Motion detector 70° surface-mounted
Order-No. : 143 99 09
Motion detector 70° surface-mounted
Order-No. : 143 99 05

Operation- and
Assembly Instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Danger of electric shock. Device is not suitable for disconnection from supply voltage.

Danger of electric shock. Always disconnect before carrying out work on the devise or load. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.

Do not press on the sensor window. Device can be damaged.

The device is not suitable for use as a burglar alarm or other alarm.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

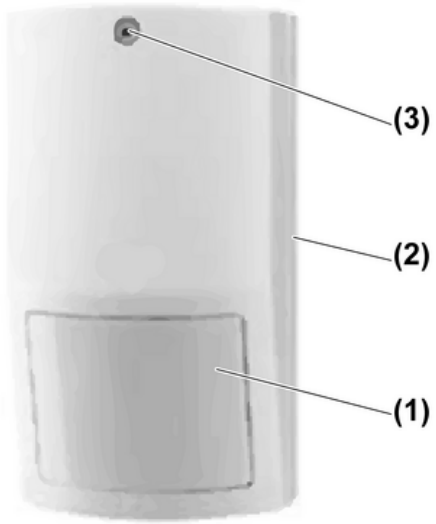

Figure 1

(1) Sensor window
(2) Rear device panel
(3) Central screw

3 Function

Intended use

- Automatic switching of lighting depending on the heat motion and ambient brightness.
- Surface-mounting in indoor and outdoor areas

Product characteristics

- Variable installation position
- Protected against spray water
- Follow-up time and brightness value settable
- Test operation for checking the detection area
- Range can be set in three levels
- Parallel connection of multiple motion detectors possible
- Manual switch-on possible with installation button, NC contact

Automatic operation

The controller detects heat motions of people, animals and objects.

- The light is switched on if a person enters the detection area and the brightness is below the set threshold.
- The light is switched off if no more movement is detected in the detection area and the follow-up time has elapsed.

In order to avoid light oscillations due to the cooling of a bulb, the controller does not evaluate any signals for approx. 3 seconds after switch-off.

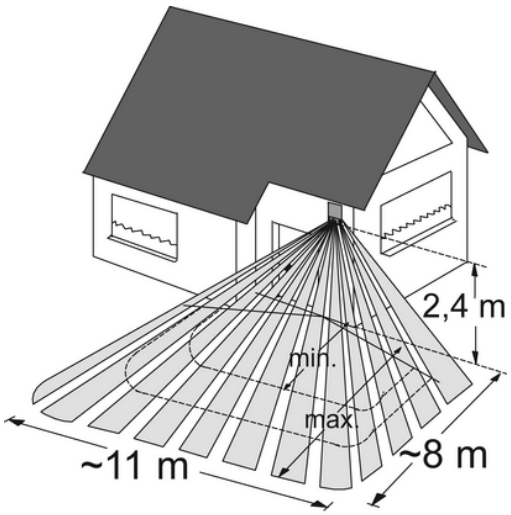

Figure 2: Detection area, motion detector

4 Operation

Switching the light on manually

Optional installation button, NC contact is installed (connect the motion detector).

- Press the installation button for at least 1 second.

  Light is switched on independently of the brightness for the set follow-up time. When motions are detected, the delay time is restarted.

5 Information for electrically skilled persons

5.1 Fitting and electrical connection

DANGER!
Electrical shock when live parts are touched.
Electrical shocks can be fatal.
Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

CAUTION!
Heat radiation too high.
Destruction of the sensors.
Align the device so that no direct sunshine hits the sensor window.
Do not place the device in the sun.

