1-32-027 / D2x: Aluminium hazardous location

D2xS2F 123dB(A) Alarm Horn Sounder - Warning Siren

The D2xS2F is a high performance globally certified alarm horn sounder featuring a sound output of up to 123dB(A). The robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure is approved for Class I & II Div 2, Zone 2 & 22, IECEx and ATEX Zone 2 & 22 hazardous location signalling applications.

Featuring 64 alarm tones, each of the 4 stage/channels can be remotely activated. Class D amplification with a choice of two power modes. The threaded enclosure cover, multiple cable entries and duplicated, pluggable termination simplifies installation and routine maintenance. The 24Vdc version is approved for public mode fire alarm use and the 100-240Vac version for general signalling use. SIL1 & SIL2 Route 2H compliant to IEC61508 (2010) as standard.

Features

- Maximum sound pressure level output of 123dB(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
- Stainless Steel mounting bracket included as standard
- Triple cable entries
- Available with custom tone configurations and frequencies
- Robust marine grade aluminium enclosure
- 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
- UKCA certificate: UL21UKEX2132X
- CSFM listing: 7136-2279:0503
- DNV certificate: TAA00003HM
- SIL1 & SIL2 compliant to IEC61508 (2010)

Coding

- NEC / CEC Class Div
  Class I Div 2 ABCD T3C Ta -55°C to +85°C
  Class I Div 2 ABCD T4 Ta -55°C to +60°C (T4A +45°C)
  Class II Div 2 FG T4 Ta -55°C to +85°C
  Class III Ta -55°C to +85°C
- NEC Class Zone
  Class I Zone 2 AEx ec IIC T3 Gc Ta -55°C to +75°C
  Class I Zone 2 AEx ec IIC T4 Gc Ta -55°C to +50°C
  Zone 22 AEx tc IIIC T95°C Dc Ta -55°C to +75°C
- CEC Class Zone
  Ex ec IIC T3 Gc Ta -55°C to +75°C (T4: +55°C)
  Ex tc IIIC T95°C Dc Ta -55°C to +75°C
- IECEx / ATEX
  II 3G Ex ec IIC T3 Gc Ta -55°C to +75°C (T4: +55°C)
  II 3D Ex tc IIIC T95°C Dc Ta -55°C to +75°C
  See product manual for full voltage specific coding.

Specification

Maximum output:	High power level: 123dB(A) @ 1 m +/- 3dB [114dB(A) @ 10ft/3m +/- 3dB] Default power level: 120dB(A) @ 1 m +/- 3dB [111dB(A) @ 10ft/3m +/- 3dB]
Nominal output:	High power level: 120dB(A) @ 1m +/- 3dB [111dB(A) @ 10ft/3m] +/- 3dB Default power level: 117dB(A) @ 1m +/- 3dB [108dB(A) @ 10ft/3m] +/- 3dB
No. of tones:	64 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Full range
Effective range:	200m/656ft @ 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:	SIL1 and SIL2 Route 2H IEC61508 (2010)
Ingress protection:	EN60529: IP66/67 UL50E / NEMA250: 4 / 4X / 3R / 13
Enclosure material:	Marine grade LM6 aluminium alloy
Enclosure finish:	Chromate & powder coated finish 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
Stopping plugs:	Brass, Nickel Plated or Stainless Steel
Terminals:	0.5 – 2.5mm² (20-14AWG) – 12AWG solid core conductor Pluggable & duplicated terminals
Line monitoring:	Supervisory/Blocking diode included 24Vdc: EOL Min. 1K Ohm 2W, or 3K9 Ohm 0.5W resistor 24Vdc: EOL Min. 3K9 Ohm 2W, or 15K 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% – tropicalised/conformal coated electronics
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

