MPD-310 Pet

**Wireless passive infrared detector
with pet immunity up to 20 kg**

CE
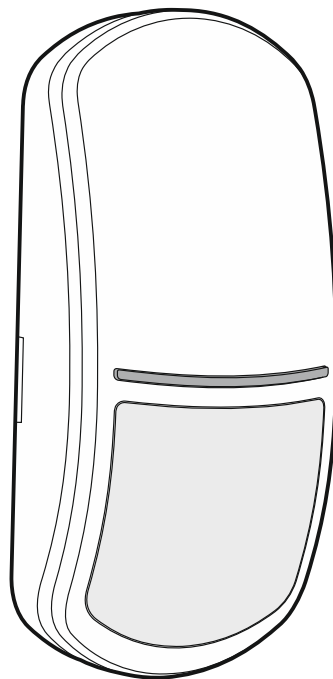
IMPORTANT

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.

The rating plate of the device is located on the enclosure base.

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http://www.satel.eu

Hereby, SATEL sp. z o.o. declares that the radio equipment type MPD-310 Pet is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.satel.eu/ce

The following symbols may be used in this manual:

i - note;

⚠   - caution.

CONTENTS

The MPD-310 Pet detector detects motion in a protected area. The detector is supported by:

- PERFECTA alarm control panels (WRL models),
- VERSA-MCU controller,
- MTX-300 controller,
- MICRA alarm module (firmware version 2.02 or newer).

This manual applies to the detector with firmware version 1.2.

1 Features

- Motion detection with passive infrared sensor (PIR).
- Wide-angle lens with the maximum coverage area of 14x12 m.
- Digital motion detection algorithm.
- Digital temperature compensation.
- Pet immunity up to 20 kg.
- Encrypted radio transmissions in the 433 MHz frequency band.
- LED indicators.
- Supervision of motion detection system.
- Battery status control.
- Tamper protection against enclosure opening and removal from mounting surface.

2 Description

Radio transmissions

Every 15 minutes, the detector sends information about its state (periodical transmission). Additional radio transmissions take place as a result of alarm.

Alarms

The detector will report alarm:

- after detecting a motion in the protected area,
- after opening the tamper switch (tamper alarm).

Operating modes

Normal – each alarm results in a radio transmission.

Energy save – information about the alarm triggered by motion detection is sent not more often than every 3 minutes (the next alarms triggered within 3 minutes from sending the information about the alarm will not result in a radio transmission). Information about tamper alarm is always sent.

You can set the operating mode using the jumper (Fig. 2).

Test mode

For 20 minutes after battery is inserted or tamper switch is opened, the detector operates in a special mode that allows you to test the detector. In the test mode, the LEDs are enabled and the detector operates like in the "Normal" mode (regardless of which operating mode was set with the jumper).

LEDs

The LEDs are flashing for about 15 seconds from inserting the battery, signaling the warm-up of the detector. The LEDs are also enabled in the test mode, in which they indicate:

- periodical transmission – short flash (80 milliseconds),
- alarm – ON for 2 seconds,
- motion detection system failure – 2 flashes every 40 seconds.

Supervision of motion detection system

When the motion detection system starts malfunctioning, the detector will report an alarm during periodical transmission. The alarm will keep going until the fault is cleared (long violation).

Battery status control

When the battery voltage is below 2.75 V, information about low battery is sent during each transmission.

Electronics module

⚠ **Do not remove the plastic cover from the circuit board to prevent damage to the components located on the board.**

