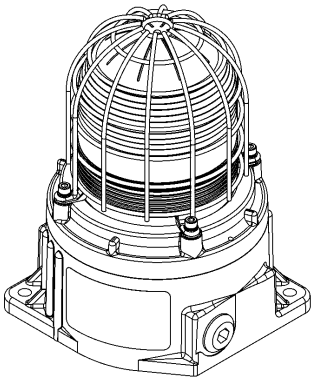
# INSTRUCTION MANUAL
## GNExB2LD2
## Flameproof LED Beacons
## For use in Flammable Gas and Dust Atmospheres



**GNExB2LD2**

## 1) Product Table

| Standard | Model | Nom. Voltage | Voltage Range | Nom. Operating Current* | Max Current |
|---|---|---|---|---|---|
| ATEX / IECEx / UKEX / NEC / CEC | GNExB2LD2DC024 | 24Vdc | 18-54Vdc[1]<br>18-30Vdc[2] | 230mA | 500mA |
| | GNExB2LD2AC115 | 115Vac | 110-120Vac 50/60Hz | 95mA | 180mA |
| | GNExB2LD2AC230 | 230Vac | 220-240Vac 50/60Hz | 50mA | 100mA |

*Rate at 1Hz
[1]ATEX / IECEx / UKEX Conformity
[2]NEC / CEC Conformity

The table shows the input current taken by the various beacons.
A supply voltage variation of +/-10% outside the voltage range is permissible.
Nominal current at nominal voltage and 1Hz flash rate.
Max. rated current at worst case supply voltage and flash rate.

Table 1: Electrical Ratings

Ensure the system power supply is capable of providing the maximum current required for all beacons. Review associated cable size, length and quantity of beacons on each circuit.

## 2) Warnings

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – CLEAN ONLY WITH A DAMP CLOTH.
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
- ALL ENTRIES M20 X 1.5MM.
- USE SUITABLE RATED CABLES AND CABLE GLANDS IF TEMPERATURE EXCEEDS AS PER STANDARDS INDICATIONS BELOW.
  FOR ATEX / IECEx / UKEX STANDARDS:
  70ºC AT ENTRY OR 80ºC AT BRANCHING POINT.
  FOR NEC / CEC STANDARDS:
  60ºC AT ENTRY OR 60ºC AT BRANCHING POINT.

## 3) Rating & Marking Information

All units have a rating label, which carries the following important information:

- Unit Model.
- Voltage Range
- Nominal Voltage
- Max. Current

See Table 1 for electrical ratings of each Unit Model.

### 3.1. ATEX / IECEx / UKEX Ratings

| Standards | |
|---|---|
| EN IEC 60079-0:2018 / IEC60079-0:2017 (Ed 7):<br>Explosive Atmospheres - Equipment. General Requirements<br>EN60079-1:2014 / IEC60079-1:2014 (Ed 7):<br>Explosive Atmospheres - Equipment Protection by Flameproof Enclosures "d"<br>BS EN 60079-31:2014 / IEC 60079-31:2013 (Ed 2):<br>Explosive Atmospheres - Equipment Dust Ignition Protection by Enclosure "t" | |
| **Ratings** | |
| GNExB2:<br>LD2DC024<br>LD2AC115<br>LD2AC230 | Ex db IIC T5 Gb Ta -50°C to +70°C<br>Ex db IIC T6 Gb Ta -50°C to +65°C<br>Ex tb IIIC T85°C Db Ta -50°C to +70°C |

Certificate No. DEMKO 15ATEX1448X
IECEx UL15.0003X
UL21UKEX2136X

Epsilon x, Equipment Group and Category: **II 2G**
**II 2D**

CE Marking Notified Body No. **2813**

UKCA Marking and Notified Body No. **0518**

### 3.2. NEC / CEC Ratings

All models are approved for use as Visual Signal Device for use as General Signalling:

UL1638A & CSA C22.2 No 205-17

**NEC Class / Zone Ratings US Codes**

| Standards | |
|---|---|
| UL 60079-0 (Ed. 7) 04/15/2020<br>Explosive Atmospheres - Part 0: Equipment - General Requirements<br>UL 60079-1 (Ed. 7) 2015<br>Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures 'd' | |
| **Ratings** | |
| GNExB2:<br>LD2DC024<br>LD2AC115<br>LD2AC230 | Class 1 Zone 1 AEx db IIC T5 Gb Ta -50°C to +70°C<br>Class 1 Zone 1 AEx db IIC T6 Gb Ta -50°C to +65°C |

Installation must be carried out in compliance with the National Electric Code.

