WIRELESS PASSIVE INFRARED DETECTOR WITH PET IMMUNITY

«FOTON-19»

Installation Guide

1 Introduction

Wireless passive infrared detector «Foton-19» (hereinafter, the Detector) is intended for detecting intrusion into a closed protected space and generating an alarm message.

The Detector ensures case tamper protection by «TAMPER» contacts opening.

The Detector is resistant to ambient light impact and radio interference.

The Detector does not generate false alarms caused by the movement of:

a) short-haired pets weighting up to 20 kg (with temperature contrast 8 ^{0}C);

b) long-haired pets weighing up to 40 kg (with temperature contrast 6 ^{0}C);

The Detector is installed directly on a wall or in a corner of a room.

2 Features of the Detector

- Dual-element pyrodetector.
- Distortions prevention and pet immunity within the detection zone by means of spherical lens.
- Protection against ingress of insects to the pyrodetector.
- LED indication modes choosing.
- Pet immunity adjustment (10, 20 or 40 kg pet weight).
- Powered by DC current power supply with output voltage (9 – 15) V.
- Generates «Failure» message at power supply voltage drop.

3 Specifications

Table 1

Parameter	Value
Detection zone size	10 x 10 m
Power supply	9 ... 15 V DC
Consumption current, not more than	15 mA
Relay output contacts	NC, 30 mA, 42 V
Alarm message duration, not less than	2 sec
Detection zones	8 long-range zones, 4 short-range zones
Maximum detection range, not less than	10 m
Pet immunity	is chosen by DIP-switch «1» see Cl. 10
Operating temperature	minus 30 °C ... +55 °C
Dimensions, not more	105 x 75 x 56 mm
Weight, not more	100 g
IP rating	IP41
Service life	8 years

4 Scope of Delivery

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

Table 2

Name	QNT
Wireless passive infrared detector «Foton-19»	1 pc.
Cap Screw 3-3x30.016	2 pcs.
Screw 2.9x6.5 DIN7981F	1 pc.
Wireless passive infrared detector «Foton-19». Installation Guide	1 copy

5 Field of Application

The Detector can be installed in apartments, as well as in shops, offices, museums and industrial facilities. The Detector may be installed in premises that are inhabited by pets weighing up to 20 kg.

6 Choosing an Installation Place for the Detector

When choosing the Detector installation place, it is advisable to take note of the fact that the detection zone may be limited by non-transparent objects (curtains, houseplants, cabinets, bookcases, etc.), as well as glass and mesh partitions. There must be no windows, air conditioners, space heaters or heating radiators in the Detector visibility zone. The presence of furniture items on which an animal may climb in the detection zone may cause a false alarm.

Recommended installation height – 2.3 m from the floor.

The Detector should be installed at an enough distance from electric cables.

7 Detection Pattern

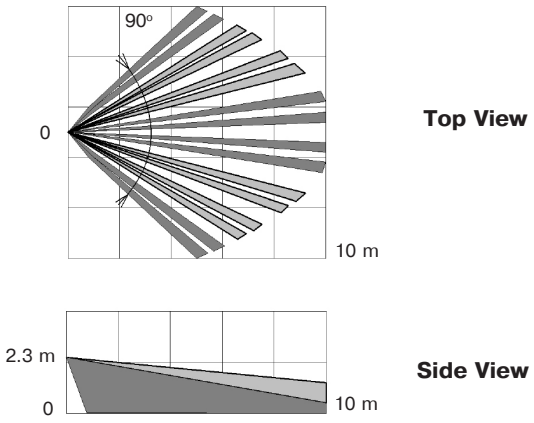

Figure 1

8 Installing the Detector

Before installing the Detector act as follows:

- remove the cover of the Detector;
- put off printed circuit board (PCB) by pushing PCB locating pin (see Figure 2);
- drill the holes (Figure 2) in the base of the Detector case. They will be used for fastening of the Detector and wiring;
- choose the installation place, mark out and drill the installation holes in the wall with regard for the position of the holes on the Detector base;
- install the wires through the holes in the base. Leave several centimeters of a wire for it's connection to the Detector leading-in sockets;
- fix the base at the chosen place;
- reinstall the PCB;
- put on the cover by fixing the retainer screw 2.9x6.5 DIN7981F (supplied).

Note – To exclude false alarms caused by pet's motion, the Detector should be installed vertically.

