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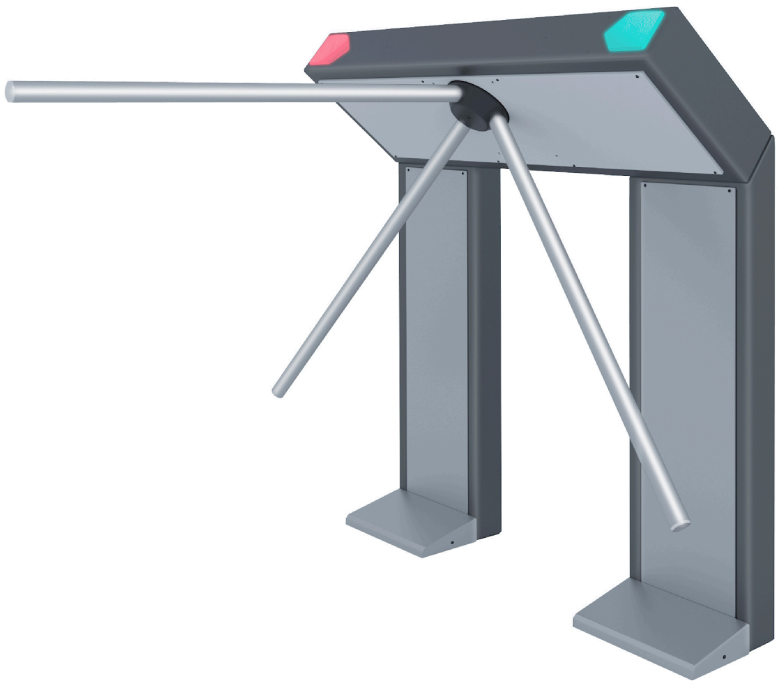


OPERATING MANUAL

Electromechanical fail safe double-leg tripod turnstile

T3-NO-BF SERIES

ISO

CE

RoHS Compliant

CONTENTS

1. INTRODUCTION

Operating manual contains information necessary for the use of turnstile's features during operation, as well as recommendations for installation and maintenance. Installation and maintenance shall be performed by persons who have fully read this manual.

2. PURPOSE

Turnstile is designed to control the flow of people at checkpoints. Number of turnstiles to ensure quick and convenient passage shall be determined based on the calculation of the turnstile throughput capacity. It is recommended to install one turnstile per 500 people working in one shift, or on the basis of peak load of 30 people per minute.

In terms of resistance to climatic factors, turnstile corresponds to exploitation indoors, with artificial regulation of climatic conditions.

Turnstile may be operated at an ambient temperature of +1 to +40 °C and a relative humidity of 80% at 25 degrees (without condensation).

The following turnstile models are available:

T3-NO-SF – fail safe single-leg tripod turnstile;
T3-NO-BF – fail safe enlarged double-leg tripod turnstile;
T3-NO-W – fail safe wall-mounted tripod turnstile;

Turnstiles can be of various designs:

without built-in readers (tripod turnstile – v.1, counter turnstile – v.1.1, STOP-COVID counter - v.1.2);

with built-in readers (autonomous module – v.2, autonomous checkpoint v.2.1 etc.).

Turnstiles with readers in the basic configuration support EM Marine (EM) or Mifare 1K (MF) standard cards subject to customer approval.

Turnstiles can be equipped with additional functions (including universal or specialized readers, fingerprint or barcode scanners, sensors for unauthorized passage, etc.) according to the customer's technical requirements.

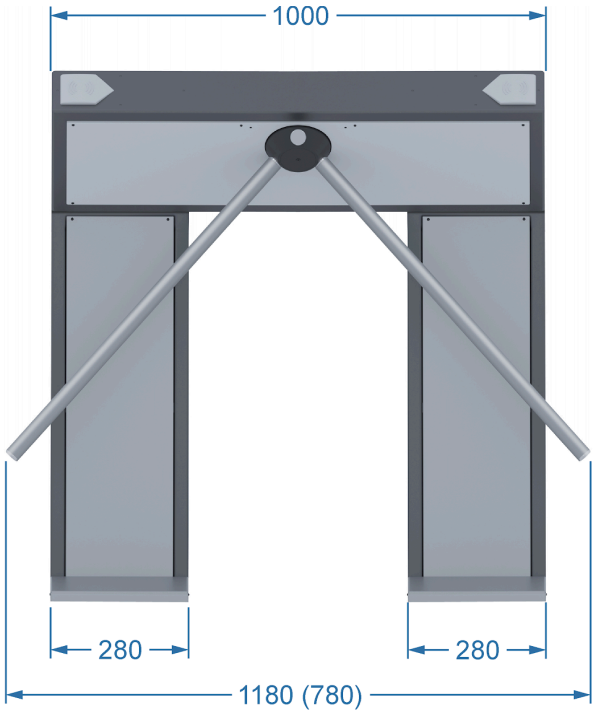
Turnstiles correspond to safety requirements and the harmlessness, stated in the General Product Safety Directive 2001/95/EC, Directive 2014/30/EU Electromagnetic Compatibility (Appendix II, Module A), Radio Equipment Directive 2014/53/EU and in the Directive 2011/65/EC (RoHS) with Commission Delegated Directive (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. For fulfillment of safety requirements and the harmlessness, specified in the Directive 2014/30/EC following international standards have been applied: EN 61000-6-1:2007, IEC 61000-6-1:2016; EN 61000-6-3:2007/A1:2011/AC:2012, IEC 61000-6-3:2011.

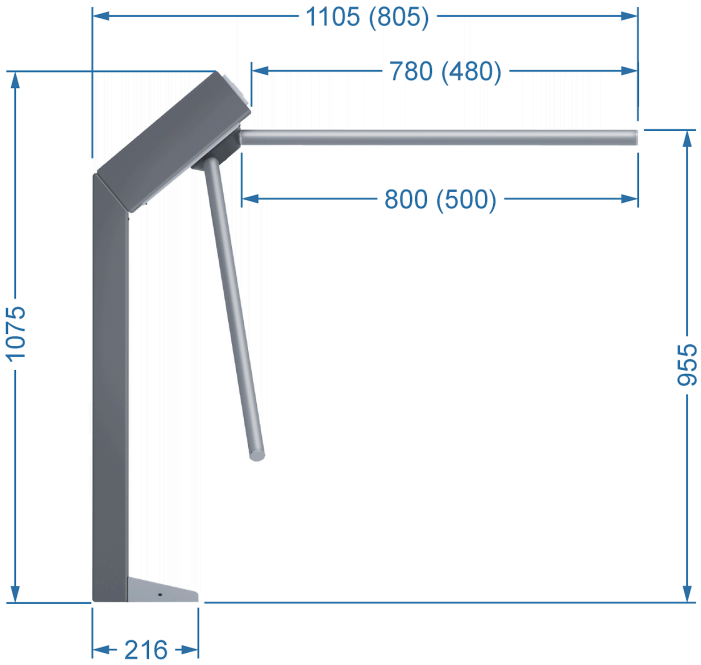
Manufacturer: «OREL MK» LLC 119A, Gruzovaya Str. office 71, Oryol, Russia, 302006 Tel. +7-800-200-74-68 e-mail: info@rusgate.pro	**Importer:** VZR System OU Tulika 19, Tallinn 10613 +372 5844 4957 e-mail: sales@rusgate.pro

3. SPECIFICATIONS

Housing material	Painted steel
Colour	Gray, light gray
Dimensions without arms	280×325×1075 mm
Dimensions with arms	1180×1105(805)×1075 mm
Width of the blocked passage	1105 (805) mm
Passage width min/max	780 (480) mm / 840 (540) mm
Net weight	61.5 kg
Arms are available	Yes
Anti-panic system	Implemented on the arms using mechanical means
Throughput capacity	30 people per minute
Supply voltage (Direct)	12 V DC
Current consumption, max.	2 A
Power consumption, max.	3 W in standby mode, 24 W when the passage is blocked
Interfaces	Wiegand 26, Wiegand 34, Wi-Fi and RS-485
Number of readers	2 (for turnstiles with readers)
Access card format	Mifare or EM Marine (depending on the customer's request)
Software included in the scope of supply	Yes
Integration with the Physical Access Control System (PACS)	With any Physical Access Control System
Offline mode is available	Yes
Number of users	In autonomous module mode or autonomous checkpoint mode without memory expansion module – 1,500. More than 1,500 with memory expansion module (sold separately)
Unauthorized access control	below the turnstile barrier arm (optional for the T3-NO series)
Number of events	up to 4,000 (additional module is required; it is sold separately)
Operating temperature	From +1 °C to +40 °C
Operating humidity	Not higher than 80%
Protection class/Installation location	IP41/indoors
Insulation class	III
Time before failure (medium)	Not less than 2 million cycles
Average service life	Not less than 8 years
Power supply	Sold separately
Remote	Wired remote with push-buttons is included in the scope of supply. Optional Wi-Fi remote is sold separately. Wi-Fi control is available from an Android device

4. OVERALL DIMENSIONS





5. STANDARD SCOPE OF SUPPLY

Turnstile housing included in the scope of supply – 1 pc.;

ATTENTION!

Housing is supplied disassembled and consists of three parts:
horizontal unit included in the scope of supply – 1 pc.;
universal column with a pre-installed set of metalware for assembly – 2 pcs.;
Turnstile barrier arm with the mechanical anti-panic function – 3 pcs.;

Package – 1 pc.;

Datasheet – 1 pc.;

RC Plate – 1 pc.

