

AQUA RING

CEILING MOUNT

DIGITAL PASSIVE INFRARED DETECTOR

CE

aquaring_en 06/09

The microprocessor-based, fully digital AQUA RING detector is characterized by high sensitivity and interference resistance. Due to an advanced digital temperature compensation feature, the device can work in a wide temperature range. A dual element pyrosensor is used in the detector. The processor performs two-way signal analysis, based on value and quantity.

The detector is provided with a **prealarm feature**. Prealarm is signaled by a short flash of the LED after changes which do not meet the alarm criteria have been sensed within the detector coverage area. The prealarm sensitivity depends on what sensitivity is set on the detector pins. Frequently occurring prealarms may cause an alarm.

For 30 seconds after the power-up, the detector remains in the **starting state**, which is signaled by a rapid LED blinking. Only after this time has elapsed, the detector will be ready to work.

The detector monitors the supply voltage. If the voltage drops below 9 V ($\pm 5\%$) for more than 2 seconds, the detector will signal a trouble by activation of the alarm relay and by steady light of the LED indicator. Restoration of a minimum 9 V ($\pm 5\%$) voltage will turn the signaling off.

Explanations to Fig. 1:

1 - terminals:

- NC** - relay (NC)
- TMP** - tamper contact (NC)
- COM** - common ground
- 12V** - supply input

2 - red color LED to indicate:

- prealarm – short flash (approx. 120 ms);
- alarm – lit up for 2 seconds;
- starting state – blinking rapidly;
- low supply voltage – red light.

3 - pyroelement.

4 - tamper contact.

5 - fixing screw hole.

6 - detector configuration pins:

PIR SENS. - setting detector sensitivity (see Fig. 2);

LED ON/OFF - enabling/disabling the LED signaling. The signaling is enabled when the pins are shorted

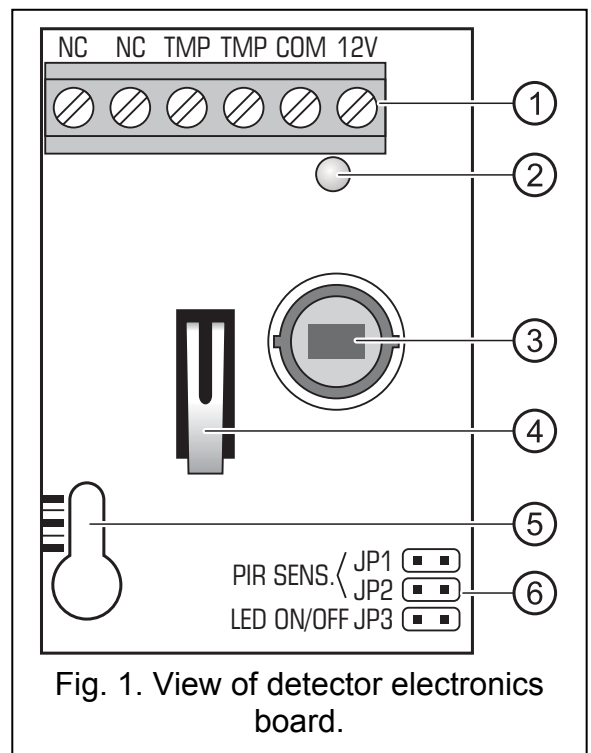


Fig. 1. View of detector electronics board.

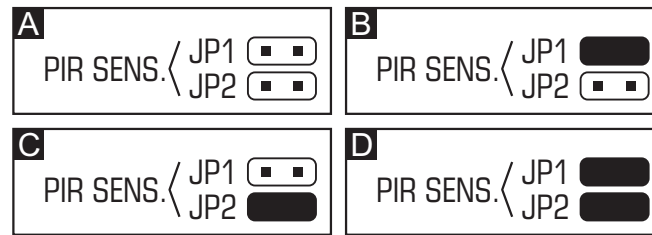


Fig. 2. Setting the detector sensitivity
(A – low sensitivity, B and C – medium sensitivity, D – high sensitivity)
[■ – pins shorted; □ – pins open].

1. Installation

The detector is designed for indoor installation.



It is advisable that you exercise particular care during installation so as not to soil or damage the pyroelectric element.

Remember during installation that the detector should not be directed towards heat sources or air-conditioning outlets, as well as objects exposed to strong solar radiation.

1. Open the detector housing.

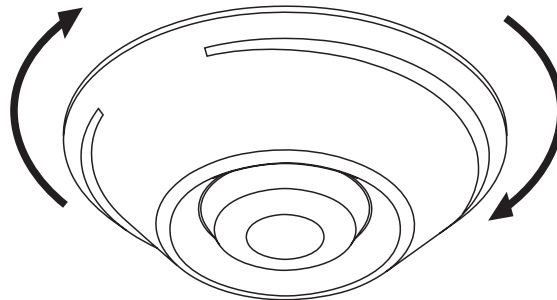


Fig. 3. Removing the cover.

2. Remove the electronics board.
3. Make suitable openings for screws and cable in the housing base.
4. Pass the cable through the prepared opening.
5. Secure the housing base to the ceiling in the selected location.
6. Fasten the electronics board.
7. Connect the leads to the corresponding terminals.
8. Using jumpers, set the working parameters of the detector
9. Close the detector housing.

2. 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 enters its working state (the LED will stop blinking), carry out the detector range test, i.e. check that movement within the supervised area will activate the alarm relay and lighting of the LED.

3. If necessary, change the detector sensitivity (pins PIR SENS.).

3. Specifications

Supply voltage	12 V DC \pm 15%
Current consumption, standby	10 mA
Current consumption, maximum	12 mA
Relay contacts rated load (resistive)	40 mA / 16 V DC
Alarm signaling time	2 s
Detectable speed	0.3...3 m/s
Standards complied with	EN50131-1, EN50130-4, EN50130-5
Environmental class according to EN50130-5	II
Operating temperature range	-10...+55°C
Dimensions	\varnothing 97 x 29 mm
Recommended installation height	from 2.2 m to 4.5 m
Coverage area:	
when mounted at a height of 2.4 m	36 m ²
when mounted at a height of 3.7 m	80 m ²
Weight	60 g

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

The latest EC declaration of conformity and product approval certificates are available for downloading on the www.satel.pl website