Do not touch the pyroelectric sensor, so as not to soil it.
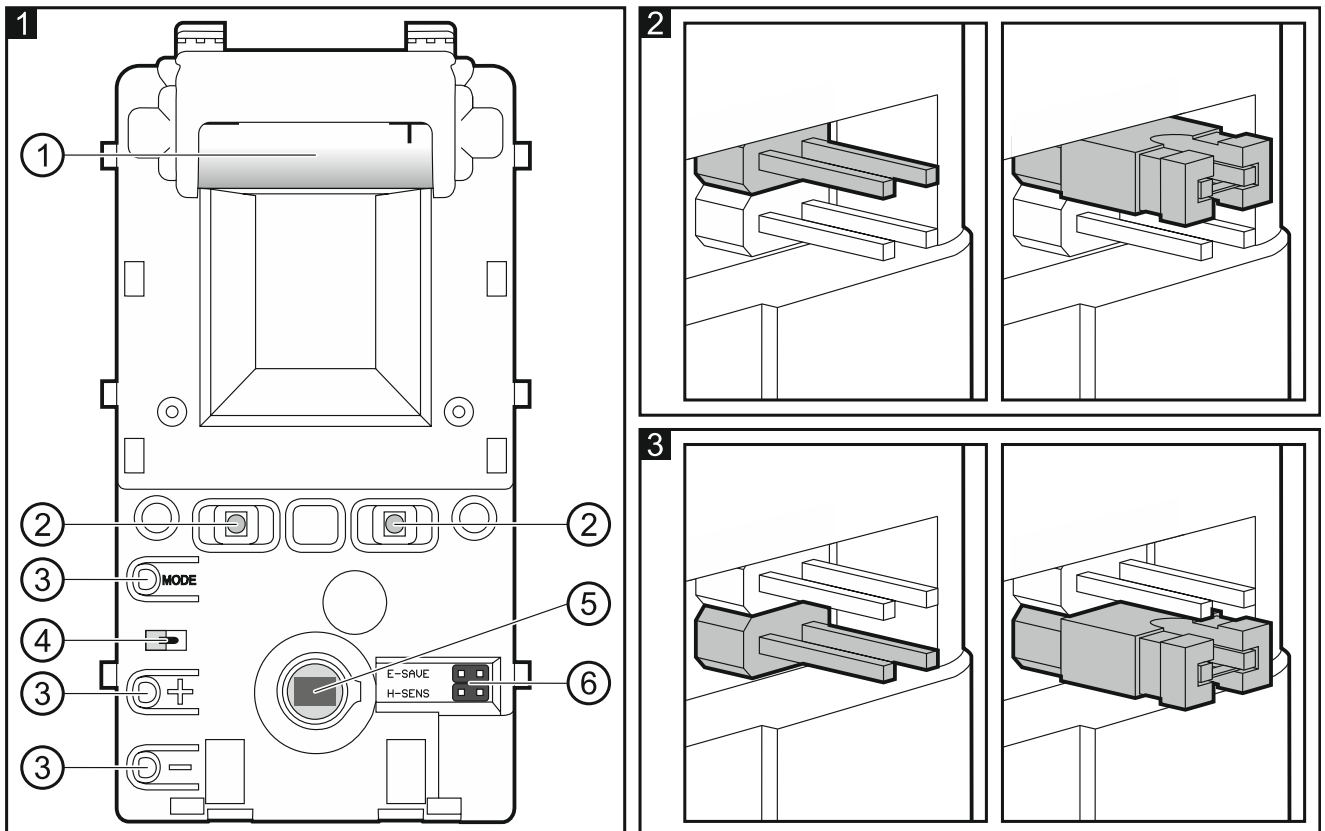
① CR123A lithium battery.

② LED indicator.

③ element not used.

④ tamper switch activated by cover removal.

⑤ PIR sensor (quad element pyrosensor).

⑥ detector configuration pins. For how to configure the detector, see the figures:

2 – operating mode selection:

jumper off – normal mode;

jumper on – energy save mode.

3 – sensitivity selection:

jumper off – normal sensitivity (Fig. 4);

jumper on – high sensitivity (Fig. 5).

