

# 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)



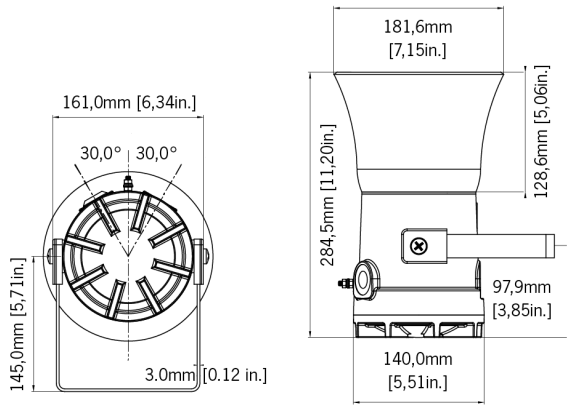
## Approvals

- 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] 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] Class II version: 94dB(A) @ 1 metre [84dB(A) @ 10ft/3m]
No. of tones:	64 (UK00A / 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 AC units: common supply line
Ingress protection:	EN60529: IP66 UL50E / NEMA250: 4 / 4X / 3R / 13
Enclosure material:	Marine grade aluminium LM6-copper free Chromated & powder coated - corrosion proof
Colour:	Red (RAL3000), Grey (RAL7038)
Cable entries:	1 × 1/2"NPT & 2 × M20 x 1.5mm 1 × 1/2"NPT & 2 × 1/2"NPT 1 × 1/2"NPT & 2 × 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:	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:	A	1 × 1/2"NPT & 2 × M20 x 1.5mm
[e]	B	1 × 1/2"NPT & 2 × 1/2"NPT
	C	1 × 1/2"NPT & 2 × 3/4"NPT
Adaptor/Stopping plug material:	B	Brass
[m]	N	Nickel Plated
	S	Stainless Steel
Bracket matl & tag:	1	A2 304 Stainless Steel
[s]	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:	G	Grey RAL7038
[x]	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)

## 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	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