**CEC Class / Zone Ratings Canada Codes**

| Standards | |
|---|---|
| CAN/CSA C22.2 No. 60079-0 (Ed. 4) 02/2019<br>Explosive Atmospheres - Part 0: Equipment - General Requirements<br>CAN/CSA C22.2 No. 60079-1 (Ed. 3) 2016<br>Electrical Apparatus for Explosive Gas Atmospheres - Part 1: Flameproof Enclosures 'd' | |
| **Ratings** | |
| GNExB2:<br>LD2DC024<br>LD2AC115<br>LD2AC230 | Ex db IIC T5 Gb Ta -50°C to +70°C<br>Ex db IIC T6 Gb Ta -50°C to +65°C |

Installation must be carried out in compliance with the Canadian Electric Code

**NEC & CEC Class / Division Ratings for US / Canada, USL CNL**

| Standards | |
|---|---|
| UL1638A (Ed. 1) 2016<br>Standard for Visual Signal Appliances for General Signalling Use<br>CSA C22.2 No. 205-17 (Ed. 3) 2017<br>Signal Equipment | |
| **Ratings** | |
| GNExB2:<br>LD2DC024<br>LD2AC115<br>LD2AC230 | Class I Div 2 Group ABCD T5 Ta -50°C to +70°C<br>Class I Div 2 Group ABCD T6 Ta -50°C to +65°C |

The certification approval has validated continuous use up to 38°C ambient and are for transient use up to 70°C ambient.

Installation must be carried out in compliance with the National Electric Code / Canadian Electric Code.

## 4) Zones, Gas Group, Category, IP Rating and Temperature Classification

The units can be installed in locations with the following conditions:

| Area Classification Gas | |
|---|---|
| Zone 1 | Explosive gas air mixture likely to occur in normal operation. |
| Zone 2 | Explosive gas air mixture not likely to occur in normal operation, and if it does, it will only exist for a short time. |
| Zone 21 **(ATEX / IECEx / UKEX only)** | Explosive dust air mixture likely to occur in normal operation. |
| Zone 22 **(ATEX / IECEx / UKEX only)** | Explosive dust air mixture not likely to occur in normal operation, and if it does, it will only exist for a short time. |
| **Gas Groupings** | |
| Group IIA | Propane |
| Group IIB | Ethylene |
| Group IIC | Hydrogen and Acetylene |

| Temperature Classification for Gas Applications | |
|---|---|
| T1 | 450ºC |
| T2 | 300ºC |
| T3 | 200ºC |
| T4 | 135ºC |
| T5 | 100ºC |
| T6 | 85ºC (up to 65ºC ambient) |
| **Dust Groupings (ATEX / IECEx / UKEX only)** | |
| Group IIIA | Combustible Flyings |
| Group IIIB | Non-conductive Dust |
| Group IIIC | Conductive Dust |
| **Maximum Surface Temperature for Dust Applications (ATEX / IECEx / UKEX only)** | |
| GNExB2:<br>LD2DC024<br>LD2AC115<br>LD2AC230 | 85ºC |
| **Equipment Category** | |
| 2G / 2D | |
| **Ambient Temperature Range** | |
| -50°C to +70°C | |
| **IP Rating** | |
| IP6X to EN/IEC60079-0<br>IP66 to EN60529 | |

## 5) Special Conditions for Safe Use

Repair of the flame path / cemented joints is not permitted.

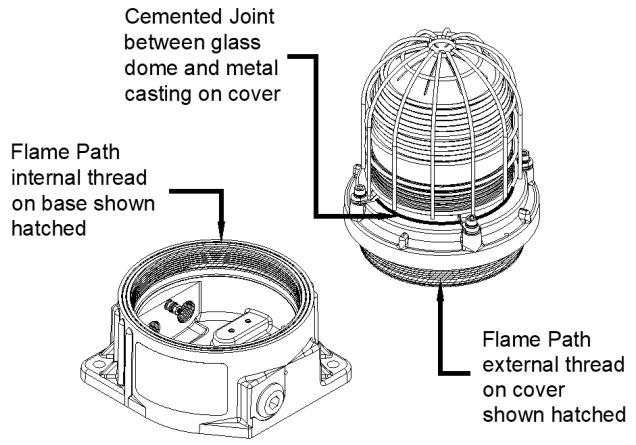



Figure 1: Flame Path.

The enclosure is non-conducting and may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces.

The stainless steel beacon guard is not earthed and may generate an ignition-capable level of electrostatic charges. It has a capacitance of 10pF according to EN/IEC60079-0, clause 7.5.

## 6) Product Mounting and Access

### 6.1. Location and Mounting

The location of the beacons should be made with due regard to the area over which the warning signal must be visible. They should only be fixed to services that can carry the weight of the unit.

