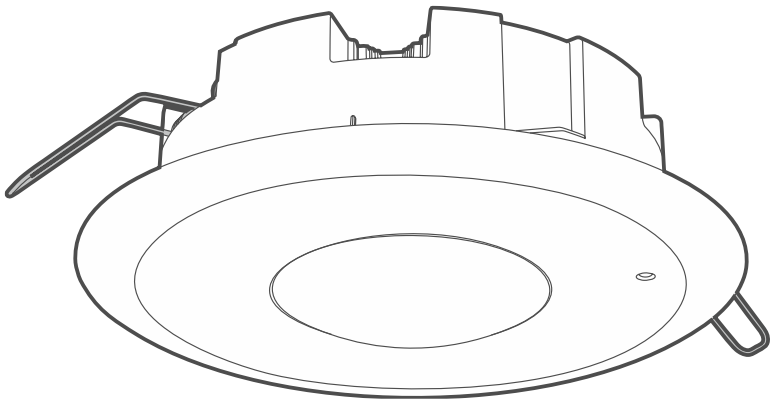
Bus ceiling PIR motion detector
with anti-mask (recessed)

# SLIM-R-PIR-PRO BUS

Firmware version 1.00

EN



CE

slim-r-pir-pro_bus_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:

⎓ Direct current (DC).

CE The device meets the requirements of the applicable EU directives.

The device is designed for indoor installation.

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).

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.
Please visit us at:
https://support.satel.pl

**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.

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The SLIM-R-PIR-PRO BUS ceiling detector uses infrared to detect motion. It is designed for mounting in a suspended ceiling. The detector can be connected to the RS communication bus of a SATEL control panel that supports bus devices.

*The detector meets requirements of the EN 50131-2-2 standard for Grade 3.*

# 1. Features

- Motion detection using passive infrared sensor (PIR).
- Maximum coverage area (see Fig. 12):
  - ø 6 m / 28 $m^2$ – mounted at 2.4 m,
  - ø 10 m / 79 $m^2$ – mounted at 3.5 m.
- Adjustable detection sensitivity.
- Digital motion detection algorithm.
- Digital temperature compensation.
- Active IR anti-mask, compliant with EN 50131-2-2 requirements for Grade 3.
- RS communication bus.
- Programming settings via the RS bus.
- Firmware update via the RS bus.
- Built-in temperature sensor (measuring range: -10 °C...+55°C).
- LED indicator.
- Supervision of motion detection system.
- Powered by 12 VDC (±15%).
- Supply voltage control.
- Tamper protection against opening the enclosure and detector displacement.
- Mounted in a suspended ceiling.

# 2. Description

The detector will report alarm when the infrared sensor (PIR) detects motion.

## Tamper protection

The detector will report tamper after enclosure opening or after detecting displacement. The detector reports tamper as long as it detects it.

*The detector remembers its position at the moment of startup or enabling the diagnostic mode in the system.*

## Active IR anti-mask

The active anti-mask feature detects attempts to cover the detector or paint over the lens. The detector emits infrared radiation and measures the amount of radiation received. If the detector detects a change in the level of received radiation, it will report masking. The detector reports masking as long as it detects a wrong amount of infrared radiation.

*The active anti-mask feature meets the EN 50131-2-2 requirements.*

## LED indicator

The LED indicator indicates:

- warm-up – flashing alternately different colors for about 30 seconds,

- alarm – ON in blue for 2 seconds,
- masking – flashing blue when the detector is masked,
- trouble – ON in blue for entire duration of the trouble.

### Supervision features

In the event of the voltage drop below 9 V (±5%) for more than 2 seconds or the motion detection system failure, the detector will indicate a trouble. The trouble is indicated by turning on the LED indicator. The detector reports / indicates the trouble for the entire duration of its occurrence.

