

«PUV-RK»

Installation Guide

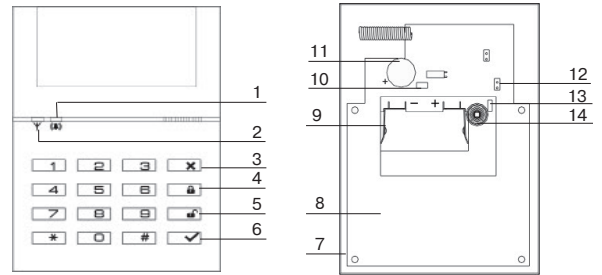


Figure 2

1 General Information

1.1 Wireless remote operating console «PUV-RK» (hereinafter, Console) 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.

Console 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 Console and extension module two operating frequencies: main and reserve are used. Console switches to reserve operating frequency automatically in case of radio-frequency interference on the main one.

1.4 Console is powered by lithium power supply battery CR123A type.

1.5 Console generates and transfers the following messages: «Battery Discharge» message if power supply battery voltage drops lower than 2.6_{-0,4} V and «Tamper» message in case of Console removing from the installation place.

1.6 Console ensures control codes transmission by «Enter» button pushing and release. Entered codes cleaning is ensured by pressing the «Reset» button.

1.7 Console is resistant to electromagnetic interferences.

1.8 Console 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 90 %
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 at average usage rating 2 times a day, not less than	1 year
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.
Wireless remote operating console «PUV-RK». Installation Guide	1 copy

4 Design

The console 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: piezo transmitter (11), jumper for sound switching off (10), service LED indicator (13), «Reset» contacts (12) for Console changing to «Binding» mode, wall tamper (14).

LED indicators of general application (Ⓜ), Ψ (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 Console is equipped by 16 buttons: 14 buttons generate codes and two service ones provide supervision of codes entry:

- X button – to reset data («Reset»);
- ✓ (6) button – to enter data («Enter»).

5 LED Indication

Console comprises the following types of built-in LED indicators:

- a) Service LED indicator (13), which displays the following information:
 - «Binding» mode (logging to the control panel (hereinafter, the CP));
 - «Communication quality appraisal»;

- b) Indicator of general use Ψ (2), which displays the following information:

- «Communication established»;
- «Communication loss»;
- «Battery discharge»;
- «Identification».

LED indication modes depend on the Console 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 availability» LED indication	LED indicator single-shot red blink	During data transmission after wake-up or pushing «Enter» button
«Communication loss» LED indication	Four-shot LED indicator blinking red	
LED indication «Battery discharge»	Three-shot LED indicator blinking red	During information entry
LED indication «Identification»	LED indicator alternate blinking green and red	After receiving command on switching ON LED indication «Identification»
Sound indication	Short-term click	Short-term button pressing registration
	Long-term signal during button pressing	Long-term button pressing registration
	Long-term signal under attempt of next button pressing	Buttons pressing buffer overflow. It is recommended to press «Reset» button
Communication quality appraising	See Cl. «Communication Quality Appraising»	

6 Binding with the CP

«Binding» mode is provided for the Console 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 (13) periodical blinking green means that the Console is being in process of binding. In case of service LED indication absence, close the «Reset» contacts (12) at the Console backside for a moment. The time during which the Console operates in the «Binding» mode is limited to 100 sec. After it expires, the Console state changes to the sleep mode. To restore the «Binding» mode, the «Reset» (12) contacts must be closed for a moment.

7 Operation Aspects

The Console stores in it's buffer not more than 12 pressed buttons. The Console transmits information about pressed buttons after pressing and release «Enter» (6).

To ensure energy conservation the Console transfers to energy saving (sleeping) mode. Two seconds before the transfer to sleeping mode the Console produces warning sound. For the control commands activation it is recommended to start data entry from «Reset» (3) button pressing.

After the Console transfers to energy saving (sleeping) mode, other buttons are deactivated, and buffer is cleared.

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

8 Communication Quality Appraising

Before installing the Console to its place of operation, it is advisable to appraise the CP communication quality as follows: press wall tamper button (14) and release it after two seconds, then the Console should display radio communication quality with the CP by means the service LED indicator (13) 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.

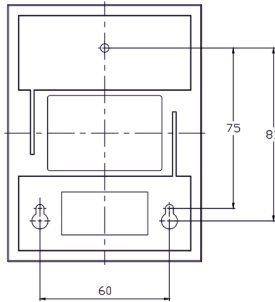


Figure 2

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 $50 \dots +50 \text{ }^\circ\text{C}$;
- c) relative air humidity $(95 \pm 3) \%$ at the ambient temperature $+35 \text{ }^\circ\text{C}$.

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 its 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 Console.

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 Acceptance and Packing Certificate

Wireless remote operating console «PUV-RK»,

serial number _____,

has been manufactured in compliance with the active technical documentation and classified as fit for operation and packed by «RIELTA» JSC.

Person in charge of acceptance and packing

QC representative _____
day, year, month

Made in Russia

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