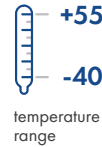


TTR-10A Motorized tripod turnstile with automatic anti-panic barrier arms for outdoor application



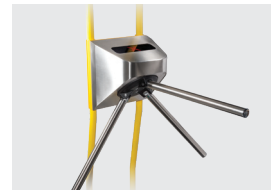
Application

TTR-10A Motorized tripod turnstile with automatic anti-panic barrier arms is designed for use in paid access systems, including transport, and at entrances of enterprises.

The main features of the TTR-10A tripod turnstile are the electric drive of the barrier arm rotation during the passage, automatic anti-panic barrier arms that fold down at a signal from an emergency unlocking device, or at a power loss, and stainless-steel housing.

The delivery set includes an RC-panel; the orientation of the RC-panel buttons relative to the directions of passage is set when connecting to the turnstile. The turnstile provides the passage control in two directions; the turnstile operating mode may be set independently for each passage direction.

It is recommended to install one turnstile per 500 people working the same shift, and based on a maximum working load of 30 persons/min. Turnstiles can be equipped with railings. The turnstile provides passage control in two directions, a turnstile operating mode may be set independently for each.



For transport



For wall mounting



Automatic anti-panic function

Operating modes

Supported operating modes:

- passage denial
- single passage in one direction and passage denial in the other direction
- single passage in both directions
- free passage in one direction and passage denial in the other direction
- free passage in one direction and single passage in the other direction
- free passage in both directions

When the power is turned off, the turnstile barrier arm falls down under its own weight, and both directions become open for free passage

Main features

- operation of the turnstile from RC-panel, WRC, ACS
- possibility of installation in the vehicle interior on vertical handrails (pipes) (TTR-10AT), on a vertical wall (TTR-10AK) or on the floor (TTR-10AB)

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- possibility of outdoor application
- built into the turnstile housing electronic boards
- safe voltage – max. 29 V; power consumption – 150 W (maximum value of 260 W can only be reached for a short period of time in some states of the turnstile, the rest of the time power does not exceed 15 W)
- to power the turnstile, a power supply of at least 5.5 A is needed; when the emergency unlocking device sends a command, as well as when the power is turned off, the passage is automatically opened by switching the barrier arm to the vertical position
- after restoring the supply voltage or removing the Fire Alarm signal the barrier arm is moved to the working position manually
- electric drive provides automatic easy rotation of the barrier arms to the home position during the passage
- smooth silent operation of the turnstile electric drive
- the drive features a high-precision sensor (encoder) that correctly detects the barrier arms position
- possibility to connect an intrusion detector and a siren to the turnstile
- two control modes – pulse and potential
- galvanically isolated outputs
- Fire Alarm control input that allows connecting the emergency unlocking device
- relay outputs for connecting additional external indicators of the passage grant / denial

Design

Turnstile housing – stainless steel with a polycarbonate insert. Barrier arms – stainless steel.

Operating conditions

The turnstile, with regard to resistance to environmental exposure, complies with GOST 15150-69 category NF4 (operation outdoors). The operation of the turnstile is allowed at ambient temperature from -40° C to +50° C (when used under a canopy up to +55° C) and relative humidity of up to 80% at +25° C.

It is a serially produced product certified for compliance with applicable Russian and European CE standards.

Delivery set

Turnstile housing with ready-mounted cover	1
Hub with barrier arms and mounting kit	1
RC-panel (cable length of at least 6.6 m)	1
MT10.1 or MT10.2 mounting bracket or MT10.3 mounting post	1
Mounting kit	1
Documentation set	1
Optional equipment (upon request)	
WRC (consisting of a receiver and two transmitters in the form of key fobs) with a range of up to 40 m	1
Intrusion detector (installed upon request at the manufacturing site)	1
Siren (alert on an unauthorized passage attempt)	1
Turnstile power supply	1

