







# ST-11 Speed gate



 <p><b>+50</b> <b>+1</b></p> <p>temperature range</p>	 <p><b>24V</b></p> <p>operating voltage</p>	 <p><b>160W</b></p> <p>power consumption</p>
 <p><b>2</b></p> <p>passage directions</p>	 <p>motor drive</p>	 <p><b>60</b></p> <p>persons/min</p>

## Application

ST-11 Speed gate with swing panels is designed for indoor operation. It is a perfect solution for sites with high aesthetic and comfort requirements.

Speed gate top covers can be made of artificial quartz stone or stainless steel. The swing panels of ST-11 can be of different width: 650 mm, 900 mm, and 1000 mm. The increased passageway width allows organizing an additional emergency exit and a convenient passage for people with reduced mobility. When passing through, the turnstile swing panels open.

If necessary, the number of passage zones can be increased by installing STD-11 double-sided sections. Each double-sided section allows arranging one extra passage zone. The tracking system is equipped with two levels of infrared sensors with 24 pairs located on the upper level and the other 24 on the lower level of the turnstile, which guarantees safety and high throughput and prevents tailgating.

The delivery set includes an RC-panel; the orientation of the RC-panel buttons relative to the passage directions is set when connecting to the turnstile.



RC-panel

## Operating modes

The powered speed gate operates in a normally closed mode. It is possible to switch the turnstile to the additional "Automatic opening in the selected direction" mode, as well as to adjust initial position of the swing panels in the "training" mode.

The product provides independent control of the passage in two directions.

Control commands:

- passage denial
- authorized single passage in the set direction
- authorized free passage in the set direction
- authorized free passages in both directions

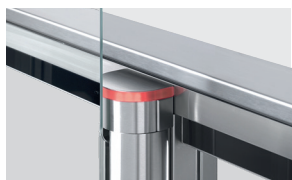
When the power is off, the turnstile panels are unlocked and can be moved manually in any direction.

## Main features

- operation of the speed gate from RC-panel, WRC, ACS
- built-in electronic boards

## ST-11 Speed gate

- safe voltage – 24 V
- power consumption – max. 160 W per passage
- two levels of infrared sensors control the passage zone; 24 pairs are located on the upper level and 24 – on the lower one
- possibility for several users to perform authorized single passages in a row in the same direction without the panels being closed
- 4 types of panels, both for different passageway widths (600, 900, and 1000 mm) and increased height (1300 mm for a passageway width of 600 mm)
- the number of passage zones can be increased with STD-11 double-sided section installation
- proximity card readers can be installed inside sections under the top covers (overall reader dimensions – max. 155x68x28 mm, reading range – min. 40 mm)
- central sections feature indication blocks of passage grant / denial
- indication of passage permission on the top covers of sections made of artificial stone (not provided on top covers made of stainless steel)
- reader interrogation zones are indicated with pictograms on stainless steel top covers
- possibility to adjust the panels position when in the closed position (training mode)
- Fire Alarm input for connecting the emergency passage opening device; when the command is sent from it, the panels automatically opened in one direction and it is possible to pass through the turnstile in both directions
- outputs for connecting remote indication blocks of passage grant / denial, as well as a sounder (sirens)
- two control modes: pulse and potential; it can operate both as a standalone unit controlled by the operator using an RC-panel and as a part of ACS



Turnstile mode indication



Turnstile mode indication (artificial stone top cover)

## Design

Housing – stainless steel; filler panels – 8 mm tempered glass; top cover – glass and / or stainless steel; panels – 10 mm tempered glass.

The speed gate can be equipped with 4 types of swing panels.

Swing panels type	Passageway width	Barrier height
ATG-300	650 mm	915 mm
ATG-300H	650 mm	1300 mm
ATG-425	900 mm	915 mm
ATG-475	1000 mm	915 mm

Size 1 and Size 2 switches positioning on the ST-01.771 control board, depending on the type of swing panels:

Swing panels type	Switch position	
	Size 1	SIZE2
ATG-300	ON	OFF
ATG-300H	ON	ON
ATG-425, ATG-475	OFF	OFF

# ST-11 Speed gate

## Operating conditions

The turnstile, with regard to resistance to environmental exposure, complies with GOST15150-69 category NF4 (operation in rooms with climate control).

