Satel®

SLIM-PIR

Digital passive infrared detector
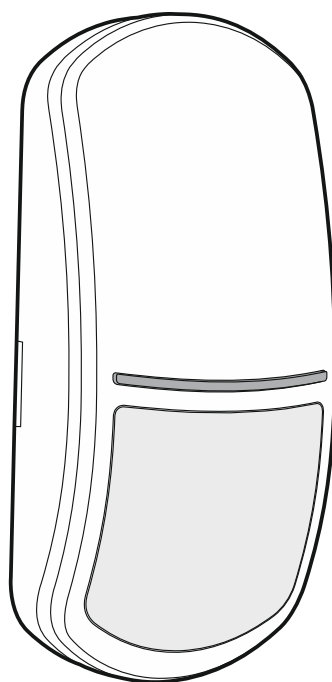
CE

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.
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http://www.satel.eu

The declaration of conformity may be consulted at www.satel.eu/ce

The following symbols may be used in this manual:

i - note,

⚠ - caution.

CONTENTS

The SLIM-PIR detector detects movement in the protected area. This manual applies to the detector with electronics version F.

1. Features

- Motion detection with passive infrared sensor (PIR).
- Adjustable detection sensitivity.
- Digital motion detection algorithm.
- Digital temperature compensation.
- Wide-angle lens designed specially for SLIM detectors.
- Option to replace the lens with a curtain or long range one.
- Built-in end-of-line resistors (2EOL: 2 x 1.1 kΩ).
- LED indicator.
- Selectable color for alarm indication by LED (4 colors available).
- Remote LED enable/disable.
- Supervision of motion detection system and supply voltage.
- Tamper protection against opening the enclosure.

2. Description

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

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 signal a trouble. The trouble is indicated by the alarm relay activation and the LED indicator coming on. Signaling will continue as long as the trouble exists.

LED indicator

The LED indicates:

- warm-up – flashing red for about 30 seconds;
- alarm – ON for 2 seconds (default color: blue);
- trouble – steady ON for entire duration of the trouble (the same color of lighting as in case of alarm).

You can change the color to be used to indicate alarm / trouble (see "Configuring LED indicator settings").

Enabling the LED by using a jumper

If you put a jumper across the LED pins, the LED will be enabled, i.e. it will indicate the above described events (the LED can't be enabled/disabled remotely). If you do not put a jumper across the pins, the LED will be disabled, but it can be enabled/disabled remotely.

Remote LED enable/disable

The LED terminal is provided to allow remote LED enable/disable. When the terminal is connected to common ground, the LED is enabled. When the terminal is disconnected from common ground, the LED is disabled.

If the detector is used in the INTEGRA / INTEGRA Plus alarm system, you can connect to the terminal an OC type control panel output programmed e.g. as "Zone test status" or "BI switch".

