OXGARD
GUARDING THE FUTURE

Operational manual

Turnstile Praktika T-03-M(K)

Contents

List of abbreviations

PS   – power supply

FA   – fire alarm

RC   – remote control

ACS   – access control system

OD   – operating device

Turnstile firmware version FW v1.76

Card collector firmware version FWv1.52

1. Product purpose

Praktika T-03-M(K) turnstile is designed for access control and pedestrian flow management. The turnstile can be used at checkpoints at factories and organizations, institutions, banks, schools, sports and entertainment facilities, shops, railway stations, etc.

To ensure easy and quick passage of people it is recommended to install one turnstile for every 500 people working in one shift.

2. Delivery set

Table 1. Delivery set

Item	Qty, pcs.
Turnstile **Praktika T-03-M(K)**	1
Remote control with cable	1
Door lock key	8
Datasheet	1
Installation guidelines	1
Operational manual	1
SORMAT PFG LB 12-50 anchor *	12
M12x60 DIN912(GOST 11738-84) hexagon screw *	12
Connecting cable PVA 2x1,5*	2

*-optional

3. Basic specifications

Table 2 Basic specifications

Description	Turnstile	RC panel
Dimension (HxWxL), (mm) - operational state - collapsed arms	1505x1200x1730 1505x1200x730	107x107x25
Weight, kg	176,0	0,5
Temperature range, 0C - operation - transportation and storage	+1...+40 +1...+40	+1...+40 +1...+40
Atmosphere relative humidity, no more than %	80	80
Passage width, mm	2x500	
Throughput, people per minute	2x30	
Max. number of connected RC panels, pcs	2x2	
Lifetime, years	8	8

Table 3 Electrical specifications

Description	Turnstile (each tripod)	Card collector**	RC panel
Supply voltage, V: - nominal - working	12,0 10,8...13,2	12,0 8…18	12,0 7,5...15
Average current in standby mode * A	0,4	0,2	
Average current operational mode * A	1,5		
Maximal current * A	5,0	1,5	

*- values mentioned at a nominal supply voltage

**-optional

The manufacturer reserves the right to change the packaging, specifications and appearance without notice

4. Product design

Turnstile housing

Turnstile housing and arms are made of brushed stainless steel. In the middle part of the housing there is a removable cover with lock for quick access to the motherboard where PS, RC and ACS cables are connected. In the lower part there are holes for cable routing and base cover concealing the fixation of turnstile to the floor (Fig. 1).
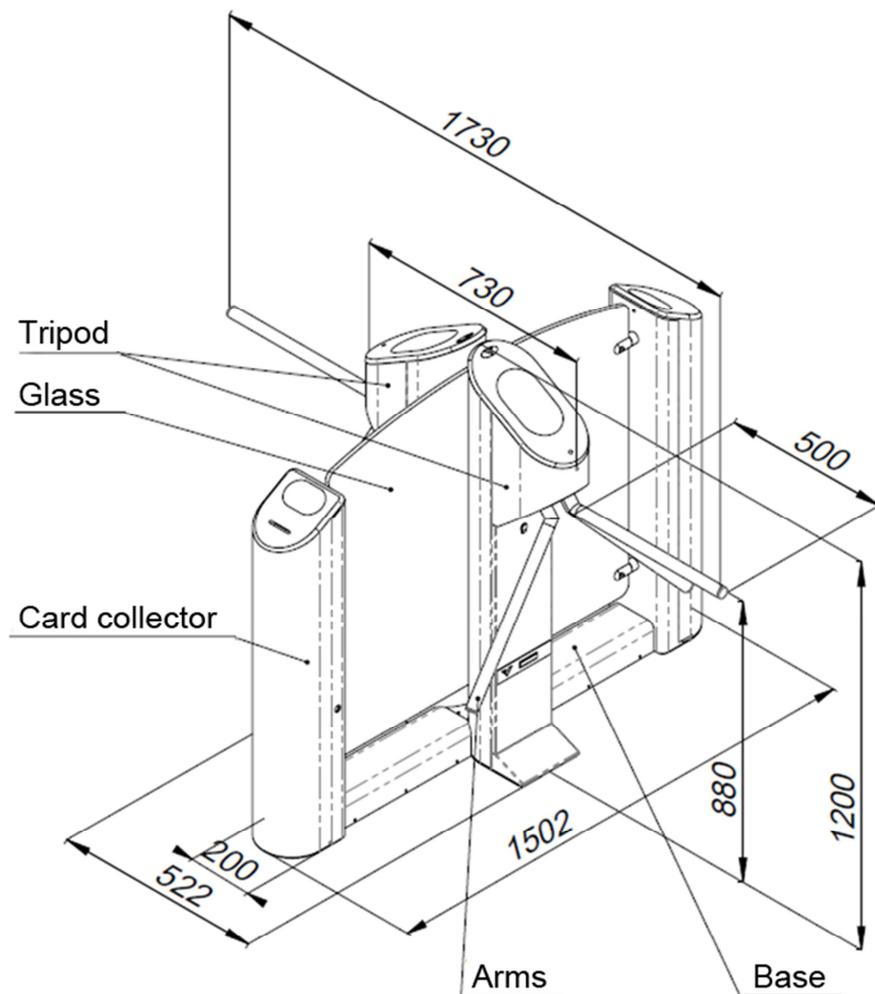