The beacons should be securely bolted to a suitable surface using the 9.4mm diameter bolt holes in the base of the unit (see figure 2).

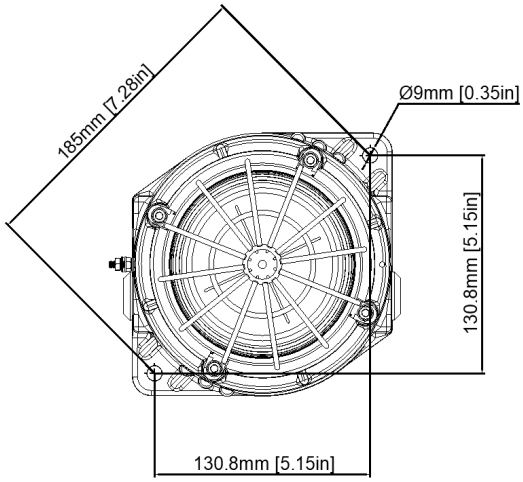



Figure 2: Fixing Location for B2 Beacon.

### 6.2. Access to the Flameproof Enclosure

In order to connect the electrical supply cables to the beacon it is necessary to remove the flameproof cover to gain access to the flameproof chamber. To access the Ex d chamber, loosen the M4 grub screw on the beacon cover. Open the enclosure by turning the beacon cover counterclockwise and remove the cover, taking extreme care not to damage the flameproof threads in the process (see figure 3).

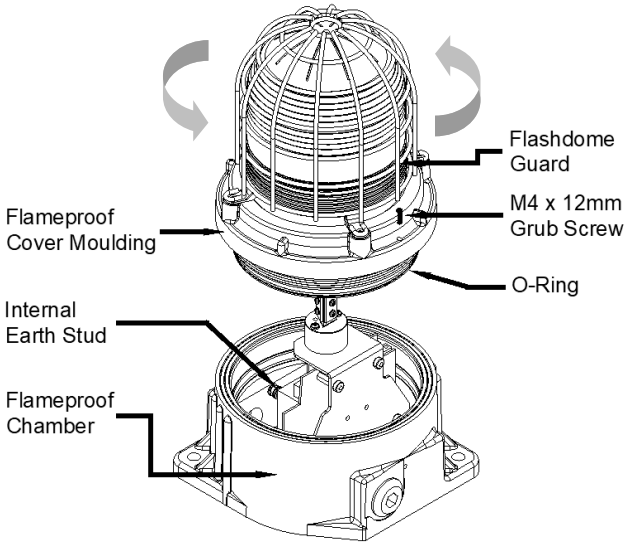



Figure 3: Accessing the Explosion Proof Enclosure.

On completion of the installation the flameproof threaded joint should be inspected to ensure that they are clean and that they have not been damaged during installation.

Flameproof threaded joints are not intended to be repaired.

Ensure that the 'O' ring seal is in place and undamaged.

When fitting the flameproof cover ensure the thread is engaged correctly. Fully tighten the cover all the way, ensure no gap is visible between the cover and base of the beacon enclosure. Tighten the M4 grub screw.

# 7) Installation Requirements

## 7.1. Installation Standards Compliance

Attention: Disconnect from power source before installation or service to prevent electric shock.

The beacons must only be installed by suitably qualified personnel in accordance with the latest issues of the relevant standards.

ATEX / IECEx & UKEx installation standards

EN60079-14 / IEC60079-14: Explosive atmospheres - Electrical installations design, selection and erection.

EN60079-10-1 / IEC60079-10-1: Explosive atmospheres - Classification of areas. Explosive gas atmospheres.

EN60079-10-2 / IEC60079-10-2: Explosive atmospheres - Classification of areas. Explosive dust atmospheres.

The installation of the units must also be in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer who has the necessary training.

NEC / CEC Installation Standards

*Cautions*

Attention: Installation must be carried out by an electrician in compliance with the National Electrical Code, NFPA 70 or CSA 22.1 Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32. / L'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain, NFPA 70 ou CSA 22.1 Code canadien de l'électricité, première partie, norme de sécurité relative aux installations électriques, Section 32.

Attention: Disconnect from power source before installation or service to prevent electric shock / Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.

The installation of the units must also be in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer who has the necessary training.

## 7.2. Cable Selection and Connections

When selecting the cable size, consideration must be given to the input current that each unit draws (see table 1), the number of beacons on the line and the length of the cable runs. The cable size selected must have the necessary capacity to provide the input current to all of the beacons connected to the line.

