

**Description**

**EE810, EE811 and EE812**

High performance presence detector that will be used in premises or in passage areas, where they increase comfort and reduce drastically the energy costs.

**Combination of a presence area and a motion area.**

The presence area is especially interesting in offices, where the motion area may be used in long corridors. Head rotation for detection area adjustment. Settings via potentiometers.

**Applications**

**EE810 - 1 channel detector**

Direct control of a light load or used as a slave for detection area enlargement. Lux level and ON delay setting via potentiometers. Test mode in order to set lux level and the detection pattern.

**EE811 - 2 channels detector**

Light relay output for direct control of a light load. Presence output potential free relay. Lux level, on delay setting for light channel and presence channel via potentiometers. Input for slave (EE810) and/or override push button.

in order to control electronic ballasts and/or Hager dimmers EV100/EV102. Detector especially dedicated for energy saving and comfort purpose. Input for slave (EE810) and/or override pushbutton in order to modify the setpoints. Lux level, On delay for light channel and min level via potentiometers. 3 functional modes : no dimming, dimming with local setpoint, dimming with remote setpoint.

**EE813** : accessory to surface mounting.

**EE812 - Light regulator 1/10V**

Light regulator with 1/10V output

Complies with IEC 60 609-1 and 60 669-2-1.



EE810



EE813

Description	Characteristics	Pack qty.	Cat. ref.
<p><b>Presence detector 1 channel</b></p> <ul style="list-style-type: none"> <li>• relay output light channel</li> <li>• lux level and on delay (duration or pulse) defined via potentiometers</li> <li>• Slave output for association with EE811/EE812 - Lux OFF</li> </ul>	<p><b>230V~ 50Hz</b> μ16A AC1</p> <p>triac output 0.8A</p>	1	<b>EE810</b>
<p><b>Presence detector 2 channels</b></p> <ul style="list-style-type: none"> <li>• Relay output light channel</li> <li>• lux level and On delay define via potentiometers</li> <li>• input slave / override</li> <li>• 230V input used with push button to toggle the light channel state or with slave in order to enlarge the detection area</li> <li>• Relay output presence channel</li> <li>• on delay presence defined via potentiometer</li> </ul>	<p><b>230V~ 50Hz</b> μ16A AC1</p> <p>230V input 50Hz</p> <p>μ2 A AC1</p>	1	<b>EE811</b>
<p><b>Presence detector 1/10V</b></p> <ul style="list-style-type: none"> <li>• Relay output used to switch ON/OFF the electronic ballast</li> <li>• 1/10V output used to control an electronic ballast or Hager dimmers EV100/EV102</li> <li>• 230V input used with push button to toggle the channel or change the setpoint or with slave in order to enlarge the detection area</li> <li>• 3 functional modes defined via potentiometers mode 1 : no dimming mode 2 : dimming with local setpoint via potentiometer mode 3 : dimming with setpoint defined via a remote push button</li> </ul>	<p><b>230V~ 50Hz</b> μ10 A AC1</p> <p>1/10V 50mA</p> <p>230V input 50Hz</p>	1	<b>EE812</b>
<p><b>Accessory</b> mounting accessory for surface mounting can be used with EE810, EE811, EE812</p>		1	<b>EE813</b>

**Description**

High performance presence detector that will be used in premises or in passage areas, where they increase comfort and reduce drastically the energy costs. Settings via potentiometers or via remote control EE807

**EE815 - presence detector**

ON/OFF  
Direct control of a light load  
Lux level and ON delay settings

**EE816 - presence detector for light regulation**

3 functional modes  
DALi/DSI bus output

Customer remote control EE808 for override operation.

Description	Characteristics	Pack qty.	Cat. ref.
-------------	-----------------	-----------	-----------

<b>Presence detector monobloc on/off</b>	switched phase 16A AC1 230V power supply: 230V AC detection angle 360°	1	<b>EE815</b>
--	---	---	--------------

<b>Presence detector monobloc DALi/DSI for lighting regulation</b>	DALi/DSI bus power supply: 230V AC detection angle 360°	1	<b>EE816</b>
--	---	---	--------------

<b>Remote control for the settings</b>	infra red remote control	1	<b>EE807</b>
--	--------------------------	---	--------------

<b>Remote control for the customer</b>	infra red remote control	1	<b>EE808</b>
--	--------------------------	---	--------------

