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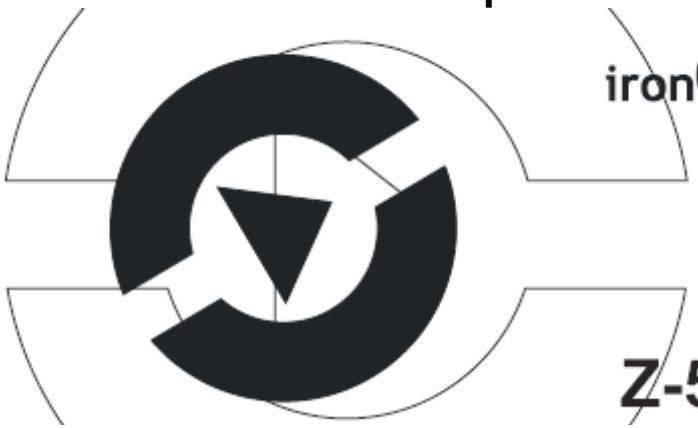
Certificate GOST R No POCC RU.ME83.B00374

Operation instructions



Z-5R Net

Network controller

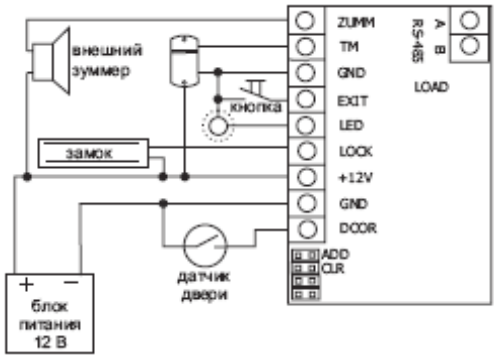
4. DELIVERY SET
Controller "Z-5R Net" 1pc. (supplied in installation box case)
Instructions- 1 pc.
Connection element-2 pcs.
Battery (CR 2032)- 1pc.
Bag- 1pc.

5. WARRANTY
Warranty period is 18 months from the date of sale but not exceeding 24 months from date of manufacture.
Reasons for warranty termination:
- violation of these Instructions and maintenance requirements;
- mechanical damages;
- use of aggressive agents;
- unauthorized intervention into the controller scheme.

During the warranty period the Manufacturer repairs reader failures free of charge which appeared due to the fault of Manufacturer or replaces faulty components and blocks. Repair is performed in the Manufacturer workshop.

TECHNICAL CHARACTERISTICS:
Connection element of lock type (electromagnetic/electromechanical)
Light and sound indication of operating and programming modes
Setup of lock release duration: from 0 to 220 sec (factory default - 3 sec)
Output: MIS-transistor
Operating voltage: 12V DC
Useful current (standby mode) 30mA
Communication current up to 5A
Protection from misconnection +
Ambient temperature: from -30C to +50C
Relative air humidity: not exceeding 90%

3. CONNECTION DIAGRAM



внешний зуммер = external buzzer, блок питания = power supply unit, замок = lock, датчик двери = door sensor

Connection variant No1:
Connection variant No2:
Reader MATRIX-II – at input
Door release button – at output
1-st reader MATRIX-II – at input
2-тв reader MATRIX-II – at output
Output of TM1 reader MATRIX-II is connected to contact TM of controller Z-5R Net.
Output of TM2 reader MATRIX-II connected to contact EXIT of controller Z-5R Net.

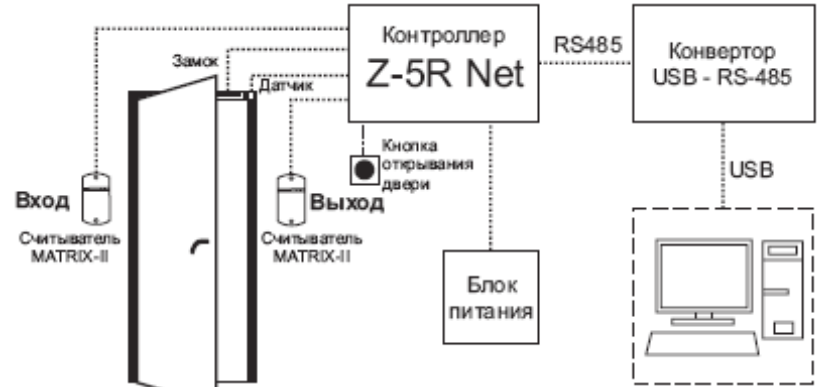
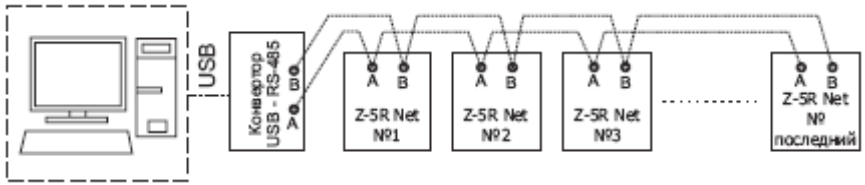


