



MPD-300

WIRELESS PASSIVE INFRARED DETECTOR

The MPD-300 detector can detect motion in a protected area. It can be used in conjunction with the MICRA alarm module. This manual applies to the detector with electronics version 1.2 or later.

1. Features

- Dual element pyrosensor.
- Digital motion detection algorithm.
- Detector signal path self-diagnostic.
- Pet immunity up to 15 kg.
- Digital temperature compensation.
- LED indicator.
- Tamper protection in 2 ways – cover and/or detector removal.

2. Specifications

Operating frequency band	433,05 ÷ 434,79 MHz
Radio communication range (in open area)	up to 200 m
Battery	CR123A 3 V
Battery life expectancy (energy save mode)	approx. 3 years
Standby current consumption	90 µA
Maximum current consumption	20 mA
Detectable speed	0,3...3 m/s
Environmental class according to EN50130-5	II
Operating temperature range	-10 °C...+55 °C
Maximum humidity	93±3%
Recommended installation height	2,4 m
Enclosure dimensions	63 x 96 x 49 mm
Weight	108 g

Hereby, SATEL sp. z o.o., declares that this detector is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be consulted at www.satel.eu/ce

3. Description

Motion detection or opening the tamper contact causes an alarm. Information on the alarm is send by radio to the MICRA alarm module.

The detector can work in the following modes:

normal – each alarm results in sending a radio transmission.

energy save – after sending information about the alarm caused by motion detection, the next transmission containing information on this alarm will be sent after 3 minutes at the earliest.

Tamper alarms are always sent.

test – the detector operates like in the normal mode, but the alarms are signaled by the LED (the LED is lit for 2 seconds).

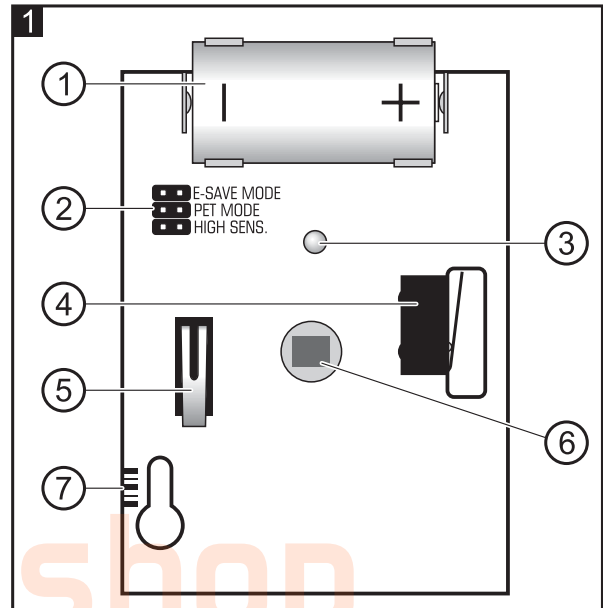
To select between normal mode and energy saving mode, use the E-SAVE MODE pins (Fig. 1). The test mode is turned on for 20 minutes after inserting the batteries or opening the tamper contact.

The detector monitors the signal path for correct operation. Failure of the signal path is indicated by the LED (2 flashes every 40 seconds).

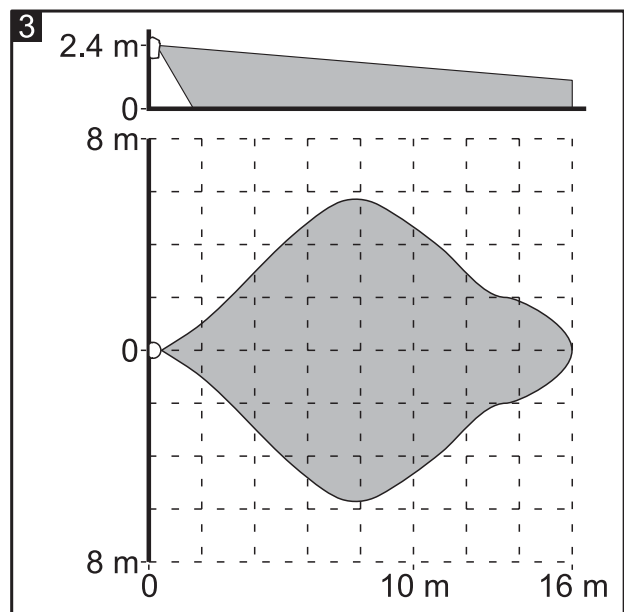
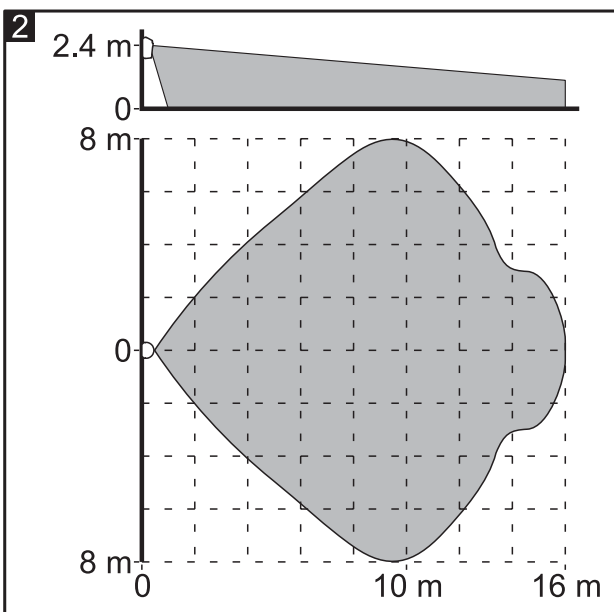
Every 15 minutes, the detector sends a transmission containing information on the status of the signal path, tamper contacts and battery. Periodic transmissions are used to monitor presence and operation of the detector. In the test mode, this transmission is indicated by the LED lighting for 80 milliseconds.

