

General Information

The LS01 is a light level transmitter designed for use in the active control of artificial lighting, both to optimise light levels and to achieve maximum energy efficiency.

The LS01 transmitter uses a photo-diode cell to detect light levels in a selection of lux ranges, providing a linear 0-10 Vdc output signal.

The LS01 is designed for outdoor mounting for the measurement of external light levels.

Features

Switch selectable ranges

24 Vac/dc supply

0-10 Vdc output

Installation and Connection details

The connections to the controllers should be made using signal cable. If screened cable is used the screen should be connected to earth at the controller end only. Low voltage signal and supply cables should be routed separately from high voltage or mains cabling. Separate conduit or cable trays should be used. Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth.

Mounting

It is recommended that the unit be mounted with the cable entry at the bottom. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.

Remove the front cover by twisting the lid and separating from the main body. Using the base of the housing as a template mark the hole centres. Drill two pilot holes at 85 mm centres in the surface on which the sensor is to be mounted, and fix the sensor with appropriate screws. The housing is designed to make it easy for an electric screwdriver to be used if desired.

Feed the cable through the waterproof gland and terminate the cores at the terminal block. Leaving some slack inside the unit, tighten the cable gland onto the cable to ensure water tightness. Replace the lid after the electrical connections have been made.

Specification

| | |
|----------------------------|--|
| Sensor reference | Photo diode |
| Accuracy | ±5% across range |
| Span adjustment | ±10% |
| Zero adjustment | ±10% |
| Field of view | 120 d |
| Ranges (Switch selectable) | 0 - 2000 lux 0 - 4000 lux 0 - 10,000 lux 0 - 20,000 lux |
| Housing dimensions | 84 x 84 x 36 mm See Figure 1 |
| Ambient range | T=0/+50°C RH=0/100% |
| Power supply | 24 Vac/dc (±10%) |
| Connections | 3-wire |
| Output | 0 - 10 Vdc |
| Protection | IP65 |
| Weight | 250 g |

Operational Data

| | |
|-------------------------------------|---------|
| Typical Daylight Conditions: | lux |
| Dusk | 15 - 20 |
| Average daylight | 2000 |
| Bright sunlight | 20,000+ |

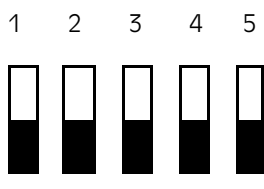
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| Service Illuminations: | lux |
| Minimum for outdoor areas | 25 |
| Exterior walkways & car parks | 50 |
| Industrial circulation areas, stores etc | 150 |
| Minimum task lighting | 200 |
| General offices & retail areas | 500 |
| Fine task, machine operation, precision assembly etc | 1500 |

Connections

| | | |
|------------|-------|-------------------------|
| Terminal 1 | | 24 Vac/dc (24 V) |
| Terminal 2 | | 0 - 10 Vdc output (SIG) |
| Terminal 3 | | 0V (GND) |

Setting the Range

The measuring range is set by setting ONE ONLY of the DIP switches to ON.



- 1 = 0 - 20,000 Lux
2 = 0 - 10,000 Lux
3 = 0 - 4000 Lux
4 = 0 - 2000 Lux
5 = Slugs the output

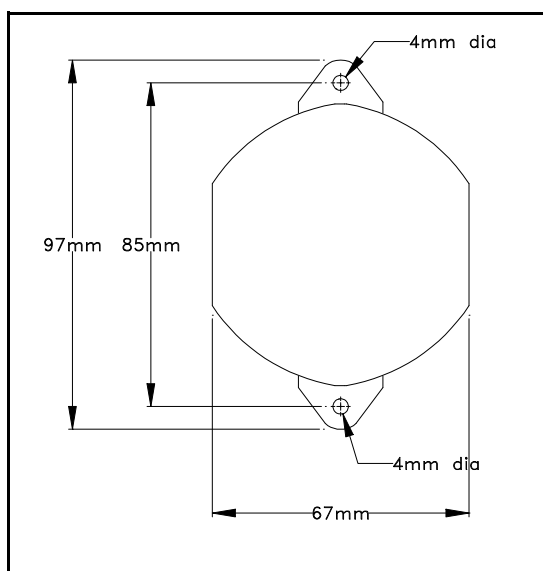


Figure 1



This unit conforms with the relevant EU standards when fitted in accordance with its installation instructions.