## 3. Electronics module

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

1

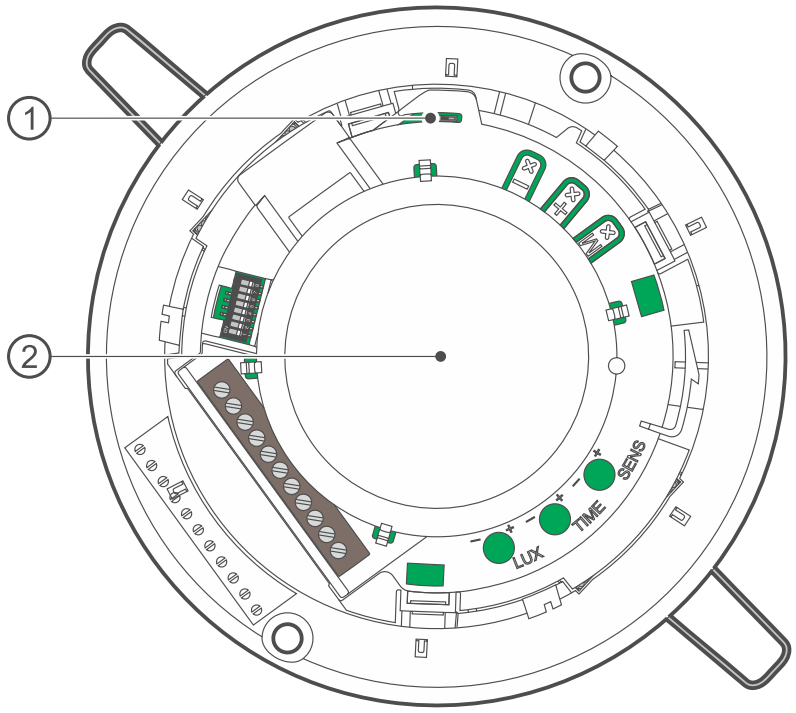



Figure 1 shows the inside of the detector after opening the enclosure.

(1) tamper switch activated by cover removal.

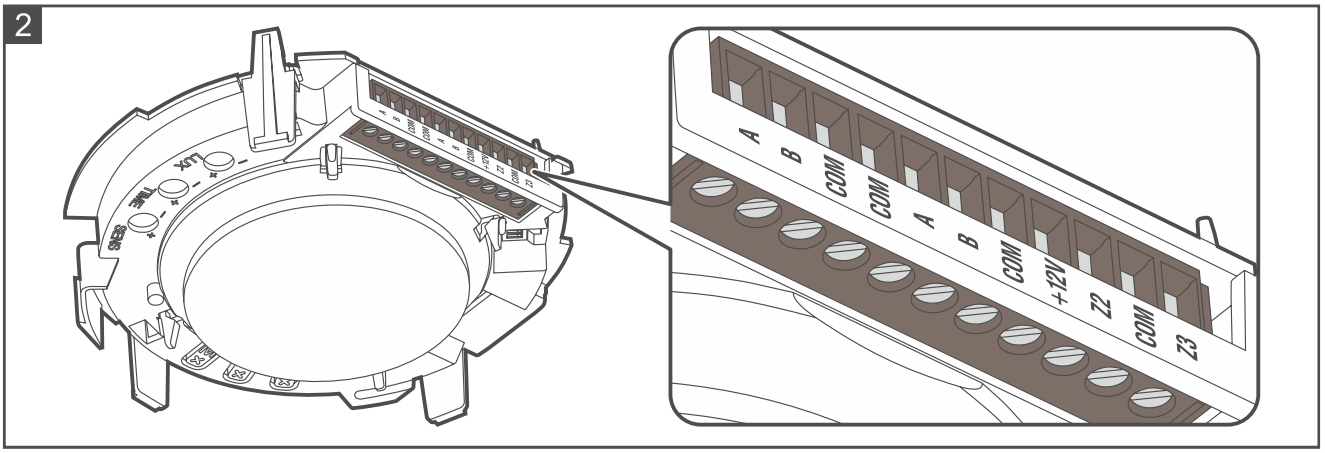
(2) lens.

The PIR sensor (dual element pyrosensor), the displacement sensor (accelerometer), the LED indicator and the LEDs for anti-mask are under the lens.

### Terminals

To access the terminals for connecting the wires, remove the electronics module from the base (Fig. 5 and 6).