Electrical connections are to be made into the terminal blocks on the PCBA, using solid wire 0.5-4mm2 / AWG 20-12 or stranded wire, sizes 0.5-2.5mm2 / AWG 24-14. Wire insulation needs to be stripped 8mm. Wires may be fitted securely with crimped ferrules.

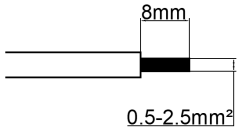



Figure 4: Wire Preparation.

Terminal screws need to be tightened down with a tightening torque of 0.45 Nm / 5 Lb-in. A 6-way terminal blocks is provided on the AC Beacon: 2-off Live, 2-off Neutral terminals and 2-off Earth terminals in total. A 6-way terminal blocks is provided on the DC Beacon: 2-off +ve, 2-off -ve terminals, 1-off S2 (Stage 2) and 1-off S3 (Stage 3).

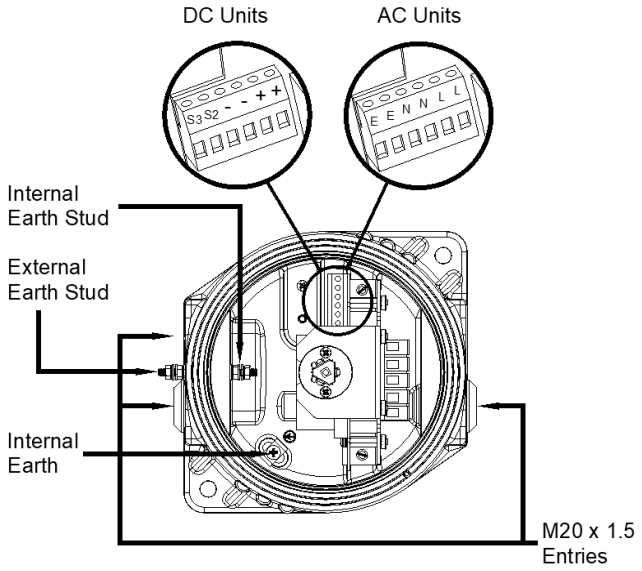



Figure 5: GNExB2 Entries and Terminal Blocks.

When connecting wires to the terminals great care should be taken to dress the wires so that when the cover is inserted into the chamber the wires do not exert excess pressure on the terminal blocks. This is particularly important when using cables with large cross-sectional areas such as 2.5mm².

**Earthing**

Please note that for AC supply voltage product versions the Earth terminal on the PCBA does not provide an earth connection to the product enclosure. The enclosure must be independently earthed using either the external or internal earth fixing point, (see fig 5 and notes below).

Internal earthing connections should be made to the Internal Earth terminal in the base of the housing using a ring crimp terminal to secure the earth conductor under the earth clamp. The earth conductor should be at least equal in size and rating to the incoming power conductors.

External earthing connections should be made to the M4 earth stud, using a ring crimp terminal to secure the earth conductor to the earth stud. The external earth conductor should be at least 4mm2 in size.

## 7.3. Cable Glands, Blanking Elements & Adapters

Follow the minimum temperature ratings of cables and cable glands according to the approvals applied.

ATEX / IECEx & UKEx Requirements

For high ambient temperatures the cable entry temperature may exceed 70ºC or the cable branching point temperature may exceed 80ºC and therefore suitable heat resisting cables and cable glands must be used, with a rated service temperature at least as stated below:

| | Max Ambient Temperature (°C) | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model GNExB2** | **40** | **45** | **50** | **55** | **60** | **65** | **70** |
| LD2DC024<br>LD2AC115<br>LD2AC230 | 75 | 80 | 85 | 90 | 95 | 100 | 105 |

Table 2: ATEX / IECEx & UKEx Min. Ratings of Cables & Cable Glands.

NEC / CEC Requirements Only

For high ambient temperatures the cable entry temperature may exceed 60ºC or the cable branching point temperature may exceed 60ºC and therefore suitable heat resisting cables and cable glands must be used, with a rated service temperature at least as stated below:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model GNExB2** | **30** | **35** | **40** | **45** | **50** | **55** | **60** | **65** | **70** |
| LD2DC024<br>LD2AC115<br>LD2AC230 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 |

Table 3: NEC / CEC Min. Ratings of Cables & Cable Glands.

**Cable Glands & Blanking Plugs**

Appropriate cable glands to be customer supplied.

ATEX / IECEx & UKEx Requirements Only

The cable gland entries have an M20 x 1.5 entry thread. Only suitably rated and ATEX / IECEx & UKEx certified cable glands which must be suitable for the type of cable being used and also meet the requirements of the current Ex ‘d’ flameproof installation standards EN 60079-14 / IEC60079-14.