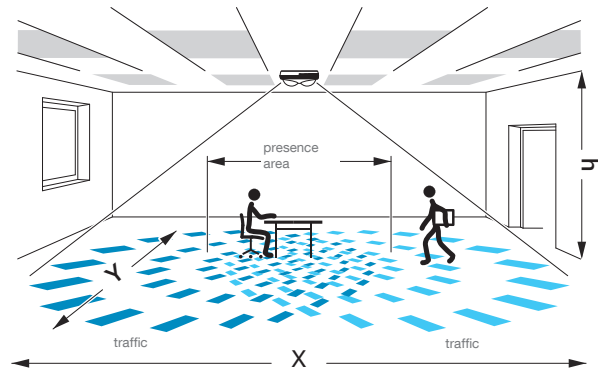
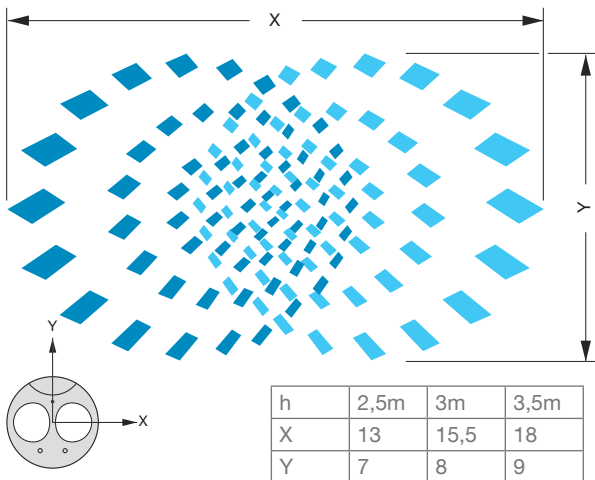


EE816

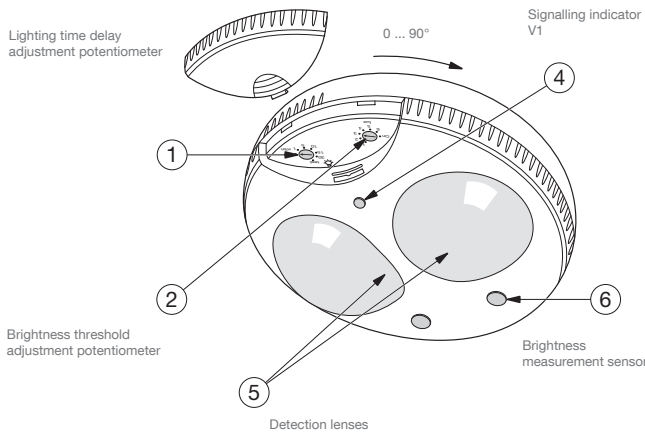


EE807

## EE810/EE811/EE812 detection areas



## Description

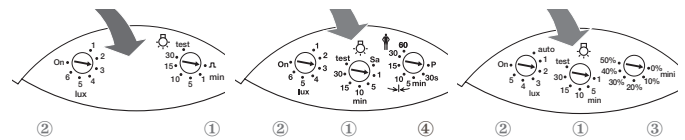


## Adjustment potentiometers

### EE810

### EE811 / TX510

### EE812 / TX511



- ① on delay ② light regulation
- ③ residual lighting ④ time delay with the interlocking (output 2)
- mode 1 :** potentiometer > 10 s = time delay with the interlocking 15 min (use : correction of the setpoint, heating, etc.)
- mode 2 :** potentiometer ≤ 10 s = time delay with the interlocking 15 s (use : ventilation/ventilation, synoptic lighting, ...)

