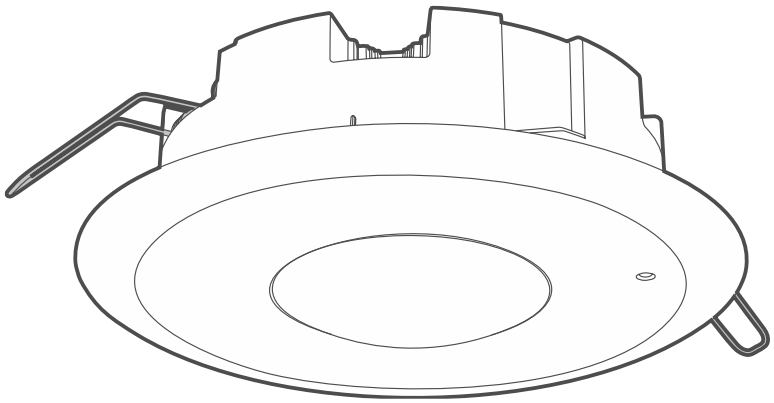
Ceiling dual technology motion detector
for lighting control (recessed)

SLIM-R-DUAL-AC

Firmware version 1.00

EN



CE

slim-r-dual-ac_en 04/26

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IMPORTANT

The device should be installed by qualified personnel.

Prior to installation, please read carefully this manual.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

Description of symbols on the device:


The device meets the requirements of the applicable EU directives.


The device must not be disposed of with other municipal waste. It should be disposed of in accordance with the existing rules for environment protection (the device was placed on the market after 13 August 2005).


The device is designed for indoor installation.


Protection class II (protective insulation).

Alternating current (AC).

Switch.


Prior to installation, please read carefully the manual.

SATEL aims to continually improve the quality of its products, which may result in changes in their technical specifications and software. Current information about the changes being introduced is available on our website.
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The declaration of conformity may be consulted at www.satel.pl/ce

Signs in this manual


Caution – information on the safety of users, devices, etc.


Note – suggestion or additional information.

CONTENTS

The SLIM-R-DUAL-AC ceiling detector is used to turn on 230 VAC lighting after motion is detected. The detector uses infrared and microwaves to detect motion. The detector is designed for mounting in a suspended ceiling.

This detector is designed for home automation and should not be used as a motion detector in an alarm system.

1. Features

- Motion detection with passive infrared sensor (PIR) and microwave sensor (MW).
- NO relay output for 230 VAC lighting control.
- Adjustable lighting ON-time.
- Adjustable motion detection sensitivity.
- Digital motion detection algorithm for both sensors.
- Digital temperature compensation.
- Built-in dusk sensor.
- Powered by 230 VAC.
- Mounted in a suspended ceiling.

2. Description

The detector will turn on the lighting when the infrared sensor (PIR) and the microwave sensor detect motion within a time period shorter than 3 seconds. The lighting ON-time can be set from 2 to 180 seconds. If the lighting is ON and motion is detected again, the countdown starts anew. Thanks to the built-in dusk sensor, the lighting can be turned on only when it is dark.

3. Electronics module

Do not remove the electronics board from the plastic cover to avoid damage to the components on the board.

1

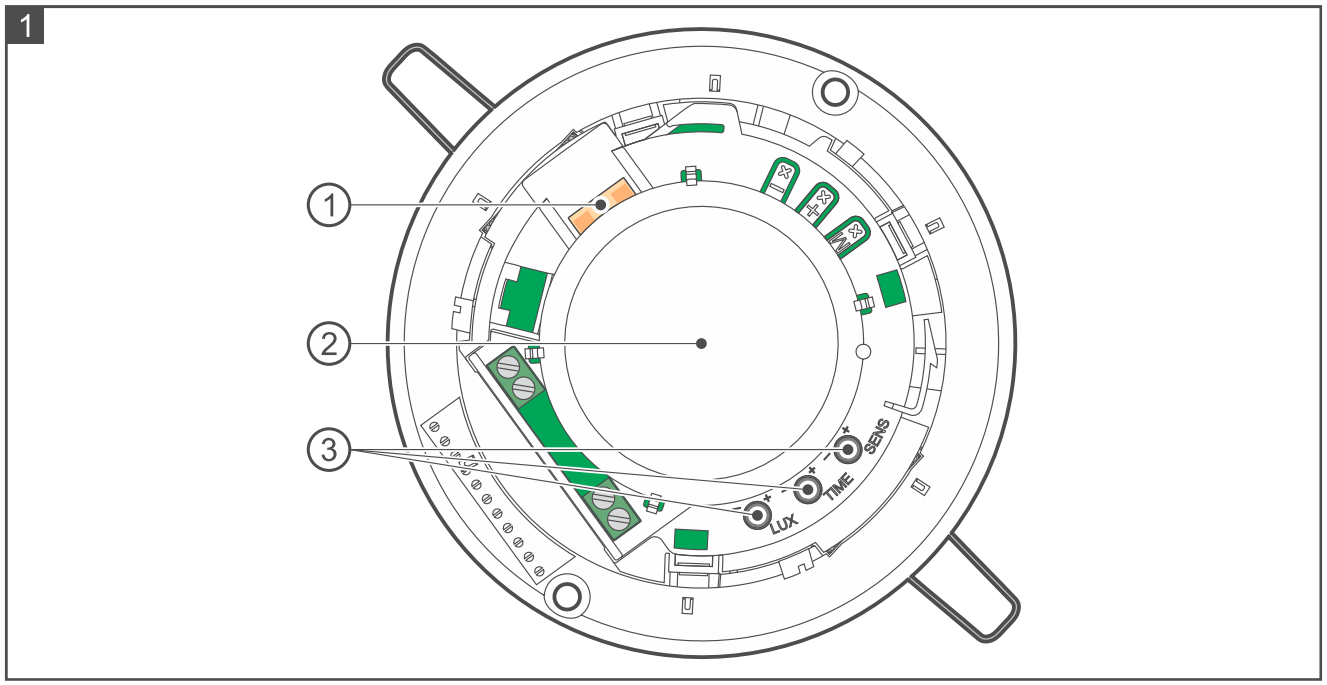


Figure 1 shows the inside of the detector after opening the enclosure.