Fig. 1 General view of turnstile

Display system

Display system of turnstile consists of three LED panels. The panels are made of artificial stone with insertions made of acrylic glass. Turnstile operating modes are displayed on the panel in the form of mnemonic signs depicting authorization and non-authorization of passage (Fig. 2 and Fig. 3).
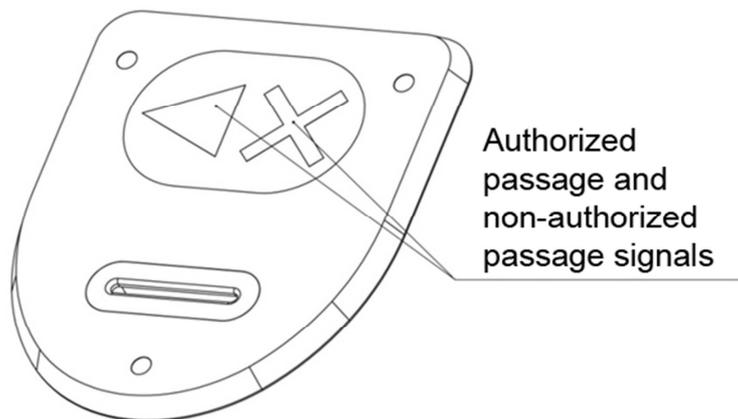
Authorized passage and non-authorized passage signals

Fig. 2 General view LED panel display

Authorized direction of passage
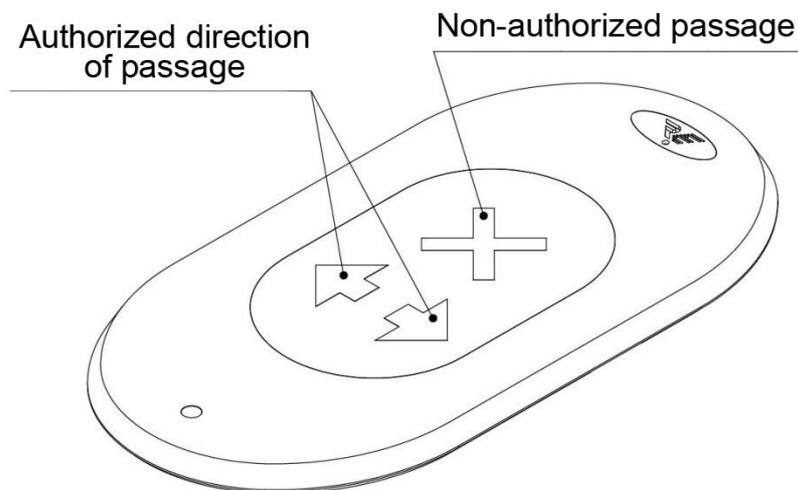
Non-authorized passage