## Technical specifications

References	EE810	EE811	EE812
<b>Type</b>	presence detector	presence detector	presence detector
	1 channel	2 channels	1/10V
<b>Supply voltage</b>	230V~ +10%/-15% / 50Hz		
<b>Settings</b>			
output brightness 1/3	potentiometer : auto (400 Lux) 5 to 1200 Lux, OFF		
output temporisation 1	potentiometer : 1 - 30 min, test, impulses (EE810)		
output temporisation 2/3		potentiometer : 30 s - 1 h	
residual brightness	-	-	Potentiometer 0-50%
<b>Breaking capacity</b>			
output 1 (lighting)	16 A AC+, incandescent lamps, halogen: 1500W flu with electronic ballast: 580W flu parrallel compensated: 290W/32µF		10A AC1
output 2 (presence)	-	2A AC1	
output 3 (brightness setting)	-	-	1-10V current : 50 mA
<b>Input command</b> 50 m max.	-	230V commutation	230V commutation / dimming
<b>LED</b>	OFF, auto, ON : movement/test		
<b>Power consumption</b>	1,2 W	1,1 W	1 W
<b>Ingress protection</b>	IP41		
<b>Connection</b>	1 - 4mm <sup>2</sup>		
<b>Temperature</b>	storage: -10°C to +60°C working: 0°C to +45°C		

## Test mode :

this mode makes it possible to validate the detection area :

- potentiometer ① in position "test"
- indicator V1 - ④ will indicate any detection by lighting for one second if the level of illumination is lower than the preset threshold. This lighting output S1 is not controlled in this mode, the time settings will remain ignored.

## Instances of lighting levels

position of potentiometer	Lux value	Application
1	5	-
2	100	corridor
3	200	corridor, WC
4	100	VDU work
5	500	offices
6	800-1200	classrooms laboratory
ON	measurement of brightness @inhibited	

regulation set point is set at 400 Lux

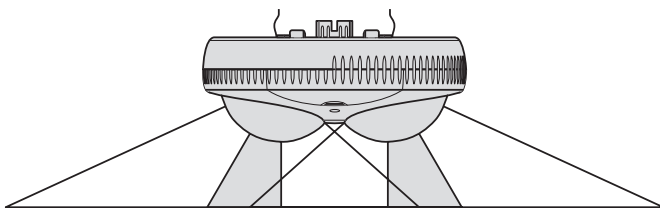
## Lighting measurement

In addition to one density of higher detection, the difference between one presence detector and a conventional detector of movements reside at the level of their principle of detection. The detector of movements will be activated in the event of detection of movements in the darkness. If the latter is transformed into lighting during the capture, the detector of movements will not extinguish however the light. One presence detector must be able to fill of such tasks and to make the difference between the natural and artificial light.

The measurement of lighting carried out since the ceiling can be different from the measured lighting, because it will be influenced by the provision of the windows, the form and the reflective properties of the walls and the pieces of furniture, etc measurement moreover will be delayed in order to avoid inopportune commutations.

## Presence detection

based on a solution patented by Hager, the optical part presence detection rests on a double lens making it possible to obtain a zone of rectangular capture of form. The head of the detector can also swivel to adjust the detection zone. The latter is subdivided in two sections equipped with a density higher than the center and a density to reduce in the direction length. in the offices, these detectors should thus be assembled directly above the places of work, resp. in the direction length for an installation in corridors (zones of circulation).



movement detection	presence detection	movement detection
13 x 7 m (installation max. high 2,5 m)		

## Detection zone

Covering a rectangular detection zone of 13 x 7m, the Hager presence detectors represent an ideal solution for the offices, classrooms, toilets, corridors, markets and garages. In the event of assembly of two detectors in order to increase the range of detection, it is then recommended to respect a zone of covering of approximately a meter. Only two detectors will be thus necessary to cover a 25m length market. A possibility of circuit Master/Slave exists for the commutation of only one group of luminaries. The presence detector principal one (Master : EE812 or EE811) measurement the lighting and the presence, then commutates and controls the electric consumers. Auxiliary presence detectors (Slave : EE810) detect only the presence and will presence detector announce this one to principal, which will carry out commutation then by taking account of the lighting. The diagrams of wiring are illustrated in the respective instructions.

## Assembly

The behavior of commutation will be determined by the passage of people in the zone of capture of the detector. In exceptional cases, an inopportune commutation can be caused by various influences. The sources of potential parasites should already be evaluated during the study of the project, resp. eliminated before the assembly.