① microwave sensor.

② lens. The PIR sensor (dual element pyrosensor) and the dusk sensor are under the lens.

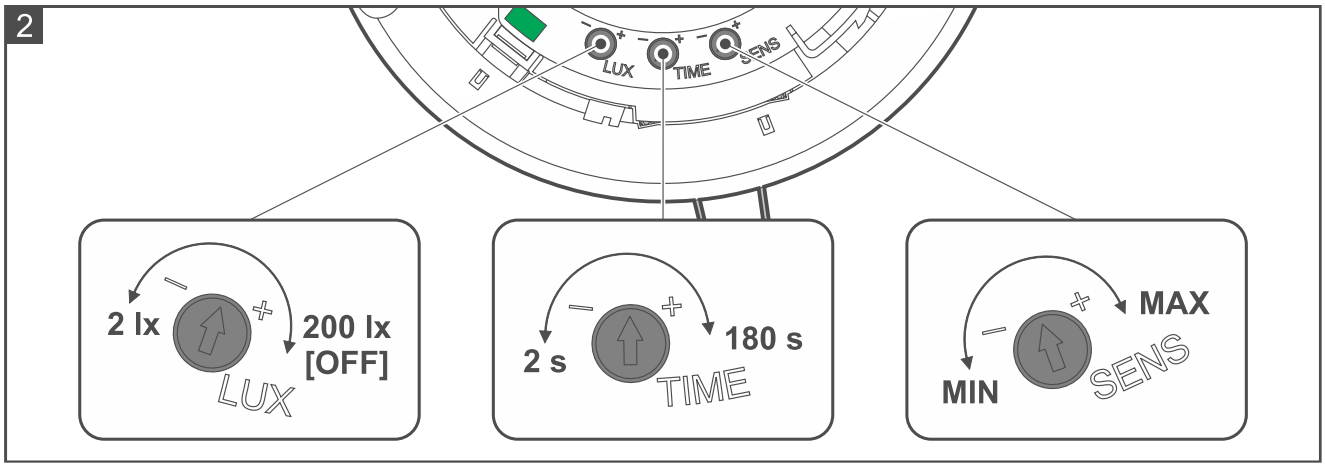
③ detector configuration potentiometers (Fig. 2):

LUX - setting the dusk sensor detection threshold. Setting range: 2...200 lx. When the light intensity is below the threshold (it is dark), motion detection will turn on the lighting (relay). When the light intensity is above the threshold, motion detection will not turn on the lighting. If the maximum value (200 lx) is set, the dusk sensor is disabled and motion detection will always turn on the lighting.

TIME - setting the lighting (relay) ON-time after motion detection. Setting range: 2...180 seconds (2, 4, 6, 8, 10, 12, 14, 20, 30, 40, 60, 80, 100, 120, 150 or 180 s.).

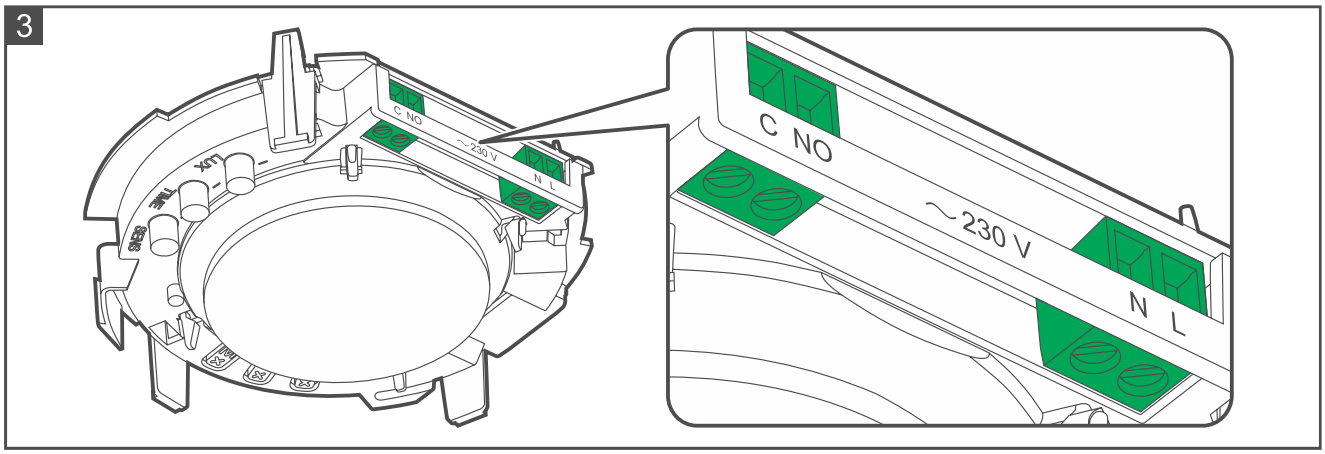
SENS - setting the motion detection sensitivity (infrared sensor (PIR) and microwave sensor (MW)).

2



Terminals

3



To access the terminals for connecting the wires, remove the electronics module from the base (Fig. 6 and 7).

C - relay output C contact.