Fig. 3 General view of display panel

Remote Control Panel

The housing of RC panel is made of polished stainless steel. On the front side there are control buttons and LED indicators of RC operational modes (Fig. 4). The standard supplied cable is 5 meters long.
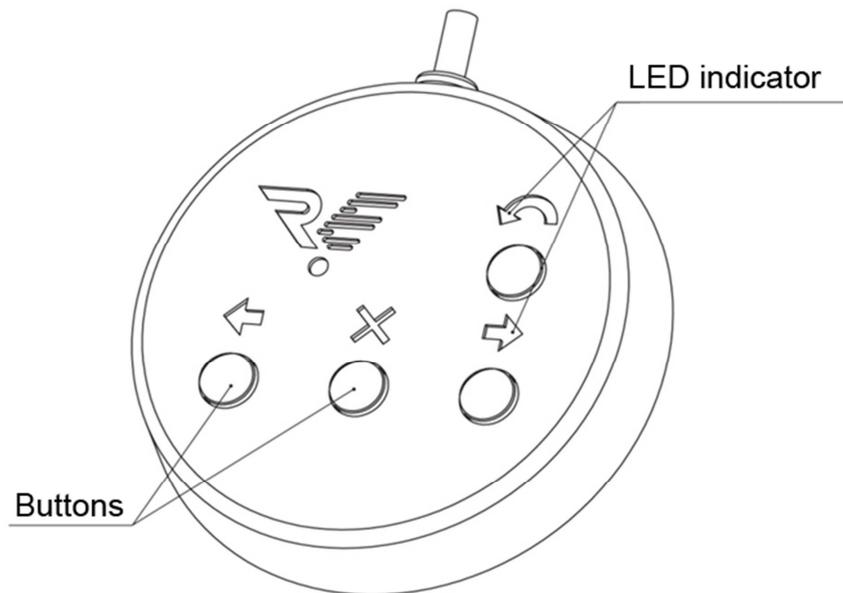

Fig. 4 General view of remote control

5. Transportation and storage

Turnstile in its original packaging shall be transported by air, by road and by railroad with protection from direct exposure to rain and dust without range limitation. It is allowed to stack boxes in 2 rows during transportation and storage if Euro-pallets used. Keep the turnstile in dry (no moisture condensation) heated places within +1 to + 40 °C temperature range. Avoid vapors of acids, alkalis, and corrosive gases at the storage place. Storage of turnstile in the original package in a dry unheated

premises or closed transport containers is permitted for short periods, no more than 3 days. Before startup, the turnstile must be kept in a room with normal climate conditions for 12 hours after storage in unheated rooms.

6. Safety requirements

CAUTION! Failure to comply with the safety requirements specified in this section may result in damage to human life and health, total or partial loss of workability of products and (or) auxiliary equipment.

CAUTION! Installation of turnstile must be carried out by qualified personnel according to the instructions.

CAUTION! The producer disclaims any liability for damage to human life and health, total or partial loss of workability of products and (or) auxiliary equipment for non-compliance of the safety requirements specified in this section, as well as terminate the product warranty.

IT IS NOT ALLOWED TO:

• Set the power supply inside the case of turnstile as this could lead to electric shock to persons;

• Set the turnstile other than in dry and heated places;

• Impede or accelerate the turnstile arms during "antipanic" mode;

• Apply chemically aggressive cleaning detergents (as pastes and liquids) to the materials of the housing.

