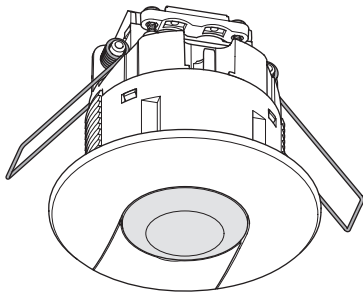


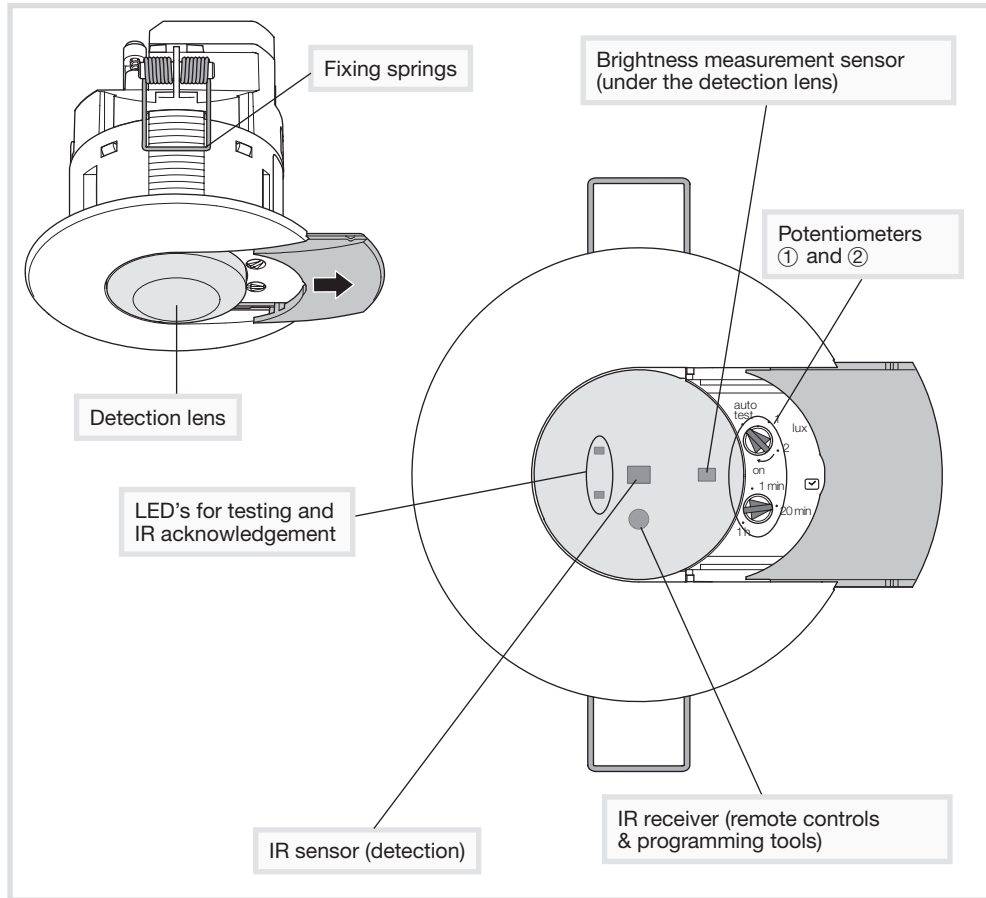
EN

PIR Occupancy Sensors

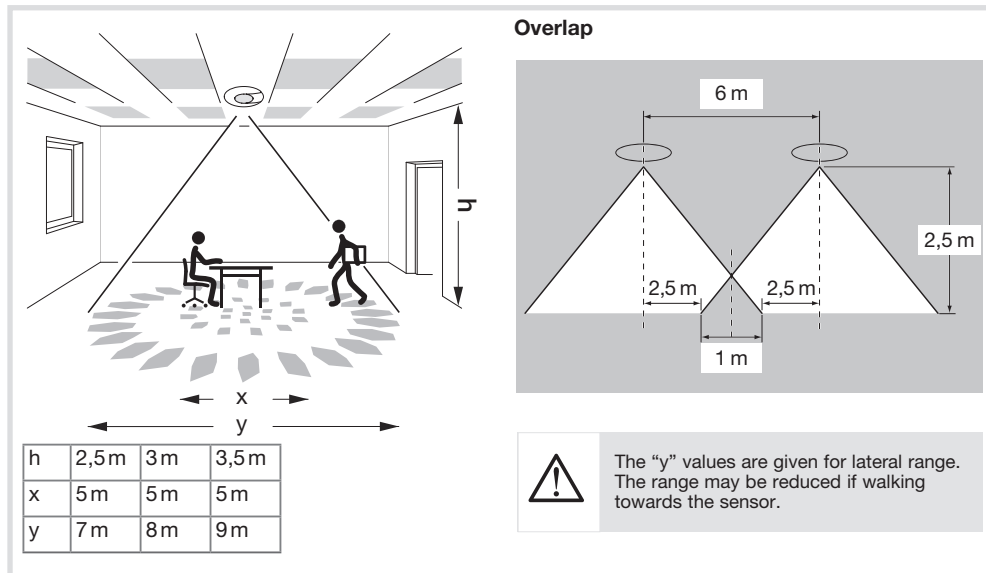


EEK510B, EEK513W
EEK51.P

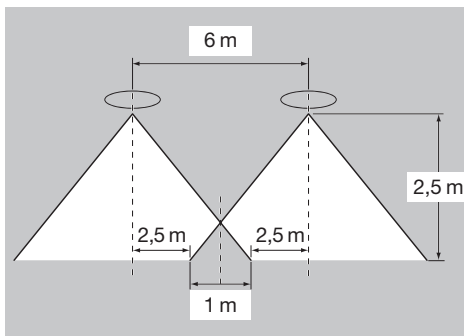
Description



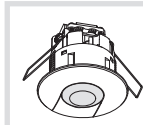
Detection areas



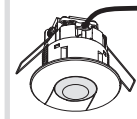
Overlap



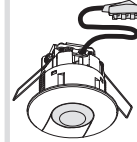
The "y" values are given for lateral range. The range may be reduced if walking towards the sensor.



Occupancy Sensors
standalone
EEK510B

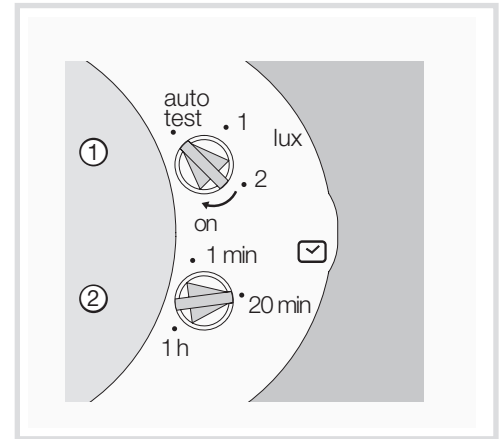


Occupancy Sensors
with pre-wired lead
EEK513W: 3m



Occupancy Sensors
with pre-wired lead
and klik.system plug
EEK513P: 3m
EEK515P: 5m

Settings



Instances of lighting levels

Position of potentiometer	Lux value approximate*	Application
auto test	preset (≈ 400 Lux)	
1	200	Corridor
>1 ... 2 <	> 200 ... 400 <	
2	400	Offices
>2 ... On <	> 400 ... 1000 <	
On	1000	Offices

*The light measurement accuracy (Lux) is affected by the environment (furniture, ground, walls...). If necessary, the level has to be adjusted by potentiometer or programming tool.

Programming tool for settings

The installer programming tool EEK001 can be used to set the following features if the potentiometer is set on "auto test":

- Lux levels (- +)
- Time ()
- Absence/presence detection ()
- Power up behaviour ()
- Active/passive cell ()



Override remote control

The remote control EEK002 allows the switching ON or OFF of the light (on off). The EEK002 allows the same functionality as the wallswitch.





This device must be installed by a suitably qualified electrician according to the installation's standards.

Usable throughout Europe  and in Switzerland

Hager Controls hereby declares that the PIR Occupancy Sensors device complies with the essential requirements and other relevant provisions of Directive 2014/53/EU.