Fig.1 *Connection diagram of Z-5R Net.*
Вход = input, контроллер = controller, конвертер = converter, считыватель = reader, кнопка открывания двери = door release button, выход = output, блок питания = power supply unit

2.2 Operation in network.
Controllers Z-5 Net may be joined in a network using interface RS-485 and operate under the control of computer. Special software allows program and manage their operation, download events. But the decision of providing access using a card/key are taken by controller, irrespective of whether it is connected to PC or not.
Controllers are joined consequently one after another.



конвертор = converter, последний = the last
Figure below shows the example of controllers connection to PC. Term "the last" means that the controller is the last in the communication line.

Table 1. Programming modes

Modes	Entry into Programming mode	Designation
Programming using master cards		1….5 – Number of swipes д – long swipe (key is hold for 6 seconds) к – short swipe (swipe the key and hold for more than 1 second) М – master key П – simple key Б – locking key
1. Adding of simple keys.	1 дМ	
2. Adding of locking keys.	1 дМ	
3. Adding of master keys.	1 кМ, 1 дМ	
4. Deleting of certain keys.	2кМ, 1 дМ	
5. Deleting of all keys (from reader memory)	3кМ, 1 дМ	
6. Setup of door release time.	4кМ	
7. Entry into Locking mode.	1дБ	
8. Entry into Accept mode	5кМ	
Programming using connection elements		
1. Operation of electromechanical lock	Position 1	
2. Memory erasing.	Position 2	
3. Adding of simple keys without master cards.	Position 3	
4. Standard – no effect on operation.	Position 4	

This mode blocks all simple keys. Use of simple keys does not open the door and induces a series of short signals. Exit from locking mode to general mode is performed using locking key (up to the series of short signals) by short swipe of a master key (series of short signals).
*In case of supply voltage failure set before Locking mode is saved after switching-on of voltage.

8. Включение режима "Асcерт" (5 кМ)

Accept mode is used for the record of all swiped to contactor keys DS1990A.
In this mode the key swiped to the contactor induces door release and simultaneous record into the contactor memory. The mode is used to recover users base without collection of clients keys.
To enter into the mode use the key.
Swipe the master key to the connector five times for a short period of time. In the moment of each swipe connector gives signals confirming identification of all master keys and their number will correspond to the number of swipes. In the moment of fifth swipe the connector will give five signals and one long signal confirming entry to Accept mode. To exit from the mode swipe the master key. The signal confirming such exit is a series of short signals.
* In case of supply voltage failure set before Accept mode is saved after switching-on of voltage.

3. Adding of master keys (1 к М, 1 дМ)

Swipe the master key to the controller for a short period of time (short swipe). In the moment of such swipe the controller will give short signal confirming identification of the master key, hold the card not longer than for 6 seconds at the reader (long swipe). In the moment of swipe the controller will give two short signals indicating the second swipe of the master key in programming mode and in 6 seconds one signal indicating entry to the mode of master keys adding. After that remove the master key. To add new master keys swipe them in turn to the controller with an interval not longer than 16 seconds. After each swipe of a new key the controller gives short confirming signal. If the key is already recorded in the memory as a master key signals will not be given. Exit from the mode of master keys adding is performed automatically in 16 seconds after the last swipe. Controller confirms exit from the mode by a series of 5 short signals.