Obstacles decreasing the range of the detector :

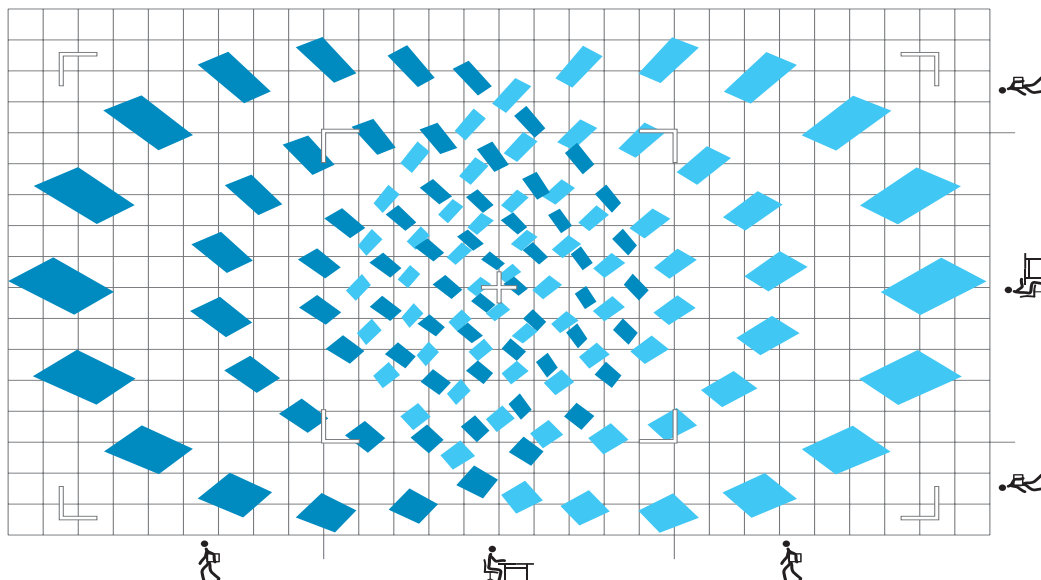
- the partition walls, plants or racks, etc can limit the range of detection.

Simulated movements :

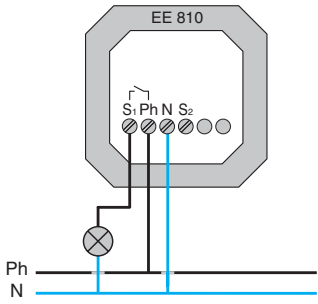
- the presence detectors capture fast modifications of temperature in the environment of the detector as being movements, for example at the time of or the stop starting of lowers with hot air, ventilators etc when the flow of air is directed directly on the lenses or of the objects near the zone of capture of the detector.
- objects being heated slowly do not have a negative influence and do not cause inopportune commutation. A side distance > 0,5m should however be respected. Proximity of the conduits of heating and the bodies of radiators.
- luminaries switching on themselves and dying out near the zone of detection can simulate a displacement (p e.g of the lamps incandescence or halogen located at a distance < 1m).
- objects moving such as mobile machines, robots, posters can also cause an inopportune detection.