On the other side of the electronics module there is a tamper switch activated by removing the detector from the wall.
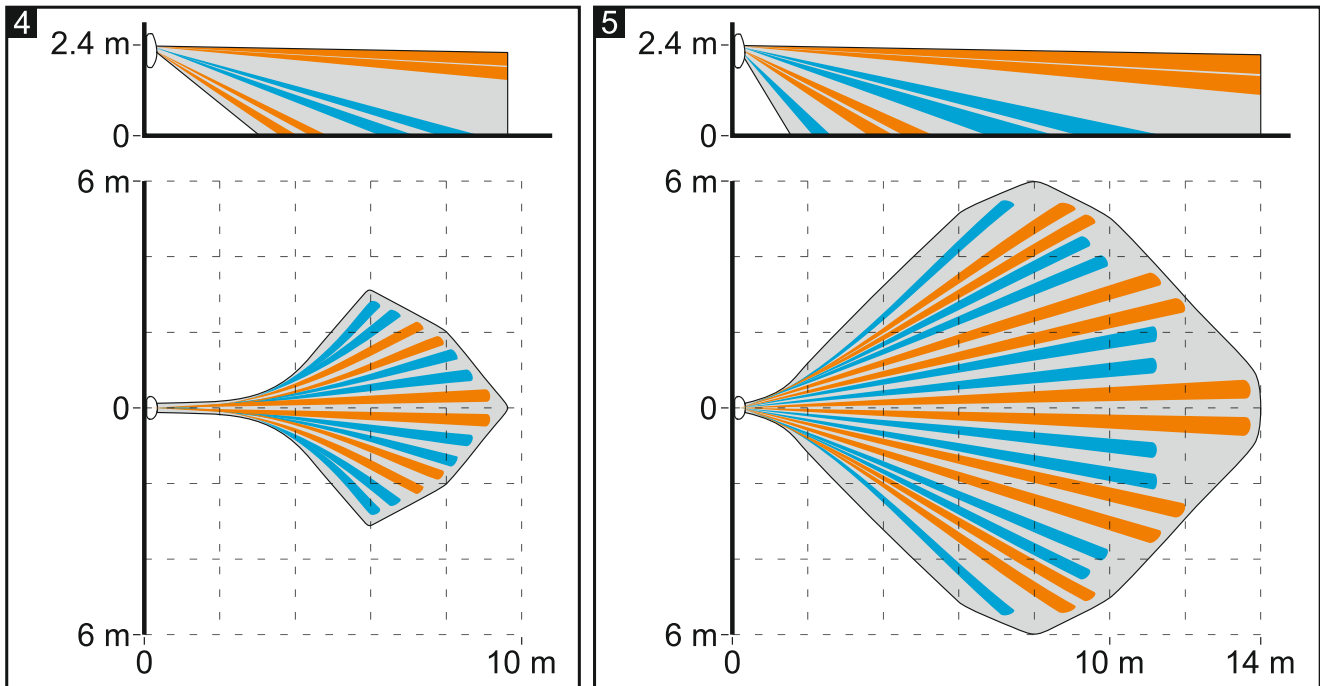
3 Selecting a mounting location
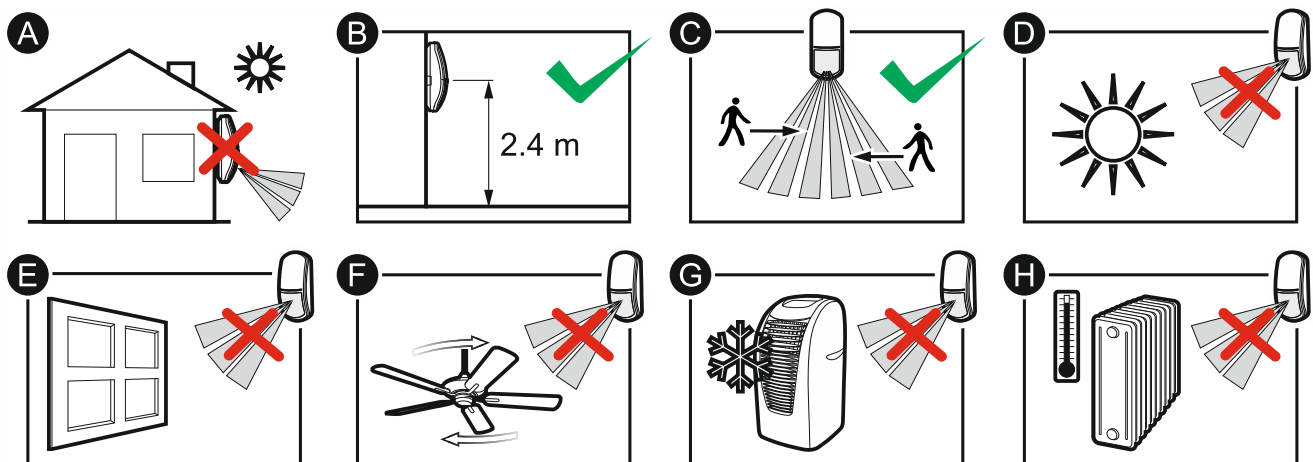
- Do not install the detector outdoors (A).
- Install the detector at the recommended height (B).
- When choosing the installation location, keep in mind that the detector performance will be the best where the expected direction of the intruder movement will be across the coverage pattern (C).

- 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 conditioner (G) or heat sources (H).

4 Installation

There is a danger of battery explosion when using a different battery than recommended by the manufacturer, or handling the battery improperly.

Be particularly careful during installation and replacement of the battery. The manufacturer is not liable for the consequences of incorrect installation of the battery.

The used batteries must not be discarded, but should be disposed of in accordance with the existing rules for environment protection.

If the detector is to be pet immune, it must not be mounted on the bracket and must be installed at a height of 2.4 m with no inclination from the vertical.