3. Electronics board

⚠ **Do not touch the pyroelectric sensor, so as not to soil it.**
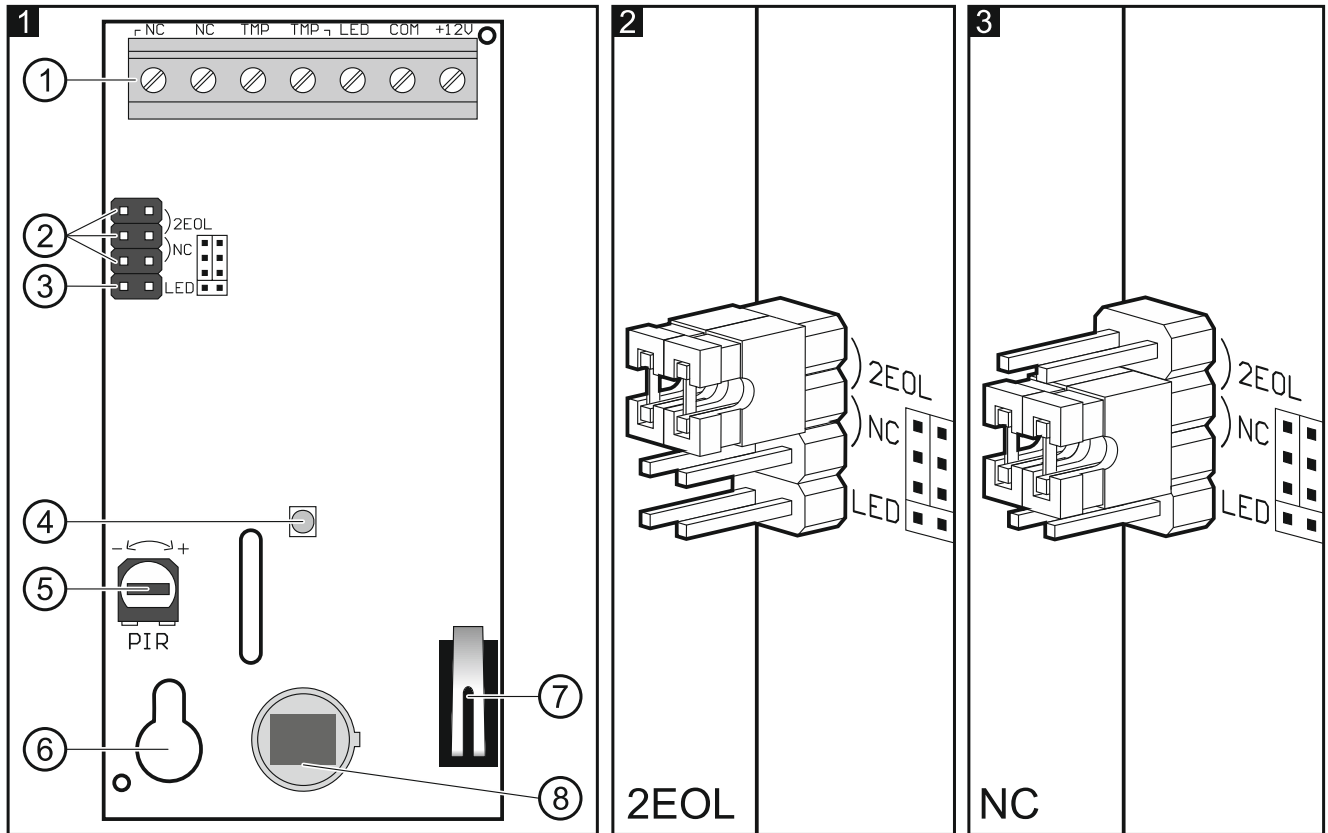
① terminal block:

    NC - alarm output (NC relay).

    TMP - tamper output (NC).

    LED - enable/disable the LED indicator.

    COM - common ground.

    +12V - power input.

② 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 shown in Fig. 9.

    3 – built-in resistors are not used – connect the detector outputs as shown in Fig. 8.

③ pins to enable/disable the LED indicator.

④ LED indicator.

⑤ potentiometer for adjustment of PIR sensor sensitivity.

⑥ fixing screw hole.

⑦ tamper switch.

⑧ PIR sensor (dual element pyrosensor).

