



GROUP OF COMPANIES

"TiSO-PRODUCTION" LTD

WAIST-HIGH TURNSTILE JETPAN



OPERATION MANUAL
AUIA.168 OM (rev.1)

2018

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INTRODUCTION

This Operation Manual (hereinafter referred to as OM) covers the servo-operated «JETPAN» type waist-high turnstile (hereinafter referred to as the "turnstile"). The Operation Manual contains information about design, specifications, installation for proper operation and maintenance of the turnstile.

This Operation Manual is prepared in compliance with the specification requirements TU U 28.9-32421280-005:2018.

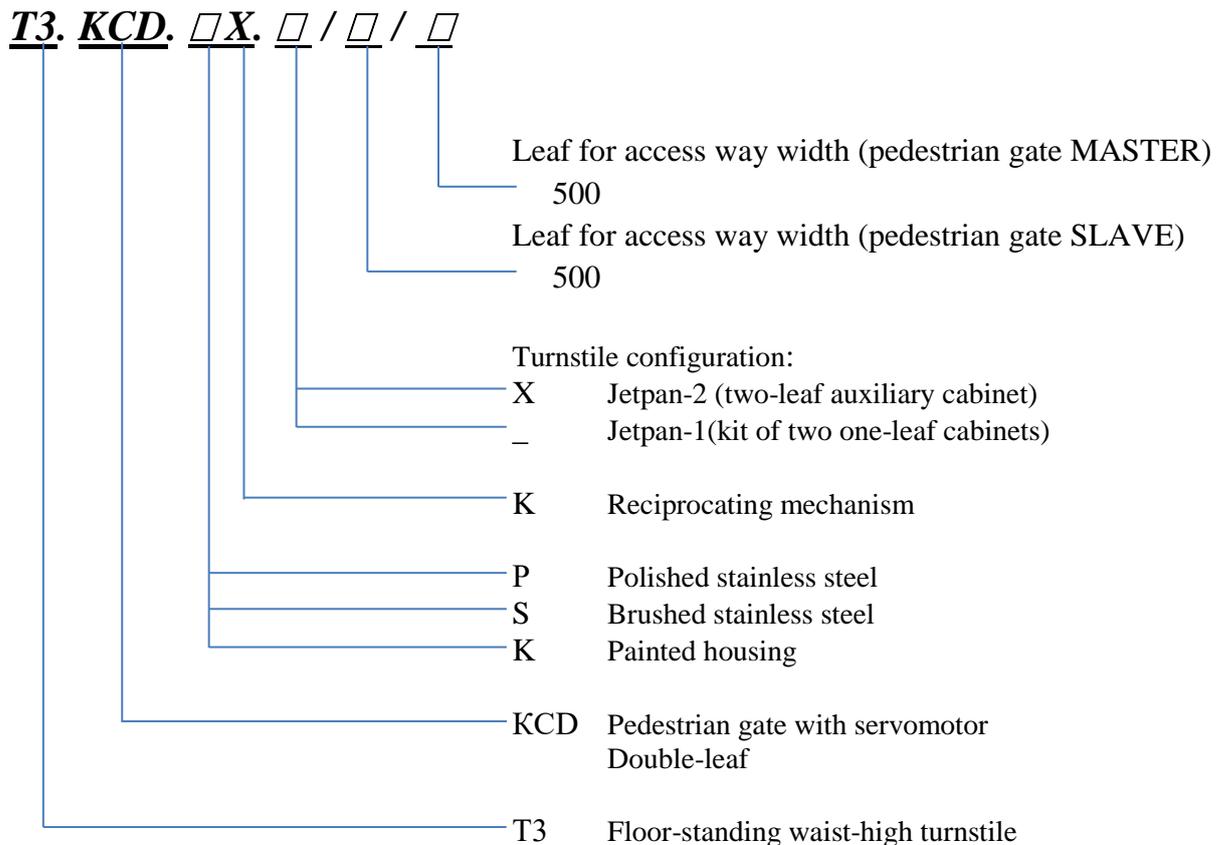
The turnstile shall be serviced only by the qualified staff having the relevant class of permit to work with electrical facilities with voltage up to 1000V and scrutinizing this Operation Manual, obtaining safety instructions and trained for operation and maintenance of the turnstile.

