



GUARDING THE FUTURE

ООО «VOZROZHDENIE»

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APPROVED

VZR.230200.000 AS

TURNSTILE

MODEL PRAKTIKA QL-04

QL-04-SM-660, QL-04-SM-900, QL-04-SMK-660, QL-04-SMK-900, QL-04-SMR-660, QL-04-SMR-900, QL-04-SMRK-660, QL-04-SMRK-900,
QL-04-CM-660, QL-04-CM-900, QL-04-CMK-660, QL-04-CMK-900, QL-04-CMR-660, QL-04-CMR-900, QL-04-CMRK-660, QL-04-CMRK-900,
QL-04-GCM-660/900, QL-04-GCMR-660/900

VZR.230200.000 IG

INSTALLATION GUIDELINES

Pages 48

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This installation guidelines (IG) is composed for Turnstile Oxgard Praktika QL-04 и and its modifications (hereinafter referred to as - item). Firmware version:

FW v2.4-2.5

- 1) software turnstile version with swing doors 660 mm – FW v2.4;
- 2) software turnstile version with swing doors 900 mm – FW v2.5.

IG establishes the rules and procedure for the installation and commissioning of the item.

Before installing the item you should also read the Operational manual VZR.230200.000 OM.

Taking into account ongoing work of improving the item's design, some changes can be made that won't be reflected in this edition of the IG.

Turnstile can be integrated with card collector.

List of abbreviations used in this document:

- OM — operational manual;
- IG — installation guidelines;
- PS — power supply;
- RCP — remote control panel;
- ACS— access control system;
- SFAS — security and fire alarm;
- NC — normally connected;
- NO — normally opened.
- NO — normally open connection;
- AD — actuation device (turnstile).

1 GENERAL INSTRUCTIONS

When assembling and installing the product for general safety take into account all the recommendations and instructions given in this manual.

Before starting the installation work, completely disconnect the power supply of the item.



IT IS PROHIBITED:

TO INSTALL POWER SUPPLY MODULE INSIDE THE BODY OF THE TURNSTILE AS IT MAY RESULT IN AN INJURY OF THE HUMAN BEINGS DUE TO AN ELECTRIC SHOCK.

TO INSTALL THE TURNSTILE OUTSIDE DRY AND HEATED PREMISES.
BLOCK OR ACCELERATE THE MOVEMENT OF ARMS OF THE TURNSTILE.

TO USE PASTES AND LIQUIDS CHEMICALLY AGGRESSIVE TO THE MATERIALS OF THE HOUSING FOR CLEANING PURPOSES OF THE PRODUCT.

2 SAFETY REQUIREMENTS

Installation should be carried out in compliance with the "Rules for the technical operation of electrical installations of consumers" and "Safety regulations for the operation of electrical installations of consumers".

The installation of the product should be carried out by qualified personnel prepared for work with electrical appliances, instructed about safety precautions when working with electrical installations with voltages up to 1000 V.



ATTENTION: A FAILURE TO OBSERVE SAFETY REQUIREMENTS, INDICATED IN THIS SECTION, MAY CAUSE DAMAGE TO LIFE AND HEALTH OF PEOPLE, COMPLETE OR PARTIAL LOSS OF OPERATING CAPABILITY OF THE PRODUCT AND (OR) AUXILIARY EQUIPMENT.



ATTENTION: THE MANUFACTURER SHALL DISCLAIM THE LIABILITY FOR CAUSING INJURY TO HUMAN LIFE AND HEALTH COMPLETE OR PARTIAL LOSS OF OPERATING CAPABILITY OF THE PRODUCT AND (OR) AUXILIARY EQUIPMENT IN CASE OF A FAILURE TO OBSERVE SAFETY REQUIREMENTS, INDICATED IN THIS SECTION, AND WILL TERMINATE THE VALIDITY OF THE PRODUCT WARRANTY.

3 PREPARATIONS FOR ITEM'S INSTALLATION

3.1 Transportation of item to the installation place

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.

After transportation at a negative temperature, in order to avoid condensation of moisture, the item should be kept in a room with normal climatic conditions during 12 hours.

Loading and unloading operations must be carried out in compliance with safety regulations.

3.2 Unpackaging regulations

3.2.1 Perform an external inspection of the packaging. Box should not have visible damage.

3.2.2 Open the box, unpack it and look for the content:

- 1) Turnstile units;
- 2) Remote control panel with cable;
- 3) Keys from the locks (4 pcs).

3.1 Item's inspection regulations

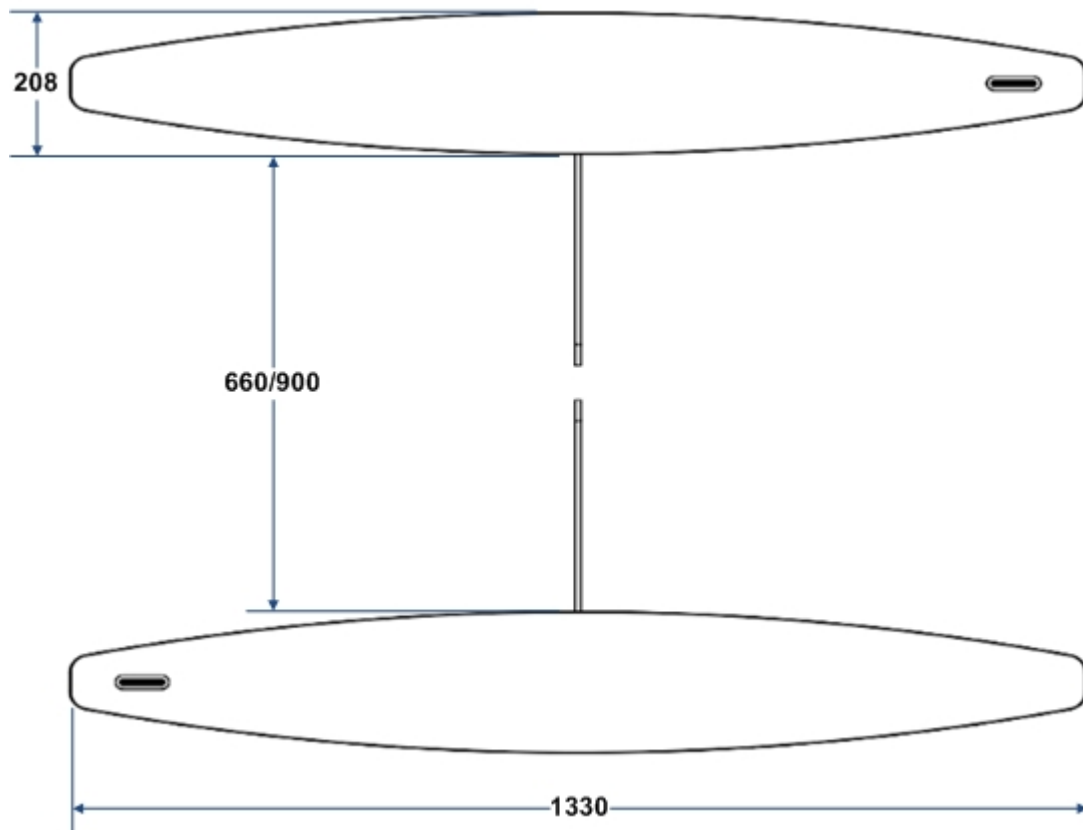
3.1.1 Check the complete set of delivery

Set of delivery should be checked in accordance with Datasheet VZR.230200.000 DS.

3.1.1 Perform an external inspection of the packaging. Box should not have visible damage.

3.1.2 In case of damage, make a reclamation act.

3.1.3 Overall turnstile's dimensions



Picture 1 Overall turnstile's dimensions

3.3 Requirements for the installation site



ATTENTION: INSTALL THE TURNSTILE RELIABLY IN ORDER TO AVOID SWINGING AND / OR TURNOVER IN THE PROCESS OF OPERATION. IN CASE OF MOUNTING THE TURNSTILE TO THE FLOOR OF LOW STRENGTH - TAKE MEASURES TO STRENGTHEN THE FLOORS IN THE PLACE OF INSTALLATION.

3.2 Procedure for checking the conformity of the installation site



ATTENTION: DURING INSTALLATION TAKE INTO ACCOUNT THAT GLASS WINGS CANNOT BE ADJUSTED. IT IS RECOMMENDED TO CHECK THE CORRECTNESS OF INSTALLATION BEFORE FIXING THE SIDE UNITS.



ATTENTION: DURING PREPARATION OF THE INSTALLATION SITE TAKE INTO ACCOUNT THAT EACH SIDE UNIT REQUIRES A SEPARATE POWER SUPPLY.



ATTENTION: DURING INSTALLATION OF THE SPEEDGATE PREPARE CONDUITS FOR CABLE ROUTING OF CAN-BUS TO CONNECT SIDE UNITS.

4 ITEMS' S INSTALLATION AND DISMANTLING

Required equipment

Equipment used in the process of installation of the turnstile:

- 1) electric drill;
- 2) hard alloy drill 16 mm in diameter for drilling holes for anchors in the floor (recommended anchor shell SORMAT PFG ES 10);
- 3) wrench for screws DIN 933 M10x60 S17;
- 4) slotted screwdriver;
- 5) plummet or leveling gauge;
- 6) steel liners for turnstile aligning;
- 7) round file;
- 8) side cutters.

4.1 Installation



ATTENTION: BEFORE INSTALLATION CAREFULLY LOOK THROUGH THIS SECTION OF INSTRUCTION.

4.1.1 Prepare horizontal surface at the installation site of the turnstile.

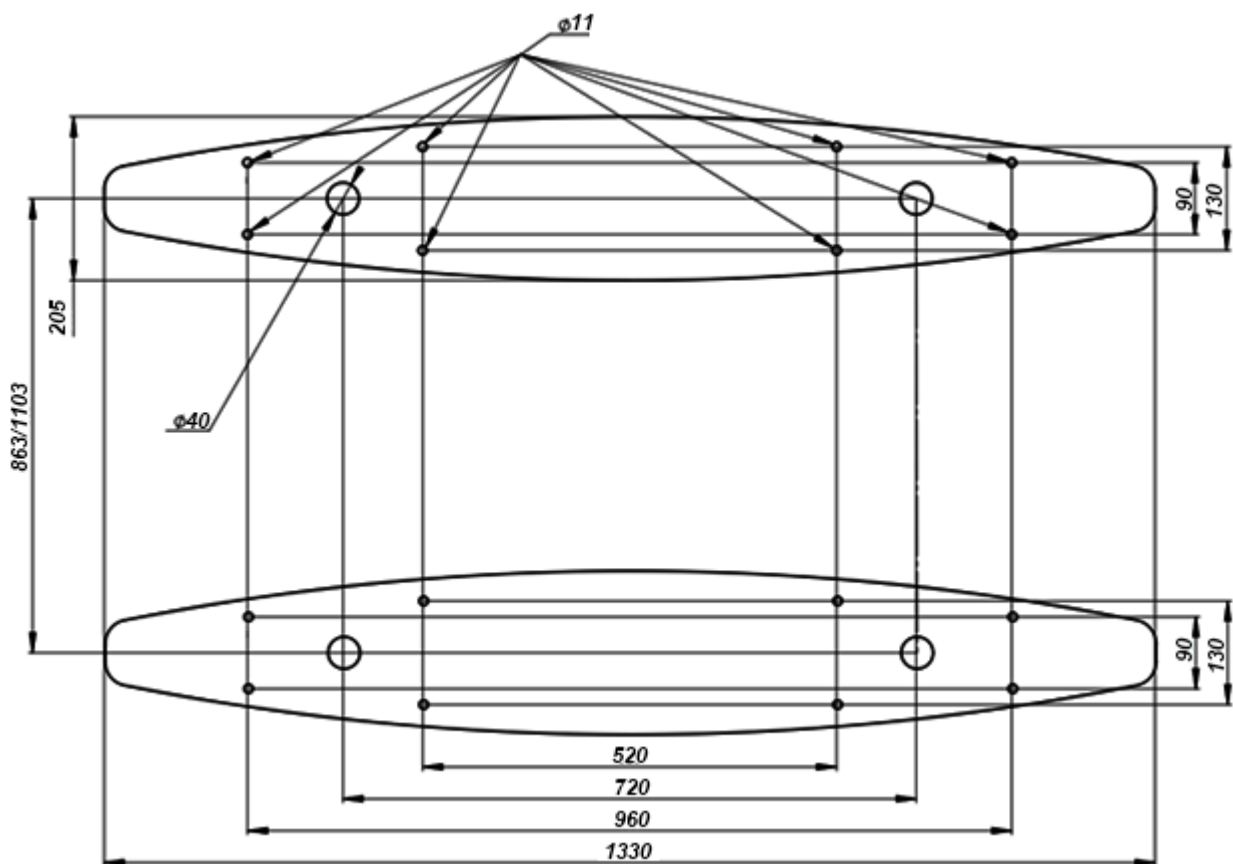
4.1.2 Prepare cable conduit coming from the site to the installation area of PS, remote control panel, and as well, if it is required, to the connection point of ACS and SFAS.