2

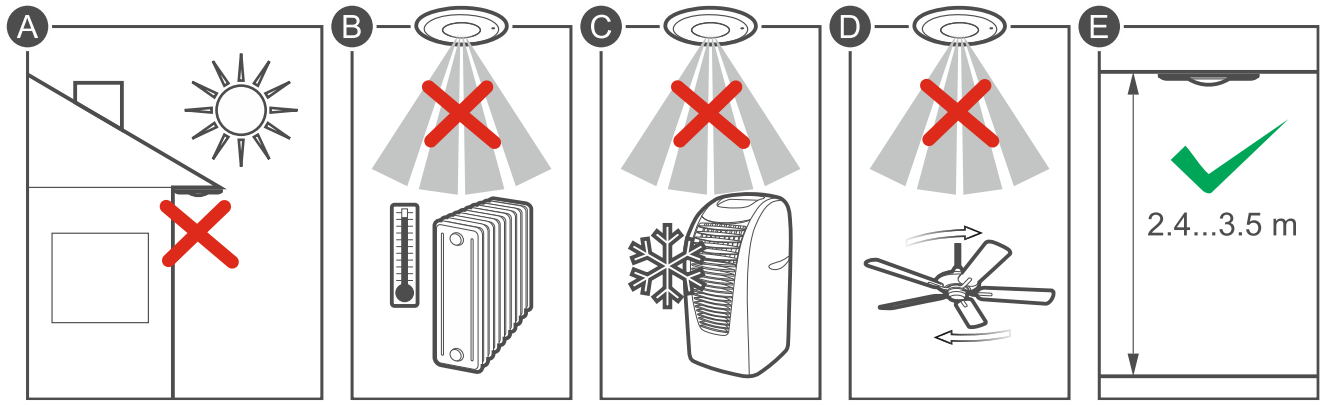



**A, B** - RS communication bus.
**COM** - common ground.
**+12V** - power input.
**Z2** - terminal for future use.
**Z3** - terminal for future use.

# 4. Installation

**Disconnect power before making any electrical connections.**

## 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).

*If you want to install the detector at a height other than the recommended, make sure the coverage area of the detector mounted at that height is optimal. The maximum coverage area of the detector mounted at a height of 4.5 m is ø 8 m [50 m²].*

### *RS communication bus*

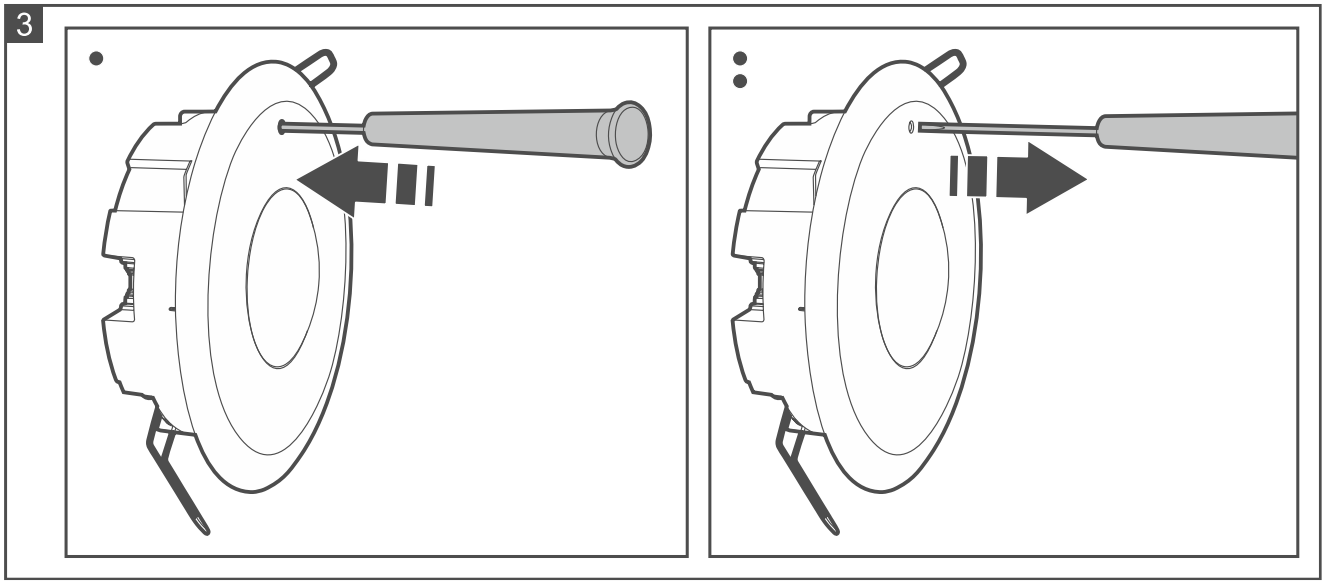
- Use a UTP cable (unshielded twisted pair).
- The length of the bus must not exceed 1200 meters.
- If the device is connected at either end of the bus, place a 120 Ω ± 20% resistor between the A and B terminals.

