D1xB2LD2 Explosion Proof LED Multi-function Beacon

The D1xB2LD2 is a globally approved explosion proof multi-function LED beacon. The robust Type 4/4X corrosion proof LM6 marine grade aluminium alloy enclosure ensures suitability for all Class I/II Div 1, Zone 1, 2, 21 & 22 applications.

The D1xB2LD2 beacons produce a high output LED flash required for effective signalling in environments with elevated levels of ambient light. The field replaceable colour filter enhances the strobe and is constructed from UV stable PC. The robust enclosure features a threaded flame path, four cable entries. Mounting options include surface via integrated lugs, pendant or by addition of optional multi direction stainless steel bracket. SIL1 & SIL2 Route 2H compliant to IEC61508 (2010) as standard.

Features

- Five flash rates: 1Hz, 1.33Hz, 2Hz, double and triple flash.
- Automatic synchronisation on multi-beacon systems
- High and low power Steady modes
- Three remotely selectable stages/channels on DC versions.
- A4 316 Stainless Steel guard included as standard
- Field replaceable UV stable lens colour filter
- 4 x side, 1 x pendant entries – stopping plugs included
- Corrosion proof marine grade aluminium enclosure
- UL Marine approved



Approvals

- UL/cUL – File ref: E245313
- IECEx Certificate: IECEx ULD 19.0006X
- ATEX Certificate: DEMKO 19 ATEX 2009X
- UKCA certificate: UL21UKEX2130X
- CCCEx certificate: 2022122309114969
- EAC Ex certificate: KZ 7500525.01.01.02138
- PESO CCOE certified: P656260
- CSFM listing: 7300-2279:0508
- SIL1 & SIL2 compliant to IEC61508 (2010)

Coding

- NEC Class / Zone
  Class I Zone 1 AEx db IIC T5 Ta -55°C to +80°C
  Class I Zone 1 AEx db IIC T6 Ta -55°C to +70°C
  Zone 21 AEx tb IIIC T100°C Ta -55°C to +80°C
- CEC Class / Zone
  Ex db IIC T4 Ta -55°C to +80°C (T5: +70°C)
  Ex tb IIIC T100°C Ta -55°C to +80°C
- NEC / CEC Class / Div
  Class I Div 1 Group ABCD T5 Ta -55°C to +80°C
  Class I Div 1 Group ABCD T6 Ta -55°C to +75°C
  Class II Div 1 Group EFG T4 Ta -55°C to +80°C
- IECEx / ATEX
  II 2G Ex db IIC T5 Gb Ta -55°C to +80°C (T6: +70°C)
  II 2D Ex tb IIIC T95°C Db Ta -55°C to +80°C



Specification

Source:	Array of 4 x High Power Cree® LED's
Modes:	1Hz flash (60 fpm) 1.33Hz flash (80 fpm) 2Hz flash (120 fpm) Double strike flash Triple strike flash High Power Steady Low Power Steady
Eff. Intensity cd:	338 cd – 1Hz flash
Eff. Intensity cd:	174 cd – High Power Steady
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Voltage DC:	24Vdc (18-30Vdc)
Voltage AC:	115Vac (110-120Vac), 230Vac (220-240Vac)
In-rush @ 24Vdc:	1890mA within 0.22ms
LED life:	60,000 hours+
Safety Integrity Level:	SIL1 and SIL2 Route 2H IEC61508 (2010)
Ingress protection:	IP rating per EN60529:IP66/67 Type rating per UL50E/NEMA250:4/4X/3R/13
Lens material:	High impact Borosilicate glass
Enclosure material:	Marine grade LM6 aluminium alloy
Enclosure colour:	Red or Grey, custom colours available on request
Enclosure finish:	Chromate & powder coated finish
Cable entries:	Side: 2 × 3/4"NPT & 2 x M20x1.5mm Pendant: 1 × 3/4"NPT Stopping plugs included
Stopping plugs:	Brass, Nickel Plated or Stainless Steel
Terminals:	0.5 – 2.5mm² (20-14AWG) – 12AWG solid core conductor Duplicated terminals
Ground/Earth 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 +80°C [-67° to +176°F]
Storage temp:	-55 to +80°C [-67° to +176°F]
Relative humidity:	99% – tropicalised/conformal coated electronics
MTBF DC:	212.90 years / 1,865,671 hours – MIL 217
MTBF AC:	204.40 years / 1,790,510 hours – MIL 217
Weight:	3.2kg/7.1lbs

*All candela data is representative of performance with clear lens at optimum voltage.

Part Codes

Part Code:	Identifier:	Description:
Product type:	D1xB2	
Type:	LD2	Multi-function LED beacon
Voltage:	DC024 AC115 AC230	24Vdc (18-30Vdc) 115Vac (110-120Vac) 230Vac (220-240Vac)
Cable entries: [e]	M B E	2 × 3/4"NPT, 2 x M20, 1 × 3/4"NPT 2 × 1/2"NPT – adaptors, 2 × 3/4"NPT, 1 × 3/4"NPT 1 × 1/2"NPT – adaptors, 1 x M20, 2 × 3/4"NPT, 1 × 3/4"NPT
Stopping plug/ adaptor material: [m]	B N S	Brass Nickel plated brass Stainless steel
Guard 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, Ex EAC, PESO, CSFM – SIL1 & SIL2
	J	CCCEx, UL, cUL, ULC, IECEx, ATEX, Ex EAC, PESO, CSFM – SIL1 & SIL2
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:

SP77-0001-A4-R	Multi angle bracket A4 (316) for Red enclosure
SP77-0001-A4-G	Multi angle bracket A4 (316) for Grey enclosure
SP65-0001-A4	Pole Mount Bracket Kit St/St A4 (316)
SP65-0003-A4	Sunshade – St/St A4 (316)