4. Deleting of simple keys using master key (2 к М, 1 дМ)

Swipe the master key to the controller for a short period of time (short swipe). In the moment of the first swipe controller will give a short signal confirming identification of the master key. In the moment of the second swipe the controller gives two short signals indicating the second swipe of the master key in programming mode, hold the master key not longer than for 6 seconds at the controller (long swipe). In the moment of the third swipe, the controller will give three short signals and in 6 seconds one signal indicating entry into the mode of simple keys deleting. To delete keys swipe them in turn to the controller with an interval between swipes not longer than 16 seconds.

After each swipe of the key to be deleted the controller gives short confirming signal. If the key is not recorded in the memory, the controller gives two short signals. Exit from the mode occurs automatically in 16 seconds after the last swipe or with the swipe of the master key. Controller informs about the exit from the mode with a series of short signals.

5. Deleting of the controller memory (3 к М, 1 дМ).

Swipe the key to the controller for three time for a short period of time (short swipes). At the moment of the first swipe the controller will give a short signal confirming master key identification. At the moment of the second swipe the controller will give two short signals confirming the second swipe of the master key in programming mode. At the moment of the third swipe controller will give three short signals confirming the third swipe of the master key, and not more than for 6 seconds swipe and hold the master key to the controller (long swipe). At the moment of the forth swipe the controller gives four short signals and in 6 seconds a series of short signals confirming deleting of the controller memory and exit from programming mode. After that master key should be removed. Entry to programming mode occurs automatically when power is on.
* At the moment of deleting of the base using master key the programmed release time is not deleted.

6. Release time programming (4 кМ)

Swipe master key to the controller four times for a short period of time. В At the moment of each swipe controller gives signals confirming identification of the master key and their number will correspond to the number of swipes. At the moment of the forth swipe controller gives four signals and enters in the mode of door release programming. Within 6 seconds from the last swipe lock the door button for a period required for release. After the button release controller will give a signal and record the time in the base.
*If release button cannot be set, contacts No 4 and No3 (earth) close on each other.

7. Locking mode (1 д Б)

In the locking mode the passage is open using locking keys and closed for simple keys.
Locking mode is set using locking key (using locking keys - p.2).
Locking key is used:
As a simple access key in general operating mode (i.e. access is opened for all simple and locking keys recorded in the base)
To enter into locking mode (in this mode only locking keys can open the door).
To enter into common mode
Locking key opens by release.
To enter into locking mode hold locking key at controller for 3 seconds till the long continuous signal, confirming entry into locking mode.

GENERAL CHARACTERISTICS OF PROGRAMMING MODE

To enter into required programming mode use short (less than 1 sec) and long (about 6 sec) swipes with master key. Operation in programming mode is restricted with period after the last swipe (about 16 seconds), after which controller comes to initial condition informing about it with a series of five short signals.

1. Adding of simple keys (1 д М).

Swipe and hold master key (long swipe). At the moment of swipe controller gives short signal confirming identification of master key and in 6 seconds another signal confirming controller entry into the mode of simple keys adding. After that master key should be removed. To add new keys swipe them in turn to the controller with the interval between swipes not less than 16 seconds. After each swipe of a new key controller gives confirming short signal. If the key is already recorded in the memory, it gives two short signals. Exit from the mode occurs automatically in 16 seconds after the last swipe or after the swipe of a master key. After exit from the mode controller gives a series of 5 short signals.

2. Adding of locking keys (1 д М).

In the mode of simple keys adding it is required to swipe the selected key to the controller and hold it for 9 seconds till the long signal (i.e. first it gives a short signal and after that long signal confirming adding of a locking key).

If you do not add other keys the controller gives a series of short signals confirming exit from the programming mode.

Use of socket straps No 1.

Controller is complete with one socket used for programming and setting into the mode of electromechanical lock (total four positions).

Position No 1 – sets logics of power cascade without connection element of the electromagnetic lock, in closed position voltage applied; With connection element of electromagnetic lock, in closed position voltage released

Position No 2 CLR – to delete controller memory. For this purpose turn off power, install connection element and turn on power. After deleting controller gives a series of short signals.

*-Deleting of all keys and programmed release time.

(sets default settings - 3 sec.)