Technical specifications

Operating voltage	22V–29V DC	
Current consumption	max. 5.5 A	
Power consumption	max. 150 W	
Overall dimensions (LxWxH)	TTR-10AT	613x806x746 mm
	TTR-10AK	613x806x714 mm
	TTR-10AB	1055x806x762 mm
Passageway width	500 mm	

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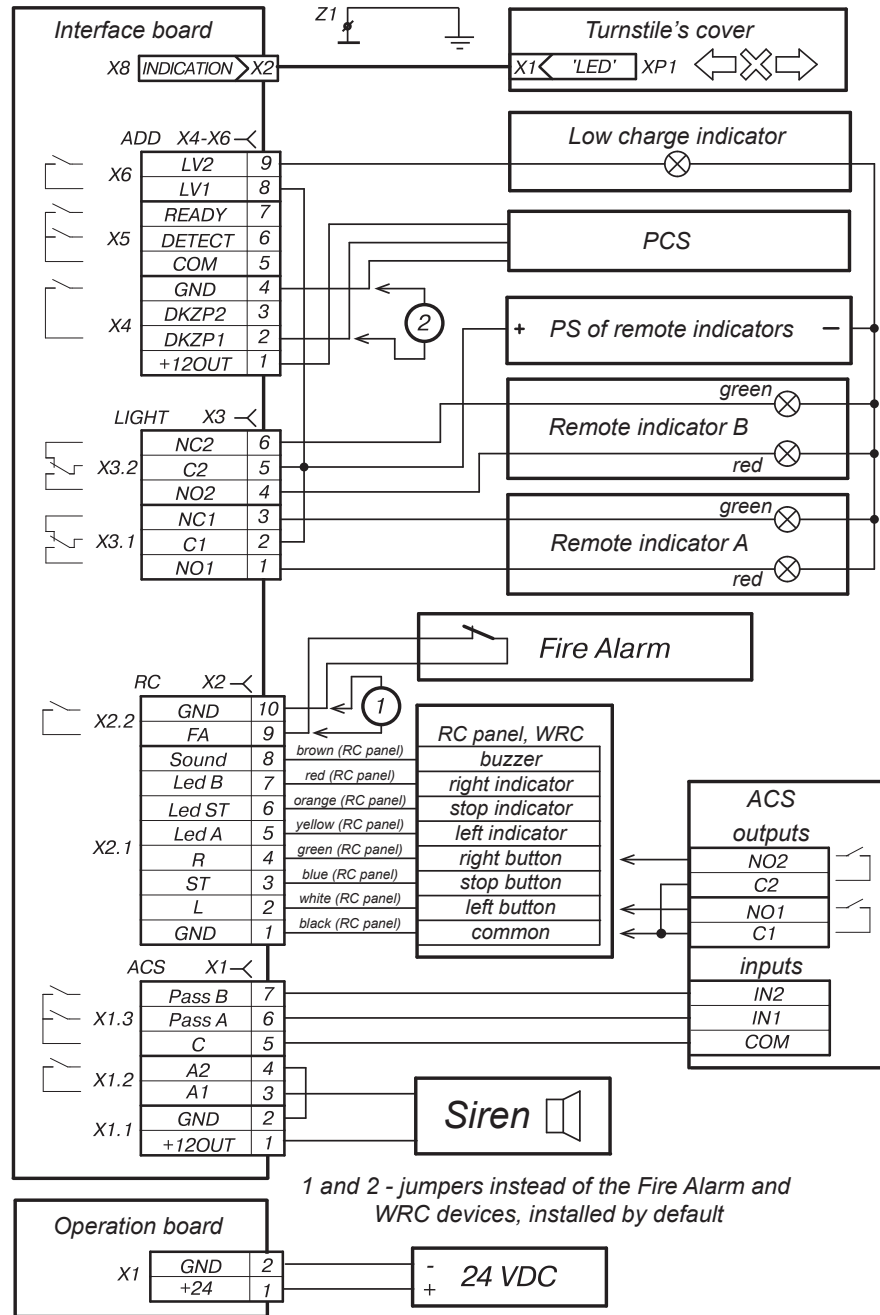
Turnstile weight	TTR-10AB	max. 55 kg
Throughput in single passage mode		30 persons / min
Throughput in free passage mode		60 persons / min
IP Code		IP54
Vandal resistance		IK09
Vibration resistance		M28 and M29
Mean time to failure		3,000,000 passages
Mean lifetime		8 years