Fig. 1. View of the detector electronics board.

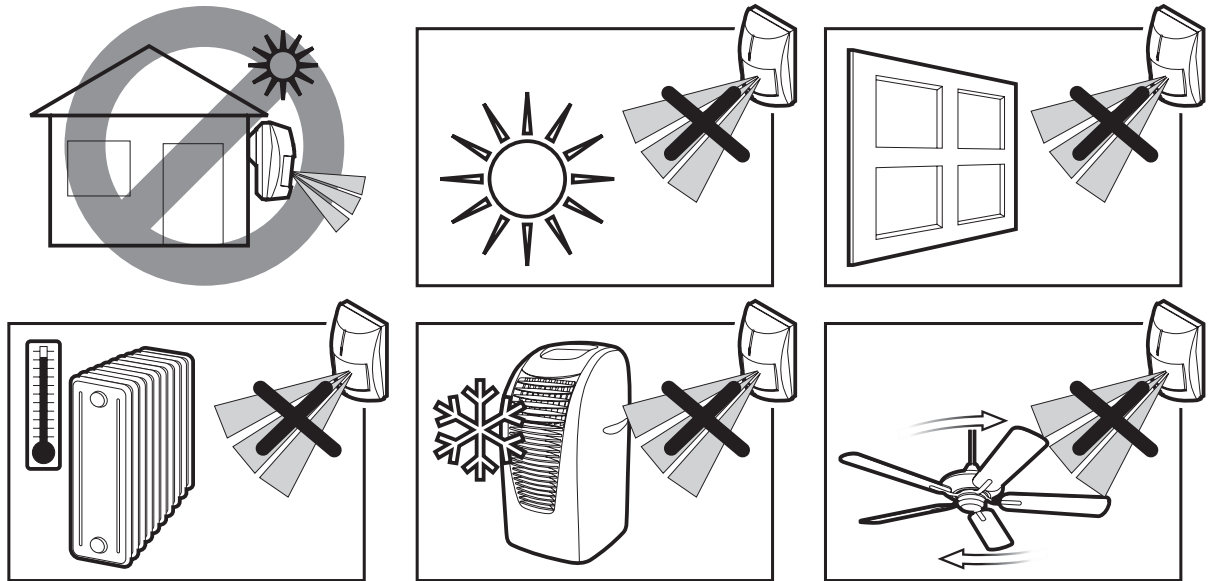
- 1 - CR123A battery. The detector checks the battery status. When the voltage is lower than 2.6 V, the low-battery information is sent during each transmission.
- 2 - detector configuration pins:
 - E-SAVE MODE** - operating mode selection:
 - pins shorted – energy save mode;
 - pins open – normal mode.
 - PET MODE** - pet immunity option:
 - pins shorted – option enabled;
 - pins open – option disabled.
 - HIGH SENS.** - sensitivity selection:
 - pins shorted – high sensitivity (Fig. 2);
 - pins open – normal sensitivity (Fig. 3).



- 3 - LED indicator.
- 4 - tamper contact activated by detector removal from the back tamper unit.
- 5 - tamper contact activated by cover removal.
- 6 - pyroelectric sensor.
- 7 - scale for positioning of pyroelectric sensor against the lens (Fig. 9).



