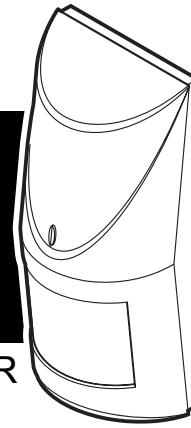




COBALT
COBALT Plus
COBALT Pro

DIGITAL DUAL TECHNOLOGY MOTION DETECTOR



9.35

cobalt935_en 12/11

1. Features

- Combined PIR and microwave technology.
- Dual [COBALT, COBALT Plus] or quad [COBALT Pro] element pyrosensor.
- Fully digital motion detection algorithm.
- Digital temperature compensation.
- Selectable operation modes: basic or counting.
- Microwave based anti-mask feature [COBALT Plus, COBALT Pro].
- Low supply voltage signaling (voltage drop below 9 V ±5%).

2. Specifications

Supply voltage.....	12 V DC ±15%
Standby current consumption:	
	COBALT 20 mA
	COBALT Plus 22 mA
	COBALT Pro..... 22 mA
Maximum current consumption:	
	COBALT 25 mA
	COBALT Plus 27 mA
	COBALT Pro..... 27 mA
Relay contacts rating (resistive load).....	40 mA / 16 V DC
Microwave frequency	9,35 GHz
Detectable speed	0.3...3 m/s
Alarm signaling time	2 s
Environmental class according to EN50130-5.....	II
Operating temperature range	-30...+55 °C
Maximum humidity	93±3%
Dimensions	63 x 136 x 49 mm
Recommended installation height.....	2.4 m
Weight	
	COBALT 136 g
	COBALT Plus 144 g
	COBALT Pro..... 145 g

3. Operation modes

Basic – the detector indicates an alarm if both sensors detect motion within a time period shorter than 10 seconds.

Counting – the detector indicates an alarm if both sensors detect motion within a time period shorter than 10 seconds or if the microwave sensor is activated 16 times in less than 30 minutes without activation of the infrared sensor.

4. Anti-mask feature

Detection by the microwave sensor of an object moving at a distance of 10-20 centimeters from the detector is interpreted as an attempt to mask the detector and results in opening the anti-masking relay contacts for two seconds. Objects permeable to microwaves, but isolating the infrared radiation are not detected by the anti-masking feature.

5. Electronics board

① terminals:

- WRN** - anti-masking relay (NC) [only COBALT Plus and COBALT Pro];
- TMP** - tamper contact (NC);
- COM** - common ground;
- 12V** - power supply input;
- NC** - alarm relay (NC).

② microwave sensor.

③ two-color LED to indicate:

- alarm – LED lit up red for 2 seconds;
- motion detection by one of the sensors – LED lit up green for 2 seconds;
- warm-up – LED flashing alternately red and green;
- low supply voltage – LED lit up red.



④ potentiometer for sensitivity control of the microwave path. Please bear in mind that microwaves can penetrate e.g. glass, gypsum walls, non-metallic doors, etc.

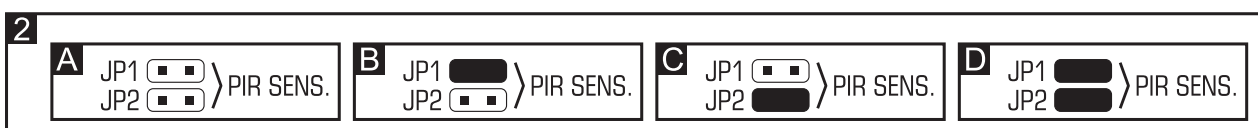
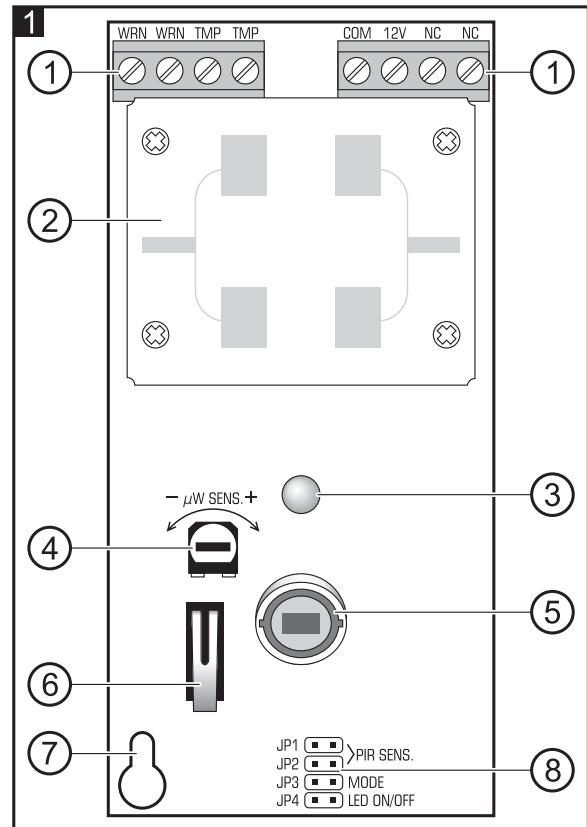
⑤ pyroelectric sensor.