Spares:

SP77-0015-R	Pack of 2 x Mounting Lugs – Red enclosure
SP77-0015-G	Pack of 2 x Mounting Lugs – Grey enclosure

Multi-function patterns

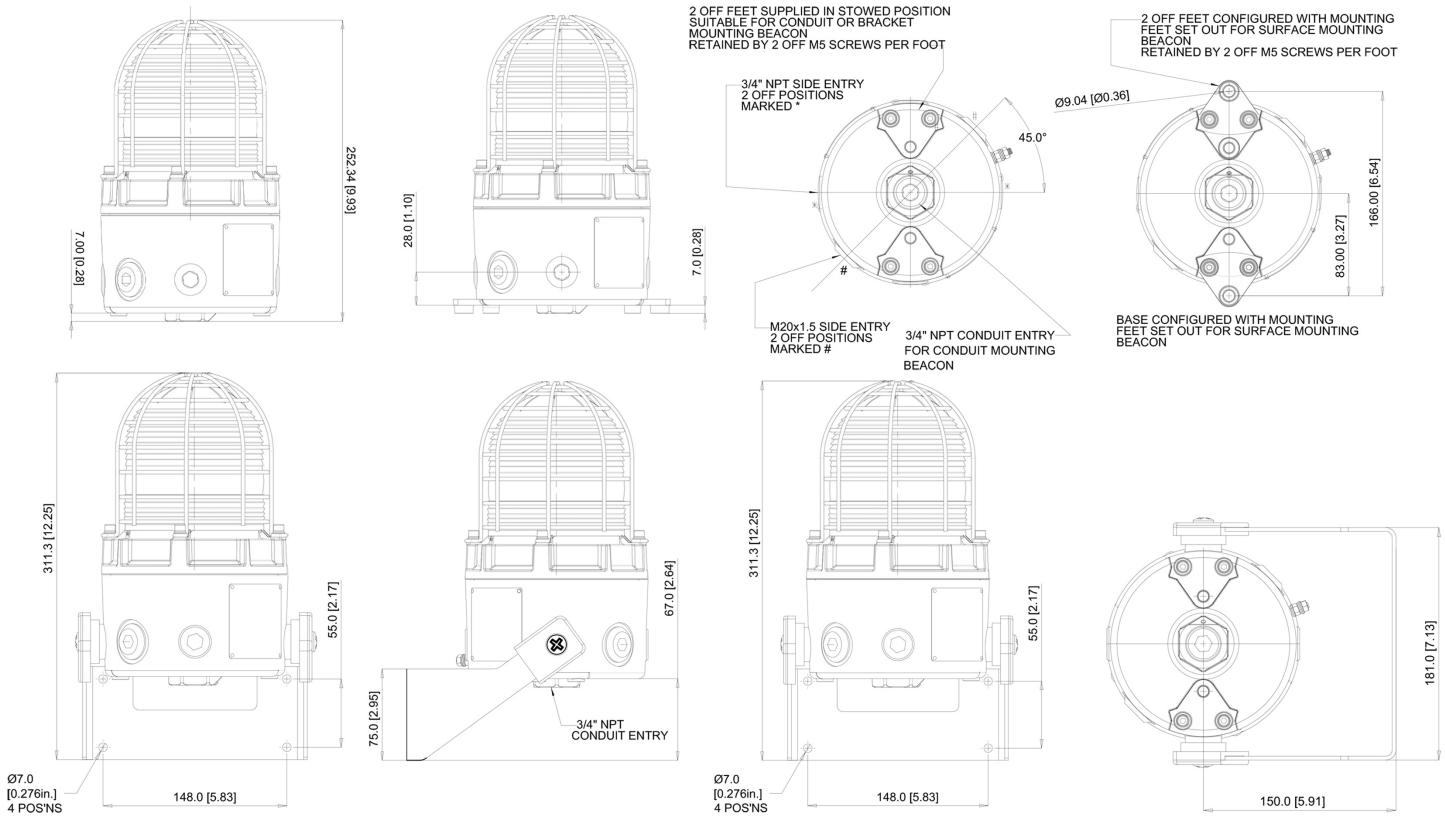
Stage 1: [On board]	Stage 2: [Remote]	Stage 3: [Remote]
Steady High Power	Flashing 1Hz	Triple Strike
Steady Low Power	Flashing 1Hz	Triple Strike
Flashing 1Hz	2x Flash 2Hz	Triple Strike
Flashing 1.33Hz	Flashing 2Hz	Double Strike
Flashing 2Hz	Triple Strike	Triple Strike
Double Strike	Steady High Power	Triple Strike
Triple Strike	Flashing 2Hz	Double Strike

Note: Remote second and third stage on DC units only

Double strike: 150ms on, 150ms off x 2, 600ms off
Triple strike: 150ms on, 150ms off x 3, 600ms off

Current Consumption

Nominal Voltage:	Voltage range:	Steady High Power Nominal current:	Steady Low Power Nominal current:	Flashing 1Hz Nominal current:	Max. current:	In rush:
24Vdc	18-30Vdc	240mA	134mA	110mA	500mA	1890mA <0.22ms
115Vac	110-120Vac 50/60Hz	95mA	78mA	90mA	180mA	1150mA < 12ms
230Vac	220-240Vac 50/60Hz	48mA	37mA	45mA	100mA	670mA <12ms



Assemblies

The D1xB2LD2 is available as a plated assembly configured with a D1x type alarm horn sounder and additional D1x type Xenon strobe or LED beacons with or without a D1xJ2 Ex d junction box. Contact E2S for further information.

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.