NO - relay output NO contact (normally it is disconnected from the C contact – does not conduct electricity).

N - for connecting the neutral wire of 230 VAC power.

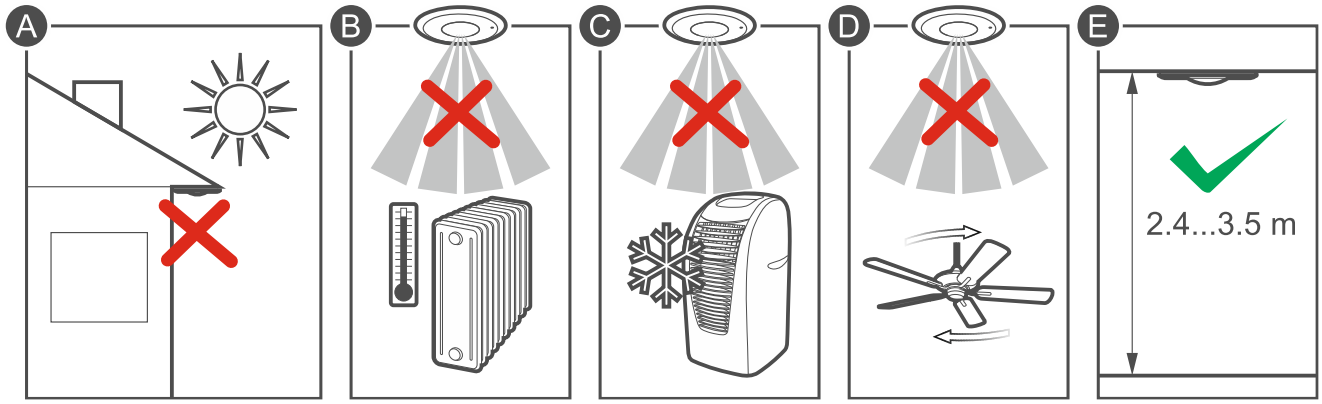
L - for connecting the phase wire of 230 VAC power.

4. Installation

Disconnect power before making any electrical connections.

Connect the detector to a single-phase network according to the applicable standards.

Tips for installation

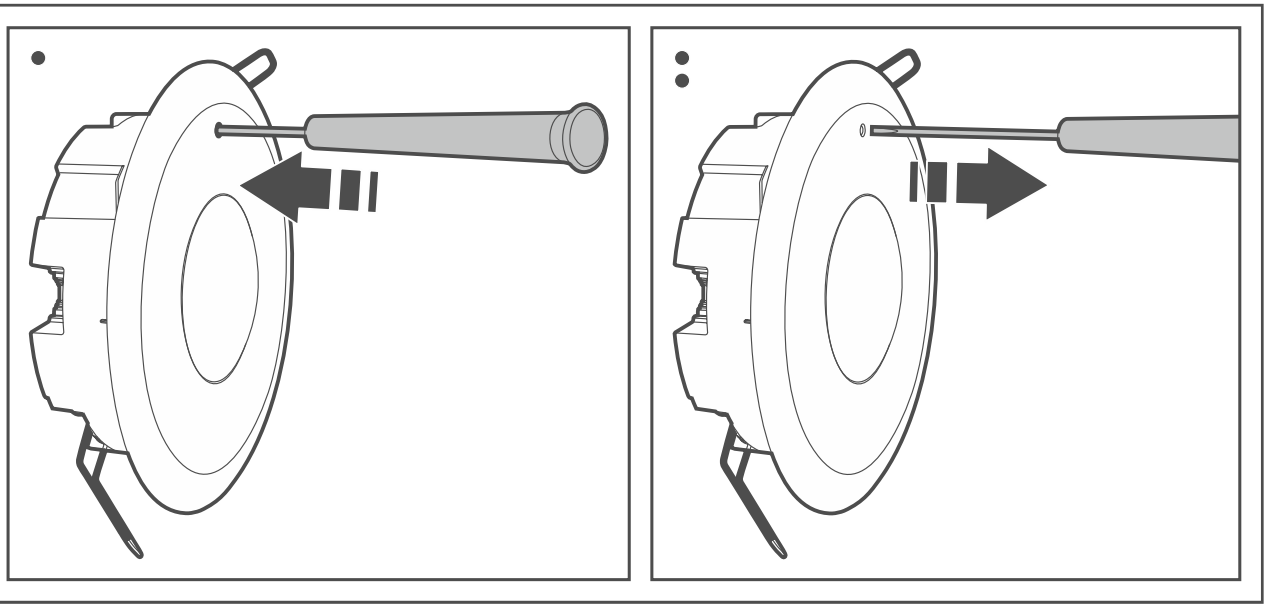


- The detector should be installed indoors, in spaces with normal air humidity.
- Do not install the detector outdoors (A).
- Do not point the detector towards heat sources (B), air conditioners (C) or fans (D).
- No object should obstruct the detector's field of view.
- Install the detector in a suspended ceiling, at a height of 2.4...3.5 m (E).
- The electrical circuit to which the detector is to be connected must have suitable protection. Instruct the owner / user of the system on how to disconnect the detector from the mains supply (e.g. indicate the fuse or circuit breaker protecting the detector supply circuit).
- To connect the detector, use flexible wires with a cross-section of 0.5-0.75 mm^2.
- To the detector relay output you can connect a 230 VAC appliance with current consumption up to 8 A.

Mounting

1. Unlock the enclosure cover (Fig. 4). To unlock the cover, you can use a 1.8 mm flathead screwdriver.
2. Turn the cover counter-clockwise and remove it (Fig. 5).
3. Release the mounting catches one by one to unlock the electronics module (Fig. 6). To release the catches, you can use a flathead screwdriver.
4. Remove the electronics module from the base (Fig. 7).
5. Make the opening for a cable in the base (Fig. 8).
6. Make a 100 mm diameter opening in the suspended ceiling for the detector (Fig. 11).

