# WIRELESS LIGHT ALARM ANNUNCIATOR

# «Trubach-T-RK»

## Installation Guide

### 1 General Information

1.1 Wireless light alarm annunciator «Trubach-T-RK» (hereinafter, the annunciator) is designed to provide evacuation management in case of fire break-out or other extreme event.

1.2 Variants of caption:

- EXIT
- 
- 
- FIRE

1.3 The annunciator is intended for operation as a component of a system, that is operated by a control panel (hereinafter, CP), supporting «Rielta-Contact-R» wireless two-way data exchange protocol.

1.4 Two frequencies in the 433.05 to 434.79 frequency range are used for wireless signal exchange with the CP: the main frequency and the reserve one. The annunciator switches to the reserve operating frequency automatically in case of radio-frequency interference on the main one.

1.5 Transmitter power does not exceed 10 mW.

1.6 The annunciator is powered in two ways:

a) by two CR123A/3V batteries, the main and the backup one;

b) by external uninterrupted power supply.

1.7 The annunciator generates and transmits the following messages via radio channel:

- «NORM»;
- «Tamper» – after TEST button pressing;
- «Main power supply low-battery» – in case of the main battery power supply discharge lower than $2.5_{-0.3}$ V or external power supply drop lower than $9_{-2}$ V;
- «Backup power supply low-battery» – in case of the backup battery power supply discharge lower than $2.5_{-0.3}$ V;
- «Announcing» – if annunciator is switched on.

1.8 The following rates of radio exchange sessions of the annunciator status message transmission is assigned by a command from the control panel (hereinafter, the CP): 10, 15, 30 sec, 1, 5 or 10 min.

1.9 «Announcing» mode switching ON/OFF as well as annunciator operation mode adjustment are fulfilled by relevant commands from the CP.

1.10 The annunciator provides operation in continuous or pulsed light-alarm modes.

1.11 Pulse-mode parameters can be set by the user in the process of the annunciator adjustment.

1.12 The annunciator operation mode is displayed by two LED indicators – red and green (see Table 3).

1.13 The annunciator ensures safe operation in standby mode*:

- in case of main battery power supply – not less than 6 years or 10 hours in continuous announcing mode;
- in case of backup power supply – not less than 2 months.

1.14 The annunciator is designed for continuous operation around the clock in closed premises.

1.15 The annunciator is resistant to electromagnetic interferences, electrostatic discharge and nanosecond pulse interferences.

### 2 Specifications

Table 1

| Parameter | Value |
|---|---|
| External power supply | (12 ± 3) V DC |
| Current consumption in Announcing mode under:<br>- C123A power supply<br>- external power supply | <br>85 mA<br>100 mA |
| Average current in standby mode under:<br>- C123A power supply<br>- external power supply | <br>10 μA<br>8 mA |
| Operating temperature under:<br>- C123A power supply<br>- external power supply | <br>from minus 20 ... +55 °C<br>from minus 30 ... +55 °C |
| Permissible humidity at 40 °C | 93 % |
| Ambient class | Boreal climate** |
| IP rating | IP44 |
| Dimensions, not more than | 330 x 150 x 62 mm |
| Weight, not more than | 0.45 kg |
| Average service life | 10 years |

*) – provided that radio transmitting period is not less than 30 sec;

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

### 3 Scope of Delivery

Each annunciator unit package contains items listed in Table 2.

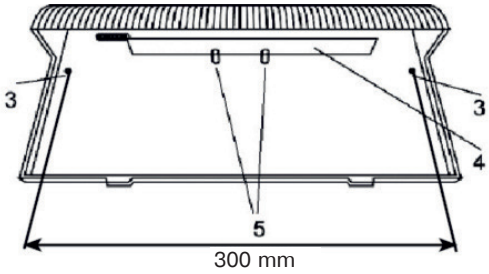
Table 2

| Name | QNT |
|---|---|
| Wireless light alarm annunciator «Trubach-T-RK» | 1 pc. |
| Screw3-3x30.016 | 2 pcs. |
| Wall NAT «SORMAT» 5x25 | 2 pcs. |
| CR123A power supply battery | 2 pcs. |
| Wireless light alarm annunciator «Trubach-T-RK». Installation Guide | 1 copy |

### 4 Design

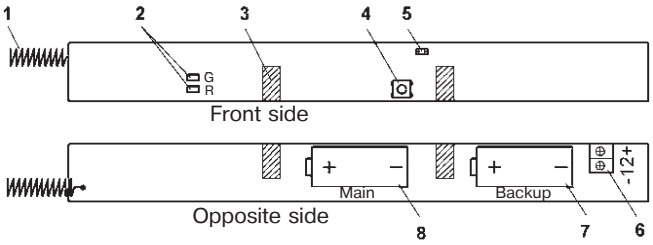
With cover on


Without cover




1 – cover;
2 – cover latches;
3 – mounting holes;
4 – printed circuit board (PCB);
5 – PCB holders.