The operation of the turnstile is allowed at ambient temperature from +1 °C to +50 °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

ST-11	
ST-11 /M (Master) section	1
ST-11 /S (Slave) section	1
Section top cover	2
Glass panel	2
RC-panel with cable	1
Documentation set: Certificate and Operation manual	1
STD-11	
STD-11 section	1
Section top cover	1
Glass panel	2
RC-panel with cable	1
Certificate	1

## Technical specifications

Operating voltage	24 V	
Current consumption	6,5 A	
Power consumption	160 W	
Throughput in single passage mode	up to 60 persons / min	
Passageway width	ATG-300, ATG-300H	650 mm
	ATG-425	900 mm
	ATG-475	1000 mm
Mean time to failure	5,000,000 passages	
Mean lifetime	8 years	
ST-11 weight with swing panels	148 kg	
STD-11 weight with swing panels max.	98 kg	
Overall ST-11 dimensions *	with ATG-300 swing panels	1236×944×1022 mm
	with ATG-300H swing panels	1236×944×1300 mm
	with ATG-425 swing panels	1236×1194×1022 mm
	with ATG-475 swing panels	1236×1294×1022 mm

\*Calculation of overall dimensions when organizing several passage zones:

$L_{total} = 864n + 1114m + 1214k + 84$  (mm), being:

**n** – the number of installed pairs of ATG-300 and ATG-300H swing panels;

**m** – the number of installed pairs of ATG-425 swing panels;

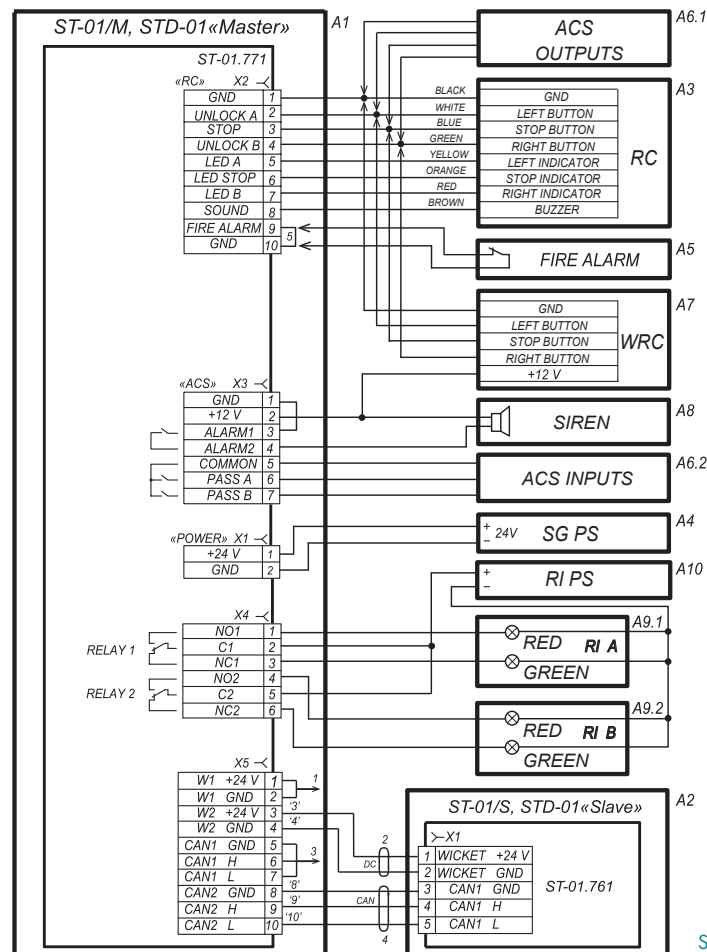
**k** – the number of installed pairs of ATG-475 swing panels.

