



# EHC

## **KEYPAD**

# «CN-Keypad»

#### **Installation Guide**

#### 1 General Information

- 1.1 Keypad «CN-Keypad» (hereinafter, Keypad) works as a component in security and other control and monitoring systems along with corresponding devices which support wireless «CN-Contact-R» exchange protocol. The keypad allows for entry and exchange of information via two-way communication channel as well as for indication of information in accordance with the indication management codes received from the wireless network coordinator.
- 1.2 The keypad operates within the frequency range 433.05 ... 434.79 MHz. Power emitted by transmitter does not exceed 10 mW. The keypad doesn't require getting permits for purchase, operation and registration.
- 1.3 To provide radio exchange between the keypad and extension module two operating frequencies: main and reserve are used. The keypad switches to reserve operating frequency automatically.
- 1.4 The keypad is powered by two lithium batteries CR123A type. One is the main battery the other is the reserve battery.
  - 1.5 The keypad has fourteen keys for entering information.
- 1.6 Two light indicators (red and green) and one sound emitter are user to indicate the information and modes of operation.
- 1.7 The keypad generates and transfers the following messages: «Battery Discharge» message if the power supply battery voltage drops lower than  $2.4_{0.1}$  V and «Reserve battery discharge» message if the reserve power supply battery voltage drops lower than  $2.4_{0.1}$  V.
  - 1.8 The keys of the keypad have a backlight function.
- 1.9 The keypad is resistant to the effects of electromagnetic interference.

### 2 Specifications

Table 1

Parameter	Value
Operating temperature	minus 20 +50 °C
Permissible relative humidity +25 °C	up to 90 %
IP rating	IP20
Dimensions, not more than	155 x 100 x 35 mm
Weight (without batteries, not more than	0.15 kg
Operating period under normal climate conditions at average usage rating 4 times a day, not less than	24 months
Average service life, not less than	8 years

#### 3 Scope of delivery

The keypad scope of delivery is referenced in Table 2.

Table 2

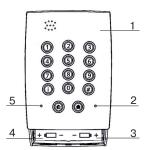
Name	Qty
Keypad «CN-Keypad»	1 pc.
Lithium battery CR123A	2 pcs.
Keypad «CN-Keypad». Installation Guide	1 сору

#### 4 Design

The keypad consists of the housing (1) with the installed printed circuit board (PCB) (7) and battery compartment cover. Keys for information entry, red (5) and green (2) light indicators, main battery holder (3) and reserve battery holder (4) are located on the front side of the keypad. The keypad mounting openings (6) for fixing the keypad to a wall are located on the back cover of the keypad. «Reset» contacts (8) are located in the housing window on PCB.

The keys for the information entry include:

- ten numeric keys from 0 to 9;
- «i» key;
- «#» key;
- «♠» key;



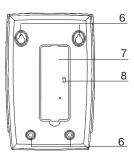


Figure 1

#### 5 LED indications

LED indication modes are listed in Table 3.