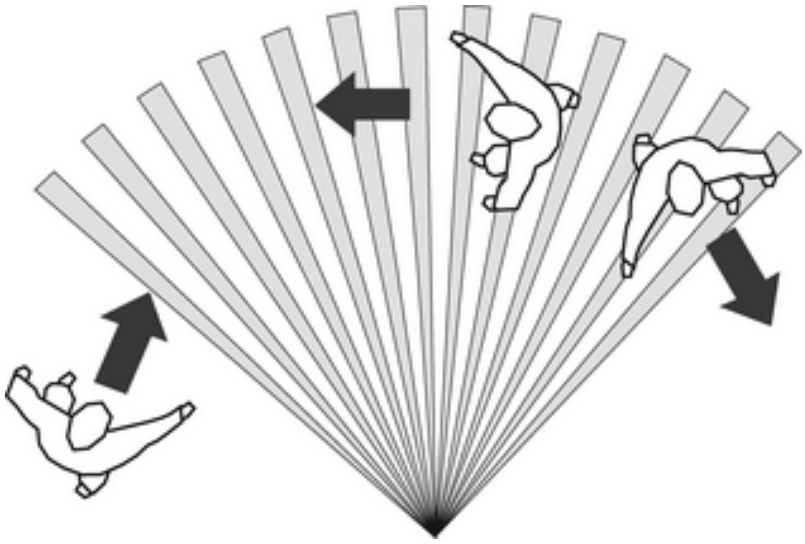

Figure 3: Installation laterally to the direction of movement

Selecting the installation location

At an installation height of 2.4 m (Figure 2), the optimum range of the motion detector is achieved transversely to the direction of movement (Figure 3).

The range is reduced in the case of:
- The land slopes upwards away from the motion detector
- Internal housing in middle or lower lock (Figure 6)
- Low temperature difference
- Installation height less than 2.4 m
- Effects of weather, e.g. rain, fog or snow

The range is increased in the case of:
- The land slopes downwards away from the motion detector
- High temperature difference
- Installation height greater than 2.4 m

- Select a vibration-free installation location; vibrations can lead to unwanted switching.
- Avoid interference sources in the detection area. Interference sources, e.g. heaters, ventilation, air conditioners, or cooling light bulbs can lead to unwanted switching.
- Take direction of motion into account.
- Determine installation height.

i To achieve a rapid response from the motion detector on leaving the building, install the device at a height of less than 2.4 m, centrally above the door.

Installing the motion detector

- Slacken central screw (3) (Figure 1).
- Remove the housing cover.

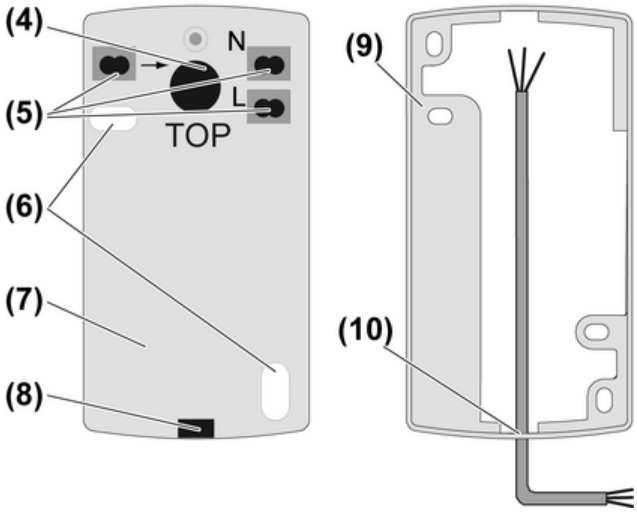

Figure 4: Rear housing panel and installation frame

i To prevent the ingress of moisture, we recommend inserting the cables from below (10).

- When the cables enter below, use an installation frame (9). Insert the rear housing panel (7) into the installation frame.
- Do not use an installation frame for surface cable entry from the side or from above, but instead penetrate one of the the thinner areas of the rear housing panel.

i Do not remove the water-permeable closure of the condensation water hole (8).

- Run the connection cable into the connection compartment through a rubber sleeve (4).
- Fasten the rear housing panel on the installation location with two screws (6) in such a way that the condensation water hole is at the bottom.

Configuring the motion detector

On the rear side of the housing cover of the motion detector, there is one adjuster each for the follow-up time (11) and the brightness threshold (12) (Figure 5).