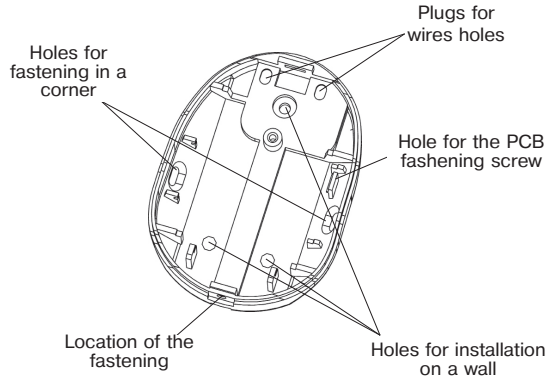

Figure 2 – The Detector base

9 Switching On

- Terminals for the Detector connection are located on the upper side of PCB.
- Fulfill connections in accordance with Figure 3a (for switching to one alarm loop (AL)) or in accordance with Figure 3b (with tamper control via separate AL).
- Set DIP-switches in accordance with application conditions (assignment of DIP-switches is listed on PCB and Cl.10 of herein Installation Guide.

-Put the cover on it's place.

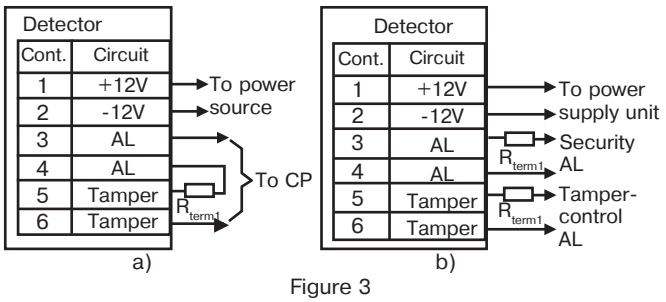

Figure 3

10 DIP-switches Assignment

Table 3

Mode	DIP-switch	DIP-switch position	
		OFF	ON
Sensitivity	1	Immunity to pets up to 10 kg	Immunity to pets weighting up to 20 kg (with t° contrast 8 °C) or pets weighing up to 40 kg (with temperature contrast 6 °C)
Detection zone testing	2	Normal operation	Detection zone positioning
LED indication	3	OFF	ON

11 LED Indication

Table 4

Message	LED Indication State
«Warm-up Time»	Blinking at 1 Hz frequency for a time not more than 60 sec after Detector energizing
«Norm»	No indication
«Alarm»	Switching ON for 3 sec
«Failure» – power supply	Single-shot blinking with 4 sec period for the time of failure duration and for 15 min after supply voltage recovery
«Detection Zone Positioning»	Switching for 0.5 sec at each detection zone beam crossing

12 Indicator Disabling

For masking the Detector operation, LED indication disabling mode is provided. For this purpose set DIP-switch «3» to OFF position.

13 Functional Testing

In presence of the pets weighing up to 20 kg in the room, set DIP-switch «1» in ON position, in presence of the pets weighting not more than 10 kg in the room, set DIP-switch «1» in OFF position. It is advisable to set DIP-switch «1» in ON position in the premises with a high interference level.

After Detector energizing, LED indicator starts blinking at 1 Hz frequency, relay contacts are opened. Upon the expiry of warm-up time (not more than 60 sec), Detector changes to standby mode and is able to generate alarm messages. For the Detector testing two modes of operation are available:

- detection zone positioning;
- sensitivity check.

Detection Zone Positioning

DIP-switches position: «3» – ON, «2» – ON.

This mode is intended for every beam of the detection zone positioning. At each beam crossing, LED indicator switches ON for 0.5 sec. Optimal speed of movement at maximum distance is 0.5 m/sec.

Note – In this mode LED indication of alarm message is OFF (Alarm message is delivered only by relay contacts opening).

Under movement absence in the secured area LED indicator should not switch ON. After 5 minutes testing the Detector changes to normal operation mode if DIP-switch «3» is in ON position. Alarm message delivery is displayed by LED indicator lighting for 3 sec.

Sensitivity Check

DIP-switches position: «3» – ON, «2» – OFF. This mode is intended for sensitivity estimation (a distance, which one can accomplish inside the sensitivity zone up to the time of alarm signal generation). Alarm signal should be generated after 2 – 4 steps inside the detection zone during 3 sec.

After every alarm message generation stop and wait until LED indicator is OFF. Then wait for 8 – 10 sec more before continuing movement through the detection zone.

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

14 Storage and Transportation

14.1 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.) over any distances in compliance with the existing shipping rules concerning the respective means of transportation.

14.2 The storage premises should not contain any current-conducting dust, acid and alkali fumes, or corrosive or destroying insulation gases.

15 Manufacturer's Guarantees

15.1 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.

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

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

16 Packing Certificate

The detector Foton-19 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

Person in charge of acceptance and packing

QC representative_____ _____.
day, year, month

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