D2xC2LD2 Haz Loc Alarm Horn & LED Beacon

The hazardous location combination D2xC2LD2 alarm horn sounder & LED beacon/status warning light is UL/cULs/ULC approved for Class I Div 2, Class II Div 2, Class I Zone 2/22 as well as IECEx and ATEX certified for Zone 2 and 22 applications.

The D2xC2LD2 utilises an array of high power Cree® LED's, orientated to optimise visibility in any direction. The beacon can be configured as a steady light for status indicator use with a light output of up to 87 candela. Alternatively one of the five flashing modes, with a effective output of up to 180 candela, may be used for warning applications. The high output alarm horn features 64 tones and DC voltage versions feature remotely selectable stages enabling multiple warnings to be signalled from one device. The 24Vdc version is approved for private mode fire alarm use.

Features

- UL464/UL1638 Private mode fire use
- CAN/ULC-S525 Fire Alarm
- UL464/UL1638 General signaling
- Auto-synchronised – audible and visual
- 64 alarm tones, 4 remotely selectable alarm stages/channels
- Five flash rates: 1Hz, 1.3Hz, 2Hz, double and triple flash.
- Two steady mode intensities for status indication
- Marine grade aluminium enclosure Type 4/4X/3R/13, IP66
- High impact resistant Borosilicate glass lens
- Field changeable lens colour filter
- Duplicate, pluggable cable terminations, supervisory diode
- Dual cable entries
- Supplied with haz loc rated stopping plugs/adaptors



Approvals

- UL File ref: E230764
- IECEx cert: IECEx ULD 14.0004X
- ATEX cert: DEMKO 14 ATEX 4786493904X
- CSFM listing: 7136-2279:0501
- Ex EAC certified: EAC RU C GB.AA71.B.00273/20

Coding

- NEC / CEC:
  Class I Div 2 ABCD T4 Ta -40°C to +50°C
  Class I Div 2 ABCD T4A Ta -40°C to +40°C
  Class II Div 2 FG T6 Ta -40°C to +50°C
  Class III Div 1&2 Ta -40°C to +50°C
- NEC:
  Class I Zone 2 AEx ec IIC Gc T4 Ta -40°C to +50°C
  Zone 22 AEx tc IIIB T75°C Dc Ta -40°C to +50°C
- CEC:
  Class I Zone 2 Ex ec IIC Gc X T4 Ta -40°C to +50°C
  Zone 22 Ex tc IIIC T75°C Dc X Ta -20°C to +50°C
- IECEx & ATEX:
  II 3G Ex ec IIC T4 Gc Ta -40°C to +50°C
  II 3D Ex tc IIIC T75°C Dc Ta -40°C to +50°C
  See product manual for full voltage specific coding.



Specification

Alarm Horn Sounder:	
Maximum output:	116dB(A) @ 1 metre [107dB(A) @ 10ft/3m]
Nominal output:	112dB(A) @ 1m +/- 3dB – Tone 2 [103dB(A) @ 10ft/3m]
No. of tones:	64 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Adjustable -12dB(A) [Tone 2]
Effective range:	125m/410ft @ 1KHz
Synchronisation:	Automatic synchronisation
LED Beacon/Light:	
Source:	Array of 4 x High Power Cree® LED's
Eff. Intensity cd:	73.4 cd UL1638 Private mode fire
Eff. Intensity cd:	180 cd UL1638 General signaling
Peak Intensity cd:	300,000 cd
Eff. Intensity cd:	87 cd High power steady
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Synchronisation:	Synchronised 1Hz, 1.5Hz and 2Hz flash rates
General:	
Voltages DC:	24V dc, 48V dc
In rush:	2.1A for <10ms
Voltages AC:	115Vac, 230Vac
Ingress protection:	IP rating per EN60529:IP66 Type rating per UL50E/NEMA250:4/4X/3R/13
Enclosure material:	Marine grade LM6 aluminum alloy
Enclosure finish:	Chromate & powder coated finish ISO 12944-6 CX, C5VH & C5H
Enclosure colour:	Red or Grey, custom colours available on request
Lens material:	Borosilicate glass dome with PC prismatic lens cover
Guard:	Stainless Steel dome guard as standard
Cable entries:	2 × 1/2"NPT or 2 x M20x1.5mm
Stopping plug:	Stopping plug included Optional brass, nickel plated or stainless steel
Ground/Earth stud:	M5
Terminals:	0.5 – 2.5mm² (20-14 AWG)
Line monitoring:	Blocking diode included EOL can be factory fitted
Operating temp:	-40 to +50°C [-40° to +122°F]
Storage temp:	-40 to +70°C [-40° to +158°F]
Relative humidity:	99% – tropicalised/conformal coated electronics
MTBF DC:	84.47 years / 739,918 hours – MIL 217
Weight:	DC: 4.00kg/8.82lbs AC:4.50kg/9.92lbs

Part Codes

Part Code:	Identifier:	Description:
Product type:	D2xC2LD2	Combination Alarm Horn & LED Beacon / Warning Light
Voltage:	AC115 AC230 DC024 DC048	115-120Vac 50/60Hz 220-230Vac 50/60Hz 24V dc 48V dc
Cable entries: [e]	A B	2 x M20x1.5 2 × 1/2" NPT
Stopping plug material: [m]	N S	Nickel plated brass Stainless Steel
Guard material & tag: [s]	1 3 5	A4 316 Stainless Steel A4 316 St/St with Equip. Tag A4 316 St/St with Equip. Tag & Duty Label
Product version: [v]	A	UL, cUL, ULC, IECEx, ATEX, CSFM, Ex EAC
Product option: [o]	1 X	Standard product Custom configuration – contact E2S
Enclosure colour: [x]	R G S	Red Grey Special colour – contact E2S
Lens colour: [y]	A, B, C G, M, R, Y	Amber, Blue, Clear Green, Magenta, Red, Yellow
Accessories:		
SP65-0001-A4		Pole Mount Bracket Kit St/St A4 (316)
SP65-0003-A4		Sunshade – St/St A4 (316)

