

# 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



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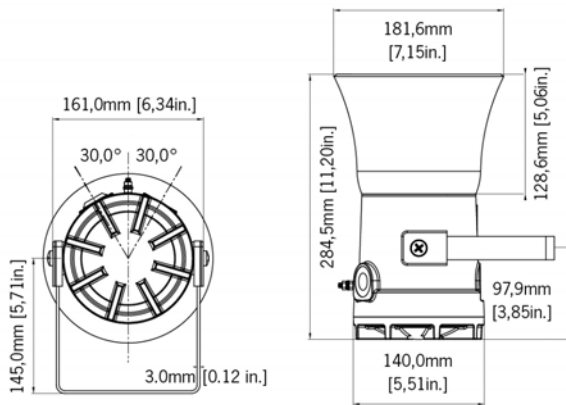
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### Specification

|                     |  |
|---------------------|--|
| 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 -12 dB(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 - 2.5mm <sup>2</sup> (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 reentrant horn               |
| Voltage:                            | DC024  | 10-30V dc                          |
|                                     | AC230  | 110-240V ac                        |
| Cable Entry Type: [e]               | A  | 1 x 1/2" NPT & 2 x M20 x 1.5mm     |
|                                     | B  | 1 x 1/2" NPT & 2 x 1/2" NPT        |
|                                     | C  | 1 x 1/2" NPT & 2 x 3/4" NPT        |
| Adaptor/Stopping plug material: [m] | B  | Brass                              |
|                                     | N  | Nickel Plated                      |
|                                     | S  | Stainless Steel                    |
| Bracket material: [s]               | 1  | A2 304 Stainless Steel             |
|                                     | 2  | A4 316 Stainless Steel             |
| Product version: [v]                | A1   | Gas environments Class I/Zone1     |
|                                     | D1   | Dust environments Class II/Zone 20 |
| Enclosure colour: [x]               | G  | Grey RAL7038                       |
|                                     | R  | 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 Ta -40°C to +70°C          |