7. Description of card collector

7.1. Card collector purpose

Card collector (Fig. 5) is designed for collection and storage of proximity access cards at the exit from the facility. Flexible logic of the controller allows the integration of the card reader with any access control systems.
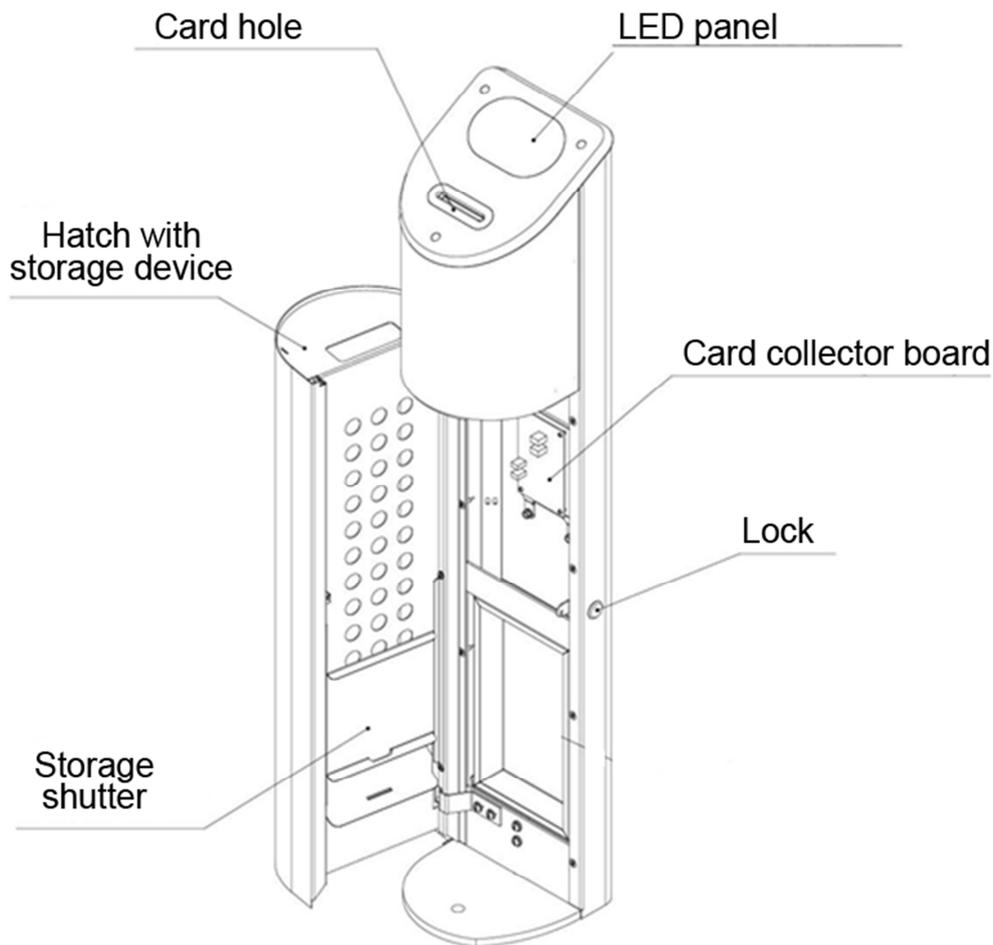
7.2. Product design

Fig 5. *General view of card reader*

In front of the housing is a door with lock for quick access to removing the card and to the board when cables PS, EU and ACS are connected. Door has card storage device where more than 500 cards be placed.

ATTENTION (!) Reader doesn't include in scope of supply. Customer should choose suitable reader model for its own environment.

The reader is mounted on a universal adjustable bracket, located under the top cover of the card collector. This solution provides maximum flexibility for installation and connecting of the card collector.

7.3. Removing guest cards from card reader

7.3.1. Open the hatch lock of card collector with a key (Fig. 5).

7.3.2. Put a bag to collect cards (not supplied) underneath storage device.

7.3.3. Lift the storage shutter to remove cards.

7.3.4. Lower the storage shutter and close the hatch with a key.

8. Turnstile operation

8.1. Turning on

Connect power supply unit to 220V power network and turn it on. Turnstile will make one complete arms circle. One arm will set in the initial position, red cross indicator will turn on on the LED panel (Fig. 2 and Fig.3), button 2 on RC panel (Fig. 4) will turn red. The turnstile is ready for operation.

8.2. Operating modes

The turnstile has several modes of operation. The desired mode is set by using RC panel or ACS. Operational modes displayed on the panel in the form of mnemonic signs depicting authorization and non-authorization of passage.

8.3.Control with remote control unit

General view of RC is shown in Fig. 4. Above each button there is an LED indicator displaying operational mode of the turnstile.

The "Stop" mode

"Stop" mode is set when the turnstile is turned on. Switch from another mode to "Stop" is performed by pressing button 2, in this case LED indicator above button 2 turns red. In this mode the passage is non-authorized in both directions. Central arm can be deflected from its initial position on a small angle. The stopper will be turned on automatically and will not let the arm to rotate for passage, and then the arm will return to its original state.

The single passage mode

Button 1 (3) turns on single passage mode to the left (right). This mode allows one pass to the left (right) with a subsequent changing to "Stop" mode. Green arrow indicator turns on the display showing a free passage to the left (right). Green LED indicator on the RC panel turns on above the button corresponding to the authorized passage and a red indicator - above button 2. If the passage is not performed within 5 seconds, the turnstile switches to "Stop" automatically.

Multiple passage in one direction mode

In order to switch to this mode press and hold button 2 and then press button 1 (3). After that release both buttons. Multiple pass mode is displayed on the RC panel by green light above the button 1 (3). Red LED indicator above button 2 is off. Arrow indicator on the LED panel shows the direction of the authorized passage. In this mode the passage is allowed in the authorized direction for an unlimited number of times. It is also possible to authorize a single pass into the non-authorized direction by pressing button 1 (3). After this passage or within 5 seconds turnstile will return to the original mode.

