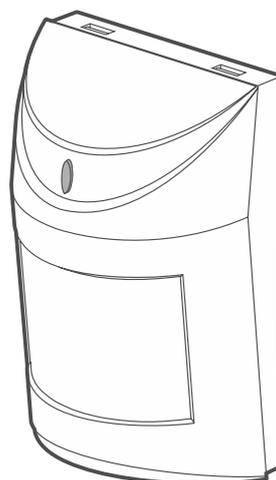


Digital passive infrared detector
with lighting feature

AQUA Luna

Firmware version 3.00

EN



CE

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Satel®

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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.

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:
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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.

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The AQUA Luna detector uses infrared to detect motion. Additionally, it has a lighting feature. This manual applies to the detector with electronics version 2.1.

1. Features

- Motion detection using passive infrared sensor (PIR).
- Maximum coverage area: 15 m x 14 m 108° (Fig. 13).
- Digital motion detection algorithm.
- Digital temperature compensation.
- Adjustable detection sensitivity.
- Ability to replace the lens with a curtain or long-range one.
- Built-in end-of-line resistors (2EOL: 2 x 1.1 k Ω).
- Set of LEDs for lighting.
- Remote-controlled lighting.
- LED indicator.
- Supply voltage control.
- Tamper protection against enclosure opening.
- Adjustable mounting bracket included.

2. Description

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

Lighting feature

The light sources are white LEDs. The – LED + terminals are used to control the lighting. The lighting can be controlled by a control panel output that must be programmed as needed. If the lighting is to be turned on for a specified period of time after violating the detector:

- INTEGRA / INTEGRA Plus: use the output programmed as “MONO switch”,
- PERFECTA / VERSA: use the output programmed as “Controlled”.

Supply voltage control

When the voltage drops below 9 V (\pm 5%) for more than 2 seconds, the detector will report trouble. The trouble is indicated by the alarm output and the LED indicator turning on. The signaling continues for the duration of the trouble.

LED indicator

The LED indicator indicates:

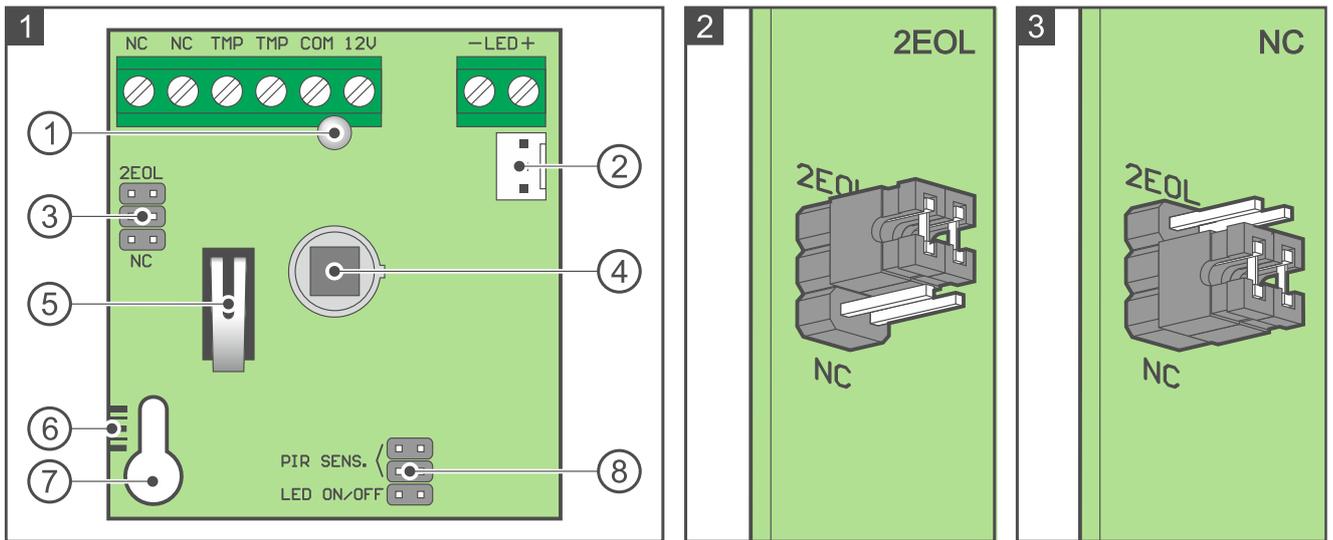
- warm-up – flashing for 45 seconds;
- alarm – ON for 2 seconds;
- trouble (low supply voltage) – ON for entire duration of the trouble.