If the installation is made using conduit, openings must have a sealing fitting connected as close as practical to the wall of the enclosure, but in no case more than the size of the conduit or 50mm, whichever is the lesser.

When only one cable entry is used the other entries must be closed with suitably rated and ATEX / IECEx & UKEx certified blanking plugs.

NEC / CEC Requirements Only

The cable entries have an M20 x 1.5 – 6H entry thread. If the installation is made using cable glands, only suitably rated and certified cable glands must be used. They must be suitable for the type of cable being used and also meet the requirements of the current NEC / CEC installation standards.

If the installation is made using conduit, openings must have a sealing fitting connected as close as practical to the wall of the enclosure, but in no case more than the size of the conduit or 50mm, whichever is the lesser.

For use in Class I Division II locations, in order to maintain the db type protection, flameproof conduit seals and/or cable glands must be used.

Any unused cable entries must be closed with suitably rated and certified blanking plugs.

**Ingress Protection**

Follow instructions according to the approvals applied.

ATEX / IECEx & UKEx Requirements Only

If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable glands or blanking plugs. A minimum ingress protection rating of IP6X must be maintained for installations in explosive dust atmospheres.

NEC / CEC Requirements Only

If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable glands or blanking plugs. A minimum ingress protection rating of IP6X must be maintained for installations in explosive dust atmospheres.

**Adapters**

The GNEx Beacon Range can be supplied with the following types of adapters:

M20 to ½” NPT
M20 to ¾” NPT
M20 to M25

It is important to note that stopping plugs cannot be fitted onto adapters, only directly onto the M20 entries.

Any other adapters used must be suitably rated as per the applicable standards.

## 8) Flash Pattern Settings

Warning – high-intensity light source. Avoid looking directly at the light source for extended periods of time.

The GNExB2 beacon can produce different flash patterns as shown in Table 4. The flash patterns are selected by operation of the flash setting DIP switch on the PCB, Fig 6.

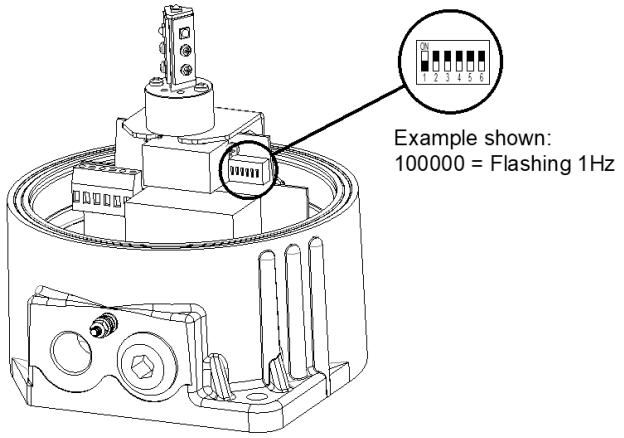



Figure 6: DIP Switch Location.

| Switch Setting (123456) | S1 Mode (for AC & DC) | S2 Mode (DC only) | S3 Mode (DC only) |
|---|---|---|---|
| 000000 | Steady High Power | Flashing 1Hz | Flashing Triple Strike |
| 000001 | Steady Low Power | Flashing 1Hz | Flashing Triple Strike |
| 100000 | Flashing 1Hz | Flashing Double Strike | Flashing Triple Strike |
| 101000 | Flashing 1.5Hz | Flashing 2Hz | Flashing Double Strike |
| 010000 | Flashing 2Hz | Flashing Triple Strike | Flashing Triple Strike |
| 110000 | Flashing Double Strike | Steady High Power | Flashing Triple Strike |
| 001000 | Flashing Triple Strike | Flashing 2Hz | Flashing Double Strike |

Table 4: Switch Positions for Flash Patterns

### 8.1. Synchronised Operation

All GNExB2LD2 beacons that are connected to the same supply line will have a synchronised flash rate at one flash every second. To ensure that the units will be synchronised check that the DIP switch is set to1 Hz (see Figure 6).

## 9) End of Line Monitoring (DC Units)

All DC units have a blocking diode fitted in their supply input lines. An end of line monitoring diode or an end of line monitoring resistor can be connected across the +ve and –ve terminals in the flameproof chamber. If an end of line resistor is used it must have a minimum resistance value of 3k3 ohms and a minimum wattage of 0.5W or a minimum resistance value of 500 ohms and a minimum wattage of 2W.

## 10) Interchangeable & Spare Parts

Warning – Hot surfaces. External surfaces and internal components may be hot after operation, take care when handling the equipment.

The beacon lenses are interchangeable, contact European Safety Systems Ltd for a replacement lens available in various colours.

The guard is an integral part of the protection and must be reassembled exactly the same way as it was disassembled.

