



# Wireless receiver

**RDK1**

**6 outputs**

**Data sheet**

**Device identification number**

## 1. Product Designation

The RDK1 wireless receiver with 6 outputs (hereinafter referred to as the receiver) is designed for:

- receiving signals transmitted by connected wireless signaling devices and keyfobs;
- received signals transmission to security panels connected to receiver outputs;

Therefore the receiver allows:

- to combine a radio channel system with security and fire alarm panels without incorporated ability of operation with radio channel signaling devices;
- to increase maximum number of radio sensors connected to the panel with an included radio system.

## 2. Manufacturer

**RITM Company**  
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St Petersburg, Russia  
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[www.ritm.ru/en](http://www.ritm.ru/en)    [world@ritm.ru](mailto:world@ritm.ru)

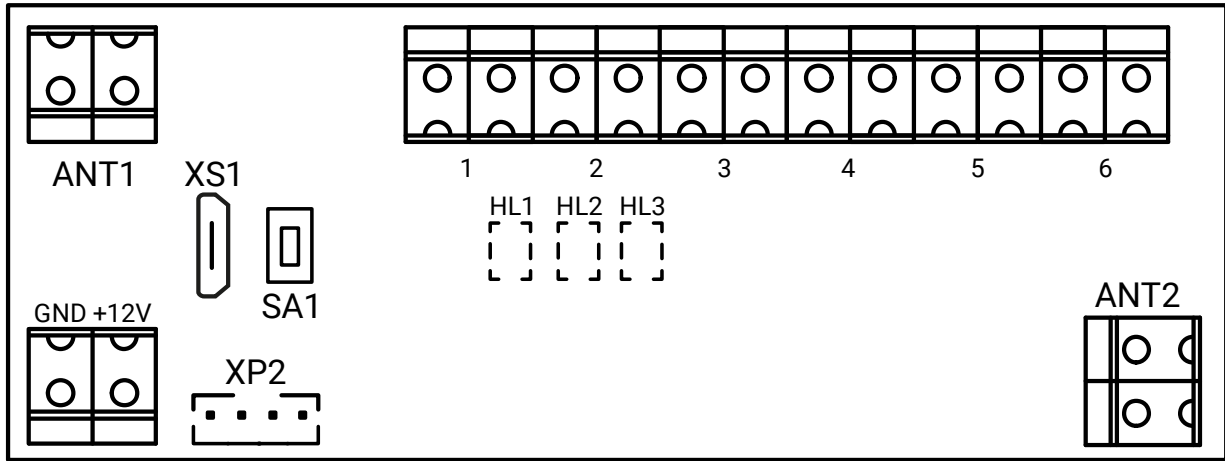
## 3. Package Contents

RDK1 wireless receiver (6 outputs)	1 pc
Radio channel whip antenna 433 MHz, 174 mm	2 pcs
Fastening kit	1 pc
Data sheet	1 pc
Packaging	1 pc

#### 4. Technical Specifications

<b>Parameter</b>	<b>Value</b>
Communication channels band, MHz	433.075–434.775
No. of communication channels	7
No. of monitored radio channel devices	Up to 32
Monitoring period of signaling device operation in radio system, min	1
Configuration using PC	+
Radio system configuration w/o PC	+
Transmitter radiated power, mW	Not exceeding 10
Maximum distance for strong signal, m	Up to 1200
No. of outputs (dry contact), 30 V 120 mA	6
Supply voltage, V	12±2
Absorbed current, mA	Up to 150
Dimensions w/o antennas, mm	29×101×34
Weight (w/o antennas), g	54
Operating temperature range, °C	-30...+55

## 5. Connector Designation



Part	Designation
<b>XS1</b>	Micro-USB connector for PC connection.
<b>1-6</b>	Outputs of "dry contact" type.
<b>XP2</b>	4-pin connector for configuration cable.
<b>GND, +12V</b>	Terminal for external power source, 12V: <ul style="list-style-type: none"> <li>• GND – negative terminal for external power source;</li> <li>• +12V – positive terminal for external power source.</li> </ul>
<b>HL1, HL2, HL3,</b>	Visual indicators on the back side of the board.
<b>ANT1, ANT2</b>	Antenna connectors.
<b>SA1</b>	Device addition button.

