1-23-085 / D1x: Aluminium explosion/flameproof

D1xC2X10R 114dB(A) Radial Alarm & 10J Strobe

The D1xC2X10R is a globally certified alarm horn sounder with a compact, omni-directional horn and combined with a 10 Joule Xenon strobe beacon. The robust Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure is approved for Class I Div 1, Zone 1, IECEx and ATEx Zone 1, 2, 21 & 22 explosion proof signalling applications.

Featuring 64 alarm tones, each of the 4 stage/channels can be remotely activated. Class D amplification provides a high sound output with a choice of two power modes. The threaded flameproof joint, multiple cable entries and duplicated, pluggable termination simplifies both installation and routine maintenance. The 24Vdc version is approved for public (alarm horn) and private mode fire alarm use. SIL1 & SIL2 compliant to IEC61508 (2010) as standard.

Features

- Maximum sound pressure level output of 114dB(A)
- Choice of 64 alarm tone frequencies.
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Automatic synchronisation on multi-beacon & sounder systems
- User selectable strobe flash rates
- Field replaceable lens colour filter
- Ratchet adjustable 316 stainless steel bracket
- Available with custom tone configurations and frequencies
- Robust corrosion proof aluminium enclosure
- Duplicate cable terminations
- UL464 / CAN/ULC-S525 & UL1638 / CAN/ULC-S526



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
- INMETRO IEx 24.0158X

Coding

- NEC Class / Zone
  Class I Zone 1 IIC T3C Gb Ta -55°C to +85°C
  Class I Zone 1 IIC T4 Gb Ta -55°C to +70°C (T4A: +55°C)
- CEC Class / Zone
  Class I Zone 1 IIC T4A Gb Ta -55°C to +55°C
- NEC Class / Div
  Class I Div 1 ABCD T3C Ta -55°C to +85°C
  Class I Div 1 ABCD T4 Ta -55°C to +70°C (T4A: +55°C)
- CEC Class / Div
  Class I Div 1 ABCD T4A Ta -55°C to +55°C
- IECEx / ATEX
  II 2G Ex db IIC T3 Gb Ta -55°C to +75°C
  II 2G Ex db IIC T4 Gb Ta -55°C to +65°C
  II 2D Ex tb IIIC T137°C Db Ta 55°C to +75°C
  See product manual for full voltage specific coding.



Specification

Alarm Horn:

Maximum output:	High power level: 114dB(A) @ 1 m +/- 3dB [105dB(A) @ 10ft/3m +/- 3dB] Default power level: 112dB(A) @ 1 m +/- 3dB [103dB(A) @ 10ft/3m +/- 3dB]
Nominal output:	High power level: 109dB(A) @ 1m +/- 3dB [100dB(A) @ 10ft/3m] +/- 3dB Default power level: 107dB(A) @ 1m +/- 3dB [98dB(A) @ 10ft/3m] +/- 3dB
No. of tones:	64 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Full range
Effective range:	125m/410ft @ 1KHz
Voltages DC:	24Vdc (20-28Vdc)
Voltages AC:	110-120Vac, 220-240Vac
Stage switching:	DC units: negative or positive AC units: common supply line

Strobe Beacon:

Energy:	10 Joules (10Ws)
Flash rates:	Option 1: 1Hz (60 fpm) Option 2: 1.5Hz (90 fpm) Option 3: Double Strike
Peak Candela:	1,000,000 cd – calculated from energy (J)
Effective Intensity:	500 cd – calculated from energy (J)
Peak Candela:	85,544 cd* – measured ref. to I.E.S.
Effective Intensity:	260 cd* – measured ref. to I.E.S.
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life :	Emissions reduced to 70% > 5 million flashes

General:

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 aluminium LM6 – copper free
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
Terminals:	0.5 – 2.5mm² (20-14 AWG) Pluggable, duplicated terminals
Grounding stud:	M5
Line monitoring:	Blocking diode included. EOL Min. 500 Ohm 2W, or 3k3 Ohm 0.5W resistor or diode (DC versions) can be fitted
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)
Relative humidity:	95% – Additional tropicalisation is recommended for applications where both high relative humidity and high ambient temperatures exist