You can enable / disable the LED indicator using the LED ON/OFF pins.

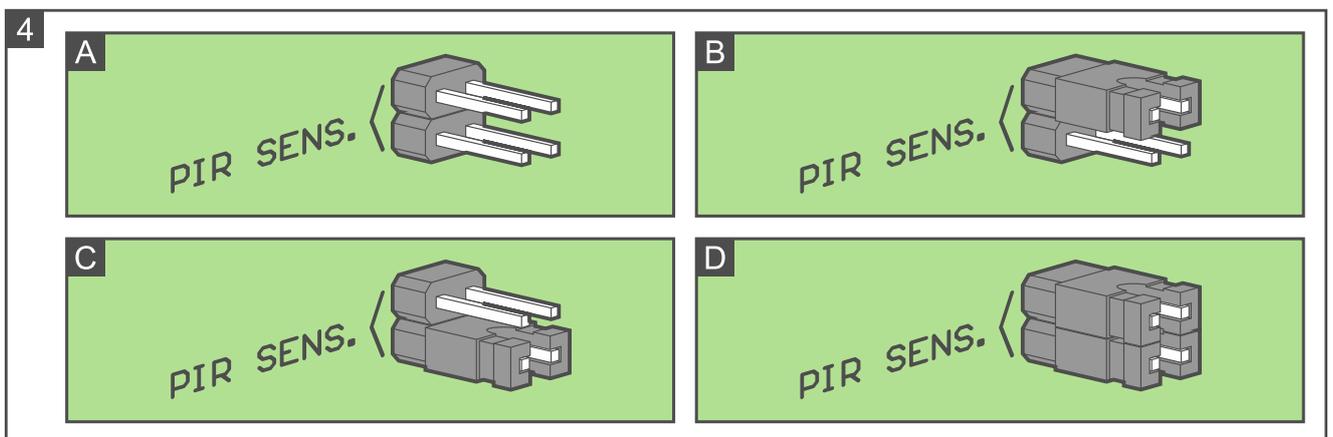
3. Electronics board



Do not touch the pyroelectric sensor, so as not to soil it.



- ① red LED indicator.
- ② connector for the LEDs that provide the lighting feature.
- ③ pins for configuration of the detector outputs. Available settings are shown in the figures:
 - 2 – built-in resistors are used – connect the detector outputs as in Fig. 11.
 - 3 – built-in resistors are not used – connect the detector outputs as in Fig. 12.
- ④ PIR sensor (dual element pyrosensor).
- ⑤ tamper switch (NC).
- ⑥ scale for positioning of pyroelectric sensor against the lens (Fig. 10).
- ⑦ fixing screw hole.
- ⑧ detector configuration pins:
 - PIR SENS.** - selecting the PIR sensor detection sensitivity – see: Fig. 4 (A – low sensitivity, B and C – medium sensitivity, D – high sensitivity).
 - LED ON/OFF** – enabling / disabling the LED indicator (jumper on – LED indicator enabled; jumper off – LED indicator disabled).



Terminals

- NC** - alarm output (NC relay).
- TMP** - tamper output (NC).
- COM** - common ground.
- 12V** - power input.

