WIRELESS REMOTE OPERATING CONSOLE

«PUV-RK»

Installation Guide

1 General Information

1.1 Wireless remote operating console «PUV-RK» (hereinafter, PUV-RK) is designed to provide display, entry and exchange the information via two-way communication channel within 433.05 ... 434.79 MHz frequency range according to the «Rielta-Contact-R» exchange protocol.

PUV-RK is intended for operation as a component of a system that is operated by a control panel (hereinafter, the CP), supporting wireless «Rielta-Contact-R» exchange protocol.

1.2 Transmitter emitted power does not exceed 10 mW.

1.3 To provide radio exchange between PUV-RK and extension module two operating frequencies: main and reserve are used. PUV-RK switches to reserve operating frequency automatically in case of radio-frequency interference on the main one.

1.4 PUV-RK is powered by lithium power supply battery CR123A type.

1.5 PUV-RK generates and transfers the following messages:

- «Main Battery Discharge» message if power supply battery voltage drops lower than $2.4_{-0.1}$ V;
- «Reserve Battery Discharge» message if power supply battery voltage drops lower than $2.3_{-0.1}$ V.

1.6 PUV-RK generates «Tamper» message in case of PUV-RK removing from the installation place.

1.7 PUV-RK ensures control codes transmission by ✓ button pushing and release. Entered codes cleaning is ensured by pressing the ✳ button.

1.8 PUV-RK provides transmission of an emergency call (panic button function) by pressing the buttons ✳ and # for at least 3 seconds.

1.9 PUV-RK is resistant to electromagnetic interferences.

1.10 PUV-RK is designed for continuous operation around the clock.

2 Specifications

Table 1

Parameter	Value
Operating temperature	minus 20 ... +50 °C
Permissible relative humidity +25 °C	up to 98 %
Ambient class	Boreal climate*
IP rating	IP30
Dimensions, not more than	120 x 90 x 23 mm
Weight, not more than	0.12 kg
Operating period under normal climate conditions, not less than	24 months
Average service life, not less than	8 years

* background temperature 15 – 35 °C, relative humidity 25 – 75 %, air-pressure 86 – 106 kPa.

3 Scope of delivery

Each Console unit package contains items listed in Table 2.

Table 2

Name	QNT.
Wireless remote operating console «PUV-RK»	1 pc.
Lithium battery CR123A	1 pc.
Screw 3-3x30.016	3 pcs.
Wall Plug NAT 5x25 SORMAT	3 pcs.
Wireless remote operating console «PUV-RK». Installation Guide	1 copy

4 Design

PUV-RK comprises the following components (see Figure 1): case (7) with the installed printed circuit board (PCB) (8). Power supply battery should be installed to the holder (9).

PCB comprises: pieso transmitter (10), jumper for sound switching off (13), «Reset» contacts (12) for PUV-RK changing to «Binding» mode, wall tamper (11).

LED indicators of general application (1), (2) located on the front panel can be switched ON / OFF by the relevant command from CP.

In order to provide control codes entry PUV-RK is equipped by 16 buttons, 14 of which generate codes. Keys (3),(4),(5),(6) are used in combination with numeric keys:

- key ✓ (5) - sending the code combination;
- key ✳ (6) - reset the code combination.

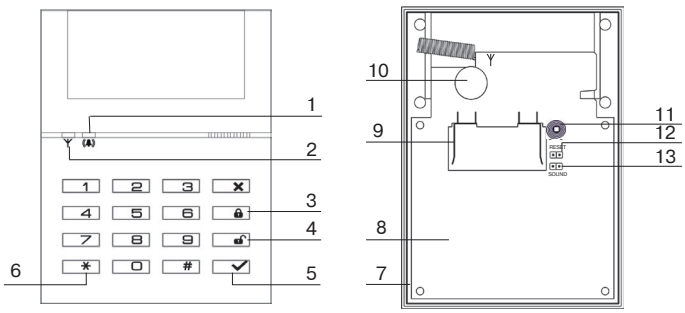

Figure 1

5 LED Indication

PUV-RK comprises the following types of built-in LED indicators (1), (2):

- «Binding» mode (logging to the control panel (hereinafter, the CP);
- «Communication quality appraisal»;
- «Communication loss»;
- «Battery discharge»;

LED indication modes depend on the PUV-RK state and are listed in Table 3.

Table 3

State	LED Indication	Notes
Operation in «Binding» mode	Service LED indicator blinking green periodically	Request for logging in the CP
«Binding» mode finishing	Service LED indicator lighting red for 1 sec	
«Communication loss» LED indication	Four-shot LED indicator blinking red	When transmitting data in the absence of communication
LED indication «Battery discharge»	One-shot LED indicator blinking red during any button pressing	
LED indication «Battery normal»	One-shot LED indicator blinking green during any button pressing	
Communication quality appraising	See Cl. «Communication Quality Appraising»	

Sound indication is switched on/off by installing/removing a jumper on the back side of the PUV-RK (Fig. 1, (13)).

6 Binding with the CP

«Binding» mode is provided for the PUV-RK logging in the CP and for service information exchange.

Install power supply battery to the holder. Prepare the CP for the Detector logging in accordance to the CP Installation Guide. Service LED indicator (Fig. 1, (1)) periodical blinking green means that the PUV-RK is being in process of binding. In case of service LED indication absence, close the «Reset» contacts (12) at PUV-RK backside for a moment. The time during which the PUV-RK operates in the «Binding» mode is limited to 100 sec. After it expires, the PUV-RK state changes to the sleep mode. To restore the «Binding» mode, the «Reset» (12) contacts must be closed for a moment.