#### Table 3

Keypad settings changed  Flashing of red and green indicators, as well as a sound indication» or «Enable or disable sound indication» or «Enable or disable sound indication» or «Enable or disable the built-in key illumination»  Object or section status «Security activated»  Object or section status «security deactivated»  Green indicator id ON  Security activation successful  Security activation failed  Exit delay in progress  Security deactivation Security	Table 3			
«Binding» mode  «Binding» mode finishing  Confirmation of any kay pressing. Power supply is OK  Confirmation of any key pressing. Power battery require changing  Key sequence identification failure  No connection to CP  Reypad settings changed  Cobject or section status «Security activated»  Object or section status «Security deactivated»  Security activation of security deactivation afield  Security activation afield  Security activation afield  Exit delay in progress  Security deactivation  Security deactivation afield  Entrance delay in progress  Communication  «Alarm button» is prohibited in settings  Communications  «Norm»  Periodic short flashing of red and green indicators, as well as periodic activation of the sound indicator *for 0.6 seconds  After the commands «Enable or disable the built-in key illumination»  After command are port status of object or section status «Security deactivated»  Security activation and sound indicator is ON  Security activation and sound indicator of the red indicator indica	State	LED Indication	Notes	
Confirmation of any kay pressing. Power supply is OK Confirmation of any key pressing. Power supply is OK Confirmation of any key pressing. Power battery require changing  Key sequence identification failure  No connection to CP  Respond settings changed  Flashing of red and green indicators, as well as periodic activation of the sound indicator * for 0.6 seconds  Keypad settings changed  Flashing of red and green indicators, as well as a sound indicator * for 0.6 seconds  Red indicator * for 0.6 seconds  Flashing of red and green indicators, as well as a sound indicator * for 0.6 seconds  Red indicator is ON Cobject or section status «Security deactivated»  Object or section status «security deactivated»  Security activation failed  Security activation failed  Flashes of red indicator * for object or sections indicator and sound indicator *  Exit delay in progress  Security deactivation activated activation failed  Security deactivation and sound indicator *  Security deactivation and sound indicator *  Exit delay in progress  Security deactivation and sound indicator *  Security deactivation and sound indicator is ON  Flashing of the red indicator and sound indicator *  Entrance delay in progress  Red indicator is ON, periodic activation of sound indicator *  Flashing of red and green indicator and sound indicator *  Entrance delay in progress  Red indicator is ON, periodic activation of sound indicator *  Entrance delay in progress  Flashing of red and green indicator and sound indicator *  Entrance delay in progress  Flashing of red and green indicator is on the red indicator is section.  After command activate security of object or section.  Tree flashes of green indicator and activation of sound indicator.  Flashing of red and green indicator and sound indicator.  After command activate se				
any kay pressing, Power supply is OK Confirmation of any key pressing, Power battery require changing Key sequence identification failure  No connection to CP  No connection to CP  Respond settings changed  Respond settings changed  Nobject or section status «Security activated»  Object or section status «Security deactivated»  Security activation failed  Exit delay in progress  Security deactivation failed  Security deactivation failed  Security activation failed  Security deactivation failed  Flashing of red and green indicator is ON activated object or section status «Security deactivation failed  Security activation failed  Security activation Security deactivation failed  Security activation failed  Free flashes of red indicator for section object or section object or section activated object or section object or sectio		Service LED indicator lighting red for $-3$ seconds		
any key pressing, Power battery require changing  Key sequence identification failure  Reypad settings changed  Reypad settings changed  No connection to CP  Reypad settings changed  Red indicator is ON  Security activation of status "security deactivated"  Security activation failed  Exit delay in progress  Security deactivation successful  Security deactivation successful  Security deactivation successful  Security deactivation failed  Entrance delay in progress  "Alarm button" confirmation  "Alarm button" is prohibited in settings  "Alarm button" is prohibited in settings  "Norm"  Fire flashes of red and green indicator indicator indicator indicator is ON, periodic activation of sound indicator indindicator indicator indicator indicator indicator indicator indica	any kay pressing,	short flashing and sound		
identification failure  No connection to CP  No connection to CP  Alternating flashing of of red and green indicators, as well as periodic activation of the sound indicators for 0.6 seconds  Keypad settings Changed  Flashing of red and green indicators, as well as a sound indicators, as well as a sound indicators, as well as a sound indications or «Enable or disable the built-in key illuminations object or section status «Security activated»  Object or section status «security deactivated»  Security activation successful  Security activation failed  Exit delay in progress  Security deactivation successful  Security deactivation successful  Flashes of red indicator son activate security of object or sections.  Security deactivation successful  Flashes of green indicator and sound indicator.  Security deactivation successful  Flashing of red and green indicator and sound indicator.  Flashing of red indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator and sound indicator.  Flashing of red and green indicator.  Flashing of red and green indicator for 1 second.  After command activate security of object or section.  Flashing of red and green indicator.  Flashing of red and green ind	any key pressing, Power battery	short flashing and sound		
No connection to CP and green indicators, as well as periodic activation of the sound indicator* for 1.6 seconds  Keypad settings changed Flashing of red and green indicators, as well as a sound indication» or "Enable or disable the built-in key illumination" or "Enable or disable the built-in key illumination" object or section status "Security activated" Green indicator is ON  Security activation successful Security activation failed Failed indicator and sound indicator solve object or section. Tree flashes of red indicator and sound indicator. Security deactivation successful Security deactivation successful Green indicator id ON Security activation failed Tree flashes of red indicator. Security deactivation successful Green indicator id ON Security deactivation successful Green indicator id ON Security deactivation successful Green indicator id ON Security deactivation failed Tree flashes of green indicator of section. After command activate security of object or section. After command activate security of object or section. After command activate security of object or section. After command activation failed Security and sound indicator. After command activation of sound indicators for 1 second. After command activation of sound indicators for 1 second. After command activation of sound indicators and sound indicator. After command activation. Tree flashes of red and green indicators and sound indicator. After command activation. After command activation section. After command activation of sound indicators and sound indicator. After command activation of sound indicators and sound indicator. After command activation of sound indicators and sound indicator. After command activation of sound indicators and sound indicator. After command activation of sound indicators and sound indicator. After command activation of sound indicator. After command activation of sound indicator		the red indicator and sound		