4.1.3 Installation site of the turnstile:

0 according to installation dimensions prepare 8 holes 16 mm in diameter in the floor for fixation anchors of the two of the turnstile’s stands.

Location of the mounting holes in relation to the outer dimensions of the turnstile is shown in Appendix B.

The depth of the hole, should exceed the length of the anchor by 5 mm. Insert the anchors into the holes.



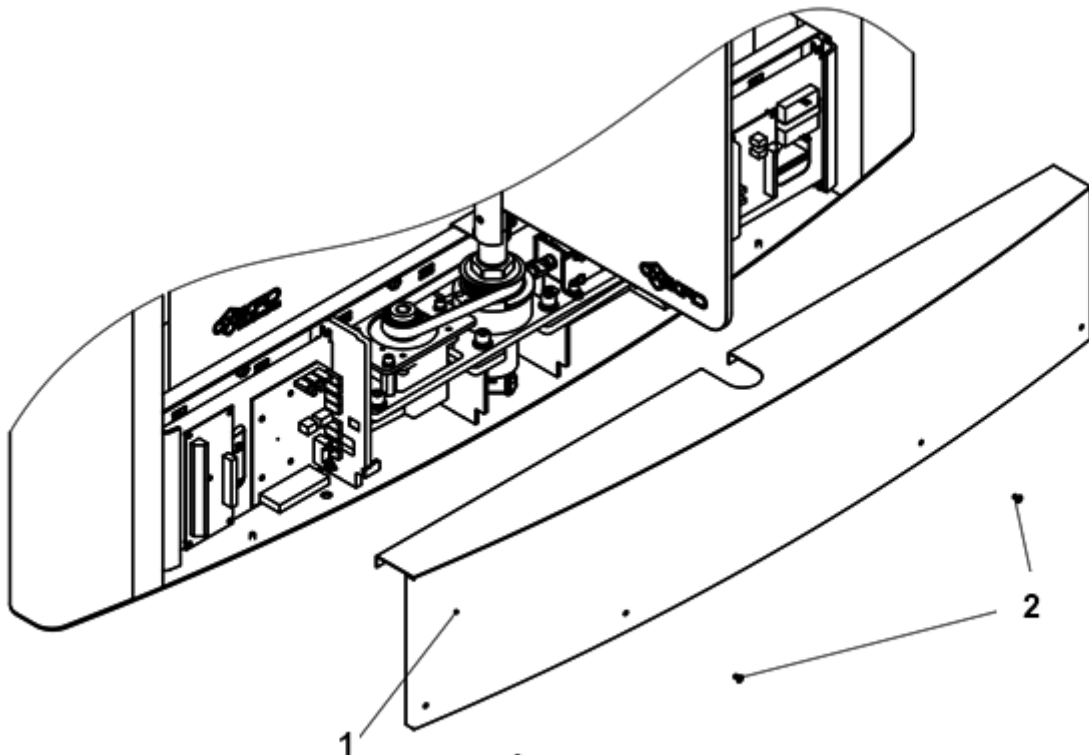
Picture 2 - Installation dimensions of the turnstile site with a passage width 660 (900) mm

4.1.4 0 cable routing is exercised through the hole 40 mm in diameter the lower turnstile panels.

4.1.5 Lay to the wiring duct or trench the connecting cable for remote control panel, cable for PS, bus – CAN cable, RS-485 indication bus cable and, if provided, ACS and SFAS cables.

4.1.6 Mount turnstile stands on the prepared installation site.

Undo 4 screws M4 (2) and remove base cover (1).



1 - крышка основания; 2 - винты М4 (4 шт.)

Picture 1 – preparation for turnstile installation

1- Base cover; 2-screws M4 (4 pcs); 2 – screws M4 (4 pcs.)

4.1.7 Lay to the wiring duct or trench the connecting cable for remote control panel, cable for PS and, if provided, ACS and SFAS cables.

4.1.8 Align together the holes in the lower plate of side unit and anchors in the floor.

Check the vertical installation in 2 planes. If necessary, use appropriate steel underlayers for proper installation of the speedgate.

Fix the housing of side unit with 8 screws M10, tightening them to the corresponding anchors by using a wrench with internal hexagon S17.

4.1.9 Connect necessary cables (Section 5). Secure cables with cable ties.

4.1.10 Install the base cover to its normal position.

4.1.11 Remove protective film from the housing of the speedgate.

4.2 Dismantling

4.2.1 Disassembly of the product for dispatch for verification or repair shall be carried out in the following order:

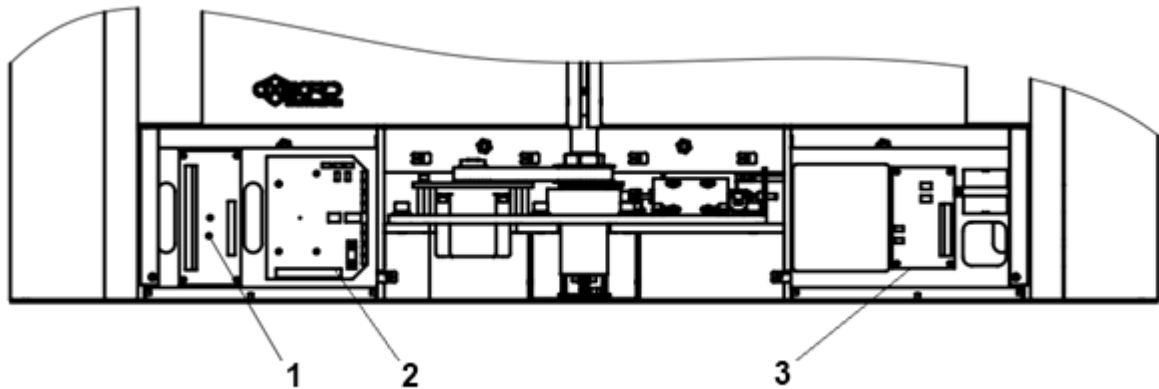
- 1) switch off turnstile's power supply;
- 2) disconnect the item from the power supply;
- 3) disconnect the cable part of the item from additional cables
- 4) dismantle the item from the installation site

4.2.2 Before packing, clean the product of dust and dirt.

4.2.3 Pack the item to the packing box.

5 ITEMS CONNECTION AND SETTING-UP

Connection of RC, PS and ACS is performed with the use of crossboard.
Picture 4 - the location of the boards at the stand of the speedgate unit.



1 - кросс-плата; 2 - материнская плата; 3 - плата картоприемника

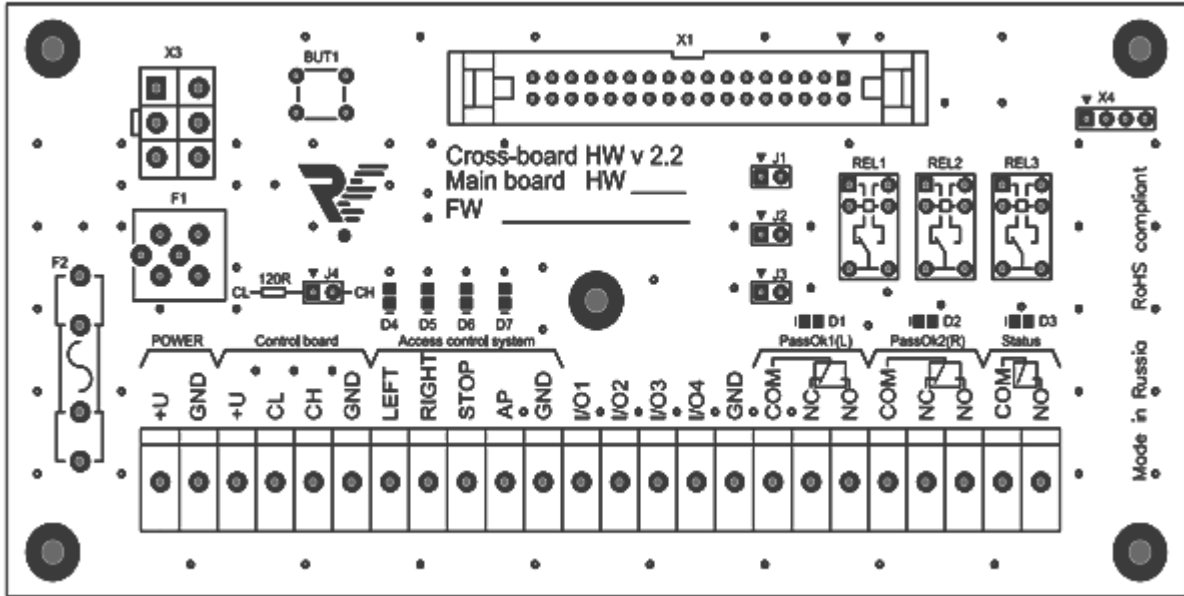
Picture 1 – Arrangement of boards at speed gate stand

1 – cross-board, 2- motherboard, 3 – card collector's board



ATTENTION: OPERATING MODE OF SPEEDGATE IS DEFINED BY SETTING THE JUMPERS ON CROSSBOARDS OF BOTH SIDE UNITS OF THE SPEEDGATE.

0 depicts the cross-board and connectors for PS, RC, ACS and FA.



Picture 5 – General view of the cross-board

Table 1 describes different speed gate operation modes with different positions of jumpers.

