

Strazhnik-1100 / Strazhnik-1040 / Strazhnik-1030 access control device

Manual

Basic Item Information and Technical Data

Strazhnik-1100 / Strazhnik-1040 / Strazhnik-1030 access control device is used to protect premises from the access of unauthorized people. Contactless code carriers are used to identify users. The code carrier should be placed near the ACD at the reading distance. The contactless code carriers standards that can be used for the purpose are as follows: EM-Marin (version Strazhnik-1100), HID ProxCard II (version Strazhnik-1040), and PHILIPS MIFARE (version Strazhnik-1030).

Table 1 – Performance Data

Power supply voltage, V	9.5 ... 15.0		
Consumption current at the power supply voltage of 12 V (apart from consumption current of lock and sound alarm), mA , maximum	ACD 1100	ACD 1040	ACD 1030
	160	160	150
Maximum reading distance *, mm , minimum:			
code carriers of the EM-Marin	150		
code carriers of the HID	90		
code carriers of the PHILIPS MIFARE	50		
Load current at the control output, A , maximum	1.5		
Number of code carrier's codes recorded, pcs.	510		
Duration of the lock staying open, sec	0.5...15.0		
Overall dimensions, mm	117x78x20		
Weight, g , maximum	80		
* - distance between the ACD and the code carrier.			

Standard Equipment

- | | | | |
|---|---|-----|------|
| 1 | Strazhnik-1100 (Strazhnik-1040, Strazhnik-1030) ACD | – 1 | pc |
| 2 | Master key | – 1 | pc |
| 3 | Self-tapping Screw 3.5x25 | – 4 | pcs |
| 4 | Plastic Nailing Plug | – 4 | pcs |
| 5 | Manual | – 1 | copy |
| 6 | Package | – 1 | pc |

Connection and Assembly

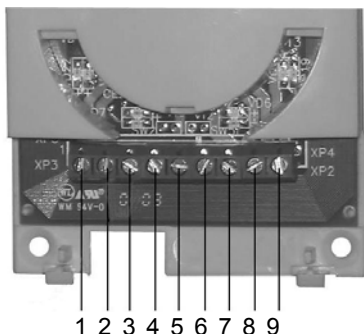


Figure 1 – Terminals of ACD

Terminal	Assignment	
1	The terminal has no functional purpose	
2	The terminal has no functional purpose	
3	lock type dependant	Terminal 3 is not used if the direct type lock is used
		Terminal 3 is connected to terminal 6 (e.g., through a 0.22 mm ² wire), if the inverse type lock is used
4	For the door sensor connection	
5*	For the Exit button connection	
6	For the common power supply cable connection	
	For the door sensor connection (Figure 2)	
	For the Exit button connection (Figure 2)	
7	For the lock connection	
8	For the sound alarm connection	
9	For the plus terminal of 12 V power supply connection	
	For the lock connection (Figure 2)	
	For the sound alarm connection (Figure 2)	

* - if the Exit button is not used, terminal 5 remains unconnected.

A direct type lock is de-energized in standby mode; the door is closed. When a pulse is fed, the lock opens the door.

An inverse type lock is energized by DC voltage in standby mode; the door is closed. To open the door the lock must be de-energized (cutting the voltage).



- The lock is controlled by applying and cutting 12 V voltage for the time of the lock opening. At that, long-term load current at the ACD control output must not exceed 1.5 A.



- Direct connection of the electric magnet circuit to the control output is allowed only for electromagnetic locks with consumption wattage below 18 W and power voltage of 12 V.
- When pulse-type electromechanic locks with current value up to 4 A are used, they can be briefly switched on for 2 sec maximum.
- Neglecting the requirement may cause the lock control cascades to fail.
- If locks with characteristics above the specified are used, an additional converter must be installed. In these cases consult the representative of the ACD manufacturer.