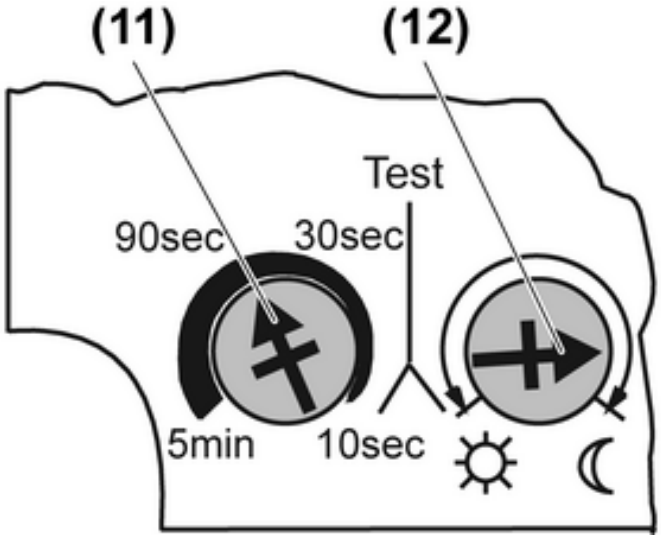

Figure 5: Setting the follow-up time and the brightness threshold

The range of the motion detector can be set in three stages by sliding the internal housing (13) (Figure 6).

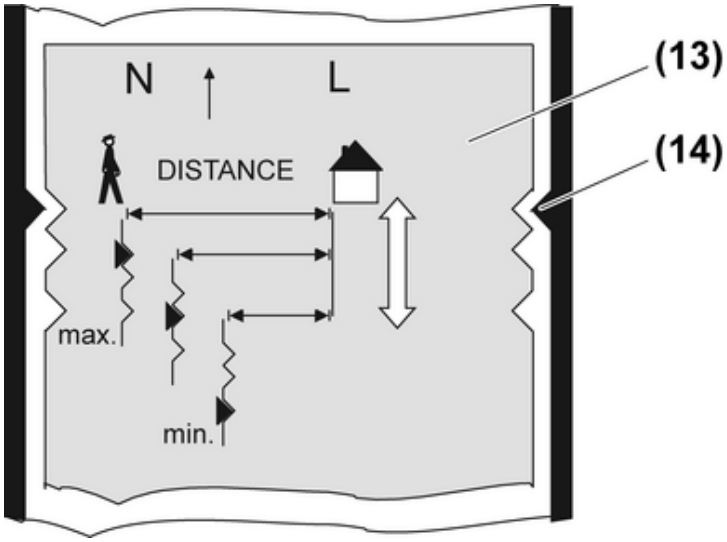

Figure 6: Setting the range

- Set the required follow-up time using the adjuster (11).
- Set the required brightness threshold with the adjuster (12). The ☼ icon stands for Day mode, i.e. switching independent of brightness, and the ☾ icon for minimum brightness.

i Should the device need to switch at the start of twilight, then set the adjuster (12) as shown in (Figure 5).

- Set the range by sliding the internal housing (Figure 6).

Top lock (14)	Maximum range
Centre lock (14)	Medium range
Bottom lock (14)	Minimum range

- Measure the detection area by walking it. To do this, switch the motion detector to test mode. Set the follow-up time to 10 seconds and the brightness value to ☼.

Connecting the controller

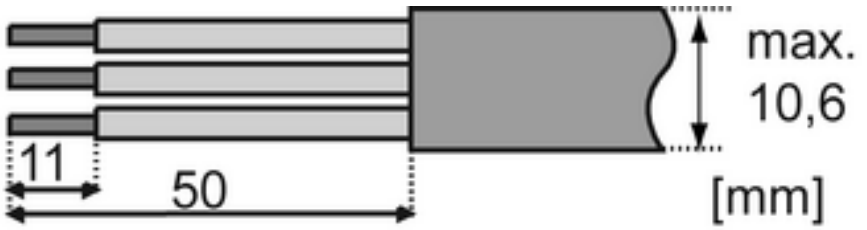

Figure 7: Stripping the connection cable

The connection cables are equipped with screwless terminals. For secure contacting, connect only single-wire cables with a cross-section of maximum 2.5 mm². Observe the stripping lengths for external cable jacketing and basic insulation (Figure 7).

blue, BU	**N**, neutral conductor
brown, BN	↓ Lamp cable
black, BK	**L**, conductor

- Insert the screwless terminals for fixing into the holders (5) of the housing cover (Figure 4).