1. Remove the front cover (Fig. 6).
2. Configure the detector using the jumpers.
3. Move the electronics module down to unlock it, and then remove it from the enclosure base (Fig. 7).
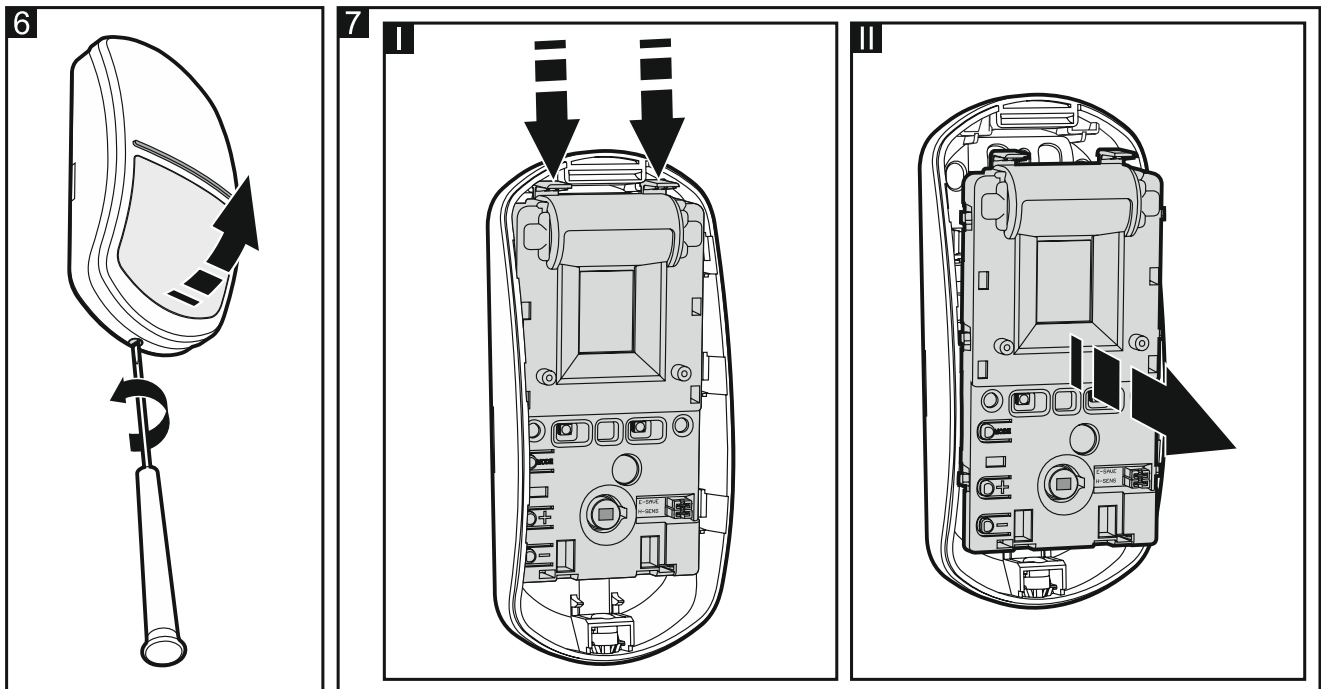
4. Install the battery in the detector.
5. Register the detector in the system (see: PERFECTA / VERSA control panel installer manual, MTX-300 controller manual or MICRA module manual).

The detector is identified as MPD-300.

6. Place the electronics module in the enclosure base and then move it up to lock it.
7. Replace the cover.
8. Place the detector at the location of its future installation.

9. Open the enclosure but do not remove the front cover. If the transmission from the detector is received, continue with the installation. If the transmission from the detector is not received, select a different mounting location and repeat the test. Sometimes, it is sufficient to shift the detector ten or twenty centimeters.

