

TTD-08A Box tripod turnstile



+55
-20
temperature range

12V
operating voltage

anti-panic barrier arms

2
passage direction

30
persons/min

72W
power consumption

Application

TTD-08A box tripod turnstile made of stainless steel is a modern solution to arrange access control with a possibility of outdoor operation without a canopy. Due to its design, the turnstile can be installed at entrances of company offices, enterprises, business centers, banks etc.

TTD-08A key features

- modern housing design made of stainless steel
- pictogram indication which is well seen in any lighting
- places for hidden installation of readers inside the housing are indicated with pictograms
- automatic anti-panic barrier arms
- possibility to operate outdoors without a canopy at temperatures from -20° C to + 45° C (under a canopy from -20°C to +55°C)



Operating modes indication



Passage direction indication

Operating modes

It is recommended to install one turnstile per 500 people working the same shift based on a maximum working load of 30 persons/min. Turnstiles can be equipped with railings.

The turnstile provides passage control in two directions, the turnstile operating mode may be set independently for each passage direction. Supported operating modes:

- passage denial in both directions
- 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, and both directions become open for free passage.

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Main features

- operation of the turnstile from RC-panel, WRC, ACS
- possibility of outdoor application
- built-in electronic board
- safe voltage – max. 14 V
- power consumption - max. 72 W (maximum value of 72 W – within 5 seconds after powering the turnstile or removing the Fire Alarm signal; the power consumption is max. 30 W during the rest of the operation)
- to power the turnstile, a power supply of min. 6 A is needed for 5 seconds
- when a command is given by the emergency unlocking device, as well as when the turnstile power supply is turned off, the passage is automatically opened by moving the barrier arm to the vertical position
- after restoring the turnstile supply voltage or removing the Fire Alarm signal, the barrier arm is moved to the working position manually
- automatic reset of the barrier arms to the home position after each passage
- damping device provides smooth silent operation
- barrier arm rotation optical sensors record correctly the fact of passage
- turnstile features additional light indication of the passage direction on the side panels
- possibility to install built-in proximity readers
- reader interrogation zones are indicated with backlit pictograms
- possibility to connect an intrusion detector and a siren to the turnstile
- two control modes – pulse and potential
- outputs galvanic isolation
- 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 ABS plastic inserts.
Barrier arms – stainless steel.

Operating conditions

TTD-08A turnstile, with regard to resistance to environmental exposure, complies with GOST 15150-69 category N1 (for outdoor application). The operation of the turnstile is allowed at ambient temperature from +20°C to +55°C and relative air humidity 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 built-in electronic board	1
Hub with barrier arms and mounting kit	1
RC-panel (cable length of min. 6.6 m)	1
Mounting kit	1
Documentation set	1
Optional equipment (upon request)	
WRC (consisting of a receiver and 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
PFG IR 10-15 anchor (SORMAT company, Finland)	4
Turnstile power supply	1

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Technical specifications

Operating voltage	12±1.2 V DC
Current consumption	max. 6 A
Power consumption	max. 72 W
Overall dimensions with installed barrier arms (LxWxH)	1170x750x1020 mm
Passageway width	560 mm
Turnstile weight	max 70 kg
Package dimensions (LxWxH)	132x110x40 cm
Throughput in single passage mode	30 persons / min
Throughput in free passage mode	60 persons / min
Mean time to failure	4,000,000 passages
Mean lifetime	8 years

