

General Information

The LS02 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 LS02 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 LS02 is designed for outdoor mounting for the measurement of external light levels.

The LS02 replaces the previous LS01 product.

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	60 degrees
Ranges (Link 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+
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 (+ V)
Terminal 2		0V (ov)
Terminal 3		0 - 10 Vdc output (o/p)

Note: The connections to the LS02 light sensor are different to its predecessor type LS01 and require the connections to be rewired. Terminals 2 and 3 are crossed over.

Setting the Range

Link

2K Lux	0 - 2,000 Lux
4K Lux	0 - 4,000 Lux
10K Lux	0 - 10,000 Lux
20K Lux	0 - 20,000 Lux

SLUG Reduces speed of response

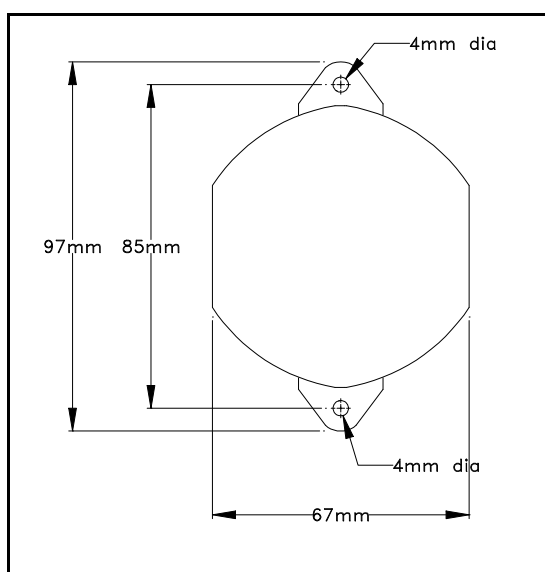


Figure 1



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