## 6. Visual Indication

There are 3 operation modes of the receiver:

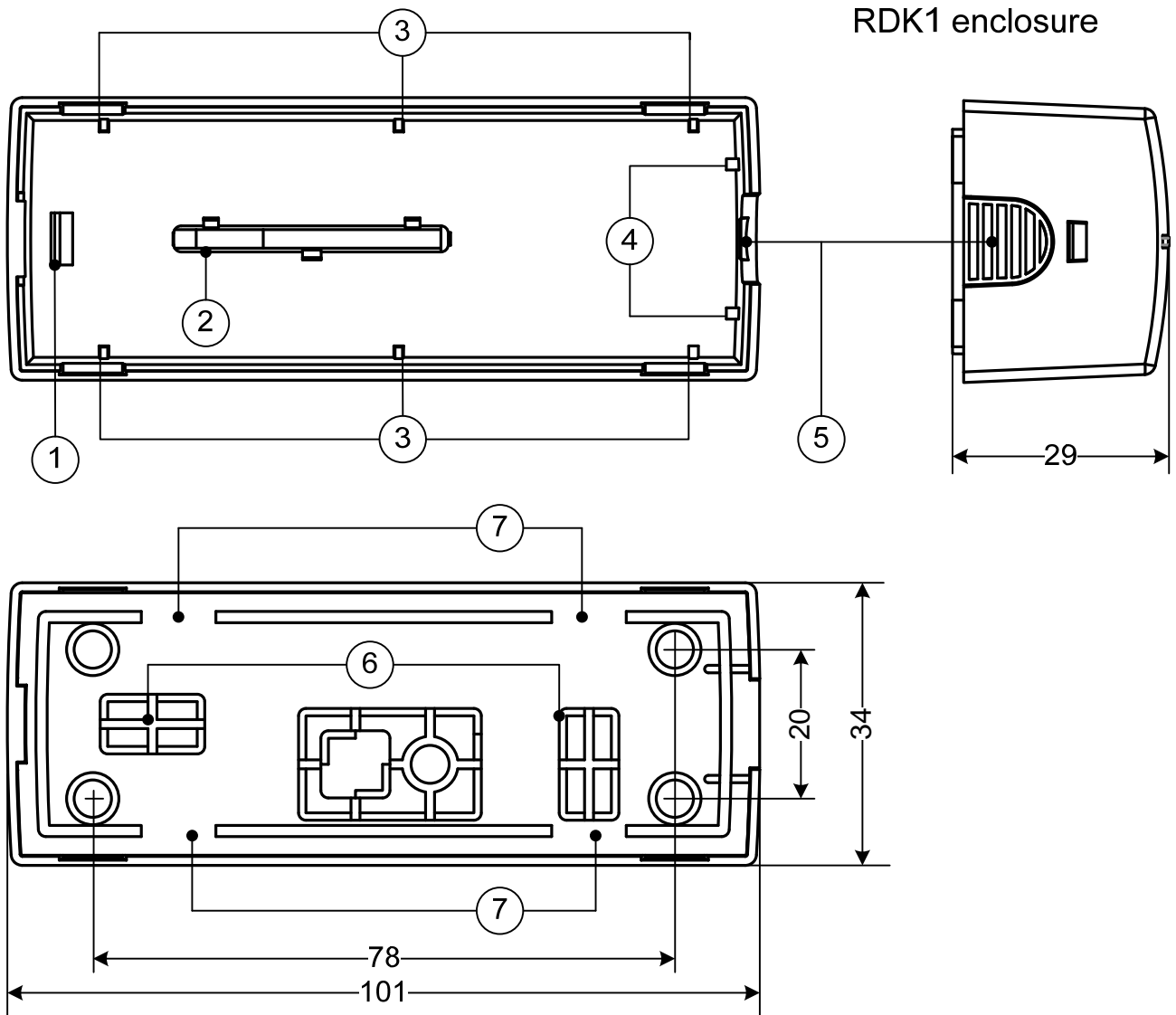
1. Standby (operation) mode;
2. Mode of manual device addition to the radio system (to enter the mode press and hold the SA1 button for about 2 sec);
3. Mode of device addition to the radio system using the configuration software.

