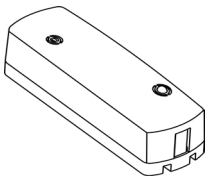
RIELTA C.Nord

EAC

WIRELESS MAGNETIC CONTACT SECURITY DETECTOR



«CN-Magnetic»

Installation Guide

1 General Information

1.1 Wireless magnetic contact security detector «CN-Magnetic» (hereinafter, the Detector) is intended for opening or shifting control of doors, windows or other structural elements with the following transmission of messages to the control panel (hereinafter, the CP) via two-way wireless channel by the «CN-Contact-R» protocol.

1.2 Opening or shifting control is fulfilled by built-in magnetic contact «Gerkon» monitoring. The Detector comprises the plug for external inertia detector (hereinafter, the EID) hooking up.

1.3 The Detector is a single-zone, providing a possibility for one EID hooking up to «G 1» loop.

The built-in «Gerkon» and «G 1» loop are integrated in a single control zone, operation tactics of which is set by the «Gerkon» jumper (see Cl. 8).

1.4 Detector operates within 433.05 – 434.79 MHz frequency range. It's transmission power does not exceed 10 mW.

1.5 The Detector ensures operation at the main and backup operating frequencies. The changeover to backup operating frequency is fulfilled automatically.

1.6 Radio communication is initiated by the Detector at 10, 15, 30, 60, 300 or 600 sec intervals assigned in the process of their binding with the CP. Alarm and tamper messages are transmitted immediately.

1.7 The Detector is powered by main (CR123A) and backup (CR2450) power supply batteries.

1.8 Operation modes of the Detector are displayed by a two-color LED indicator.

1.9 The Detector generates and transmits the following messages:

- «Norm» – under closed built-in magnetic contacts and «G 1» loop resistance value in the range 3.6 ... 6.5 kΩ;
- «Intrusion to Zone 1» – under opened built-in magnetic contacts and «G 1» loop resistance value less than 3.4 or more than 6.9 kΩ;
- «Tamper» – in the event of case tampering or removal from the installation surface;
- «Main Power Supply Low Battery» – under the main power supply battery voltage drop over $2.2_{-0.2}$ V;
- «Backup Power Supply Low Battery» – under the backup power supply battery voltage drop over $2.2_{-0.2}$ V.

1.10 The Detectors are designed to operate continuously, around the clock.

1.11 The Detectors have immunity to electromagnetic interference.

2 Specifications

Table 1

Parameter	Value
Distance between the Detector and the magnet, mm: - for magnetic contact opening - for magnetic contact restoration	 more than 15 less than 5
Monitored loop resistance range, kΩ - in the «Norm» state - in the «Alarm» state	 3.6 to 6.5 less than 3.4 or more than 6.9
Operating temperatures range, °C	minus 20 ... +55 °C
Permissible relative humidity at ambient temperature 25 °C, %	up to 98 %
Dimensions, mm, maximum	112 x 41 x 32
Weight, kg, maximum	0.1
IP rating	IP30
The operation duration under normal climate conditions and specified radio communication period than 60 sec and longer, normal climatic conditions and disabled LED indication, not less than: - supplied by main battery, years, not less than - supplied by backup battery, months, not less than	 8 2
Average service life, years	8

3 Scope of Delivery

Each Detector unit package contains items listed in Table 2.

Table 2

Name	QNT
Wireless magnetic contact security Detector «CN-Magnetic»	1 pc.
CR123A power supply battery	1 pc.
CR2450 power supply battery	1 pc.
Magnetic contact inertia security detector	1 pc.
Resistor 5.1 kΩ 0.125 W	1 pc.
Screw 3-3x30	6 pcs.
Wireless magnetic contact security Detector «CN-Magnetic». Installation Guide	1 copy

4 Design

The Detector consists of a case and a printed circuit board (PCB). On the front side of the PCB (1) there are located: antenna (2), built-in hermetic contact «Gerkon» (3), jumper «Gerkon» (5), tamper (4), two-color LED indicator (7), terminal blocks for EID hooking up (8), main battery holder (9), backup battery holder (12), «RESET» contacts (11).

Tamper is located on the back side of PCB. PCB is fixed on the base by a latch (10).

Magnet (6) of the inertial detector (supplied) is used for the built-in hermetic contact control. The magnet should be installed opposite to the location mark in the sidewall of the base.

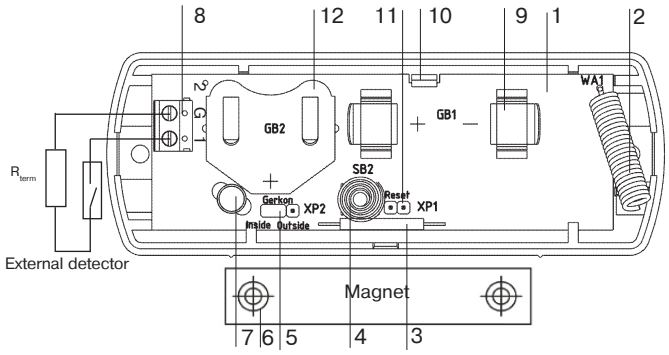


Figure 1

5 Indication

The following types of indication are generated by the Detectors:

a) «Binding» – procedure of logging of the Detector in the CP;

b) «Identification» indication is activated by relevant commands received from the CP and continues during 15 min or until the Detector cover is closed;

c) LED indication is activated after the Detector cover is closed and continues first 15 minutes under conditions:

- other LED indication types absence;
- alarm «Tamper» message is not generated during this time;
- absence of command from the CP disabling the Detector state indication.