7 Operation Aspects

PUV-RK stores in it's buffer not more than 24 pressed buttons. PUV-RK transmits information about pressed buttons after pressing and release ✓ (6).

To ensure energy conservation PUV-RK transfers to energy saving (sleeping) mode 5 s after the last key press. When entering the energy saving mode, the other keys are deactivated and the buffer is cleared.

PUV-RK provides the mode of periodical radio sessions in order to control it's presence in radio network.

A list of messages and commands supported by the device:

1) to report a set period of going in radio network;
2) to set the established period of radio sessions;
3) to set the frequency lit;
4) to synchronize the session key;
5) to report the status of the terminating device;
6) to report the set frequency lit;
7) to set light and sound indication in command with the CP;
8) to set the start of radiosessions after the set time.

8 Communication Quality Appraising

Before installing the PUV-RK to it's place of operation, it is advisable to appraise the CP communication quality as follows: press ✓ button, then the PUV-RK displays radio communication quality with the CP by means the service LED indicator (1), in accordance to Table 4.

Table 4

LED Indication	Communication Quality Appraisal	Recommendations
LED indicator blinks green three times	Excellent	Install Console at this place
LED indicator blinks green two times	Good	
LED indicator blinks green one time	Communication established	Choose another place of installation or use a repeater*)
LED indicator blinks red four times	No communication	
*) – «Ladoga-RK» system repeater		

After choosing place of installation tighten 2 screws in the wall in correspondence to pear shaped holes in the base (See Figure 2), then hang up the base on them and fix connection by third screw.

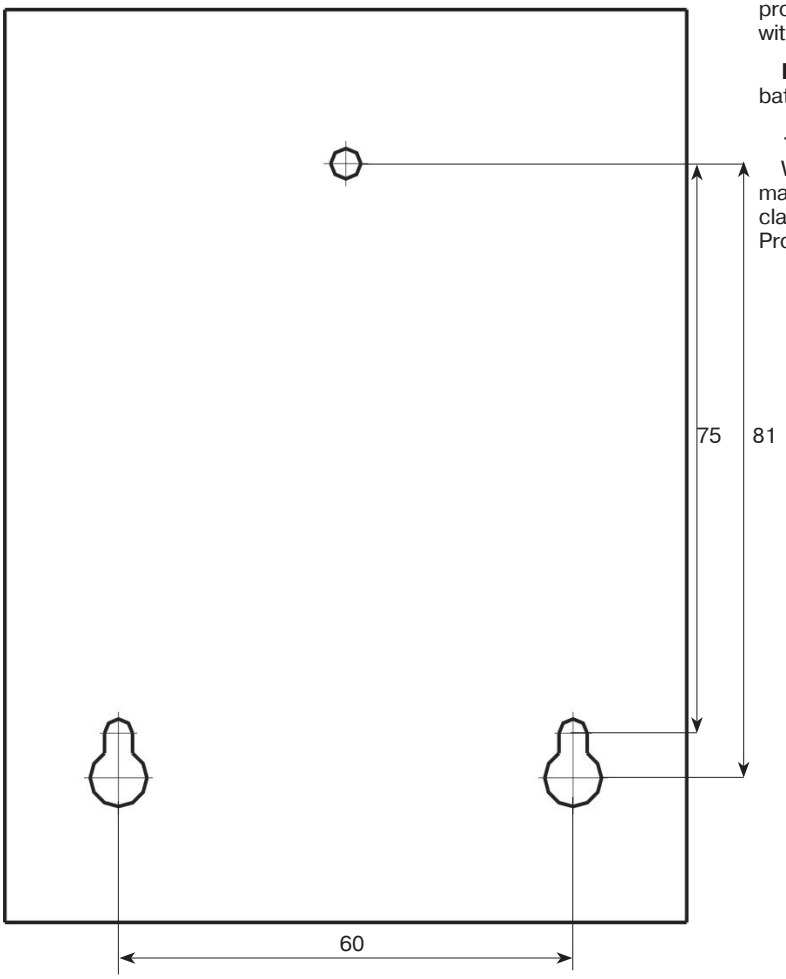

Figure 2 - Template for marking PUV-RK attachment points (scale 1:1)

9 Storage and Transportation

9.1 The Consoles 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 Console without power supply battery is resistant to:

a) transport jolting with the acceleration 30 m/sec^2 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.

9.2 After transportation under the conditions different to exploitation conditions the Console shall be ready to operate after a maximum of two hours.

10 Manufacturer's Guarantees

10.1 The Manufacturer guarantees conformity of the Console 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 Consoler.

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

10.3 The Consoles 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.

Note – Warranty obligations are not applied to the power-supply batteries.

11 Packing Certificate

Wireless remote operating console «PUV-RK» has been manufactured in compliance with the active technical documentation, classified as fit for operation and packed by «Development and Production Enterprise RIELTA» LLC.

Packing date _____
month, year

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v10.1

Made in Russia

«Development and Production Enterprise RIELTA» LLC
Petrogradskaya nab., 34, letter B, Saint Petersburg, Russia, 197046
www.rielta.com, rielta@rielta.com
Tel./fax: +7 (812) 233-0302, 703-1360, support@rielta.com
Technical support, tel.: +7 (812) 233-29-53, 703-13-57, support@rielta.com