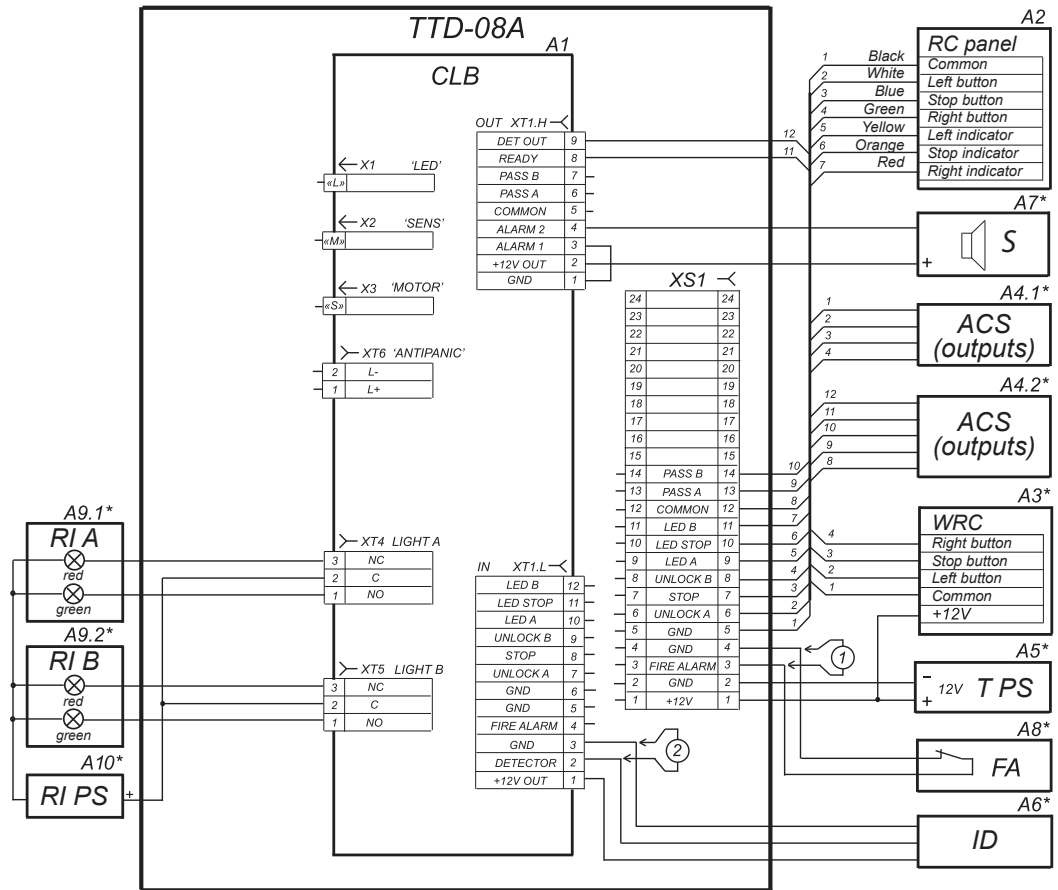
Connection

TTD-08A turnstile is equipped with integrated CLB.140 electronic board. All connections are made to the board contacts. The microcontroller installed on the board controls the turnstile's actuating mechanism, processes signals from optical sensors for moving the barrier arms, processes commands received from external devices, and generates signals about passages through the turnstile.

Built-in CLB electronic board contacts description by connectors

Connector	Contact	Electrical circuit	Designation
XT1.L	1, 2,3	+12 V, Detector, GND	Intrusion detector connection
	4,5	Fire Alarm, GND	Emergency unlocking input
	6	GND	Power supply negative terminal
	7, 8, 9	Unlock A, Stop, Unlock B	Turnstile control inputs
	10, 11, 12	Led A, Led Stop, Led B	RC-panel indication outputs
XT1.H	1	GND	Power supply negative terminal
	2	+12 V	"Siren" device power supply positive terminal
	3, 4	Alarm 1, Alarm 2	Alarm relay contacts
	5	Common	Common contact for PASS A, PASS B, Ready, Det Out signals
	6	PASS A	PASS A relay contact (passage in the direction A)
	7	PASS B	PASS B relay contact (passage in the direction B)
	8	Ready	Ready relay contact
9	Det Out	Det Out relay contact	
XT3	1, 2	+12 V, GND	Connecting an external power supply
XT4	1, 2,3	NO, C, NC	Light A relay contacts – connection of the remote indicator for direction A (not included in the standard delivery set)
XT5	1, 2, 3	NO, C, NC	Light B relay contacts – connection of the remote indicator for direction B (not included in the standard delivery set)
XT6	1, 2, 3	"L+", "L-"	AntiPanic relay contacts for connecting electromagnet of the automatic anti-panic function device
X1		LED	X1 (LED) connector for connecting indication board cable
X2		SENS	X2 (SENS) connector for connecting rotation optical sensor unit cable
X3		MOTOR	X3 (MOTOR) connector for connecting control mechanism cable with an electromechanical locking device

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Wiring diagram of external connections to the CLB Board

Diagram description	
Item	Description
A1	CLB.140 control board
A2	RC-panel
A3*	WRC
A4*	Access control system
A5*	Turnstile power supply
A6*	Intrusion detector
A7*	12V DC siren
A8*	Device that gives the emergency passage opening command (FA)
A9.1*, A9.2*	Remote indicators
A10*	Power supply for remote indicators
XS1	PSK1/12 (12) Klemmsan x 2 terminal block
1	Jumper wire if there is no FA device (A8)
2	Jumper wire if there is no intrusion detector (A6)
3	Control board indication cable
4	Turnstile cover indication cable

* The equipment is not included in the standard delivery set

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Operation algorithm

The turnstile can operate from the RC-panel (included in the delivery set), WRC or ACS controller.