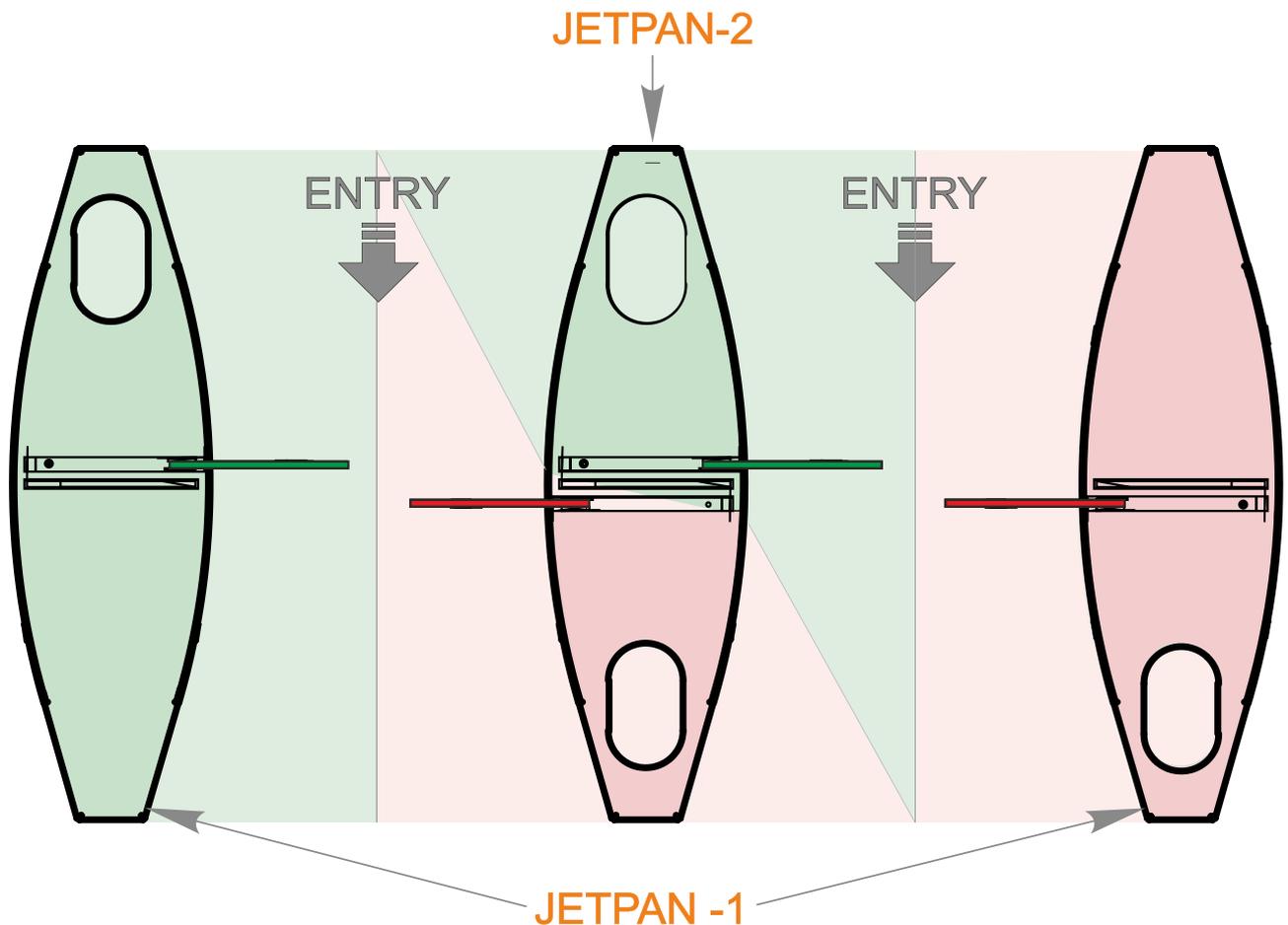
Reliability and durability of the turnstile operation are provided with observation of modes and conditions of transportation, storage, installation and operation. So, fulfillment of all requirements specified in this document is mandatory.

The turnstile «JETPAN» can be installed either singly or in line. The single turnstile includes two cabinets (left-hand and right-hand), each of which has one glass blade.

The turnstile row is provided by installation one more or a number of additional cabinets equipped with glass blades from both sides reducing costs and saving space.

Depending on the purpose and design features of the turnstile, the following pattern of reference designation is accepted:





Turnstile «JETPAN-1» - set of two pedestrian gates Master and Slave: - identification order code **T3.KCD.PK _/500 / 500**

Turnstile «JETPAN-2» - one two-leaf pedestrian gate Master/Slave: - identification order code **T3.KCD.PK. X / 500 / 500**

Fig. 1 – Definition of the turnstile component description

Example of reference designation of the single turnstile «JETPAN-1» consisting of Master and Slave pedestrian gates made of brushed stainless steel:

The turnstile T3.KCD.SK TU U 28.9-32421280-005:2018

Example of reference designation of the double turnstile «JETPAN-2» consisting of one consisting of servo-operated Master/Slave pedestrian gate made of polished stainless steel

The turnstile T3.KCD.PK.X TU U 28.9-32421280-005:2018

Due to regular improvement of the product its design can be modified without degradation of the product features and quality not covered by this Operation Manual.

WARNINGS TO THE CUSTOMER ON SAFE OPERATION OF THE TURNSTILE

These warnings are designed for ensuring of safety during operation of the turnstile to prevent violation of safety characteristics by improper installation or operation. These warnings are aimed at drawing attention of the customer to safety problems.

GENERAL WARNINGS

The Operation Manual is an integral part of the product and it should be handed over to the customer. The OM should be kept for later use and consulted for clarifications if required. If the turnstile is resold, handed over to another owner or transported to another place, make sure that the OM is enclosed to the turnstile to be used by new owner and/or maintenance staff during installation and/or operation.

Safety measures and requirements specified in this in this OM must be observed:

- the turnstile must be connected to ground loop prior to operation;
- the turnstile should be connected to AC network with parameters specified in p.1.2 "Specifications";
- inspection, adjustment and repair should be performed only after the turnstile is deenergized.

After the turnstile is purchased it should be unpacked and its integrity should be checked. In case of doubt in integrity of the turnstile it should not be used and the customer shall refer to the supplier or to the manufacturer.

Packing accessories (wooden pallet, nails, clips, polyethylene bags, cardboard etc.) as potential sources of hazard must be removed to unacceptable place prior to proper use of the turnstile.

As electric shock protection device the turnstile is related to 01 protection class according to the GOST (State Standard) 12.2.007.0-75 and is not intended for operation in explosive and fire-hazardous areas by the "Electrical Installation Code".

Using of the turnstile for unintended purpose, improper installation, nonobservance of conditions of transportation, storage, installation and operation specified by this OM, may result in damage to people, animals or property for which the manufacturer is not responsible.

1. DESCRIPTION AND OPERATION

1.1 General Information and Designation

1.1.1 Purpose:

The motorized turnstile is designed for pedestrian movement control at access points of industrial enterprises, banks, stadiums, administrative facilities etc. by access control system (from magnetic card readers) or manually (from manual control panel).

Traffic flow capacity of the turnstile with personal identification is at least 30 persons per minute in one direction.