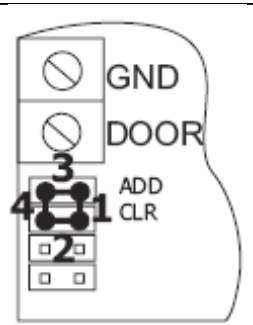
Position No 3 ADD to add simple keys without master keys.

For this purpose turn off power, install connection element and turn on power.

After a signal controller is in the mode of simple keys adding (you may add simple, locking keys without master key)

Position No 4

- standard position, does not influence on controller operation



2. PROGRAMMING OF CONTROLLER MATRIX-II NET

2.1 Programming in operation in offline mode (without network connection)

First switch on (no keys in the base).

Short signals within 16 seconds. They indicate that the memory is deleted and the mode of master keys adding is set.

At the moment of signals swipe the key to the controller to record it into its memory as a master key.

Termination of short signals confirms successful recording of the first master key.

To add new master keys swipe them in turn to the controller with an interval between swipes not exceeding 16 seconds. After each swipe of a new key controller gives a short confirming signal.

Exit from the mode of master keys adding occurs automatically in 16 second after the last swipe. After the exit from the mode the controller gives five short signals.

Further master keys are used for programming.

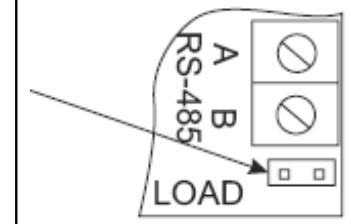
If no keys were recorded turn on the controller again.

Entry into the mode of master key recording when power is supplied occurs only if the base is empty (neither simple, nor master, nor locking keys).

Connection element encloses at the controller Socket No 2(LOAD)

Number of controller in the network is defined by special software.

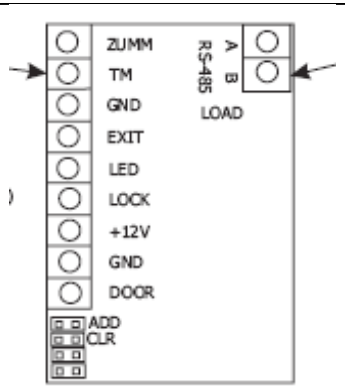
Initial all controllers have network address "1".



Characteristics of Z-5R Net controller operation in standalone mode (without network connection).
Maximum number of keys – up to 2024 pcs.
-simple keys for passage
-master keys only to enter into the modes of programming and exit from Locking mode
Locking
-locking keys for passage and entry into the locking mode
Additional operating modes:
- Locking mode – passage open for locking keys, closed for simple keys;
- Accept mode –simultaneous opening and record of all swiped keys (switch by master key)
Characteristics of Z-5R Net controller network operation.
Maximum number of cards/keys:- 2024 шт
events memory capacity - 2048
maximum number of controllers in network - 255
rate of exchange by network RS-485: 19200/57600 bit/sec (set automatically)
When the door sensor is installed "Door breaking" and "Unclosed door" events are available.

Connector No 1

1. ZUMM – external buzzer.
2. TM - input TM central
3. GND – general earth (-)
4. EXIT – door release button
5. LED – external light-emitting diode (+)
6. LOCK - lock
7. +12V power +12V
8. GND – general earth (-)
9. DOOR – door release sensor (hermetic contact).



Connector No2
(connection RS-485)
A- to A of converter
B- to B of converter
Note:
1) When non-contact reader MATRIX-II is connected with Z-5R Net light-emitting diodes and sound are managed by wire TM.
2) Connection not required for:
External buzzer; light-emitting diode; door sensor.

1.O GENERAL
Controller Z-5R Net is designed to manage access in accommodation and production facilities, track of passage time and events.
Controller can operate both in standalone mode and using the network.
Connection and operation in standalone mode of controller Z-5R Net are the same as for controller Z-5R.
Connection to network by RS 485 (double-wire connection)
Controller Z-5R Net allows connection of the following equipment:
- non-contact reader for proximity-cards, emulating key protocol DS1990A;
- non-contact reader – contactor;
- electromagnetic lock, electromechanical lock/latch;
- door release button (normally open);
- external buzzer, external light-emitting diode (analogue set at the controller plate);
- open door sensor (normally open type).

Date of sale: "_____" _____200___
Distributor_____