

## «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<sub>-0.3</sub> V or external power supply drop lower than 9<sub>-2</sub> V;
- «Backup power supply low-battery» – in case of the backup battery power supply discharge lower than 2.5<sub>-0.3</sub> 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:	
- C123A power supply	85 mA
- external power supply	100 mA
Average current in standby mode under:	
- C123A power supply	10 µA
- external power supply	8 mA
Operating temperature under:	
- C123A power supply	from minus 20 ... +55 °C
- external power supply	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.

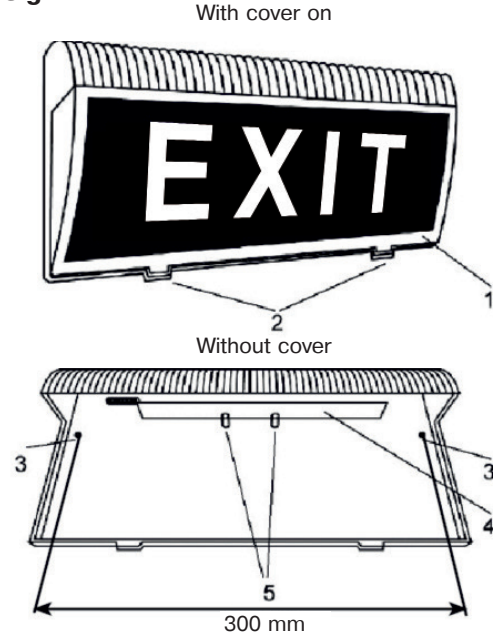
#### 3 Scope of Delivery

Each annunciator unit package contains items listed in Table 2.

Table 2

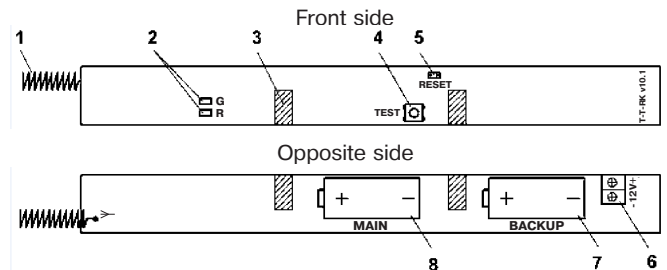
Name	QNT.
Wireless light alarm annunciator «Trubach-T-RK»	1 pc.
Screw 3-3x30.016	2 pcs.
Wall NAT «SORMAT» 5x25	2 pcs.
CR123A power supply battery	2 pcs.
Wireless light alarm annunciator «Trubach-T-RK». Installation Guide	1 copy

#### 4 Design



- 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 Binding with the CP

The binding procedure is intended for logging of the Detector in the CP and transmitting of service information to it.

6.1 Prepare the CP for the Detector binding in accordance to the CP manual.

6.2 Remove the Detector cover. For this purpose press the cover latches by screwdriver.

6.3 Pull out isolators located between contacts + and battery holders first from the backup power supply battery, and after from the main one. In case of external power supply apply 12 V on the Detector terminals.

6.4 LED indicator blinking green displays the Detector readiness for the binding procedure.

6.5 In case the LED indicator does not blink, close the «RESET» contacts (5) for 2–3 s.

6.6 After a successful binding with the CP, the LED indicator lights red for 2 - 3 s.

6.7 The «Binding» procedure is limited to 100 sec. After it expires, the Detector changes to the sleep mode. To resume the «Binding» mode, the «RESET» contacts (5) must be closed for 2–3 c.

## 7 Choosing Place of Installation

7.1 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.

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

7.3 Install the annunciator in the place, where communication quality is appraised as «good» or «excellent» (see Cl. 8).

## 8 Communication Quality Appraising

8.1 Bring the annunciator to the chosen place of installation.

8.2 Push «TEST» button for a second.

8.3 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-RK» system repeater

## 9 Mounting

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

9.2 Fasten case to the wall by two screws.

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

## 10 Storage and Transportation

10.1 The annunciator are transported without power supply battery. The annunciator in their original packaging are resistant to:

- transport jolting with the acceleration up to 30 m/sec<sup>2</sup> at impact frequency range from 10 to 120 per minute or 15 000 strikes;
- ambient temperature range minus 50 ... +50 °C;
- relative air humidity (95 ± 3) % at a temperature +35 °C.

10.2 The annunciator in original package 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.

10.3 After transportation under the conditions different to exploitation conditions the annunciator shall be ready to operate after a maximum of six hours.

10.4 The storage room shall be free from current-conducting dust, acid vapors, alkali and gases that cause corrosion and destroy insulation.

## 11 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.

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

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

11.4 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.

## 12 Acceptance and Packing Certificate

Wireless light alarm annunciator «Trubach-T-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