1.1.2 Dimensions and weight of the turnstile correspond to the values specified in Table 1

Dimensions of turnstile group - Table 1

Designation of turnstile modification type	Access way width	Dimensions, mm			Max. weight, kg
		H	L	B	
T3.KCD.XK_/500/500	500	1522 /	1080	1000 (1006*)	211
T3.KCD.XK_/500/500	500+500	1800** (HG)	1870		345

When the turnstile with more than two access ways is ordered:

$$L_{total} = 790 \cdot s + b$$

where s – number of 500 mm access ways «standard»;

b - lid width 290 mm;

Example of calculation of size L_{total} for double turnstile = $790 \cdot 1 + 790 \cdot 1 + 290 = 1870$ mm (See Fig 2)

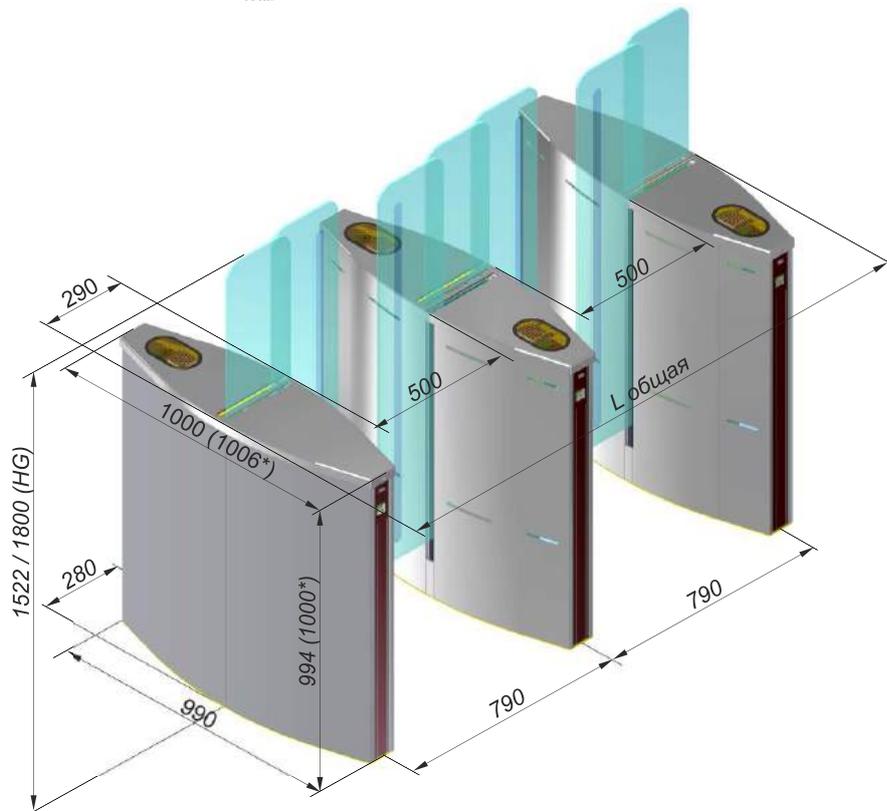


Fig. 2 – Dimensions of turnstile group

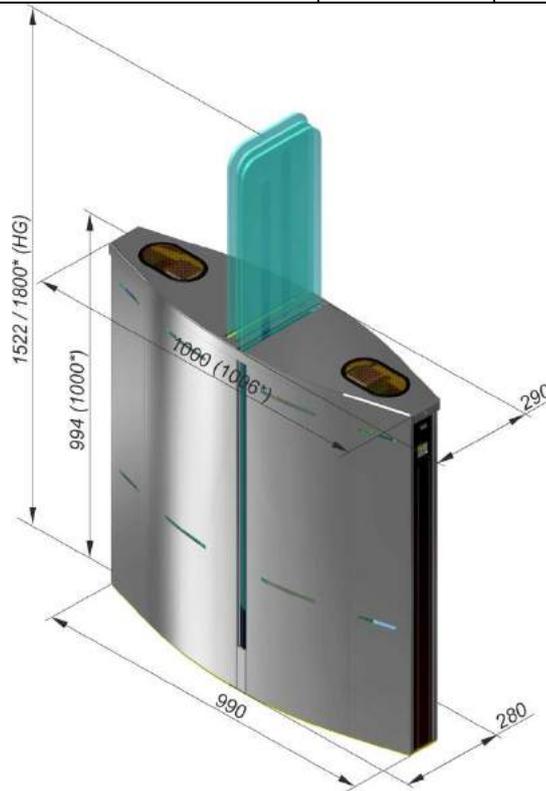
* Overall dimension for the turnstile with glass countertop

** Overall dimension for the turnstile with high glass panel (Jetpan-HG 1800)

1.1.3 The turnstile component identification codes are specified in Table 2.

Overall dimensions of cabinet - Table 2

Description of the turnstile component	Order code	Dimensions, mm			Max. weight, kg
		H	L	B	
JETPAN-1	T3.KCD.XK	1522	290	1000 (1006*)	100
JETPAN-2	T3.KCD.XK				130
JETPAN-1 HG	T3.KCD.XK.X	1800	290	1000 (1006*)	105
JETPAN-2 HG	T3.KCD.XK.X				134



* Overall dimension for the turnstile with glass countertop

Fig. 3 – Overall dimensions of the turnstile cabinet

1.1.4 The operation condition parameters according to GOST 15150-69 are specified in Table 3.

Table 3

Operation conditions	For climatic modification	Parameter value
1	2	3
Ambient air temperature	NF4	+1°C to +40°C
Relative air humidity		80% at +20°C
Ambient air allowable pressure		84 to 106,7 kPa
Transportation temperature range		- 40°C to + 50°C
Storage temperature range		+ 5 to + 40°C
Structural design category		L3

Continued Table 3

1	2	3
Altitude above sea level		up to 2000m
Environment		Explosion-proof, does not contain current-conducting dust, aggressive gases and vapours in concentration destroying isolation and metals, disturbing normal operation of the equipment installed in turnstiles
Installation site		In enclosed spaces in the absence of direct impact of precipitations and solar radiation
Operating position		Vertical, deviation from vertical position no more than 1° to any side is allowed

1.1.5 Reliability indices:

- mean time to repair (without delivery time of spare parts, tools and accessories) – at most 6 hours;
- mean time to failure – at least 1 500 000 accesses;
- mean service life between overhauls – at least 10 years

1.2 Specifications

Key parameters of the turnstile are specified in Table 4.