⑥ tamper contact.

⑦ fixing screw hole.

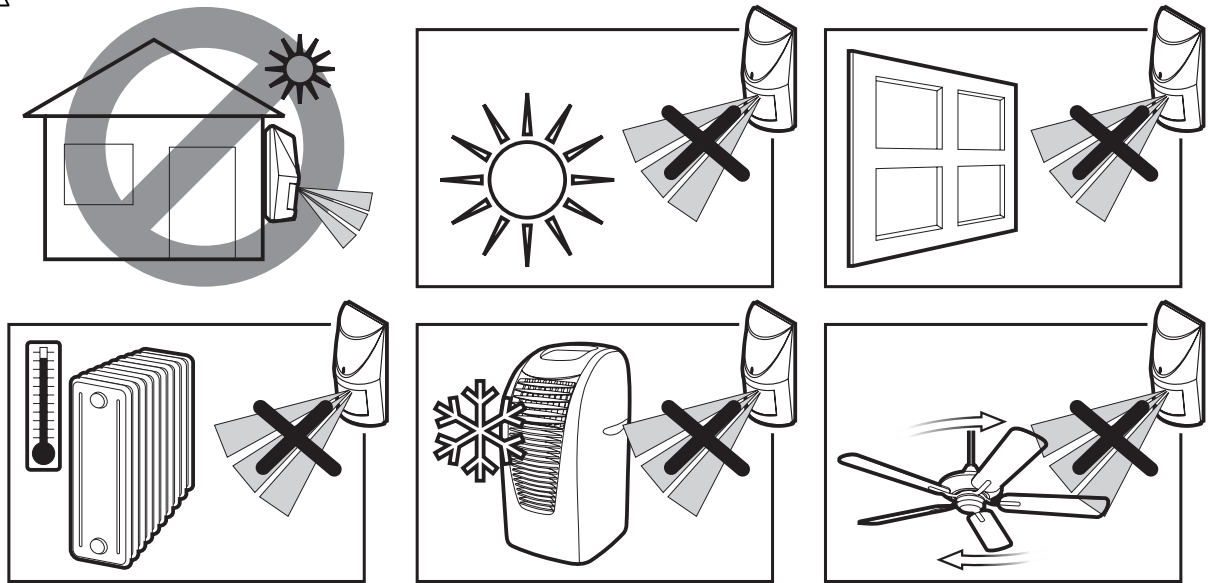
⑧ detector configuration pins:

- PIR SENS.** - setting detector sensitivity (see Fig. 2: A – low sensitivity, B and C – medium sensitivity, D – high sensitivity [ – pins shorted;  – pins open]);
- MODE** - selecting the detector operation mode:
 - pins shorted – basic mode;
 - pins open – counting mode.
- LED ON/OFF** - enabling/disabling the LED signaling. The signaling is enabled when the pins are shorted.