10. Remove the front cover.

11. Remove the electronics module (Fig. 7).

12. Make the openings for screws in the enclosure base (Fig. 8).
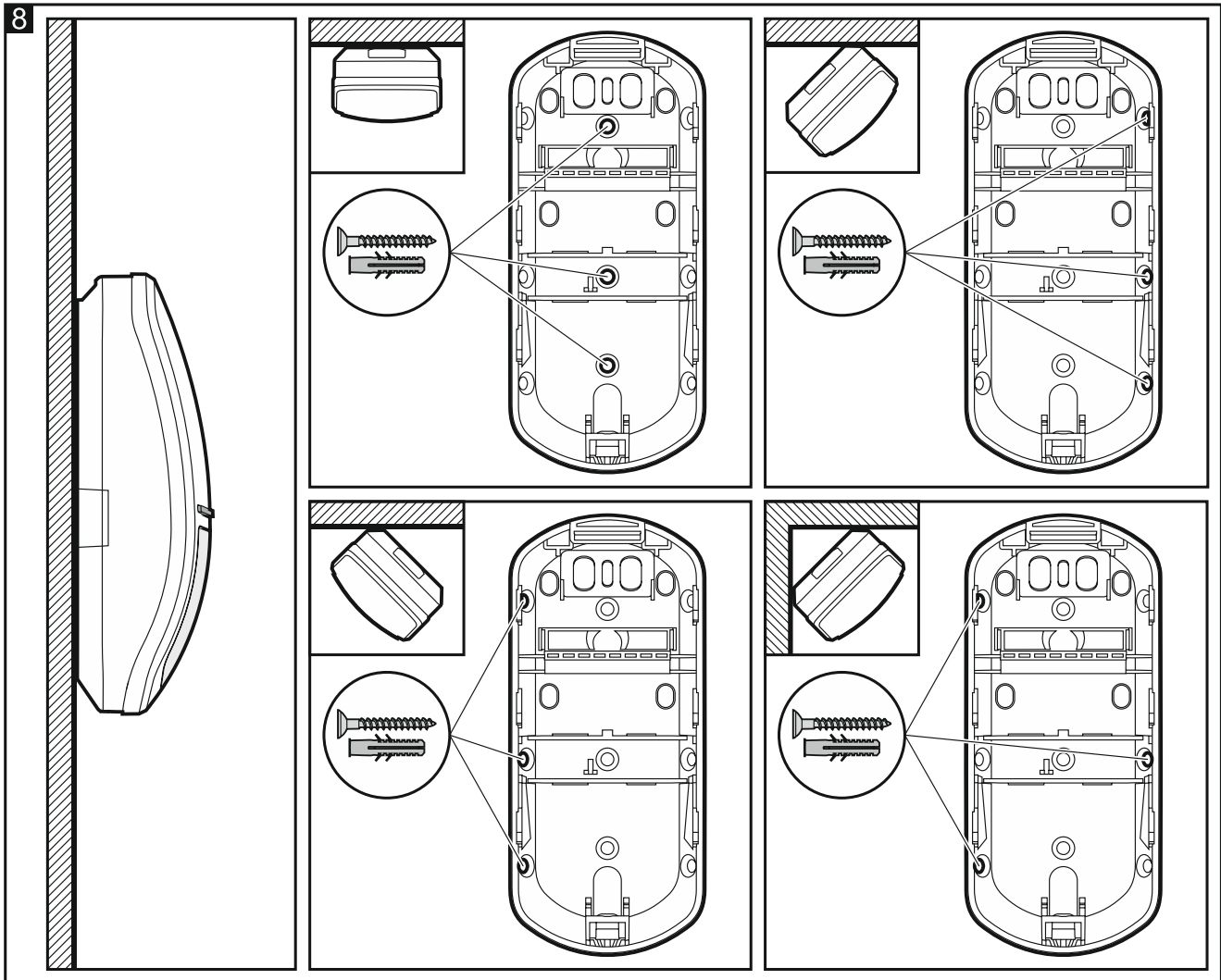
13. Secure the enclosure base to the wall (Fig. 8). The wall plugs (anchors) delivered with the device are intended for concrete, brick, etc. For other types of surface (drywall, styrofoam), use the appropriately selected wall plugs.

14. Fasten the electronics module in the enclosure.

15. Close and open the tamper switch to enable the test mode.

16. Replace the cover of the detector.

17. Check if moving around within the detector coverage area will make the LEDs to light up. Fig. 4 and Fig. 5 show the coverage area of a detector mounted at a height of 2.4 m (Fig. 4 – normal sensitivity, Fig. 5 – high sensitivity; you can set the sensitivity using the jumper – Fig. 3).

5   Specifications

Operating frequency band ....433.05 ÷ 434.79 MHz
Radio communication range (in open area)
      PERFECTA .... up to 600 m
      VERSA-MCU / MTX-300 / MICRA .... up to 500 m
      MRU-300 .... up to 250 m
Battery .... CR123A 3 V
Battery life expectancy (in energy save mode) .... up to 3 years
Standby current consumption ....45 µA
Maximum current consumption ....48 mA
Detectable speed .... 0.3...3 m/s
Warm-up period .... 15 s
Recommended installation height .... 2.4 m
Coverage area
      normal sensitivity...9,8 m x 6 m, 58°
      high sensitivity .... 14 m x 12 m, 84°
Complied with standards.. EN 50131-1, EN 50130-4, EN 50130-5
Security grade according to EN 50131-2-2 .... Grade 2
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.. 122 g