



## PASSIVE INFRARED DETECTOR

### «PYRONE-SH» vers. 3

#### Installation Guide

#### 1 General Information

1.1 Passive infrared detector «Pyrone-SH» vers.3 (hereinafter, the Detector) is designed for security protection of museum showpieces in the day-time by detecting intrusion into the protected closed area of a room through door and window openings, and for generating and transmitting alarm messages.

1.2 The Detector is designed to operate continuously around the clock.

1.3 The Detector provides vertical curtain detection zone (see Figure 1).

1.4 Temperature compensation of the detection ability is ensured by the Detector.

1.5 The Detector is resistant to small pets movement, background illumination differentials, convective air flows, slow background temperature changes.

1.6 Optical and sound indication is available (with possibility of its disabling).

1.7 The Detector provides high immunity to power supply voltage pulses, electrostatic discharges, as well as electromagnetic fields within FM band.

#### 2 Features

- Microprocessor-based signal processing;
- Built-in sound indication;
- Possibility of LED indication disabling;
- Mode of enhanced sensitivity.

#### 3 Information Capacity

The Detector generates 5 types of messages:

- wam-up time – by the relay contacts opening and LED indication lighting for the time not more than 60 s after the Detector energizing;
- norm state – by the relay contacts closing;
- alarm - by the relay contacts opening and LED indication lighting for the time not less than 2 s;
- tampering - by the micro-relay contacts opening after the Detector decapsulation;
- power supply malfunction – by the relay contacts opening and LED indication lighting.

#### 4 Specifications

Table 1

Parameter	Value
Installation height, max	5 m
Power supply range, DC	9-18 V
Consumption current, not more than:	
- In Standby mode	10 mA
- In Alarm mode	45 mA
Alarm message duration, not less	2 s
Volume level (sound pressure) of sound indication at 1 m distance, not less than	80 dB
Detection zone type	vertical curtain
IP rating	IP20
Operating temperature	minus 30 ...50 °C
Relative humidity at a temperature + 25 °C without water condensation	95 %
Mean time-to-failure in standby mode	60 000 hrs
Dimensions, max	80x47x40 mm
Weight, not more	60 g

#### 5 Indication

For light and sound indication disabling remove relevant wafer IND or SOUND located on the printed circuit board (PCB).

#### 6 Enhanced Sensitivity Mode

The Detector provides enhanced sensitivity mode. To switch the mode, install SENS wafer on the PCB.

#### 7 Detection Zone Pattern

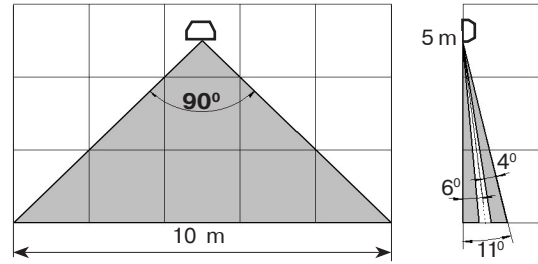


Figure 1

#### 8 Choosing Place of Installation

When choosing locations for the Detector installation, it is advisable to take note of the fact that the detection zone may be limited by non-transparent objects (curtains, curtain holders, door trims, etc), as well as glass partitions. There must be no air conditioners, space heaters or heating radiators in the Detectors' detection zone. Alarm loop should be wired far enough from electrical power cables.

The Detector installation variants are shown in Figure 2.

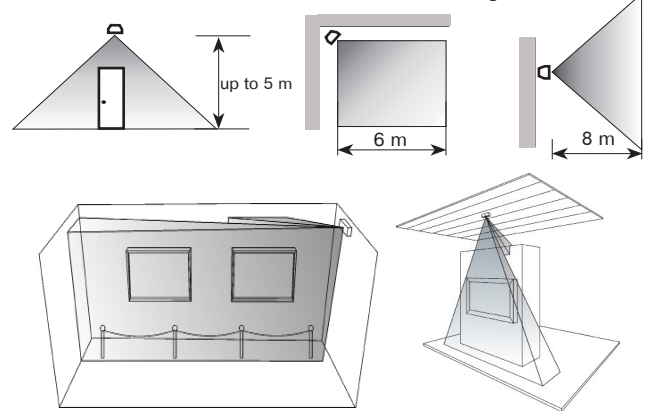


Figure 2

#### 9 Installing the Detector

9.1 Remove the cover. For this purpose take the upper cover by one hand for its side walls. By other hand push the back wall of the Detector base (Figure 3), press the cover edges and put off the Detector cover.

