

Observer 110
Art.-No.: 222 WW

Operationsmanual

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 device or load. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.

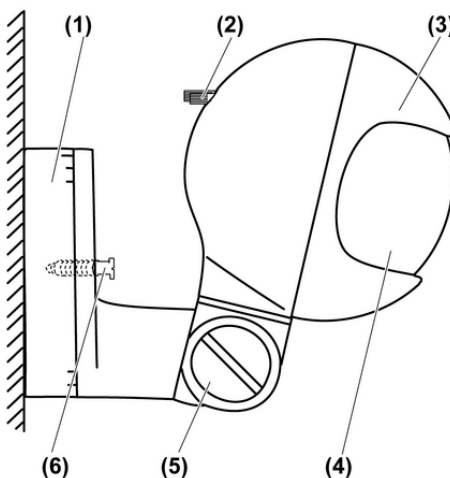
Do not press on the lens. Device can be damaged.

Do not open the sensor head, because close sealing is not possible. Foreign bodies and spray water can penetrate and damage the device.

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



picture 1: Device components

- (1) Connection box
- (2) Adjuster
- (3) Sensor head
- (4) Sensor window
- (5) Manual knob
- (6) 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, sensitivity and brightness value settable
- Test operation for checking the detection area
- Sensor head adjustable in 3 axes
- Screens for limiting the detection area
- 18 detection zones in 3 levels
- Parallel connection of multiple controllers possible
- Manual switch-on possible with installation button

Automatic operation

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

- The light is switched on if a person enters the monitored 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. 2 seconds after switch-off.

4 Operation

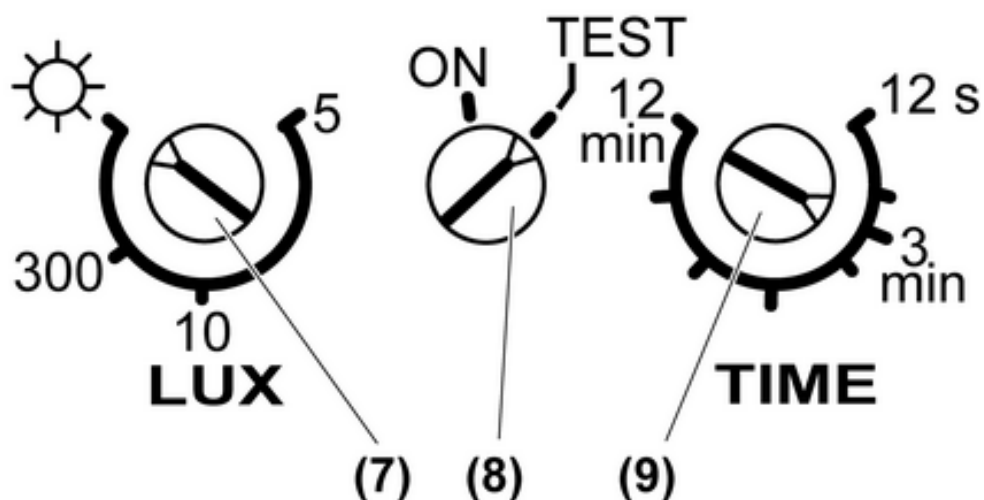
Switching the light on manually

Optional push-button is installed.

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

Configuring the controller

The controller has one adjuster each for the brightness threshold, the follow-up time and the operating mode.




picture 2: Adjuster

- (7) Adjuster for brightness threshold, **LUX**
- (8) Adjuster for operating mode, **TEST, ON**
- (9) Adjuster for follow-up time, **TIME**

Switch on test operation

In test operation the motion detector operates independently of the brightness. The follow-up time is approx. 1 second. The motion detector switches on cyclically as long as there is movement in the detection area.

- Turn adjuster for operating mode (8) to **TEST** position (picture 2).
-  The adjusters **TIME** and **LUX** have no function in test operation.


Switching on automatic mode

- Turn adjuster for operating mode (8) to **ON** position (picture 2).

Setting the brightness threshold

Only when the brightness drops below the threshold will the light be switched on when there is motion in the detection area. The brightness threshold is steplessly adjustable in a range from approx. 5 to 300 lux.

- Turn adjuster **LUX** (7) to the appropriate position (picture 2).

Position	Function
	switches independently of the brightness
300 lux	switches when there are heavy clouds or towards the evening
10 lux	switches at twilight
5 lux	switches upon darkness

Set follow-up time

The light is switched on for this time The follow-up time is set in a range from approx. 12 seconds to 12 minutes.