Keypad settings changed  Flashing of red and green indicators, as well as a sound indications or end status as security activated.  Object or section status as security deactivated.  Security activation successful  Exit delay in progress  Security deactivation successful  Security activation failed  Feriodic flashing of red and green indicator is ON  Free flashes of red indicator is ON  Exit delay in progress  Security deactivation successful  Feriodic flashing of the red indicator and sound indicator.  Security deactivation successful  Feriodic flashing of the red indicator and sound indicator.  Feriodic flashing of the red indicator and sound indicator.  Feriodic flashing of the red indicator and sound indicator.  Feriodic flashing of the red indicator is ON  Free flashes of green indicator.  Flashing of red and green indicator activation of sound indicator.  Flashing of red and green indicator.  Flashing of red and green indicator.  Flashing of red and green indicator is one indicator.  Flashing of red and green indicators for 1 second, periodic activation of sound indication.  Flashing of red and green indicators and sound indicator.  Flashing of red and green indicators and sound indicator.  Flashing of red and green indicators and green indications and sound indicator.  Flashing of red and green indicators and sound indicator.  Flashing of red and green indicators and green indicators and sound indicator.  Flashing of red and green indicator and green indicators and sound indicator.  Flashing of red and green indicators and green indicators.		and green indicators, as well as periodic activation of the sound		
status «Security activated»         Red indicator is ON         After command «report status of object or section»           Object or section status «security deactivated»         Red indicator id ON         After command «report status of object or section»           Security activation successful         Red indicator is ON         After command «activate security of object or section»           Exit delay in progress         Periodic flashing of the red indicator and sound indicator*         After command «activate security of object or section»           Security deactivation successful         Green indicator id ON         After command «activate security of object or section»           Security deactivation failed         Tree flashes of green indicator of object or section»           Entrance delay in progress         Red indicator is ON, periodic activation of sound indicator*           Entrance delay in progress         Flashing of red and green indicators for 1 second, periodic activation of sound indicator*         After command «deactivate security of object or section»           "Alarm button" confirmation         Flashing of red and green indicators for 1 second, periodic activation of sound indicators for 1 second         After command «Transmit Alarm button»           "Apter command contraction indicators for 1 second         Second contraction for sound indicators for 1 second           "Apter command contraction indicators for 1 second         Second contraction for sound indicators for 1 second           "Apter command contractio		indicators, as well as a sound	sound indication» or «Enable or disable the built-in key	
Object or section»  Security activation successful  Security activation failed  Exit delay in progress  Security deactivation successful  Security deactivation failed  Exit delay in progress  Security deactivation successful  Security deactivation and sound indicator and sound indicator and sound indicator.  Security deactivation successful  Security deactivation failed  Finance delay in progress  Red indicator id ON activate security of object or section.  After command activate security of object or section.  Flashing of green indicator.  After command activation of sound indicator.  After command activation of sound indicator.  After command activation of sound indicator.  After command activation.  Tree flashes of red and green indication.  After command activation.  After command act	status «Security	Red indicator is ON		
Security activation failed   Tree flashes of red indicator sound indicator	status «security	Green indicator id ON		
Security activation failed   Tree flashes of red indicator and sound indicator *   Object or section		Red indicator is ON		
Security deactivation successful   Green indicator id ON   After command deactivation successful   Security deactivation failed   Tree flashes of green indicator of object or section   Security deactivation failed   Red indicator is ON, periodic activation of sound indicator*				
Security deactivation failed   Tree flashes of green indicator of object or and sound indicator.*				
Security deactivation failed  Entrance delay in progress  Red indicator is ON, periodic activation of sound indicator*  *Alarm button confirmation  *Alarm button is prohibited in settings  Communication quality apprising  *Norm Turned off  Tree flashes of green indicator section section and sound indicator for 1 second, periodic activation of sound indication for 1 second  *After command actransmit Alarm button button indicator settings  See section *Communication quality apprising*	deactivation	Green indicator id ON	«deactivate security	
progress activation of sound indicator*  "Alarm button" confirmation   Flashing of red and green indicators for 1 second, periodic activation of sound indication* for 1 second "After command indication* for 1 second "Transmit Alarm button" is prohibited in settings   Tree flashes of red and green indicators and sound indicator*  Communication quality apprising   See section "Communication quality apprising"   Turned off		Tree flashes of green indicator and sound indicator*		
«Alarm button» confirmation indicators for 1 second, periodic activation of sound indication* for 1 second  «Alarm button» is prohibited in settings  Communication quality apprising  «Norm» indicators for 1 second and green indicators and sound indicator*  After command arransmit Alarm button» button»  See section «Communication quality apprising»				
is prohibited in settings  Communication quality apprising  «Norm»  Tree flashes of red and green indicators and sound indicator*  See section «Communication quality apprising»  Turned off		indicators for 1 second, periodic activation of sound		
quality apprising See Section «Communication quality apprising»  «Norm» Turned off	is prohibited in	Tree flashes of red and green indicators and sound indicator*		
		See section «Communication quality apprising»		
*) - if sound indication is allowed	«Norm» Turned off			

