



**CLIPSAL**<sup>®</sup>

by **Schneider** Electric

## C-Bus<sup>®</sup> Light Level Sensor

# 5031PE, E5031PE

Series



### Installation Instructions

#### Product Range

5031PE	C-Bus Light Level Sensor (Australian Pattern)
E5031PE	C-Bus Light Level Sensor (British Standard Pattern)

#### Description

The light level sensor is a C-Bus input device which measures the ambient light levels and converts this information into messages sent across the C-Bus network. C-Bus output units (relays and dimmers) can be configured to respond to such messages, allowing automatic regulation and control of the lighting levels.

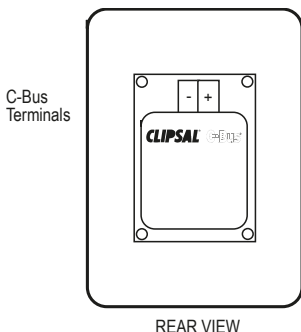
#### Capabilities

The C-Bus light level sensor is intended for use in an automatic light level regulation system and is capable of maintaining a constant illumination level in the range of 40 to 1600 lux (20 to 3000 lux measurable). The light level sensor unit continuously monitors ambient light levels, providing a comparison with the user-defined target light level. Control instructions are then subsequently issued to output units on the C-Bus network, altering the light levels as required (e.g. "RAMP TO LEVEL" command issued to a dimmer unit).

Sunset switching (ON/OFF) operations are also possible, allowing external lighting to be activated after dark.

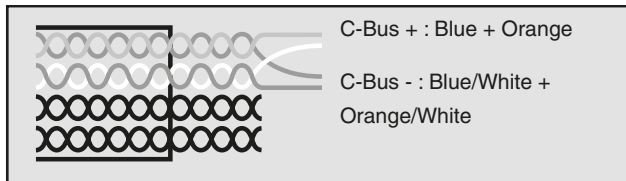
The light level sensor unit incorporates filtering and some degree of hysteresis, to suppress noise and compensate for rapid light intensity fluctuations. If the natural ambient light level is such that extra illumination is not necessary, an OFF command is transmitted across the C-Bus network to the appropriately programmed output units.

## Connection to the C-Bus Network



Installation of the light level sensor unit to the C-Bus network requires a two wire connection to the safe extra-low voltage unshielded twisted pair C-Bus network cable. This connection is polarity sensitive, and is clearly marked on the terminal block of the unit. The light level sensor incorporates an LED indicator, which can be configured to aid in identifying the unit during the installation process. This indicator is located on the front of the unit.

The illustration below shows the recommended technique for cable termination giving the best electrical performance. Bootlace crimps may also be used to provide a highly reliable connection. It is recommended that Category 5 data cable be used, (Clipsal catalogue number 5005C305B or 5005C305BST).

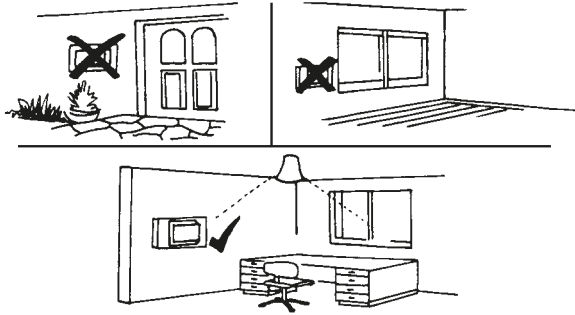


**NOTE:** Observe the mutual twist of solid and dotted conductors of opposing coloured conductors. This ensures a good electrical termination, with favourable common mode noise characteristics.

## Location Recommendations

When installing the light level sensor, it is recommended that the user attempts to observe the following guidelines:

- Position at an elevated height, so the sensor element will not be obstructed by persons passing by or standing in the vicinity.
- Position such that the sensor's viewing window is directed as far away as practicable from lighting sources (natural or artificial).
- Direct the sensor's viewing window toward those surfaces requiring illumination (sources of reflected light).
- Mount the sensor such that the incident light is typical for the control area. Avoid darkened, or shadowy locations.



## Field Calibration Procedures

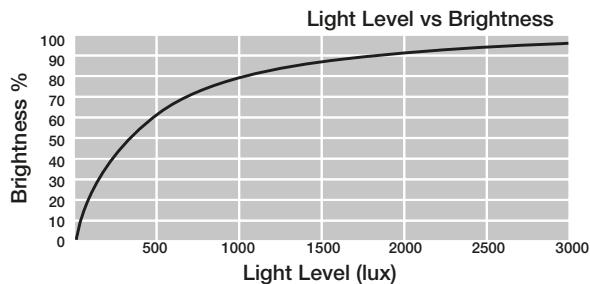
For lighting control applications, the light level sensor must be calibrated to attain the desired target illumination level. This is achieved through the C-Bus Toolkit installation software. There are two methods available for field calibration:

### 1. Set target level in lux

Directly specify the target ambient light level in lux. Enter the desired lux value in the software template, and download to the light level sensor unit. Care must be taken to ensure proper account of any resulting offset, since the ambient light level incident on the sensor may vary from that present at the working surfaces. This is due to physical location, proximity to light sources, shadows or diffusion effects.

### 2. Set target level by current illumination level

The ambient light level in the work area of interest is adjusted as required, and then the current light level, as measured by the sensor, is registered as the target light level. This process can be one of personal comfort/mood setting, or can be precisely measured using a handheld lux level meter.



## Programming Requirements

As with other C-Bus units, the light level sensor units must be programmed to set their unique identification and the mode of operation on the C-Bus network. The C-Bus Toolkit installation software can be used to configure all operational parameters, including the specification of target lighting levels. Please refer to the C-Bus Toolkit Installation Software Help file for information relating to the programming and calibration of light level sensor units.

## Important Warning

The use of any non C-Bus software in conjunction with the hardware installation without the written consent of Clipsal Australia Pty Ltd may void any warranties applicable to the hardware.

## Electrical Specifications

Catalogue Number	5031PE / E5031PE
C-Bus input voltage	15 - 36V d.c. @ 18mA nominal
Readable light level range	20 - 3000 lux
Controllable light level range	40 - 1600 lux
Field of view	180°

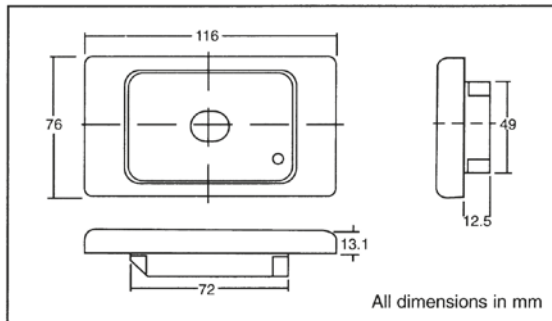
## Ambient Conditions

Operating temperature	0 - 50°C
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## Terminals

Per C-Bus side	Screw terminals accommodate 6 x 0.2mm <sup>2</sup>
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## Mechanical Specifications - Australian Pattern



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