Free passage mode

In order to switch to this mode it is required to press and hold button 1, then press 3 and release both buttons. In this mode passage is allowed in both directions for an unlimited number of times. Arrow indicators on the LED panel blink in both directions. Green LED indicators on the RC panel turn on above the buttons 1 and 3.

"Antipanic" mode

This mode is turned on by pressing button 4 while in any other mode.

Red cross indicator on the LED panel blinks for a few times and then the turnstile begins rotating and folding arms. In this mode the turnstile folds all the arms; arrow indicators on LED panel flash for both direction. Yellow LED indicator on the RC panel turns on above the button 4.

8.4. Adjustment of remote control panel

Turnstile can be set in various directions in relation to the user. In some cases it is needed to reverse left / right passage buttons. This can be done by the following operations:

• Power off the turnstile;

• Press and hold left (1) and right (3) buttons;

• Turn on the turnstile;

• Press button 2 while still holding buttons 1 and 3;

• Release buttons 1 and 3;

• Release button 2.

Now when you click left button passage will be allowed to the right and vice versa. The current functions of the buttons are saved and do not reset when power is turned off. In order to return to the initial modification re-do the above sequence.

8.5. Control with card collector

The card collector is set in the standby mode after power-up. It is necessary to present access card to switch the mode.

Passage with permanent cards

When an authorized permanent visitor card is presented to the reader card collector unlocks the speedgate for the time specified by ACS controller (depending on the operating mode; for 5 seconds in pulse mode). During the specified time interval other cards are not accepted. When the passage

is performed or the specified time interval is expired card collector switches into standby mode and can collect the next card. Green arrow turns on on the LED panel, indicating the authorization of the passage.

Passage with guest cards

Guest card shall be inserted into the card hole up to the stop otherwise it will be ignored. In case the presented card is authorized, the card collector collects it and then unlocks OD for 5 seconds.

Storage device is full

When the storage device is overfilled, the card collector stops collecting guest cards and provides four short audio signals at intervals of 4 sec., the LED panel flashes red cross indicator at an interval of 4 seconds. Audio signal lasts for 3 minutes; then red cross on LED display continues single blinks 1 time in 2 sec. Passages with permanent cards are performed normally. In order to switch the card collector in the standard operating mode, remove cards from the storage device (see. Article 7.3).

Emergency mode

During the operation of the card collector there might be a situation when a card or a foreign object becomes jammed by shutter of the card collector. To resolve such situations is an emergency mode.

- Open the hatch of the card collector using the key (Fig. 5);

- Press and hold BUT1 button on the board of the card collector (Fig. 6). When the button is pressed shutter is open forcedly and a continuous audio signal is performed;

  - Remove the object that impedes the normal operation of the system;