## Connection

The sections are equipped with integrated electronic boards. The Slave section (side of the bidirectional section) is connected by its standard cables to the Master section (side of the bidirectional section) of one passage zone. The Master section (side of the bidirectional section) is equipped with the ST-01.771 control board (located at the bottom of the central section post behind the cover plate). All external connections are made to this board contacts. Microcontrollers, installed on the boards, control the drives of the swing panels, process signals from IR sensors, process external commands, and generate signals about passages through the turnstile.

# ST-11 Speed gate

ST-01.770 control board contacts description by connectors			
Connector	Contact	Electrical circuit	Designation
X1 (Power)	1	+24V	External power supply connection
	2	GND	
X2 (RC)	1	GND	Common
	2	Unlock A	Direction A control input
	3	Stop	Control input – passage denial
	4	Unlock B	Direction B control input
	5	Led A	Indication output of direction A on the RC-panel
	6	Led Stop	Indication output of passage denial on the RC-panel
	7	Led B	Indication output of direction B on the RC-panel
	8	Sound	RC-panel sound signal output
	9	Fire Alarm	Emergency passage opening control input
	10	GND	
X3 (ACS)	1	+12V	+12V output for powering additional devices
	2	GND	Common
	3	Alarm1	Siren connection output
	4	Alarm2	
	5	Common	Common for PASS A, PASS B outputs
	6	PASS A	PASS A relay contact (passage in the direction A)
	7	PASS B	PASS B relay contact (passage in the direction B)
X4	1	NO1	Normally open Light A output contact
	2	C1	Common Light A output contact
	3	NC	Common Light A output contact
	4	NO2	Normally open Light B output contact
	5	C2	Common Light B output contact
	6	NC2	Normally closed Light B output contact