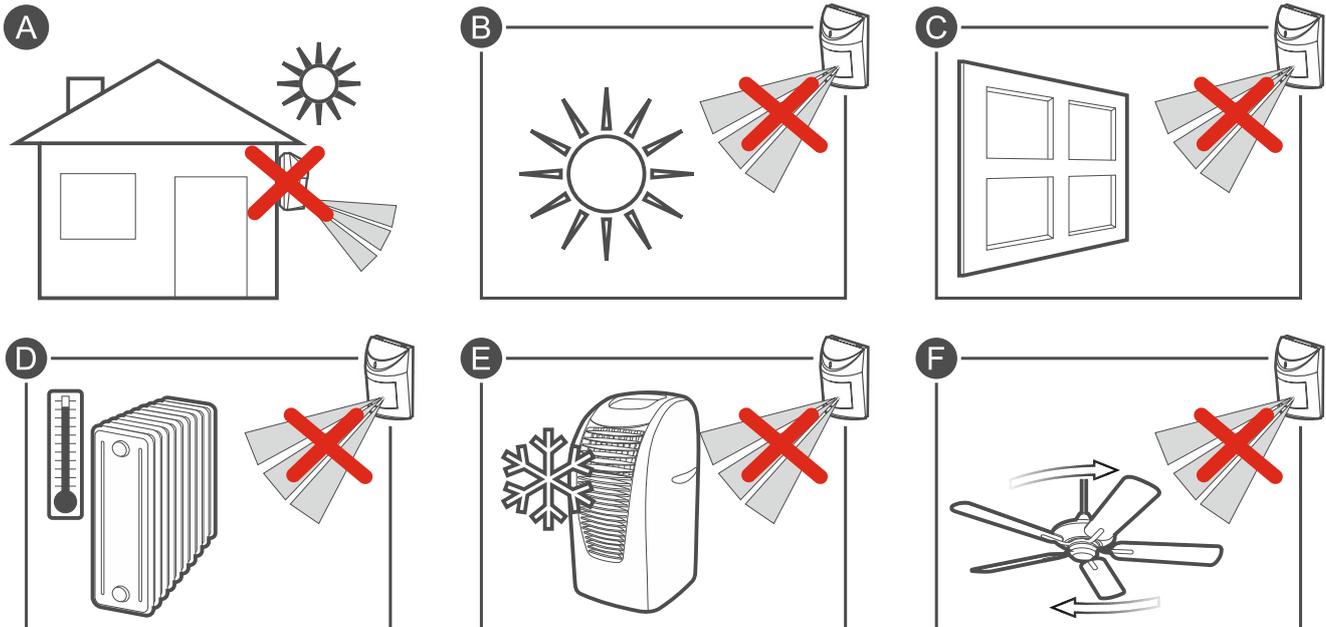
- **LED +** - control of LED lighting. If the lighting is to be controlled by a low-current OC output, connect it to the – terminal, and to the + terminal connect +12 VDC voltage. If the lighting is to be controlled by a high-current output, connect it to the + terminal, and to the + terminal connect the common ground.

4. Installation



Disconnect power before making any electrical connections.