- Turn adjuster **TIME** (9) to the appropriate position (picture 2).



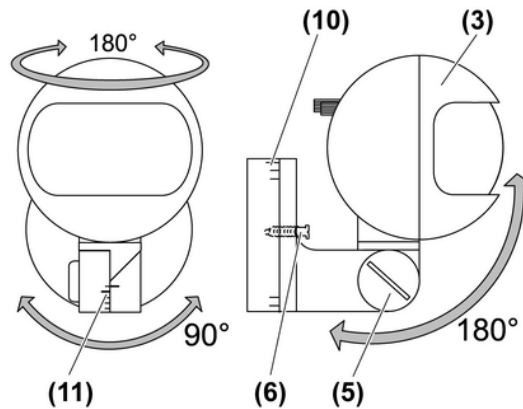
CAUTION!

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.



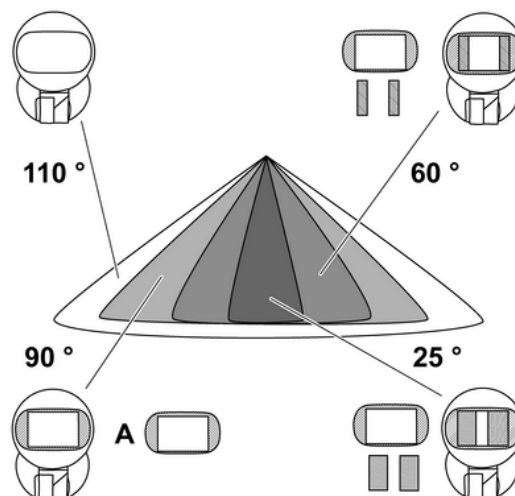
picture 3: Aligning the sensor head

Aligning the sensor head

For optimal alignment of the detection area the sensor head can be adjusted in three axes.

- Slacken central screw (6) somewhat (picture 3).
- Slew the sensor head. The scale (10) serves as an aid to orientation (picture 3).
- Tighten central screw.
- Slacken manual knob (5) (picture 3).
- Incline the sensor head (3).
- i If the heavy marks of the scale (11) are aligned with each other, the inclination is approx. 14° . (picture 3). The farther the sensor head is inclined, the shorter is the range.
- Tighten manual knob (5).
- Turn the sensor head (3) (picture 3). The adjustment is detented; each detent corresponds to approx. 10° .

Limiting the detection area to the side

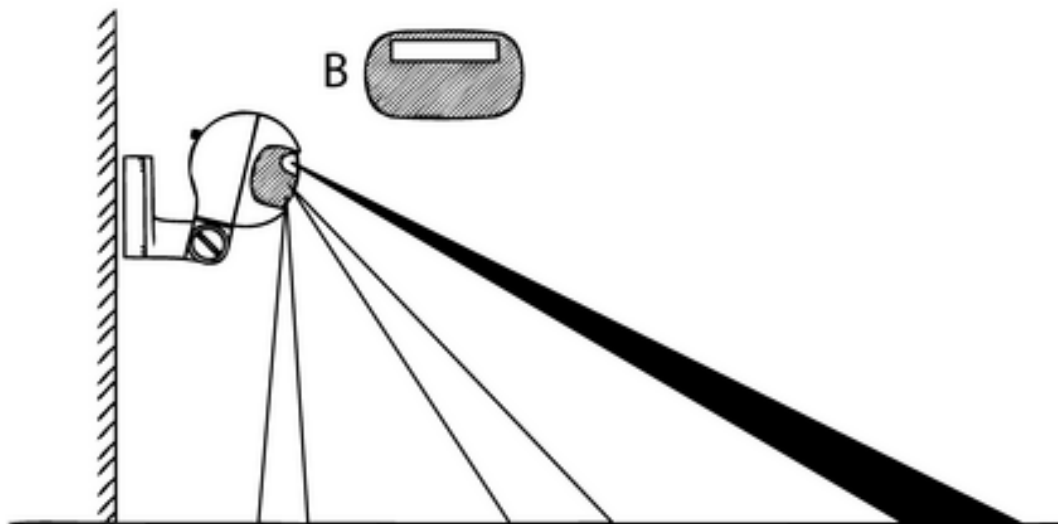


picture 4: Detection area with cover plate A

The detection area of the motion sensor can be limited to the side using the included cover plate **A**.

