C to +70°C
  Class II Div 2 FG T6 Ta -40°C to +70°C
  Class III Div 1 & 2
  Zone 20, 21, 22 IIIB Ta -40°C to +70°C
- Protection concept: Ex d / AEx d




## Specification

| | |
|---|---|
| Maximum output: | Class I version: 117dB(A) @ 1 metre [107dB(A) @ 10ft/3m]<br>Class II version: 98dB(A) @ 1 metre [88dB(A) @ 10ft/3m] |
| Nominal output: | Class I version: 113dB(A) @ 1m +/- 3dB – Tone 4 [104dB(A) @ 10ft/3m]<br>Class II version: 94dB(A) @ 1 metre [84dB(A) @ 10ft/3m] |
| No. of tones: | 64 (UKOOA / PFEER compliant) |
| No. of stages: | 4 |
| Volume control: | Adjustable -12dB(A) |
| Effective range: | 125m/410ft @ 1KHz |
| Voltages DC: | 24V dc (10-30V dc) |
| Voltages AC: | 110-240V ac 50/60Hz |
| Stage switching: | DC units: negative or positive<br>AC units: common supply line |
| Ingress protection: | EN60529: IP66<br>UL50E / NEMA250: 4 / 4X / 3R / 13 |
| Enclosure material: | Marine grade aluminium LM6- copper free<br>Chromated & powder coated – corrosion proof |
| Colour: | Red (RAL3000), Grey (RAL7038) |
| Cable entries: | 1 × 1/2"NPT & 2 x M20 x 1.5mm<br>1 × 1/2"NPT & 2 × 1/2"NPT<br>1 × 1/2"NPT & 2 × 3/4"NPT |
| Terminals: | 0.5 – 2.5mm² (20-14 AWG) |
| Grounding stud: | M5 |
| Operating temp: | -40° to +70°C [-40° to +158°F] |
| Storage temp: | -50° to +70°C [-58° to +158°F] |
| Relative humidity: | 95% – Additional tropicalisation is recommended for applications where both high relative humidity and high ambient temperatures exist |
| Weight: | 4.00kg/8.80lbs |

## Part Codes

| Version: | Part code: | |
|---|---|---|
| Product type: | D1xS1 | |
| Horn type: | F | Flare re-entrant horn |
| Voltage: | DC024 | 10-30V dc |
| | AC230 | 110-240V ac |
| Cable Entry Type: [e] | A | 1 × 1/2"NPT & 2 x M20 x 1.5mm |
| | B | 1 × 1/2"NPT & 2 × 1/2"NPT |
| | C | 1 × 1/2"NPT & 2 × 3/4"NPT |
| Adaptor/Stopping plug material: [m] | B | Brass |
| | N | Nickel Plated |
| | S | Stainless Steel |
| Bracket matl & tag: [s] | 1 | A2 304 Stainless Steel |
| | 2 | A4 316 Stainless Steel |
| | 3 | A2 304 St/St with Equip. Tag |
| | 4 | A4 316 St/St with Equip. Tag |
| Product version: [v] | A1 | Gas environments UL, cUL, IECEx, ATEX |
| | D1 | Dust environments UL, cUL |
| Enclosure colour: [x] | G | Grey RAL7038 |
| | R | Red RAL3000 |
| Accessories: | SP65-0001-A2 | Pole Mount Bracket Kit 2" St/St A2 (304) |
| | SP65-0001-A4 | Pole Mount Bracket Kit 2" St/St A4 (316) |
| | SP65-0003-A2 | Sunshade – St/St A2 (304) |
| | SP65-0003-A4 | Sunshade – St/St A4 (316) |