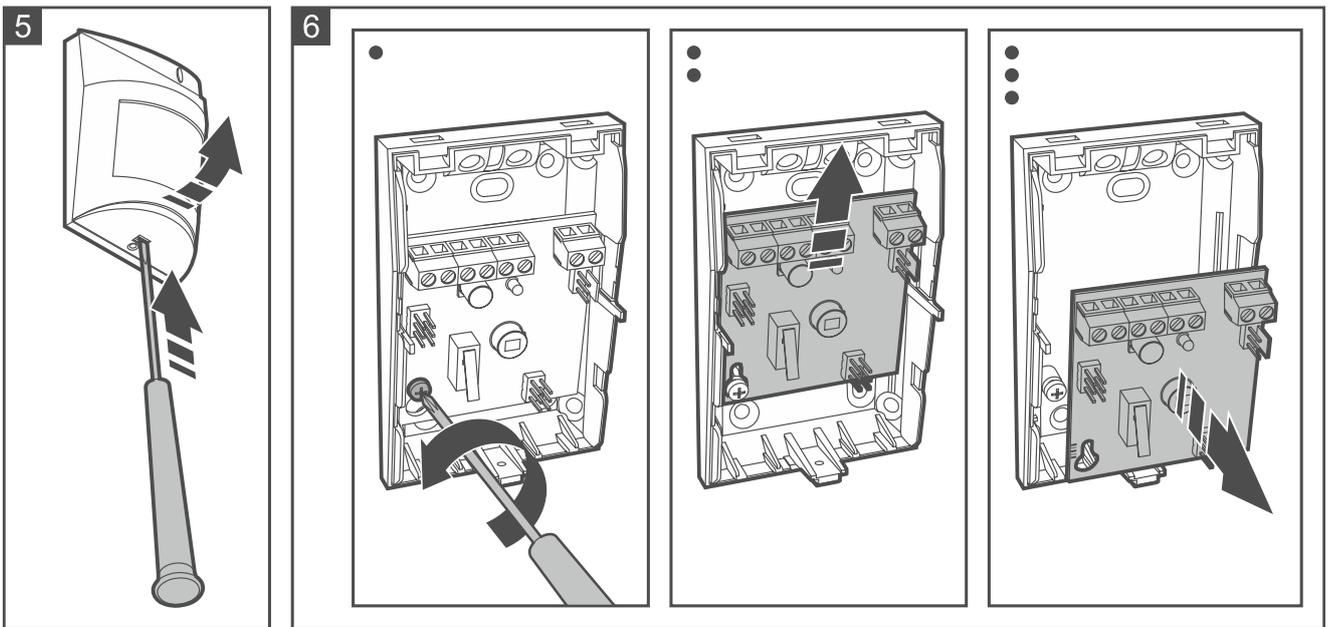
Tips for installation



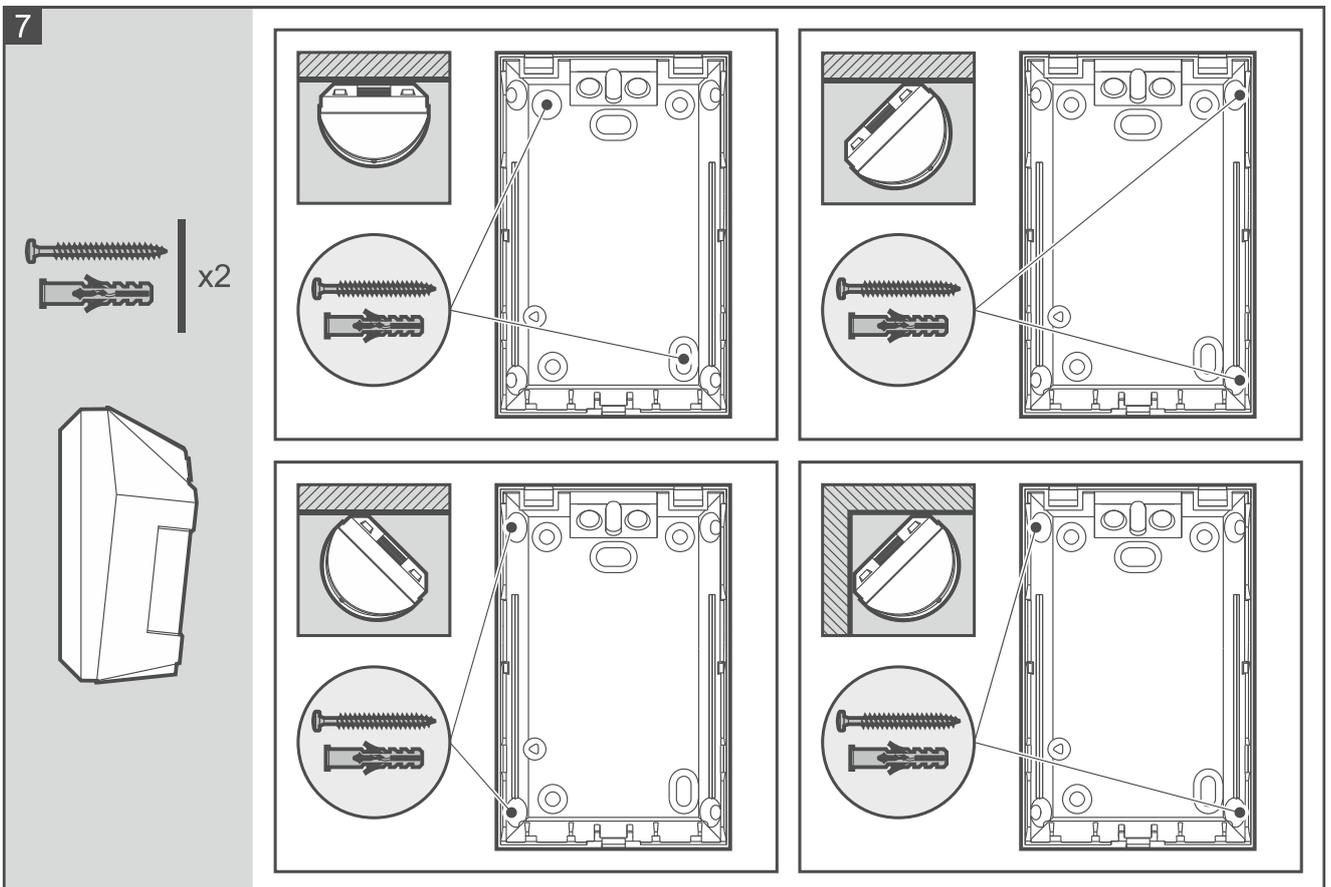
- The detector should be installed indoors, in spaces with normal air humidity.
- Do not install the detector outdoors (A).
- Do not aim the detector directly at sunlight or at surfaces reflecting sunlight (B).
- Do not aim the detector at a window because it may detect motion on the outside (C).
- Do not point the detector towards heat sources (D), air conditioners (E) or fans (F).
- No object should obstruct the detector's field of view.
- Install the detector at 2.4 m height.