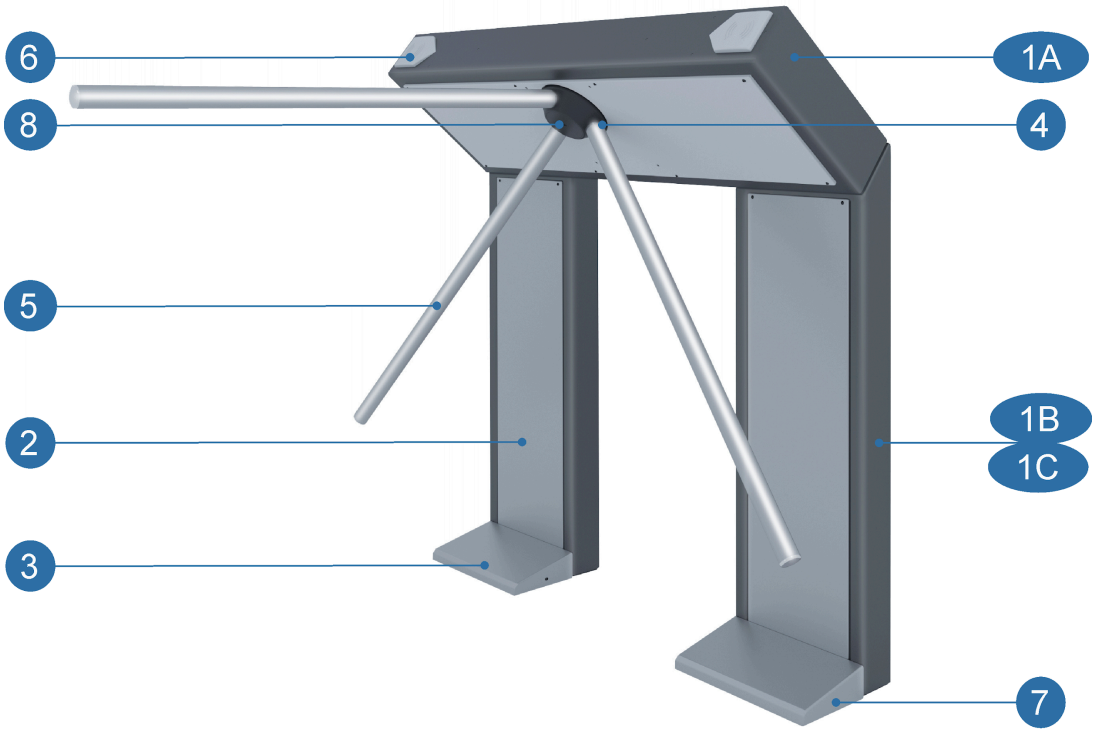
Operating manual available on the website www.rusgate.pro

6. BRIEF DESCRIPTION

Turnstile scope of supply includes:

- damping device that ensures smooth and silent operation of the mechanism;
- mechanism for completing the turn of the arms to starting position with each passage;
- rotation sensors of the turnstile barrier arms, recording the fact and direction of passage;
- light and sound indication, as well as two built-in EM Marine or Mifare readers (optional) for turnstile version from v.2 onwards;
- Wi-Fi and RS-485 interfaces (protocols are open and can be changed at the customer's request). As for Wiegand, data can only be transferred from card readers. Wi-Fi and RS-485 ensure full control, card data transfer, event reading and turnstile setup;
- as for designs from v.2 onwards in offline mode, up to 1,500 user cards can be edited via Wi-Fi or RS-485 interface. More than 1,500 cards when connecting a memory expansion module (sold separately). It is possible to record from 4,000 (or more) events when connecting an additional module (not included in the basic configuration), further reading is possible via Wi-Fi or RS-485 interface;
- possibility of controlling unauthorized access under the barrier arm for models of the T3-NO-SF series, which include infrared obstacle control sensors. Sensor system controls the relay on the turnstile board to turn on the warning system.
- possibility of establishing the connection with third-party hardware Physical Access Control System using the Wiegand interface, passage control channels (passage status);
- possibility of connecting push-button Wi-Fi remote (remote is not included in the basic configuration). Also, the possibility of connecting any Android device as a Wi-Fi remote with the use of the company's free app;
- possibility of controlling two third-party devices for closing/opening (gate, signal lighting, siren, etc.);
- possibility of connecting the fire alarm system;
- turnstile software update via Wi-Fi or RS-485 interface.

7. TURNSTILE INSTALLATION



1. Turnstile housing consists of three parts (1A – horizontal unit included in the scope of supply; 1B, 1C – universal columns with a predefined set of metalware for assembly)
2. Front casing
3. Lower casing
4. Mechanism
5. Turnstile barrier arm with the mechanical anti-panic function
6. Card readers with passage indication
7. Mounting of the lower casing
8. Mechanism faceplate cover

Tools and equipment necessary for installation:

- electric hammer-drill or perforator with a power of 1.2-1.5 kW;
- drill or perforator bit for Ø16 mm drill for M12 anchors;
- wall chaser to make a cable way;
- 0.5x3 mm slotted screwdriver and PH0 cross-head screwdriver (for the installation of wires into the terminal blocks);
- 2.5 Allen key (for turnstile cover removal);
- 7 Allen key (for barrier arm mounting);
- socket wrench for mounting of M12 anchors S19 (for nuts according to DIN 934);
- level;
- 2 m tape measure;
- 1.5 m rigid wire (for cable pulling).

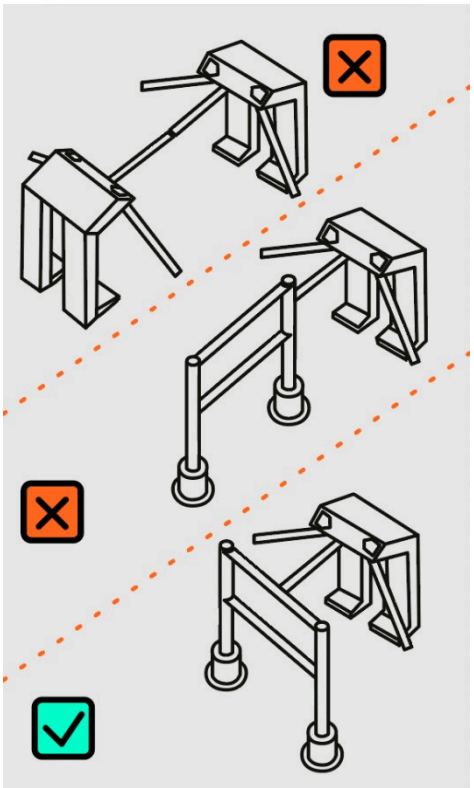
When installing it is recommended to:

- When installing it is recommended to:
- mount the turnstile columns on solid and smooth concrete (not lower than grade 400), stone, etc. bases with a thickness of not less than 150 mm;
- align the base so that the mounting points of the turnstile column are in the same horizontal plane (control using a level);
- use embedded foundation elements (300×300×300mm) when installing the turnstile column on a less solid base (the use of a frame base is possible);
- mark installation holes in accordance with the scheme given in clause 7 of this manual;
- during installation, control the vertical position of the column using a plumb bob;
- organize an additional emergency exit;
- when organizing a zone of passage through the turnstile, keep in mind that the mechanism of completing the turn works according to the following principle:
    - when the barrier arm is rotated by an angle of more than 60°, the barrier arm is forced to complete the turn in the direction of movement;
    - when the barrier arm is rotated by an angle less than 60°, the barrier arm is forced to complete the turn to the side that is in the opposite direction of movement (return to the initial position).

CAUTION!

Manufacturer shall not be liable for damage caused by improper installation and rejects any claims if the installation is not carried out in accordance with the instructions given in this operating manual.

Turnstile shall be installed according to the drawing below (top view of the turnstile).

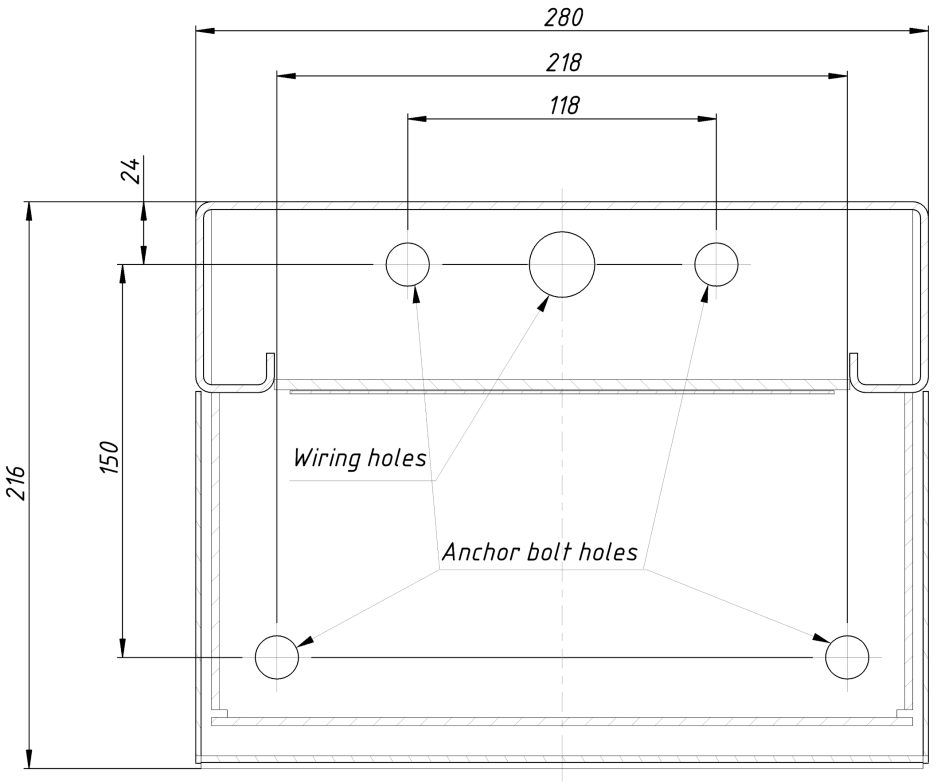


WARNING!

When installing the turnstile with anti-panic arms to the wall, it is necessary to ensure additional distance of about 60 mm between the wall and the horizontal arm for the unhindered operation of the anti-panic mechanism.

Unpack the turnstile, check the scope of supply.

Prepare holes in the floor for anchor sleeves to attach the turnstile columns according to the drawing below. Mounting holes of the two columns are equidistant from each other to a length of 720 mm. It is recommended to mark the mounting holes for the second column using the assembled turnstile housing.



Insert the anchor sleeves into the holes so that they do not protrude above the floor surface. Remove the lower turnstile casing (pos. 3) by unscrewing the two screws securing the lower casing (pos. 7). Install the turnstile column on the anchor sleeves and secure it with M12 bolts.

WARNING!

Installation of the turnstile and its fastening to the base shall be carried out with the barrier arms removed.

Before mounting the barrier arms, remove the cover (pos. 8) by unscrewing the screw that secures it. Remove the pre-installed mounting screws in the arms. Install the arms in the matching holes of the faceplate of the mechanism and securely fasten the previously dismantled mounting screws. Install the cover (pos. 8) to its original place. Depending on the intensity of the operating conditions, it may be necessary to periodically tighten the mounting screws. In order to reduce the frequency of servicing, it is recommended to apply thread sealant (for detachable joints) to the mounting screws.

WARNING!

It is forbidden to sit on and lean on the barrier arms. Maximum load on the barrier arm shall not exceed 15 kg.

