

D1xS1F 115dB(A) Alarm Horn Sounder

The D1xS1F is a high performance globally certified alarm horn sounder featuring a sound output of up to 115dB(A). The robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure is approved for Class I & II Div 1, Zone 1 & 20, IECEx and ATEX Zone 1, 2, 21 & 22 explosion proof signalling applications.

Featuring 64 alarm tones with 4 remotely activated stage/channels. The threaded flameproof joint, multiple cable entries and duplicated, pluggable termination simplifies both installation and routine maintenance. The 24Vdc version is EN54-3 EU, UK CPR, MED and MER compliant plus UL464 NFPA complaint for public mode fire alarm use, the 100-240Vac version for general signalling use. SIL1 & SIL2 Route 2H to IEC61508 (2010), with optional diagnostics for Route 1H SIL2 compliance.

Features

- Maximum sound pressure level output of 115dB(A)
- Choice of 64 alarm tone frequencies
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Automatic synchronisation on multi-sounder system
- Ratchet adjustable 316 stainless steel bracket
- Triple cable entries
- Robust marine grade aluminium enclosure
- EN54-3 tested – EU & UK CPR compliant
- UL464 Public mode fire alarm use
- CAN/ULC S525 Audible Signaling Devices for Fire Alarm

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
- CCCEx certificate: 2022122310115173
- EU CPR certificate: 2831-CPR-F4858
- UK CPR certificate: 0832-UKCA-CPR-F1782
- MED certificate: MEDB000085K
- MER certificate: MERB000085K
- SIL1 & SIL2 compliant to IEC61508 (2010)

Coding

- NEC / CEC Class / Zone
Class I Zone 1 IIC T5 Ta -55°C to +85°C (T6 +75°C)
- NEC / CEC Class / Div
Class I Div 1 ABCD T5 Ta -55°C to +85°C (T6 +75°C)
- IECEx / ATEX
II 2G Ex db IIC T5 Gb Ta -55°C to +75°C (T6 +70°C)
II 2D Ex tb IIIC T82°C Db Ta -55°C to +75°C
- Product version: D: NEC / CEC Class / Zone
Zone 20 IIIB Ta -55°C to +70°C
- Product version: D: NEC / CEC Class / Div
Class II Div 1 FG T6 Ta -55°C to +70°C
Class III Div 1 Ta -55°C to +70°C

See product manual for full voltage specific coding



Specification

| | |
|-------------------------|---|
| Maximum output: | 115dB(A) @ 1 metre [106dB(A) @ 10ft/3m] Class II version: 98dB(A) @ 1 metre [88dB(A) @ 10ft/3m] |
| Nominal output: | 110dB(A) @ 1m +/- 3dB - Tone 4 [101dB(A) @ 10ft/3m] Class II version: 94dB(A) @ 1 metre [84dB(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 (11.5-54Vdc) |
| Voltages AC: | 230Vac (100-240Vac) |
| In-rush: | 815mA within 4ms @ 24Vdc |
| Stage switching: | DC units: positive or negative AC units: common supply line |
| Safety Integrity Level: | Product version A: SIL1 and SIL2 Route 2H Product version S: SIL2 Route 1H with diagnostics SFF: >99% See install manual for reliability & functional safety data |
| Ingress protection: | EN60529: IP66/67 UL50E / NEMA250: 4 / 4X / 3R / 13 |
| Enclosure material: | Marine grade LM6 aluminium alloy |
| Enclosure colour: | Red or Grey, custom colours available on request |
| Enclosure finish: | Chromate & powder coated finish |
| Cable entries: | 1x1/2"NPT & 2xM20 Thread adaptors available |
| Stopping plugs: | Brass, Nickel Plated or Stainless Steel |
| Terminals: | 0.5 - 2.5mm ² (20-14AWG) - 12AWG solid core conductor Pluggable & duplicated terminals |
| Line monitoring: | Blocking diode included EOL Min. 500 Ohm 2W, or 3k3 Ohm 0.5W resistor or diode (DC versions) can be fitted |
| Ground/Earth stud: | M5 |
| 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) |
| MTBF DC: | 225.16 years / 1,972,386 hours - MIL 217 |
| MTBF AC: | 138.96 years / 1,217,285 hours - MIL 217 |
| Weight: | 4.00kg/8.80lbs |

Part Codes

| Part Code: | Identifier: | Description: |
|--|-------------------------------------|--|
| Product type: | D1xS1 | D1xS1 alarm horn sounder |
| Horn type: | F | Flare re-entrant horn |
| Voltage: | DC024 AC230 | 11.5-54Vdc 100-240Vac |
| Cable entries:[e] | A B C D F G Note: | 2 x M20x1.5mm & 1 x 1/2"NPT 2 x 1/2"NPT - adaptors 2 x 3/4"NPT - adaptors 2 x M25x1.5mm - adaptors 1 x 3/4"NPT - adaptor 1 x M25x1.5mm - adaptor All entries, excluding thread adaptors, supplied with stopping plugs installed. |
| Stopping plug/ adaptor material: [m] | B N S | Brass Nickel plated brass Stainless steel |
| Bracket material: [s] | 1 3 5 | A4 316 Stainless Steel A4 316 St/St with Equip. Tag A4 316 St/St with Equip. Tag and Duty Label |
| Product version: [v] | A D S T | UL, cUL, ULC, IECEx, ATEX, CCCEX, PESO, CSFM, MED, MER - SIL1 & SIL2 Route 2H Class II - UL, cUL UL, cUL, ULC, IECEx, ATEX, CCCEX, PESO, CSFM SIL2 Route 1H with diagnostics SFF: >99% IECEx, ATEX, PESO - Telephone/Relay initiate |
| Product option: [o] | 1 Z X Y K V | Standard product Custom alarm tone software - contact E2S Custom configuration - contact E2S Stage control Config. 4 Stage control Config. 5 (DC) and Config. 2 (AC) Stage control Config. 6 |
| Enclosure colour: [x] | R G S | Red Grey Special colour - contact E2S |