- Connect the COM terminals of all devices on the bus with an additional wire.

## Mounting

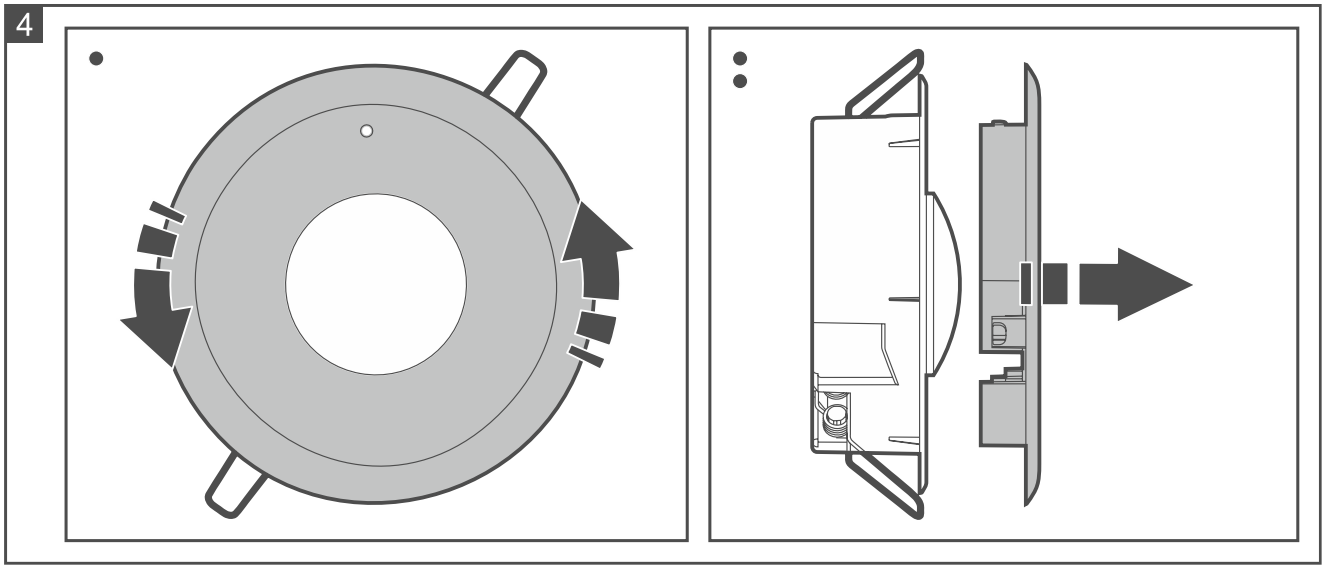
1. Unlock the enclosure cover (Fig. 3). To unlock the cover, you can use a 1.8 mm flathead screwdriver.