Table 1 – Speed gate operating modes

The position of jumpers	Operating mode of speedgate
J1 removed	Pulse mode (see article 5.3.)
J1 installed	Potential mode (see article 5.3).
J2 installed	Speedgate does not respond to the remote commands. Status of the buttons is transmitted to the outputs I / O1 ... I / O4 (see article 5.4)
J2 removed	Speedgate is controlled by remote control. Status of the buttons is transmitted to the outputs I / O1 ... I / O4 (see article 5.4)

- Jumper J3 is not used

- Jumper J4 is used to establish the normal operation of CAN2.0 bus. (See Appendix A)

5.1 Connecting power supply



IT IS PROHIBITED:

DO NOT USE POWER SUPPLIES WITH AN OUTPUT CURRENT LESS THAN 10 A. DO NOT CONNECT THE POWER CABLE WITH CROSS-SECTION LESS THAN 1.5 MM². WHEN THE LENGTH OF THE POWER CABLE IS MORE THAN 5 M - IT IS RECOMMENDED TO USE A CABLE WITH 2.5 MM² CROSS-SECTION.



ATTENTION: DO NOT INSTALL THE POWER SUPPLY AT A DISTANCE MORE THAN 25 METERS FROM THE SPEEDGATE.



ATTENTION: FOR EACH SIDE UNIT MUST BE A SEPARATE POWER SUPPLY.

Each passage (two wings) is powered by two sources of 12V DC voltage.

PS unit shall be selected on the basis of these parameters. Also note that an increase in the length of the supplied cable increases the voltage drop (the operating voltage range is given in the Operational manual VZR.230200.00 OM). The list of recommended power supplies is provided in Appendix B.

Install the PS unit in a place with easy access for operator. Connect the power supply to the POWER contact set on the cross-board. Connect (+) and (-) contacts of PS unit to (12V) and (GND) terminals respectively.

Make sure the cables are securely connected.

5.1 Connecting control panel

RC panel is connected to *Control Board* contact set on cross-board.
Marking of contacts: 12V, CL, CH, GND.

Connection of RCP shall be made on the basis of contacts' marking, provided in Table 2.

Table 2 - Contact marking for RCP connection

Contacts marking	Wire color
12V	Red
CL	Yellow
CH	Green
GND	Blue

5.2 Connecting ACS (optionally)

ACS Controller will have to be connected to the group of contacts *Access Control System* on the cross board.

The contacts will have to be marked as follows: LEFT, RIGHT, STOP, GND. Contact assignment is indicated in Table 3.

Table 3 - ACS contacts assignment

Marking of contacts	Contact assignment
LEFT, RIGHT	One-pass movement to the left/to the right (lowest priority)
STOP	No Entry ("Stop" mode) (medium priority)
AP	Folding arms («Antipanic function») (high priority)
GND	Common contact

Inputs for ACS connection will have to be identified by means of priorities:

- 1) AP input possesses the highest priority. At GND contact of this input the turnstile works with open wings (glass doors) and **DOES NOT REACT (!)** to the other signals except for AP;
- 2) STOP mode possesses the medium priority. AT GND contact of this input the turnstile in stop mode “Stop! and does not react to the other signals except for AP signal;
- 3) LEFT and RIGHT possess equally low priority and include one pass to one or another side. If both inputs are closed, the pass will be allowed to the side which input closed first. In case the pass fails to be done the turnstile will automatically change over to “Stop” mode 5 seconds later.



ATTENTION: IN CASE OF ONE OF STOP INPUTS ARE CLOSED, THE INSTRUCTIONS COMING FROM THE CONTROL PANEL WILL NOT BE RECEIVED AS ACS HAS THE HIGHER PRIORITY.

STOP inputs are potential ones, i.e. until the input is at GND contact, the turnstile is operating in the corresponding mode, after the contacts are opened the turnstile changes over to “Stop” mode irrespective of what mode has been until ACS activated.

Inputs LEFT and RIGHT are able to operate both in potential and pulse mode (actuation by the fact of GND contact). Pulse mode is installed by default.

In order to switch to potential mode set J1 jumper (0 J1). And J1 shall be set at both cross-boards of decided passage.

In this case the mode of left / right passage turns on only during the control signal to LEFT / RIGHT.

Mode of free passage can be set by control signals to both inputs simultaneously. Priorities of LEFT and RIGHT inputs at the switch to the pulse mode remain unchanged.

Cross-board contains two relay outputs for ACS operating on the principle of "dry contacts» - Pass Ok1 and Pass Ok2. NO and COMM - normally open connection, NC and COMM - normally closed connection.

Activation of one of the contact sets suggests the passage in the corresponding direction (PassOk1 - right or left, PassOk2 - left or right).

Activation of corresponding relay depends on the location of speedgate and determined by an experiment. Related LED indicators turn on, either D1 for right or D2 for left, depending on the direction of passage.

Cross-board contains relay output for ACS operating on the principle of "dry contacts» - Status. NO and COMM - normally open connection, its contacts close when the speedgate switches to "AP" and D3 LED indicator lights up.

Also the cross-board contains following LED indicators indicating that they are closed at the following GND inputs:

- 1) D4 indicates a signal to the «LEFT» input.
- 2) D5 indicates a signal to the «RIGHT» input.
- 3) D6 indicates signal to the «STOP» input.
- 4) D7 indicates a signal to the «AP» input.

Jumper J4 must be installed - used to connect a 120 ohm resistor to the CAN 2.0 bus in order to ensure its normal operation.

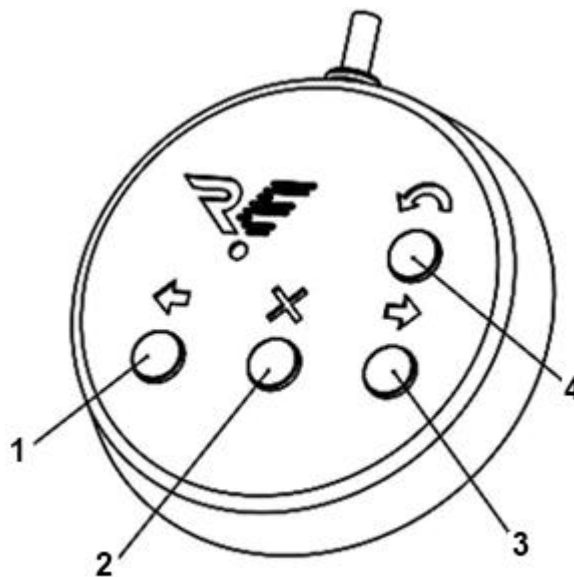
When using two control panels, J4 is not set, since the 120 ohm resistors are on the CL and CH terminals on Remote control panels.

5.3 Connecting Remote control panel to ACS controller

In some cases remote control panel must be connected directly to ACS controller, as the passages, permitted by control panel (without controller), are regarded by the system as «forced entry».

To use this turnstile connection scheme it is required to install a jumper of chosen passage to the both cross-boards (**Ошибка! Источник ссылки не найден.** J2). With J2 jumper installed the turnstile does not react to the signals coming from the control panel but transmits their state to the contacts of the terminals (0 I/O1...I/O4), which are the outputs with bare collector.

Contact assignment is represented in Table 4, 0 numbering of the control panel buttons. For this group of contacts maximum output current does not exceed 150 mA, permissible voltage is no more than 24 V.



1, 2, 3, 4 - кнопки управления

Picture 6 – Numbering of RCP buttons

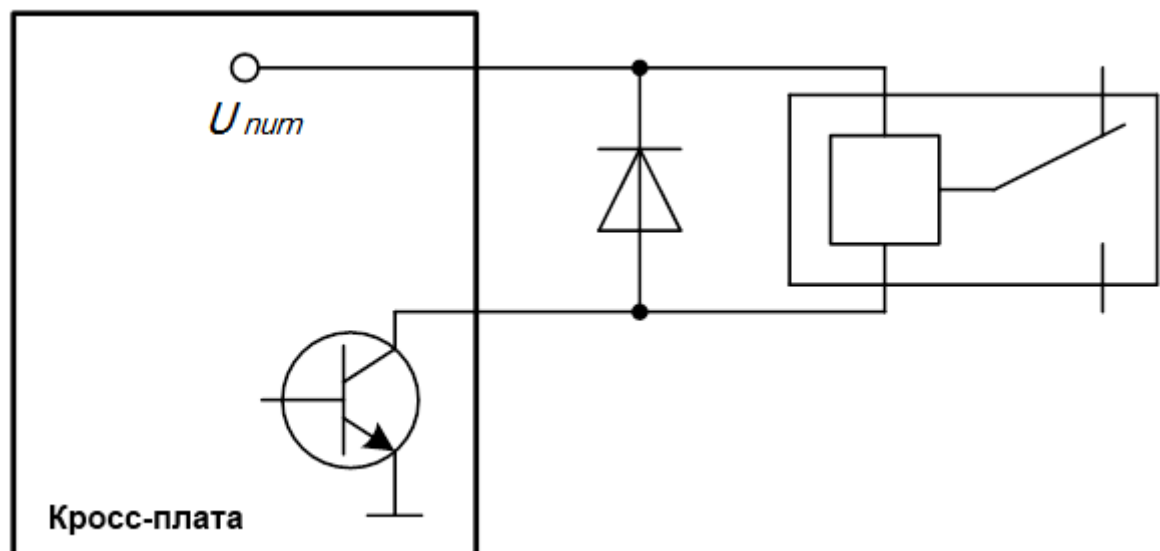
Numbering of control panel buttons

Table 4 - Assignment of I/O contact group

Маркировка контактов	Назначение контактов
I/O1	Status of "Left" button (1)
I/O2	Status of "Right" button (3)
I/O3	Status of "Stop" button (2)
I/O4	Status of "Antipanic" button (4)

I/O1 ... I/O3 outputs show the current status of the RC panel buttons, i.e. transistor is opened by pressing the corresponding button. The I/O4 output changes its state to the opposite every time the "Antipanic" button is pressed.

I/O1 ... I/O4 outputs can be connected either directly to the ACS controller or via relay. Picture 7 - when using the relay it is **NECESSARY (!)** to connect diode in parallel with the relay coil.



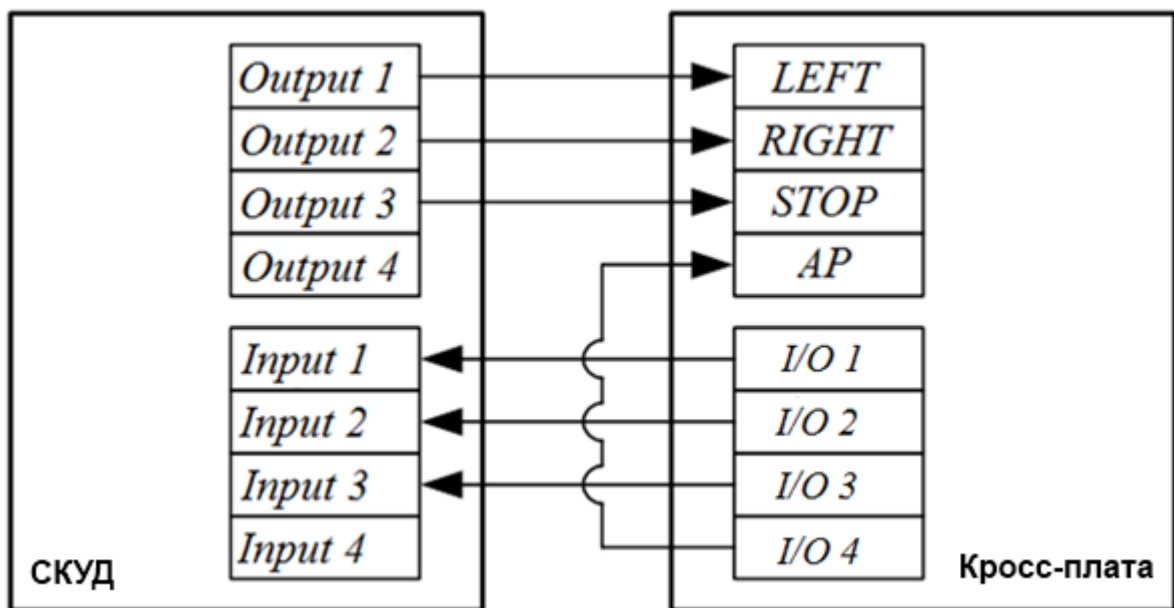
Cross-board

Picture 7 - Connection scheme of diode in parallel with relay coil

0 connection scheme of PCP to ACS controller.