4. Selecting a mounting location
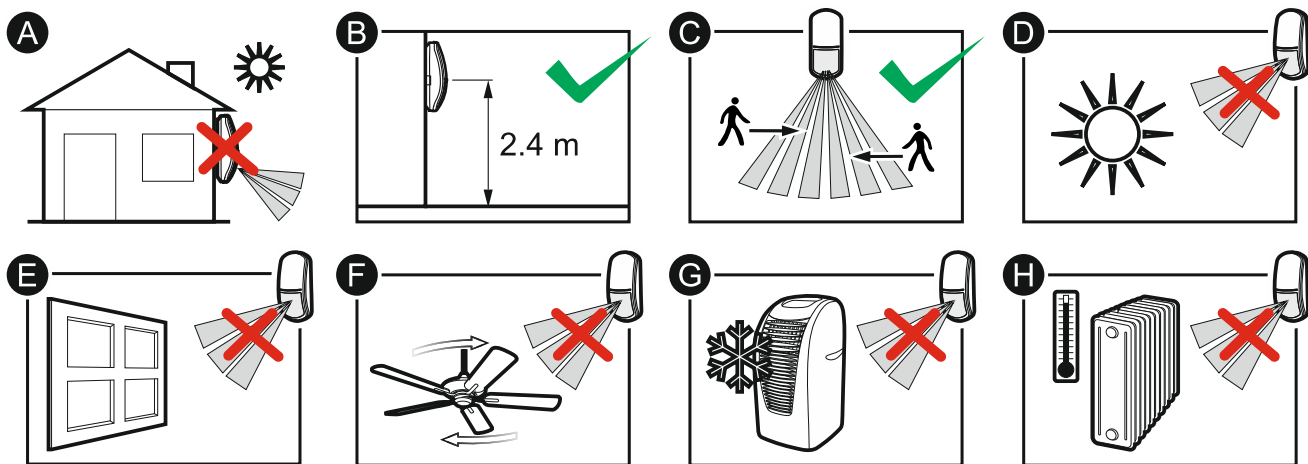
- Do not install the detector outdoors (A).
- Install the detector at the recommended height (B).
- When choosing the installation location, keep in mind that the detector performance will be the best where the expected direction of the intruder movement will be across the coverage pattern (C).
- Do not install the detector in places where it will be exposed to direct sunlight (D) or light reflected from other objects (E).
- Do not point the detector towards fans (F), air conditioners (G) or heat sources (H).

5. Installation

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

1. Remove the front cover (Fig. 4).
2. Remove the electronics board (Fig. 5).
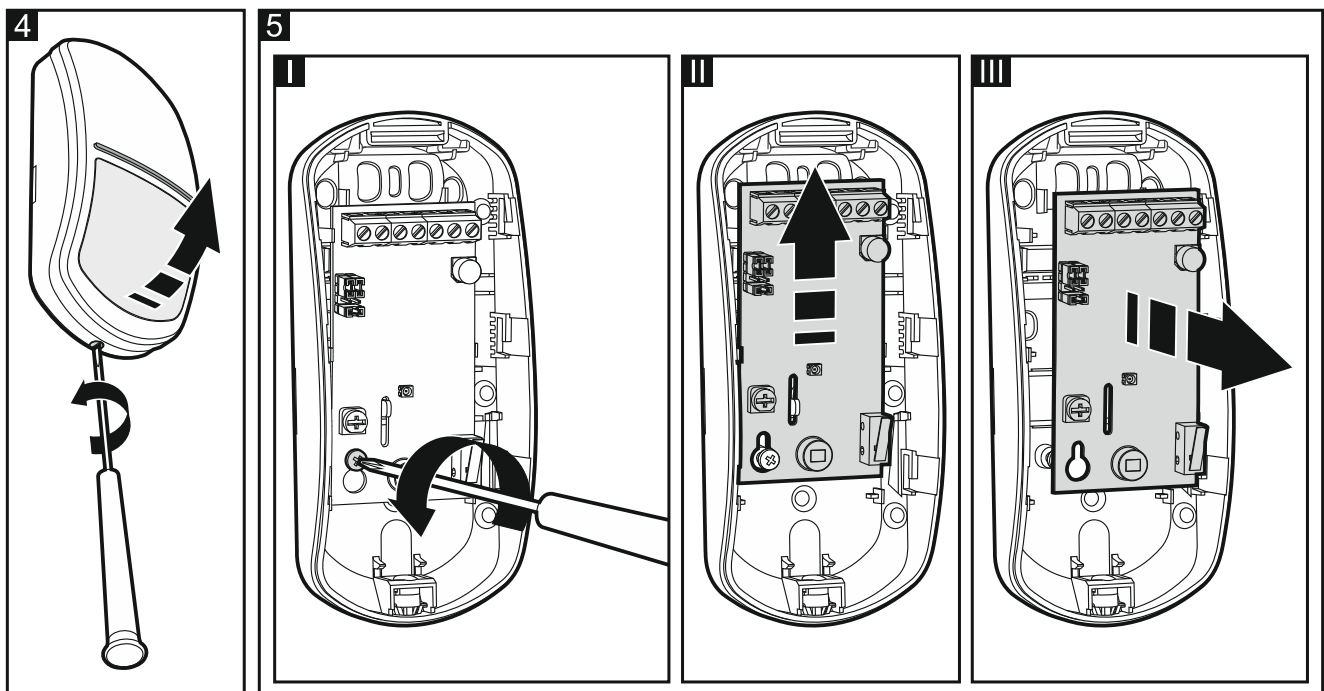
3. Make the openings for screws (Fig. 6 or Fig. 7) and cable in the enclosure base.