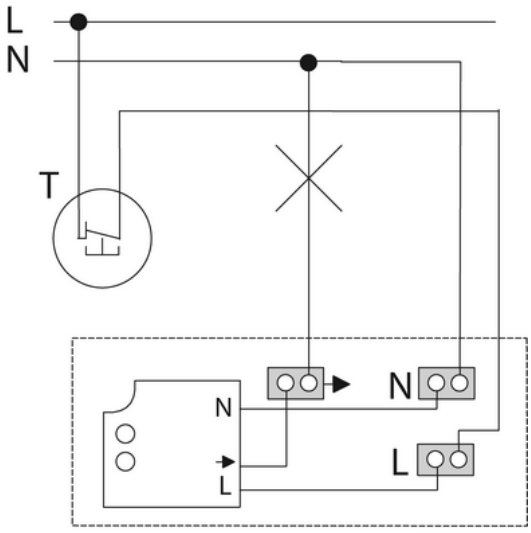

Figure 8: Motion detector connection diagram

- Connect controller and optional installation button T, NC contact, according to connection diagram (Figure 8).
- If multiple motion detectors are to switch a shared load, connect the motion detectors in parallel.

i Parallel switching of multiple motion detectors does not increase maximum connected load.

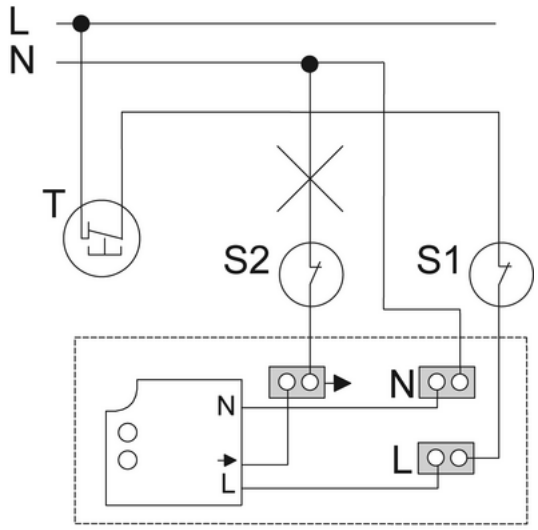

Figure 9: Connection diagram, switching off motion detectors

The motion detector can be switched off using installation switch S1 or S2 (Figure 9). Switching installation switch S1 on again triggers switch-on for the follow-up time. Installation S2 does not do this.

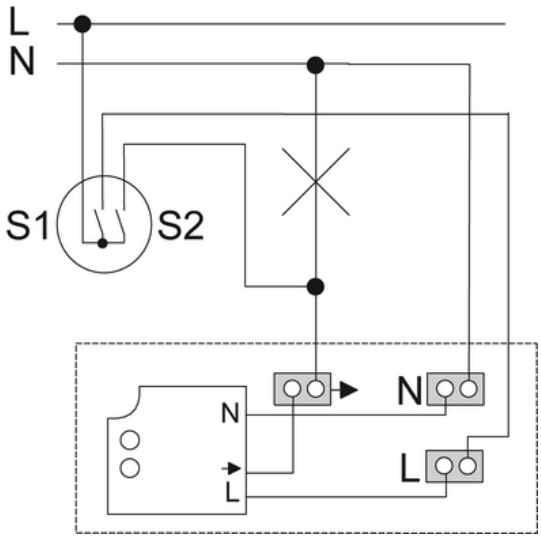

Figure 10: Connection diagram, Automatic manual mode

Installation switch S1 (Figure 10) can be used to switch Automatic mode on and off. Installation switch S2 can be used to switch Manual mode on and off.

- Lock the housing cover into the bottom of the rear housing panel, push the top down and screw it tight with the central screw (3).

6 Appendix

6.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 Hz
Power consumption	approx. 1.1 W
Ambient temperature	-25 ... +55 °C
Protection rating	IP 55
Circuit breaker	max. 10 A
Installation height	approx. 2.40 m

Detection angle	approx. 70 °
run-on time	approx. 10 s ... 5 min
Connected load	
Incandescent lamps	1000 W
HV halogen lamps	1000 W
Tronic transformers	750 W
Inductive transformers	750 VA
Electronic ballast	Type-dependent
Fluorescent lamps, uncompensated	500 VA
Fluorescent lamps, parallel compensated	400 VA
Switching current	
Minimum switching current AC	100 mA
Contact type	µ contact
Connection	
Single stranded	max. 2.5 mm²

6.2 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale or ship the device postage free with a description of the fault to the appropriate regional representative.

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