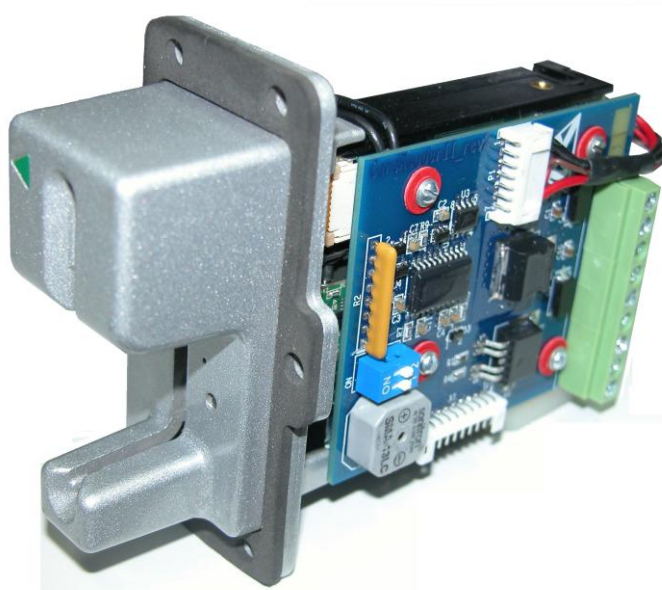


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## Installation manual for the device

### Universal standalone reader-controller "Privratnik-02B"



This manual is designed to carry out preparation and mounting works when installing the universal reader-controller Privratnik 02B.

### **General data.**

The universal reader-controller (Device) is designed to be used as a "cut-in" device. The component layout of the devices is designed so that a single "cut-in" module includes both: a cardreader mechanism and a controller.

The device is mounted in the fragment of the outer wall located in the vicinity of the door opening, which is equipped with the system. When choosing the place of installation one should be guided by issues concerning the convenience of using the device (insertion of the card into the reader, the door opening by the user), as well as by issues concerning the routing of the cable for connection of additional external devices (lock/latch, exit button, device blocking key, power line).

### **Note on the preparation works related to the installation of the universal reader-controller Privratnik-02B.**

Structurally, the universal reader of plastic bank cards is designed as a device for cut-in (hidden) installation. The device is installed on the surface adjacent to the blocked doorway. The reader is attached to the surface through special mounting holes located on its face front antivandal panel. The external view of the reader-controller assembly is presented in **Fig. 1**. In cases where the door unit is framed by metal-glass windows, it is possible to install the reader-controller in a special attachment box. This box is an optional position and is ordered separately. The installation of the controller in the box is not difficult, therefore in this manual we will consider the cut-in installation.

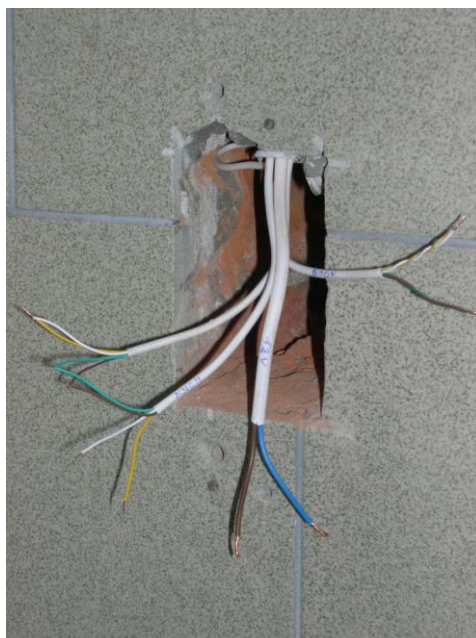


**Fig. 1**

After the Device installation place is selected, the cycle of preparation works is carried out, consisting in:

- 1) choosing the material of construction of the wall segment appropriate as per size to accommodate the hidden part of the universal reader;
- 2) marking and punching the holes for fasteners of the protective anti-vandal plate;