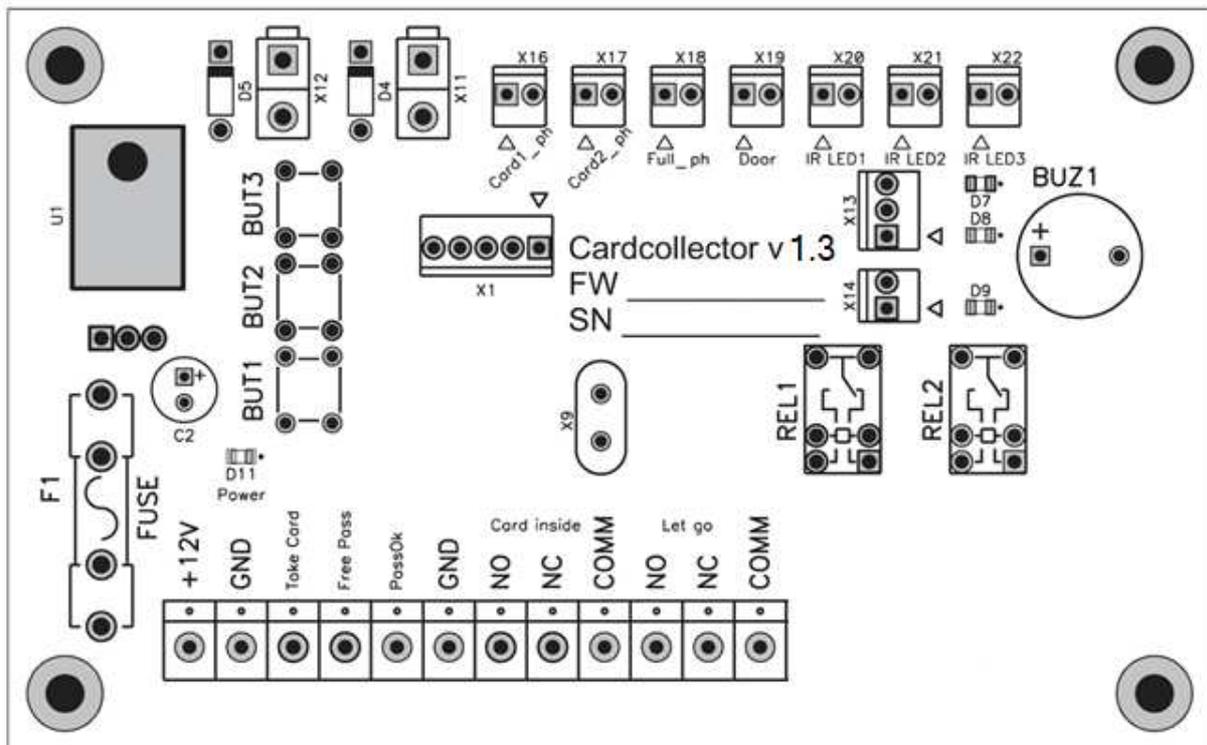Release BUT1 button and close the hatch with a key.

Fig. 6. General view of motherboard

Appendix 1. Troubleshooting for turnstile

Table 6. Troubleshooting

Probable cause:	Remedy:
PS unit is connected, but the turnstile does not work	Check the connection cable; Check the fuses on motherboard
RC panel does not work	Check the RC panel connection; If +12 and GND contacts are connected properly try to interchange positions of CL and CH;
Turnstile works fine, but arms do not rotate when in "antipanic" mode	Check the supply voltage on the connectors of motherboard. If "antipanic" mode is on and voltage is lower than 10V, the motor will not work.
RC unit displays the status of the turnstile, but the turnstile does not respond to buttons pressing.	Check jumper J2 on the motherboard (the jumper must be removed. See article 5.4 of Installation guidelines)

Appendix 2. Typical troubles of card collector
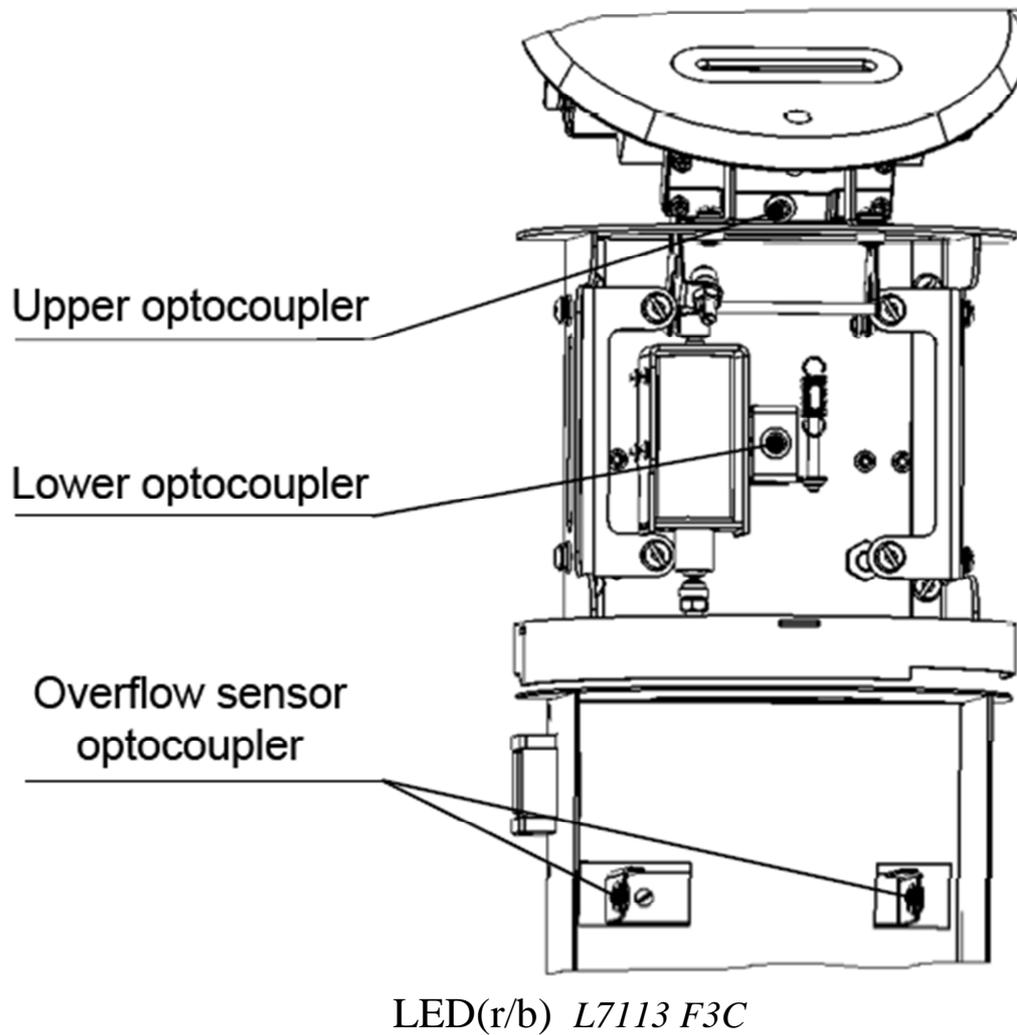
LED(r/b) *L7113 F3C*