In this case the controller controls the speedgate via "LEFT", "RIGHT" and "STOP" contacts, and the "AP" contact is turned on and off with the RC panel.

Please note that when the RC panel is connected via ACS controller it is impossible to use speedgate modes which are set by the combination of the RC panel buttons (except for the free passage in the potential control mode. See article 5.3 of Manual). In this case ACS controls these operation modes.



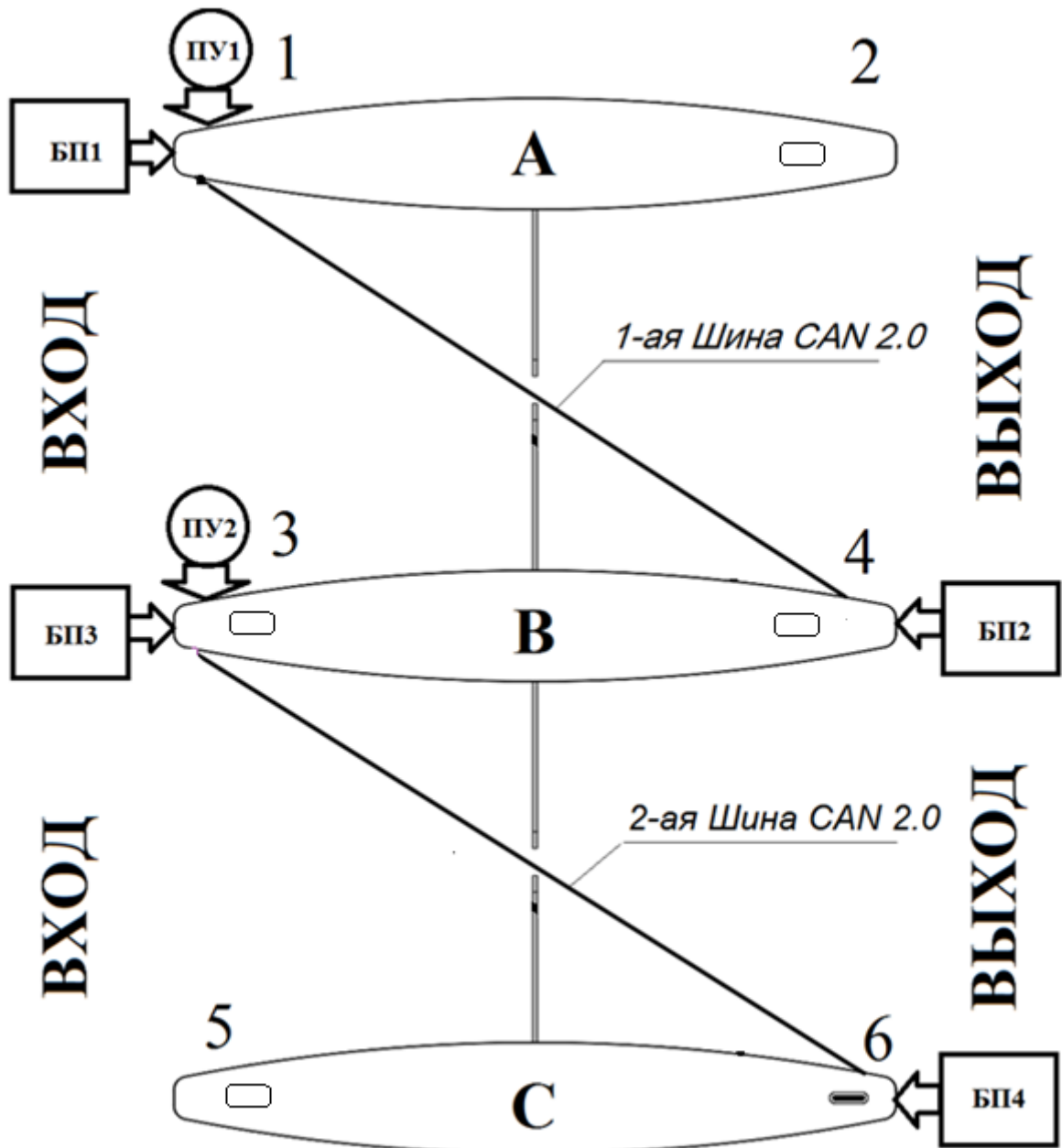
Picture 8 - Connection pattern of RC panel to ACS controller

СКУД – ACS

Кросс-плата – Cross-board

5.2 Connecting side units

0 connection scheme for two side units. In case you need to increase the number of passes, it shall be cascaded



Picture 9 - connection scheme for turnstile units

ПУ1 – RC1

БП1 – PS1

ПУ2 – RC2

БП2 – PS2

БП3 – PS3

БП4 – PS4

1-ая Шина CAN 2.0 – 1st Busline CAN 2.0

2-ая Шина CAN 2.0 – 2d Busline CAN 2.0

ВХОД – ENTRANCE

ВЫХОД - EXIT

Picture 9 - for normal operation of the entrance with two passages, perform the following:

Combine two side (one-sided) units (A) and (C) and one two-sided middle unit B with two three-wire buses CAN-2 (first bus CAN2.0 and second bus CAN2.0).

Connect «CL» «CH» «GND» contacts of cross-board located in unit "A" housing (marked No. 1) with the same contacts of motherboard located in unit B housing (marked No. 4).

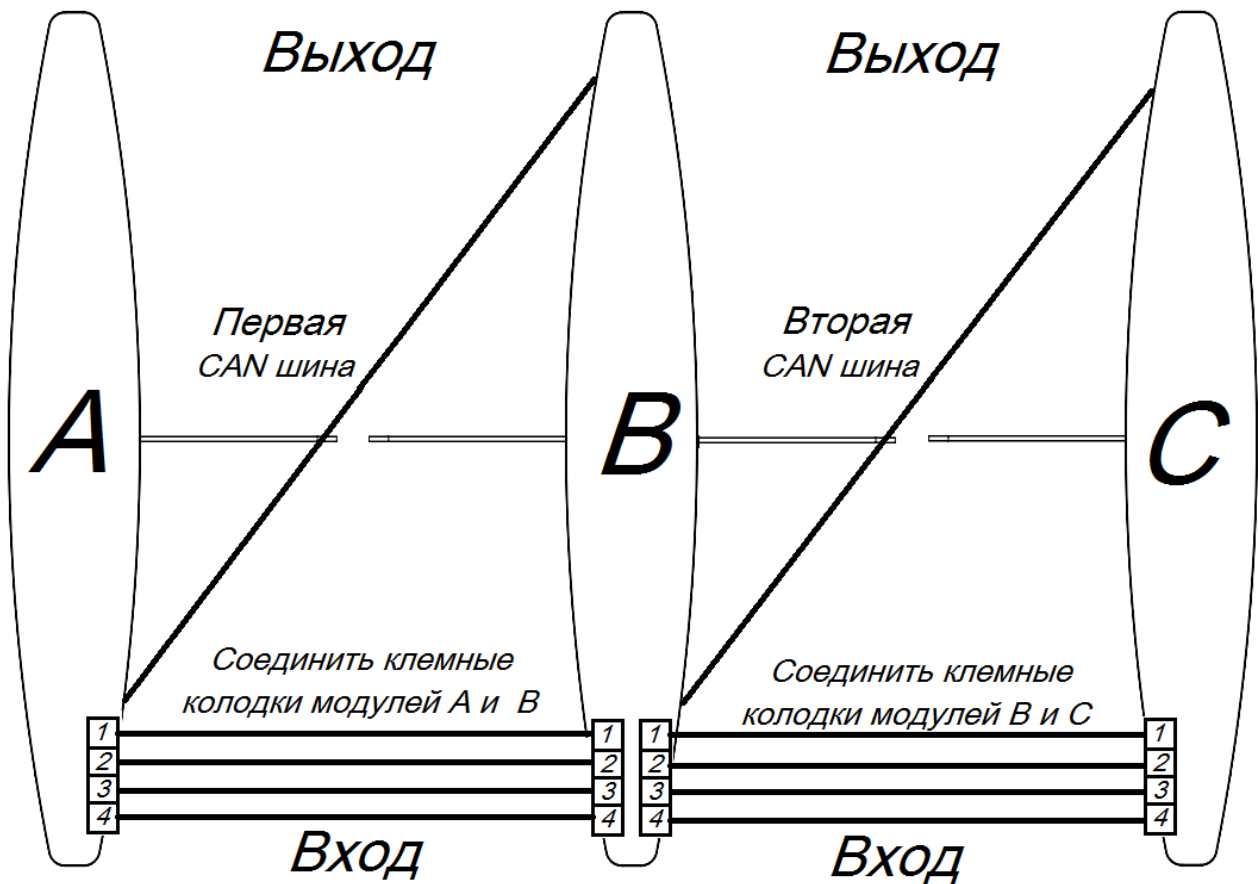
«CL» «CH» «GND» contacts of cross-board located in unit "B" (marked No. 3) shall be connected to the same contacts of motherboard located in unit "C" (marked No. 6).

Control panels RC1 and RC2 are connected to pins «+ U» «CL» «CH» «GND» of corresponded unit.

If RC panels are connected as shown on Picture 9 jumpers shall be set as follows for the proper operation of the bus CAN2.0 J4:

- J4 on the motherboard 1 is open, J4 on the motherboard 4 is closed
- J4 on the motherboard 3 is open, J4 on the motherboard 6 is closed

Picture 10 - for synchronous operation of LED indication stripe of neighbor units, it is necessary to connect the contacts of the terminals 1, 2, 3, 4 of closely-spaced units.



Picture 10 - Connection scheme for turnstile terminals

Первая CAN шина – First CAN busline

Вторая CAN шина – Second CAN busline

ВХОД – ENTRANCE

ВЫХОД - EXIT

Соединить клемные колодки модулей A и B – Connect terminals A and

B

Соединить клемные колодки модулей B и C – Connect terminals B and

C

Detailed connection pattern of two units of speedgate is shown in Appendix E.

In order to provide the entrance with two passages you need four power supply units 12V 5 A.

The middle unit is powered either by two power supply units 12V 5A or by single power supply 12V 10A.