Table 4

Parameter description	Unit measure	Parameter value
Traffic flow capacity in free access mode, at least	man/min.	30
Opening/closing time	s	0,8
Maximum access way width	mm	500
Power supply voltage		
– AC power supply (primary)	V Hz	~ 100 ÷ 240 50/60
– DC power supply (secondary)	V	12
Maximum power consumption	W	155
Index of protection according to EN 60529	-	IP41

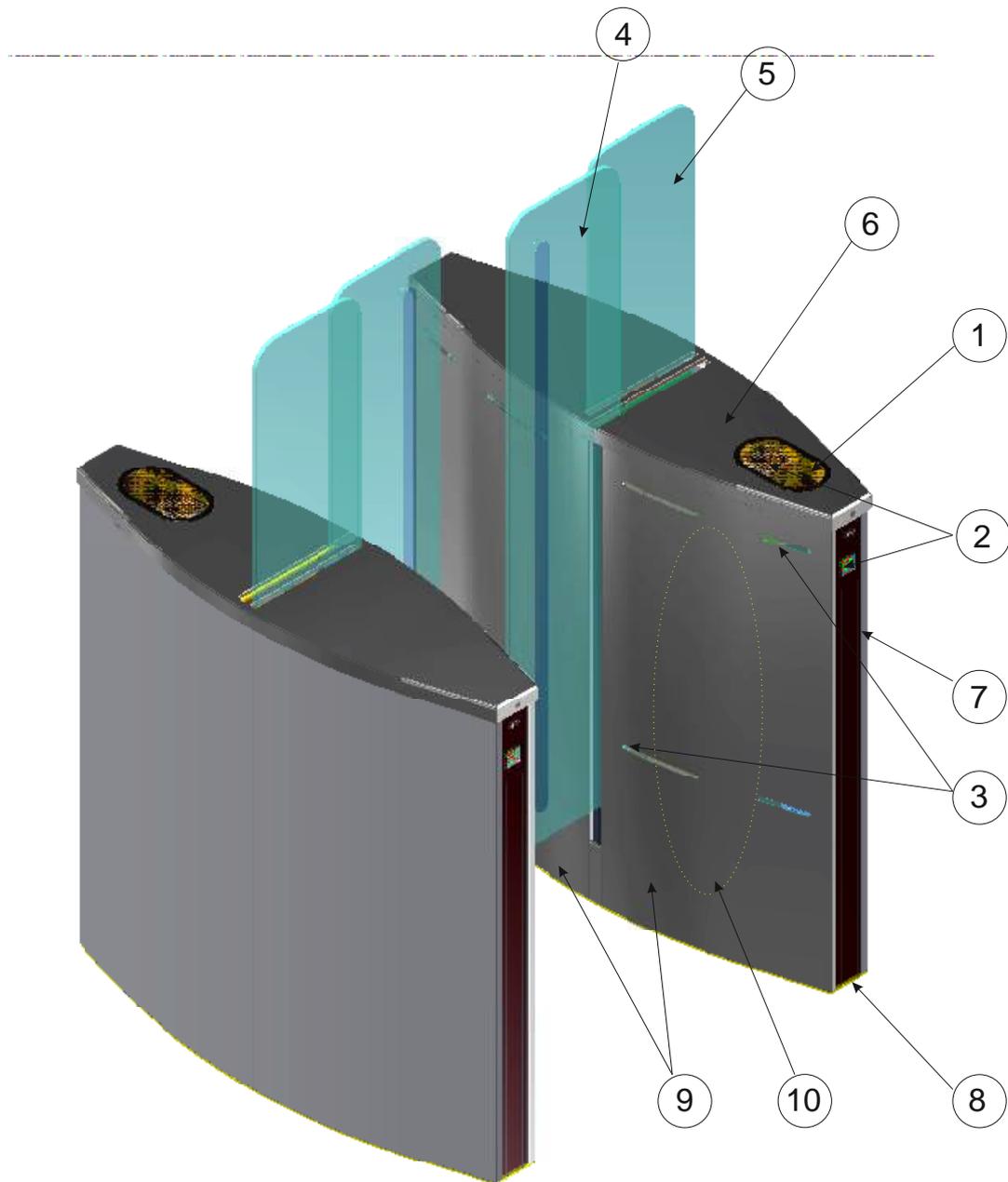
1.3 Configuration and Scope of Delivery

1.3.1 The turnstile modification depends on the number of access ways:

1) For arrangement of single access way the turnstile «JETPAN-1» " is a set of two similar in design pedestrian gates (Master and Slave) with one each of which has one glass leaf (reference designation T3.KCD.XK))

2) For arrangement of two or more access ways the turnstile «JETPAN-1» is a set of two one-leaf pedestrian gates (reference designation T3.KCD.XK) (Fig.1 b) and one or more auxiliary pedestrian gate «JETPAN-2» (Master/Slave) with one each of which has two glass leaf (reference designation T3.KCD.XK.X).

1.3.2 Design of the single «JETPAN-1» type turnstile



- | | |
|-------------------------------|-------------------------------------|
| 1 – location for card reader; | 6 – Lid (or glass countertop); |
| 2 – LED display; | 7 – End panel; |
| 3 – IR access sensors; | 8 – Base; |
| 4 – Glass panel (leaf); | 9 – Side panel (front and rear); |
| 5 - Jumper (Fixed glass) | 10 – Turnstile operating mechanism; |

Fig. 4 – Design of the single turnstile «JETPAN-1»

The single turnstile «JETPAN-1» (See Fig.4) consists of two one-leaf cabinets.