Multi-function patterns

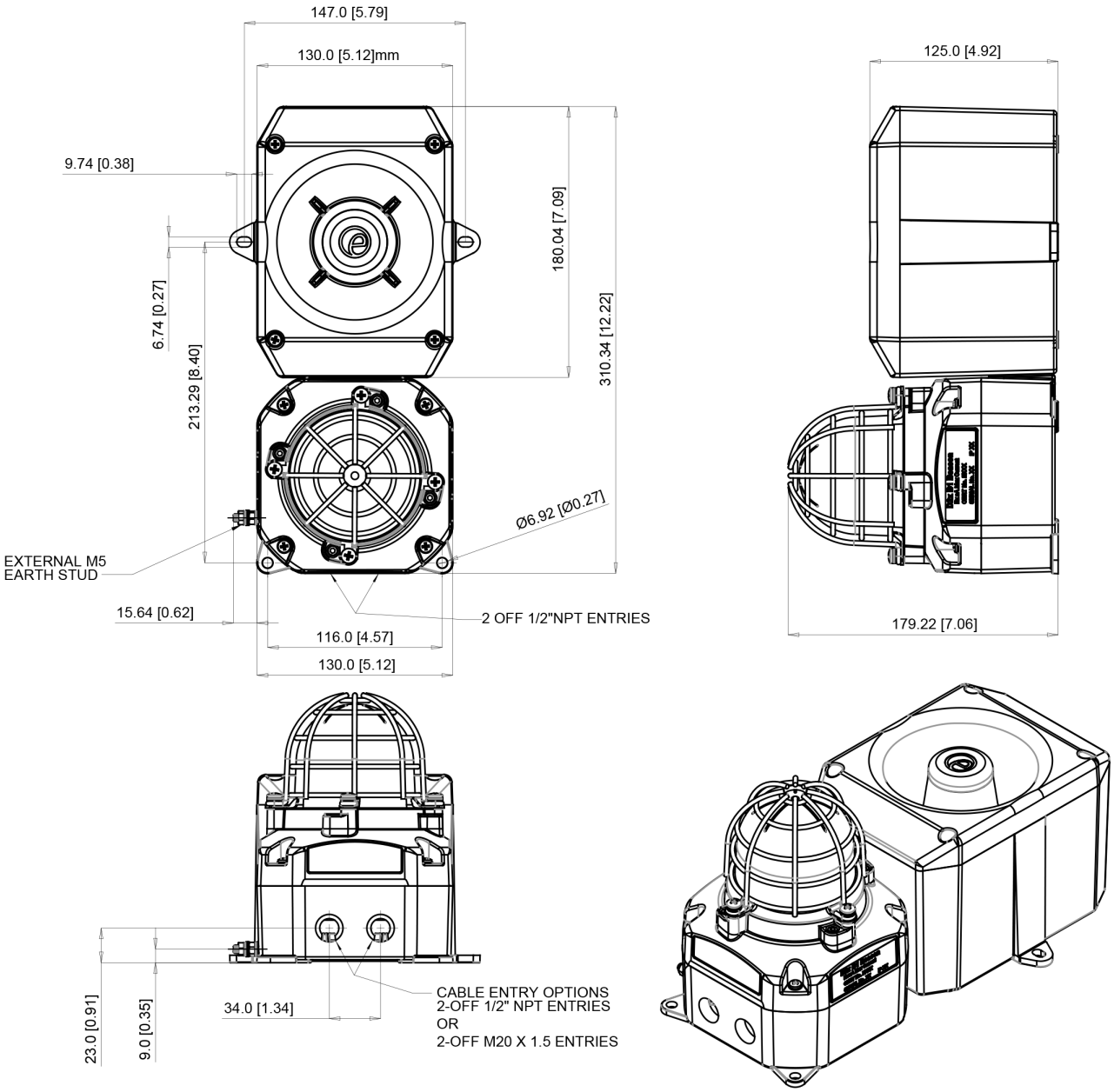
Stage 1: [On board]	Stage 2: [Remote]	Stage 3: [Remote]
Steady High Power	Flashing 1Hz	Triple Strike
Steady Low Power	Flashing 1Hz	Triple Strike
Flashing 1Hz	2x Flash 2Hz	Triple Strike
Flashing 1.5Hz	Flashing 2Hz	Double Strike
Flashing 2Hz	Triple Strike	Triple Strike
Double Strike	Steady High Power	Triple Strike
Triple Strike	Flashing 2Hz	Double Strike

Note: Remote second and third stage on DC units only

Current Consumption

Nominal Voltage:	In rush:	Voltage range:	Nominal current [Beacon]:	Nominal current [Alarm Horn]:
24V dc	2100mA <9.0ms	24V dc	99.5mA	313mA
48V dc		48V dc	47.4mA	181mA
115V ac		115-120Vac 50/60Hz	68mA	89mA
230V ac		220-230Vac 50/60Hz	70mA	52mA

Current at 1Hz (60fpm) flash mode



Tone table

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

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