- Fit cover plate **A**(picture 4).

Reducing the detection area to one level



picture 5: Detection area with cover plate B

Cover plate **B** masks out the two lower detection levels (picture 5).

- Fit cover plate **B**.

5 Information for qualified electricians

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.



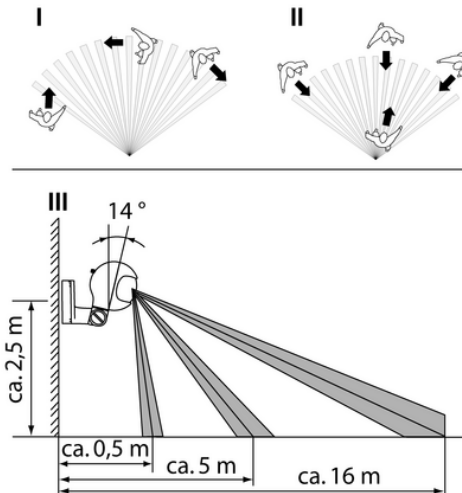
CAUTION!

Heat radiation too high.

Destruction of the sensors.

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Do not place the device in the sun.

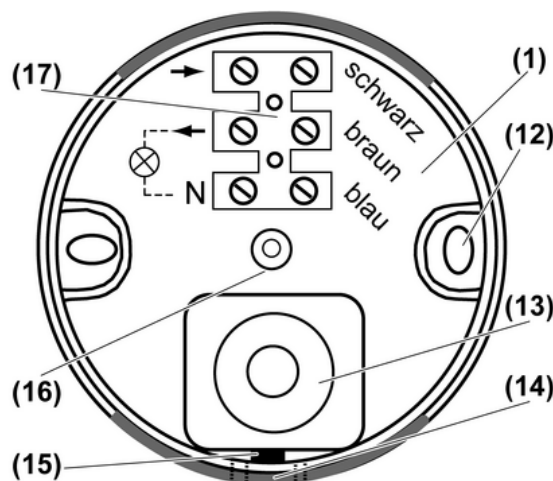


picture 6: Direction of motion

Selecting the installation location

- Select a vibration-free installation location; vibrations can lead to unwanted switching.
- Avoid interference sources. Interference sources, e.g. heaters, ventilation, air conditioners, and cooling light bulbs can lead to unwanted switching.
- Take direction of motion into account.
- ❶ Motions that are transverse to the motion detector, direction of motion I can be detected more easily than motions towards or away from the motion detector, direction of motion II (picture 6)
- Determine installation height (picture 6) III.
- ❶ The effects of weather, e.g. rain, fog or snow can reduce the range.

Installing the connection box



picture 7: Connection box

- (1) Connection box
- (12) Fastening holes
- (13) Cable entry

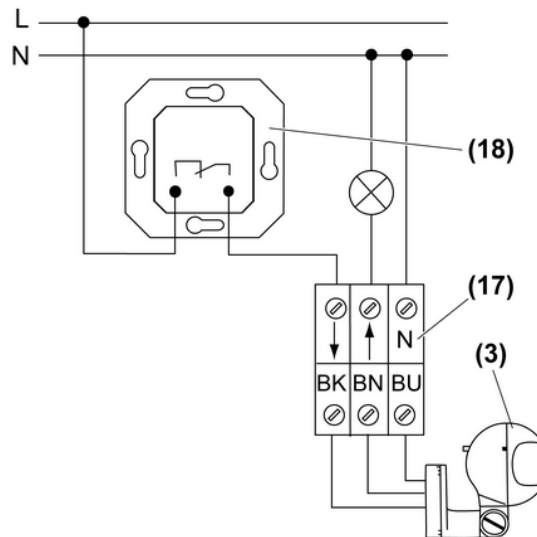
- (14) Surface-mounted cable entry
- (15) Condensation hole
- (16) Central fastening dome
- (17) Terminals

- Slacken manual knob (5).
- Incline sensor head and slacken central screw (6).

Cable entry from below.

- When the connecting cable is laid on the surface, open cable entry (14) in the connection box.
- Unless installing in dusty areas, break out the condensation hole (15) in the connection box.
- Fasten connection box using suitable screws.

Connecting the controller



picture 8: Connection diagram

- (3) Sensor head
- (17) Terminals
- (18) Installation button, NC contact

- Connect sensor head and optional installation button according to connection diagram .