One-leaf cabinet body includes:

- frame;
- base;
- set of side panels;
- top lids;
- retractable device with glass leaf;
- glass partitions;
- two LED displays.

Inside cabinet there are installed:

- terminal block;
- controller;
- seven access sensors;
- proximity identification card reader (to be equipped by the customer, if appropriate);
- power supply unit.

The cabinet design provides a space for installation of proximity identification card reader.

Cabinet has built-in components:

- controllers;
- power supply unit.

Optionally cabinet can be completed with battery* (4 A·h). The single turnstile control desk equipped with power supply unit, circuit breaker and battery* is installed only in the cabinet (Master) from the protected area side.

1.3.3 Design of the «JETPAN-2» type turnstile (See Fig.5).

The turnstile is an additional cabinet «JETPAN-2» (Master/Slave) with two leaves (glass panels). The number of additional cabinets is specified in order.

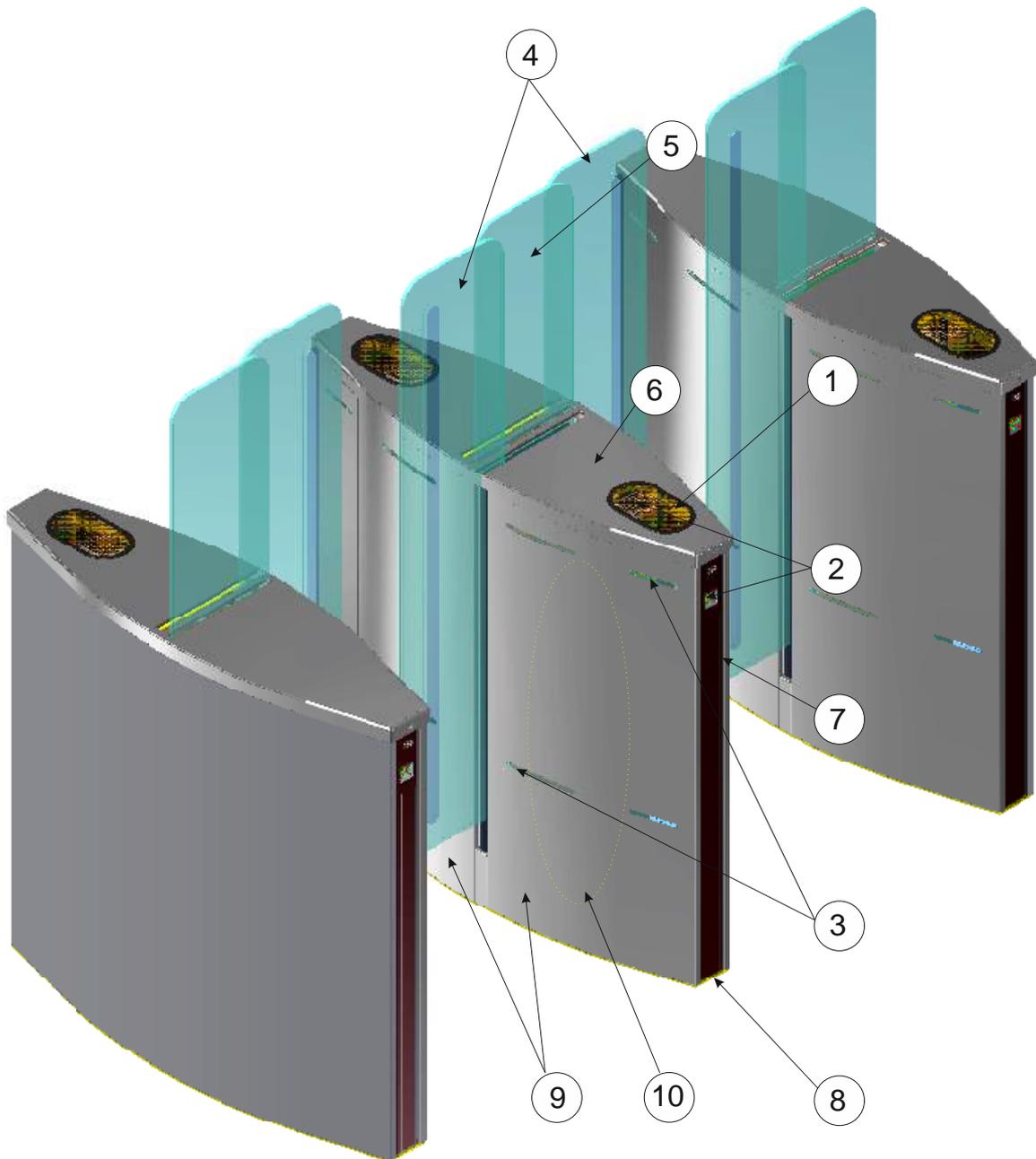
The turnstile «JETPAN-2» operates only as part of the turnstile “JETPAN-1”. The additional cabinet includes:

- base;
- set of side panels;
- top lid;
- two retractable devices with retractable glass leaves;
- glass partition;
- four LED displays.

Inside the additional cabinet body there are installed:

- terminal blocks;
- controllers;
- fourteen access sensors;
- two proximity identification card readers;
- power supply unit.

Optionally additional cabinet can be completed with battery*.



1 – location for card reader;
2 – LED display;
3 – IR access sensors;
4 – Glass panel (leaf);

5 - Jumper (Fixed glass);
6 – Lid (or glass countertop);
7 – End panel;
8 – Base;
9 – Side panel (front and rear);
10 – Turnstile operating mechanism

Fig. 5 – Design of the turnstile «JETPAN-2» T3.KCD.XK.X

1.3.4 Design, overall and installation dimensions of the turnstile are shown in Annex A.

1.3.5 The turnstile material of manufacture is carbon steel subject to painting, brushed stainless steel or polished stainless steel.

1.3.6 Turnstile scope of delivery

The turnstile is delivered as a kit (set of pedestrian gates depending on the number of access ways).

The turnstile is delivered by one or a number of packages (depending on the order).