Detection zone - scale 1:100

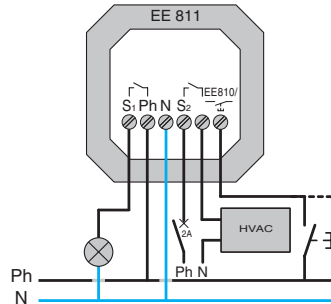
assembly height 2,5 m



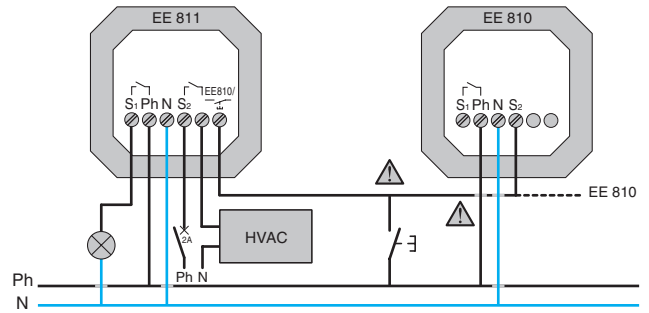
EE810



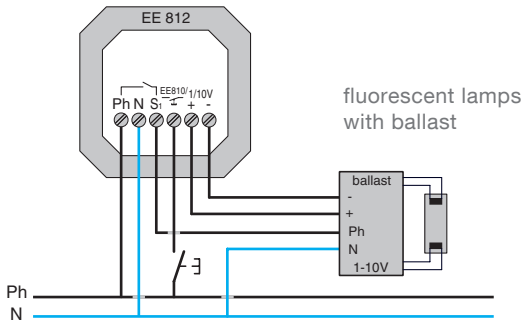
EE811



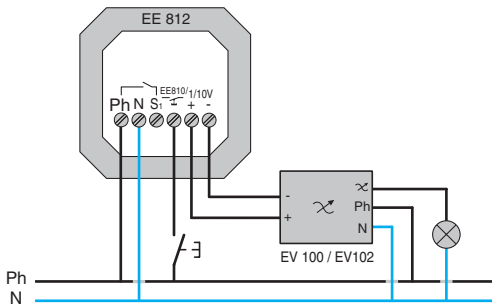
EE811 Master + EE810 Slave



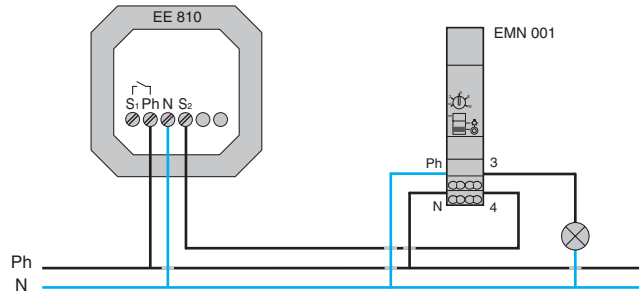
EE812 + ballast, EE812 + EV100 / EV102



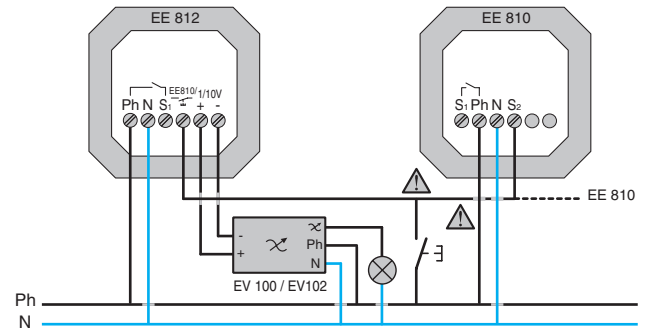
fluorescent lamps with ballast



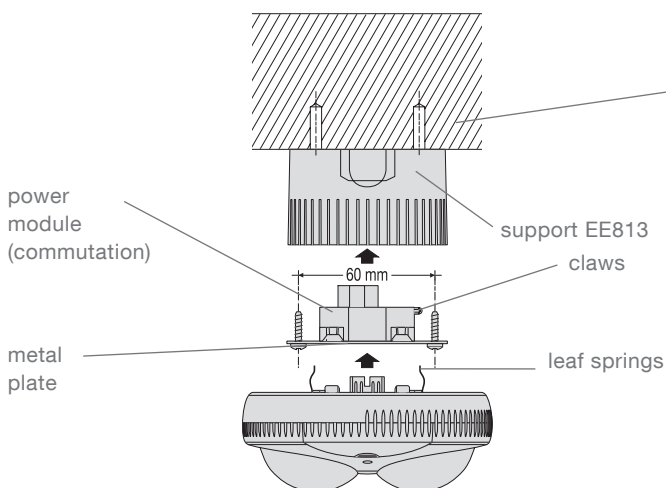
EE810 + EM001N / EM003



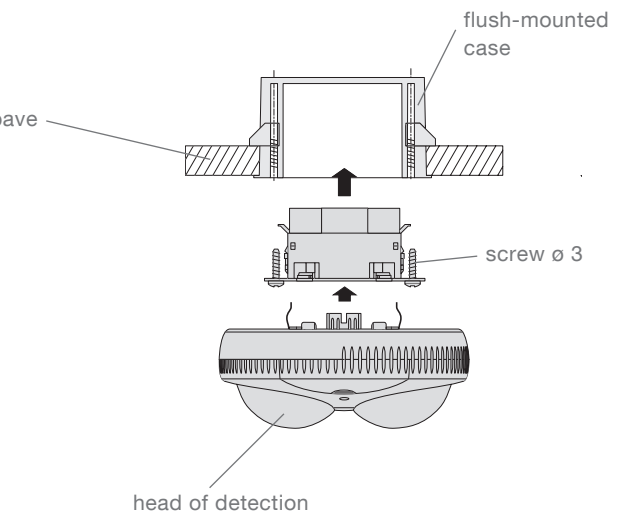
EE812 Master + EE810 Slave



Apparent assembly



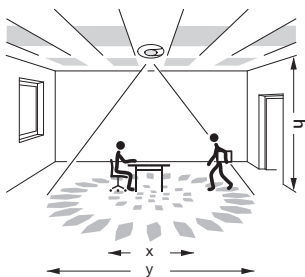
Flush-mounted assembly



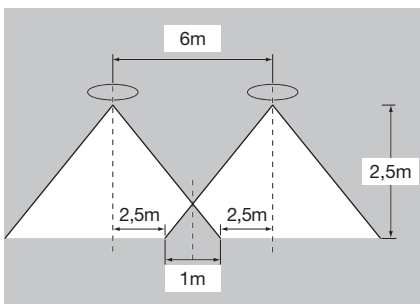
## Technical characteristics

	EE815	EE816
detection range	motion area: diameter 7m (product installed at 2,5m height) presence area: diameter 5m (product installed at 2,5m height)	
supply voltage	230 V AC +10% -15%	
frequency	50/60 Hz	
local lux threshold setting	5 to 1000 lux	3 modes available
local time setting	1 min to 1 hr	
commissioning via installer remote control	EE807 for power up, absence / presence mode, timer, active / passive cell	EE807 for power up, absence / presence mode, timer, active / passive cell