Operation is performed by applying a low-level signal to Unlock A, Stop and Unlock B contacts relative to the GND contact. The response to these signals depends on the control mode selected by the J1 jumper wire.

Pulse control mode is when a pulse is applied to the Unlock A (B) input, the turnstile will automatically open 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 a pulse to the Stop input locks both passage directions. Simultaneous sending of pulses to Unlock A (B) and Stop inputs places the turnstile in the "Free passage" mode in the selected direction.

It is recommended to use pulse mode during operation 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 rear side) can be changed by swapping the wires from the RC-panel that are connected to the Unlock A and Unlock B, as well as Led A and Led B, respectively.

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

Potential mode is recommended during operation from the ACS controller.

Regardless of the selected control mode, PASS A or PASS B signals are generated when moving the barrier arms in one direction or the other. 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:

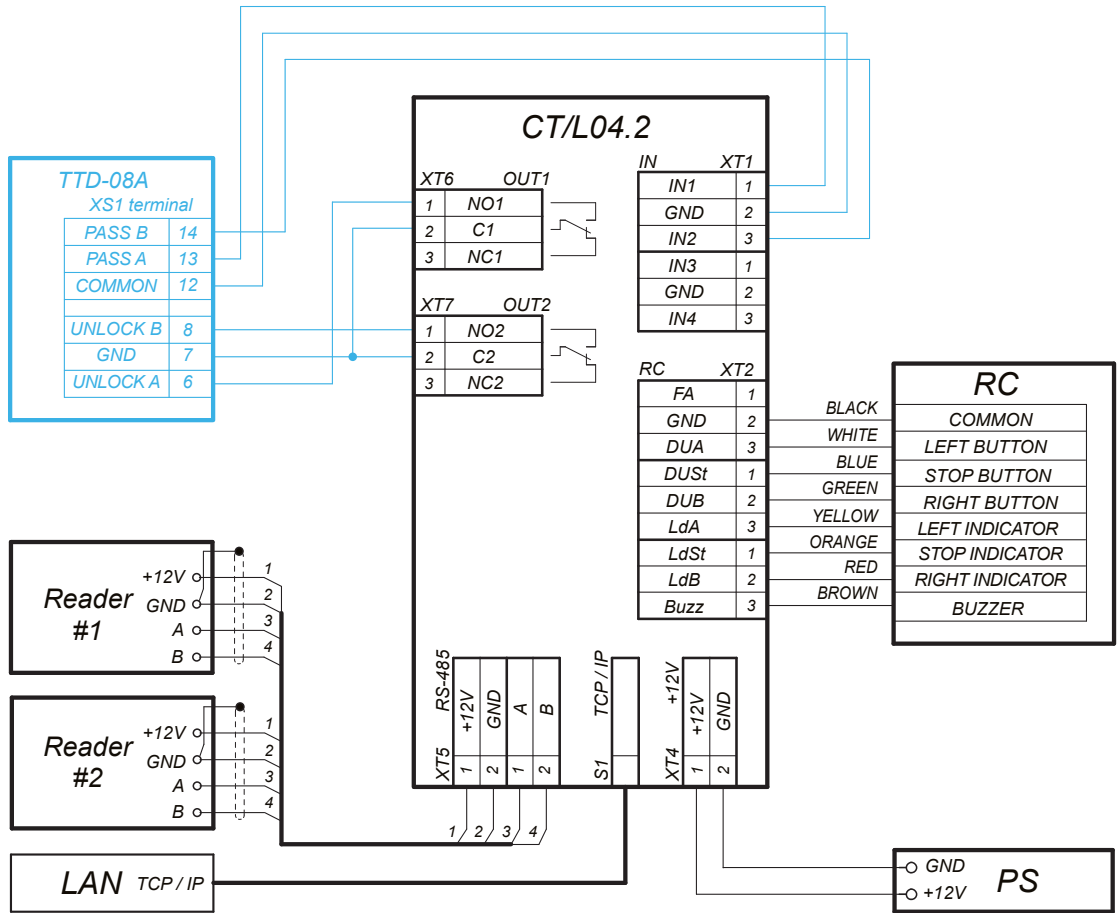
- 1.5 mm² cable cross-section – 10 m
- 2.5 mm² cable cross-section – 15 m