The types of LED indication are listed in the Table 3.

Table 3

The Detector state	LED Indication	Notes
«Binding» mode is completed	LED indicator lighting red for 2 – 3 sec	
«Binding» mode	LED indicator lighting green	The Detector logging in the CP
Indication «Identification»	LED indicator alternate blinking red and green	By the relevant command from the CP
«Intrusion to Zone 1»	Single-shot LED indicator lighting red for 4 sec*	State indication is ON, «Identification» indication is OFF
Generation of «Intrusion to Zone 1» message	Two-shot sound indication unmute ** State	State sound indication is ON
Restoration after «Intrusion to Zone 1»	Single-shot sound indication unmute **	
Communication quality appraising	See Cl. «Communication Quality Appraising»	
«Norm»	Off	

* – LED indication of the Detector
** – sound indication of the Detector

6 Binding with the CP

The «Binding» mode is intended for the Detector logging in the CP and service information exchange.

6.1 Prepare the CP in accordance with CP Installation Guide.

6.2 Set the backup power supply battery to the holder plate (12) (if the battery is installed by manufacturer, remove an isolator).

6.3 Set the main power supply battery to the holder (9) (if the battery is installed by manufacturer, remove an isolator).

6.4 Periodical LED indicator blinking green is evidence of binding process.

6.5 In case of mentioned above LED indication absence, short-circuit «RESET» terminals for 2 – 3 sec.

6.6 Successful binding procedure complying is indicated by LED indicator lighting red for 2 – 3 sec.

6.7 The time limit for the binding process of the Detector is 70 sec. To restart the binding procedure, short-circuit «RESET» terminals for 2 – 3 sec.

7 Communication Quality Appraising

7.1 For radio communication quality appraising it is necessary to:

- install the PCB to the base;
- set the Detector on the assumed place of installation;
- press and then release case tamper.

7.2 After case tamper releasing the Detector generates case tamper alarm message, transmits it via radio communication channel and represents communication quality with CP by LED indication in accordance with Table 4.

Table 4

Indication		Communication Quality Appraisal	Recommendations
Color	Mode		
Green	Three blinks	Excellent	Install the Detector at this place
Green	Two blinks	Good	
Green	One blink	Communication established	Choose another place for installation or use a repeater *)
Red	Four blinks	No communication	
*) «Ladoga-RK» system repeaters			

8 Operating Features

8.1 Built-in magnetic contact «Gerkon» may be disabled by «Gerkon» limper installation to the «Outside» position.

8.2 «G 1» loop control can be switched off by setting «Gerkon» jumper to «Inside» position. In this case nothing should be connected to «G 1» loop.

9 Installation

9.1 Choose the place of installation. Mark the holes layout, for the purpose the base of the Detector can be used (see Figure 2). Fasten the base by screws. To ensure wall tampering control, fasten the screw in the wall tamper holder.

9.2 Install the PCB, connect the wires of monitored loops to terminal blocks (8) and close the cover. The length of the loops must not exceed 5 m. Install the terminal (EOL) resistor R_{term} (5.1 kΩ) at the end of the loop as shown in Figure 1. The connections must be soldered or screwed.

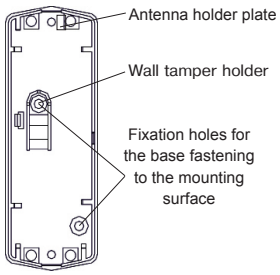


Figure 2 – Base

9.3 It is not recommended to install the Detectors on metal surfaces. The distance between the Detector and a magnet or magnetically conductive material should be at least 25 mm.

9.4 Irrespectively of any permissible positions of the monitored structure, the Detector and the magnet should not be subjected to mechanical impacts (compression, blows, etc.).

ATTENTION! Antenna should be installed vertically on the holder (see Figure 2). Otherwise radio communication range will be essentially reduced.

10 Storage and Transportation

10.1 The Detector in original package without power supply batteries is resistant to:

a) transport jolting with the acceleration of 30 m/sec^2 with impact frequency rate from 10 to 120 impacts/sec or 15000 impacts with the same acceleration;

b) ambient temperature minus 50 ... +50 °C;

c) relative air humidity (95 ± 3) % at the ambient temperature +35 °C.

10.2 The Detectors in original package may be transported by any transport facility in closed vehicles over any distances in compliance with the existing shipping rules concerning the respective means of transport.

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

11 Manufacturer's Guarantees

11.1 «RIELTA» JSC guarantees conformity of the Detector 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 Detector.

11.2 The guaranteed period of operation is 60 months since the date of commissioning within the storage period guaranteed.

11.3 For guaranteed maintenance, please contact:

«C.Nord» STCF
Russia, 190020, St. Petersburg,
Obvodny Channel emb., 199-201, build.13, BC «Obvodny Dvor»
Phone: (812) 327-16-36
E-mail: cnord@cnord.ru, support@cnord.ru, www.cnord.ru

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

12 Packing Certificate

Wireless magnetic contact security detector «CN-Magnetic» has been manufactured in compliance with the active technical documentation and classified as fit for operation and packed by «RIELTA» JSC.

Packing date _____
month, year

Made in Russia

Rev. 5 of 26.02.2018
№ 00441
v.11.1

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