Connection

The TTR-10A turnstile features two built-in electronic boards – a control board and an interface board. The power supply is connected to the control board, and all other external connections are made to the interface board.

Built-in electronics contacts description by connectors			
Control board			
X1	1, 2	+24, GND	24V DC, 9A power supply connection of the turnstile
Interface board			
X1	1, 2	+12OUT, GND	+12V power supply connection of optional equipment (sirens)
	3, 4	A1, A2	Alarm system connection (sirens)
	5	C	Common for A1, A2, Pass A, Pass B contacts
	6	Pass A	PASS A relay contact (passage in the direction A)
	7	Pass B	PASS B relay contact (passage in the direction B)
X2	1	GND	Common for RC-panel (WRC, ACS)
	2, 3, 4	L, ST, R	Turnstile control inputs
	5, 6, 7, 8	Led A, Led ST, Led B, Sound	Light and sound indication outputs on the RC-panel
	9, 10	FA, GND	Emergency passage opening control input
X3	1, 2, 3	NO1, C1, NC1	Light A relay contacts – connection of a remote indicator for direction A (not included in the standard delivery set)
	5, 6, 7	NO2, C2, NC2	Light B relay contacts – connection of a remote indicator for direction B (not included in the standard delivery set)
X4	1	+12OUT	+12V power supply connection for optional equipment (intrusion detector)
	2, 3, 4	DKZP1, DKZP2, GND	Intrusion detector connection
X5	5	COM	Common for DETECT and READY signals
	6	DETECT	Det Out relay output (intrusion detector status)
	7	READY	Ready relay output (the turnstile availability)
X6	8, 9	LV1, LV2	Relay output for low-voltage signalling (the battery is low)

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TTR-10A wiring diagram

Operation algorithm

The turnstile can operate from the RC-panel (included in the delivery set), WRC, or ACS controller. The turnstile is controlled by applying a low-level signal to the L, ST, and R contacts relative to the GND contact. The response to these signals depends on the control mode selected by the switch 1. Pulse control mode is when a pulse is applied to the L (R) input, the turnstile will automatically unlock for a single passage in the selected direction. The waiting time for the passage being completed does not depend on the duration of the control pulse and lasts 5 seconds. Sending pulse to the ST input locks both directions. Simultaneous sending of pulses to the L (R) and ST inputs places the turnstile in the "Free passage" mode in the selected direction. It is recommended to use pulse mode when operating from RC-panel or WRC. The orientation of RC-panel buttons (if the turnstile is facing the operator not with the front side, but with the back side) can be changed by swapping the wires from the RC-panel that are connected to the L and R, as well as Led A and Led B, respectively.

Potential control mode is when the control signal is applied to the L (R) input, the turnstile remains unlocked in the selected direction during the entire holding signal time. Sending the control signal to the ST input locks both passage directions regardless of the signals at the L (R) inputs.