1.4 Design and operation

1.4.1 Turnstile design

1.4.1.1 The cabinet body is a set of side panels (9) from stainless steel (See Fig.4-5), which are securely fixed to frame and installed on base (8). A decorative lid (6) is mounted on the top of frame (finishing material is determined by order). An additional vertical partition (5) with 10 mm tempered safety glass is mounted in the center of body to prevent unauthorized intrusion along the upper horizontal surface of the body.

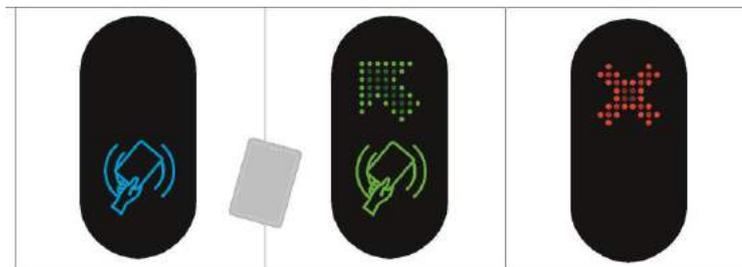


Fig. 6 - Turnstile status display

1.4.1.2 The turnstile status (Fig.6) is displayed by LED display (4) installed in the cabinet frame. Constantly lit blue LED means initial state of the turnstile. In case of attempt of unauthorized access red LED starts blinking and sound signal is generated on control desk. When opening command is issued, LED is changed to green from the side of authorized access. If unauthorized access is attempted when glass leaves (10) are opened, then the leaves will be closed, if there is no any obstacle in the leaves movement area.

1.4.1.3 Seven infrared sensors (3), installed on side panels of the turnstile from access side, are designed for detection of the turnstile access, preventing closing of leaves during pedestrian access in immediate proximity to them and minimizing personal injury during the turnstile access.

1.4.1.4 Leaf 1 is made from 10 mm tempered glass and is located in the middle of the cabinet body on motion mechanism (1). Each leaf is actuated by separate servomotor. The additional cabinet «JETPAN-2» is equipped with two servomotors (one per each leaf), while the «JETPAN-1» turnstile cabinets are equipped with one servomotor per each cabinet.

1.4.1.5 In case of 230 V power supply failure the turnstile panels will be released and will remain in the position in which they were and the turnstile operation will be maintained from battery (if it is installed) until it is discharged.

1.4.1.6 The cabinet operating mechanism (Fig.4) provides reliable mechanical locking of leaf in the end travel points due to tooth-belt drive.

Inside the turnstile body the panels are fixed to frame, on which controllers, power supply unit, battery and terminal blocks to be connected to 230V mains and control devices are installed.

1.4.1.7 The controllers PCB.201.01.00.00 control the turnstile motors analyzing signals from speed and position sensors and provide motor overload protection. The controllers PCB206.21.20.00 analyze infrared sensors, receive control commands from peripherals (control

panel , ACS etc.), control LED displays and generate feedback signals for ACS (More detailed description of the turnstile controller is given in chapter 1.6).

1.4.1.8 Control panel has the following functions: single entry and single exit, locking of entry and exit, free entry and exit.