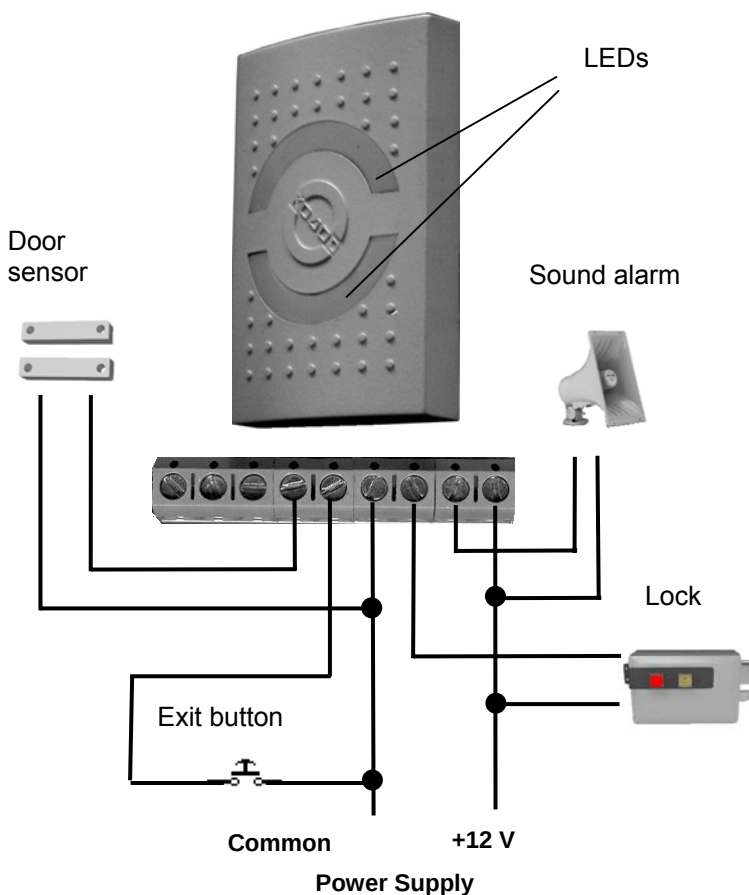


Figure 2 – A version of the ACD connection with a direct type lock

Recommended types and cross sections of wires

Power supply cable	2x0.75 mm ²
Burglar sensor loop	2x0.22 mm ²
Door sensor wire	2x0.22 mm ²
Exit button wire	2x0.22 mm ²
Lock, sound alarm wire	2x0.22 mm ²

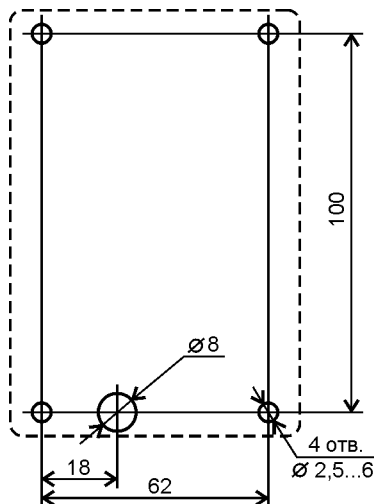


Figure 3 – Installation Dimensions

Operation Modes

The ACD may have the following modes (stored in the memory): guard off, guard on, and alarm modes. After the initial switching on of the power supply the ACD assumes the guard off operation mode.

In the guard off operation mode the LEDs are constantly red. In this mode the access to the premises is provided by means of the code carrier, whose code is stored in the ACD's memory. In this mode the door sensor is not controlled, audible signals are not issued.

The guard on mode is indicated by frequent blinking of the LEDs. In this mode the access to the premise is also provided by means of the code carrier, which code is stored in the ACD's memory. In case of attempts to trespass with an unregistered code carrier or to open the door by means of the Exit button, the LEDs go off for 4 seconds and the sound alarm and the ACD audible signal are activated. In case the door is opened (sensor triggered) or the ACD body is opened, the device switches to the alarm mode, the sound alarm switches on. The sound alarm can only be switched off by setting the premises off guard.



