

Light Sensitive Switches

Using light sensitive switches can prevent the unnecessary use of lighting circuits where sufficient daylight exists. The benefit of modular devices is the facility to set the ambient lighting level at which the device will operate, and as the device is fitted at the distribution point prevent unauthorised tampering. The remote photocell unit can be mounted up to a distance of 50 metres from the device. Two devices are available the standard EEN100 light sensitive switch and an enhanced programmable version the EE171 that also allows time clock control.

Principle of Operation

Both devices control lighting systems according to natural illumination;

- The user sets the working level:
- The photo cell measures the external light level

The output of the EEN100 is:

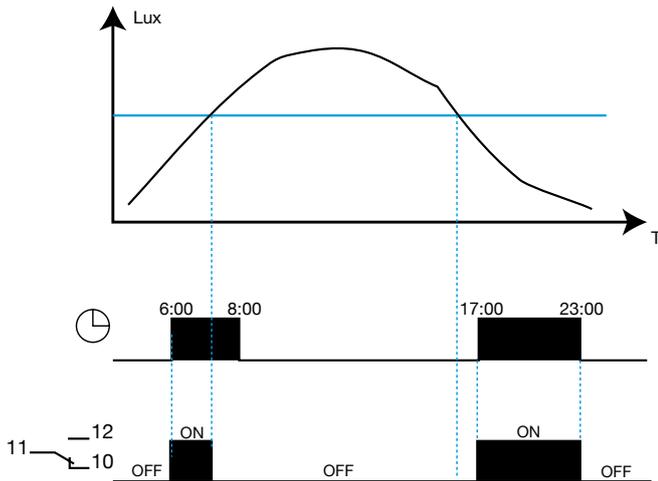
- ON, when the measured level is lower than the pre-set light level
- OFF, when the measured level is higher than the pre-set light level

The output of the EE171 during the programmed ON time period is:

- ON, when the measured level is lower than the pre-set light level
- OFF, when the measured level is higher than the pre-set light level

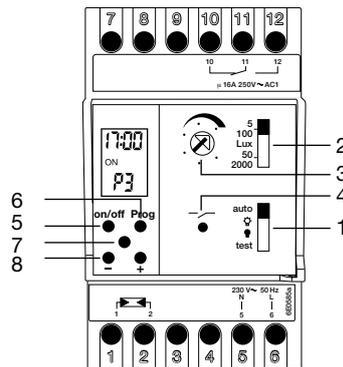
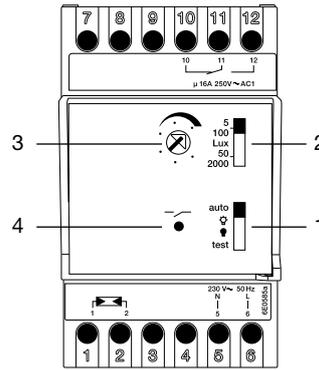
The output of the EE171 during the programmed off time period is:

- OFF, regardless of the lighting level



The light sensitive switches include a built in time delay which avoids unnecessary switching due to temporary factors such as car headlight beams etc...

Description



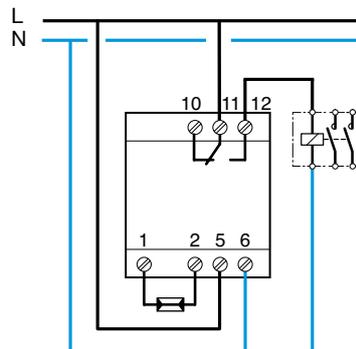
The programmable light sensitive switch EE171 has two main functions:

- Light sensitive switch comprising
 - 1 Override selector switch to allow permanent ON or OFF, auto or test mode
 - 2 Lighting range selector
 - 3 Potentiometer to set light level
 - 4 Indicator to show output switching status

- A programmer to establish the automatic operating cycle

The programmer comprises 4 keys:

- 5 **ON / OFF** to choose whether the circuit is on or off.
- 6 **Prog** to set the program and scroll program steps
- 7 **Reset**
- 8 **+** and **-** to change settings



Mounting the Cell

To ensure correct operation of the light sensitive switch, the cell must not be influenced by artificial light or direct solar radiation and should be sheltered from dust and humidity. In case of disconnection of the link between the cell and the light sensitive switch, the output of the device will be switched on. Make sure the light sensitive switch is unplugged before connecting the cell.

	EE002	EE003
Type	Flush Mounting	Surface Mounting
Dimensions (mm)	89 x 48 x 32	25 x 25 x 20 Hole 25mm
Connection	Cable 1m 2 x 0.75mm ²	0.75 to 4mm ²
Protection Class	IP54	IP54
Working & Storage Temperature	-30°C to +60°C	-30°C to +60°C

Adjustment of the Working Level

The test position of the override selector 1 makes setting the preset level easier by removing the ON and OFF delay.

Select the sensitivity range which suits your application (selector 1) 5 to 100 lux (low light level) application examples; public lighting, shop windows, signals...

50 to 2000 lux (high light level) application examples; controls of shades

At the appropriate moment of the day, put the selector 1 in test position; turn the potentiometer 2 up to the switching point (the indicator 4 lights); put the selector back to position 'auto' the normal operating mode of the device.

Technical Specification

Electrical Specification	
Voltage Rating	230V +10 -15% 50Hz
Consumption	1.5VA Max
Output	1 Voltage Free Changeover Contact
Max Breaking Capacity	AC1 16A 250V~
Incandescent Lamp	2000W 230V~
Halogen Lamp	1000W 230V~
Fluorescent Lamp Uncompensated	1000W 230V~
Compensated in Series (10µF)	1000W 230V~
// Compensated (15µF)	200W 230V~
Duo	1000W 230V~
Functional Characteristics	
Sensitivity Range	5 to 100 lux, 50 to 2000 lux
Cycle	Weekly
Programs	8 Pre-defined Program
Program Setting	1 Minute Increments*
Accuracy	+6min / annum*
Operating Reserve	Lithium Battery Total of 3 Years Supply Failure*
On and Off Delay	15 to 60s
Working Temperature	-30°C to +60°C (cell) -10°C to +50°C (modular device)
Storage Temperature	-20°C to +60°C
Protection Class (cell)	IP54
Insulation Class	II
Connection Capacity	
Modular Device	0.5 to 4mm ²
Cell	0.75 to 2.5mm ²
Max Length between Cell and Modular Device	50m
Mounting of the Cell with 2 Screws	2.5mm

* EE171 only