The CE declaration is available on the: www.hagergroup.com

Product description and operating principles

Occupancy sensors EEK are designed to detect low level movements (e.g. person sitting at a desk). Different models are available:

- without lead: EEK510B for standalone and BESA mounting
- with pre-wired lead (3m): EEK513W to be interfaced with the KLDS marshalling boxes
- with pre-wired lead (3m or 5m) and klik.system plug to be interfaced with the KLMB marshalling boxes: EEK513P, EEK515P.

Detection is by means of a pyroelectric sensor located under the detection lens.

The occupancy sensor measures the brightness in the room on a continuous basis and compares it to the level preset on the potentiometer (or by means of the programming tool EEK001).

Settings

The Lux threshold and time out period can be set with the potentiometers or by using the installer programming tool (EEK001).

Test Mode - Walk test

This mode makes it possible to validate the detection area. To select this mode, set the potentiometer ① to the position "auto test". The green or red LED behind the lens is on for 2 seconds after detection. The red LED indicates that the light level measured is lower than current setting. If the green LED is on, the light level measured is higher than current setting.

There is a time out of 2 minutes which is reactivated after each detection. The output is also switched during 2s. after each detection.

It is also possible to use the programming tool EEK001 to set the detector in test mode.

Functional modes

The detector has 2 different modes.

- Presence detection (automatic).
- Absence detection (semi-automatic).

The power up and cell operation can be set for each mode. A normally open retractive switch connected to the product makes it possible to reverse the lighting output state.

This state is maintained for the time period set by the potentiometer ② or the programming tool EEK001.

Presence detection (automatic mode)

In this mode the light is controlled by motion in the detection area and ambient light levels.

If presence is detected whilst the light levels are below the required Lux level, the sensor is activated and keeps the light on whilst there is still occupancy and for the time out period afterwards. Once the sensor has deactivated the lights, it will require a new occupancy whilst the ambient light levels are below the required Lux levels to activate the lights again. This mode can be changed via the IR remote control EEK001 (default mode is presence detection: automatic).

Absence detection (semi automatic mode)

The sensor needs to be activated by a normally open retractive switch or a user remote control input. Once the sensor is activated, it will hold the lights on whilst there is still occupancy and for the time out period afterwards. Once the sensor has deactivated the lights, it will require another input from the wallswitch or the programming tool to switch the lights on.

Power Up

A parameter of the detector allows the choice of state for the lighting after power up (mains return). During warm up phase, the green LED blinks. In the Power up ON state, the lighting will automatically be energised when mains power is initially supplied or returned to the sensor. In the Power up OFF state, the lighting will not be energised and the sensor will not operate during warm up period. This parameter is modified using the installer programming tool EEK001.

POWER UP state:

- ON: the light is immediately switched on for 30s after power up. In case of detection, the light (in automatic mode) remains on during the time delay; otherwise the light is switched off.
- OFF: the detector switches to the selected mode after warm up.

Active/passive cell

Active cell

The photocell will inhibit the output from the sensor if the ambient light level is sufficient.

If the sensor detects occupancy whilst the ambient light level is below the required Lux level, the lights will be activated. However if the ambient light level increases to a value where it is above the required Lux level during a certain time, the sensor will detect it and switch off the light.

Passive cell

The photocell will inhibit the output from the sensor if at the time of detection the ambient light level is sufficient. In case of detection, if the ambient light level increases, the photocell will not turn off the light.

Factory settings	
Luminosity threshold	400 lux
Lighting time	20 min.
Mode	Presence
Power Up	OFF
Active cell (Luminosity Cell)	ON

Technical characteristics

Electrical characteristics

Supply voltage	230V~ +10/-15% 50/60Hz 240V~ +/-6% 50/60Hz
Consumption with no load	2,4 VA/270 mW
Upstream protection	circuit breaker 16 A

Functional characteristics

Lighting output operating time	1 min. ➔ 1 h
Brightness level	5 ➔ 1000 Lux
Recommended installation height	2,5 ➔ 3,5 m
Detection range	Ø 7 m (installed product height: 2.5 m)

Fixing accessories

Screws (No 8), Protective cover
Products can be connected in parallel.