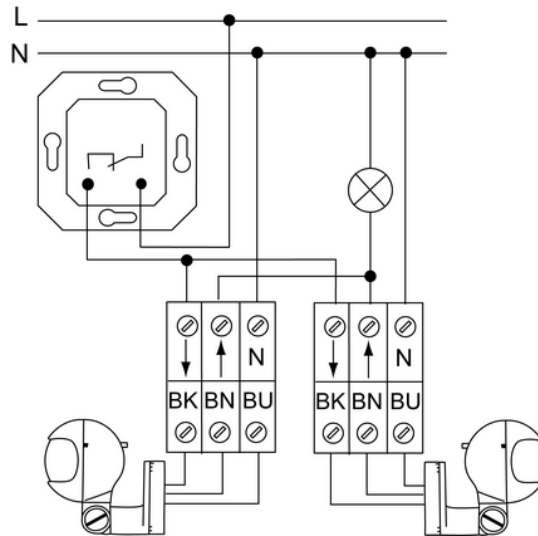
Terminal assignments for the sensor head

black, BK	External conductor
brown, BN	Switched external conductor
blue, BU	Neutral conductor

Fastening sensor head on connection box

- Set sensor head (3) on connection box (1). When doing so, do not damage any cables.
- Fix sensor head (3) by tightening central screw (6).

Connecting controllers in parallel



picture 9: Connecting controllers in parallel

- Connect controller and optional installation button according to connection diagram (picture 9).

5.2 Commissioning

Checking the detection area

- Switch on test operation (see chapter 4. Operation).
- Pace off the detection area, paying attention to reliable detection and interference sources.
- If necessary, limit the detection area to mask out interference sources. To do this, adjust the sensor head or use a cover plate (see chapter 4. Operation).

Making operation settings

For detailed information, see the chapter Operation (see chapter 4. Operation).

- Switch on automatic mode.
- Set brightness threshold.
- Set follow-up time.

6 Appendix

6.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 Hz
Power consumption	approx. 1.3 W
Ambient temperature	-35 ... 50 °C
Protection rating	IP 54
Circuit breaker	max. 10 A
Installation height	2.5 m
Detection angle	approx. 110 °
Range	approx. 16 m
Follow-up time	approx. 12 s ... 12 min
Follow-up time (test)	approx. 1 s
Lockout time	approx. 2 s
Brightness setting	approx. 5 ... 300 lx (and day operation)
Connected load	
Incandescent lamps	2200 W
HV halogen lamps	1000 W

Tronic transformers	Type-dependent
Electronic ballast	Type-dependent
Switching current	
Ohmic	10 A
inductive	0.5 A (cos φ = 0.5)
Switch-on current	max. 16 A
Contact type	μ contact
Connection	
Single stranded	max. 2.5 mm ²
Total length power cable	max. 100 m

6.2 Troubleshooting

Controller does not switch on

The ambient brightness is greater than the set brightness threshold.

Set brightness threshold using adjuster **LUX**(see chapter 4. Operation).

Detection area is limited.

Align sensor head or adapt cover plate (see chapter 4. Operation).

Controller switches on, even though it is bright enough even without lighting.

Controller is in test operation

Switch off test operation by turning middle adjuster to **ON**.

Adjuster **LUX** is at the left-hand end stop, the motion detector switches independently of the brightness.

Set brightness threshold using adjuster **LUX**(see chapter 4. Operation).

Controller switches on without detected motion

Interference sources in the detection area, e.g. ventilation, cooling light bulbs, trees and bushes.

Limit the detection area by aligning the sensor head or fitting a cover plate (see chapter 4. Operation).

Controller switches off despite motion

Detection area is limited.

Align sensor head or adapt cover plate (see chapter 4. Operation).

Controller does not switch off after the set follow-up time has elapsed

Controller detects motions constantly. Pay attention to interference sources, e.g. ventilation, cooling light bulbs, trees and bushes in the detection area.

Limit the detection area by aligning the sensor head or fitting a cover plate (see chapter 4. Operation).

6.3 Warranty

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

We provide a warranty as provided for by law.

Please send the unit postage-free with a description of the defect to our central customer service office:

ALBRECHT JUNG GMBH & CO. KG

Service Center
Kupferstr. 17-19
D-44532 Lünen
Service-Line: +49 (0) 23 55 . 80 65 51
Telefax: +49 (0) 23 55 . 80 61 89
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