To change the lens, unscrew and remove the M5 socket head screws, M5 spring & flat washers.

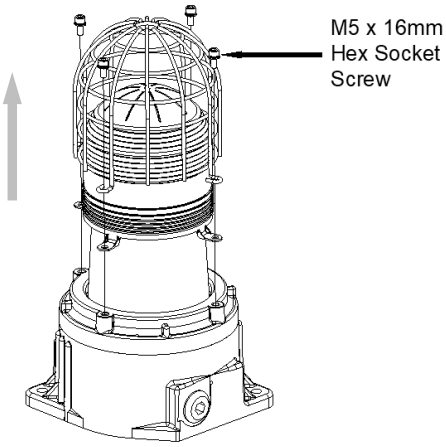



Figure 7: Removal of Lens.

Remove the guard and replace the lens.

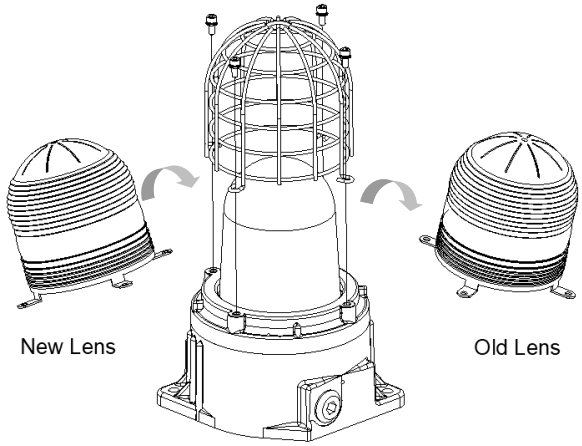



Figure 8: Changing of Lens.

Fit the guard back on to the lens and moulding, align the holes of the guard, lens and casting. To reattach the lens, the fixings MUST be in the order shown in figure 9.

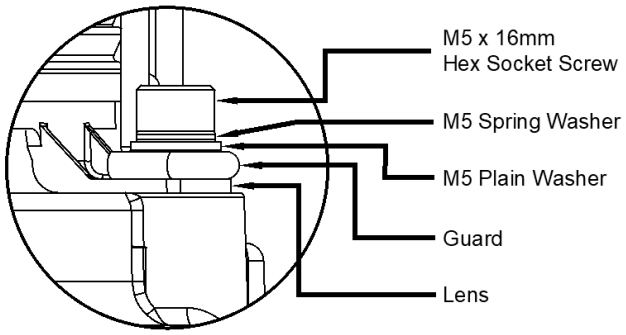



Figure 9: Lens & Guard Fixings Order.

## 11) Maintenance, Overhaul and Repair

Maintenance, repair and overhaul of the equipment should only be carried out by suitably qualified personnel in accordance with the current relevant standards:

EN60079-19/IEC60079-19 Explosive atmospheres - Equipment repair, overhaul and reclamation

EN 60079-17/IEC60079-17 Explosive atmospheres - Electrical installations inspection and maintenance

Units must not be opened while an explosive atmosphere is present.

Repair of the flameproof threaded joints and cemented joints is not permitted.

Electrostatic charging hazard - Clean only with a damp cloth.

## 12) SIL 2 Reliability Data

Reliability and Functional safety IEC/EN61508 which has been assessed and is considered suitable for use in low demand safety function:

1. Random Hardware Failures and Architectural constraints (route $2_H$).
2. As an unvoted item (i.e. hardware fault tolerance of 0) at SIL 2.

The product was assessed against failure modes:

- Failure respond to an input by lighting a beacon.
- Spurious light output despite no input.

3. When employing the device in a SIL2 compliant system the user should ensure frequent or continuous automatic monitoring of continuity.

| | |
|---|---|
| Integrity in respect of failure to function | SIL2 & SIL1 |
| Total Failure rate | 0.48 pmh |
| “Hazardous” failure rate (revealed) | 0 pmh |
| “Hazardous” failure rate (unrevealed) | 0.48 pmh |
| “Safe” failure rate (revealed) | 0 pmh |
| “Safe” failure rate (unrevealed) | 0 |
| System type | B |
| Hardware Fault Tolerance | 0 |
| Diagnostic Coverage | >60% |
| PFD (hazardous failure) | $2.1 \times 10^{-3}$ |
| Proof Test Interval | Up to 1 year |