Indicator	State	Value
<b>Standby mode</b>		
HL1	Red, always on	External power
HL3	Green, blinks once	Receiving a packet from a radio channel device
<b>Mode of manual device addition to the radio system</b>		
HL1	Red, always on	External power
HL3	Green, always on	The receiver is in the mode of manual device addition
HL2	Red, blinks once	A new device is successfully added to the radio system
HL2 + HL3	Green HL2 and red HL3 blink synchronously 2 times	The maximum number of devices are added
<b>Mode of device addition to the radio system using the configuration software</b>		
HL1	Red, always on	External power
HL2	Green, always on	The receiver is waiting for adding a device After adding a device the HL2 indicator is off

## 7. Getting Ready for Operation and Radio System Configuration



All preparation work should be done with the power off!



Install the receiver on a vertical surface so that one of its antennas is perpendicular and the other is parallel to the floor plane (it is also recommended that they are directed towards signaling devices).

Do not place RDK1 in the vicinity of EMI sources, large metal objects and structures, power cable runs.

1. Recess the latch 5 and open the enclosure.
2. Use a screw driver to release the latch 1 and remove the receiver board.
3. Remove blank plugs 6 from the enclosure base.
4. Run power cables and alarm ribbon cables through the newly available openings.
5. Connect the alarm ribbon cables to the connectors 1–6.
6. Install the whip antenna to either the ANT1 or ANT2 connector.
7. Connect the power supply circuit to the connector GND, +12V respecting the polarity.

8. Connect to the receiver using configuration software ritm.conf or Ritm Configure<sup>1</sup> with a MicroUSB cable (XS1 connector) or “USB1/USB2 PC connection cable” (XP2 connector).
9. Add to the receiver required radio devices using the configuration software or in the mode of manual device addition.
10. Configure the behavior of receiver outputs in the “Outputs” section of the configuration software.
11. After adding required radio devices switch the receiver to the standby mode.
12. Put corresponding wires in slots 7 and secure the enclosure base on the wall.
13. Install the enclosure cover to the base and secure it with the latch 5.
14. Power on the receiver. The receiver is ready for operation.

## 8. Maintenance and Safety Measures

At least twice a year, check the reliability of contacts and make sure there are no mechanical defects on input leads. If necessary, clean the bonding pads and remedy wire insulation issues.

All installation, configuration, and maintenance activities applied to the receiver should be performed by duly qualified personnel.

## 9. Transportation and Storage

The receiver should be transported in packaging in closed vehicles. Storage premises should be free of current-conducting dust, acid and alkaline fumes, corrosive gases and gases harmful to insulation.

## 10. Manufacturer's Warranties

The manufacturer guarantees that the receiver complies to requirements of the technical specifications, provided the client ensures compliances to conditions of transportation, storage, installation and operation.

Although **the warranty period** is 12 months from the commissioning date, it may not exceed 18 months from the production date.

**The warranty storage period** is 6 months from the production date.

The manufacturer reserves the right for modification of the receiver in any way that does not degrade its functional characteristics without prior notice.

## 11. Information on Claims

In case of a receiver failure or defect during the warranty period, please fill in a malfunction report specifying the dates of issue and commissioning of the receiver and nature of the defect and submit it to the manufacturer.

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<sup>1</sup> The configuration software is available for downloading on the official website [www.ritm.ru/en](http://www.ritm.ru/en).

**For Notes**