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

# D1xS1F Alarm Horn Sounder

**117dB(A) alarm horn. The D1xS1F is a high output alarm horn sounder with re-entrant flare horn. Low current consumption and high SPL in a robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure ensure the D1xS1F is suitable for all Class I & II Division 1, Zone 1 & 20 explosion proof signaling applications. The 24V dc version is approved for public mode fire alarm use and the 110-240V ac version for general signaling use.**

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 and for dust groups FG in Class II Division 1, Zone 20 IIIB environments. The threaded flameproof joint simplifies both installation and routine maintenance.

## Features

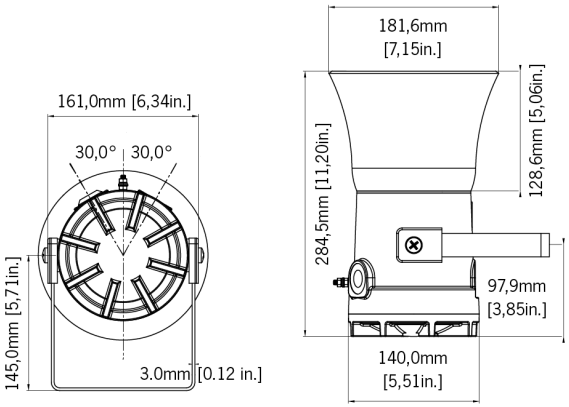
- High output, up to 117dB(A)
- Public mode fire alarm use
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Choice of 64 alarm tone frequencies
- Automatic synchronisation on multi-sounder system
- Continuously rated
- Compact form factor
- Robust corrosion 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

## Approvals

- UL File ref: E230764
  UL1203 Ed. 5
  CAN/CSA C22.2 No. 25-1966
  CSA C22.2 No. 30-M1986
  CSA C22.2 No. 205-12
  UL464 Ed. 9

## 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
- **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: | 117dB(A) @ 1 metre [107dB(A) @ 10ft/3m] |
| Nominal output: | 113dB(A) @ 1m +/- 3dB - Tone 4 [104dB(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 x 1/2"NPT & 2 x M20 x 1.5mm<br>1 x 1/2"NPT & 2 x 1/2"NPT<br>1 x 1/2"NPT & 2 x 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: | 90% at 20°C [68°F] |
| Weight: | 4.00kg/8.80lbs |

## Part Codes

| **Version:** | **Part code:** | |
|---|---|---|
| Product type: | D1xS1 | |
| Horn type: | F | Flare re-entrant horn |
| Voltage: | DC024<br>AC230 | 10-30V dc<br>110-240V ac |
| Cable Entry Type: [e] | A<br>B<br>C | 1 x 1/2"NPT & 2 x M20 x 1.5mm<br>1 x 1/2"NPT & 2 x 1/2"NPT<br>1 x 1/2"NPT & 2 x 3/4"NPT |
| Adaptor/Stopping plug material: [m] | B<br>N<br>S | Brass<br>Nickel Plated<br>Stainless Steel |
| Bracket material: [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 (304) |
| Product version: [v] | A1<br>D1 | Gas environments Class I/Zone1<br>Dust environments Class II/Zone 20 |
| Enclosure colour: [x] | G<br>R | Grey RAL7038<br>Red RAL3000 |
| Example: | D1xS1FAC230 [e][m][s][v][x]<br>D1xS1FAC230AB1A1R | |

**Ratings:**

| | |
|---|---|
| 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 IIC T6 Ta -40°C to +70°C |
| 24V dc version is approved for public mode fire alarm use | |
| 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 IIIB T6 Ta -40°C to +70°C |

## Alarm Sounder

| **Version:** | | **Voltage:** | **Current:** |
|---|---|---|---|
| 10-30V dc | | 24V dc | 217mA |
| 110-240V ac | 50/60Hz | 115V ac | 76mA |
| 110-240V ac | 50/60Hz | 230V ac | 53mA |

## Tone table

| S 1 | Description | S 2 | S 3 | S 4 |
|---|---|---|---|---|
| T 1 | 1000 Continuous - PFEER Toxic Gas | Any | T 2 | T 44 |
| 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 |
| 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 |



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