## Tone table

| S 1 | Description | S 2 | S 3 | S 4 |
|---|---|---|---|---|
| T 2 | 1200/500 @ 1Hz Sweeping - DIN / PFEER P.T.A.P. | Any | T 3 | T 44 |
| T 3 | 1000 @ 0.5Hz (1s on, 1s off) Intermittent - P... | Any | T 2 | T 44 |
| T 4 | 1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - NF C 48... | Any | T 24 | T 1 |
| T 5 | 544(100mS)/440 (400mS) - NF S 32-001 | Any | T 19 | T 1 |
| T 6 | 1500/500 - (0.5s on , 0.5s off) x3 + 1s gap -... | Any | T 44 | T 1 |
| T 7 | 500-1500Hz Sweeping 2 sec on 1 sec off - AS4428 | Any | T 44 | T 1 |
| T 8 | 500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) - NEN ... | Any | T 24 | T 35 |
| T 9 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1 |
| T 10 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1 |
| T 11 | 420(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201 ... | Any | T 1 | T 8 |
| T 12 | 1000(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201... | Any | T 1 | T 8 |
| T 13 | 422/775 - (0.85 on, 0.5 off) x3 + 1s gap - ... | Any | T 1 | T 8 |
| T 14 | 1000/2000 @ 1Hz - Singapore | Any | T 3 | T 35 |
| T 15 | 300 Continuous | Any | T 24 | T 35 |
| T 16 | 440 Continuous | Any | T 24 | T 35 |
| T 17 | 470 Continuous | Any | T 24 | T 35 |
| T 18 | 500 Continuous - IMO code 2 (Low) | Any | T 24 | T 35 |
| T 19 | 554 Continuous | Any | T 24 | T 35 |
| T 20 | 660 Continuous | Any | T 24 | T 35 |
| T 21 | 800 Continuous - IMO code 2 (High) | Any | T 24 | T 35 |
| T 22 | 1200 Continuous | Any | T 24 | T 35 |
| T 23 | 2000 Continuous | Any | T 3 | T 35 |
| T 24 | 2400 Continuous | Any | T 20 | T 35 |
| T 25 | 440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent | Any | T 44 | T 8 |
| T 26 | 470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent | Any | T 44 | T 8 |
| T 27 | 470 @ 5Hz (0.10s on, 0.10s off) Intermittent | Any | T 44 | T 8 |
| T 28 | 544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent | Any | T 24 | T 8 |
| T 29 | 655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent | Any | T 44 | T 8 |
| T 30 | 660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent | Any | T 24 | T 8 |
| T 31 | 660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent | Any | T 24 | T 8 |
| T 32 | 745 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 33 | 800 (0.25s on, 1.00s off) Intermittent | Any | T 24 | T 8 |

| S 1 | Description | S 2 | S 3 | S 4 |
|---|---|---|---|---|
| T 34 | 800 @ 2Hz (0.25s on, 0.25s off) - IMO code 3.... | Any | T 24 | T 8 |
| T 35 | 1000 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 36 | 2400 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 37 | 2900 @ 5Hz (0.10s on, 0.10s off) Intermittent | Any | T 24 | T 8 |
| T 38 | 363/518 @ 1Hz (0.50s / 0.50s) Alternating | Any | T 8 | T 19 |
| T 39 | 450/500 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 8 | T 19 |
| T 40 | 554/440 @ 1Hz (0.50s / 0.50s) Alternating | Any | T 24 | T 19 |
| T 41 | 554/440 @ 0.65Hz (0.76s / 0.76s) Alternating | Any | T 8 | T 19 |
| T 42 | 561/760 @ 0.83Hz (0.60s / 0.60s) Alternating | Any | T 8 | T 19 |
| T 43 | 780/600 @ 0.96Hz (0.52s / 0.52s) Alternating | Any | T 8 | T 19 |
| T 44 | 800/1000 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 24 | T 19 |
| T 45 | 970/800 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 8 | T 19 |
| T 46 | 800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating | Any | T 24 | T 19 |
| T 47 | 2400/2900 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 24 | T 19 |
| T 48 | 500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping | Any | T 24 | T 12 |
| T 49 | 560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping | Any | T 24 | T 12 |
| T 50 | 560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping | Any | T 24 | T 12 |
| T 51 | 600/1250 @ 0.125Hz (4s / 4s) Sweeping | Any | T 24 | T 12 |
| T 52 | 660/1200 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 53 | 800/1000 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 54 | 800/1000 @ 7Hz (0.07s / 0.07s) Sweeping | Any | T 24 | T 12 |
| T 55 | 800/1000 @ 50Hz (0.01s / 0.01s) Sweeping | Any | T 24 | T 12 |
| T 56 | 2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping | Any | T 24 | T 12 |
| T 57 | 2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 58 | 2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping | Any | T 24 | T 12 |
| T 59 | 2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping | Any | T 24 | T 12 |
| T 60 | 2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping | Any | T 24 | T 12 |
| T 61 | 800Hz Motor Siren | Any | T 24 | T 12 |
| T 62 | 1200Hz Motor Siren | Any | T 24 | T 12 |
| T 63 | 2400Hz Motor Siren | Any | T 24 | T 12 |
| T 64 | Simulated Bell | Any | T 21 | T 12 |