Note:

For UK & EU CPR, MED, MER compliant 24Vdc variant, select product version A and product option 1

Accessories:

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

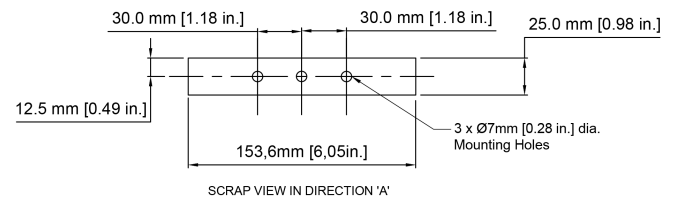
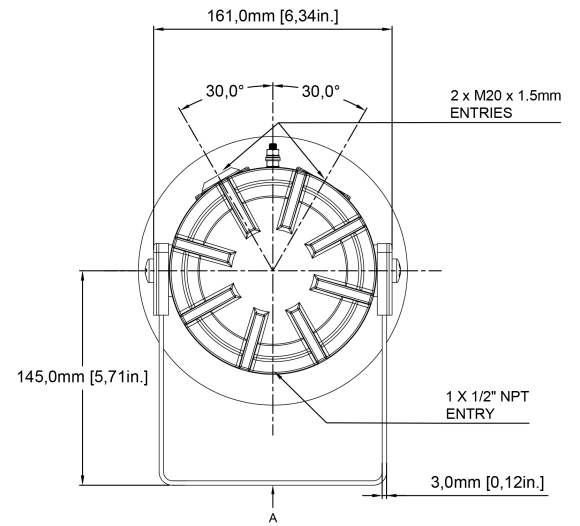
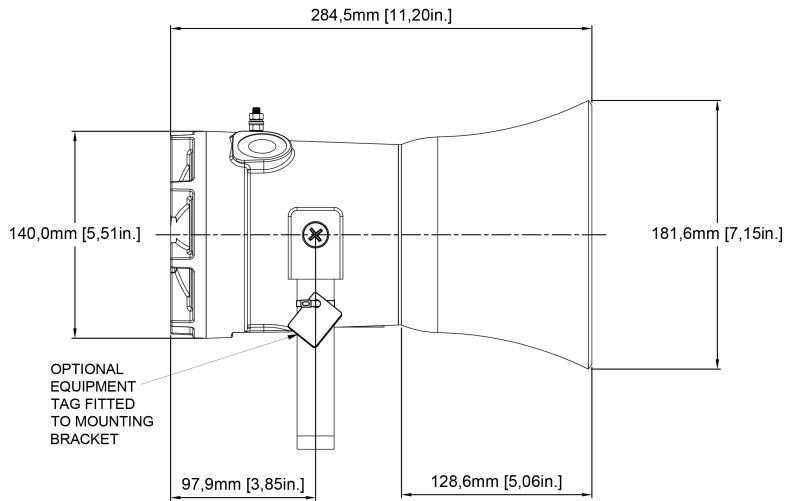
Alarm stage control:

Please review the installation manual and wiring schematics for remote stage control and EOL resistor monitoring configuration options:

| | |
|-----------------|---|
| Config. 1 [DC]: | Factory default. Common negative, positive switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only |
| Config. 2 [DC]: | User setting. Common positive, negative switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only |
| Config. 3 [DC]: | User setting. Common negative, positive switching activation of Alarm Stages 1 & 2 with EOL on both stages. Reverse polarity monitoring |
| Config. 4 [DC]: | Product option 'Y'. Independent activation of Alarm Stages 1 & 2 with EOL on both stages. Forward polarity monitoring |
| Config. 5 [DC]: | Product option 'K'. Horn continuously powered. Voltage free activation of up to 3 alarm stages |
| Config. 6 [DC]: | Product option 'V'. Independent activation of up to 4 Alarm Stages with EOL on all stages. Forward polarity monitoring |
| Config. 1 [AC]: | Factory default. Up to 4 Alarm Stages. Stage 1 activated at power on. Stages 2, 3 and 4 via volt free contacts |
| Config. 2 [AC]: | Product option 'K'. Horn continuously powered. Voltage free activation of up to 3 alarm stages |

Current Consumption

| Nominal Voltage: | Voltage range: | Nominal current: | Max. current: | In-rush: |
|------------------|----------------|------------------|---------------|------------|
| 12Vdc | 11.5-54Vdc | 221mA | 221mA | - |
| 24Vdc | 11.5-54Vdc | 185mA | 221mA | 815mA <4ms |
| 48Vdc | 11.5-54Vdc | 115mA | 221mA | - |
| 115Vac 50/60Hz | 100-260V ac | 73mA | 80mA | - |
| 230Vac 50/60Hz | 100-260V ac | 48mA | 80mA | - |



Assemblies

The D1xS1F is available as a plated assembly configured with Xenon strobe or LED beacons with or without a D1xJ2 Ex d junction box. Contact E2S for further information.

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 |

| S 1 | Description | S 2 | S 3 | S 4 |
|------|---|-----|------|------|
| 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 |