1.4.2 General appearance of the turnstile operating mechanism and control desk

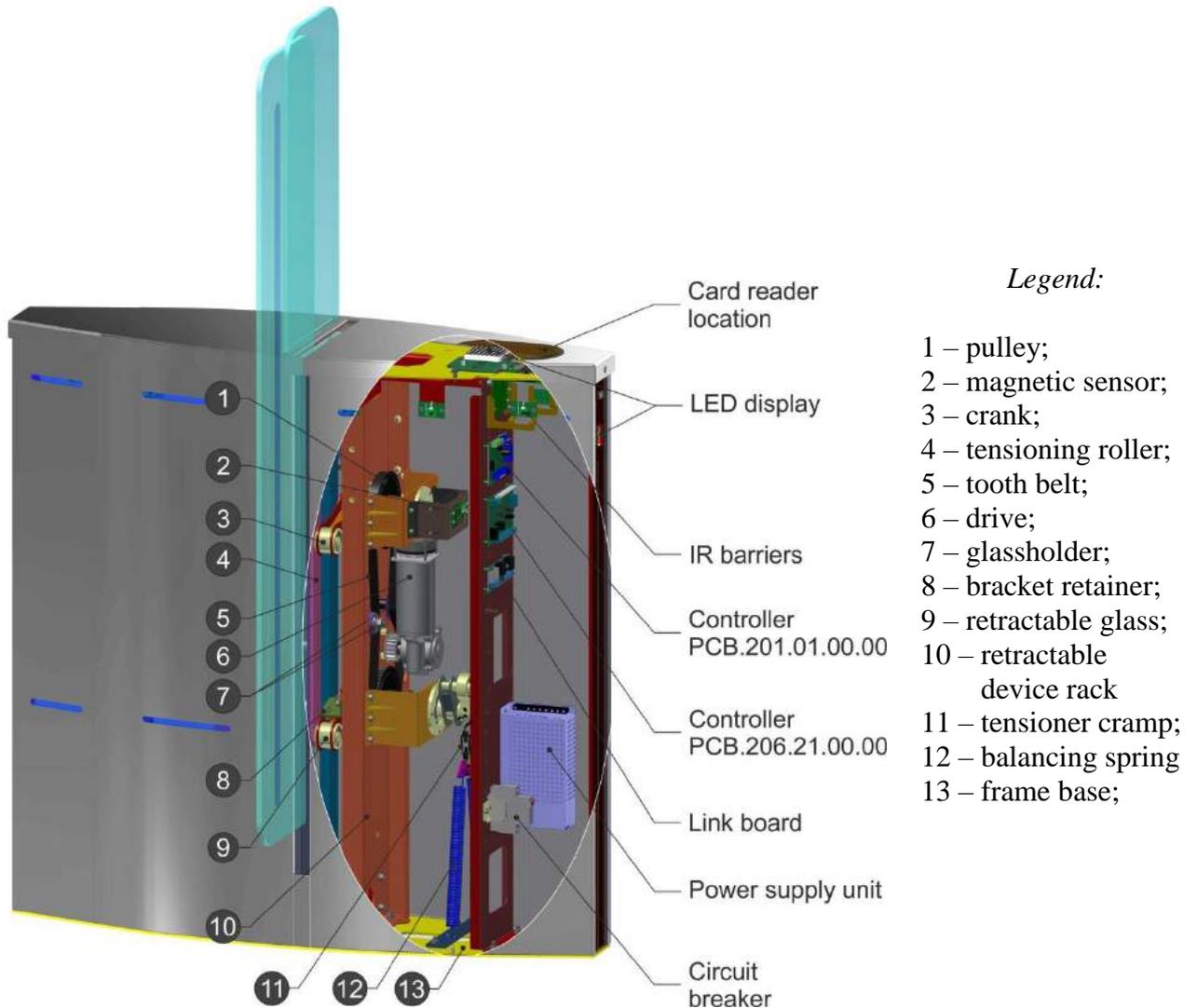


Fig.7– General appearance of and design of operating mechanism and control desk of the turnstile «JETPAN-1» (Master cabinet)

1.4.3.3 Principle of operation

1.4.3.1 Access cycle:

1. In the initial state the turnstile glass blades are located perpendicular to the body block access.

2. The turnstile is opened for access in the direction "A" or "B" after the appropriate command from ACS or control panel is issued.

3. Green arrow is lit on LED display and glass blades go fully to slots, i.e. they open. A pedestrian is able to access through the turnstile freely.

4. After pedestrian exit from control area, the "closed" mode is set until next access. Blue LED is lit. Blades are reliably closed preventing attempts of unauthorized access.

More detailed description of the turnstile operation modes is given in section 1.6 "Description and operation of controller as an integral component of the turnstile".

1.4.3.2 12V DC power voltage is provided by power supply unit.

1.4.3.3 In case of mains power supply failure, the turnstile is automatically switched to power supply from 12V, 7A•h battery (optional), which ensures the turnstile's operation within 2 hours.

1.4.3.4 The turnstile wiring and connection diagrams are shown in Annex C.

1.5 Instrumentation, tools and accessories

Dedicated tools are not required for the turnstile installation (multi-purpose measurement instrumentation and installation tools are sufficient).

1.6 Description and operation of controllers as integral component of the turnstile

1.6.1 Controller AUIA.206.21.20.00

1.6.1.1 Appearance of controller AUIA.206.21.20.00 is shown in *Figure 8*.

1.6.1.2 Description of operation

The controller provides algorithm of operation of the whole turnstile. It is assembled on the 120 x 80 mm size card from foil-clad textile laminate, on which electronic components and terminals for connection to other turnstile units as well as for connection to control peripherals (ACS, control panel etc.) are located.

The controller generates signal for 7 infrared transmitters and picks up signal from 7 infrared receivers that enables to detect human (or object) presence in the turnstile access area with high probability. Furthermore, the controller AUIA.206.21.20.00 controls light and sound indication, receives commands from control panel using interface RS-485, picks up commands and generates report signals for ACS via signal inputs and outputs as well as controls operation of motor controllers (PBC.201.01.00.00).

The controller and therefore the turnstile can be in the following modes:

- "INITIAL STATE".
- "SINGLE ACCESS IN THE DIRECTION A".
- "SINGLE ACCESS IN THE DIRECTION B".
- "SINGLE ACCESS IN BOTH DIRECTIONS".
- "FREE ACCESS IN THE DIRECTION A".

- "FREE ACCESS IN THE DIRECTION B".
- "FREE ACCESS IN BOTH DIRECTIONS".
- "LOCK OF ACCESS IN THE DIRECTION A".
- "LOCK OF ACCESS IN THE DIRECTION B".
- "LOCK OF ACCESS IN BOTH DIRECTIONS".
- «"ALARM".

"INITIAL STATE"

The turnstile is in this mode during energization and after completion of the turnstile access, if during access the mode is not changed to "LOCK", "FREE" or "ALARM". In this mode red LED is constantly lit on both LED boards, sound indication is OFF, access is locked by blades.

"SINGLE ACCESS"

The turnstile goes to this mode when command "SINGLE ACCESS A/B" comes from control panel via interface RS-485 or when signal inputs "INP1" ("ACCESS A TO BE OPENED") or/and "INP2" ("ACCESS B TO BE OPENED") are closed on common wire (terminal "GND"). In this case if command comes via interface RS-485, the access start waiting time is 5 sec. and when signal inputs are short circuited the turnstile will wait for access start while input is closed. Green arrow is lit on LED display from the side of authorized access and red cross is lit from the side of denied access. Glass blades go to cabinet slots clearing access. Pedestrian is able to access through the turnstile. If access start time is up and access is not started (the first IR barrier in the direction of movement was not locked), the turnstile returns to "INITIAL STATE". If within the above time period access is started, controller generates the signal "ACCESS IS OCCUPIED" (outputs "OUT1" or/and "OUT2") and starts tracing position and direction of pedestrian movement in the turnstile access way, analyzing 6 IR barriers. As soon as pedestrian is behind the blades line they close, the controller generates the signal "DETECTION OF ACCESS" of 0,3 second duration (outputs "OUT3" or "OUT4") and LED display is switched from green to red. After the pedestrian turnstile access the controller removes the signal "ACCESS IS OCCUPIED" and returns to "INITIAL STATE".