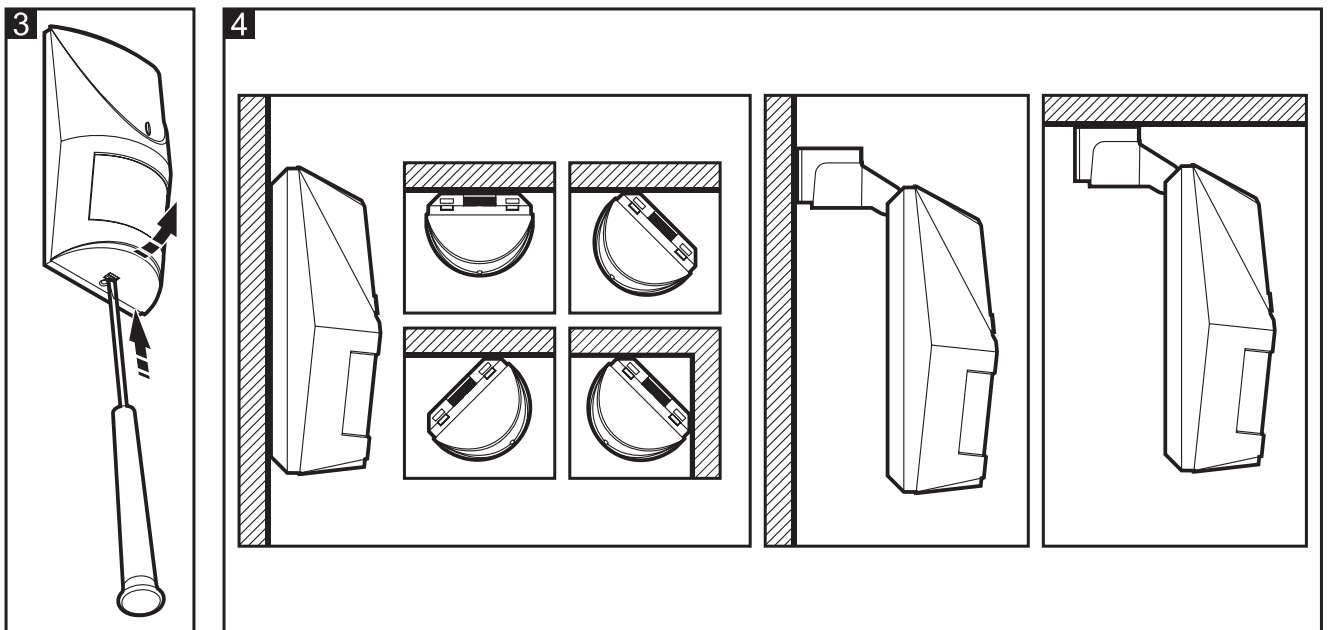


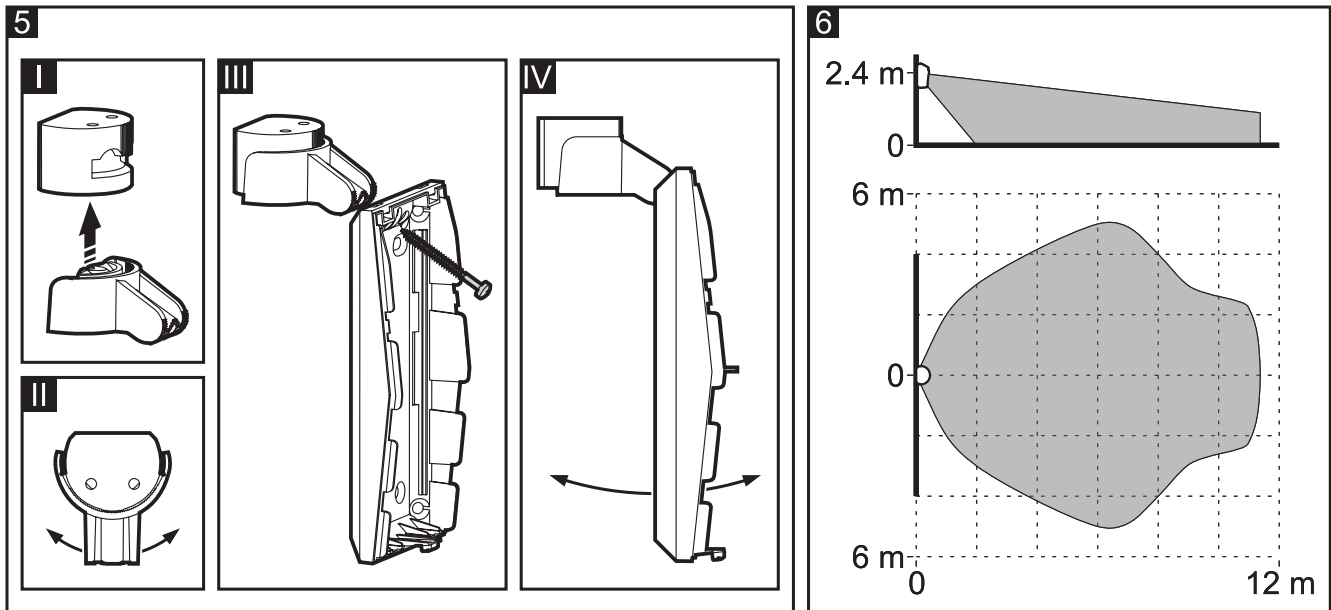
6. Installation

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



1. Open the enclosure (Fig. 3).
2. Remove the electronics board.
3. Make the openings for screws and cable in the enclosure base.
4. Pass the cable through the prepared opening.
5. Fix the enclosure base to the wall or to the attached bracket (Fig. 4 and 5).
6. Fasten the electronics board.
7. Connect the wires to the corresponding terminals.
8. Using potentiometer and jumpers, set the working parameters of the detector.
9. Close the detector enclosure.





7. Start-up

1. Switch the detector power on. The LED will start blinking (if the LED ON/OFF pins are shorted).
2. When the detector is ready to work (the LED stops flashing), test the detector range, i.e. check whether the motion within the coverage area (Fig. 6) will activate the alarm relay and light up the LED in red.
3. If necessary, change the detector sensitivity.

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

SATEL sp. z o.o.
 ul. Schuberta 79
 80-172 Gdańsk
 POLAND
 tel. + 48 58 320 94 00
 info@satel.pl
 www.satel.eu