control with IR user remote control	EE808 for ON/OFF override	EE808 for ON/OFF override and dimming up/down
output	16A AC1 relay output (cut live): • 2300W incandescent or 230V halogen: > 26000 cycles • 1500W VLV halogen lamps with ferromagnetic or electronic transformer: > 35000 cycles • 1000W / 130 µF parallel compensated fluo tubes: > 50000 cycles • 23 x 23W fluo-compact with electronic ballast: > 20000 cycles	14V / 50mA (for a DALI bus with 24 ballasts) • No isolation between the mains and the DALI bus !
push button input	phase input for absence / presence detection (semi-automatic / automatic mode) same phase as power supply	to dim up / down and absence / presence detection (semi-automatic / automatic mode) same phase as power supply
terminals	for 1,5mm <sup>2</sup> rigid / flexible wires	
power dissipation	300mW	60mW
isolation class	II	
protection	IP41 / IK03	
operating temperature	-10°C to +45°C	
storage temperature	-20°C to +60°C	
standards	IEC 60669-1, IEC 60669-2-1	

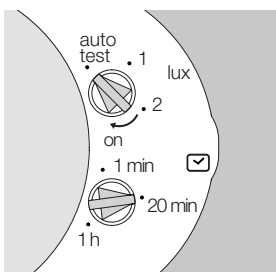
### Detection areas



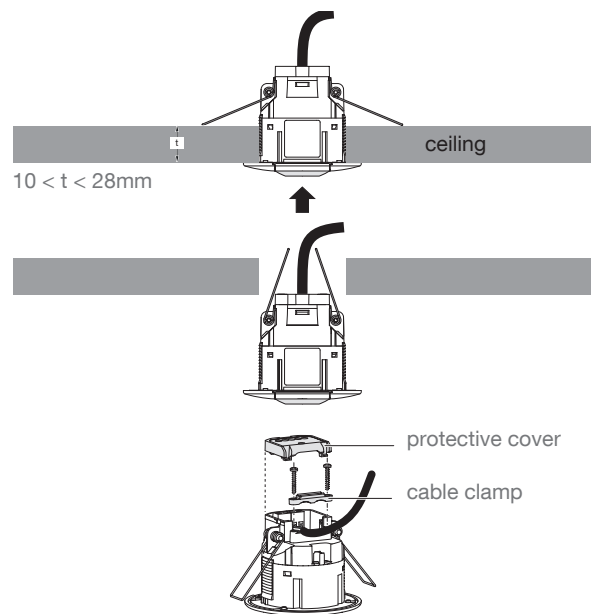
h	2,5m	3m	3,5m
x	5m	5m	5m
y	7m	8m	9m



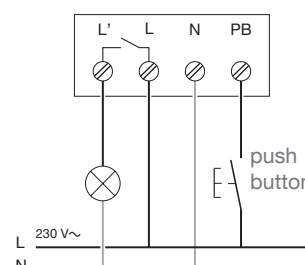
### Settings EE815 / EE816



### Mounting



### Wiring diagram EE815



### Wiring diagram EE816