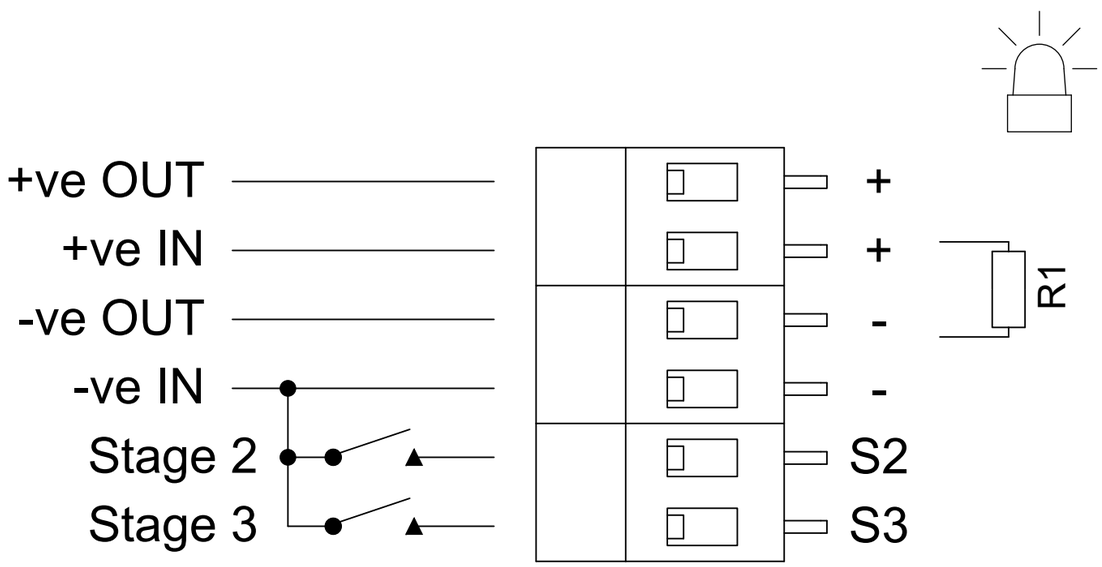
| ISSUE | MOD No. | REASON - INITIAL - DATE |
|---|---|---|
| A | | INTRODUCTION<br>J.S - 14/11/19 |
| B | | RE-DRAWN IN 2D<br>NOTES, TERMINALS & EOL RESISTOR ADDED<br>DAH 17/12/19 |
| C | | FORMAT UPDATE<br>MA - 03/12/2021 |

## DC LED GNExB2LD2 UNITS

Line Monitoring

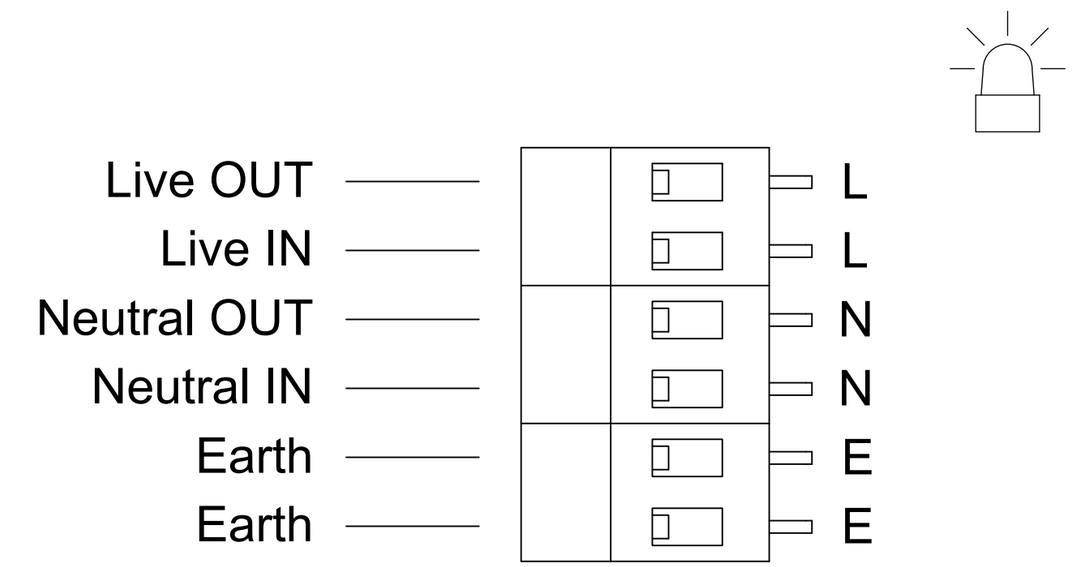
Power: +ve & -ve

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
500Ω MIN, 2W MIN OR 3K3Ω MIN, 0.5W MIN