4



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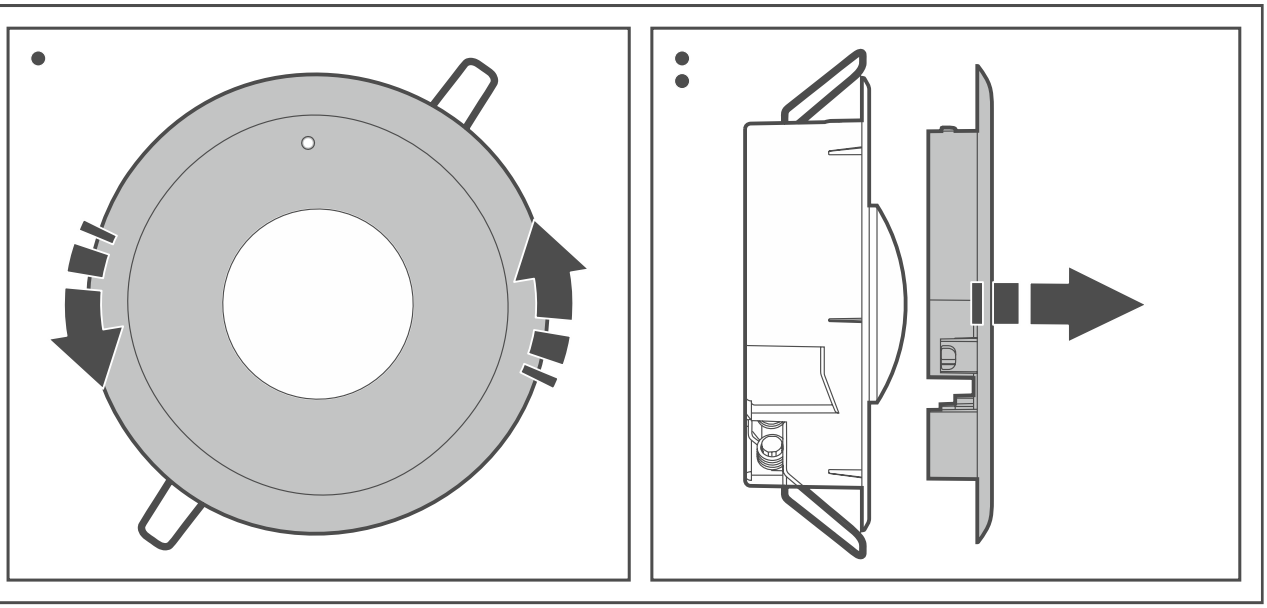

