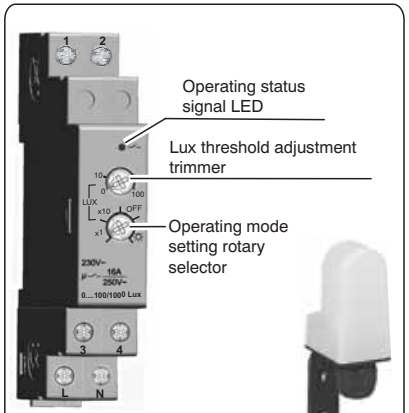
ENGLISH

MODULAR PHOTOCELL LIGHTING CONTROL with separate probe
1 DIN



PE - DEICNN009 07/12

1 - Technical data

Supply voltage:	230V~ +/- 10%, 50 Hz
Type of output:	relay with NO free contacts (without Cadmium) with potential of 16A / 250V~ type «zero-crossing»
Relay command:	0...100 Lux / 0...1000 Lux
Threshold intervention (lux) adjustment trimmer:	4 positions
Selector for operating mode selection:	**T on** = 15 sec / **T off** = 30 sec
Delay time at switching ON and switching OFF:	dynamic type
Hysteresis:	1 mm² ÷ 6 mm²
Section of the cables to the module terminals:	IP 20 (module)
Protection level:	IP 65 (probe with cable diam. 4 ÷ 8 mm)
Probe with precision photodiode sensor:	Cd - Free
Operating temperature limits of module:	- 10 °C ÷ +55 °C
Operating temperature limits of probe:	- 30 °C ÷ +65 °C
Storage temperature limits:	- 20 °C ÷ +65 °C
Installation:	DIN rail (module) - outdoor (probe)
CE reference standards:	LVD/EMC EN60669-2-1

Ability to control low safety voltage SELV circuits

Example of maximum operating power:

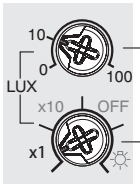
16A resistive	3600W	1000W (28x36W)	1000W (28x36W tot. 140 μF)	35 x 7W 25 x 23W

DEVICE DESCRIPTION

The electronic twilight switch controls the switching ON and OFF of outdoor lighting systems. Among the various uses, the most common is the automatic illumination of streets, shop signs, stairs or gardens as the sunlight wanes (twilight).
The switch closes the contact when the light level falls below the set threshold and it remains closed until the threshold is next exceeded. The contact is opened and closed with a delay (fixed setting) **T on approx. 15 seconds** and **T off approx. 30 seconds**, in order to prevent false switch on caused by brief changes in brightness such as lightening, car headlights, etc.
The device is equipped with a rotary selector for selecting the operating mode, a trimmer for adjusting the LUX threshold and a Led light for signalling the operating status.

One important feature of the device is the intelligent relay command of the "zero crossing" relay which optimises the enabling and disabling of the load, increasing the lifetime relay.

ROTARY SELECTOR WITH 4 OPERATING POSITIONS and LUX THRESHOLD ADJUSTMENT TRIMMER:

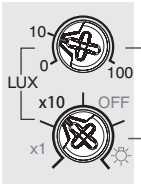


Lux threshold adjustment trimmer from 0 to100 Lux

position: x1 (Lux scale)

twilight operation

1°

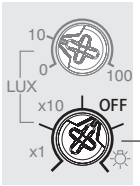


Lux threshold adjustment trimmer from 0 to1000 Lux
(example in figure: trimmer set to 100 Lux)

position: x10 (Lux scale)

twilight operation

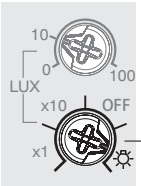
2°



position: OFF

Relay always disabled

3°



position: ☼

Relay always enabled

4°

LED SIGNALS (LED on front ○⁄–)

Selector position	**T on** (Delay time at switching ON)	Relay ON	Relay OFF	**T off** (Delay time at switching OFF)
x1 (twilight)	☼ fast blinking	◐ blinking	☼ slow blinking	☼ fast blinking
x10 (twilight)	☼ fast blinking	◐ blinking	☼ slow blinking	☼ fast blinking
OFF (relay always disabled)	———	———	☼ slow blinking	———
☼ (relay always enabled)	———	☀ fixed	———	———

Important: the switched off LED means the device is not powered.