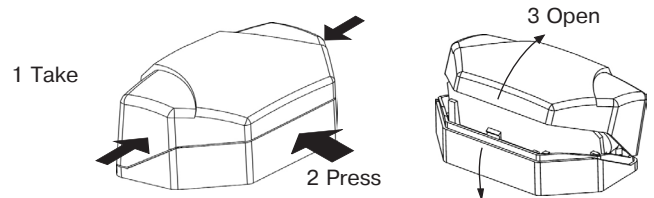


Figure 3

9.2 Insert a flat screwdriver into the slot between PCB and side wall of the base, push up the wall of the base and draw out the PCB (See Figure 4).

9.3 Depending on chosen place of the Detector installation, determine the sides of the Detector for its mounting. After it remove port plugs for the Detector mounting and wire installation (See Figure 5).

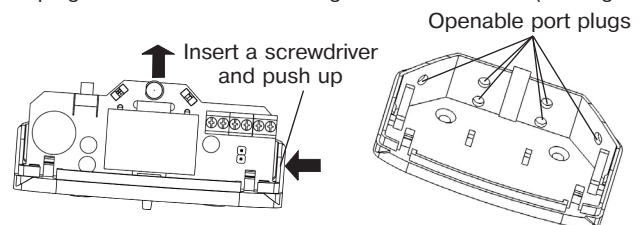


Figure 4

Figure 5

Run the wires through the openings. Leave several centimeters of the wire for connection to terminals.

9.5 Fasten the base on the chosen place.

9.6 Fulfill connections in accordance with Figure 6.

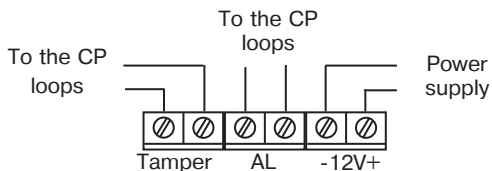


Figure 6

9.7 Install wafers IND, SOUND and SENS in required position in accordance with protection tactics.

9.8 Install the PCB to the base by inserting it to the guide ridges and latch it from all sides (see Figure 7).

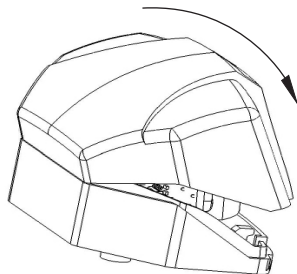


Figure 7

### 10 Functional Testing

10.1 Test the detection zone as follows:

- set up wafers IND and SOUND (indication is switched ON);
- remove wafer SENS (normal sensitivity);
- energize the Detector and wait for 1 min;
- start walking through the detection zone at a speed rate 0.5 - 1 m/s. When two zone lines are crossed, the Detector transmits an alarm message (indicators are switched on, relay contacts are opened);
- cross the detection zone on the other side and define its other border. When there is no motion in the detection zone, alarm messages should not be generated.

10.2 If the detection zone is limited by non-transparent objects (curtains, curtain holders, door trims, etc), it is necessary to change its location.

10.3 If it is necessary to correct detection zone location, use the swivel bracket (supplied optionally).

10.4 After repeated detection zone alignment, install wafer IND to the mode required for chosen protection tactics.

**ATTENTION!** The Detector must be checked at least annually in order to test its performance.

### 11 Scope of Delivery

Each Detector unit package contains the items listed in Table 2.

Table 2

Name	QNT
Passive infrared detector «Pyrone-SH» vers. 3	1 pc.
Passive infrared detector «Pyrone-SH» vers. 3. Installation Guide	1 copy

### 12 Storage and Transportation

12.1 The Detectors in their original packing may be shipped by any transport means in covered vehicles (in railway, cars, trucks, sealed heated compartments of aircraft, ship cargo holds, etc).

12.2 The storage room should be free from current-conducting dust, acid vapors, alkali and gases that cause corrosion and destroy insulation.

### 13 Manufacturer's Guarantees

13.1 The Manufacturer guarantees conformity of the Detector to its Technical Specifications if conditions of transportation, storage, assembling and operation are observed.

13.2 The guaranteed storage period is 39 months since the date of manufacturing the Detector.

13.3 The guaranteed period of operation is 36 months since the date of commissioning within the storage period guaranteed.

13.4 The Detectors that are found to non-conforming to its Technical Requirements shall be repaired by the Manufacturer, provided the installation and operation rules have been complied with.

### 14 Packing Certificate

Passive infrared detector «Pyrone-SH» vers. 3 has been manufactured in compliance with the active technical documentation and classified as fit for operation and packed by «RIELTA» JSC.

Packing date \_\_\_\_\_  
month, year