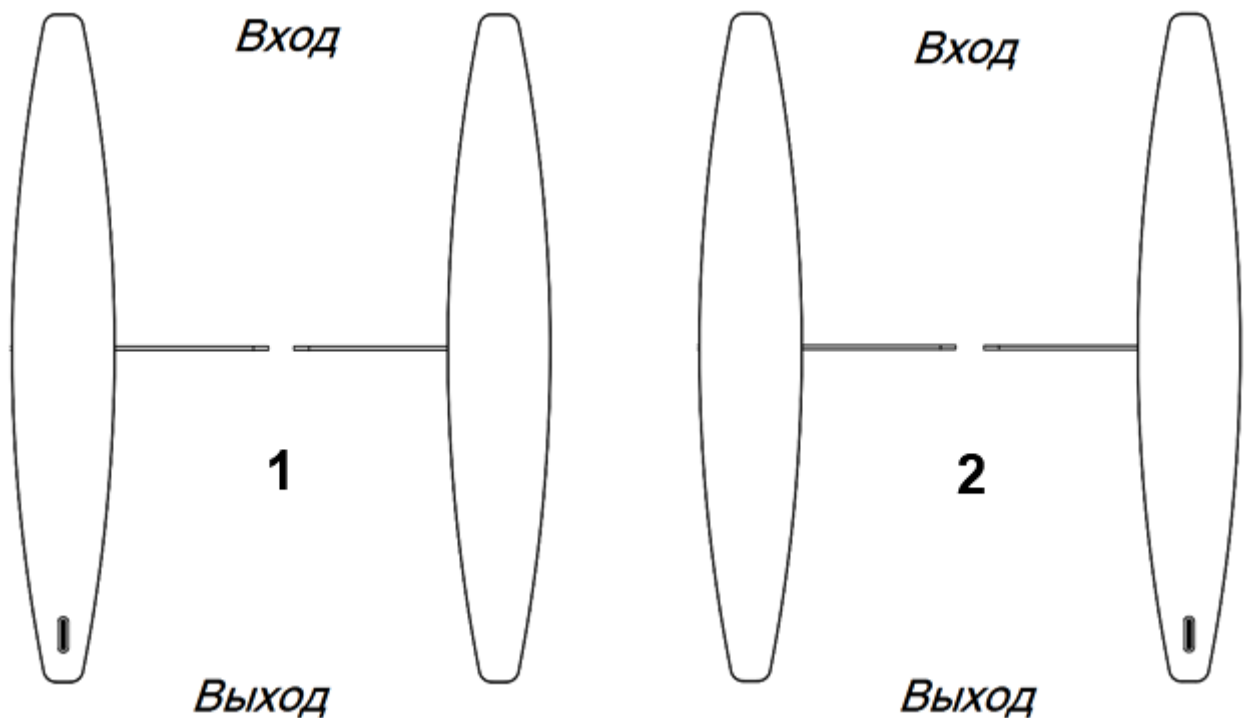
A card collector can be integrated in any side or middle units. It is supposed to be installed "the right hand" from the output side.



ATTENTION: CARD-COLLECTOR IS INSTALLED ONLY AT THE MANUFACTURING! ЕСЛИ НА ТУРНИКЕТ УСТАНОВЛЕННЫ КАРТОПРИЕМНИКИ, НЕОБХОДИМО УВЕЛИЧИВАТЬ МОЩНОСТЬ ИСТОЧНИКОВ ПИТАНИЯ НА ВЕЛИЧИНУ ПОТРЕБЛЕНИЯ КАЖДЫМ КАРТОПРИЕМНИКОМ.

5.3 Connecting card collector

0 card-collector can be installed under the right hand (2) or the left one (1). Its location should be defined by the customer at projecting phase.



Picture 11 – Possible variants of card collector's location

ВХОД – ENTRANCE

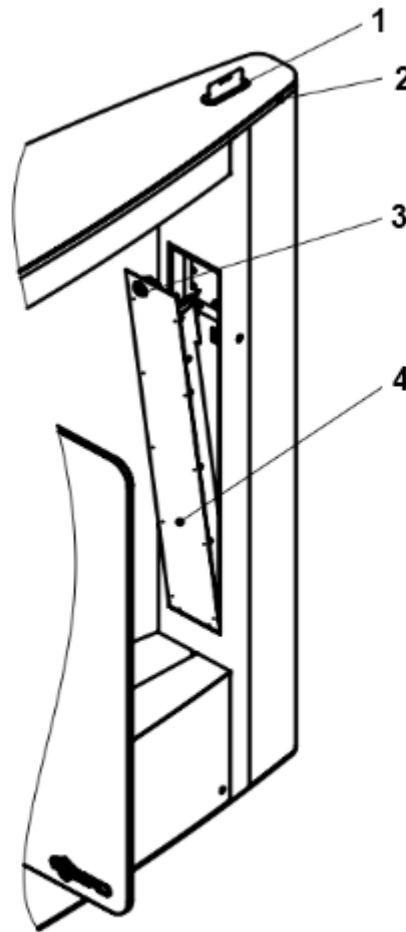
ВЫХОД - EXIT



ATTENTION: CAR COLLECTOR DELIVERY SET INCLUDES CONTACTLESS CARDS READER OF TWO TYPES: EITHER PROX13 OR PROX125. WEB-SITE OF MANUFACTURER'S READERS: WWW.PROX.RU

Customer chooses the right reader that will match the control system parameters indicated when making the order. Appendix G – designation of reader terminals

0 general view of the card collector's stand and arrangement of card collector.



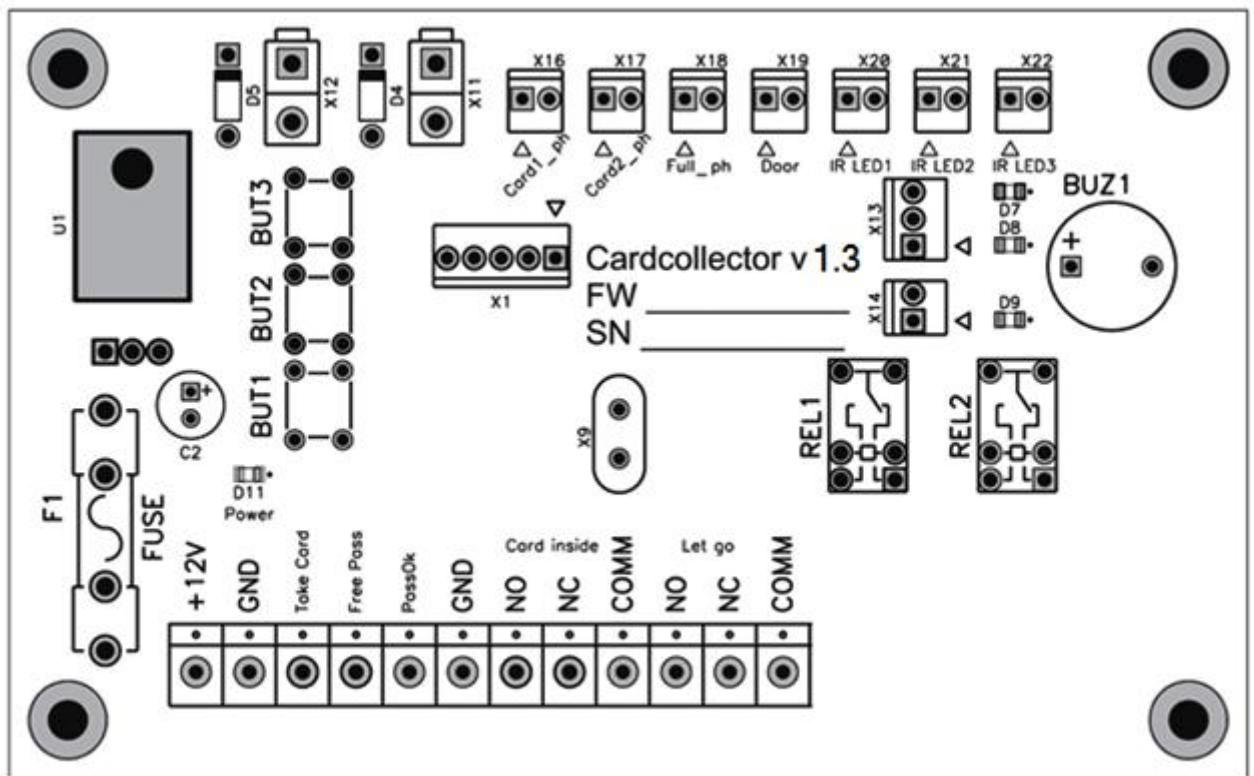
**1 - щель для карт; 2 - полоса индикации;
3 - замок контейнера; 4 - контейнер картоприемника**

Picture 12 – General view of card collector stand

1 – card hole, 2 – indication stripe, 3-lock, 4-storage device

Connection of PS, AD and ACS is performed via card collector board. To do this, remove base turnstile panel.

Picture 13 – general view of card collector’s board and arrangement of connectors for PS, AD and ACS.



Picture 13 - General view of card collector board

5.3.1 Connecting power supply

Card collector is powered by a 12 V DC voltage source. Maximum consumption is present in the mode of card collection - 1.5A.

Connect (+) and (-) contacts of power supply to (+ 12V) and (GND) contacts on the board respectively.

When the card collector board is powered, D11 LED indicator will turn on. Make sure that cable is connected securely.

5.3.2 Connecting actuation device (AD)

0 connection of AD to the card collector is performed with the use of two contact sets: "Let Go" and "Pass Ok-GND".

"Let Go" contact set

NC, NO, and COMM contacts. Relay output operating on a "dry contact" principle, which closes / opens, transmitting passage authorizing signal to AD. NC and COMM - normally closed connection, NO and COMM-normally open connection.

"Pass Ok-GND" contact set

Pass Ok and GND contacts. Pulse input that receives a signal from AD, confirming that the passage was performed. The operating principle is based on normally open contacts. Passage is detected by a contact closure for at least 200 ms.

When authorized card is presented the card collector transmits a signal and unlocks the AD for 5 seconds. During this time interval other cards are not accepted.

When a signal (a closing between Pass Ok and GND), confirming the passage, is received, the card collector switches into standby mode and can collect the next card. For these reasons, the connection of this contact set is essential to the system capacity.

5.3.3 Connecting ACS controller

Structural diagrams of the ACS controller using a card collector are given in Appendix D.



ATTENTION: ACS CONTROLLER IS CONNECTED TO ONE SPEEDGATE UNIT ONLY. THE CONNECTION BETWEEN UNITS IS PROVIDED BY CAN-BUS

0 connection of ACS controller to the card collector provided by three contact sets: Take Card-GND, Free Pass-GND and Card Inside.

Группа контактов Take Card-GND (сигнал изъятия гостевой карты)

Take Card and GND contacts. Pulse input that receives a signal from ACS controller allowing the collection of the card (guest pass).

The operating principle is based on normally open contacts. Passage is detected by a contact closure for at least 200 ms.

The signal for collection shall be transmitted no sooner and no later than 2 seconds after putting the card into the card hole of the card collector, otherwise it will be ignored.

After receiving the signal within the mentioned time interval card collector opens the shutter and the card is collected.

В случае подтверждения внутренними датчиками факта изъятия карты, картоприемник формирует сигнал для ИУ с помощью группы контактов Let Go и для СКУД с помощью группы контактов Card Inside, при этом зажигает зеленую бегущую волну на полосе индикации.

If card collection is confirmed by internal sensors, card collector generates a signal to the AD via Let Go contact set and to ACS via "Card Inside" contact set. In such case a green arrow indicator on the LED panel turns on.

Free Pass-GND" contact set (signal for passage authorization)

Free Pass and GND contacts. Input that receives a signal from the ACS controller and allows the passage without card collection (permanent pass).

In the case of receiving the signal allowing the passage without card collection, the card reader generates a signal to the AD via "Let Go" contact set. In this case a green arrow indicator on the LED panel turns on.

Free Pass input of the card collector shall operate in pulse mode (activation upon contact closure).

In pulse mode the voltage is applied to Free Pass input for a short moment and it authorizes the passage. Another passage becomes non-authorized when the passage is performed or after 5 seconds.