There is a possibility to install PERCo card readers inside the turnstile housing. If third-party readers are installed, they must comply to the following technical requirements:

- overall dimensions – max. 135x90x30 mm
- identifiers reading range – min. 50 mm

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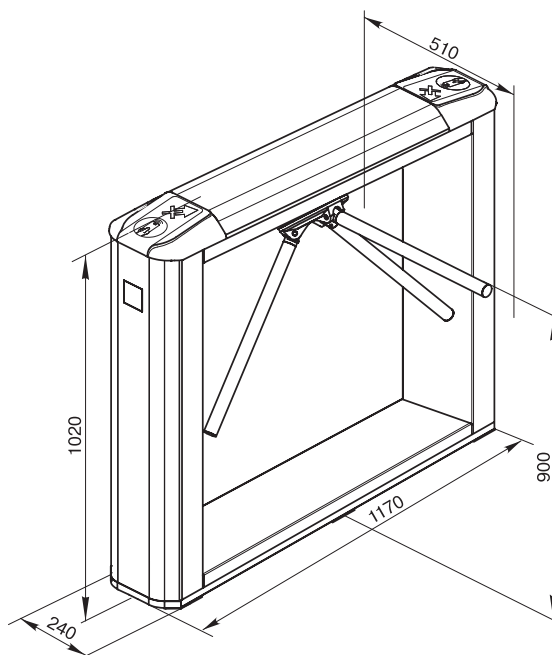
Example of connection to the ACS



1 - jumper wire, installed if there is no FA device

Example of turnstile connection to the ACS controller

Overall dimensions

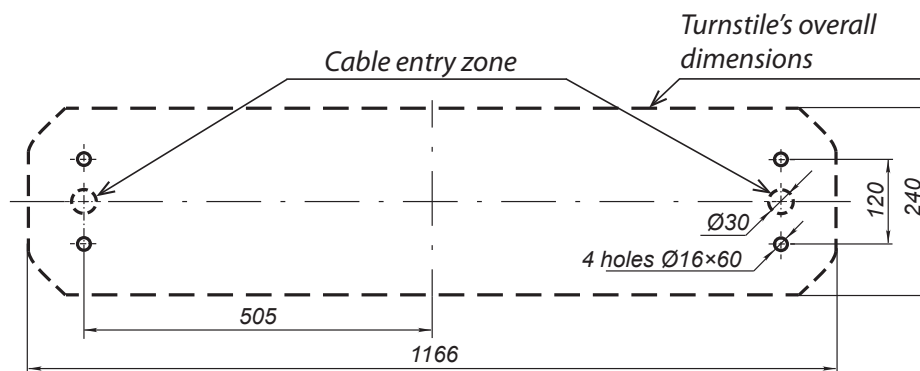


Overall dimensions

TTD-08A Box tripod turnstile

Mounting

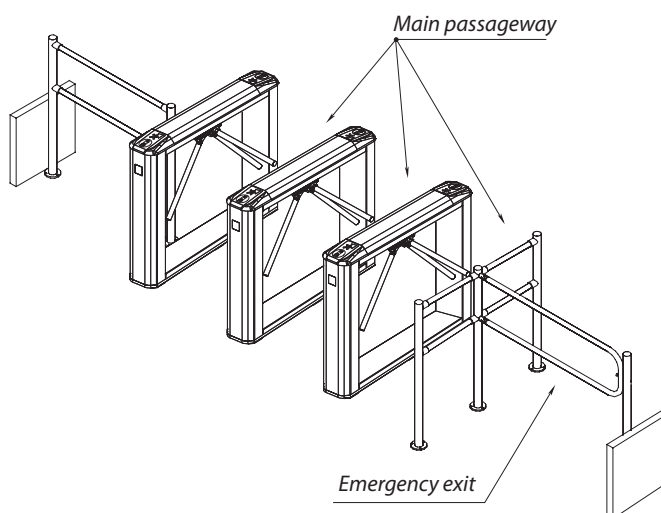
Foundation requirements: concrete (not lower than 400 grade), stone, etc. foundation of at least 150 mm thick, use reinforcing elements (400x400x300 mm) when installing turnstile housing on a less steady foundation.



Hole marking for turnstile mounting and cable entry zone

Passage zone modeling

When the turnstile is operated from ACS, it is recommended to place card readers in the turnstile housing. BH01 0-03 bracket is used for mounting readers on the BH02 series railings.



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.