4. Installation

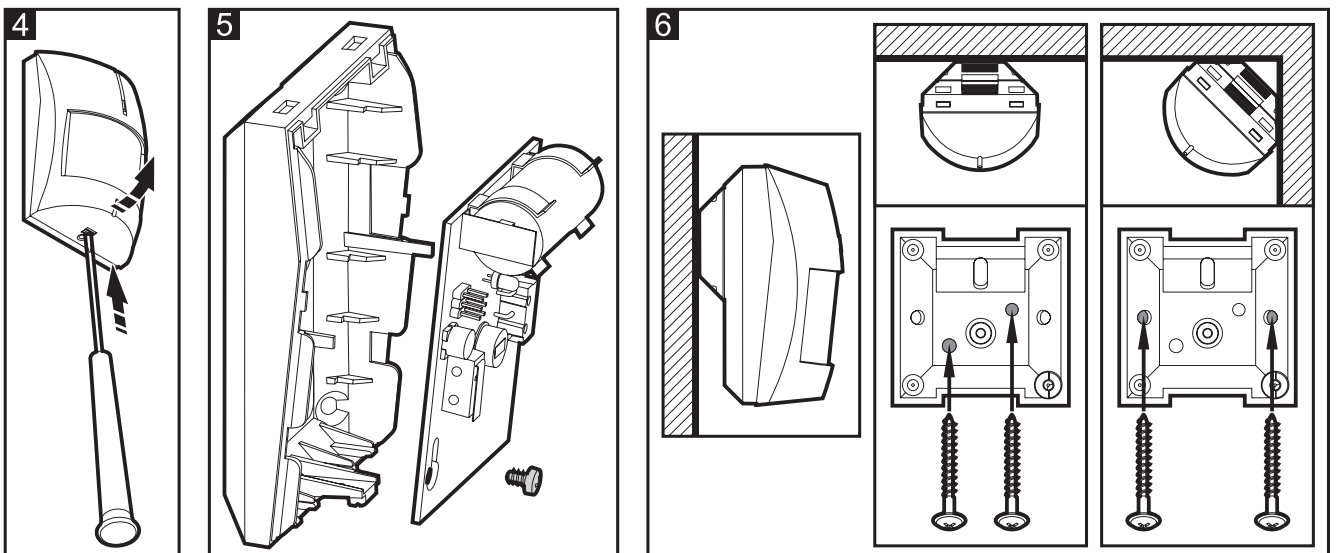


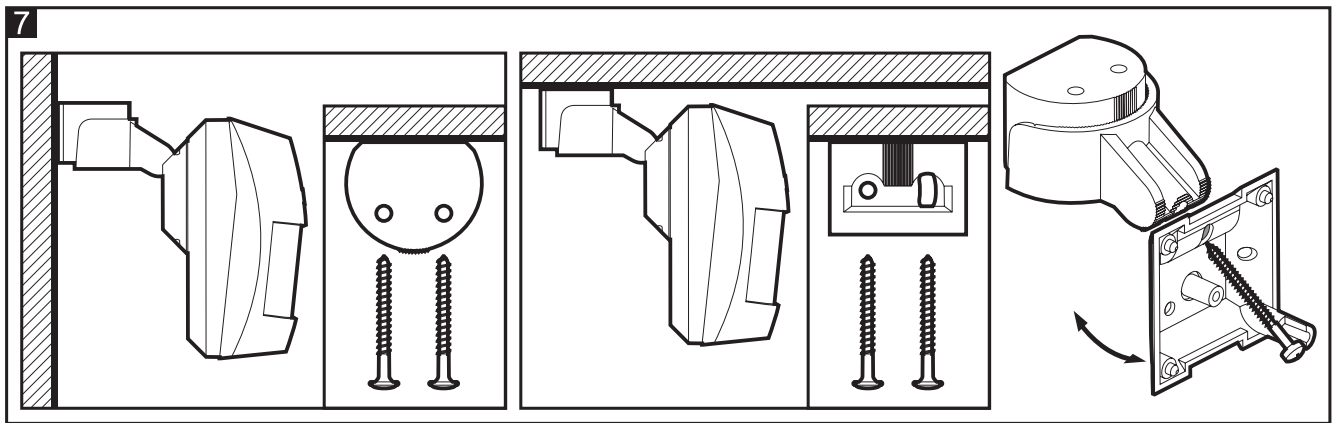
Be particularly careful during installation and replacement of the battery. The manufacturer is not liable for the consequences of incorrect installation of the battery.