The external view of the wall fragment, the preparation work cycle having been carried out, is shown in **Fig. 2**

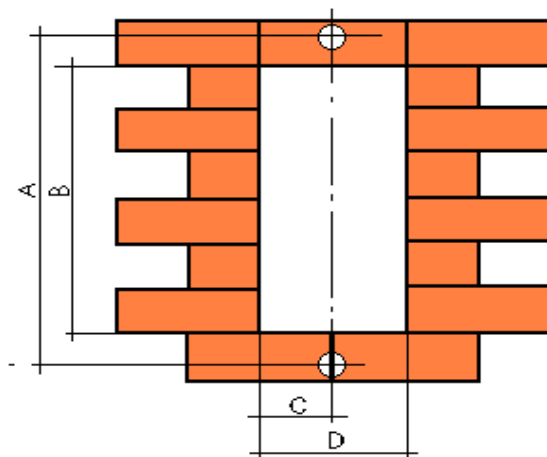


**Fig. 2**

The insertion hole for the device must be performed in accordance with the dimensions shown in **Fig. 3**, the dimension values being given in **Table №1**.

**Table 1**

A, mm	B, mm	C, mm	D, mm	hole depth, mm
160	100	30	60	120



**Fig. 3**

## Connecting the Device.

After the preparation works related to the installation of the device are finished, and before installing the reader into the seat, it is necessary to connect the Device to the power line, and to connect the external circuits of exit buttons, blocking buttons, and lock/latch control circuits. The connection is made via the terminal block of the controller shown in **Fig. 4**

The supply voltage of the Device is fed on contacts "+" and "G" of the Device.

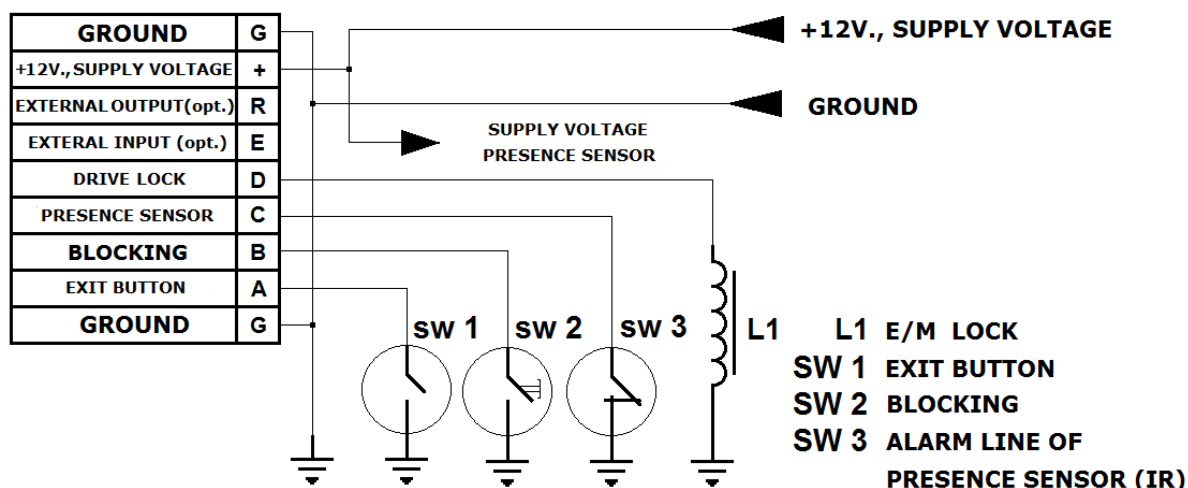
The "Exit button" is connected to contacts "A" and "G" of the Device. The button circuit is normally opened and operates the controller when the circuit is short.

"Blocking" - control signal for the controller. When the potential of the common wire "G" is fed to the input "C" the Device goes into the blocking mode and does not react to neither exit button, nor the card inserted into the reader. To implement this function simply include into the line conductor between the outputs "B" and "G" the line conductor with a normally-opened limit switch activated by short-circuit.