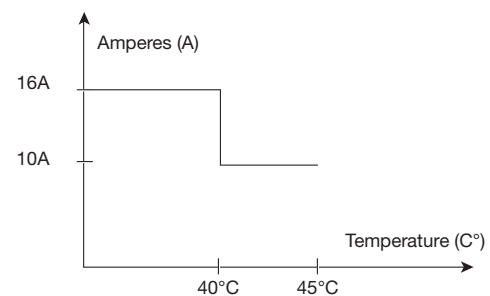
Hole size required 60 mm

Environment

Storage temperature	-20°C ➔ +60°C
Class of insulation	II
IK 03	
Index of protection	IP41
Fire resistance	650°C
Connection capacity (EEK510B)	0.5 mm ² to 1.5 mm ² flexible, 0.5 mm ² to 1.5 mm ² rigid

Operating altitude 2000m

Operating temperature:





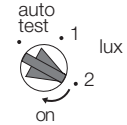

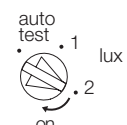
Correct Disposal of This product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems).

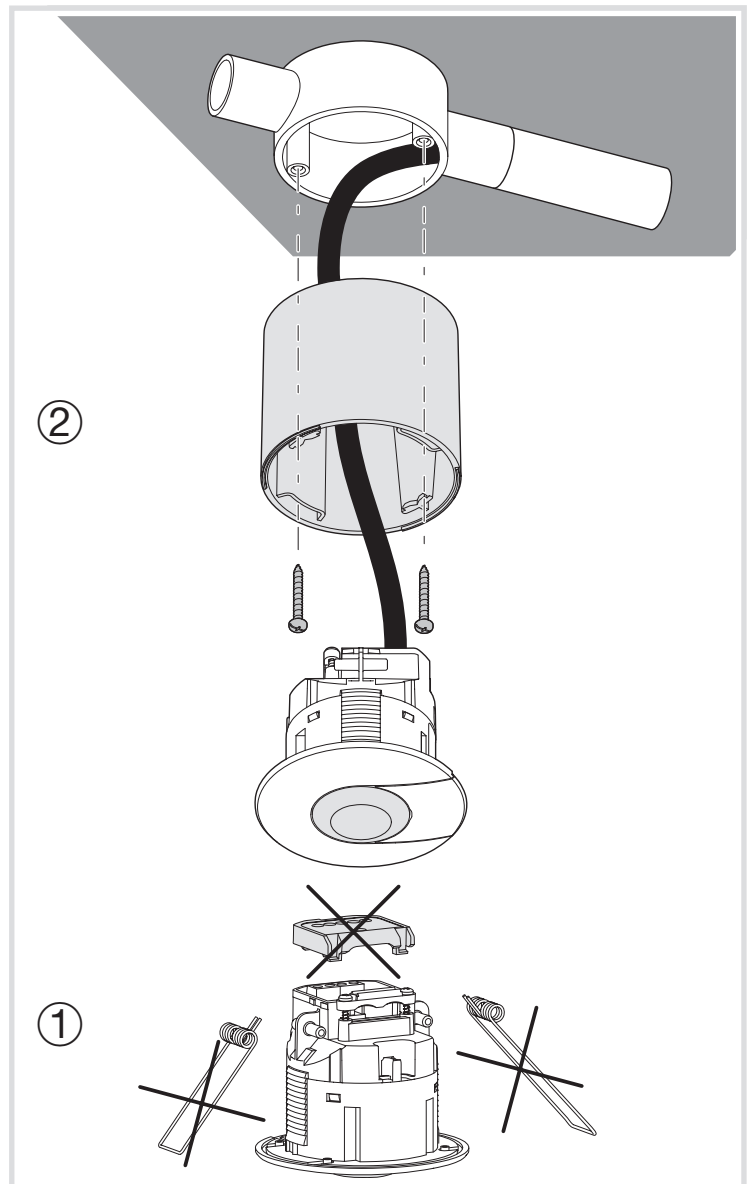
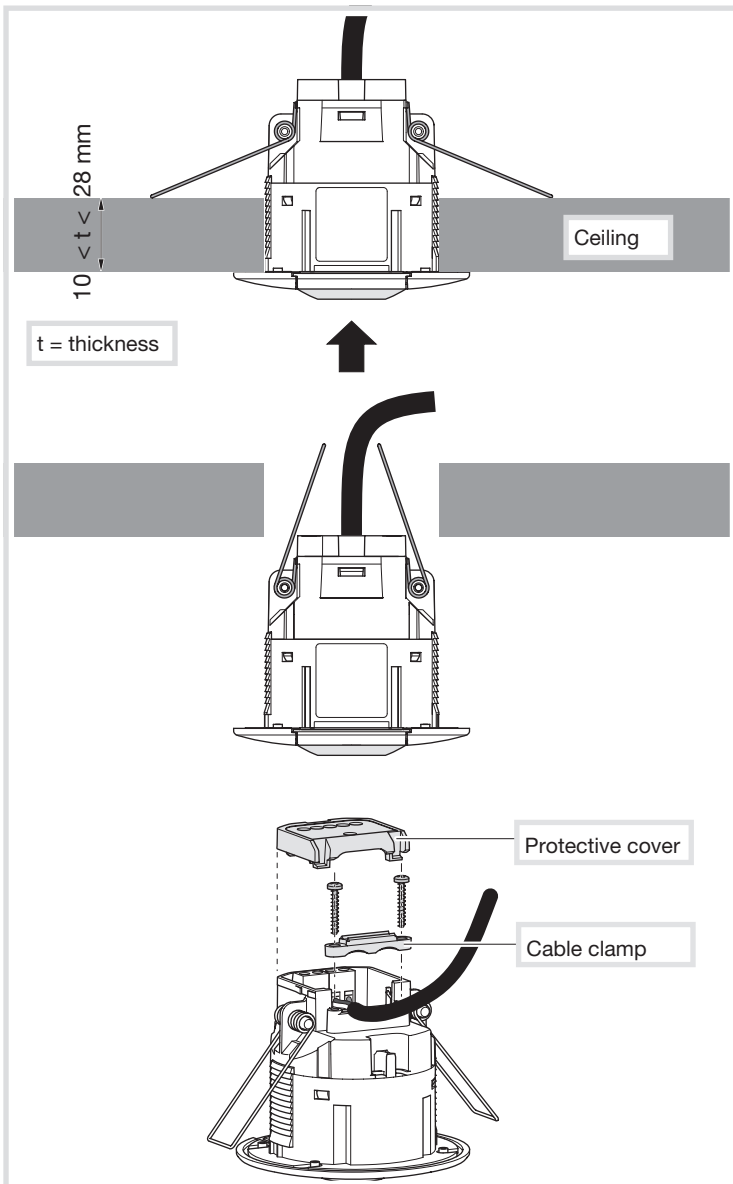
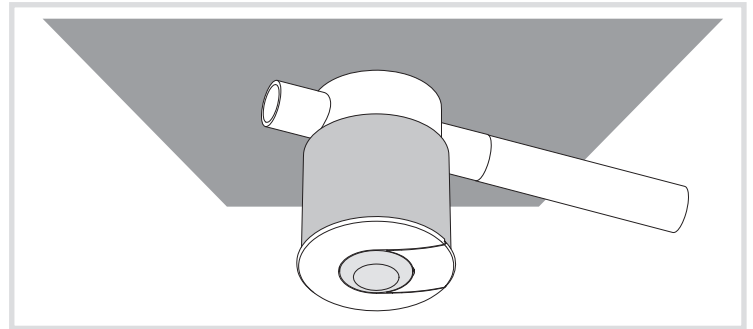
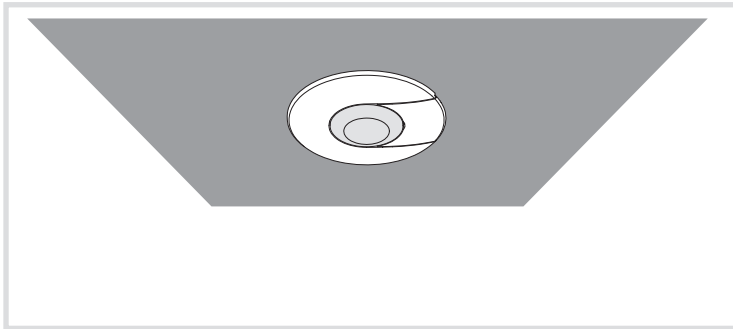
This marking shown on the product or its literature indicates that it should not be disposed with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes of disposal.