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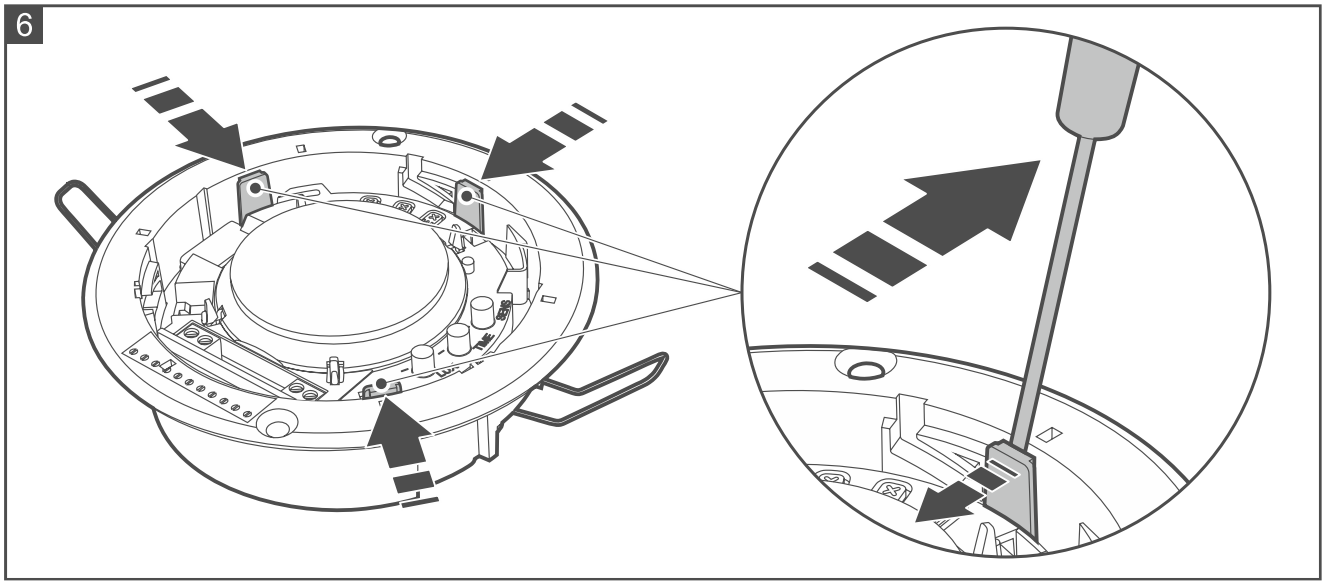
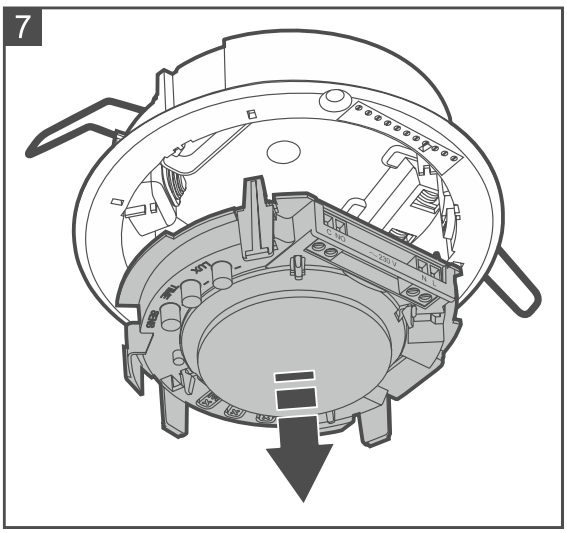
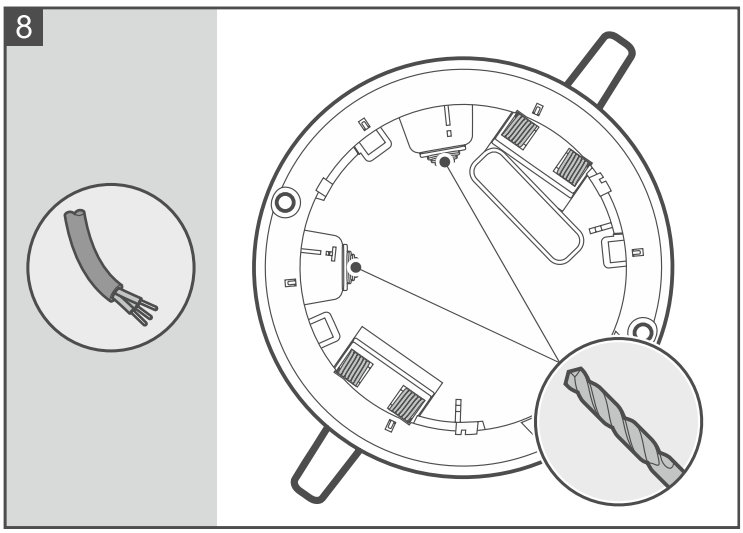
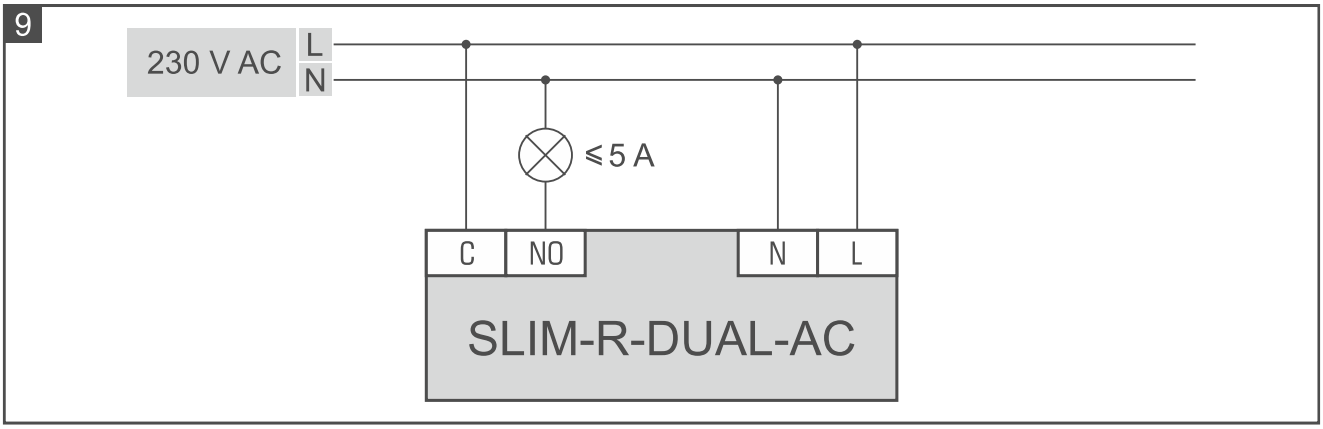


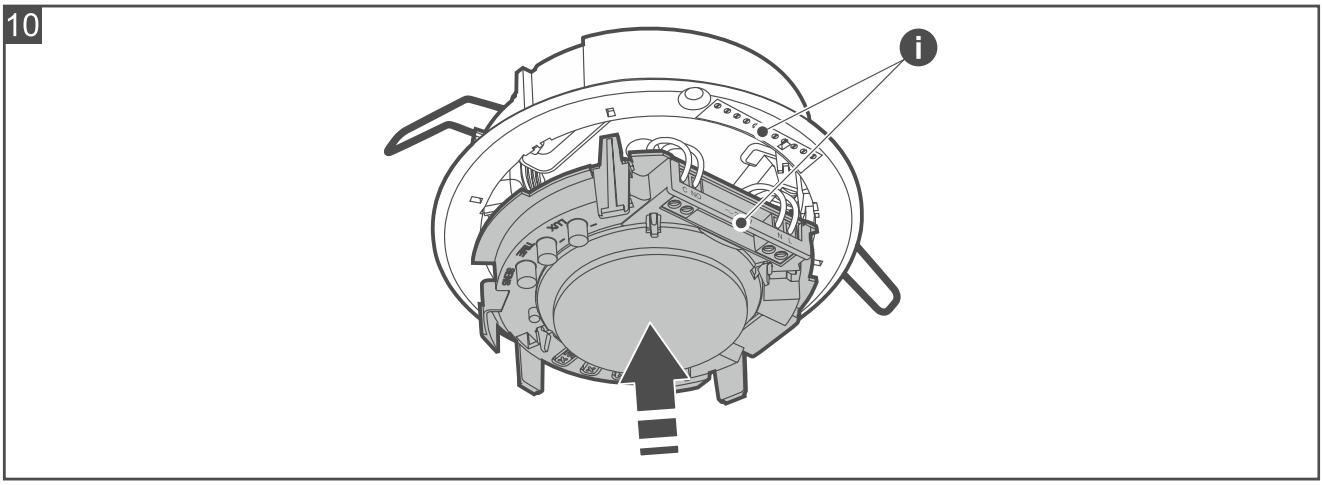
7. Run the cable inside the detector enclosure.
8. Screw the wires to the detector terminals (Fig. 9).