Operation modes storage in the ACD's memory means that, when the ACD is de-energized and reenergized afterwards (in an unlimited interval), the device returns to the operation mode it was in before the power cut-off.

Actions Procedure of the Master Key Owner

The master key is used for setting the ACD.



The master key also enables its owner to open the door lock to trespass and set the premise off guard.

In both cases the lock opens and the ACD transfers to the master status, with relevant LEDs indication. When setting off guard the sound alarm and the built-in sound indicator are also activated. **It is strongly recommended not to use the master key for these purposes!**

Clearing the Whole List of the Code Carriers' Codes

To fully clear the code list hold the master key at the reading distance from the ACD for a long time (up to 15 sec) with the door closed (door sensor closed). Completion of the memory clearing operation is indicated by long (up to 5 sec) fading of the LEDs.



It is recommended to clear the ACD code list at the first initializing of the ACD.

Recording Code Carrier Codes in ACD Memory

To record code carrier codes into the ACD memory use the master key.

To write a code carrier code to the memory proceed as follows:

- 1) Place the ACD master key to switch it to master status for 15 sec. The master status is indicated by LEDs blinking red if the code carriers' codes are already recorded into the ACD, and by LEDs fading if the code list is empty;
- 2) When in master status place the code carrier, whose code should be recorded to the memory. If the code has been recorded successfully, the lock opens and the LEDs become green for the period of the lock staying open;
- 3) Wait for the ACD to switch to the guard off mode, which is indicated by the LEDs' glowing red. You can speed up the switching to the guard off mode by opening and closing the door.

To record the next code to the memory, carry out steps 1, 2, and 3 of the present section.

The procedures of code recording and allocation of the codes in the memory are consequent: 1-st code carrier, 2-nd code carrier, 3-rd code carrier, n-th code carrier.

The ACD's built-in memory can store up to 510 codes.

If the ACD's LEDs blink red and green at a high frequency (period of about 200 msec) within 10 sec while recording the code carrier code, this means that there are 510 code carrier codes in the memory (the memory is full).

Deleting One Code Carrier's Code from the ACD Memory

To delete one code carrier's code from the ACD memory, proceed as follows:

1) Place the master key to the ACD, this will switch the ACD to the master status for 15 sec, indicated by LED's' blinking red if there are code carrier codes in the memory and by LED's' fading if the list is empty;

2) When in the master status, place the code carrier that directly follows the one you wish to delete in the ACD memory (e.g., the code carrier's code number 37 is deleted by the code carrier's code number 38). Deletion of the code is indicated by an audible signal lasting 0.5 sec and the LEDs blinking red for 5 sec;

3) Wait for the ACD to pass to the guard off mode indicated by the LEDs glowing red.

In this case the desired code carrier's code will be deleted and the code carrier's code next in the list and the rest of the list will be shifted one position. The list will be continuous again. To delete the next code carrier's code, carry out steps 1, 2, 3 of the present section.

The last code in the list is deleted by means of the first code carrier.

The only code in the list can be deleted either by itself or by clearing the whole code list .

Setting the Lock Opening Time



Carrying out the actions of section 3 (below) with the door closed causes the deleting of the whole code list.

To set the lock opening time, carry out the following steps:

1) Unlock the door lock by means of the Exit button, the code carrier, or the master key and open the door (i.e. open the door sensor). If the door is already open skip step 1;

2) Wait for the ACD to pass to the guard off mode indicated by the LEDs glowing red (if opened by the master key the waiting time will be 15 sec);

3) **With the door open** (door sensor open), place the master key to the ACD for a long time (up to 15 sec); when the LEDs glow green, remove the master key within 2 seconds. The ACD will be switched to the status of setting the lock opening time. In this status, the ACD's LEDs blink red (for 2 sec) and green (for 2 sec) in turn issuing an audible signal (lasting 0.5 sec) when the LEDs become green. Count the required number of red blinks and/or number of audible signals, place and remove the master key when the LEDs glow green. The ACD records the selected opening duration to the nonvolatile memory and switches to the master status (see example);

4) Close the door (close the door sensor);

5) Wait for the ACD to switch to the guard off mode indicated by the LEDs glow red.