Figure 1 – Annunciator case




1 – antenna;
2 – LED indicators;
3 – correct installation marks;
4 – «TEST» button;
5 – «RESET» male pins contacts;
6 – external power supply leading-in socket;
7 – backup power supply battery;
8 – main power supply battery.

Figure 2 – PCB

### 5 LED Indication

Table 3

| Operation Mode | LED Indication |
|---|---|
| Binding | LED indicator blinking green |
| «Binding is completed» | Short-term (2 sec) LED indicator lighting red |
| «Identification» | Alternate LED indicator lighting green and red |
| «Communication Quality Appraisal» | See Table 4 |

### 6 Switching On and Setting Up

In general way, procedure annunciator of setting up comprises the following steps:

- binding (logging) of annunciator with a CP;
- choosing place of installation and appraising of communication quality with the CP;
- mounting.

## 7 Binding

7.1 Prepare the CP to the new device logging («Binding» mode) in accordance with the CP Manual. During binding procedure fulfillment, only one CP prepared to the new device logging should be located in the radio-coverage zone of the annunciator.

7.2 Push the cover latch by screwdriver and put off the cover from the annunciator.

7.3 Remove terminal insulated plate between «+» and holders first from backup power supply battery, then from the main one. If the annunciator is powered by an external source, apply 12 V to the terminals.

7.4 Close «Reset» male pins contacts on the PCB by any conductive item until binding LED indication lighting.

7.5 Fulfill binding procedure. Successful binding is displayed by short-term red LED indicator lighting.

**Note** – Binding mode duration is 100 sec. To restart the binding procedure, repeat Cls. 7.3 – 7.5.

## 8 Choosing Place of Installation

8.1 It is not recommended to install the annunciator at the following places:

- directly on metal constructions and closer than 1 m to them;
- closer than 1 m to electrical power cables, as well as metal water & gas pipes;
- adjacent to radio-interference sources;
- inside metal construction.

8.3 Annunciator power supply cables should be located far enough from electrical power cables.

8.4 Install the annunciator in the place, where communication quality is appraised as «good» or «excellent» (see Cl. 9).

## 9 Communication Quality Appraising

9.1 Bring the annunciator to the chosen place of installation.

9.2 Push «TEST» button for a second.

9.3 Appraise communication quality of the annunciator and the CP as per LED indication (See Table 4).

Table 4 – Communication quality appraisal LED indication

| LED Indication | | Communication Quality Appraisal | Recommendations |
|---|---|---|---|
| Color | Mode | | |
| Green | Three blinks | Excellent | Install the annunciator at this place |
| Green | Two blinks | Good | |
| Green | One blink | Communication established | Choose another place of installation or use a repeater*** |
| Red | Blinks series | No communication | |
| ***) – «Ladoga BRSS-RK-RTR» or «Ladoga BRSS-RK-RTR», ver.1 | | | |

## 10 Mounting

10.1 Choose place of installation of the annunciator, mark places for it's mounting. Use the annunciator case for marking. (See Figure 1).

10.2 Fasten case to the wall by two screws.

10.3 Check the PCB fixation in holders (See Figure 1).

## 11 Storage and Transportation

11.1 The annunciators in their original packaging may be transported by any means of transportation in closed vehicles over any distances in compliance with the existing shipping rules concerning the respective means of transportation.

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

## 12 Manufacturer's Guarantees

The manufacturer guarantees conformity of the annunciator to it's Technical Specifications provided that the transportation, storage, installation and operation conditions are observed.

12.2 The guaranteed shelf life of the annunciator is 63 months since the date of manufacture.

12.3 The guaranteed useful life is 60 months since the day of putting into operation within the guaranteed shelf life.

12.4 The annunciators that are found non-conforming to the Technical Specifications shall be repaired by the manufacturer, provided the installation and operation rules have been complied with.

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

## 13 Acceptance and Packing Certificate

Wireless light alarm annunciator «Trubach-T-RK»,

batch number_____,

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

Person in charge of acceptance and packing

QC representative_____ _____.

day, year, month

Rev. 0 of 19.06.17

Made in Russia №00330

«RIELTA» JSC, www.rielta.com,
Chapaeva Str. 17, Saint Petersburg, Russia, 197101, rielta@rielta.com,
Tel./fax. +7 (812) 233-0302, 703-1360,
Technical support, tel. +7 (812) 233-29-53, 703-13-57, support@rielta.ru.