# 6 Binding with the CP

«Binding» mode is provided for the keypad logging in the CP and for service information exchange.

- 6.1 Prepare the CP for the keypad logging in accordance to the CP Installation Guide.
- 6.2 Open the battery cover of the keypad, install the reserve battery into the holder (4) and main battery into the holder (3).
- 6.3 LED indicator periodically flashes green. This means that the keypad is in the process of binding.
- 6.4 In case of no servic e LED indication, close the «Reset» contacts for 2-3 seconds.
  - 6.5. After successful logging red indicator turns on for 2 3 seconds. 6.6 The time allocated for the «Binding» mode is limited to 100 sec.

To renew the «Binding» mode, the «Reset» contacts should be closed for 2-3 seconds.

#### 7 Operation Aspects

All operational keys combinations and corresponding commands are given in table 4.

Table 4

Command	Keys combination	
Report object status	Press «i» key	
Report section status	Enter the section number and press «i»	
Activate object security	Press key «♠» and your code	
Activate section security	Press key «•», enter section number, press key «#» and enter your code	
Deactivate object security	Enter your code	
Deactivate section security	Enter the section number, press «#» key and enter your code	
Transmit «Alarm button»	Simultaneously press and hold keys «♠» and «♠» for 3 seconds	
Enable or disable sound indication	Simultaneously press and hold keys «#» and «9» for 3 seconds	
Enable or disable keypad backlight	Simultaneously press and hold keys «#» and «0» for 3 seconds	
Report on CP communication quality	Simultaneously press and hold keys «#» and «•»	

#### 8 Communication Quality Appraising

8.1 In order to determine the keypad and CP communication quality it is recommended to do the following:

- insert main and reserve batteries in corresponding holders;
- install the keypad in the proposed mounting place;
- press «#» and «♠» keys simultaneously.
- 8.2 The keypad shall indicate the communication with CP quality in accordance with Table 5.

Table 5

Indication	Communication quality appraising	Recommendations	
Tree short flashing of green light indicator and sound indicator activation*	Perfect	Install the keypad in this place	
Two short flashing of green light indicator and sound indicator activation*	Good		
One short flashing of green light indicator and sound indicator activation*	Communication can be established	Choose other place	
Systematic flashing of green and red indicators and sound indicator activation* for 1.6 seconds	No communication	of installation or use repeater**	
*) – if sound indication is allowed **) – «CN-Repeater»			

#### 9 Storage and Transportation

- 9.1 The keypad in original packing and without installed battery can withstand the following conditions during transportation:
- transport jolting with the acceleration 30 m/sec² with impact frequency from 10 to 120 impacts/sec or 15000 impacts with the same acceleration;
  - ambient temperature minus 50 ... +50 °C;
- relative air humidity (95  $\pm$  3) % at the ambient temperature  $\pm 35~^{\circ}\text{C}.$
- 9.2 The keypad in it's original manufacturer's packing may be shipped by any means of transportation in covered vehicles at any distances in compliance with the rules of goods transportation valid for corresponding type of transportation.
- 9.3 After transportation under the conditions different to operation conditions the keypad shall be ready to operate after a maximum of 6 hours.

#### 10 Manufacturer's Guarantees

«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.

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

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 do not apply to the power supply batteries.

## 11 Packing Certificate

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

Packing date _	
	month, year