AQUA RING S
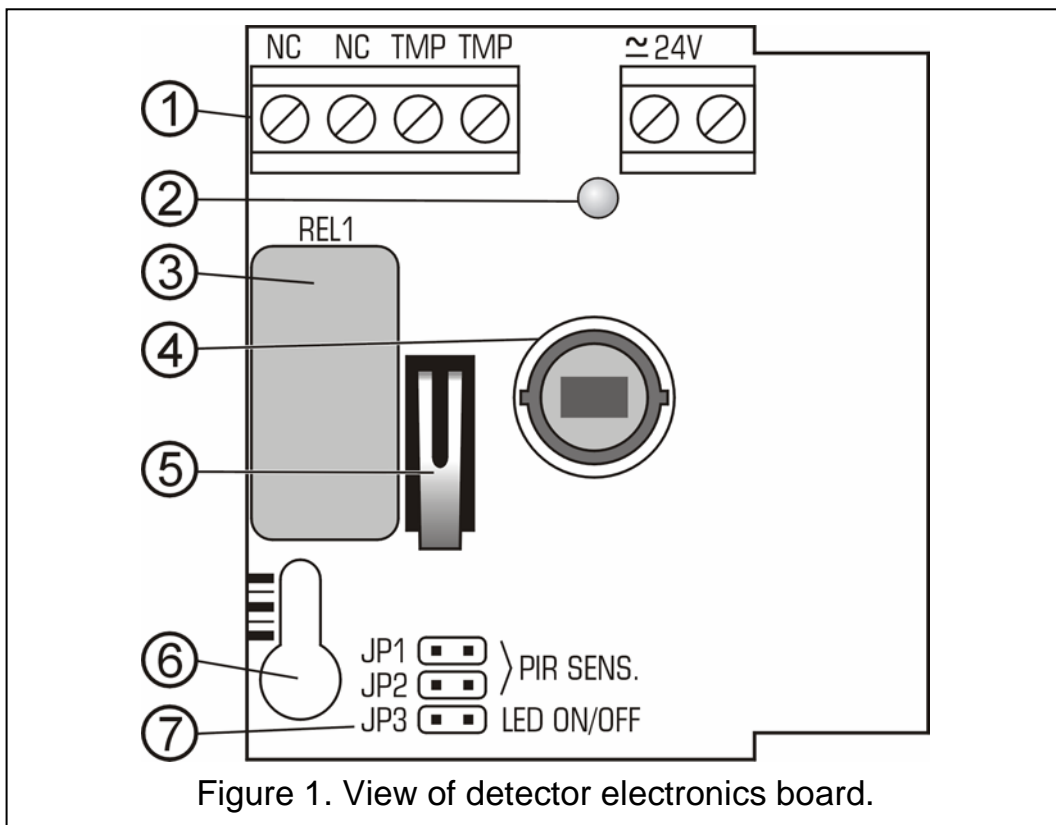
CEILING MOUNT
DIGITAL PASSIVE INFRARED DETECTOR

$C\epsilon$

The microprocessor-based, fully digital AQUA RING S detector for ceiling mount installation is characterized by high sensitivity and interference resistance. A dual pyroelectric element is used in the detector. AQUA S can be supplied with AC or DC 24V voltage.

Figure 1. View of detector electronics board.

Explanations to Fig. 1:

1 – terminals:

    NC – relay (NC)

    TMP – tamper contact

    ≃24V – supply input (AC/DC)

2 – LED indicator. It lights red for approx. 2 seconds after movement is sensed by the detector and the alarm relay activated (opening of the NC contacts). This allows the installer to check the detector for correct functioning and to approximately determine the protected area.

3 – alarm relay.

4 – pyroelement.

5 – tamper contact.

6 – fixing screw hole.

7 – pins for setting detector operating parameters (see Table 1).

The detector is provided with a **prealarm feature**. The prealarm is indicated by a short flash of the LED for approx. 120ms, but does not activate the relay. Activation of the prealarm takes place when the detector registered disturbances in the environment, which do not meet the alarm criterion. The prealarm sensitivity do not depend on what sensitivity is set on the detector pins.

For 30 seconds after the power-up, the detector remains in the **starting state**, which is signalized by a rapid LED blinking. Only then the detector enters its operational readiness state.
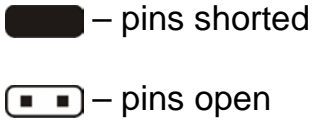
	Pins			
	JP1	JP2	JP3	▭ – pins shorted
Low sensitivity	▫ ▫	▫ ▫		
Medium sensitivity	▫ ▫	▬		▫ ▫ – pins open
	▬	▫ ▫		
High sensitivity	▬	▬		
LED indicator ON			▬	
LED indicator OFF			▫ ▫	

Table 1. Programming of working parameters.