Part Codes

Part Code:	Identifier:	Description:
Product type:	D1xC2X10	Combined Alarm Horn & Xenon Strobe
Horn type:	R	Omni-directional radial horn
Voltage:	DC024	20-28V dc
	AC115	110-120Vac
	AC230	220-240Vac
Cable entries:[e]	A	2 x M20x1.5mm & 1 × 1/2"NPT
	B	2 × 1/2"NPT – adaptors
	C	2 × 3/4"NPT – adaptors
	D	2 x M25x1.5mm – adaptors
	F	1 × 3/4"NPT – adaptor
	G	1 x M25x1.5mm – adaptor
	Note:	All entries, excluding thread adaptors, supplied with stopping plugs installed.
Stopping plug/ adaptor material: [m]	B	Brass
	N	Nickel Plated
	S	Stainless Steel
Bracket/Guard material: [s]	1	U bracket A4 316 Stainless Steel
	3	U bracket A4 316 St/St with Equip. Tag
	5	U bracket A4 316 St/St with Equip. Tag & Duty Label
	6	Surface bracket A4 316 SS
	7	Surface bracket A4 316 SS with Equip. Tag
	8	Surface bracket A4 316 SS with Equip. Tag & Duty Label
Product version: [v]	A	UL, cUL, ULC, IECEx, ATEX, CSFM, INMETRO – SIL1 & SIL2
Product option: [o]	1	Standard product
	Z	Custom alarm tone software – contact E2S
	X	Custom configuration – contact E2S
	Y	Stage control Config. 4 or 8
Enclosure colour: [x]	G	Grey
	R	Red
	S	Special colour – contact E2S
Lens colour: [y]	A	Amber
	B	Blue
	C	Clear
	G	Green
	M	Magenta
	R	Red
	Y	Yellow

Accessories:

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

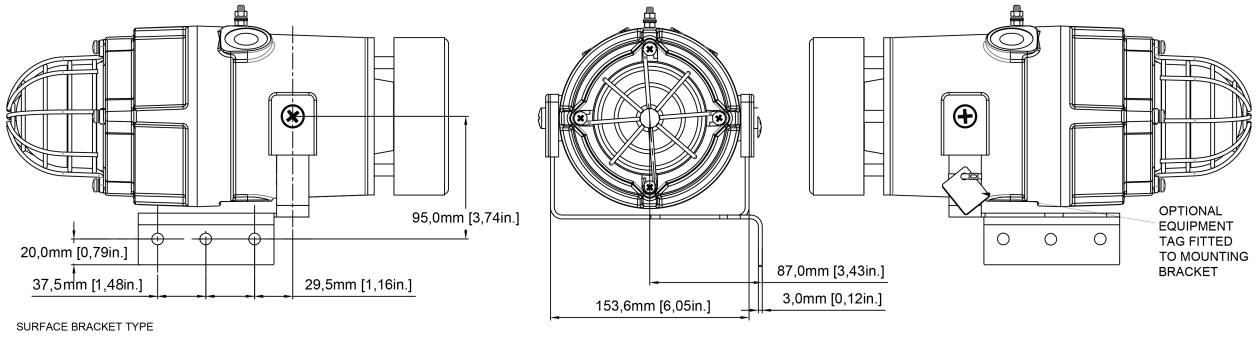
Stage control:

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

Config. 1 or 5 [DC]:	Factory default. Common negative, positive switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only
Config. 2 or 6 [DC]:	User setting. Common positive, negative switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only
Config. 3 or 7 [DC]:	User setting. Common negative, positive switching activation of Alarm Stages 1 & 2 with EOL on both stages. Reverse polarity monitoring
Config. 4 or 8 [DC]:	Product option 'Y'. Independent activation of Alarm Stages 1 & 2 with EOL on both stages. Forward polarity monitoring
Config. 1 or 2 [AC]:	Factory default. Up to 4 Alarm Stages. Stage 1 activated at power on. Stages 2, 3 and 4 via volt free contacts

