

Operating instructions

CAUTION !

Have all work involving the 230V mains supply carried out by a qualified electrician ! Before starting disconnect the mains !
The device may only be opened and installed according to the circuit diagram on the device or these instructions by a qualified electrician. The existing safety regulations must be observed.

1. Function

The detector is an automatic switching device, which operates on the principle of infrared technology. It continuously measures the ambient temperature and the ambient light level and compares it with the infrared radiation emitted from any moving form which enters its detection zone. Any differential results in automatic switching, provided the actual light level is below that contrary to other motion detectors which reacts to moving heat sources only, with the detector you will not be left in the dark unless there is no more motion because through a combination with an acoustic sensor it reacts additionally to sound. The sensitivity of the detector has been designed to detect the human form including of course children and it is therefore possible that some animals, principally large dogs, will also switch the system. This is unavoidable but, in most instances, offers an advantage, as unwanted animals are frightened away by sudden light. As long as motions are detected the connected lights remain switched on. When there is no more motion the light is switched off after the preadjusted time. 3 sec only after switching off detector can be activated again by motions. The detector is equipped with a semiballsize-fresnel lens which gives a semicircular detection field (horizontally appr. 180°, vertically appr. 60°). At a recommend fixing height of 1.2 -2.2 m and to a motion transversally to the lens segments the radius of the detection field is appr. 8 m.

2. Important

- Read all instructions prior to installation.
- A qualified electrician must install this product.
- Mains voltage must be between 220-240 VAC, 50 Hz.

Acoustic function

As long as the acoustic sensor receives sound e.g. by speech or music the detector remains switched-on even when there are no more motions - the light stays on. Every noise and every motion retrigger the unit again for the period of preselected time. Unless there is no more motion and no more noise the detector switches the light off automatically. Immediately thereafter the detector can be switched on again e.g. by calling when this has been done within a period of 8 sec. However if the detector has not been activated for a longer

period, then the unit can be retriggered only by a motion. This combination protects the unit to be switched on by unwanted noises.

3. Prior to installation

Before installation by all means the following aspects have to be considered:

- The detector is designed for the installation in standard switch flushmount boxes.
- The recommended fixing height is 1.2 to 2.2 m.
- Not more than 5 detectors can be switched into parallel, in order to avoid potential fault switchings.
- The connected load must not exceed the following values:
Detector 180° (relay version)
Incandescent/halogen lamps only 40-300 W max. 180/R (Relay version):
Ohmic load 2300W, 0 A max., $\cos(\varphi)=1$
Inductive load 50VA, 5 A max., $\cos(\varphi)=0,5$
EB, e.g. 25 x 36 W, (140 μ F max)
- There must be no obstacles in the view of the motion detector, since infrared rays cannot penetrate solid materials.
- The detector is an automatic light switch which cannot be used for intrusion applications.

Selection of fixing device

The optical system of the detector is designed for fixing heights of 1.2 to 2.2 m. A typical application is the replacement of a wallswitch in appr. .2 m height or for room surveillance in 2.2 m height. Additionally to the horizontal detection plane the detector has a vertical detection plane which detects also movements underneath the motion detector. The maximum range is 8 m, independently of fixing height. The range cannot be adjusted electronically or manually, instead unwanted detection areas have to be eliminated by adhesive tape that must be put on the corresponding lens segments.

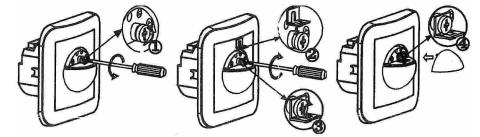
Frontal approach

To get a satisfying functioning of the occupancy detector the following typical property of infrared motion detectors must be considered: Occupancy detectors are most sensitive when motions are across the detection zones. In case of a frontal approach the sensitivity and hence the range is considerably reduced.

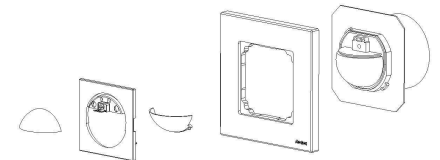
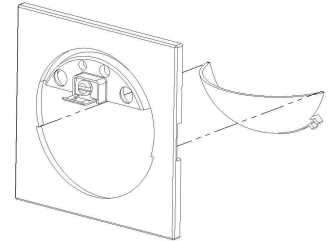
4. Installation

The mains to be switched off!

The motion detector fits into a standard flushmounting box. The location height on the wall should be between 1.20 m and 2.20m. Prior to mounting the semiballsize cover located above the lens to be removed with a small screwdriver and also the blind. For the combination with switches of leading manufacturers the enclosed additional blinds can be used.



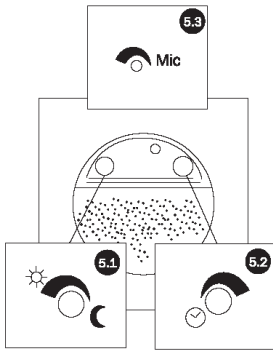
After connection of the wires accordingly to the schematics (pt. 5) the sensor part to be fixed by means of 4 screws.