3



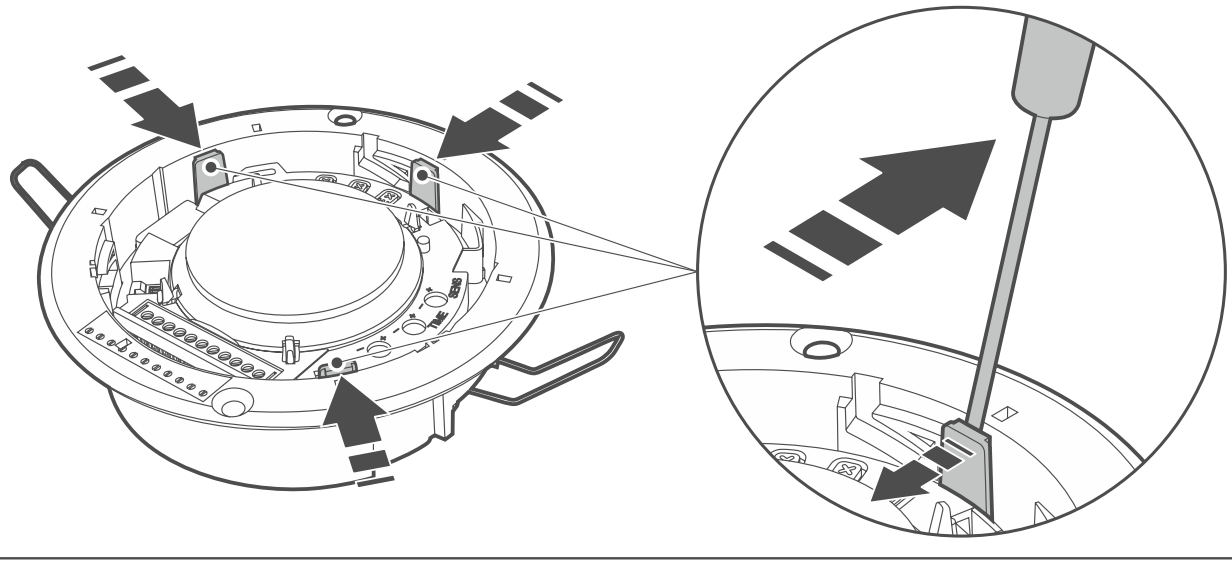
2. Turn the cover counter-clockwise and remove it (Fig. 4).

4



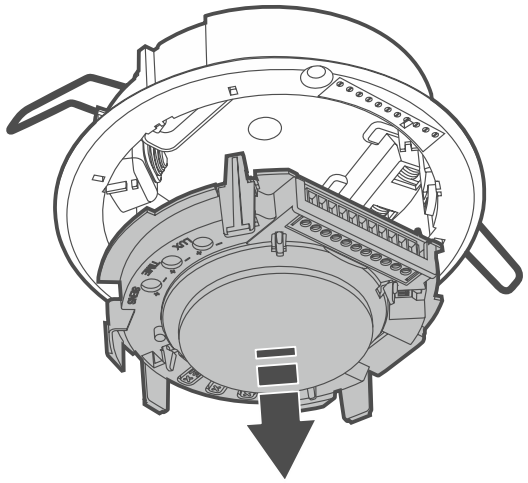
3. Release the mounting catches one by one to unlock the electronics module (Fig. 5). To release the catches, you can use a flathead screwdriver.

5



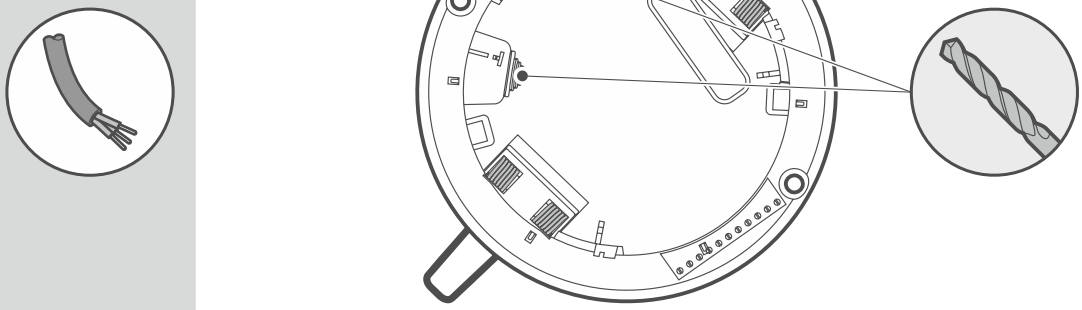
4. Remove the electronics module from the base (Fig. 6).