4. Pass the cable through the prepared opening. If the detector is to be mounted on the bracket, run the cable as shown in Fig. 7. The BRACKET D is available in SATEL's product range.

5. Secure the enclosure base to the wall (Fig. 6) or a bracket fastened with screws to the wall or ceiling (Fig. 7). The wall plugs (anchors) delivered with the device are intended for concrete, brick, etc. For other types of surface (drywall, styrofoam), use the appropriately selected wall plugs.
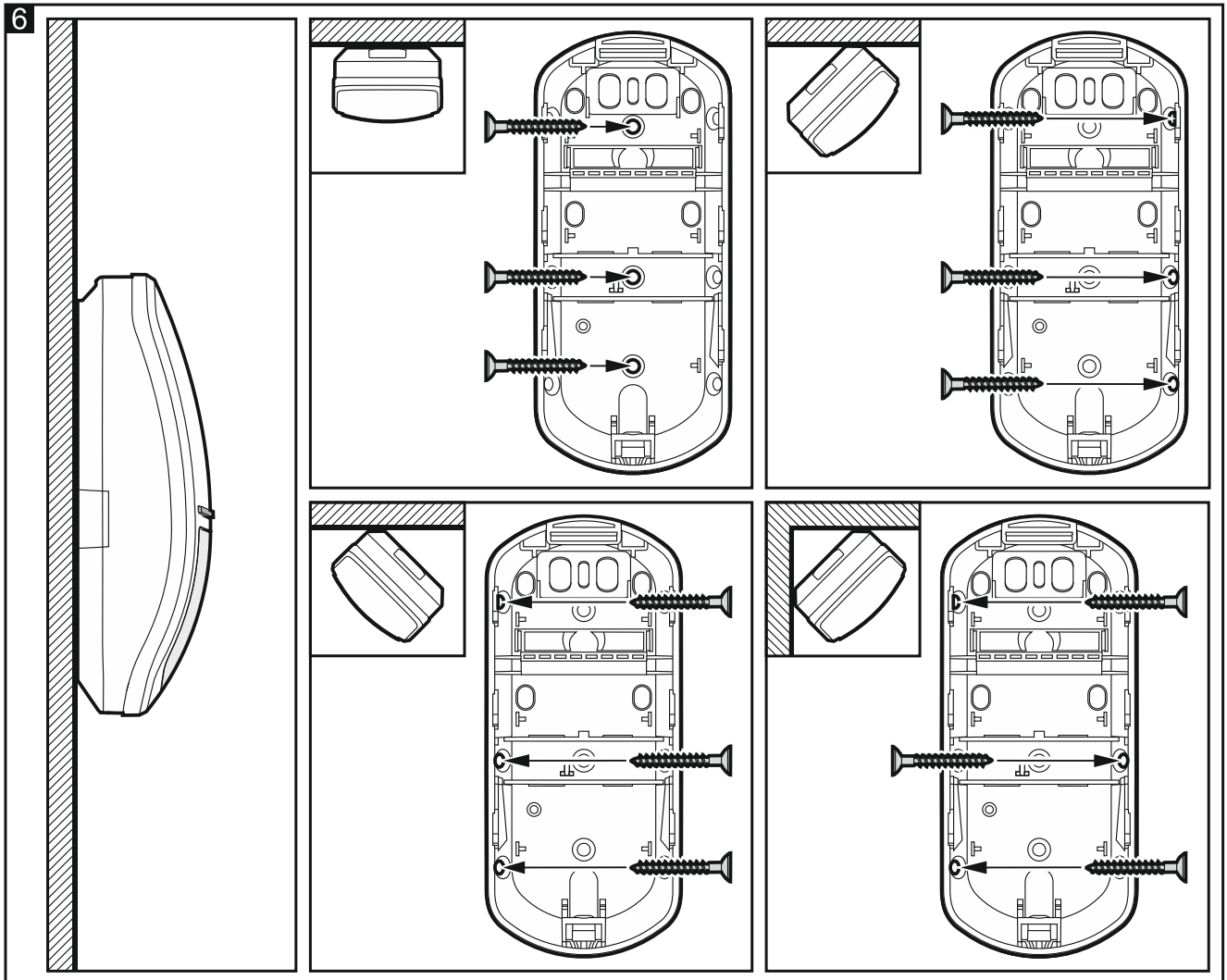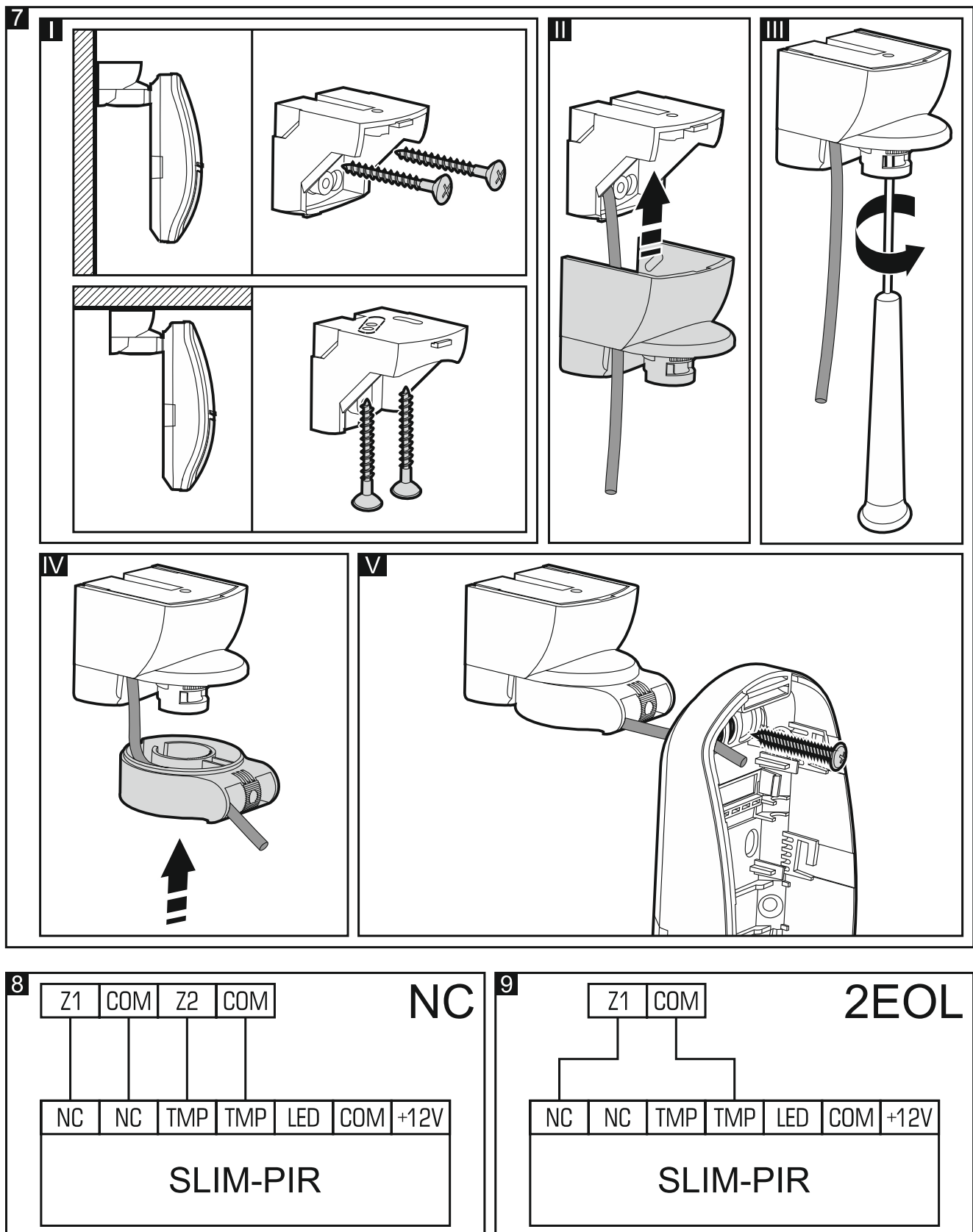