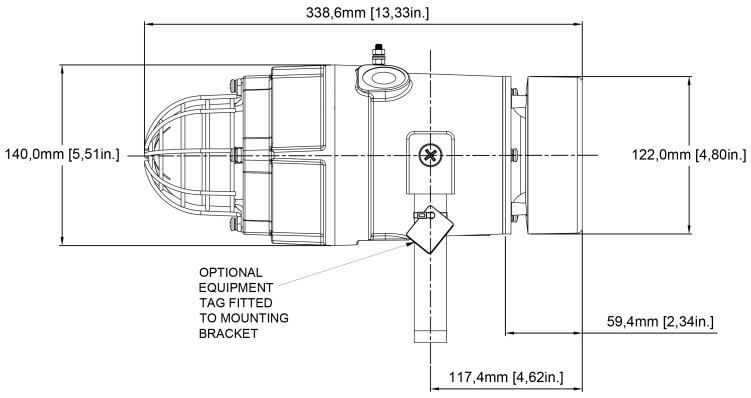
Current Consumption

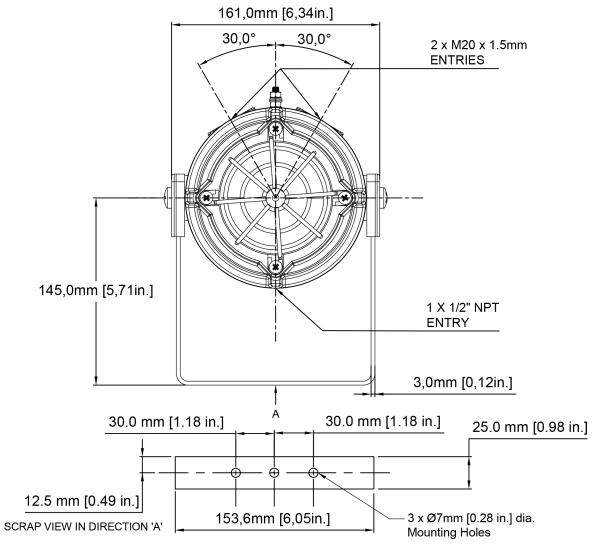
Voltage range:	Nominal Voltage:	Xenon Strobe Nominal current:	Alarm Horn Default Power Nominal current:	Alarm Horn High Power Nominal current:	Combined Default Power Nominal current:	Combined High Power Nominal current:	Combined Default Power Maximum current:	Combined High Power Maximum current:	In Rush
20-28Vdc	24Vdc	673mA	324mA	740mA	997mA	1413mA	1091mA	1507mA	786mA <5ms
110-120Vac 50/60Hz	115Vac	247mA	125mA	285mA	372mA	532mA	449mA	636mA	
220-240Vac 50/60Hz	230Vac	121mA	78mA	167mA	199mA	288mA	199mA	362mA	



SURFACE BRACKET TYPE

STANDARD BRACKET TYPE





SCRAP VIEW IN DIRECTION 'A'

E2S PART NO.	DESCRIPTION	DATA REFERENCE
D1xC1X05R	D1XC1X05R COMBINED 5J BEACON AND S1 SOUNDER WITH RADIAL HORN (Ex d)	1.23.055
D1xC1X10R	D1XC1X10R COMBINED 10J BEACON AND S1 SOUNDER WITH RADIAL HORN (Ex d)	1.23.065
D1xC2X05R	D1xC2X05R COMBINED 5J BEACON AND S2 SOUNDER WITH RADIAL HORN (Ex d)	1.23.075
D1xC2X10R	D1XC2X10R COMBINED 10J BEACON AND S2 SOUNDER WITH RADIAL HORN (Ex d)	1.23.085