6



5. Make the opening for a cable in the base (Fig. 7).

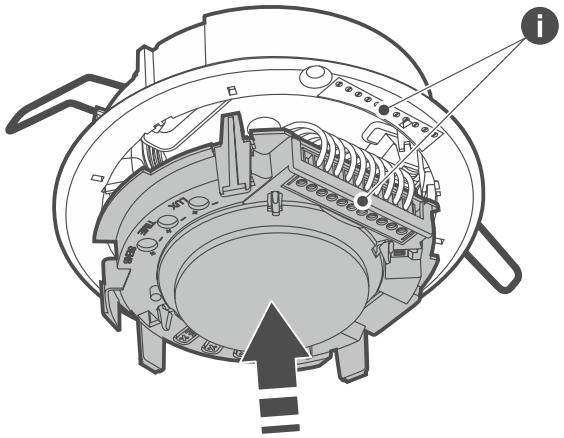
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6. Make a 100 mm diameter opening in the suspended ceiling for the detector (Fig. 10).
7. Run the cable inside the detector enclosure.
8. Screw the wires to the detector terminals.

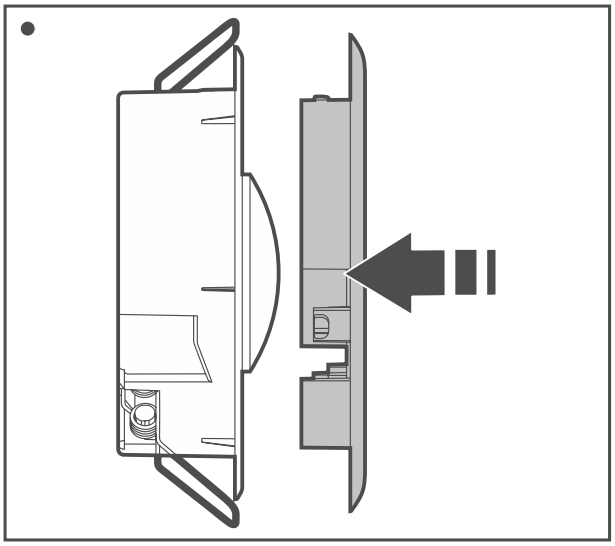
9. Place the electronics module in the enclosure base, then press it down onto the base to lock it. There are markings on the base flange showing where the terminals should be located (Fig. 8).

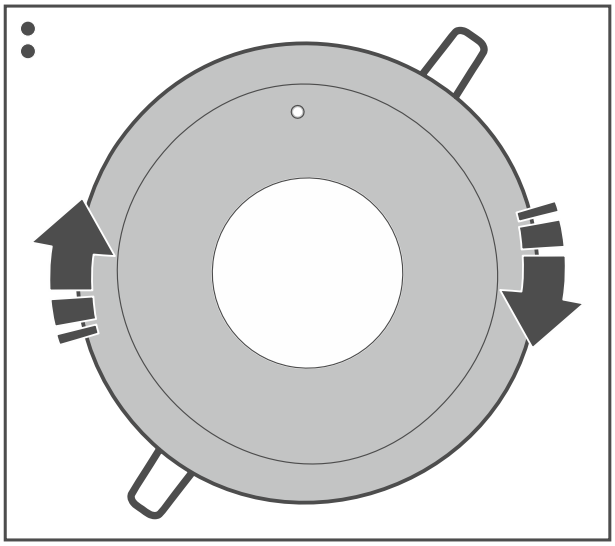
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10. Close the detector enclosure (Fig. 9).

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

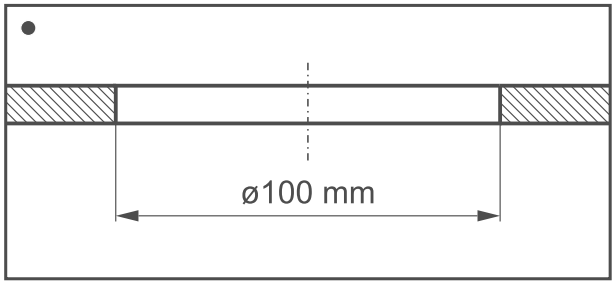
*There are screw holes in the base flange (Fig. 11). You can also use screws for mounting or remove the springs and use only screws for mounting.*