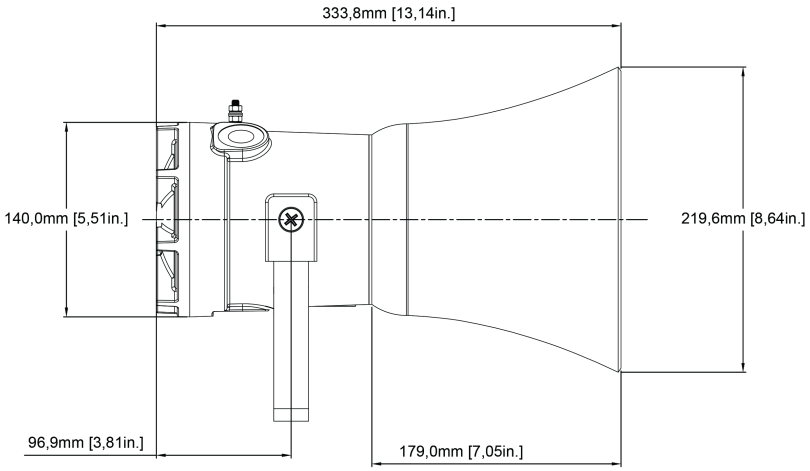
Part Codes

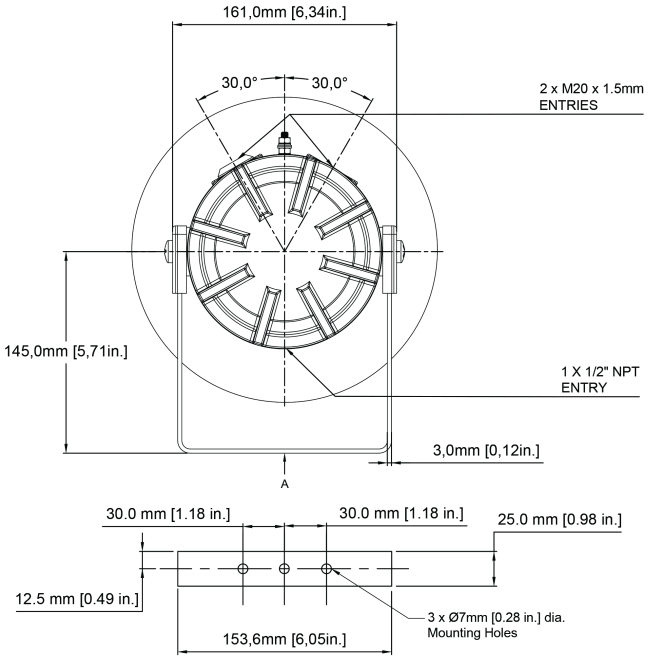
Part Code:	Identifier:	Description:
Product type:	D2xS2	D2xS2 alarm horn sounder
Horn type:	F	Flare re-entrant horn
Voltage:	DC024 AC230	11.5-54Vdc 100-240Vac
Cable entries:[e]	A B C D F G Note:	2 x M20x1.5mm & 1 × 1/2"NPT 2 × 1/2"NPT – adaptors 2 × 3/4"NPT – adaptors 2 x M25x1.5mm – adaptors 1 × 3/4"NPT – 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	UL, cUL, ULC, IECEx, ATEX, DNV – SIL1 & SIL2 Route 2H
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
Accessories:		
SP65-0001-A4		Pole Mount Bracket Kit St/St A4 (316)
SP65-0003-A4		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 positive, negative 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:	Default Power Nom. current:	Default Power Max. current:	High Power Nom. current:	High Power Max. current:	In-rush:
12Vdc	11.5-54Vdc	289mA	324mA	356mA	740mA	-
24Vdc	11.5-54Vdc	324mA	324mA	740mA	740mA	815mA <4ms
48Vdc	11.5-54Vdc	195mA	324mA	391mA	740mA	-
115Vac 50/60Hz	100-240V ac	125mA	138mA	282mA	325mA	-
230Vac 50/60Hz	100-240V ac	78mA	138mA	167mA	325mA	-





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 + 1.5s 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 + 1.5s gap - ISO 820...	Any	T 1	T 8
T 12	1000(0.5s on, 0.5s off)x3 + 1.5s gap - ISO 82...	Any	T 1	T 8
T 13	422/775 - (0.85 on, 0.5 off) x3 + 1.5s 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

No liability is accepted for any consequence of the use of this document. The technical specification of this unit is subject to change without notice due to our policy of continual product development. All dimensions are approximate. This unit is sold subject to our standard conditions of sale, a copy of which is available on request.