Pulse mode is set by default, in such case the card collector provides 1 audio signal upon turn-on.

If the card collector provides 2 audio signals, it means that it is set in potential mode.

Potential mode of the speedgate is not provided, the card collector shall be set to pulse mode.

In order to switch into pulse mode:

- 1) Turn off the power
- 2) Press and hold BUT1 button until the card collector provides 1 audio signal, indicating that it is switched to pulse mode of operation;

Set mode is saved when power is turned off.

Card Inside contact set (signal for card collection confirmation).

NC, NO, and COMM contacts. Relay output operating on a "dry contact" principle which closes / opens for 1 second transmitting a confirmation signal of card collection to the ACS controller.

NC and COMM - normally closed connection, NO and COMM - normally open connection.

COMPLEX TEST

6.1 Inspection and verification of the product's readiness for usage

6.1.1 Check turnstile's units

6.1.2 Check the reliability of all the cables.

6.1.3 Switch on the PS and check turnstile's functioning by making some tests.

6.1.4 In case of absence of abnormal noise and any violation of the operating modes, the turnstile is ready for operation.

6 COMMISSIONING OF INSTALLED ITEM

Commissioning of installed item is organized in the following way:

- 1) the representative of the organization who made the installation, demonstrates reliability of the installation of the item;
- 2) notes about the installation of the item are made in Datasheet VZR.230200.000 DS DS in the section "Item's Movement during Operation";
- 3) the "Installation information" section is filled in the Datasheet form VZR.230200.000 DS of the item;
- 4) the Acceptance Certificate is issued.

APPENDIX A — Brief Description of Data Bus CAN2.0

Remote control panel uses a modern jam-resistant bus of standard CAN2.0. According to the standard CAN2.0 a length of signal cable can reach the values more than one kilometer, however correct operation at such distances depends on many factors.

At the distances more than 25 meters – it must be used twisted pair Cat5e or Cat6. Total electrical resistance for power wire of the remote control panel for direct current shall not exceed 50 Ohm.

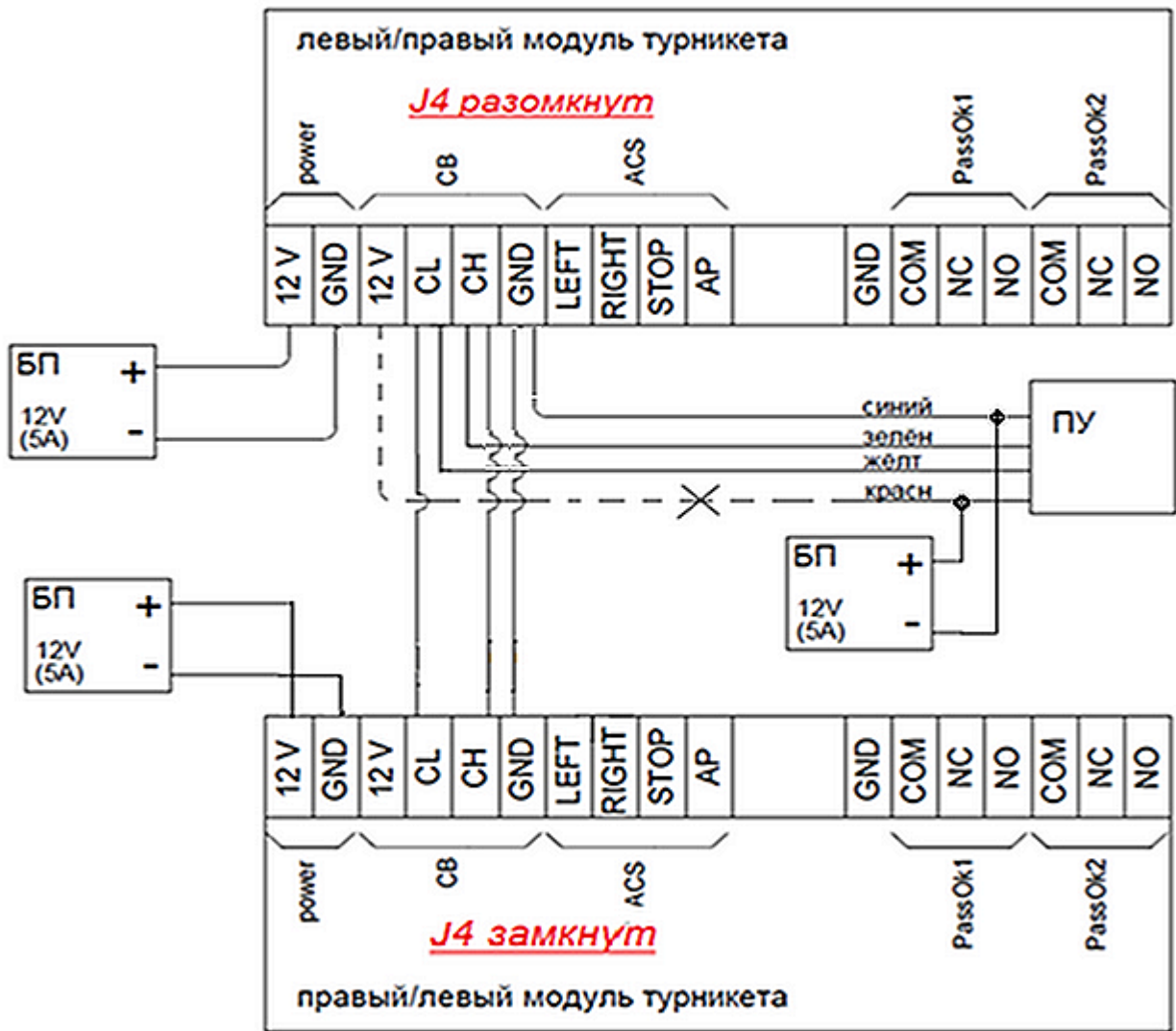
If this requirement is unable to comply with one can install additional PS for 12V/100mA (minimal operating supply voltage of remote control panel – 7.5V). At that for correct operation 3 wires coming from turnstile CL, CH, GND are sufficient. Picture 14 – in this case there is no need to lay PS cable.

Two control panels may be connected to one turnstile.

An important feature of CAN 2.0 bus is the availability of 120 Ohm resistor at the bus ends. Such resistor has already been installed in the standard remote control panel.

If you use one RC panel it is recommended to connect an additional (second) 120 ohm resistor mounted on the motherboard to CL and CH terminals. It is connected with the use of J4 jumper.

It is not required, however, in case of connection of two RC panels, because ohm resistors are already installed at the ends of the bus.



Picture 14 – PS connection to turnstile units

APPENDIX B — Power supply units and controllers

Usage of recommended power supplies and tested controllers guarantees the uninterrupted operation of the product.

Recommended power supplies:

- MEAN WELL DR-120-12;
- MEAN WELL EDR-120-12.

Tested controllers:

- ERA-2000 (ERA--10000).

APPENDIX C – Location of installation turnstile holes

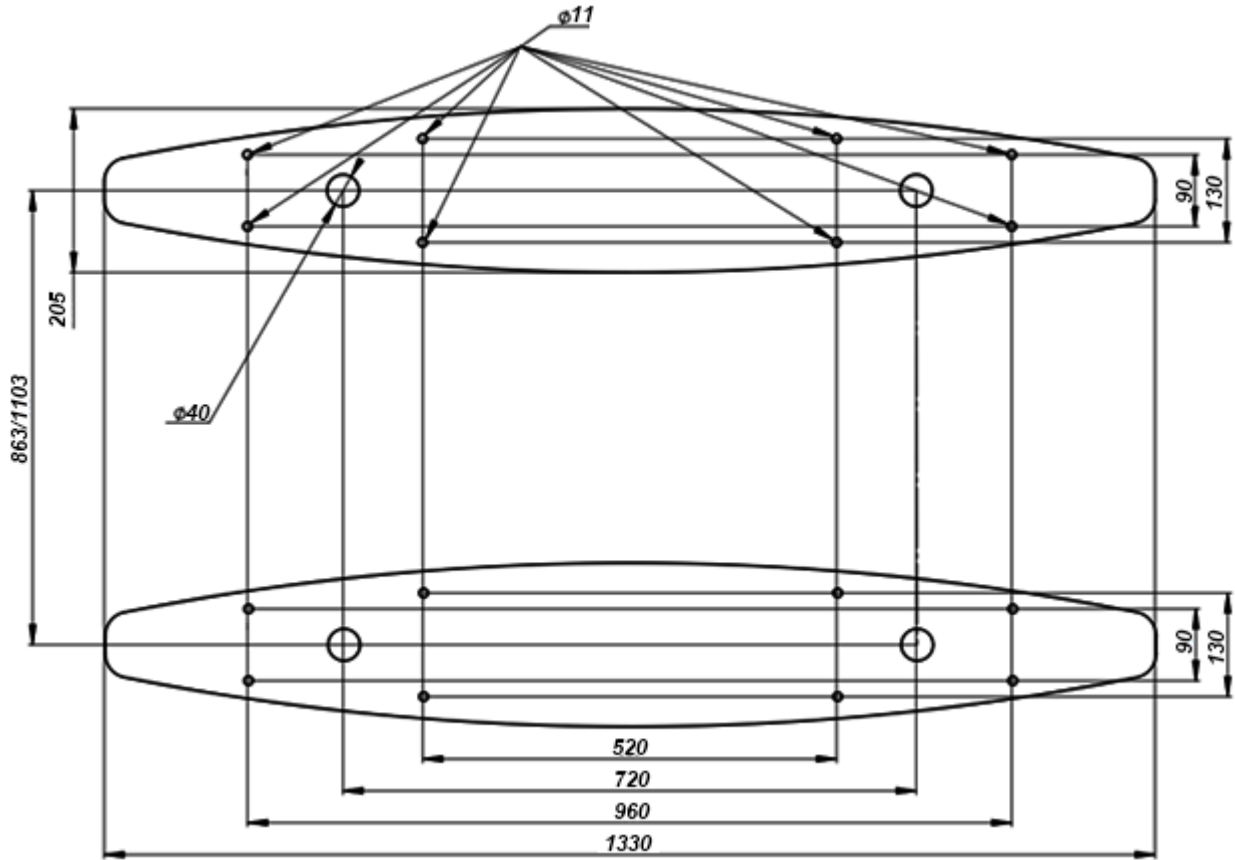
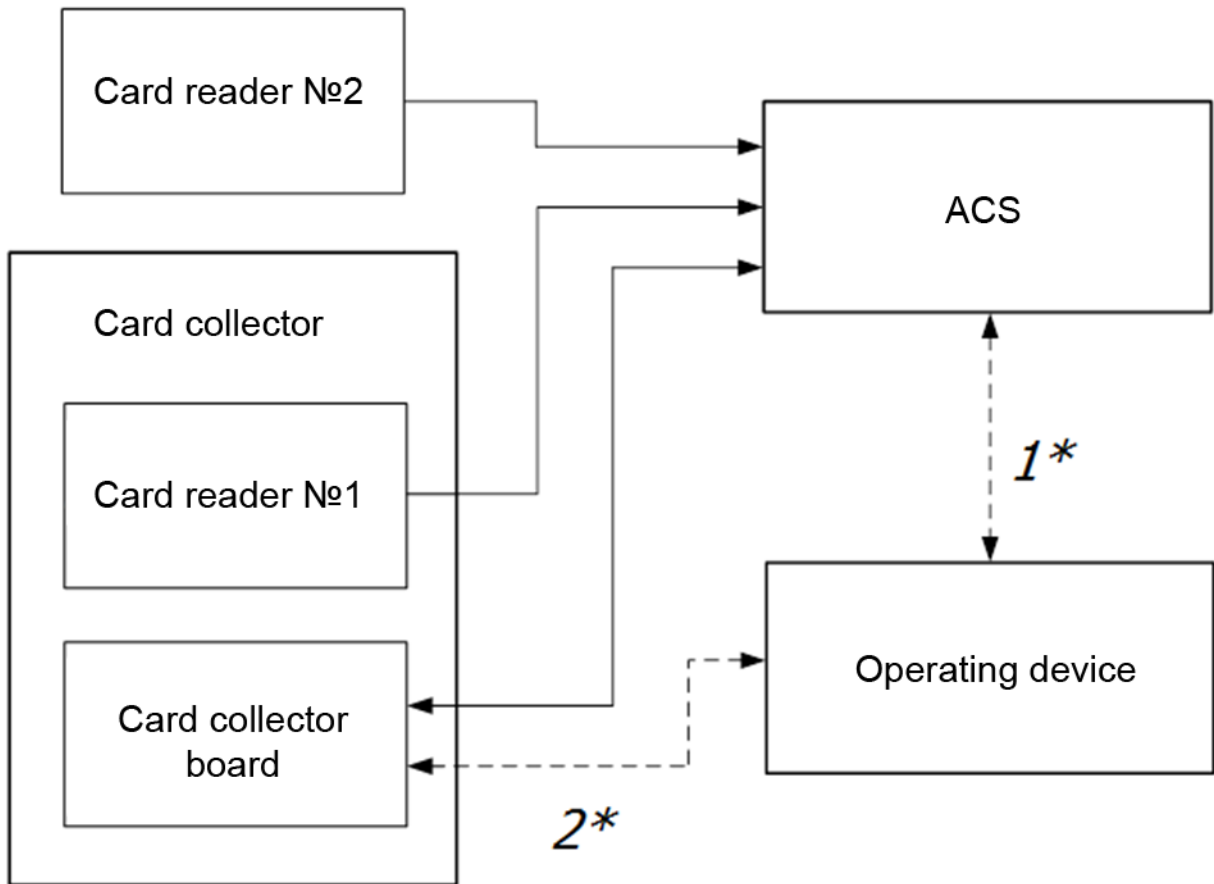


