

# D2xC2LD2 Haz Loc Alarm Horn & LED Beacon

The hazardous location combination D2xC2LD2 alarm horn sounder & LED beacon/status light is UL/cULs 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 UL and cUL approved to UL464 & UL1638 for private mode fire alarm use.

## Features

- Private mode fire use & General signaling UL1638
- Synchronised - audible and visual
- 73.4 eff. candela - UL1638 Private mode fire
- 180 eff. candela - UL1638 general signaling
- 107dB(A) @ 10ft/3m max. sound output - UL464
- 64 alarm tones, 4 remotely selectable alarm stages/channels
- Ultra low combined operating current of 412.5mA
- In rush limiting circuit just 2.1A for 10ms
- Five flash rates: 1Hz, 1.3Hz, 2Hz, double and triple flash.
- Two steady mode intensities for status indication
- Marine grade aluminium enclosure
- Ingress protection Type 4/4X/3R/13, IP66
- High impact resitant Borisilicate glass lens
- Stainless steel lens guard as standard
- Field changeable lens colour filter
- Duplicate, pluggable cable terminations
- Supervisory diode
- Dual 1/2"NPT entries
- Supplied with haz loc rated stopping plugs
- Compact footprint



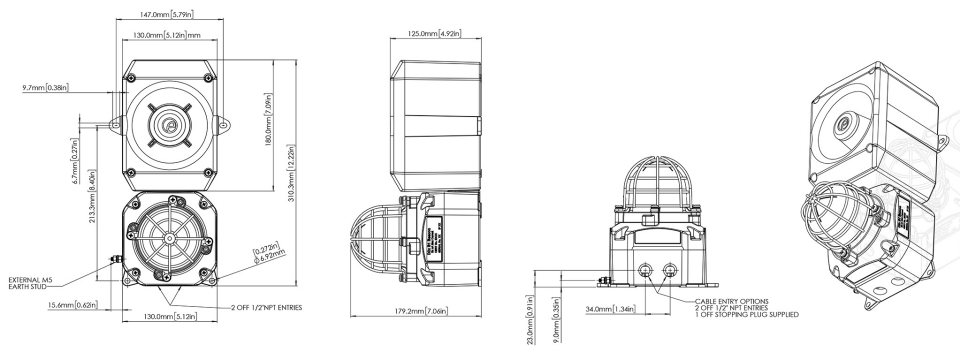
## Approvals

- UL File ref: E230764
- IECEx cert: IECEx ULD 14.0004X
- ATEX cert: DEMKO 14 ATEX 4786493904X

## Coding

- NEC / CEC: Class I Div 2 ABCD T2 B Ta -40°C to +70°C  
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 EFG T6 Ta -40°C to +50°C  
Class III Div 1&2 Ta -40°C to +50°C
- NEC: Class I Zone 2 AEx nA IIC T4 Gc (Ta -40°C to +50°C)  
AEx tc IIIC 75°C Dc Ta -40°C to +50°C
- CEC: Class I Zone 2 Ex nA IIC Gc T4 Ta -40°C to +50°C  
Zone 22 Ex tc IIIC 75°C Dc Ta -20°C to +55°C
- IECEx & ATEX: II 3G Ex nA IIC T4 Gc Ta -40°C to +50°C  
II 3D Ex tc IIIC 75°C Dc Ta -40°C to +50°C





## 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
Synchronization	All alarm tones synchronize

### LED Beacon/Light:

Source:	Array of 4 x High Power Cree® LED's
Eff. Intensity cd:	73.4 cd UL 1638 Private mode fire
Eff. Intensity cd:	180 cd UL 1638 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
Synchronization:	Synchronized 1Hz, 1.3Hz 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 colour:	Red (RAL3000), Grey (RAL7038)
Lens material:	Borosilicate glass dome with PC prismatic lens cover
Guard:	Stainless Steel dome guard as standard
Cable entries:	2 x 1/2" NPT
Stopping plug:	Stopping plug included Optional brass, nickel plated or stainless steel
Ground/Earth stud:	M5
Terminals:	0.5 - 2.5mm <sup>2</sup> (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]

## Part Codes

Part Code:	Ident.:	Description:
Product type:	D2xC2LD2	Combination Alarm Horn & LED Beacon/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 x 1/2" NPT
Stopping plug material: [m]	B N S	Brass Nickel plated brass Stainless Steel
Lens Guard: [s]	1 2	304 (A2) Stainless Steel 316 (A4) Stainless Steel
Version: [v]	A1	UL, cUL, IECEx & ATEX
Enclosure: [x]	G R	Grey RAL7038 Red RAL3000
Lens colour: [y]	A, B, C G, M, R, Y	Amber, Blue, Clear Green, Magenta, Red, Yellow

## Current Consumption

Nominal Voltage:	Voltage range:	Nominal current [Beacon]:	Nominal current [Alarm Horn]:
24V dc	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

## 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 1.3Hz	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

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