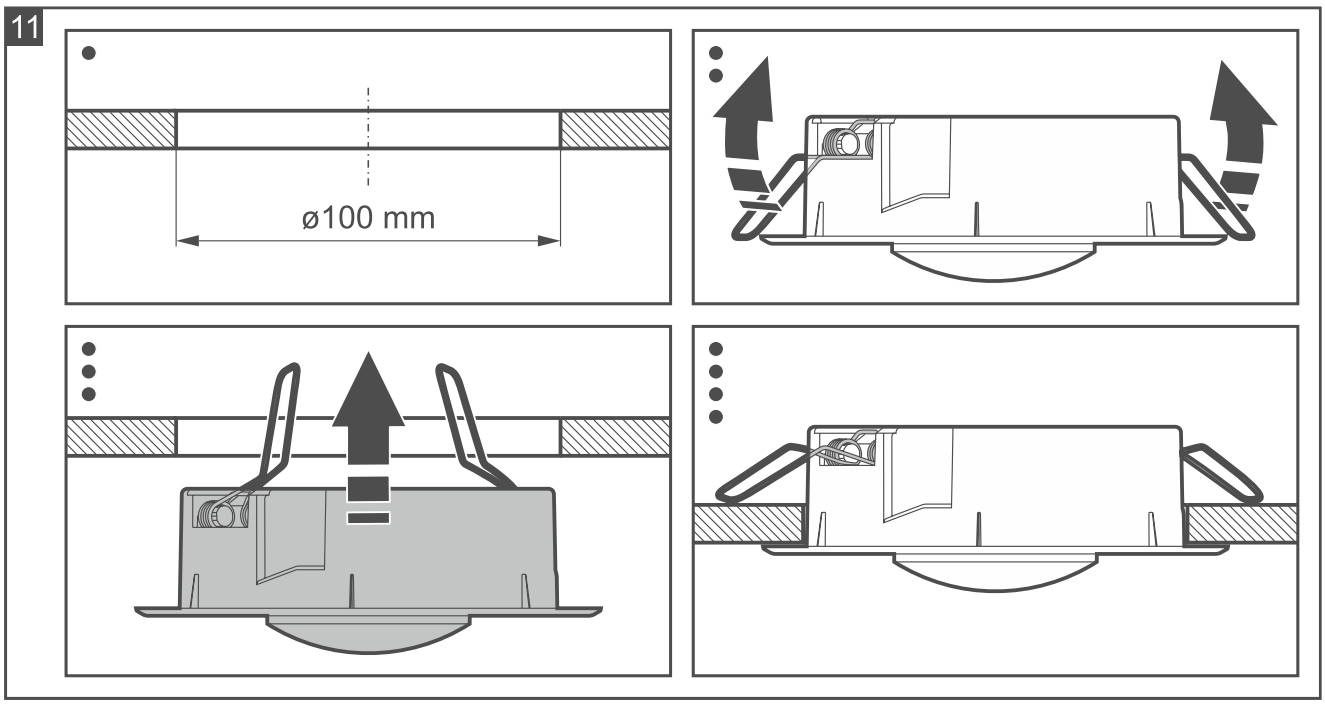
9. Place the electronics module in the enclosure base, then press it down onto the base to lock it. There are markings on the base flange showing where the terminals should be located (Fig. 10).

