



PASSIVE INFRARED DETECTOR

«PYRONE-SH»

Installation Guide



1 General Information

Passive infrared detector «Pyrone-SH» (hereinafter, the Detector) is designed for detecting intrusion into the protected closed area of a room through door and window openings, for generating and transmitting alarm messages by the relay contacts opening. The Detector is resistant to small animals movement, electromagnetic interference and ambient light.

2 Features

- Dual-element pyrodetector.
- «Vertical curtain» detection zone.
- Microprocessor-based signal processing.
- Mounting height up to 5 m.
- Possibility of LED indication disabling.
- The Detector base has four planes for mounting, providing possibility of the Detector installation in standard manner above the window opening, as well as directly in the corners of window and door openings. The Detector can be installed without swivel bracket on the wall, ceiling or in the opening corner.
- High immunity to electromagnetic interference.

3 Specifications

Table 1

Parameter	Value
Installation height, m, max	5
Alarm message duration, sec, not less	2
Power supply, V, DC	8 ... 30
Consumption current, mA, not more	12
Operating temperature, °C	minus 30 ... +50
Relative humidity under 25 °C without water condensation, %, up to	95
Detection zone type	vertical curtain
Ambient class	Boreal Climate (background temperature 15 - 35 °C, relative humidity 25 - 75 %, air-pressure 86-106 kPa)
IP rating	IP41
Dimensions, mm, max	80 x 47 x 40
Weight, g, not more	60

The Detector is designed to operate continuously around the clock. The Detector interference protection provides absence of false alarms under the following conditions:

- background illumination differential;
- convective air flows;
- slow background temperature changing;
- voltage impulses in power-supply circuit;
- electrostatic discharge;
- electromagnetic fields in FM band.

The Detector generates Alarm message under human movement within the detection zone limits transversally it's side border at a speed range 0.3 - 3 m/sec for the distance of 3 m.

The Detector is resistant to:

a) transport jolting with the acceleration 30 m/sec² with impact frequency from 10 to 120 impacts/sec or 15000 impacts with the same acceleration;

b) the ambient temperature minus 50 ... +50 °C;

c) relative air humidity (95 ± 3) % at the ambient temperature +35 °C.

After transportation under the conditions different to exploitation conditions, the Detector shall be ready to operate after a maximum of six hours.

Average time between failures is not less than 60 000 hours.

Average service life is 8 years.

4 Scope of Delivery

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

Table 2

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

5 LED Indication

Table 3

Mode	LED Indicator	
	ON	OFF
Warm-up time after energizing	Not more than 40 sec	-
Message indication	Alarm (for 3 sec)	Norm

LED indicator is used for the Detector state displaying. For LED indication disabling, remove «IND» jumper. Set up the jumper on one of the aligning plug for the further usage during testing.

6 Choosing an Installation Place for the Detector

The Detector is designed for using in closed premises (shops, offices, museums, flats, etc.). 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. Maximum installation height of the Detector is 5 m. Alarm loop wiring should be conveyed far enough from electrical power cables.

The Detector installation variants are shown in Figure 1.

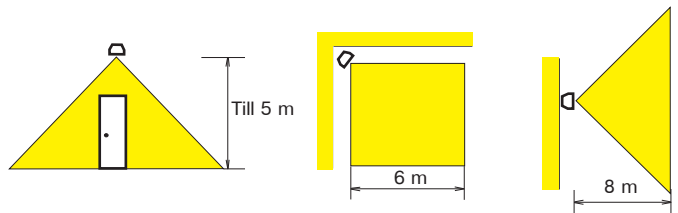


Figure 1

7 Detection Zone Pattern

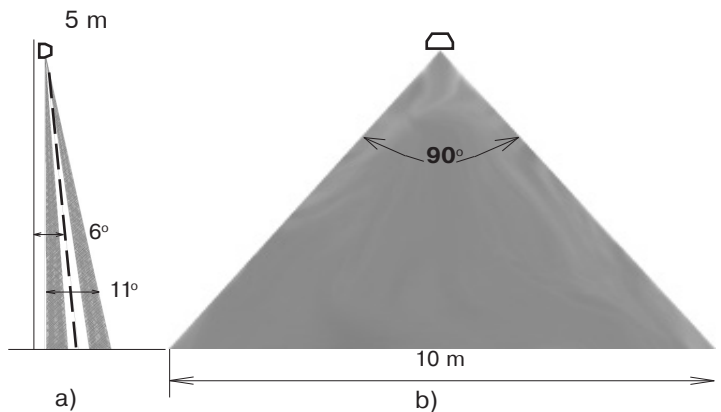


Figure 2

8 Installing the Detector

Push the back wall of the Detector base (Figure 3), press the cover edges by the second hand fingers in the places shown in Figure 4 and put off the Detector cover.

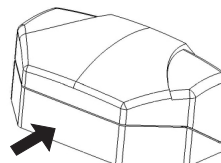


Figure 3

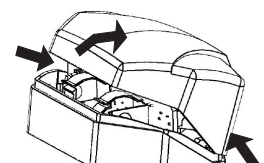


Figure 4

Insert a flat screwdriver into the slot between PCB and side wall of the base, push the wall of the base and draw out the PCB (Figure 5).

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.

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

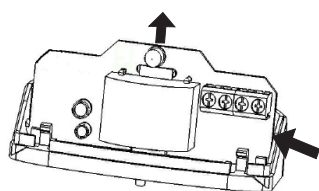


Figure 5

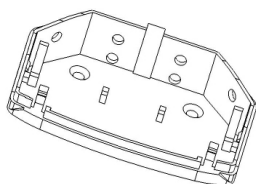


Figure 6

Fasten the base on the chosen place.

Install the PCB to the base and latch it from both sides.

Fulfill connections in accordance with designation on the PCB (Figure 7).

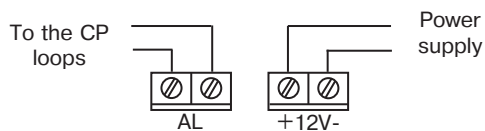


Figure 7

Put on the Detector cover (Figure 8).

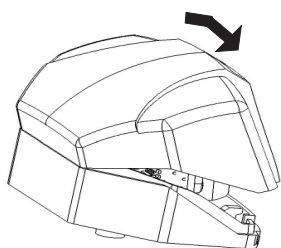


Figure 8

9 Functional Testing

Test the detection zone (Figure 2) as follows:

- Set up the «IND» jumper (LED indicator is ON);
- Energize the Detector and wait for 1 min;
- Start walking through the detection zone at a speed rate 0.5 – 1 m/sec. When two zone lines are crossed, the Detector transmits an alarm message (LED indicator is switched on, relay contacts are opened).

- Cross the detection zone on the other side and define it's other border. When there is no motion in the detection zone, alarm messages should not be generated.

If the detection zone is limited by non-transparent objects (curtains, curtain holders, door trims, etc), it is necessary to change it's location. To correct detection zone location, the swivel bracket can be used (supplied optionally).

After repeated detection zone alignment, install «IND» jumper to the mode required for chosen protection tactics.

ATTENTION! The Detector must be checked at least annually in order to test it's performance.

10 Storage and Transportation

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

11 Manufacturer's Guarantees

The Manufacturer guarantees conformity of the Detector to it's Technical Specifications if conditions of transportation, storage, assembling and operation are observed. The guaranteed storage period is 63 months since the date of manufacturing the Detector.

The guaranteed period of operation is 60 months since the date of commissioning within the storage period guaranteed.

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

12 Acceptance and Packing Certificate

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

Packing date _____
month, year