Mounting

1. Open the enclosure (Fig. 5).
2. Disconnect the LEDs for lighting from the connector on the electronics board.
3. Remove the electronics board (Fig. 6).



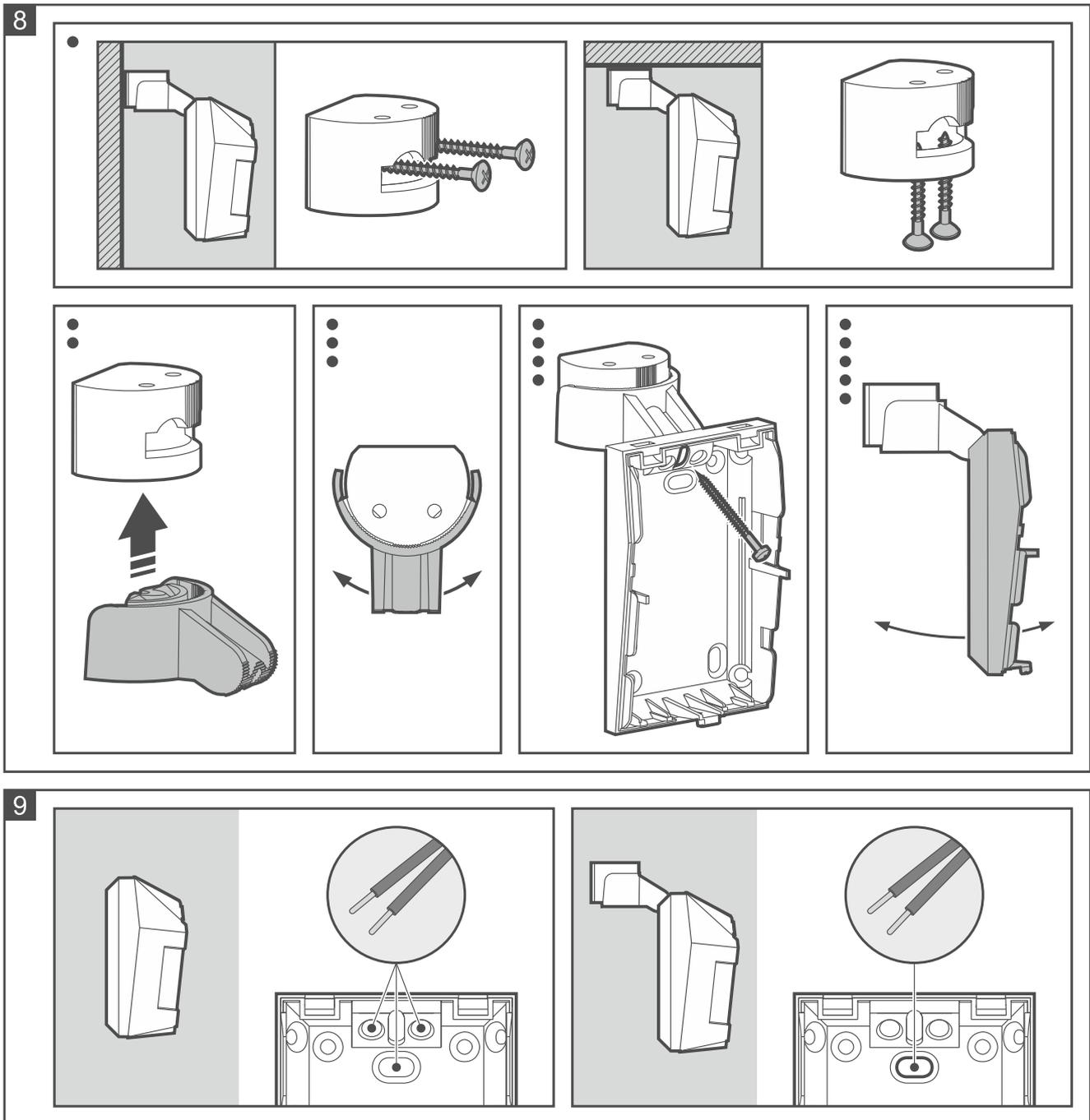
4. Make the openings for screws (Fig. 7 and 8) and cable (Fig. 9) in the enclosure base.