Action	Settings	Potentiometers
Use Auto settings (factory) or set by the programming tool to switch the light automatically for a defined time.	<p>Auto Settings Put the Lux potentiometer on "auto test". The settings are predefined: Lux = 400, time = 20 min.  test mode for 2 min.</p> <p>Programming tool settings EEK001 (manual settings inhibited). </p>	
Automatically switch on the light for a defined time.	<p>Installer settings</p>	
Test and validate the detection zone.	<p>Test mode Move the potentiometer 1 to "auto test". On this position, the programming tool EEK001 can be used.</p>	

Mounting EEK510B



Ceiling mounting

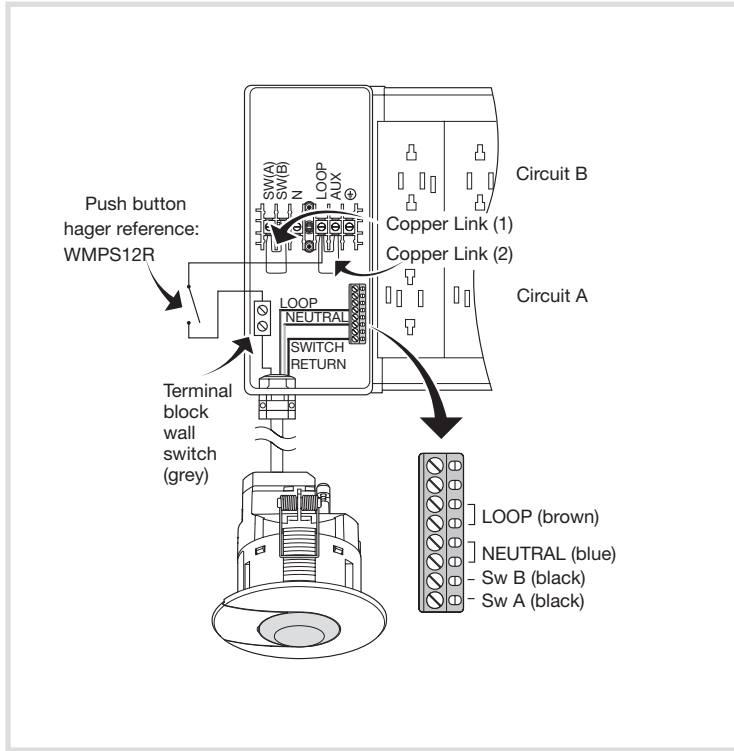
1. Cut out a 60 - 63 mm diameter hole using a hole saw.
2. Fix the detector by pushing both springs upward then insert them into the hole.
3. Wire the detector according to the recommended connection diagram or plug into the klik.system marshalling box.
4. Mount the protective cover over the terminals and screw the cable clamp.
5. Set potentiometers according to the desired values.

Surface mounting (with accessory EEK005)

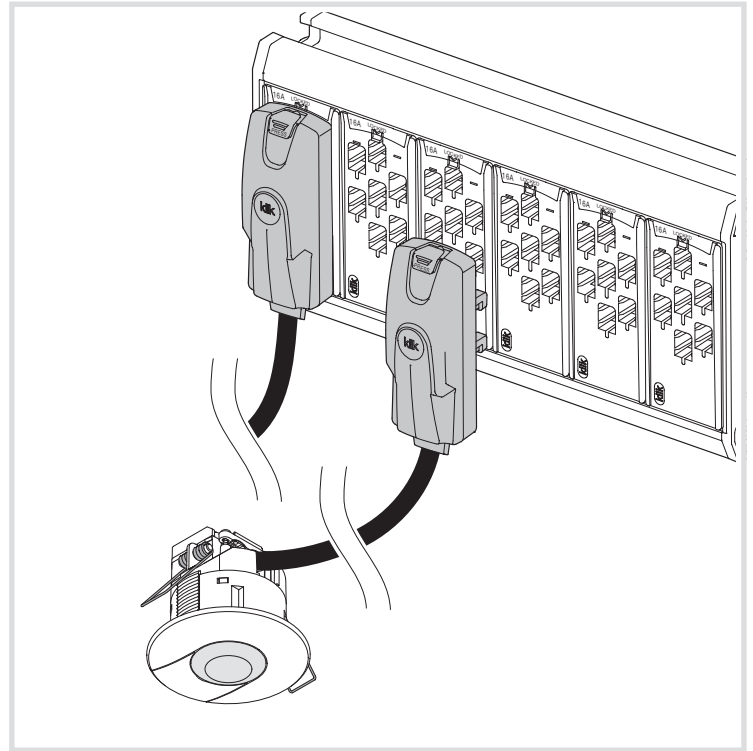
1. Mount the BESA Box.
2. Screw the accessory on the BESA Box.
3. Remove the protective cover and the springs from the detector.
4. Wire the detector according to the recommended connection diagram.
5. Push and turn the detector to lock it into the accessory.
6. Open the slider to set the potentiometers according to the desired values.