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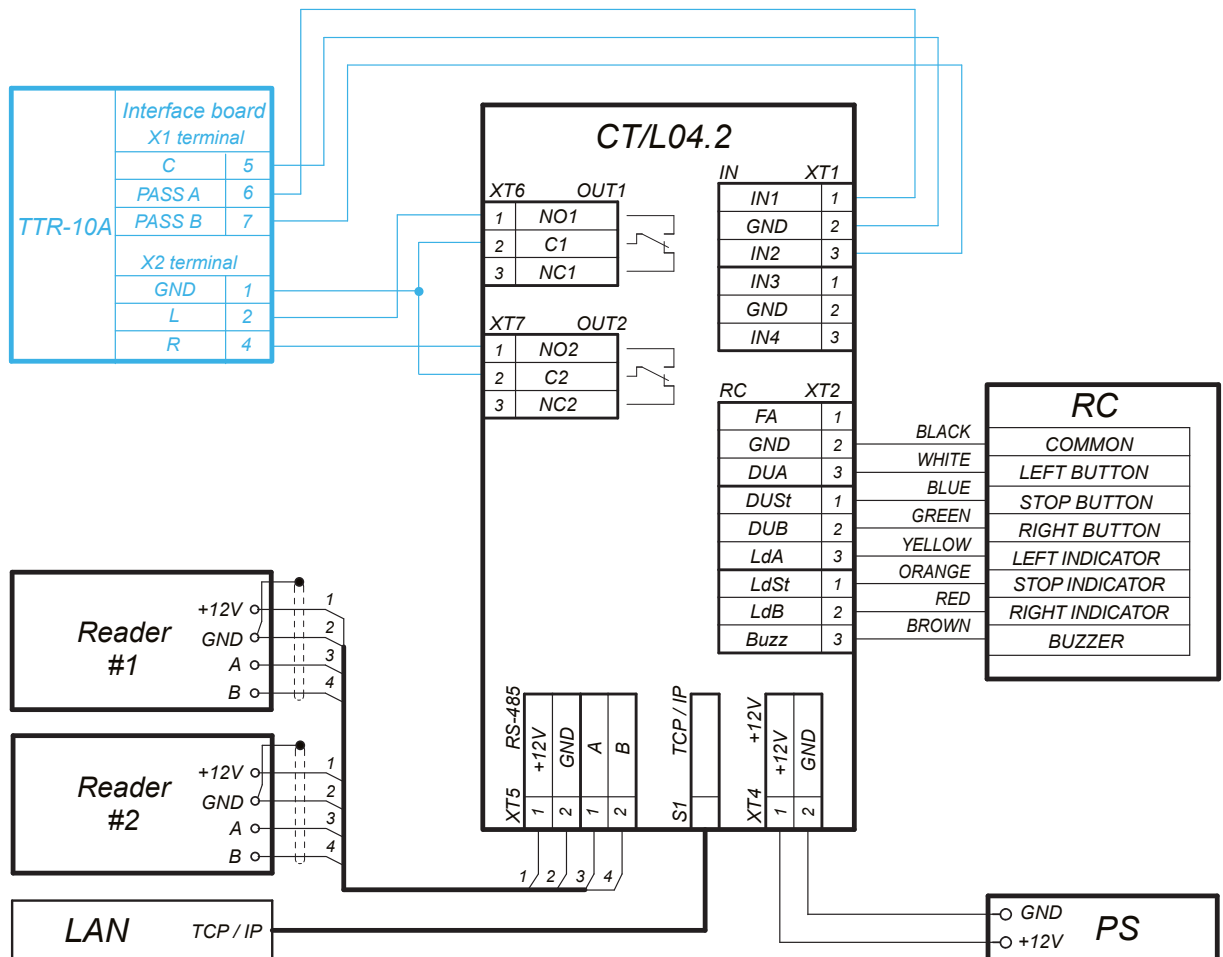
Potential mode is recommended when operating from the ACS controller. Regardless of the selected control mode, when the turnstile barrier arms are moved in one direction or the other, passage signals are generated – PASS A or PASS B respectively. These signals can inform the ACS controller of the fact of passage. Emergency passage opening is performed by removing a low-level signal from the Fire Alarm contact relative to the GND contact.