Optotransistor (y/b) L7113

Fig 7. Location of optocouplers of card reader

Table 7. Troubleshooting for card collector

Trouble	Possible causes	Remedy
PS is connected, but the card collector does not work		Check the connection cable; Check the fuse on board the card collector;
Card collector provides 4 audio signals at intervals of 3 sec, red cross on the LED panel flashes every 4 seconds (audio signals last for 3 minutes; then red cross on the LED display continues single blinks 1 time in 2 sec.)	Storage device is full	Act in accordance with article 7.3;

	Overflow sensor (*optocoupler*) is broken (Fig. 7)	Check the condition of the cables and connectors;
		
		If D9 LED on the board of the card collector does not turn red – the fault is caused by the malfunction of motherboard;
		
		If D9 LED on the board of the card collector turns red:
		set the jumper on Full_ph connector - if LED D9 then goes off, the alarm stops, the Red Cross does not blink – the fault is caused by defective optocoupler;
		
		Check the voltage at the connectors (**without removing the connectors, while holding down BUT1 button**):
		    1. Full_ph (Vtyp = 0,15 B; Vmax = 2,5 V):
		     - If V ≤ 2,5 In - all right;
		     - If V> 2,5 V – disaligment or LED and phototransistor fault;
		     - If V = 5 V - the phototransistor or cable are defective;
		    2. IR LED3 (Vtyp = 1,2 B):
		     - If V = 5 V - LED or cable defective;

Card collector provides 5 audio signals, red cross on the LED panel is blinking (then red cross on the LED display continues blinking, cards are not collected, free passage mode is off).	Card or foreign object is left in card hole of card collector	Act in accordance with the article 7.2, "Emergency mode".
	Defective upper optocoupler (Fig. 7)	Check the voltage at the connectors (**without removing the connectors, while holding down the button BUT1**) 1. IR LED1 (Vtyp = 1,2 B): - If V = 5 V - LED or cable defective 2. Card1_ph (Vtyp = 0,1 B; Vmax = 2,5 V): - If V ≤ 2,5 In - all right; - If V> 2,5 V - disaligment or LED and phototransistor fault; - If V = 5 V - the phototransistor or cable are defective;
Card collector collects a guest card and provides an audio signal for 1 second	Defective lower optocoupler (Fig. 7)	Check the voltage at the connectors (**without removing the connectors, while holding down the button BUT1**) 1. IR LED2 (Vtyp = 1,2 B): - If V = 5 V - LED or cable defective 1. Card2_ph (Vtyp = 0,1 B; Vmax = 2,5 V): - If V ≤ 2,5 In - all right; - If V> 2,5 V - disaligment or LED and phototransistor fault; - If V = 5 V - phototransistor or cable are defective

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