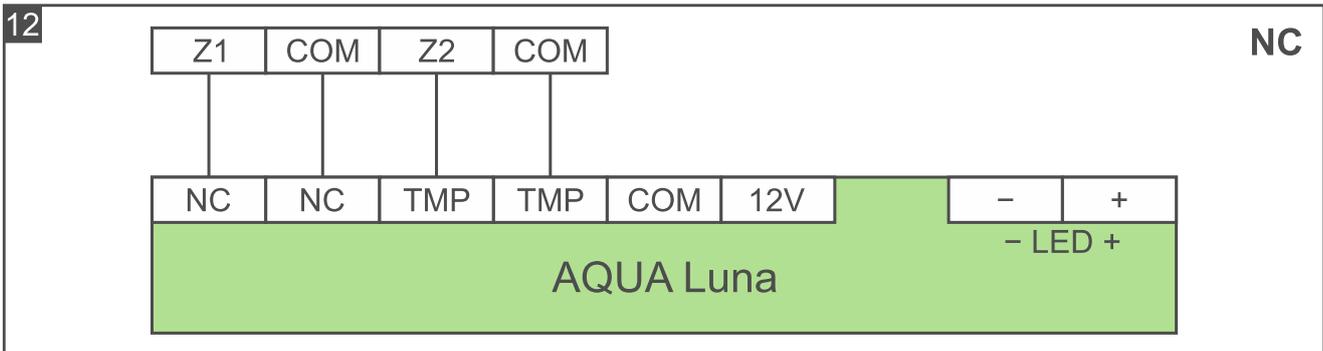
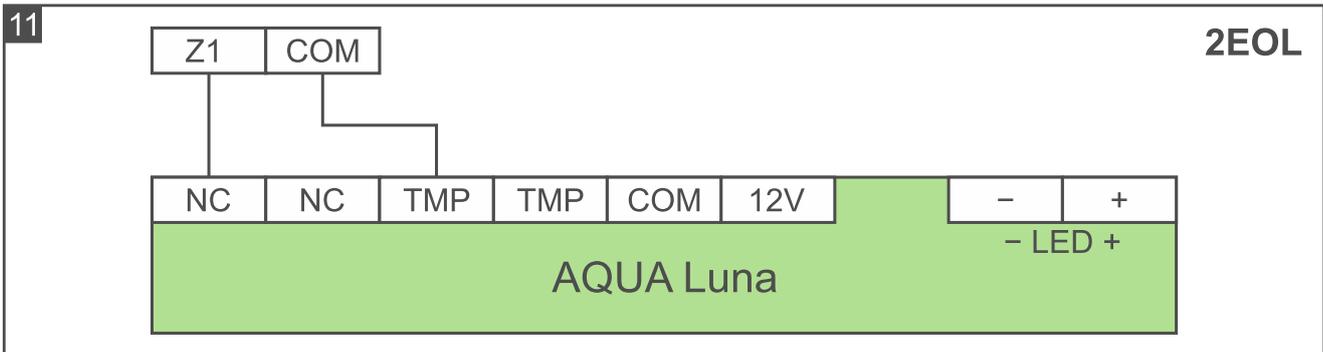
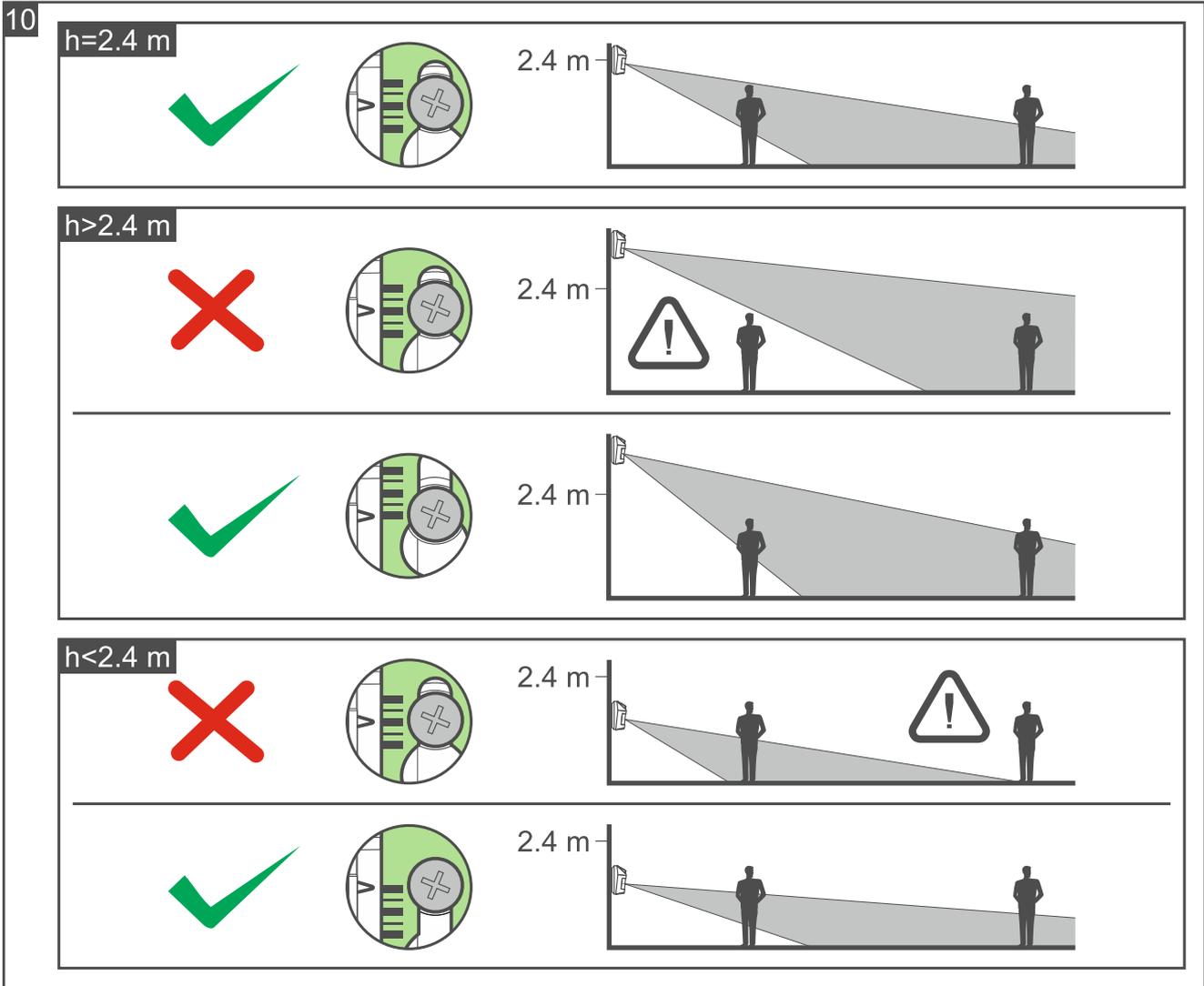
5. Pass the cable through the prepared opening.
6. Secure the enclosure base to the wall (Fig. 7) or a bracket fastened with screws to the wall or ceiling (Fig. 8). The wall plugs provided with the detector are intended for concrete or brick. For other types of surface (drywall, styrofoam), use other appropriately selected wall plugs.