Note:

When operating the turnstile from the ACS controller, it is recommended to connect the RC-panel to the ACS controller. The maximum allowed cable length of the RC-panel (ACS controller) is 40 meters. The maximum allowed cable length of the power supply depends on its cross section and must be:

- for 2.5 mm² cable – 15 meters

Example of connection to the ACS

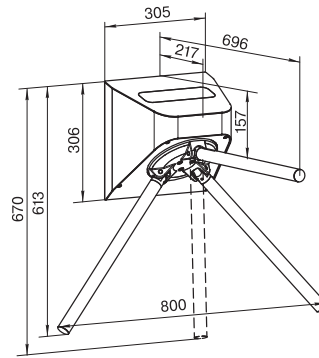


A layout example of the turnstile connection to the ACS controller

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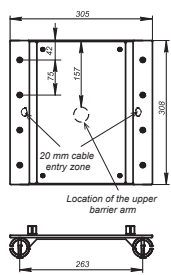


Overall dimensions

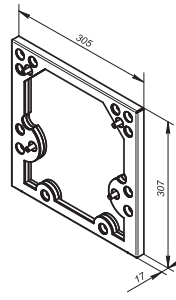
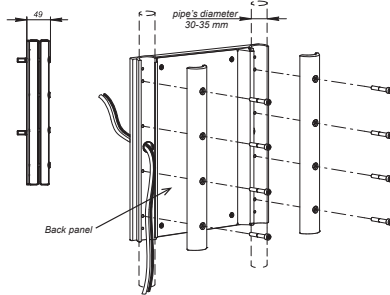


Overall turnstile dimensions without mounting bracket (mounting post)

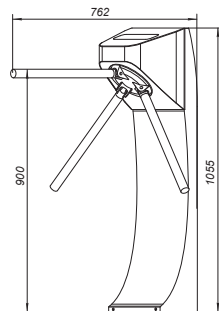
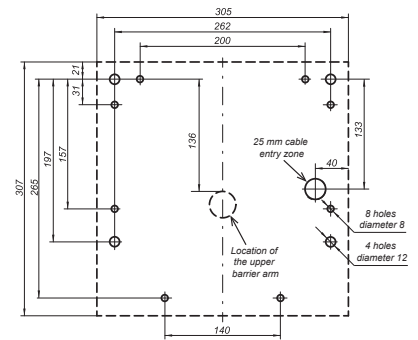
Mounting



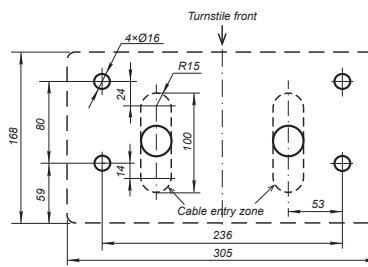
MT10.1 mounting bracket, dimensions and mounting procedure on pipes



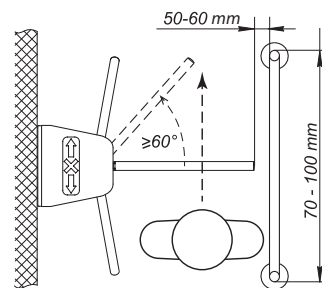
MT10.2 mounting bracket, dimensions and hole marking on the wall



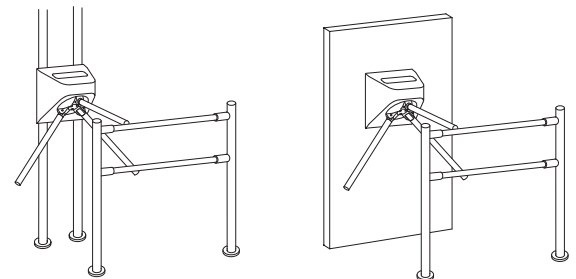
MT10.3 mounting post, dimensions and hole marking on the floor



Passage zone modeling



Turnstile top view



Example of an entrance zone project

Warranty

The warranty period is 5 (five) years commencing from the date of sale, unless otherwise determined in the delivery contract of the Product. In case of sale and installation of the equipment by authorized PERCO dealers and service centers, the warranty starts from the date of commissioning. Should there be no date of sale on the warranty card, the warranty period shall commence from the date of manufacture specified in the Certificate and on the Product label.