"The presence sensor" is a control signal and is connected by a lines conductor to contacts "C" and "G" of the Device. The line's condition is normally-closed, and operates the controller when the circuit is open (upon activation of the usual alarm infrared sensor, for example). When using this sensor in the system you need to set **pos.2** of the **DIP** switch to **ON**.

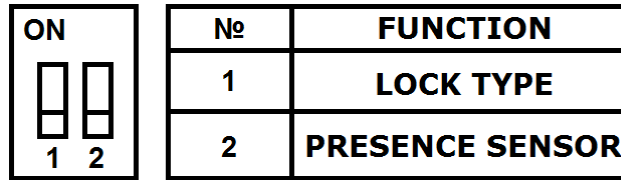
The "Drive Lock" signal - control signal fed to the actuating members of the "D" output system of the controller. The signal is "high" level (+12 VDC), which may be supplied to power the controller.

### Standard connection diagram of the Device and the system external circuits



**Fig. 4**

The device allows you to specify either of the two control signal supply options - if the passage is allowed as per output "D", +12V voltage is supplied, or the previously set is removed instead. The control signal supply option is set by the **DIP** switch, the mode table of which is shown in **Fig. 5** (pos. 1).



No. of DIP	function	ON	OFF
1	Lock type	door latch	electromagnetic lock
2	Presence detector	used	Not used

**Fig. 5**

The presence of such a function is justified by the fact that as the door blocking device one can use both the door latch, and the electromagnetic lock. Both solutions are equivalent as per the basic function, but absolutely opposite as per the used signal blocking level. The door latch is unlocked by voltage supply, the electromagnetic lock is unlocked by being removed.

**Pos.2** of the specified **DIP** switch is responsible for the use in the system of the sensor for detecting the client presence in the self-service area of the ATM lobby. The line removal of this sensor can be either considered, or ignored.

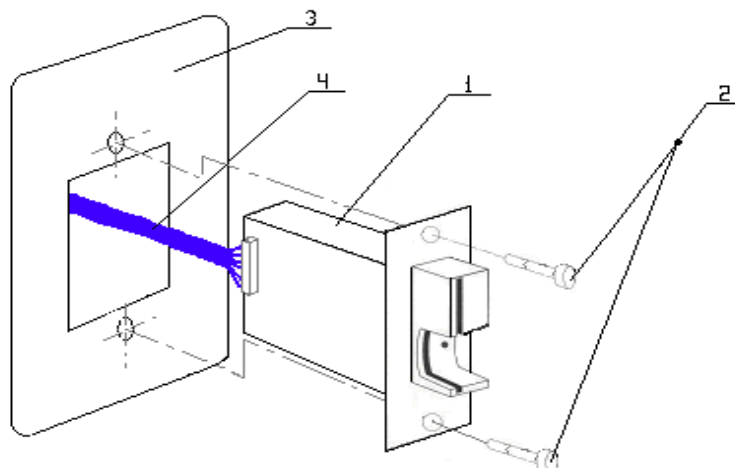
These modes are set before (!) turning the device on. If the positions of the DIP switches are changed on the running controller, the algorithm of its operation will correspond to the modes set before powering the device.

### Installing the Device.

When the cable tray (**pos.4**) is finally connected to the device (**pos.1**) the reader-controller is positioned in the prepared hole inside the wall fragment (**pos.3**) and is attached to the wall surface with the special antivandal screws (**pos.2**) that the front protective panel is equipped with (**ref. to Fig. 7**)

If the wall fragment that hosts the Device is not protected against exposure to atmospheric precipitation, it is recommended to protect the internal components from the card reader mechanism against the moisture by applying sealant on the inner surface of the protective panel along the perimeter.

The properly installed device must be fixed and no gaps between the surface of the front panel and the wall surface must be visually observed.