Рисунок 1 – Расположение монтажных отверстий турникета

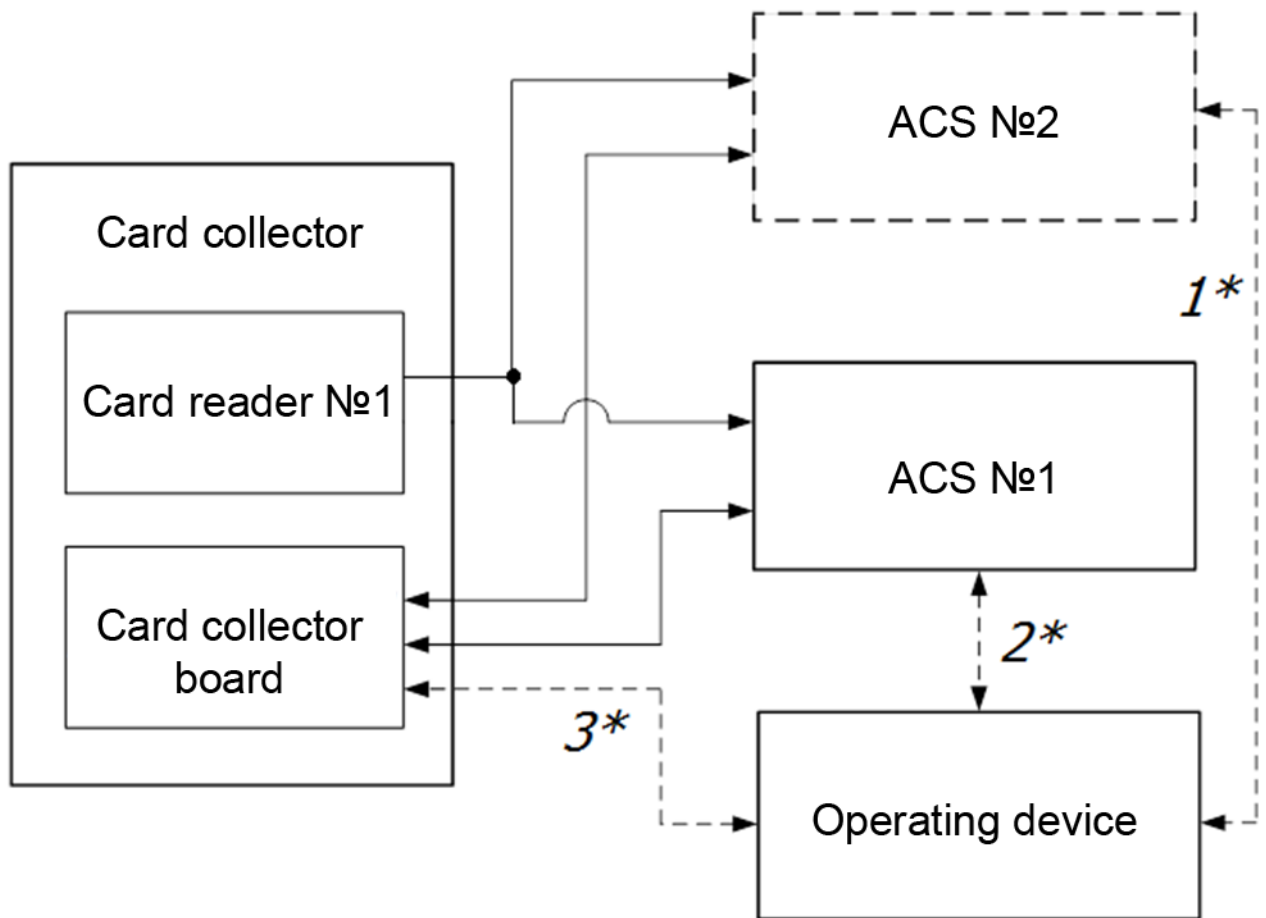
APPENDIX D — Block diagram of ACS using the card collector



Picture 16 – Block diagram №1

0 shows the most common connection circuit of card collector. OD can be controlled either by ACS controller or by the card collector directly, that is why connections 1* and 2* are drawn by dotted lines. This scheme features two readers.

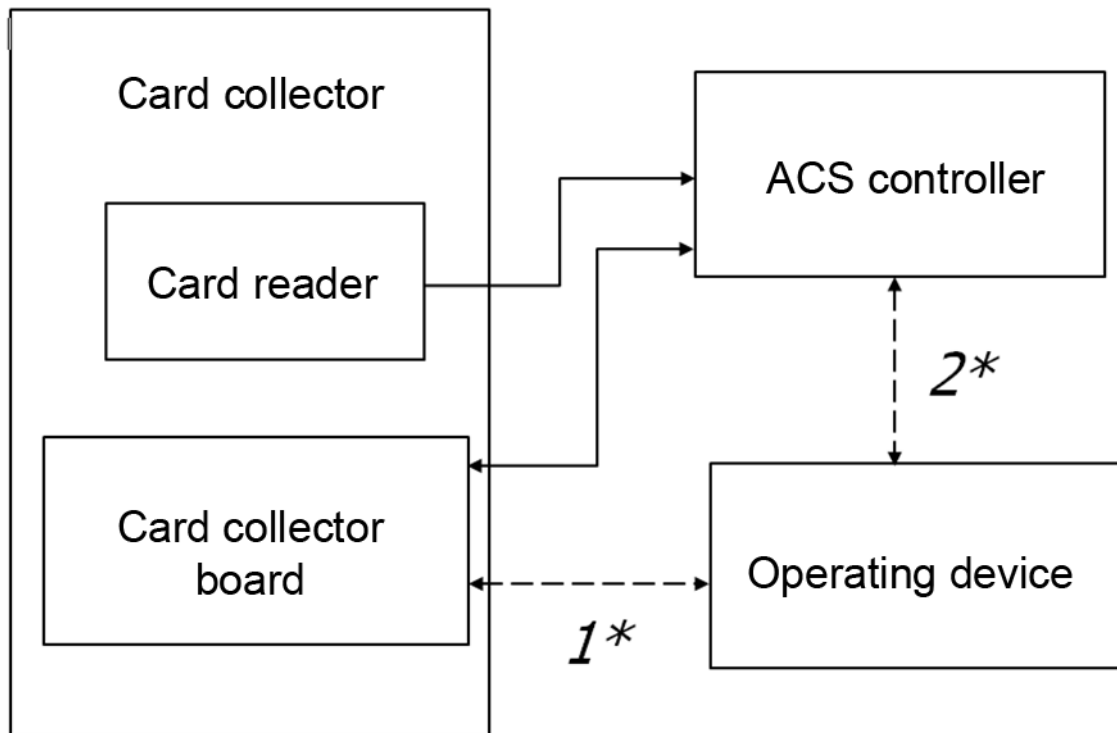
The second reader shall be installed outside the card collector, which is not always aesthetically and practically acceptable. If installed close to each other, proximity readers can create mutual interference.



Picture 17 – Block diagram №2

Picture 17 shows a more advanced but also a more high-cost circuit connection. The advantage of this scheme is that it uses only one reader installed in the card collector. Wiegand interface provides a possibility to connect several identical ACS controllers to one reader in parallel.

ACS controllers are connected to different inputs of the card collector. Memory of one of the controllers contains data on permanent card; memory of the second controller - on guest card. Reader transmits card code to both controllers and the card collector receives a corresponding signal depending on the type of card.