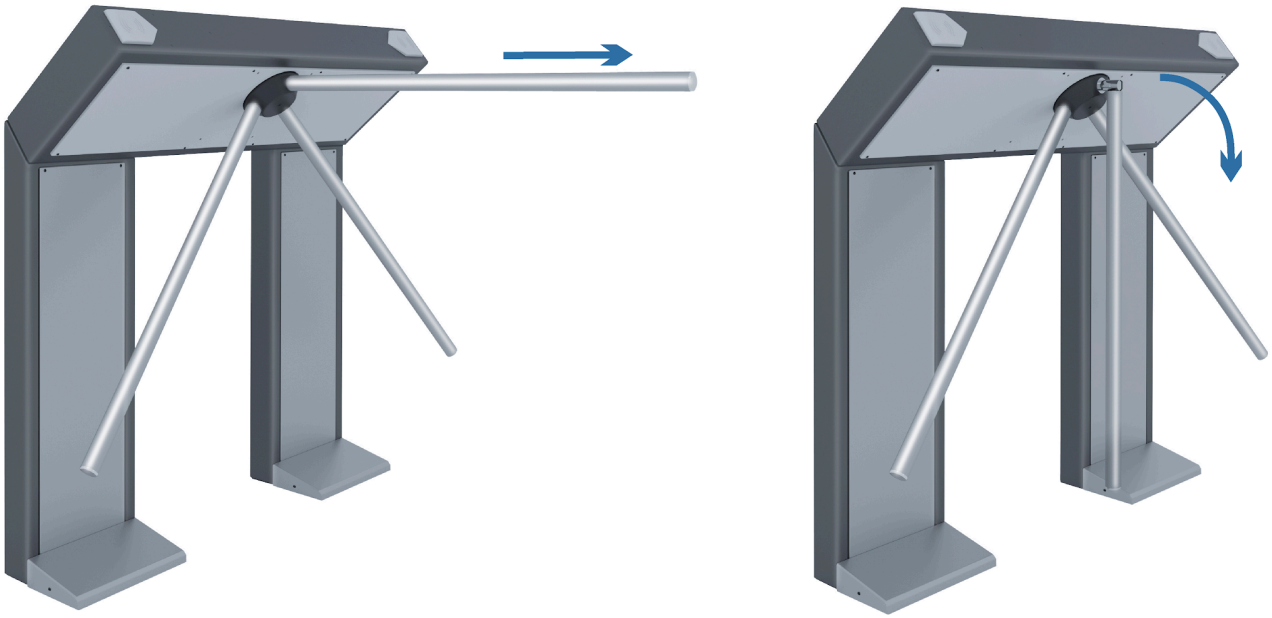
Anti-panic barrier arms are designed to quickly clear the passage as an additional measure to ensure evacuation, as well as for the passage of large-sized cargo. Short-term operation of the turnstile with the open position of barrier arms is recommended.

WARNING!

Operation of the barrier arms in a constantly open position can cause weakening of the mechanism spring, which will be considered a violation of operating conditions.

Connect the necessary wires to the terminals of the central board (assignment of terminals is described in the TURNSTILE MANAGEMENT section).

8. MECHANICAL UNLOCKING OF THE TURNSTILE

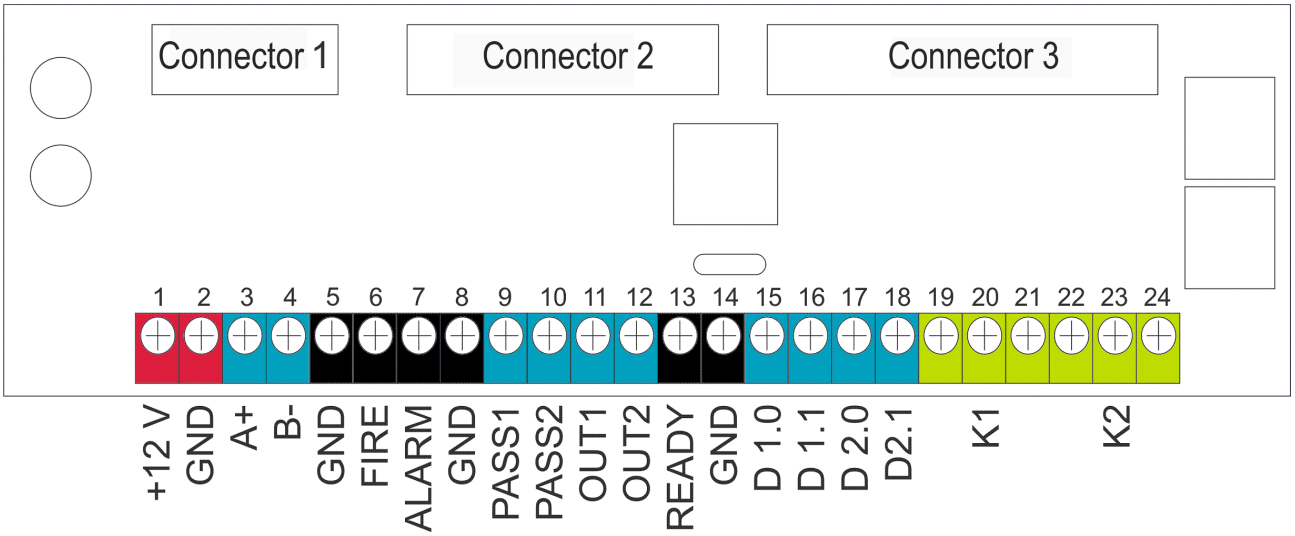


In an emergency, the anti-panic barrier arms can serve as an emergency exit. Design of these arms allows you to quickly organize free passage without the use of special keys or tools. To do this, it is necessary to pull the barrier arm blocking the passage area in the axial direction, away from the turnstile column, until the mechanism for turning the arm is released, and then fold the arm by lowering it down.

9. TURNSTILE MANAGEMENT

It is carried out by sending and blocking signals to the connectors/terminals of the control board located under the vertical casing of the turnstile column.

Control board has text marking, as well as colour segregation of the terminals.



Connector 1	Connection of the real-time module and event memory (stores up to 4,000 events), the module is sold separately, it is not included in the basic configuration.
Connector 2	Connection of the passage sensors and the electric drive of the turnstile gate ∓.
Connector 3	Connection of the indication system and built-in readers.
Terminal 1 (+12V) **Terminal 2 (GND)**	External power supply connection 12V DC
Terminal 3 (A+) **Terminal 4 (B-)**	RS-485 connection
Terminal 5 (GND) **Terminal 6 (FIRE)**	When a low-level signal is sent to terminal 6 (or the contact is closed onto GND), the external control relays switch to the Off position.
Terminal 7 (ALARM) **Terminal 8 (GND)**	ALARM terminal 7 – when a low-level signal is sent to the terminal (or the contact is closed onto GND), the turnstile unlocks in both directions.
Terminal 9 (PASS 1)	When a low-level signal is sent to the terminal (or the contact is closed onto GND), the turnstile unlocks in the corresponding direction.
Terminal 10 (PASS 2)	When a low signal is sent to the terminal, the turnstile unlocks in the corresponding direction.

Terminal 11 (OUT 1)	When the arm is rotated in the PASS1 direction, a low-level signal will appear on the terminal (the contact is closed onto GND) for 300 milliseconds (disabled in offline mode).
Terminal 12 (OUT 2)	When the arm is rotated in the PASS2 direction, a low-level signal will appear on the terminal (the contact is closed onto GND) for 300 milliseconds (disabled in offline mode).
Terminal 13 (READY)	When the turnstile is ready for operation, a low-level signal will appear on the terminal (the contact is closed onto GND).
Terminal 14 (GND)	
Terminal 15 (D 1.0)	When the card is read by the built-in reader, these contacts are used to transmit data about the read card via the WIEGAND 26 protocol.
Terminal 16 (D 1.1)	
Terminal 17 (D 2.0)	When the card is read by the built-in reader, these contacts are used to transmit data about the read card via the WIEGAND 26 protocol. If you set the D2.0, D2.1 jumper before turning on the turnstile, then the default passwords will be reset (12345678) when the turnstile is turned on. After resetting, remove the jumper and restart the turnstile.
Terminal 18 (D 2.1)	
Terminal 19	By default, terminals 20-21 are closed onto each other. When the K1 external control relay is switched on, these contacts are opened and terminals 19-20 are closed.
Terminal 20 (K1)	
Terminal 21	
Terminal 22	By default, terminals 23-24 are closed onto each other. When the K2 external control relay is switched on, these contacts are opened and terminals 22-23 are closed.
Terminal 23 (K2)	
Terminal 24	

WARNING!

Third-party external readers can only be connected via an external controller. Compatibility and connection scheme shall be checked with manufacturers.

The inputs are controlled by 5 V-level TTL signals.

The outputs have an open collector.

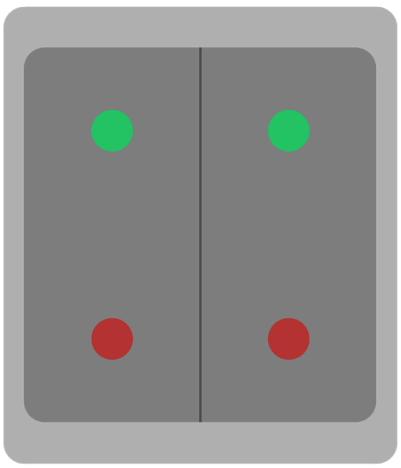
Maximum load on the relay is 24V, 3A. It is possible to connect a gate lock, emergency or signal lighting, siren, etc.

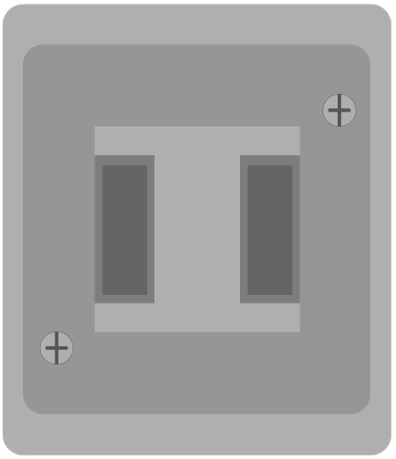
Management can be performed using external controllers. Desired direction is unlocked using PASS1, PASS2 terminals. Information about the passage can be obtained through OUT1, OUT2 terminals; information from readers can be obtained through D1.0, D1.1, D2.0, D2.1 terminals. Information about the

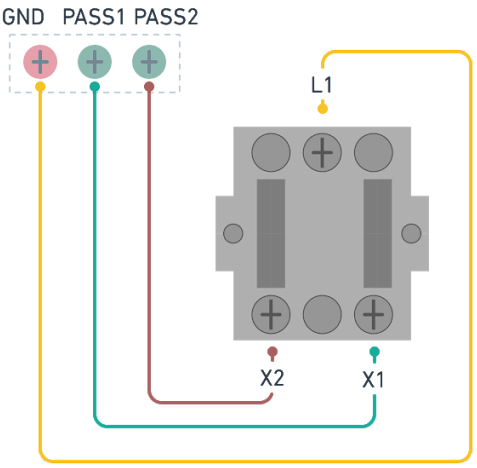
passage can also be obtained through relays K1, K2 or terminals D1.0, D1.1, D2.0, D2.1 if they are not used. The settings are selected in the ACCESS RESPONSE.Configuration menu of the MasterCard App.