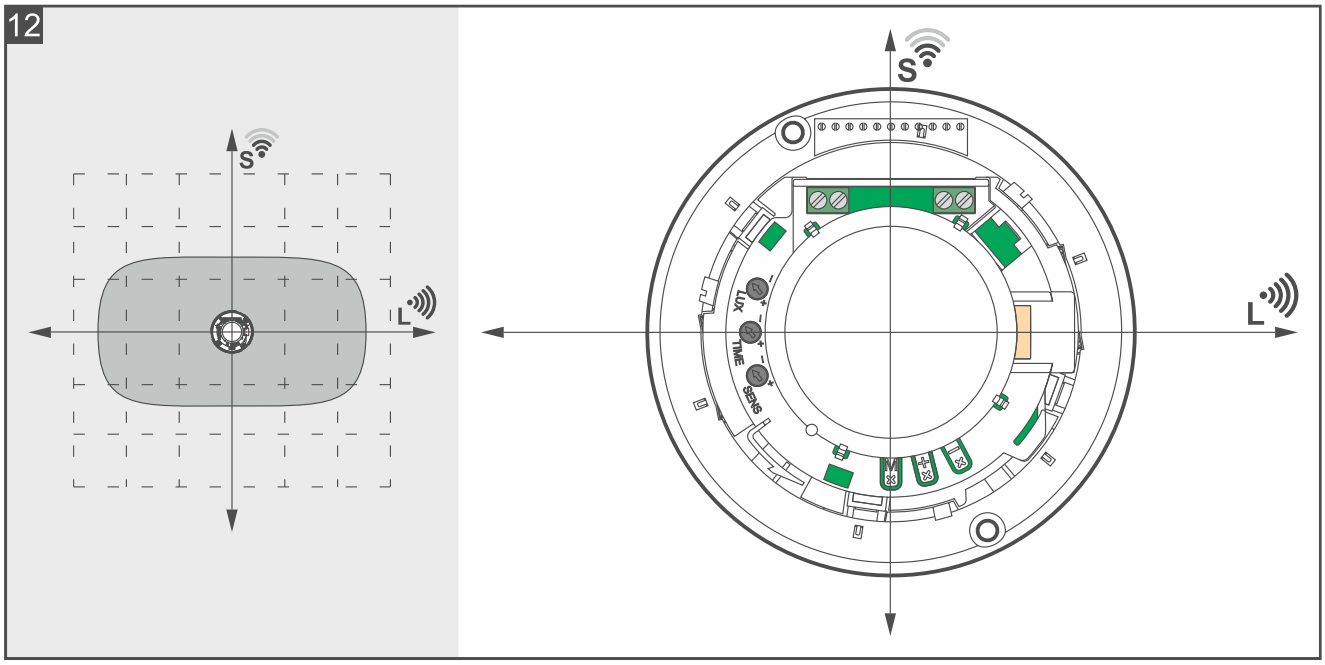


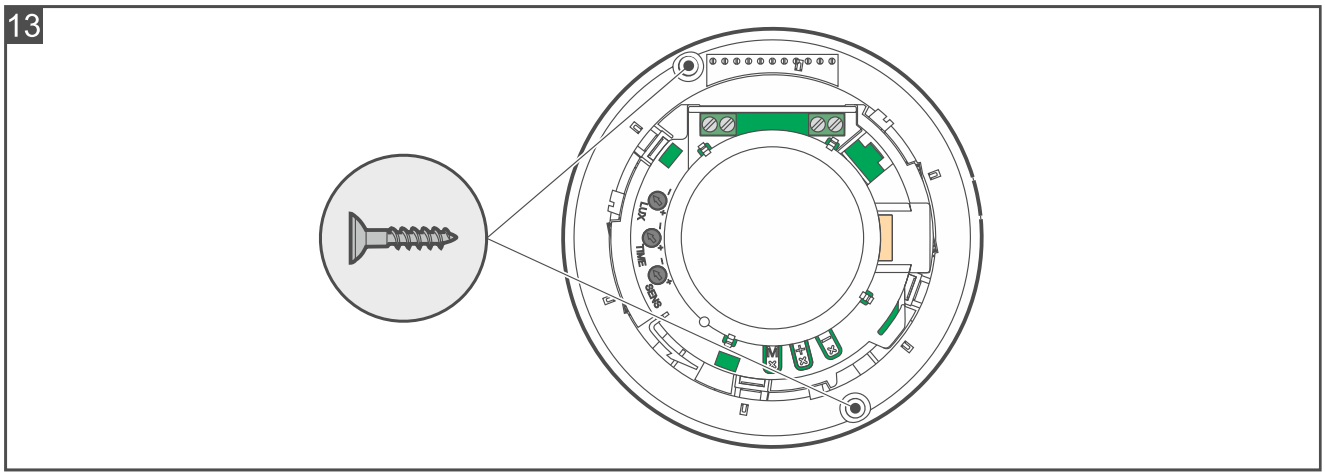
10. Bend the mounting springs and place the detector in the opening made in the ceiling (Fig. 11). When released, the springs will lock the detector in the opening.

*Figure 12 shows how the base position affects the detector coverage area. The detector has a greater coverage area along the **L** axis (passing through the TIME potentiometer) than along the **S** axis (passing through the M button). Figure 15 shows the exact dimensions of the coverage area.*

There are screw holes in the base flange (Fig. 13). You can also use screws for mounting or remove the springs and use only screws for mounting.



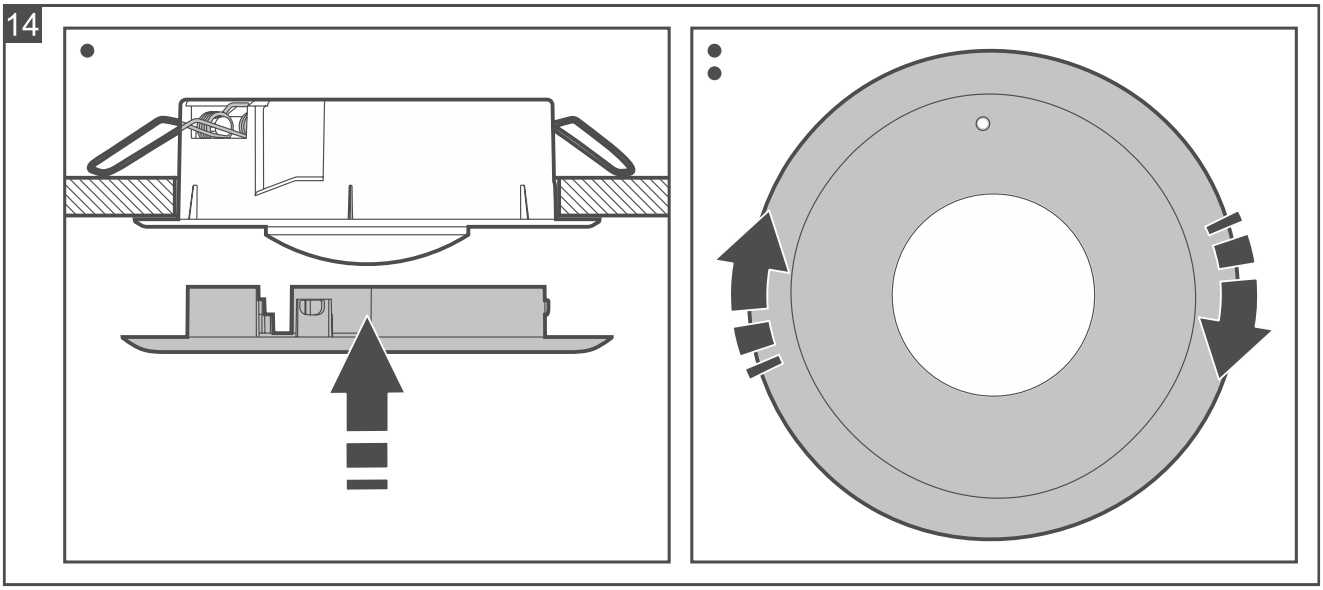




11. Power on the detector. The detector will take 30 seconds to warm up. During this time, the relay (the lighting controlled by the detector) will be turned on.