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### Tone table

| S 1  | Description                                      | S 2 | S 3  | S 4  | S 1  | Description                                     | S 2 | S 3  | S 4  |
|------|--|-----|------|------|------|---|-----|------|------|
| T 1  | 1000 Continuous - PFEER Toxic Gas                | Any | T 2  | T 44 | T 33 | 800 (0.25s on, 1.00s off) Intermittent          | Any | T 24 | T 8  |
| T 2  | 1200/500 @ 1Hz Sweeping - DIN / PFEER P.T.A.P.   | Any | T 3  | T 44 | T 34 | 800 @ 2Hz (0.25s on, 0.25s off) - IMO code 3... | Any | T 24 | T 8  |
| T 3  | 1000 @ 0.5Hz (1s on, 1s off) Intermittent - P... | Any | T 2  | T 44 | T 35 | 1000 @ 1Hz (0.50s on, 0.50s off) Intermittent   | Any | T 24 | T 8  |
| T 4  | 1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - NF C 48... | Any | T 24 | T 1  | T 36 | 2400 @ 1Hz (0.50s on, 0.50s off) Intermittent   | Any | T 24 | T 8  |
| T 5  | 544(100mS)/440 (400mS) - NF S 32-001             | Any | T 19 | T 1  | T 37 | 2900 @ 5Hz (0.10s on, 0.10s off) Intermittent   | Any | T 24 | T 8  |
| T 6  | 1500/500 - (0.5s on , 0.5s off) x3 + 1s gap -... | Any | T 44 | T 1  | T 38 | 363/518 @ 1Hz (0.50s / 0.50s) Alternating       | Any | T 8  | T 19 |
| T 7  | 500-1500Hz Sweeping 2 sec on 1 sec off - AS4428  | Any | T 44 | T 1  | T 39 | 450/500 @ 2Hz (0.25s / 0.25s) Alternating       | Any | T 8  | T 19 |
| T 8  | 500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) - NEN ... | Any | T 24 | T 35 | T 40 | 554/440 @ 1Hz (0.50s / 0.50s) Alternating       | Any | T 24 | T 19 |
| T 9  | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1  | T 41 | 554/440 @ 0.65Hz (0.76s / 0.76s) Alternating    | Any | T 8  | T 19 |
| T 10 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1  | T 42 | 561/760 @ 0.83Hz (0.60s / 0.60s) Alternating    | Any | T 8  | T 19 |
| T 11 | 420(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201 ... | Any | T 1  | T 8  | T 43 | 780/600 @ 0.96Hz (0.52s / 0.52s) Alternating    | Any | T 8  | T 19 |
| T 12 | 1000(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201... | Any | T 1  | T 8  | T 44 | 800/1000 @ 2Hz (0.25s / 0.25s) Alternating      | Any | T 24 | T 19 |
| T 13 | 422/775 - (0.85 on, 0.5 off) x3 + 1s gap - ...   | Any | T 1  | T 8  | T 45 | 970/800 @ 2Hz (0.25s / 0.25s) Alternating       | Any | T 8  | T 19 |
| T 14 | 1000/2000 @ 1Hz - Singapore                      | Any | T 3  | T 35 | T 46 | 800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating  | Any | T 24 | T 19 |
| T 15 | 300 Continuous                                   | Any | T 24 | T 35 | T 47 | 2400/2900 @ 2Hz (0.25s / 0.25s) Alternating     | Any | T 24 | T 19 |
| T 16 | 440 Continuous                                   | Any | T 24 | T 35 | T 48 | 500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping       | Any | T 24 | T 12 |
| T 17 | 470 Continuous                                   | Any | T 24 | T 35 | T 49 | 560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping      | Any | T 24 | T 12 |
| T 18 | 500 Continuous - IMO code 2 (Low)                | Any | T 24 | T 35 | T 50 | 560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping       | Any | T 24 | T 12 |
| T 19 | 554 Continuous                                   | Any | T 24 | T 35 | T 51 | 600/1250 @ 0.125Hz (4s / 4s) Sweeping           | Any | T 24 | T 12 |
| T 20 | 660 Continuous                                   | Any | T 24 | T 35 | T 52 | 660/1200 @ 1Hz (0.50s / 0.50s) Sweeping         | Any | T 24 | T 12 |
| T 21 | 800 Continuous - IMO code 2 (High)               | Any | T 24 | T 35 | T 53 | 800/1000 @ 1Hz (0.50s / 0.50s) Sweeping         | Any | T 24 | T 12 |
| T 22 | 1200 Continuous                                  | Any | T 24 | T 35 | T 54 | 800/1000 @ 7Hz (0.07s / 0.07s) Sweeping         | Any | T 24 | T 12 |
| T 23 | 2000 Continuous                                  | Any | T 3  | T 35 | T 55 | 800/1000 @ 50Hz (0.01s / 0.01s) Sweeping        | Any | T 24 | T 12 |
| T 24 | 2400 Continuous                                  | Any | T 20 | T 35 | T 56 | 2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping        | Any | T 24 | T 12 |
| T 25 | 440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent  | Any | T 44 | T 8  | T 57 | 2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping        | Any | T 24 | T 12 |
| T 26 | 470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent   | Any | T 44 | T 8  | T 58 | 2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping       | Any | T 24 | T 12 |
| T 27 | 470 @ 5Hz (0.10s on, 0.10s off) Intermittent     | Any | T 44 | T 8  | T 59 | 2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping        | Any | T 24 | T 12 |
| T 28 | 544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent  | Any | T 24 | T 8  | T 60 | 2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping      | Any | T 24 | T 12 |
| T 29 | 655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent | Any | T 44 | T 8  | T 61 | 800Hz Motor Siren                               | Any | T 24 | T 12 |
| T 30 | 660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent  | Any | T 24 | T 8  | T 62 | 1200Hz Motor Siren                              | Any | T 24 | T 12 |
| T 31 | 660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent   | Any | T 24 | T 8  | T 63 | 2400Hz Motor Siren                              | Any | T 24 | T 12 |
| T 32 | 745 @ 1Hz (0.50s on, 0.50s off) Intermittent     | Any | T 24 | T 8  | T 64 | Simulated Bell                                  | Any | T 21 | T 12 |