Access can be unlocked using a two-key switch (included in the scope of supply). Unlocking in the desired direction is done using the PASS1, PASS2 and GND terminals. Scheme and procedure for connecting the remote is given below.

Scope of supply includes a switch with a test cable of about 700 mm. In order to move the remote to a distance exceeding the length of the test cable, replace it according to the instructions below. Cable shall not be extended. It is recommended to use a 4-core indoor signal cable (4x0.5). Disassemble the switch casing; to do this, remove the keys (by pressing them on the side of the casing); unscrew the screws, and disconnect the upper cover of the casing from the base.







Remove the insulation on both sides of the cable by approximately 60 mm. Strip the ends of each of the cable wires: the ones that go to the switch for a length of 8-10 mm, and the ones that go to the turnstile for a length of 5-6 mm. Twist the yellow and brown wires together at both ends of the cable. Fold in half the insulated ends of the wires that go to the switch.

Connect the wires to the switch: yellow with white to L1, green to X1 and brown to X2. Names of the connectors are indicated on the housing of the switching mechanism and on the sticker in its lower part. Insert the mechanism into the casing and assemble the switch.

Connect the cable to the turnstile according to the corresponding diagram.

10. START OF OPERATION

If the turnstile is in normal mode (third-party Physical Access Control System control mode), then there will be a short sound signal when you turn the device on.

If the turnstile is in the Offline mode (the access is provided based on the cards recorded in the internal memory (up to 1,500 cards)), then there will be two short sound signals when you turn the device on. Mode switching is performed using the MasterCard program over Wi-Fi.

If the turnstile is in the Offline mode and the Checkpoint+++ mode is set – there will be three short sound signals.

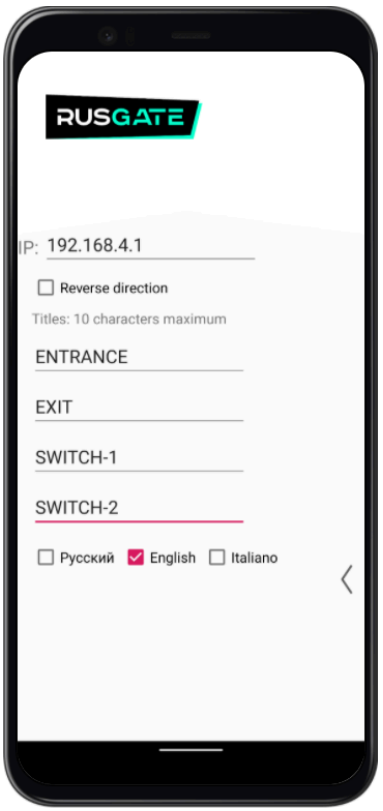
If an event memory module is connected to the turnstile (sold separately, not included in the basic configuration) and the event recording mode is turned on, then after short signals of items 2 and 3, a short signal will follow after a pause if the memory module is operational or there will be a long signal, if the module is faulty or is absent.

To connect to the turnstile, you need to search for its Wi-Fi network. Depending on the turnstile model, the SSID may look like, for example: TOE001177 (where 1177 is the turnstile sequential number). In the default factory settings, the password is 12345678. The procedure for changing and resetting the password is described on page 16 of this Manual.

11. TURNSTILE MANAGEMENT, SET-UP AND RELEVANT PROGRAMS

Management and set-up can be carried out using devices based on the Android OS, thanks to special apps that are available for download from the www.rusgate.pro website (Apps section).

TURNSTILE REMOTE APP RC_PLATE



RC_Plate app is used to open the turnstile to single or free access mode in the desired direction, or to block access in the desired direction. External control relay is also controlled using the remote.

The remote has customizable button name fields, which can be changed in the settings menu. If necessary, assignment of the remote-control keys can be inverted by selecting the Reverse direction check box.

Turnstile is controlled via the IP address, which when connected to the turnstile Wi-Fi is automatically listed as 192.168.4.1. If the turnstile is on a shared network, the IP address can be found in the router settings and specified manually.

WARNING!

For the correct operation of all functions, use the latest version of the MasterCard app and turnstile firmware available in the www.rusgate.pro website (Files section).

MASTERCARD MC_05 APP

The MC_05 app is designed for the turnstile set-up.

To control the turnstile, you need to connect via smartphone running on the Android OS to the Wi-Fi access point of the turnstile or to the Wi-Fi network to which the turnstile is connected.

After launching the MC_05 app, you need to perform the input settings and specify the turnstile IP address.

If the turnstiles are on a shared network, the IP address can be found in the router settings. Enter 192.168.4.1 when controlling the turnstile directly.

After entering the IP address, click Enter.

The "i" button in the green circle on all windows allows you to read additional information on the current window.

After you enter the IP address you will be redirected to the main control window:

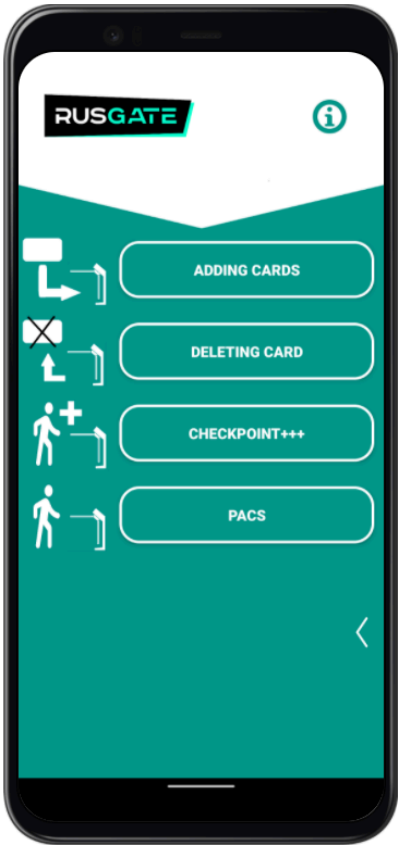
Turnstile operation mode can be configured in the MODES section.

In the SECURITY section, the corresponding password can be configured to access the turnstile or a new one can be specified.

The SETTINGS section allows you to set the turnstile settings, such as: USER BASE, EVENT RECORDING, INDICATION SETTINGS, SOUND LEVEL, and SINGLE ACCESS TIME.

The LOADER section allows you to update turnstile firmware as well as change network settings.

All settings windows are described further in the corresponding menu.



Description of the TURNSTILE MODES window:

The ADDING CARDS button puts the turnstile into the card saving mode. The card brought to the reader is recorded in the memory (at the same time, you will hear a single sound signal. If the card is already recorded, then you will hear 2 sound signals). The arrows are green and blue, the card can be brought to any reader.

The DELETING FROM MEMORY button puts the turnstile in the card deletion mode. The card brought to the reader is deleted from the memory (at the same time you will hear a single sound signal. If the card is not in the memory, then you will hear 2 sound signals). The arrows are blue and red, the card can be brought to any reader.

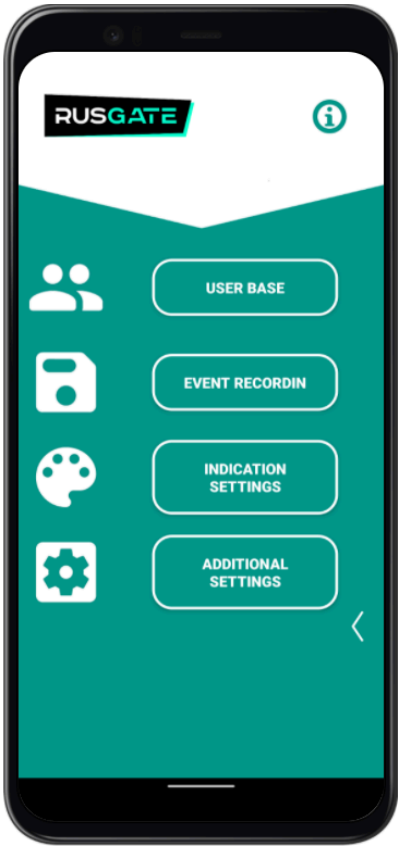
The CHECKPOINT+++ button puts the turnstile into a mode in which it opens when using any card, and this card is entered into the memory (training mode).

The CHECKPOINT/PACS button will enable the normal access mode when using cards stored in the turnstile memory or the operation mode depending from an external PACS.

Description of the SECURITY window

For the app to use the required password to work with the turnstile, you need to enter it in the text field and click the USE PASSWORD FOR ACCESSING THE TURNSTILE button. The RECORD NEW PASSWORD INTO THE TURNSTILE MEMORY button is used to enter the password in the turnstile memory. To change the password, you need to first enter the old valid password and click the USE PASSWORD FOR ACCESSING THE TURNSTILE button, then enter the new password and click the RECORD NEW PASSWORD INTO THE TURNSTILE MEMORY button. The other buttons will only work with the specified password.

To reset passwords, set a jumper between "D2.0, D2.1" before turning on the turnstile; after turning on, the default passwords will be reset (12345678). After resetting, turn off the turnstile, remove the jumper and restart the turnstile



Description of the SETTINGS window

If you switch to the SETTINGS window, you will be able to access the following settings:

USER BASE

EVENT RECORDING

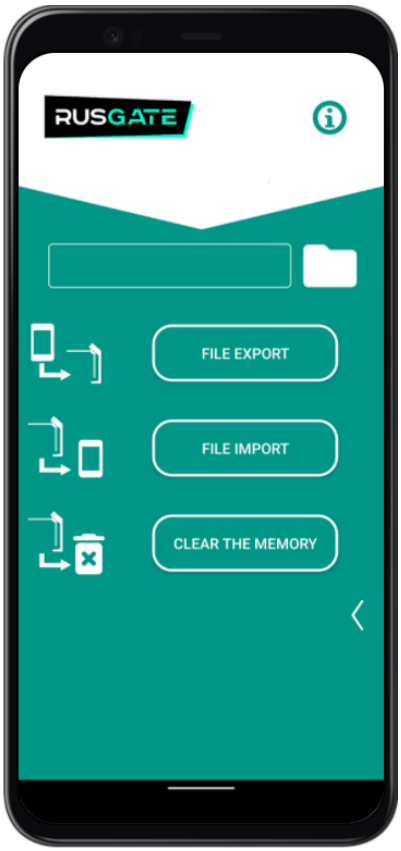
INDICATION SETTINGS

SOUND LEVEL

SINGLE ACCESS TURN-ON TIME

ACCESS WAITING TIME

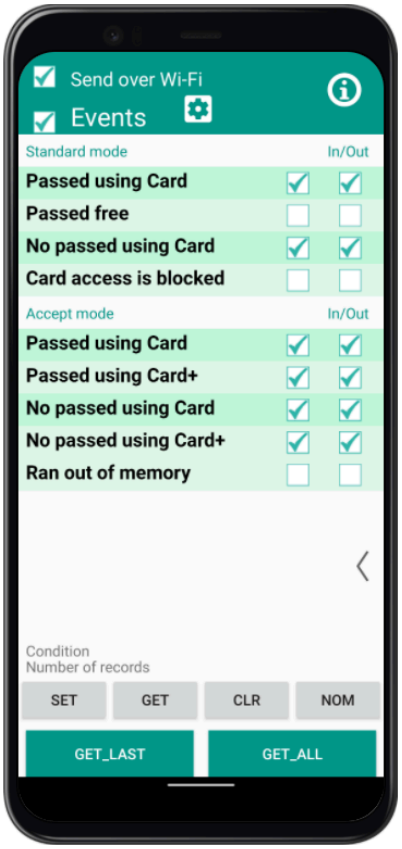
and also response about the pass



Description of the USER BASE window

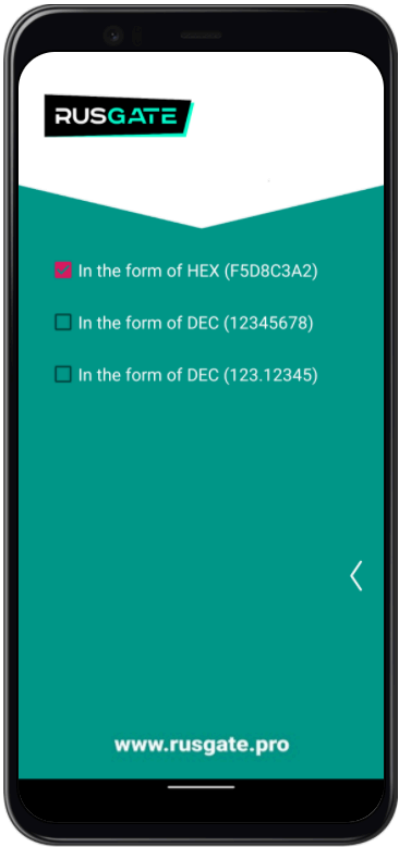
If you press the EXPORT FILE button, you will add all the cards to the turnstile memory from the file selected using the FOLDER icon button. Files are stored on your device in the Android/data/glazoff.ru.mc_05/files/Download/FolTurnBase folder (the choice of this location of the folder for recording is determined by the ANDROID system security requirements). Starting from Android 10, access to the specified folder on an android device can only be done from a PC via a USB connection, in the “Add files/Android Auto” mode. If you want only cards from a file in the memory, you need to first clear the turnstile memory.
If you press the FILE IMPORT button, you will add all the cards from the turnstile memory to the file selected using the FOLDER icon button. Files are stored on your device in the Android/data/glazoff.ru.mc_05/files/Download/FolTurnBase folder. If you need to save to a new file, just enter its name in the text box.
If you press the CLEAR MEMORY button, you will delete all previously recorded cards from the turnstile memory

WARNING! If you delete the MasterCard program, then all files associated with it will also be deleted.



Description of the EVENT RECORDING window

Set the flags for the desired events at your discretion.
The SET button will help to record them into the turnstile. Attention! The SET button is also used to set the time in the turnstile, the same as on the device from which you carry out the set-up process.
The GET button is used to read flags from the turnstile.
The CLR button is used to reset all flags.
The NOM button allows you to find the serial number of the turnstile. This number will appear in the report file.
The GET_LAST button counts unread events to a file with the turnstile number in the Android/data/glazoff.ru.mc_05/files/Download/FolTurnEvent folder.
The GET_ALL button counts ALL recorded events to a file with the turnstile number in the Android/data/glazoff.ru.mc_05/files/Download/FolTurnEvent folder.
Starting from Android 10, access to the specified folder on an android device can only be done from a PC via a USB connection, in the “Add files/Android Auto” mode



If you click on the "gear" icon, you will open a menu of additional settings for the format in which the ID cards used to identify users are recorded.

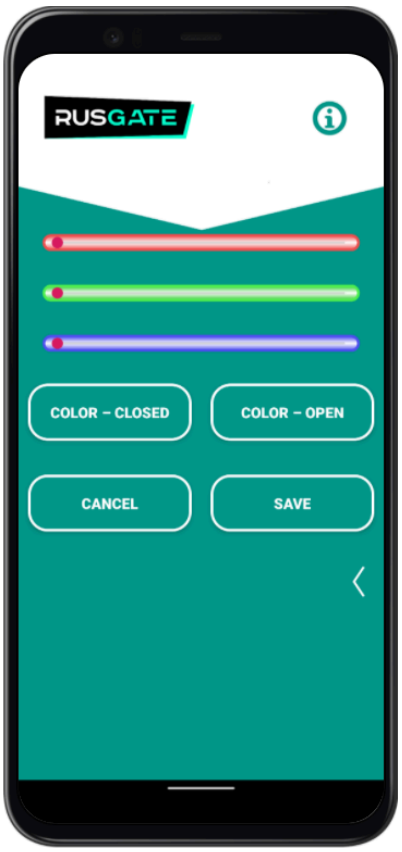
In the advanced settings menu, you can configure the type of recording ID cards used to identify users:

HEX (F5D8C3A2) – hexadecimal format;

DEC (12345678) – decimal;

DEC (123.12345) – decimal with a dot.

The choice of recording format is implemented for the convenience of forming a user base, taking into account the type of marking applied on RFID cards.



Description of INDICATION SETTINGS window

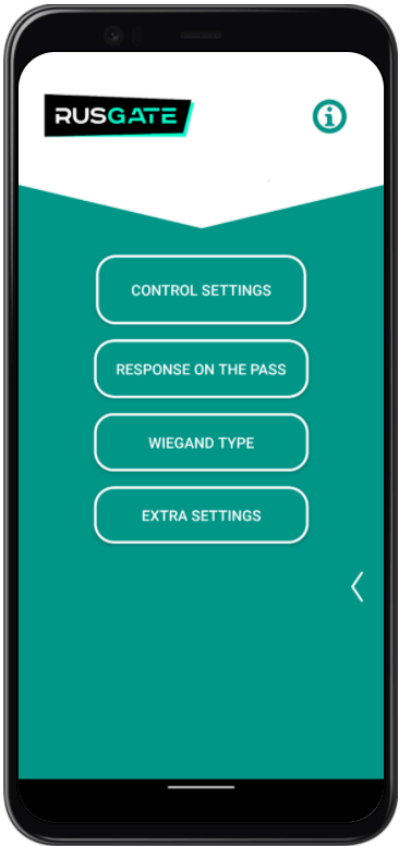
The colour intensity is set using colour sliders.

When the COLOUR-CLOSED button is pressed, the selected colour will be displayed on the left turnstile indicator. It will correspond to the colour that will be on the indicator when the access is blocked.

When the COLOUR-OPEN button is pressed, the selected colour will be displayed on the right turnstile indicator. It will correspond to the colour that will be on the indicator when the access is not blocked.

When the CANCEL button is pressed, the turnstile will return to working condition without saving the colour scheme.

When the SAVE button is pressed, the turnstile will enter the working state and save the colour scheme.



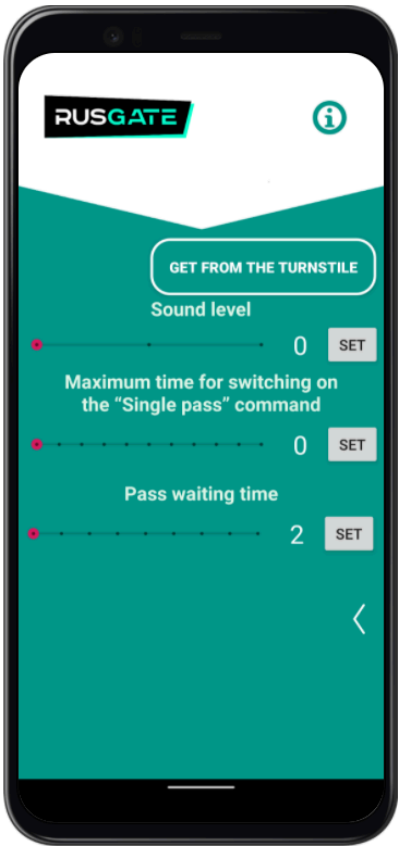
Description of the ADDITIONAL SETTINGS window

It allows you to switch to:

the CONTROL SETTINGS submenu, in which the SOUND LEVEL, the MAXIMUM TIME FOR TURNING ON THE "SINGLE ACCESS" COMMAND and the ACCESS WAITING TIME are set;

the ACCESS RESPONSE submenu, in which the SIGNAL FROM THE TURNSTILE and the SIGNAL DURATION are set.

the WIEGAND TYPE submenu, in which wiegand-26 or wiegand-34 data from card reader



Description of CONTROL SETTINGS window

SOUND LEVEL is set by the corresponding SET button. The value is set by moving the corresponding slider. The "0" value turns off the sound completely.

MAXIMUM TIME FOR TURNING ON THE SINGLE ACCESS COMMAND is set by the corresponding SET button. The value is set by moving the corresponding slider.

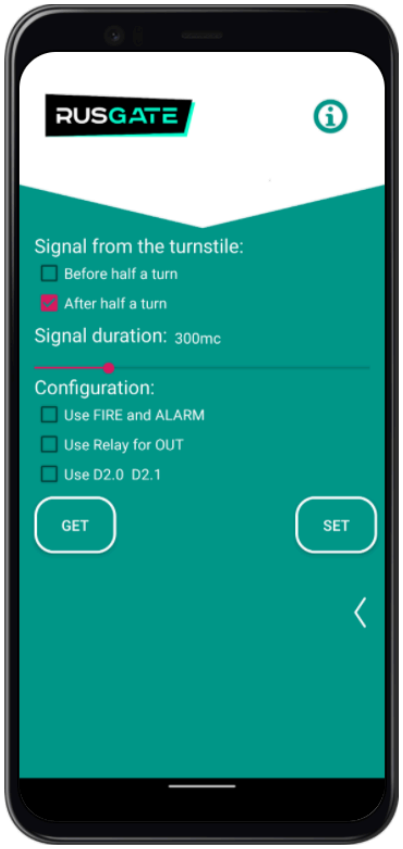
The MAXIMUM TIME FOR TURNING ON THE SINGLE ACCESS COMMAND function is used so that a single access option can be activated from the wired push-button remote included in the scope of supply. In standard mode, the wired push-button remote included in the scope of supply either opens or closes the turnstile in the selected passage direction.