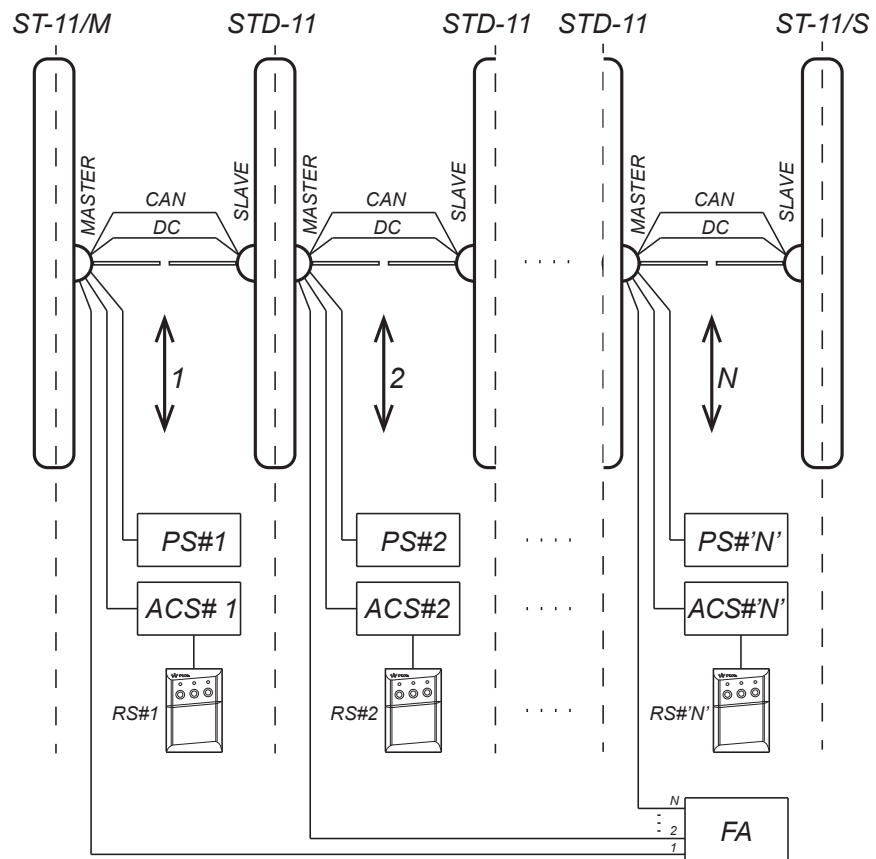


ST-11 connection layout

# ST-11 Speed gate

Layout description		
Item	Description	
A1	Master section (section side)	1
A1.1	Control board	1
A1.2	Drive control board, Master section (section side)	1
A2	Slave section (section side)	1
A2.1	Drive control board, Slave section (section side)	1
A3	RC-panel	1
A4*	Speed gate power supply	1
A5*	Fire Alarm signal sending device	1
A6.1*, A6.2*	ACS controller	1
A7*	WRC	1
A8*	12V DC siren	1
A9.1*, A9.2*	Remote indication block	2
A10*	Remote indicators power supply	1
1, 2	DC connection cable	2
3, 4	CAN connection cable	2
5	Jumper wire in case there is no Fire Alarm device (A5). Installed by default.	1

\*The equipment is not included in the standard delivery set



The connection layout of the ST-11 turnstiles and the two-sided sections STD-11 to organize the checkpoint with several passage zones

## ST-11 Speed gate

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The speed gate can operate from the RC-panel (included in the delivery set), WRC, and ACS controller.

The 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 Pulse switch.

Pulse control mode (Pulse switch in the ON position) is when a pulse is applied to the Unlock A (B) input, the speed gate panels will automatically open for a single passage in the A (B) direction. The waiting time for the passage being completed does not depend on the duration of the control pulse and lasts 8 seconds. Sending a pulse to the Stop input closes the panels from any position, thus, blocking the passage. Simultaneous sending of pulses to the Unlock A (B) and Stop inputs switches the turnstile in the "Free passage" mode in the selected direction.

It is recommended to use the pulse mode when operating from an RC-panel or WRC. The orientation of the RC-panel buttons can be changed by swapping the wires from the RC-panel that are connected to the unlock A and Unlock B contacts, as well as Led A and Led B, respectively.

Potential control mode (Pulse switch in the OFF position) is when the control signal is applied to the Unlock A (B) input, the glass panels open in the selected direction during the entire holding signal time. Sending the control signal to the Stop input closes the sliding panels, thus, blocking the passage, regardless of the signals at the Unlock A (B) inputs.

Potential mode is recommended when operating from the ACS controller.

Regardless of the selected control mode, the PASS A or PASS B signals are generated when passing in one direction or the other. These signals can inform the ACS controller of the fact of passage.

Emergency opening of the passage zone is performed by removing a low-level signal from the Fire Alarm contact relative to the GND contact.

The product also features the additional "Automatic opening in the selected direction" mode (R1 switch in the ON position). This is a mode of free passage through the turnstile in one preselected direction (selected by the R2 switch) with automatic opening and closing of the panels during passage.

The training mode (R1 switch in the OFF position, and R2 switch on the ST-01.771 control board in the ON position) allows manually adjusting the home (closed) position of the turnstile swing panels.

### Note

When operating the speed gate from the ACS controller, it is recommended to connect the RC-panel to the ACS controller.