Mains to be switched on !
After an initial self test period of appr. 60 sec the detector is ready for use.

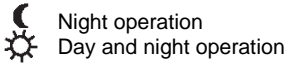
PRESENCE DETECTOR

5. Adjustment of twilight-switch and acoustic sensor



5.1. Lux level setting (photocell)

The lux level can be set between 5 and 1000 Lux.



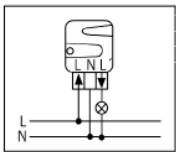
5.2. Delay time

The delay time can be adjusted from approx. 4 sec. to 10 min. When setting into operation it is recommended to use the shortest timesetting for convenient testing of range and noise sensitivity (5.3).

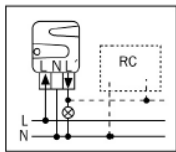
5.3 Noise sensitivity

Fully anticlockwise means highest sensitivity. Fully clockwise means noisedetector switched off. Intermediate values to be adjusted accordingly to local conditions. Functioning of the noisedetector will be indicated by a LED located behind the lens. Lighting of the LED means the noisedetector is functioning and triggers the timer again.

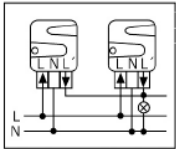
6. Wiring diagrams



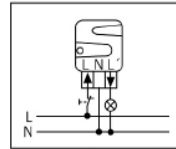
Automático /
Sustitución de un
interruptor manual



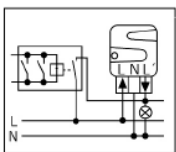
Protección mediante
batería R-C opcional



Conexión paralelo de
máx. 5 LUXOMAT®
M+S/3H



En combinación con
pulsador manual
(cerrado en reposo)

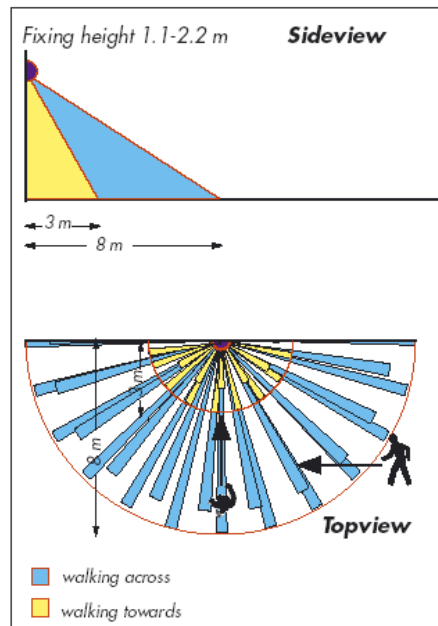


En combinación con
minutero de escalera

7. Technical data

- Supply voltage 230 VAC +6% / -10%
- Detection angle 180° horizontally
60° vertically
- Switching power:
 - Ohmic load 2.300W, 10 A max., $\cos(\varphi)=1$
 - Inductive load 1.150VA, 5 A max., $\cos(\varphi)=0,5$
 - Halogen lamps
 - EVG eg. 25 x 36 W(140µF max.)
- Range (1,2 -2,2 mts. mountingheight)
max. 8mts. For lateral walking
approx. 3m for frontal walking
- Timesettings ca.4 sec.-10 min.
- Photo electric switch ca.5-1000 Lux
- Depth 36 mm
- Protection/class IP20,II
- Cabinet material PC+ASA

8. Detection area



9. Electromagnetic compliance (EMV)

When positioned within the direct vicinity of high-powered radio transmitting equipment (e.g. portable phones, H.A.M., taxi, police, fire, ambulance, radio operators etc.) false activation switching may be experienced. However, this influence will not damage the sensor electronics.

The automatic switching of the sensor will be switched off as soon as the source of radio interference stops transmitting.

10. Trouble shooting - Practical hints

1. Lamp does not light up

- Tungsten halogen lamp defective
Replace tungsten halogen lamp
- No mains connection
Check connection by qualified electrician

- Incorrect setting of lux level
Correct setting of lux level
- Unit mounted too high
Mount at recommended height
- PIR detector lens obstructed by dirt or other objects
Clean lens or remove objects
- Main fuse defective
Check or replace by qualified electrician

2. Delayed lamp activation

- Mounted too high
Mount at height stated in specification (1.2 to 2.2m)
- Direct line of approach
Re-direct walking so that the approach is not Frontally

3. Lamp stays on continuously

- Continual thermal activity detected ie. Extractor fan, central heating ducts
Check for any activity which could cause unit detection to be maintained
- Delay time set too high
Reduce time delay
- Check ambient noiselevel, if necessary switch off noisesources*

4. Limitation of range (not up to the minimum specification)

- Mounted too high
Correct mounting height
- Temperature difference between ambient temperature and source of heat too small
No improvement possible
- Direction of movement aimed directly at lens of motion detector
Move laterally to detector