The single access mode allows you to open the turnstile at the set ACCESS WAITING TIME. In this case, there is no need to control the access in order to close the turnstile with the button of the wired remote. To do this, on the wired push-button remote included in the scope of supply, press the button of the desired direction of passage, and change the position to OPEN, and then CLOSED. MAXIMUM TIME FOR TURNING ON THE SINGLE ACCESS COMMAND is the time in seconds, during which it is necessary to successively press the button of the selected passage direction, and change the position to OPEN and then CLOSED.

For example, you set the value to "1". Then the time during which it is necessary to press the button of the desired direction of passage sequentially, and change the position to OPEN, and then CLOSED shall be less than 1 second. In this case, the single access mode is activated. Accordingly, the access system will wait for the arms to fully rotate and will not initiate closing before the expiration of the specified ACCESS WAITING TIME. By setting the value to "0" of the MAXIMUM TIME FOR TURNING ON THE "SINGLE ACCESS" COMMAND, you turn off this mode, then using the wired push-button remote you can only open or close the turnstile.

ACCESS WAITING TIME is set by the corresponding SET button. The value is set by moving the corresponding slider. Minimum time is 2 seconds. Access waiting time is the time during which it is expected that somebody will go through the turnstile from the moment the turnstile is opened for single access. If after the set ACCESS WAITING TIME, no case of access is registered, the turnstile will automatically close.

The GET from TURNSTILE button is used to display the corresponding sliders as they are stored in the turnstile's memory.



Description of the ACCESS RESPONSE window

This menu allows you to configure the duration of the access signal (300, 200 and 100 milliseconds) as well as the position of the arms when the signal is sent.

The default duration is 300 ms.

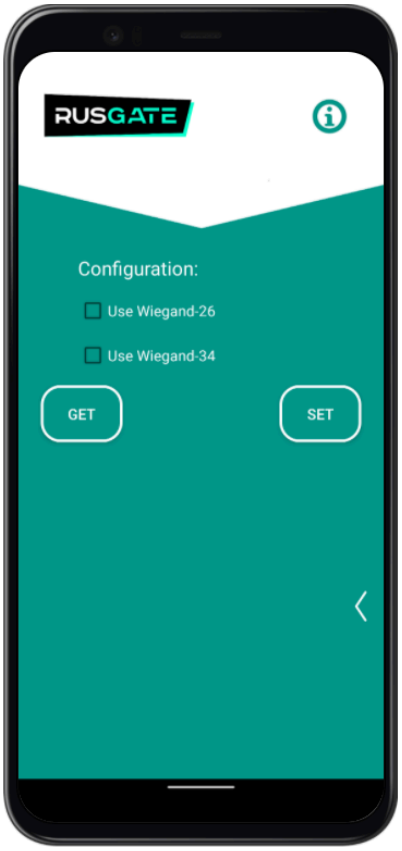
By default, the access signal is sent when the first sensor of the final position of rotation is closed, i.e. AFTER HALF A TURN, when mechanical rotation of the arms to the final position is guaranteed.

If it is necessary to fine-tune the interaction with the external PACS controller, when the latter does not have time to work correctly, you can switch to the UP TO HALF A TURN position. In this case, the exchange of the closing signal with the external PACS controller will occur much earlier, which will allow the external PACS controller to respond to the case of access and send a signal to block the access. However, if you start accessing, but do not complete the action, then the arms will mechanically return to their original position, and will not turn to the final position, which will lead to a false record of the case of access.

CONFIGURATION If the Use FIRE and ALARM checkbox is selected, the FIRE and ALARM terminals will stop performing the main function and will duplicate the terminal OUT1 and OUT2.

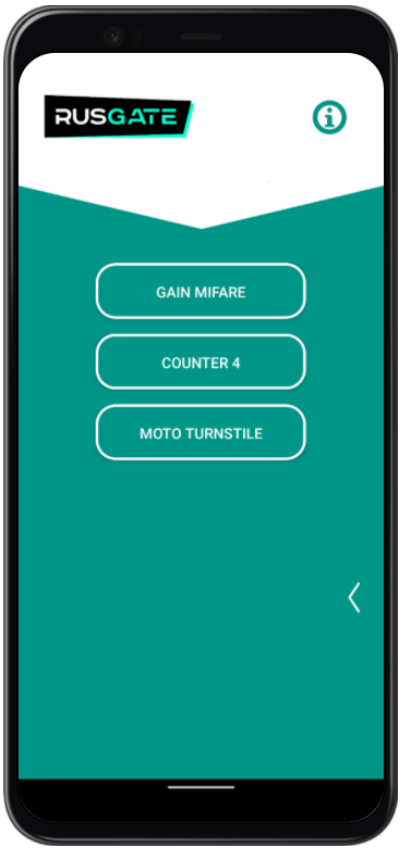
If the Use Relay checkbox is selected, the relay terminals OUT1 and OUT2.

If the Use D.2.0 D.2.1 checkbox is selected, the D.2.0 and D.2.1 terminals will stop performing the main function and will duplicate the terminals OUT1 and OUT2. Signals D2.0 and D2.1 will be transmitted via terminals D1.1 and D1.0



Description of the WIEGAND TYPE window

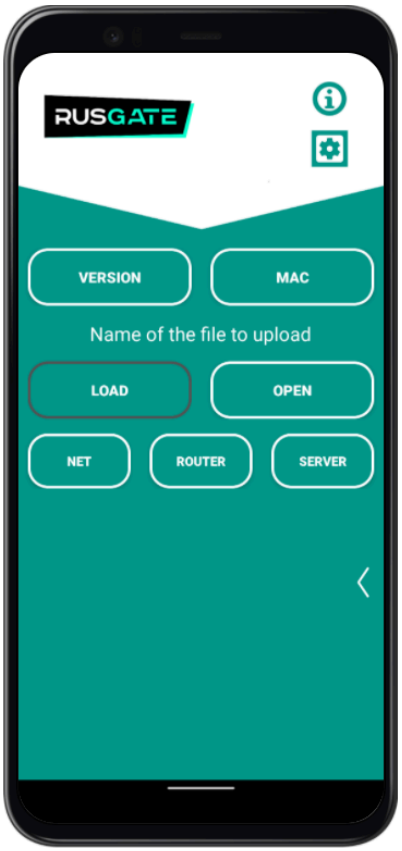
In this menu you can select desired Protocol for transmitting card data via connectors D10, D11, D20, D21.



Description of the ADVANCED SETTINGS window

MIFARE GAIN allows you to select the gain for MiFare readers
COUNTER 4 mode allows you to let a specified number of people into the room.
Two work schemes have been implemented:
Single turnstile T3-NO-SF v.1.2;
Master turnstile T3-NO-SF v.1.2 and synchronous connection of up to 3 additional turnstiles T3-NO-SF v.1 for collaboration.
All schemes are available when using the Counter Module, which is used to record quantitative data and synchronize the turnstiles.
MOTO-TOURSTILE allows you to configure the operation of motorized turnstiles T2-M series:

- turnstile rotation speed;
- enable the open passage mode when the RFID tag is applied twice and the delay of its deactivation
- manual calibration of the barrier arm deflection at the reference point.



Description of the LOADER window

MAC - lets you find out the MAC address of the TCP turnstile module.
VERSION – current firmware version.
OPEN – is used to open a file with firmware. The required file is automatically written to the Android/data/glazoff.ru.mc_05/files/Download/FolPro folder, when installing the Mater Card App.
LOAD – is used to upload the firmware file to the turnstile.
NET – is used to change the name and password of the turnstile for Wi-Fi access.
ROUTER – is used to set the name and password for access to the network through the router.
SERVER – is used to set the IP address and port of the server to which the turnstile operation statistics will be sent.

The loader is intended for updating all devices of this manufacturer. First, you need to connect to the device. Each device has a unique number indicated in the datasheet. To do this, you need to find the turnstile (or other device, such as a Wi-Fi remote) in the Wi-Fi settings of your phone, select it, enter a password and connect to it if the turnstile is in the same network with your phone and has a fixed IP-address, enter this address into the "IP-address" field in main menu MasterCard App, after which the turnstile (or another device) is ready for interaction (the turnstile default name is TOEXXXXXXX, where XXXXXX is the individual turnstile number, default factory password is 12345678).

Use the SERVER button to configure the IP and port of the server to which, if there is an event recording module, these events will be sent to, if possible.

You can find the firmware version by pressing the VERSION button. To update the standard firmware, download and reinstall the latest version of the MasterCard application from the website, the file with the new firmware will be created automatically.

The OPEN button is used to open a folder with firmware file (*.txt), which is automatically recorded when the Master Card program is installed on the disk in the folder Android/data/glazoff.ru.mc_05/files/Download/FolPro. If you need to install a special firmware, download the file to your Android device. Starting from Android 10, access to the specified folder on an android device can only be done from a PC via a USB connection, in the “Add files / Android Auto” mode. Then click the DOWNLOAD button. Wait for 100% completion of the loading process and the light and sound indication of the turnstile. If the connection with the turnstile is lost, repeat the loading process until it is complete.

Using the NET button, you can change the Wi-Fi name and password of the turnstile. This is necessary so that only you know the password.

The settings icon allows you to select the firmware download speed. If the flashing process is unstable, select a lower flashing speed.