## AC LED GNExB2LD2 UNITS

Power: Live & Neutral




DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
GNExB2 LD2

| | | |
|---|---|---|
| DRAWN J.SPILLER | DATE 14/11/19 | |
| CHECKED R.N.POTTS | DATE 14/11/19 | |
| APPROVED R.N.POTTS | DATE 14/11/19 | |

SURFACE FINISH | WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL



e2S warning signals
EUROPEAN SAFETY SYSTEMS LTD
IMPRESS HOUSE
MANSELL ROAD
ACTON
LONDON W3 7QH
WWW.E2S.COM

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK - DO NOT SCALE

A3

TITLE GNExB2 LD2 BEACON WIRING DIAGRAMS

| SCALE | SHEET | DRAWING NUMBER |
|---|---|---|
| NTS | 1 OF 1 | D156-06-401 |

# EU Declaration of Conformity

| | |
|---|---|
| Manufacturer: | European Safety Systems Ltd.<br>Impress House, Mansell Road, Acton<br>London, W3 7QH<br>United Kingdom |
| Authorised Representative: | E2S Warnsignaltechnik UG<br>Charlottenstrasse 45-51<br>72764 Reutlingen<br>Germany |
| Equipment Type: | GNExB1X05<br>GNExB2X05, GNExB2X10, GNExB2X15, GNExB2X21<br>GNExB2LD2<br>GNExJ2 |

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Directive 2014/34/EU: Equipment and Protective Systems for use in Potentially Explosive Atmospheres (ATEX)

| | |
|---|---|
| Notified Body for EU type Examination (Module B): | UL International Demko A/S<br>Notified Body No.: 0539<br>Borupvang 5A, 2750 Ballerup, Denmark |
| EU-type Examination Certificate (Module B): | DEMKO 15ATEX1448X |
| Notified Body for Quality Assurance Notification / Conformity to EU-type based on<br>quality assurance of the production process (Module D): | Sira Certification Service<br>Notified Body No.: 2813<br>CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands |
| Quality Assurance Notification (Module D): | SIRA 05 ATEX M342 |
| Provisions fulfilled by the equipment: | II 2G Ex db IIC T4…T6 Gb<br>II 2D Ex tb IIIC T80°C…T138°C Db<br>IP6X Dust Protection to EN60079-0 / EN60079-31 |
| Standards applied: | EN IEC 60079-0:2018<br>EN 60079-1: 2014<br>EN 60079-31: 2014 |

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

| | |
|---|---|
| Standards applied: | EN 61000-6-1:2007<br>EN 61000-6-2:2005<br>EN 61000-6-3:2007 / A1:2011 / AC: 2012<br>EN 61000-6-4:2007 / A1: 2011 |

Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67

# EU Declaration of Conformity

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

Martin Streetz
Quality Assurance Manager

Document No.: DC-037_Issue_H
Date and Place of Issue: London, 03/12/2021

# UKCA Declaration of Conformity

| | |
|---|---|
| Manufacturer: | European Safety Systems Ltd.<br>Impress House, Mansell Road, Acton<br>London, W3 7QH<br>United Kingdom |
| Equipment Type: | GNExB1X05<br>GNExB2X05, GNExB2X10, GNExB2X15, GNExB2X21<br>GNExB2LD2<br>GNExJ2 |

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Directive UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1 : Product or Protective System Intended for use in Potentially Explosive Atmospheres (UKCA)

| | |
|---|---|
| Notified Body for UK type Examination (Module B): | UL International (UK) Ltd<br>Notified Body No.: 0843<br>Unit 1-3 Horizon Kingsland Business Park, Wade Road,<br>Basingstoke, Hampshire RG24 8AH UK |
| UK-type Examination Certificate (Module B): | UL21UKEX2136X |
| Notified Body for Quality Assurance Notification / Conformity to EU-type based on<br>quality assurance of the production process (Module D): | Sira Certification Service<br>Notified Body No.: 0518<br>Rake Lane, Eccleston, Chester CH4 9JN, UK |
| Quality Assurance Notification (Module D): | CSAE 22UKQAN0046 |
| Provisions fulfilled by the equipment: | II 2G Ex db IIC T4…T6 Gb<br>II 2D Ex tb IIIC T80°C…T138°C Db<br>IP6X Dust Protection to EN60079-0 / EN60079-31 |
| Standards applied: | EN IEC 60079-0:2018<br>EN 60079-1: 2014<br>EN 60079-31: 2014 |

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

| | |
|---|---|
| Standards applied: | EN 61000-6-1:2007<br>EN 61000-6-2:2005<br>EN 61000-6-3:2007 / A1:2011 / AC: 2012<br>EN 61000-6-4:2007 / A1: 2011 |

Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67

# UKCA Declaration of Conformity

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

Martin Streetz
Quality Assurance Manager

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