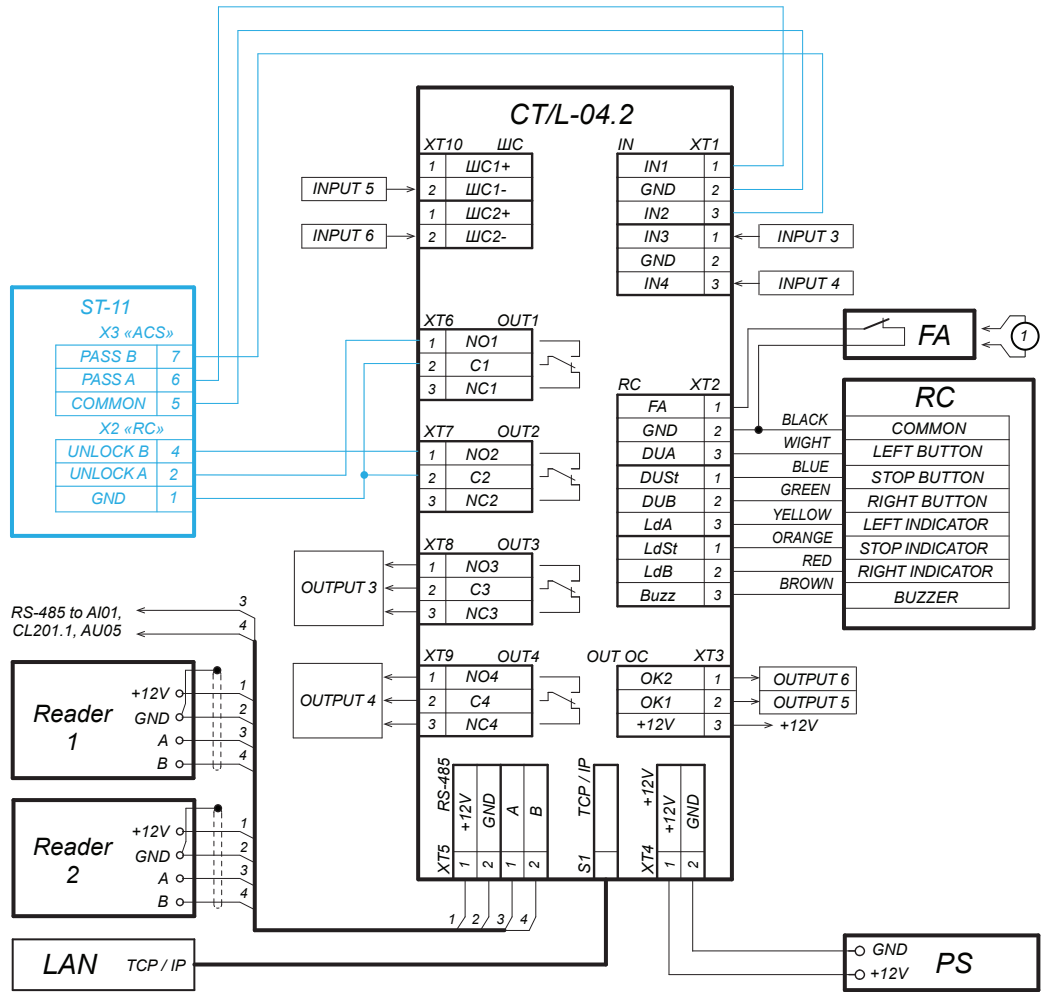
The maximum allowed cable length from the RC-panel (ACS controller) is 40 meters.

The maximum allowed cable length from the power supply depends on its cross section and must be:

- for 1.5 mm<sup>2</sup> cable – 10 meters
- for 2.5 mm<sup>2</sup> cable – 20 meters