Connection diagrams

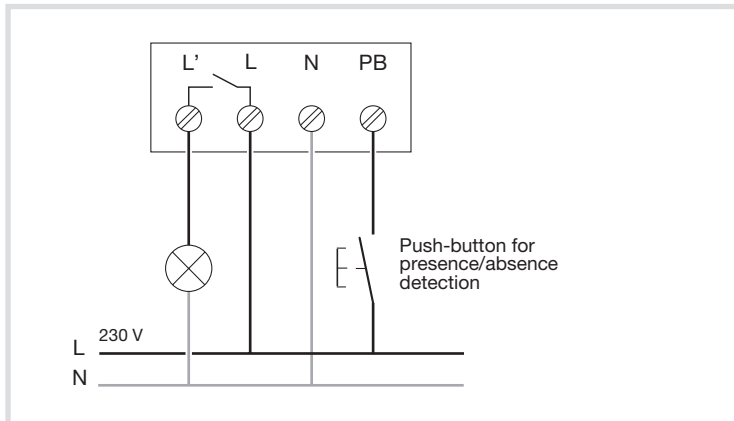
With klik KLDS marshalling boxes (EEK513W)



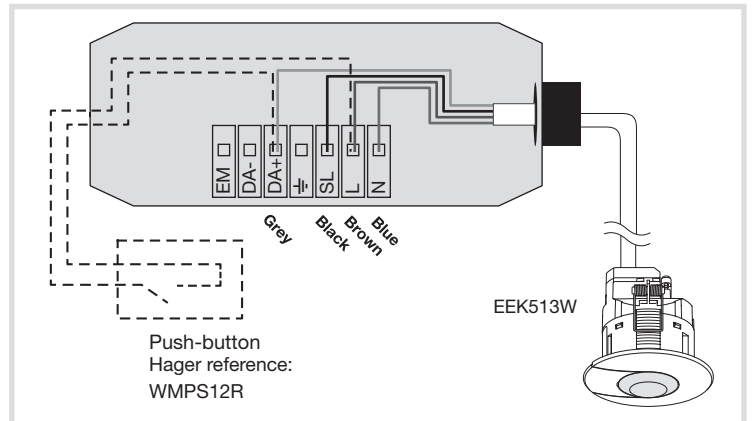
With klik.system KLMB marshalling boxes (EEK51.P)



Direct wiring to a luminaire (EEK510B)



Connection of EEK513W/EEK515W to KLMB Marshalling Box



Implementation requirements

Requirements for optimal detection

- Recommended installation distance from ground: 2.5m ➔ 3.5m.
- In offices, the detector must be installed above the workstation.
- When associating several detectors, detection areas shall overlap.
- Keep away from environmental disturbances (heat sources, partitions, houseplants, ventilation...).

Troubleshooting

- False switching of lighting point: check that the detector is not exposed directly to a heat source or a lighting source or is not placed above a ventilation grid...
- The range of the detector is too short: check whether the distance of the device from the ground is sufficient and its location is optimal.

Lighting loads		L' 16A AC1
Led load		20x20W
	Incandescent, Halogen 230V	2300W
	Halogen VLV via ferromagnetic or electronic transformer	1500W
	Fluocompact with electronic ballasts	23x23W
	Parallel compensated fluorescent tubes	1000W
	Fluorescent via electronic ballasts	1000W