12. OPTIONAL EQUIPMENT

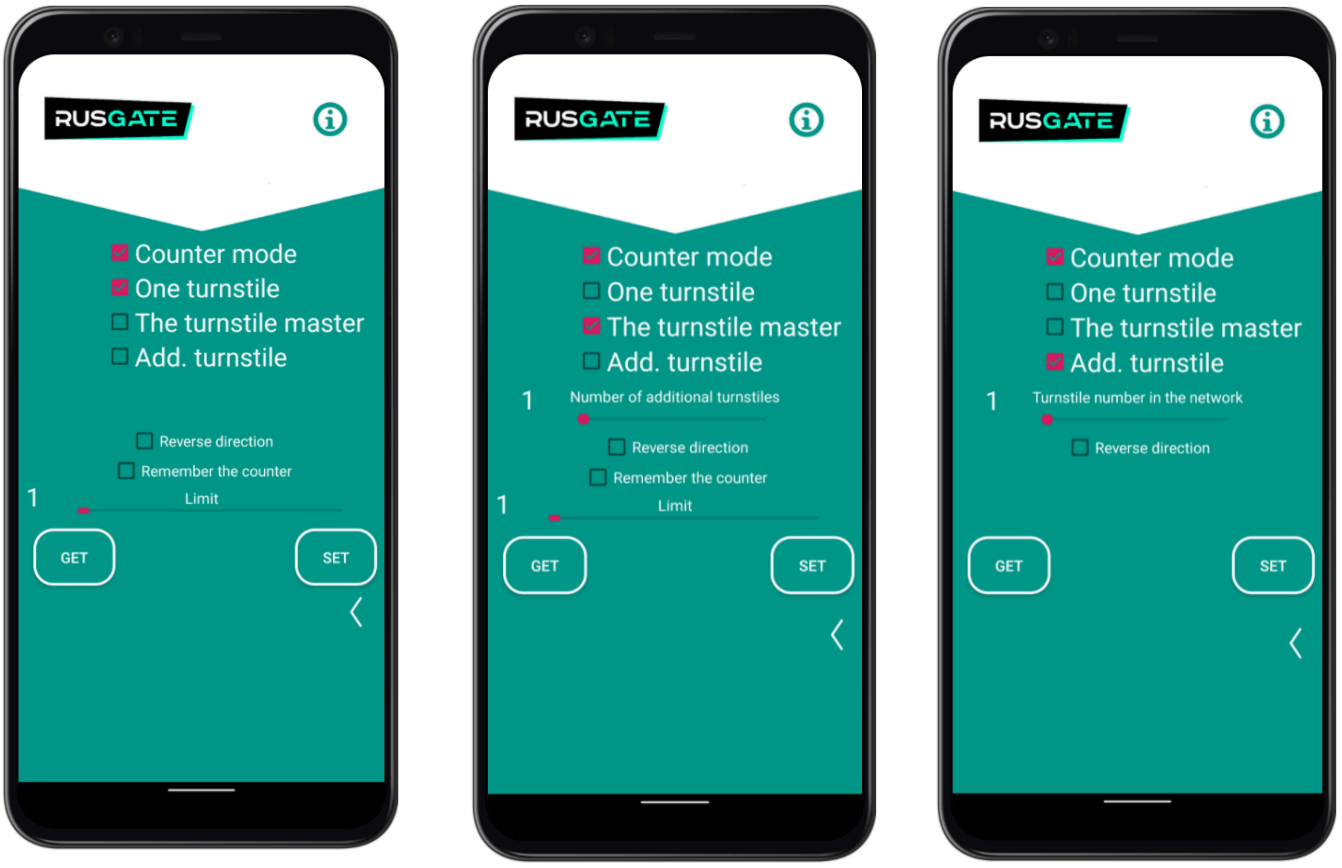
STOP-COVID COUNTER

GOAL: Limit the number of people indoors due to the coronavirus
OBJECTIVE: to minimize costs and time for system deployment
SOLUTION: standalone solution out of the box - turnstile RusGate STOP-COVID Counter

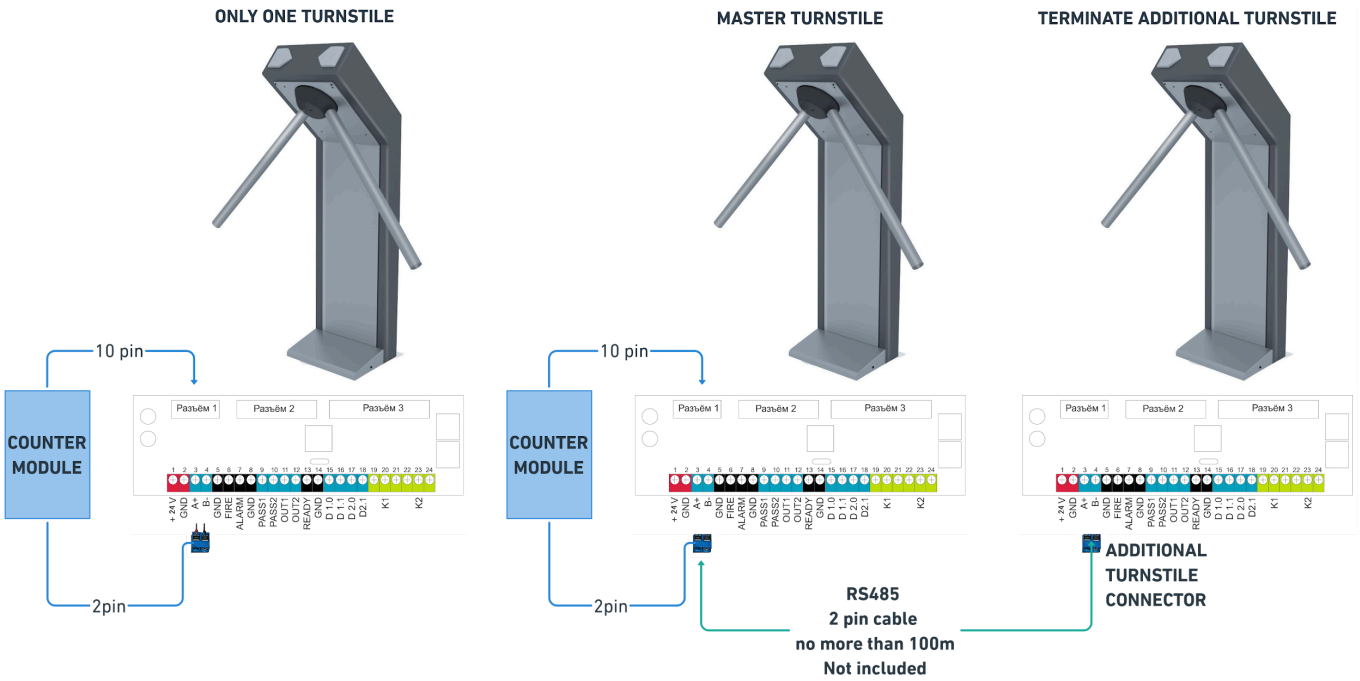
Operation mode of the turnstile STOP-COVID The counter allows a specified number of people to enter the room. The following work schemes have been implemented:
Single turnstile T2-M-SF (BF) v.1.2;
Master turnstile T2-M-SF (BF) v.1.2 and synchronous connection of up to three additional turnstiles T2-M-SF (BF) v.1 for collaboration.
All functions are available when using the Counter Module, which is used to record quantitative data and synchronize turnstiles.

The package includes:
Counter module - 1 pc .;
Battery CR 2032 3V (standard installed in the module) - 1 pc .;
Terminal connector - 1 pc .;
Packing (delivered separately from the turnstile) - 1 pc.

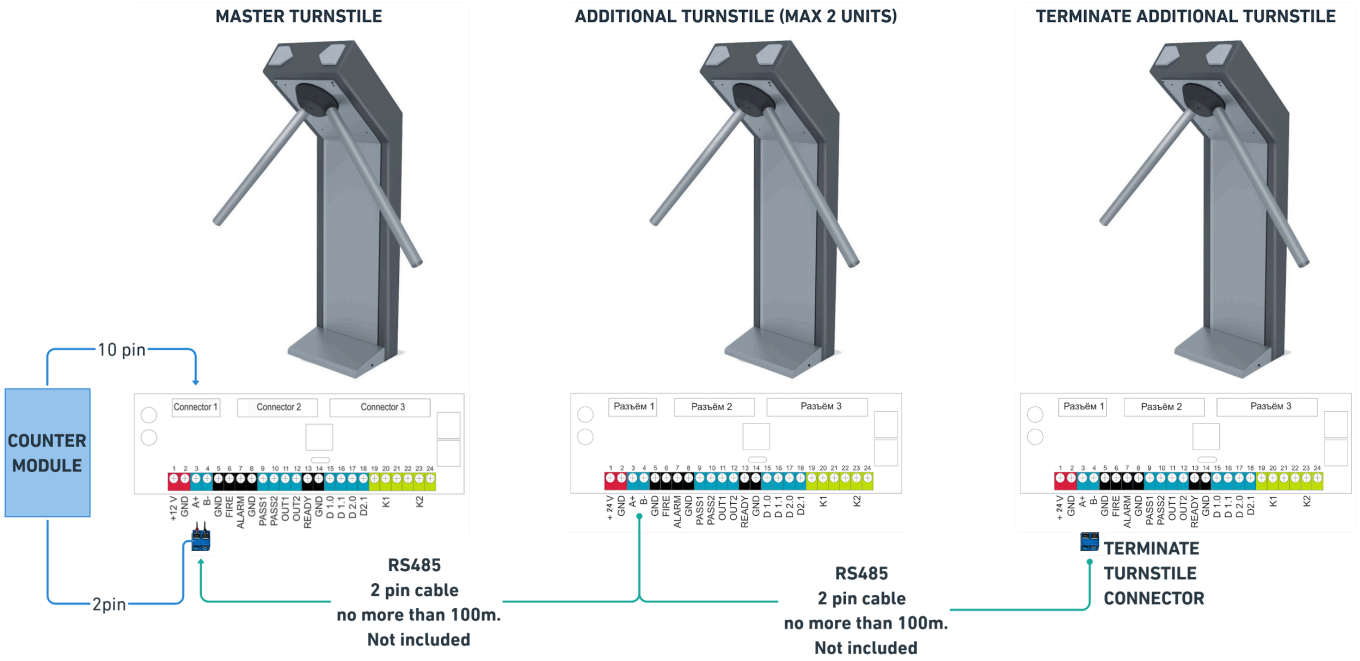
The turnstile operating mode is configured using the Counter-4 menu of the proprietary Android application MasterCard



Structural diagrams of connection in the Single-turnstile mode or in the Dual-turnstile mode



Block diagram of connection in the mode Up to 4 turnstiles



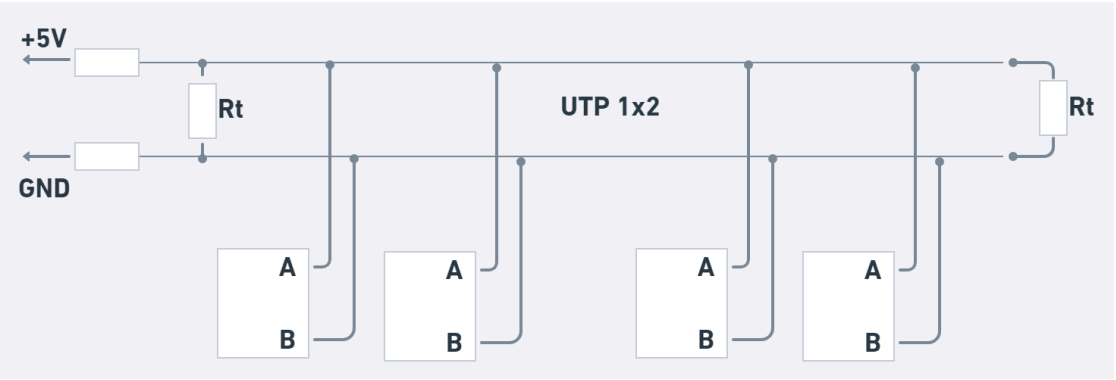
The communication line must be one twisted pair cable (UTP 1x2). All receivers and transmitters are connected to this cable. The distance from the line to the RS-485 interface chips should be as short as possible to reduce mismatch and signal reflections.