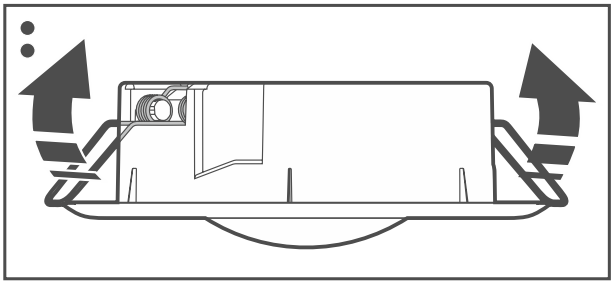
12. Power on the detector. The LED indicator will be flashing alternately different colors for 30 seconds to indicate the detector warm-up.

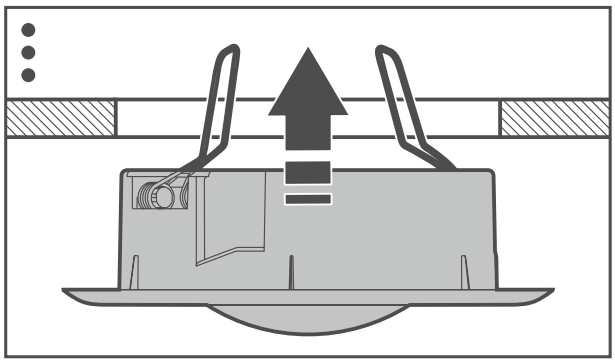
*When starting the detector, the enclosure must be closed for the anti-mask feature to work properly. After power on, the detector analyzes the environment in which it has been installed and adjusts the anti-mask system working parameters to it (for 30 seconds). During that time, no object should be located within 1 m of the detector unless the object is intended to remain there.*

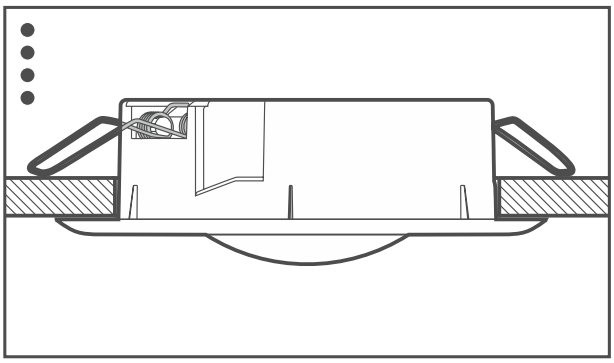
13. Add the detector to the system and program its settings (see the manual of the control panel to which the detector is connected).

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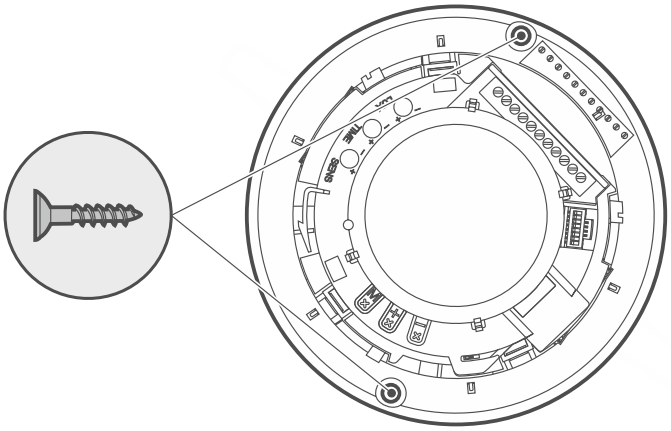