1. Installation

The detector is designed for indoor installation.

⚠ **Be careful so as not to soil or damage the pyroelement in the process of installation.**

1. Open the housing as shown on Fig. 2.

Figure 2. The opening of the housing.

2. Remove the electronics board.

3. Make suitable openings for screws and cable in the rear panel of the housing.

4. Pass the cable through the prepared opening.

5. Fix the rear housing panel to the wall or to the attached holder.

6. Fasten the electronics board.
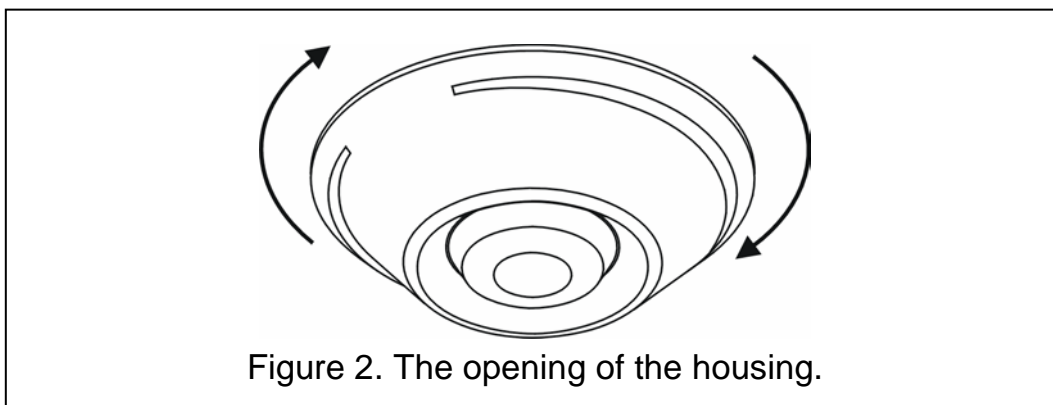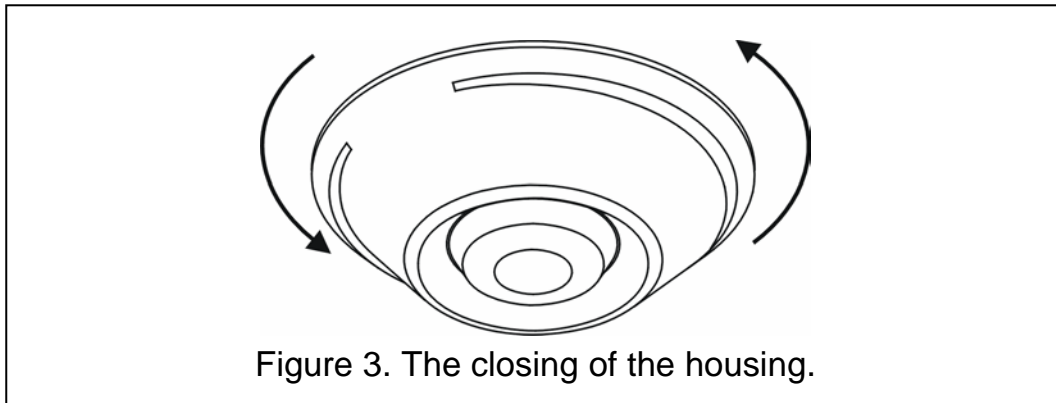
7. Connect the leads to the corresponding terminals.
8. Using jumpers, set the working parameters of the detector (see Table 1).
9. Close the detector housing as shown on Fig. 3.

Figure 3. The closing of the housing.

2. Start-up

1. Switch the detector power on. The LED will start blinking (if the JP3 pins are shorted).
2. When the detector enters the ready 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 JP1 & JP2).

3. Technical data

Nominal supply voltage .... 24V AC/DC
Max. current consumption (±10%) .... 27mA for 24V AC
.... 14mA for 24V DC
Violation signaling time 2s
Protected area:
        when mounted at a height of 2.4m .... $36m^2$
        when mounted at a height of 3.7m .... $80m^2$
Operating temperature range .... -10...+50°C
Detectable motion speed .... up to 3 m/s
Dimensions ø97x29mm
Recommended installation height .... from 2.2m to 4.5m
Weight 64g