**Fig. 7**

## **Description of the operation of the universal reader-controller Privratnik-02B.**

Upon voltage (+12 VDC) supply the device is switched in a standby mode, in which the door is locked (by lock or by latch). The standby mode is indicated by a flashing green LED indicator located on the front panel of the reader.

When the card of a standard form is installed into the reader the door is unlocked for 5-8 seconds, an audio signal sounds to indicate that passage is allowed, the indication of the light-emitting diode changes to continuous green. The countdown for unlocking the door is marked from the moment of extraction of the credit card by the user from the reader. After this time period the door is locked, and the device is put in a standby mode.

The unlocking of the door from inside the facility is done by pressing the exit button connected to the controller.

The device allows to implement a number of additional features that enhance the system performance:

A) complete blocking of the entrance door - in the event of collection of ATM or facility locking in case of obvious questioned transactions or manifestations of vandalism. When this mode is activated, the system does not respond to the exit button and does not read the cards.

b) blocking the entry through the entrance door - this function prevents the passage into the ATM lobby, if there is already a card holder being served here (in the case of installation of the alarm IR sensor).

### **"Free passage" function implementation.**

The "free passage" function is implemented by a complete power on-off of the system . In this case, the whole system of access control is de-energized, including the electromagnetic lock itself - thus, the door is unlocked and the entrance into the lobby becomes available to the public. This function is necessary, if the lockable lobby is combined with the entrance to the other units, and an immediate blocking of the entrance door is made as per fixed schedule (for example, the entrance into the ATM lobby is carried out via a client card only at night). This function can not be implemented in the systems using a door latch.

#### **Notes:**

\*) If the electromagnetic lock is installed as a blocking device, then, when routing or connecting to the Device the supply lines or the lines for controlling the blocking device, one shall consider the maximum cable length and its cross-section limited by the following values:

L (length) – max. 30 m

Ø (cross-section) – min. 1.5 mm<sup>2</sup>

This limitation is due to the possibility of large inrush currents of the executive component and inductive type of the load.

\*\*\*) As a power supply for the system we recommend to select the devices providing output voltage of  $\pm 12V \pm 10\%$ , direct current of min. 1.0 A;

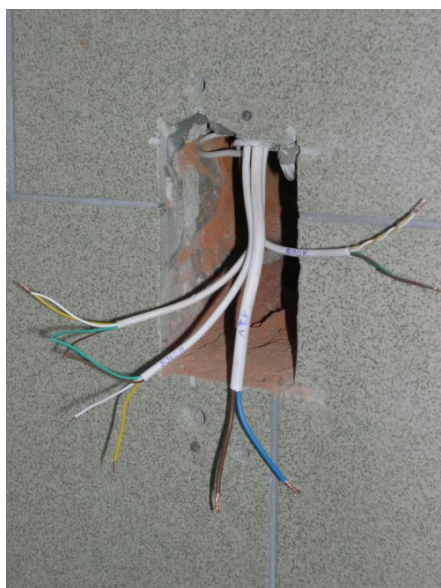
## Appendix.

### Additional installation table (table 2).

**Table 2**

<b>Circuit</b>	<b>Connector</b>	<b>Colour/marking of the loop conductor</b>
Ground	<b>G</b>	
Exit button	<b>A</b>	
Blocking	<b>V</b>	
Presence sensor	<b>C</b>	
Lock Drive	<b>D</b>	
Add. input (don't use)	<b>E</b>	
Add. output (don't use)	<b>R</b>	
Power supply 12 V	<b>+</b>	
Ground	<b>G</b>	

**Example of mounting the device on one of the Objects (Table 3).**



The mounting hole for the reader made in the facade side of the wall



Preparation in the face section of the door mounting hole for the electromagnetic lock



Mounting the "Exit button" onto the door (door-case) surface



Mounting the flexible metal hose



Installation option of the power unit with system control keys



Marking of the system control keys





View of the door face with the electromagnetic lock installed inside



Location of the label above the "Exit button"



External view of the installed panel with the reader



External view of the elements of the Privratnik system in relation to the entrance door of the Object