2 - ELECTRICAL CONNECTION

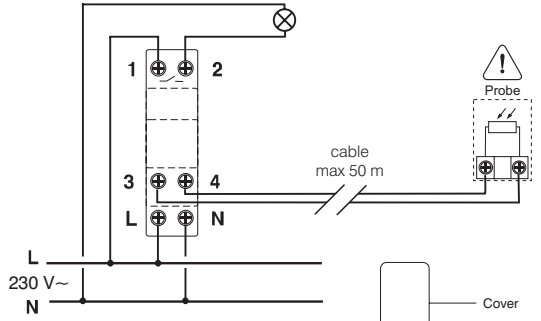
Important: the installation and electrical connections of devices and equipment must be performed by qualified personnel in conformity with current standards and regulations.
WARNING: in case of particularly reactive loads (e.g. fluorescent or HID or electronic lamps, etc.) or with a cosφ value lower than in-dicated in the technical data, the relay could suffer damage. It is advisable in such instances to use a suitably rated external or solenoid switch.

The manufacturer does not assume any responsibility concerning the use of the products, which must conform to particular environmental and/or installation standards.

CAUTION: the electrical connection to the separate probe must be made by a twin cable that has a minimum external diameter of 4 mm, a maximum of 8 mm and with the section of each conductor 0.75 ÷ 1.5 mm².

2.1 - Electrical connections (Turn off the mains supply)

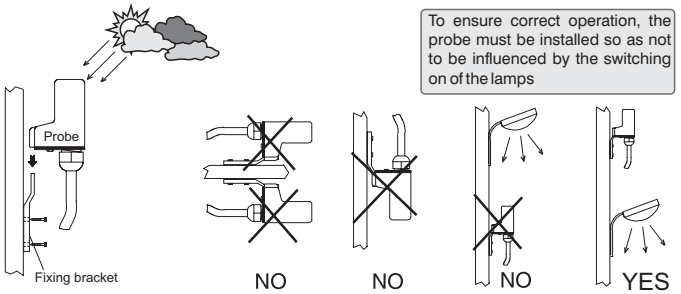
- Connect the 230 V~ supply to the **L** (line) and **N** (neutral) terminals.
- Connect the load as indicated in figure:
  - neutral (**N**) directly to the lamp
  - terminal 1 to the line (**L**)
  - terminal 2 to the lamp.
- Connect the wires coming from the probe to terminals 3 and 4 of the twilight switch.



2.2 - Installation of the probe

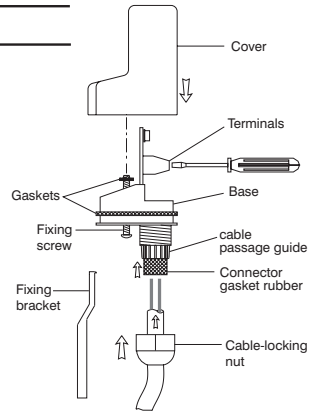
Installation on wall or pole using the fixing bracket provided.

- Fix the bracket to the wall
- Make the electrical connections to the probe
- Insert the body of the probe onto the bracket until it locks (the tooth snaps on the bracket)



To ensure correct operation, the probe must be installed so as not to be influenced by the switching on of the lamps

CAUTION: once the connection has been completed, the electrical parts will be live: do not open the protective cover without first disconnecting the 230 V~ supply.



note: the probe is also available as a spare part

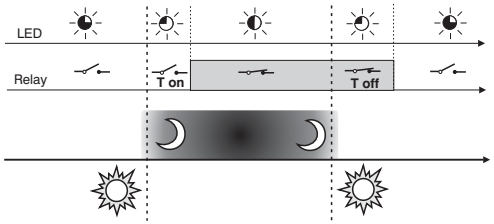
3 - DESCRIPTION OF THE OPERATING MODES (4 position rotary selector)

1° position **x1**

2° position **x10**

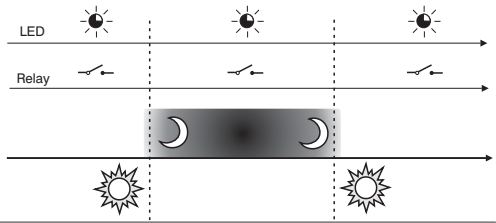
in twilight mode

When the light intensity detected by the probe is lower than the value set on the "lux adjustment" knob, the relay will close the contact after a brief delay (about 15 sec) called **T on**.
On the contrary, when the light intensity detected by the probe exceeds the value set on the "lux adjustment" knob, the relay will open the contact after a brief delay (about 30 sec) called **T off**.



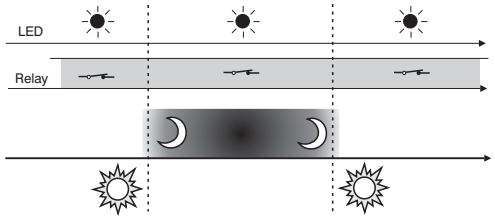
3° position **OFF: Relay always disabled**

This feature is useful for prolonged switch OFF (e.g. holidays), without the need to modify the Lux threshold setting.



4° position ☼ : **Relay always enabled**

This function is useful for carrying out tests to verify correct installation.



The manufacturer reserves the right to introduce any modification without prior notice.