If the detector is to comply with the EN 50131-2-2 requirements, do not install it on the mounting bracket.



7. Fasten the electronics board. The scale next to the mounting screw hole facilitates positioning of the electronics board, depending on the detector installation height (Fig. 10).
8. Connect the wires to the corresponding terminals.
9. Configure the detector settings using jumpers.
10. Connect the lighting LEDs to the connector on the electronics board.
11. Close the enclosure.



5. Start-up and walk test



The LED indicator should be enabled during the walk test (see: "LED indicator").

1. Power on the detector and wait until the LED indicator stops flashing.
2. Check if moving within the detector coverage area will make the LED indicator turn ON. Figure 13 shows the maximum coverage area of the detector mounted at a height of 2.4 m.
3. If needed, readjust the sensitivity (Fig. 2) and check the detector operation.

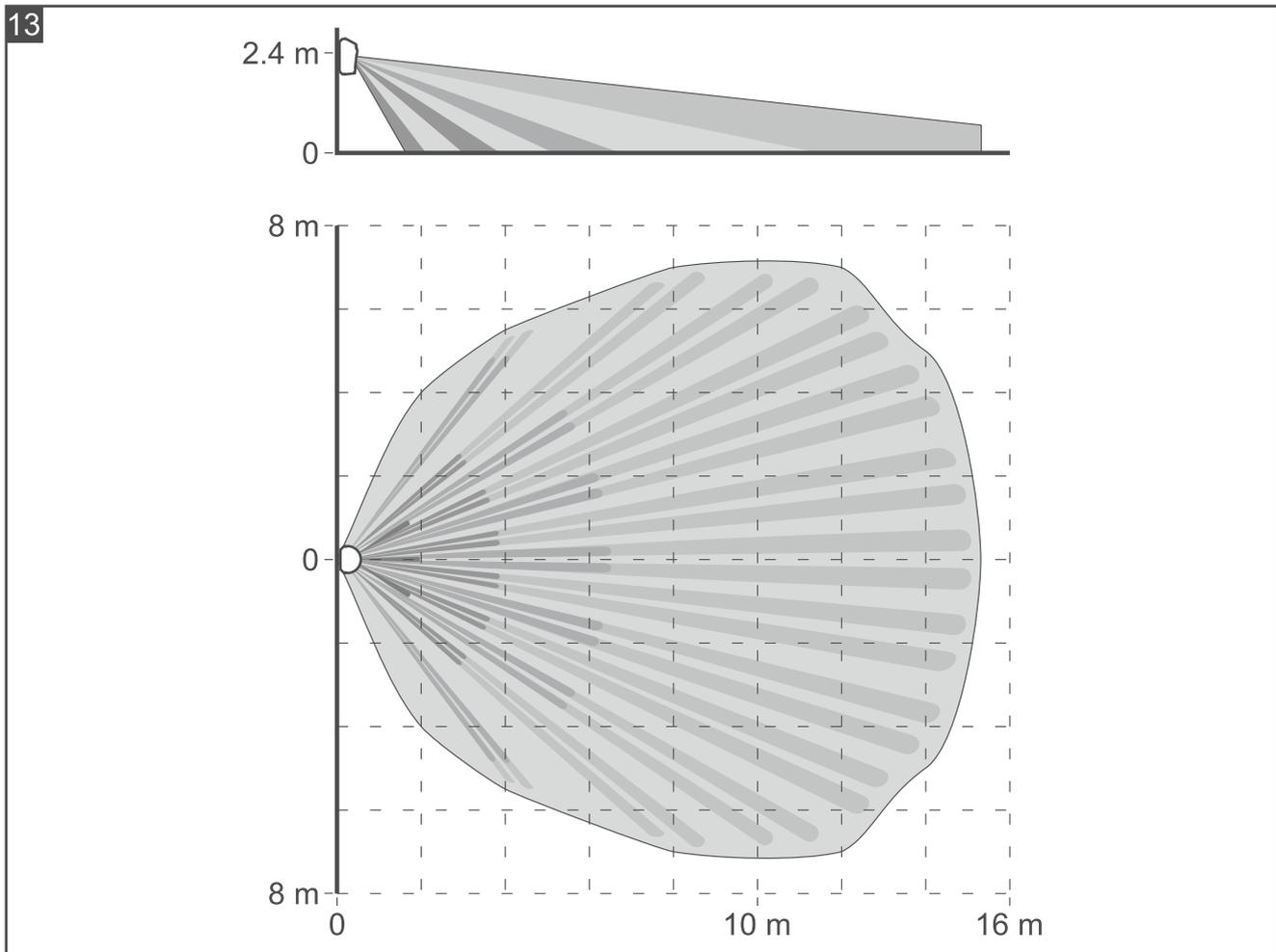


Figure 13 shows the coverage area of the detector with the factory-installed wide-angle EWA lens. This lens can be replaced with a different one. SATEL offers the VB curtain lens (maximum range 22.5 m; main beam 2.2 m wide at the end of range) and the LR long-range lens with creep zone protection (maximum range 30 m; main beam 3 m wide at the end of range).

6. Specifications

Supply voltage	12 VDC \pm 15%
Standby current consumption	8 mA
Maximum current consumption	
by detector	10 mA
by lighting.....	12 mA
EOL resistors	2 x 1.1 k Ω

Outputs

alarm (NC relay, resistive load)	40 mA / 24 VDC
tamper (NC).....	100 mA / 30 VDC
Relay contact resistance.....	26 Ω
Detectable speed.....	0.3...3 m/s
Alarm signaling period	2 s
Warm-up period	45 s
Recommended installation height.....	2.4 m
Maximum coverage area	15 m x 14 m, 108°
Complied with standards.....	EN50130-5, EN50131-1, EN50131-2-2, EN50130-4
Security grade according to EN50131-2-2	Grade 2
Environmental class according to EN50130-5	II
Operating temperature range.....	-10...+55 °C
Maximum humidity	93±3%
Dimensions	63 x 96 x 49 mm
Weight.....	92 g