Default lock opening time is 5 sec (set by the manufacturer).

Setting the lock opening time

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Audible signals
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Blinking (red)
0.5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	lock opening time, sec



During the setting, the ACD's LEDs blink red 15 times. If the master key was not applied during the indication, the ACD will pass to the guard off mode keeping the value of the lock opening time unchanged;

Zero number of blinks (see the table) means that the LEDs didn't turn red, i.e. the master key is placed to the ACD before the 4th second.

Example: Assume that we need to set the lock opening time to 7 sec. To this end we open the door (open the door sensor) either by the Exit button, the code carrier, or the master key. Wait for the ACD to pass to the guard off mode (the LEDs will turn red). With the door open (the door sensor open), place the master key to the ACD for a long time (up to 15 sec); when the LEDs turn green, remove the master key from the ACD. Count eight audible signals (seven red blinks of the LEDs), then place and remove the master key to the ACD, when LED's are green. Close the door. The LEDs of the ACD must glow red. The lock opening time is set to 7 sec.

Procedure of the Code Owner Actions

Entering the Premise

A code carrier is issued to a person authorized to access the premises (its code is stored in the ACD memory), and is used to open the lock of the premises door.

In the guard off operation mode, the ACD's LEDs continuously glow red. Placing a code carrier, whose code is stored in the memory, near to the ACD is indicated by the LEDs turning green. Meanwhile the lock of the door to the guarded room opens. The default setting of the lock open status indication, as well as the lock opening time is 5 sec. The procedure for changing the lock opening time is described above. The door is closed when the lock opening time expires (if it is never open within the time) or by the signal from the door sensor (if the door is closed before the time expires). If the code of the code carrier applied is not available in the ACD memory, the LEDs blink red for 5 sec. During this process the code is not read and the lock doesn't open.

If there are many code carriers' codes stored in the memory, the code searching time may reach 2 – 3 sec. The LEDs turn pink as they blink red at a high frequency.

Exiting the Premises

Press the Exit button and exit the premises, if it is off guard (ACD is in the guard off mode).



If the room is in the guard on mode, pressing the Exit button causes the sound alarm and the ACD buzzer will sound for 4 sec, **the lock will not open**, the LEDs will go out for the time.

Setting on Guard

To set a room on guard, carry out the following operations:

a) Place the code carrier available in the memory and open the door (open the door sensor) holding the code carrier;

b) Holding simultaneously the code carrier near to the ACD and the door open, wait for the LED to stop glowing green (the LEDs glow green within the lock opening time set). As the LEDs turn red remove the code carrier.



There is another realization of steps a) and b): place the code carrier available in the ACD's memory and open the door. Then, holding the door open wait for the LEDs to stop glowing (for 2 sec) and at the moment place the code carrier to the ACD. If the code carrier is not placed, the ACD passes to the guard off mode and the LEDs glow red.

c) Close the door from the outside of the guarded room. In about 1 sec, the ACD passes to the guard on mode and double the frequency of the LEDs blinking red. If the door is not closed within 40 sec after carrying out step b) or the actions specified in the note, the premises will not be set on guard, the ACD will pass to the guard off mode indicated by the LEDs glowing red.

When in the guard on mode, if a code carrier, whose code does not exist in the memory is placed near to the ACD, or if the Exit button is pressed, the ACD goes into the alarm status for 4 sec (the sound alarm and the built-in audible signal go on, the LEDs go off for the time, the lock does not open). Then, the ACD automatically returns to the guard on mode.

If the door is opened (door sensor triggers) or the body is opened, the sound alarm sounds; it can only be switched off by setting the premises off guard.

Setting off Guard

To set the premise off guard, apply a code carrier whose code is available in the ACD memory. The LEDs will turn green, the lock will open, the sound alarm and the ACD built-in audible signal will be switched off (if they were on), the ACD will pass to the guard off mode.

Notes on Operation

The warranty is void if the seal is broken.