Tone table

S 1	Description	S 2	S 3	S 4
T1	1000 Continuous PFEER Toxic Gas	Any	T2	T44
T2	1200/500 @ 1Hz Sweeping DIN/PFEER P.T.A.P.	Any	T3	T44
T3	1000 @ 0.5Hz (1s on, 1s off) Intermittent PFE...	Any	T2	T44
T4	1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s NF C 48-265	Any	T24	T1
T5	544(100mS)/440 (400mS) NF S 32-001	Any	T19	T1
T6	1500/500 - (0.5s on , 0.5s off) x3 + 1s gap A...	Any	T44	T1
T7	500-1500Hz Sweeping 2 sec on 1 sec off AS4428	Any	T44	T1
T8	500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) NEN 2575	Any	T24	T35
T9	1000 (1s on, 1s off)x7 + (7s on, 1s off) IMO ...	Any	T34	T1
T10	1000 (1s on, 1s off)x7 + (7s on, 1s off) IMO ...	Any	T34	T1
T11	420(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 Te...	Any	T1	T8
T12	1000(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 T...	Any	T1	T8
T13	422/775 (0.85 on, 0.5 off) x3 + 1s gap NFPA T...	Any	T1	T8
T14	1000/2000 @ 1Hz - Singapore	Any	T3	T35
T15	300 Continuous	Any	T24	T35
T16	440 Continuous	Any	T24	T35
T17	470 Continuous	Any	T24	T35
T18	500 Continuous IMO code 2 (Low)	Any	T24	T35
T19	554 Continuous	Any	T24	T35
T20	660 Continuous	Any	T24	T35
T21	800 Continuous IMO code 2 (High)	Any	T24	T35
T22	1200 Continuous	Any	T24	T35
T23	2000 Continuous	Any	T3	T35
T24	2400 Continuous	Any	T20	T35
T25	440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent	Any	T44	T8
T26	470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent	Any	T44	T8
T27	470 @ 5Hz (0.10s on, 0.10s off) Intermittent	Any	T44	T8
T28	544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent	Any	T24	T8
T29	655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent	Any	T44	T8
T30	660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent	Any	T24	T8
T31	660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent	Any	T24	T8
T32	745 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T24	T8
T33	800 (0.25s on, 1.00s off) Intermittent	Any	T24	T8
T34	800 @ 2Hz (0.25s on, 0.25s off) IMO code 3.a ...	Any	T24	T8
T35	1000 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T24	T8
T36	2400 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T24	T8
T37	2900 @ 5Hz (0.10s on, 0.10s off) Intermittent	Any	T24	T8
T38	363/518 @ 1Hz (0.50s/0.50s) Alternating	Any	T8	T19
T39	450/500 @ 2Hz (0.25s/0.25s) Alternating	Any	T8	T19
T40	554/440 @ 1Hz (0.50s/0.50s) Alternating	Any	T24	T19
T41	554/440 @ 0.65Hz (0.76s/0.76s) Alternating	Any	T8	T19
T42	561/760 @ 0.83Hz (0.60s/0.60s) Alternating	Any	T8	T19
T43	780/600 @ 0.96Hz (0.52s/0.52s) Alternating	Any	T8	T19
T44	800/1000 @ 2Hz (0.25s/0.25s) Alternating	Any	T24	T19
T45	970/800 @ 2Hz (0.25s/0.25s) Alternating	Any	T8	T19
T46	800/1000 @ 0.875Hz (0.57s/0.57s) Alternating	Any	T24	T19
T47	2400/2900 @ 2Hz (0.25s/0.25s) Alternating	Any	T24	T19
T48	500/1200 @ 0.3Hz (1.67s/1.67s) Sweeping	Any	T24	T12
T49	560/1055 @ 0.18Hz (2.73s/2.73s) Sweeping	Any	T24	T12
T50	560/1055 @ 3.3Hz (0.15s/0.15s) Sweeping	Any	T24	T12
T51	600/1250 @ 0.125Hz (4s/4s) Sweeping	Any	T24	T12
T52	660/1200 @ 1Hz (0.50s/0.50s) Sweeping	Any	T24	T12
T53	800/1000 @ 1Hz (0.50s/0.50s) Sweeping	Any	T24	T12
T54	800/1000 @ 7Hz (0.07s/0.07s) Sweeping	Any	T24	T12
T55	800/1000 @ 50Hz (0.01s/0.01s) Sweeping	Any	T24	T12
T56	2400/2900 @ 7Hz (0.07s/0.07s) Sweeping	Any	T24	T12
T57	2400/2900 @ 1Hz (0.50s/0.50s) Sweeping	Any	T24	T12
T58	2400/2900 @ 50Hz (0.01s/0.01s) Sweeping	Any	T24	T12
T59	2500/3000 @ 2Hz (0.25s/0.25s) Sweeping	Any	T24	T12
T60	2500/3000 @ 7.7Hz (0.65s/0.65s) Sweeping	Any	T24	T12
T61	800Hz Motor Siren	Any	T24	T12
T62	1200Hz Motor Siren	Any	T24	T12
T63	2400Hz Motor Siren	Any	T24	T12
T64	Simulated Bell	Any	T21	T12

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.