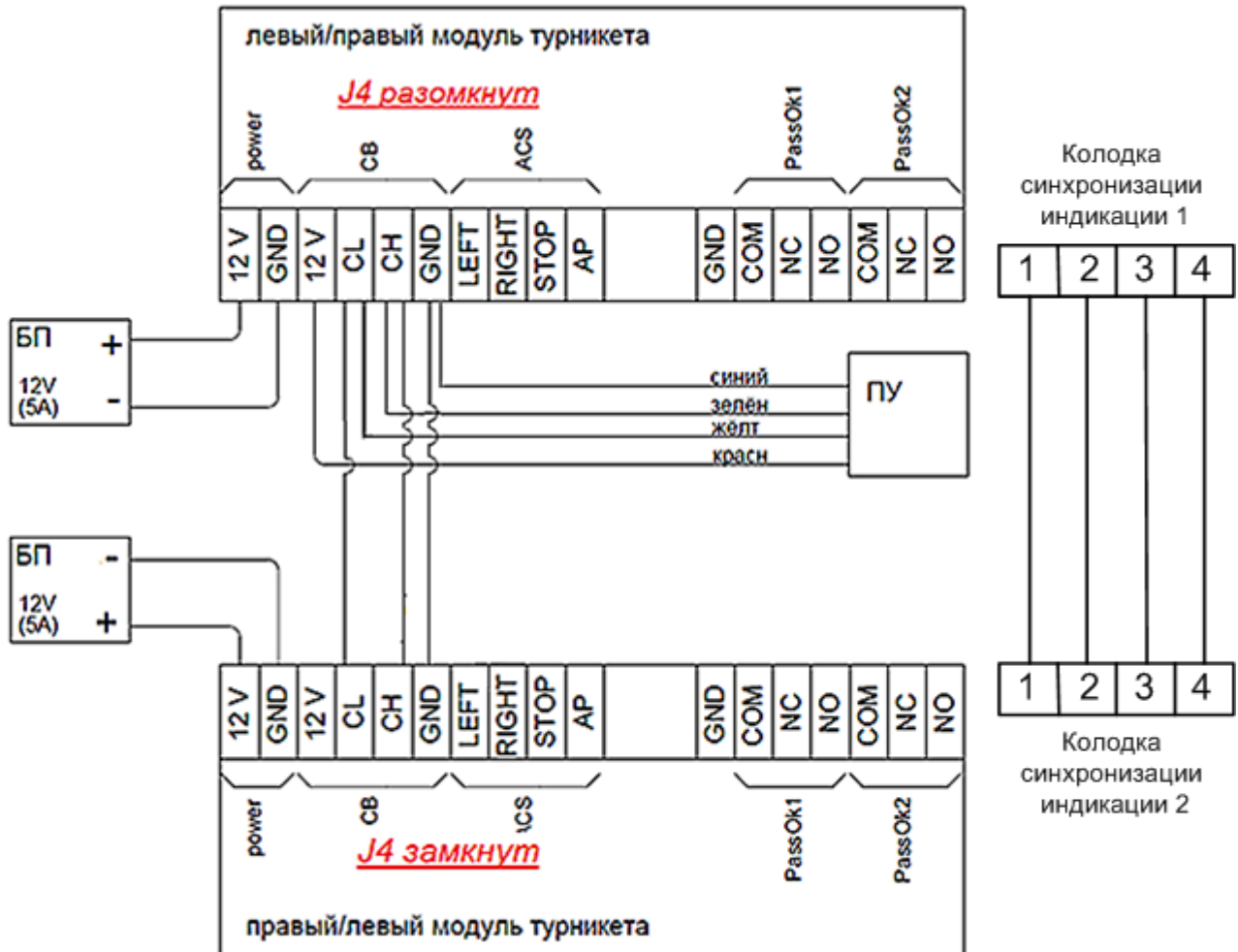


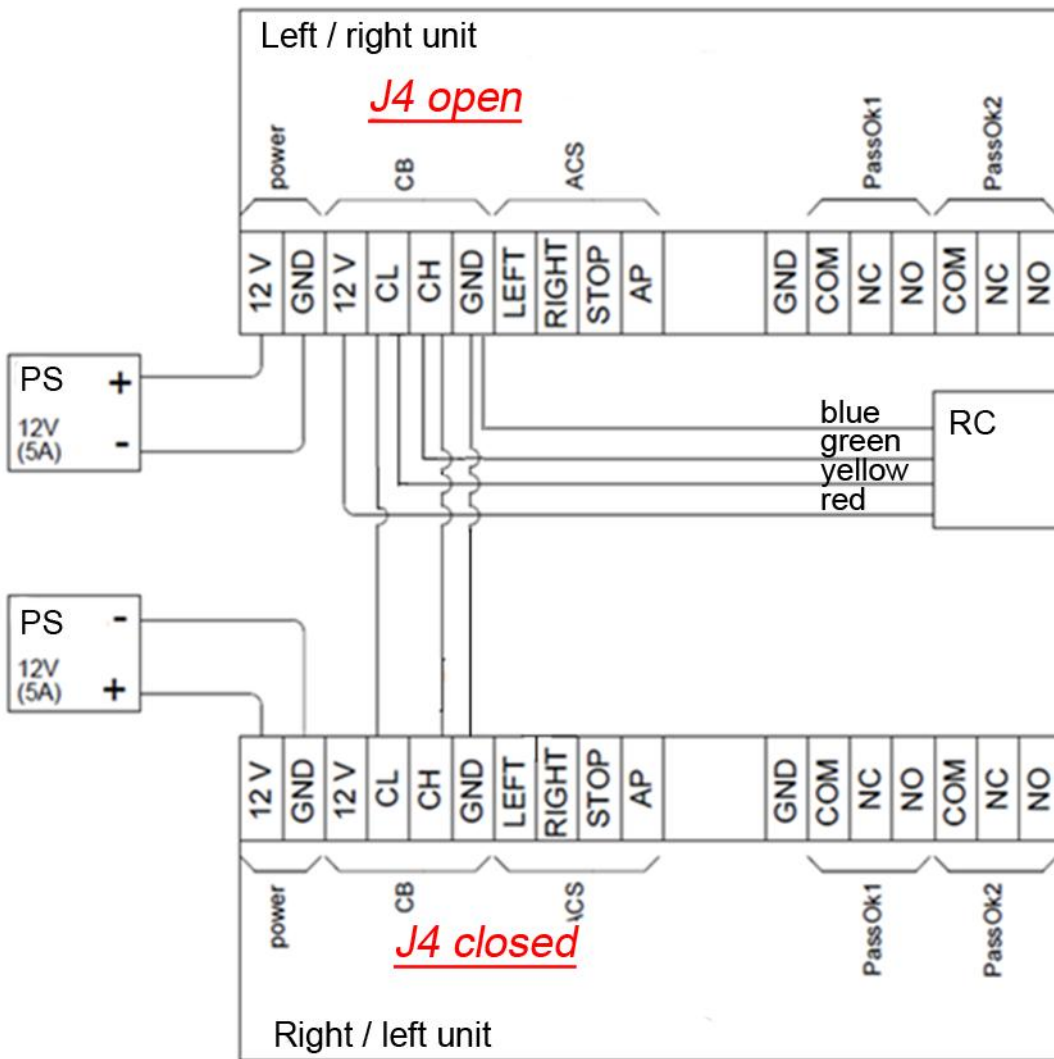
Picture 18 – Block diagram №3

The block diagram №3 (Picture 18) can be considered to be a logical development of the block diagram №2. It reduces the cost of installed system.

For this purpose the controller with two output signals to one input of a reader (i.e., the controller can distinguish the guest cards and permanent cards transmitting a signal to the corresponding output) is used.

APPENDIX E — BLOCK DIAGRAM OF MINIMAL CONNECTIONS FOR SYNCHRONIZED OPERATION OF WINGS WITH THE USE OF ONE RC PANEL





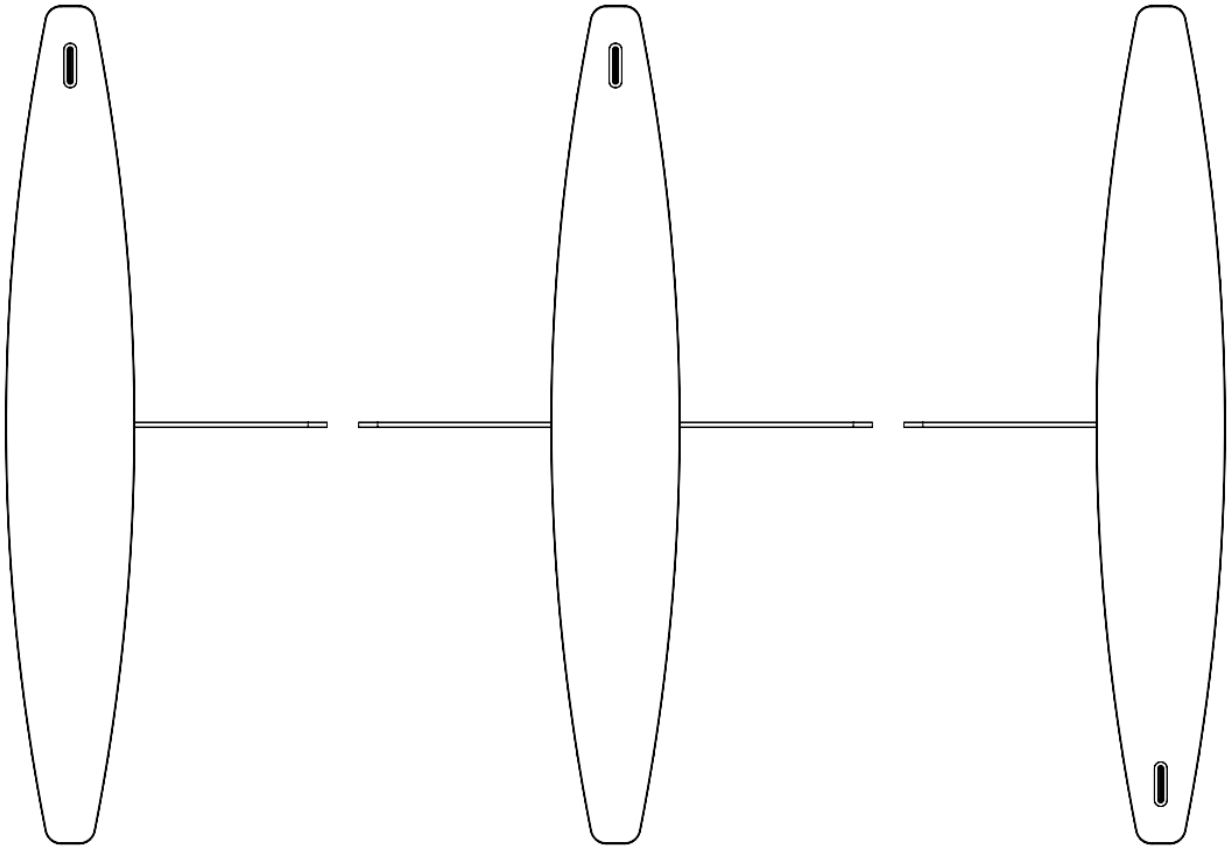
Колодка синхронизации индикации 1 - Synchronization shoe 1
Колодка синхронизации 2 - Synchronization shoe 2

Picture 19 Block diagram of minimal connections for synchronized operation of wings with the use of one RC panel

In order to secure stable operation of the speedgate unit one GND terminal of one unit shall be connected to another GND terminal of another speedgate unit.

It is also necessary to provide cable routing preventing their star connection. Connections shown in Picture 19 - depict the normal operation of the CAN-2 bus.

APPENDIX F — EXAMPLE OF INSTALLING SEVERAL UNITS



Picture 2 - Entrance example (top view).

0 several speedgates set a required pass zone when mounted in a row. In this case side and middle units should be used.



ATTENTION: ANY OF THE UNITS CANNOT BE USED STAND-ALONE. IF IT IS USED SO, IT WILL NOT BE THE NORMAL MODE AND MANUFACTURER IS NOT RESPONSIBLE FOR ITS OPERATION.

APPENDIX G — Designation of reader terminals PROX

Table 1- Designation of reader terminals PROX-125

Name	Designation	Cable color
SYNC	Synchronization of readers	Yellow
D0/TM	Data «0» or emulation «touch memory»	Green
D1	Data «1»	White
SP	Turning on the sound signal	-
LG	Turning on the green diode	Orange
LR	Turning on the red diode	Brown
PWR	Supply voltage (8..15V)	Red
GND	Common ground wire «ground»	Black

Table 2 - Designation of reader terminals PROX-13

Name	Designation	Cable color
D0/TM	Data «0» or emulation «touch memory»	Green
D1	Data «1»	White
SP	Turning on the sound signal	-
LG	Turning on the green diode	Orange
LR	Turning on the red diode	Brown
PWR	Supply voltage (8..15V)	Red
GND	Common ground wire «ground»	Black

PRODUCT IS CERTIFIED

Voltage: 12V DC

Current: 5A

Importer: VZR System OU

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