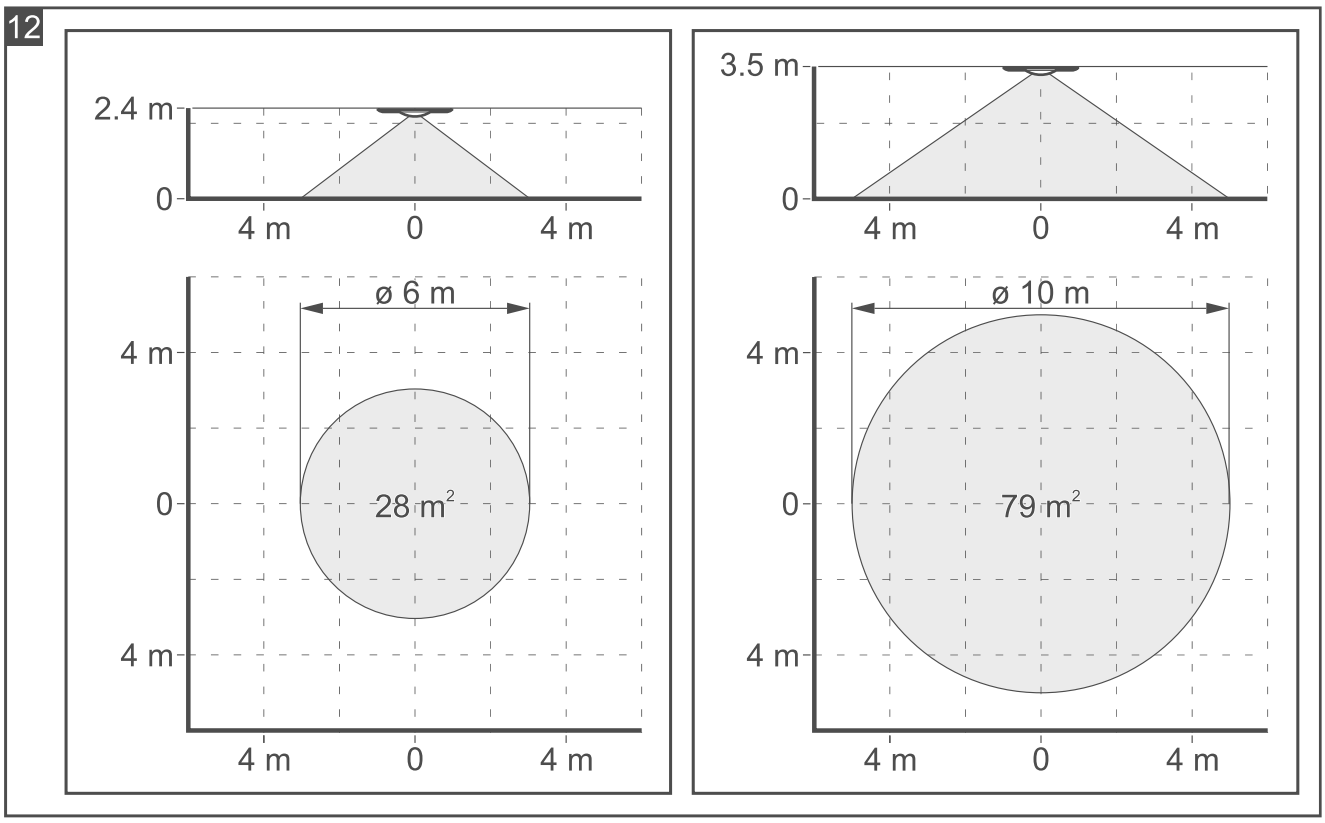
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## 5. Walk test

1. Check if moving within the detector coverage area will make the LED indicator turn ON. Figure 12 shows the maximum coverage area of the detector.
2. If necessary, change the detector sensitivity (see the manual of the control panel to which the detector is connected).

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# 6. Specifications

Supply voltage ..... 12 VDC ±15%
Standby current consumption ..... 14 mA
Maximum current consumption ..... 45 mA
Detectable speed ..... 0.2...3 m/s
Alarm signaling period ..... 2 s
Warm-up period ..... 30 s
Recommended installation height ..... 2.4...3.5 m
Maximum coverage area
mounted at 2.4 m ..... ø 6 m [28 m$^2$]
mounted at 3.5 m ..... ø 10 m [79 m$^2$]
Security grade according to EN 50131-2-2 ..... Grade 3
Compliance with standards ..... EN 50131-1, EN 50131-2-2, EN 50130-4, EN 50130-5
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 ..... 144 g

**5 year warranty from date of manufacture**