6. Fasten the electronics board.

7. Connect the wires to the corresponding terminals.

8. Configure the detector settings.

i *First, configure the LED indicator settings ("Configuring LED indicator settings"). If you want to change these settings after you have configured the sensitivity of PIR sensor, you must repeat the sensitivity configuration process.*

9. Replace the cover.

Z1	COM	Z2	COM			NC
NC	NC	TMP	TMP	LED	COM	+12V

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Z1	COM					2EOL
NC	NC	TMP	TMP	LED	COM	+12V

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6. Configuring LED indicator settings

1. Power off the detector (if it is powered on).
2. Put a jumper across the LED pins.
3. Power on the detector. The LED will start flashing red to indicate the detector warm-up.

4. Within 10 seconds from power on, remove the jumper from the LED pins to start the LED configuration mode. The LED will start flashing in the color currently selected with the PIR potentiometer (the color does not have to be the same as that used so far for alarm/trouble indication by the LED).

5. Use the PIR potentiometer to select a new color for alarm/trouble indication.

6. Put a jumper across the LED pins. The settings will be saved. The LED configuration mode will be terminated.

i | *If you do not put a jumper across the LED pins, the LED configuration mode will end automatically 20 minutes after the last operation. The changes will not be saved.*

7. Start-up and walk test

i | *The LED should be enabled during the walk test (see "LED indicator").*

1. Power on the detector. The LED will be flashing red for 30 seconds to indicate the detector warm-up.

2. When the LED stops flashing, check that moving within the detector coverage area will make the LED to turn on. Figure 10 shows the maximum coverage area of a detector installed at a height of 2.4 m.
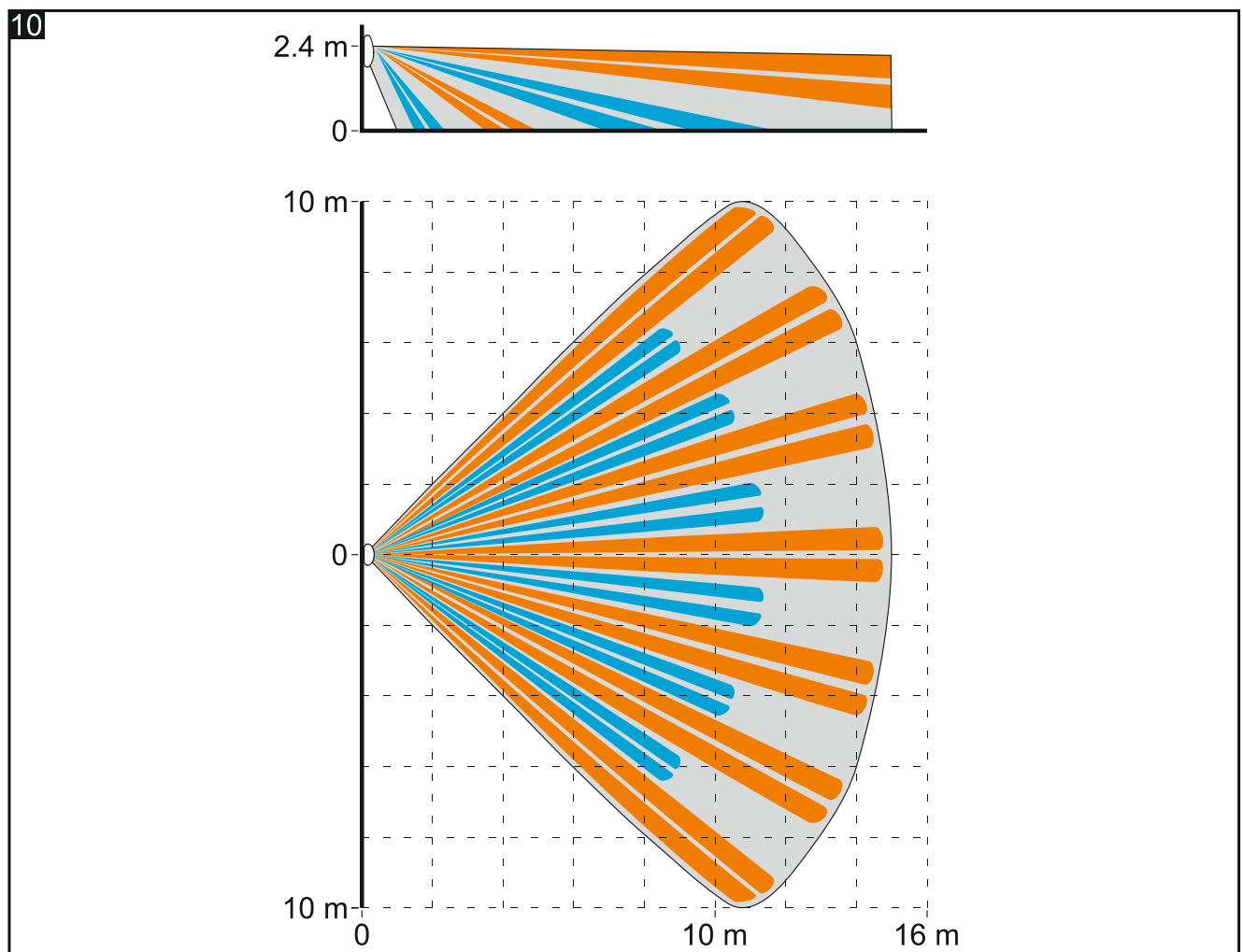
i | *Figure 10 shows the coverage area of the SLIM-PIR detector with a wide-angle lens (WD), which is installed in the detector by default. You can use the enclosure cover*

with another lens. The SATEL product range includes covers with a curtain lens (CT) and a long-range lens (LR).

8. Specifications

Supply voltage .... 12 VDC ±15%
Standby current consumption .... 8 mA
Maximum current consumption ....23 mA
EOL resistors ....2 x 1.1 kΩ
Outputs
    alarm (NC relay, resistive load)... 40 mA / 24 VDC
    tamper (NC) .... 100 mA / 30 VDC
Detectable speed .... 0.3...3 m/s
Alarm signaling period.. 2 s
Warm-up period .... 30 s
Recommended installation height ....2.4 m
Coverage area .... 15 m x 20 m, 90°
Security grade according to EN 50131-2-2 .... Grade 2
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 .... 62 x 137 x 42 mm
Weight.. 100 g

5 year warranty from date of manufacture