RIELTA

WIRELESS REMOTE OPERATING CONSOLE

«PUV-RK» version 1

Installation Guide

1 General Information

1.1 Wireless remote operating console «PUV-RK» version 1 (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.

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

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	IP41
Dimensions, not more than	60 x 146 x 25 mm
Weight, not more than	0.125 kg
Operating period under normal climate conditions, not less than	12 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» vers.1	1 pc.
Lithium battery CR123A*	1 pc.
Wireless remote operating console «PUV-RK» vers.1. Installation Guide	1 copy
* Installed	

4 Design

PUV-RK comprises the following components (see Figure 1): case (1) with the installed printed circuit board (PCB) (4). LED indicators of general application (2) located on the front panel can be switched ON / OFF by the relevant command from the control panel (hereinafter, the CP).

PCB comprises: pieso transmitter (3), «Reset» contacts (7) for PUV-RK changing to «Binding» mode. Battery (5) with insulator is installed in the battery compartment (6).

In order to provide control codes entry PUV-RK is equipped by 13 buttons, 12 of which generate codes. Keys ✳, #, 🔔 are used in combination with numeric keys:

- key ✳ - reset the code combination;
- key 🔔 - sending the code combination;
- key # and (9) - enable/disable sound indication when pressed simultaneously;
- key ✳ and # - the panic bottom;

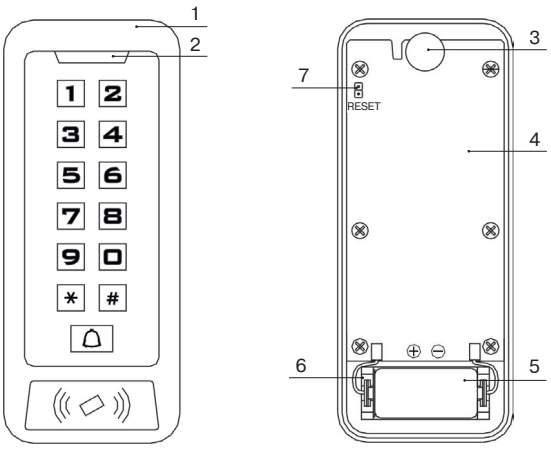

Figure 1

5 LED Indication

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

- «Binding» mode (logging to the CP);
- «Communication quality appraisal»;
- «Communication loss»;
- «Battery discharge»;
- «Communication presence».

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»	

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 (2) periodical blinking green means that the PUV-RK is in the «Binding» mode. In case of service LED indication absence, close the «Reset» contacts (7) at PUV-RK backside for a moment. The time during which the PUV-RK operates in the «Binding» mode is limited to 100 sec. 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 🔔.

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.

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 (2), 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		

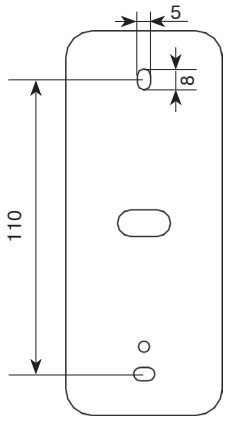

Figure 2 - Mounting dimensions

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» version 1 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

Rev. 0 of 23.07.2020
№00701
v1

Made in Russia

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