12. Configure the detector settings.
13. Replace the cover and turn it clockwise to lock it in place (Fig. 14).

14



5. Walk test

Check if moving within the detector coverage area causes the lighting to turn on. Figure 15 shows the maximum coverage area of the detector. Change the sensitivity settings if necessary.

6. Specifications

Supply voltage ..... 230 VAC, 50 Hz
Standby power consumption ..... 0.2 W
Maximum power consumption ..... 0.5 W
Control output (NO relay) ..... 8 A / 250 VAC
Contact resistance ..... ≤ 100 mΩ
Microwave frequency ..... 24.125 GHz
Detectable speed ..... 0.3...3 m/s
Lighting ON-time ..... 2...180 s
Recommended installation height ..... 2.4...3.5 m
Maximum coverage area
mounted at 2.4 m ..... 12 m x 5 m [56 m^2]
mounted at 3 m ..... 14 m x 6 m [80 m^2]
Environmental class according to EN 50130-5 II
Operating temperature range ..... -10°C...+55°C
Maximum humidity ..... 93±3%
Dimensions ..... ø 130 x 42 mm
Weight ..... 141 g

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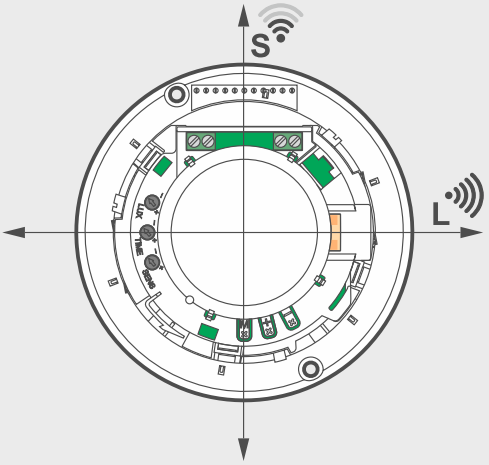

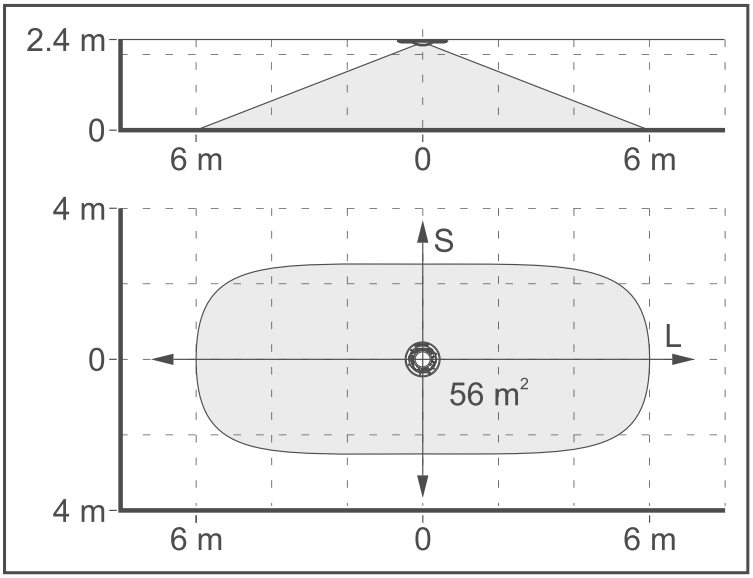

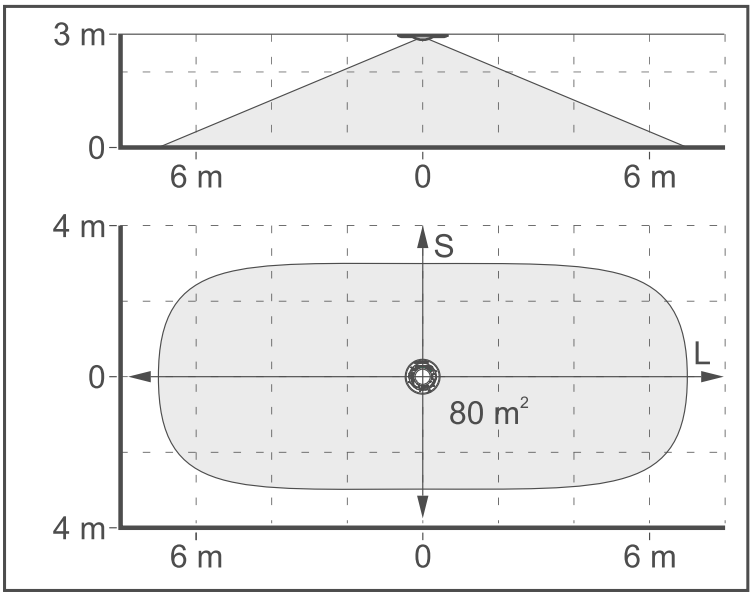

5 year warranty from date of manufacture