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

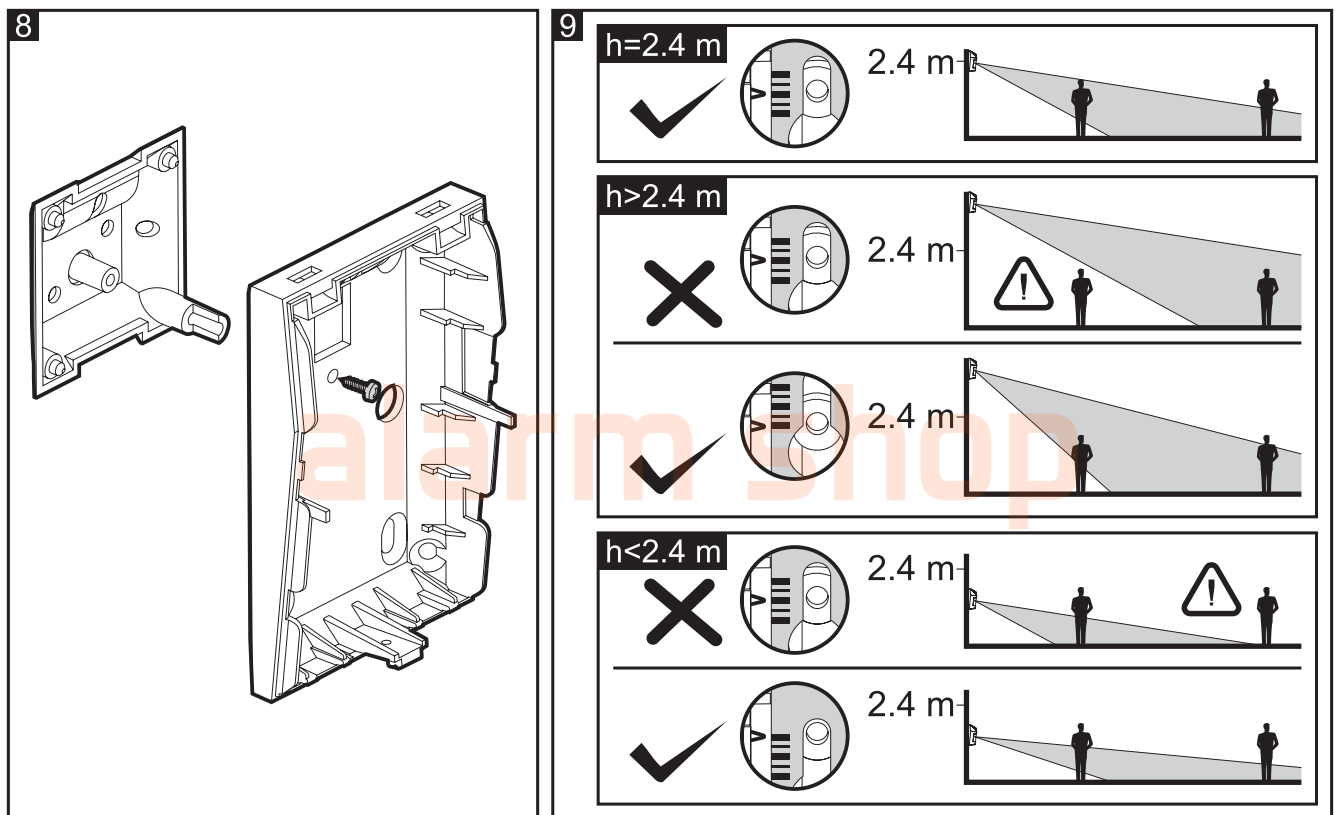
Do not touch the pyroelectric sensor, so as not to soil it.

1. Open the enclosure (Fig. 4).
2. Configure the detector by means of jumpers.
3. Install the battery and register the detector in the MICRA alarm module (see the manual for MICRA alarm module).
4. Select the place of installation. Check that the transmissions from the detector placed at that point reach the MICRA alarm module. In order to send a transmission, close and open simultaneously both tamper contacts. If the alarm transmission is received, continue with the installation. If the alarm transmission is not received, select a different mounting location and repeat the test.
5. Remove the electronics board (Fig. 5).
6. Secure the back tamper unit directly to the wall (Fig. 6) or to the bracket screwed down to the wall or ceiling (Fig. 7). If the pet immunity option is enabled, the detector cannot be mounted on the bracket.





7. Fasten the enclosure base to the back tamper unit (Fig. 8).
 8. Fasten the electronics board, taking into account the height of detector installation (Fig. 9).



9. Close and open the tamper contact that detects the cover removal to start the test mode, and then close the detector enclosure.
 10. Check that movement within the coverage area will make the LED light up.

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