For reliable reception, the distance between the turnstiles should be no more than 100 meters. The total length of the entire line must not exceed 400 meters, respectively.

At both the most distant (opposite) ends of the cable, 120 Ohm (0.25 W) Rt terminating resistors ("terminators") are connected, which are built into the Counter Module and the Terminal Connector.

Receivers of RS-485 microcircuits have a signal recognition threshold range of ± 200mV at the A-B inputs. To avoid sending erroneous signals to the UART receiver, it is necessary to ensure a potential difference Uab> + 200mV at the A-B inputs. This offset is provided by the Counter Module; for this, the direct input (A) is pulled to the power supply, and the inverse input (B) is pulled to ground.

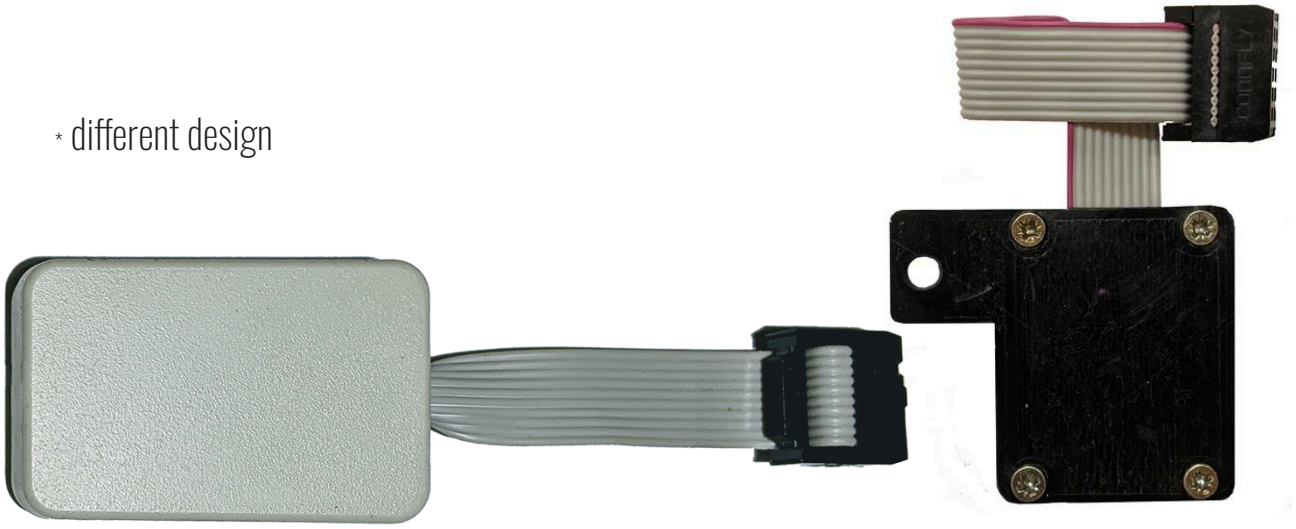
Operation of one turnstile in the restricted mode is not possible without the Counter Module. Operation of the Master-turnstile bundle and up to 3 Additional turnstiles is not possible without the Counter Module and Terminal Connector.



Schematic diagram of the turnstiles connection in the restriction mode.

MEMORY MODULE FOR RECORDING UP TO 4,000 EVENTS WITH A REAL-TIME CLOCK

* different design



Memory module is designed to record events in accordance with the time set inside the module on a particular turnstile.

The following events are taken into account:

Standard mode:

Access with the use of a card:	to the left/to the right
Free access:	to the left/to the right
Card access is blocked:	to the left/to the right
Someone else's card is used:	to the left/to the right

Accept mode:

Access with the use of a card:	to the left/to the right
Free access:	to the left/to the right
Card access is blocked:	to the left/to the right
Someone else's card is used:	to the left/to the right
Ran out of memory:	to the left/to the right

In terms of resistance to climatic factors, memory modules correspond indoors, with artificial regulation of climatic conditions.

Supply package of the module includes:

Memory module – 1 pc.
CR 2032 3V battery (installed in the memory module as a standard) – 1 pc.
Packaging (if supplied separately from the turnstile) – 1 pc.

Memory module with a real-time clock is able to store up to 4,000 events with an indication of the time, which can be adjusted using the MasterCard program via the Wi-Fi channel. Saved events are read using a Wi-Fi or RS-485 interface in the form of a structured report file.

WARNING!

The real-time clock installed in the module is configured in accordance with the current time from the Android device connected to the turnstile via Wi-Fi. Settings can be confirmed with the use of the SET button in the EVENT RECORDING window of the MasterCard app.

To install the memory module in the turnstile, you need to perform the following steps according to the figure:

- Deenergize the turnstile;
- Remove the lower casing (pos. 3);
- Remove the front casing (pos. 2);
- Unscrew the upper left nut securing the turnstile control board;
- Connect the memory module to the turnstile control board to Connector 1;
- Install the module on the stud with the nut unscrewed, then tighten the nut.

Under normal operating conditions, the battery usually lasts for not less than 5 years. If there are problems with incorrect display of time in events, replace the battery. Remove the memory module according to the previous item. Unscrew the four screws on the back of the module. Replace the CR2032 3V battery.

Housing material	ABS plastic
Colour	Black (designs in other colours are also possible)
Dimensions without mounting arm	33×48×16 mm
Dimensions with mounting arm	48×48×16 mm
Net weight	30 g
Supply voltage	5 V
Current consumption, max.	10 mA
Type of battery used	CR2032 3V
Number of events	4,000
Operating temperature	From +1 °C to +40 °C
Operating humidity	Not higher than 80%
Time before failure (medium)	Not less than 1 million cycles
Average service life	Not less than 2 years

WI-FI RC PLATE FOR TURNSTILE

Supply package of the Wi-Fi RC Plate includes:
RC Plate – 1 pc.;
USB adapter – 1 pc.;
USB A to mini (micro) USB cable - 1 pc.;
Packaging (if supplied separately from the turnstile) – 1 pc.

In order to connect and use a Wi-Fi remote to control the turnstile, please follow these steps:
1. Connect the Wi-Fi remote to the USB adapter using a USB A to mini (micro) USB cable.
2. Connect the adapter to the 220V.
3. Turn on Wi-Fi on your Android smartphone. Wi-Fi network of the remote will appear in the list of available access points with a name like PTxxxxxx (For example, PT000207 – the number depends on the remote internal number).
4. Connect to the Wi-Fi network of the remote using the default password: 12345678.
5. Run the MasterCard App (menu LOADER) on an Android device. Check connection with the device. Click the MAC button – MAC address of the device will appear in the lower field.
6. Click the ROUTER button. Enter the name of the Wi-Fi access point in the Network name field, and in the Password field, enter the password of the Wi-Fi access point of the turnstile that you want to control and click Set.
7. After a few seconds, the remote will connect to the selected turnstile (the turnstile shall be turned on!). You can control the turnstile using the keys of the Wi-Fi remote.
8. For security reasons, it is recommended to change the remote name and password. To do this, connect the smartphone in the same way. Click the NET button in the MasterCard App (menu LOADER). Enter a new username and a new password in the respective fields and click Set.
ATTENTION! Do not forget this username and password, otherwise, when necessary, you will not be able to change parameters of the turnstile that you need to control.

13. STORAGE, MARKING, PACKAGING

Turnstile included in the scope of supply is packed in a protective film and a box of corrugated cardboard, which protects it from damage during storage and handling, according to the information signs on the package. Turnstile can be stored indoors at an ambient temperature of –20 to 50 °C and a relative humidity of 98% at 25 °C without moisture condensation.

After transporting or storing the turnstile at low temperatures or high humidity, the turnstile shall be kept indoors under normal climatic conditions without the original packaging for not less than 12 hours before commissioning.

For transportation, it is necessary to additionally use transport containers depending on the transportation conditions and distance.

Turnstile in the original consumer packaging has:
Overall dimensions (length × width × height) 1150×480×450 mm.
Weight (gross) 67,5 kg.

Marking of the original consumer packaging is as follows:

Turnstile-Tripod

T3-NO-BF v.1 CE

SN: 00001171

Date of manufacture: 23/2/2021

Warrany: 2 years

Net Weight: 61,5 kg

Gross Weight: 67,5 kg

Dimensions of the package: 1150x480x450 mm

RUSGATE

ISO CE RoHS Compliant

Importer:

VZR System OU

Tulika 19, Tallinn 10613

+372-5844-4957 sales@rusgate.pro

Manufacturer:

«OREL MK» LLC

119A, Gruzovaya Str. office 71, Oryol, Russia, 302006

+7-800-200-7468 info@rusgate.pro
www.rusgate.pro

Turnstiles have physical marking in the form of laminated, moisture-resistant labels located on the front of the mechanism under the front casing. To read information from the label, it is necessary to remove the front casing (pos. 2), having previously disconnected the barrier arms. The label is as follows:

Turnstile-Tripod

T3-NO-BF v.1 CE

SN: 00001171

Date of manufacture: 23/2/2021

Warrany: 2 years

Voltage: 12 V DC Current: 2 A max
Power: 24 W max

RUSGATE

ISO CE RoHS Compliant

Importer:

VZR System OU

Tulika 19, Tallinn 10613

+372-5844-4957 sales@rusgate.pro

Manufacturer:

«OREL MK» LLC

119A, Gruzovaya Str. office 71, Oryol, Russia, 302006

+7-800-200-7468 info@rusgate.pro
www.rusgate.pro

Turnstile marking is duplicated in electronic form and remains unchanged when changing the turnstile firmware version. In the supply state, the turnstile number is indicated in the Wi-Fi code of the turnstile access point. For example, TOE0001171 (where 1171 is the turnstile sequential number). Information is also available through the MasterCard app by pressing the NOM button in the EVENT RECORDING menu (an Android device shall be connected to Wi-Fi turnstile access point).

14. SAFETY REQUIREMENTS

Only persons who have been instructed in safety procedures and have studied this operating manual shall be allowed to take part in the installation process.

When installing the turnstile, use serviceable tools only.

All cables shall be connected only when the power sources are disconnected from the mains and turned off.

Cables shall be laid in compliance with the rules of operation of electrical installations.

Before installing power supplies, observe the safety requirements set out in their technical documentation. Use electrical grounding of equipment during installation.

When operating the turnstile, follow the general rules of electrical safety when using electrical appliances.

It is forbidden to operate the turnstile in conditions that do not correspond to the operating conditions.

It is forbidden to operate the turnstile at a supply voltage that does not meet the technical specifications.

Carefully read and follow the operating requirements for power supplies contained in the documentation for these devices.

15. NOTES