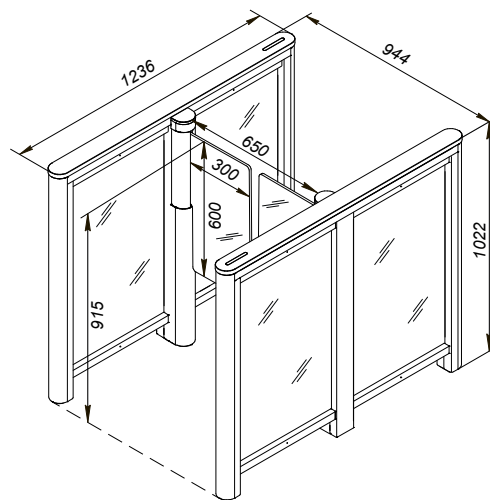
# ST-11 Speed gate

Example of connection to the ACS

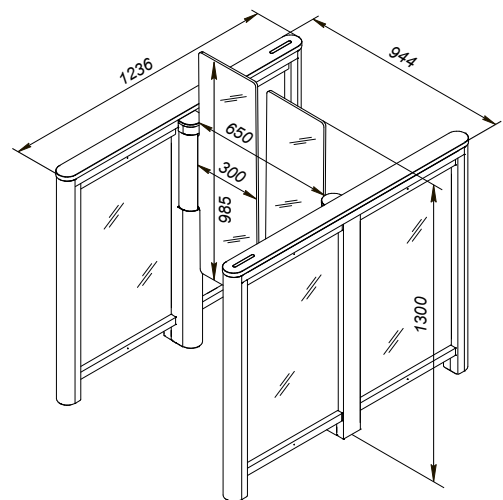


1 - jumper wire, installed when there is no FA device

## Overall dimensions

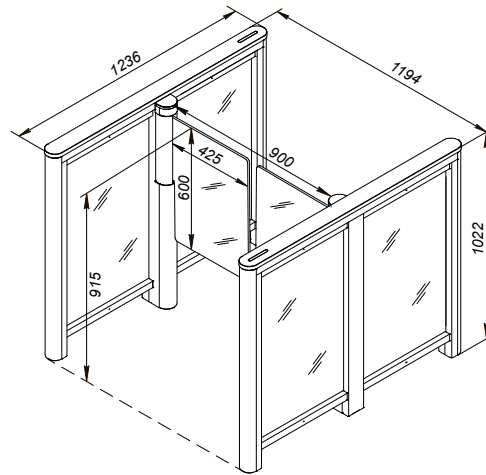


ATG-300 swing panels

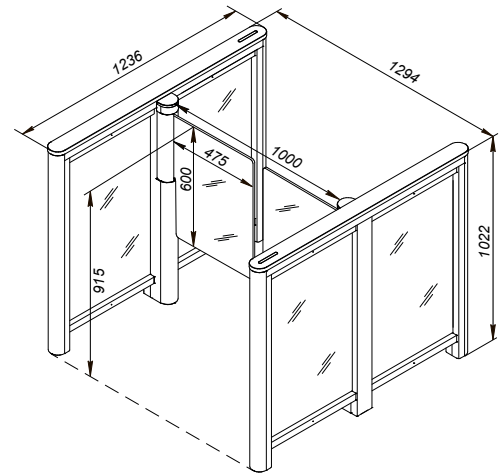


ATG-300H swing panels

# ST-11 Speed gate

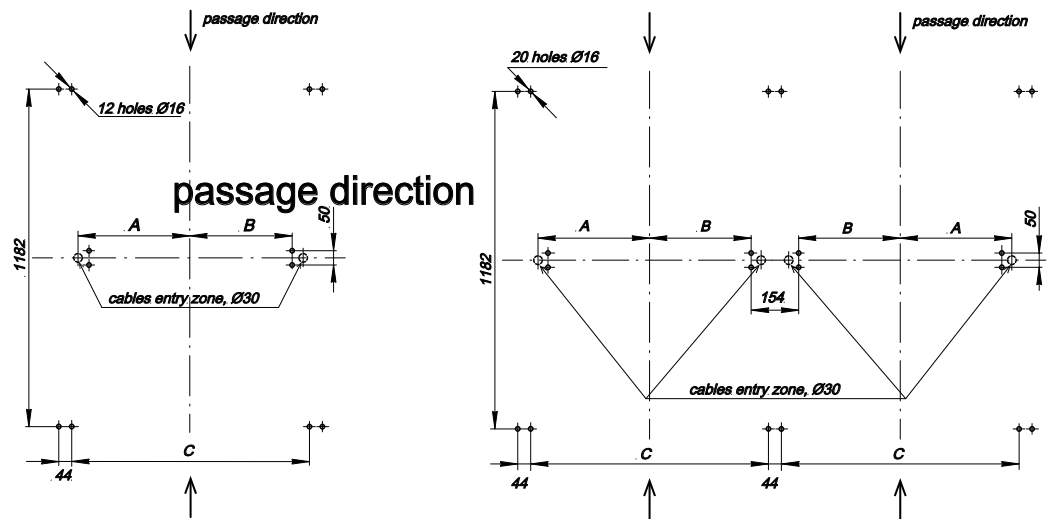


ATG-425 swing panels



ATG-475 swing panels

## Mounting



for ATG-300, ATG-300H: A = 388, B = 354, C = 818  
 for ATG-425: A = 513, B = 479, C = 1068  
 for ATG-475: A = 563, B = 529, C = 1168

Hole marking for sections mounting and cable entry zone

Foundation requirements: concrete (grade 400 or higher), stone, etc. foundation of at least 150 mm thick, use reinforcing elements (450x450x200 mm) when installing sections on a less steady foundation.

## 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.