"FREE ACCESS"

The turnstile goes to this mode either upon command "FREE ACCESS A/B" arrived via interface RS-485 from control panel or if during "SINGLE ACCESS" initiated by signal on input "INP1" ("ACCESS A TO BE OPENED") or/and "INP2" ("ACCESS B TO BE OPENED") at the end of 0,3 sec. after the signal "DETECTION OF ACCESS A" or "DETECTION OF ACCESS B" is removed by controller, the signal on the relevant input "INP1" or "INP2" was not removed. In this mode glass blades go to the turnstile cabinet slots, green arrow is blinking on LED display from the side of authorized access. Thus every turnstile access is traced and the signal "DETECTION OF ACCESS" of 0,3 second duration is generated to the relevant output («OUT3» or "OUT4").

In this state the turnstile will be until arrival of command "CANCELLATION OF FREE ACCESS" via interface RS-485 or until removal of signals from "INP1" or/and "INP2" depending on the cause of switching to the free access mode.

"LOCK OF ACCESS"

The turnstile switches to this mode only upon command "LOCK OF ACCESS A/B" arrived via interface RS-485 from control panel.

Thus red LED is blinking from the side of locked access, glass blades are closed (if the turnstile is not open for free or single access from opposite side), controller does not respond to signals of inputs "INP1" ("ACCESS A TO BE OPENED") or/and «INP2» ("ACCESS B TO BE OPENED") respectively.

The lock mode prevails over single and free access mode. It means that access can be locked at any time, thus, if within the blade closing area there is no any obstacle they will be closed. The controller will be in this mode until arrival of command "CANCELLATION OF ACCESS LOCK" via interface RS-485 from control panel.

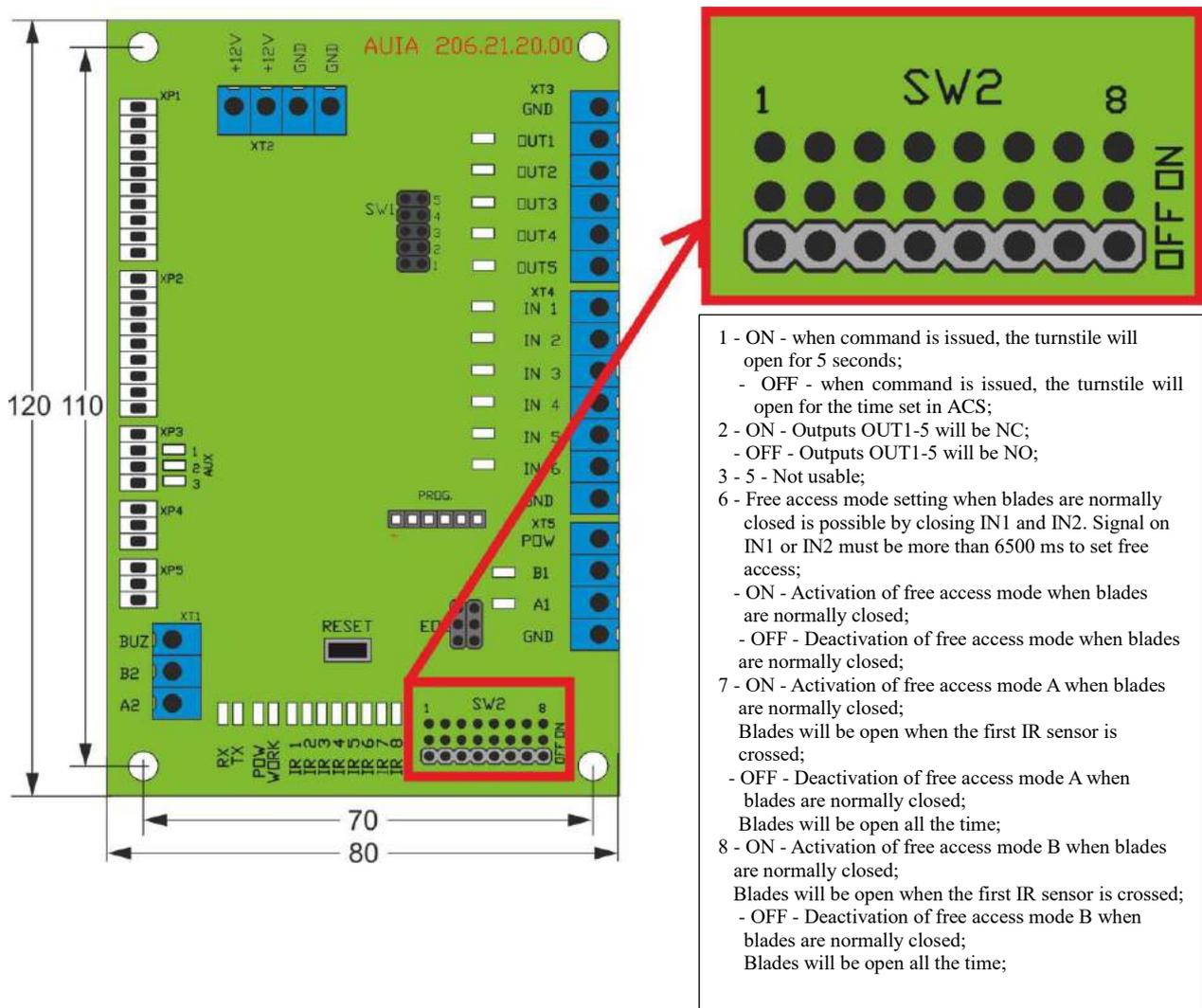


Fig. 8 – Appearance and configuration of controller AUIA.206.21.20.00

"ALARM"

The turnstile switches to this mode from any above mentioned mode in case of unauthorized access attempts. In this case red LED is frequently blinking (4 times per second), siren alarm is generated on control panel and output "OUT5" is activated on the controller board. If the turnstile was opened, then blades would be closed if there were no obstacles in the closing area. The turnstile will return to the mode preceding the "ALARM" mode as soon as causes of this mode disappear. In this case the output "OUT5" will go to passive state, siren alarms on control panel will be off and blades and light indication will be set according to the current mode.

The purpose of the controller contacts intended for connection to peripherals is specified in Table 5.

Table 5

<i>N^o Conne ctor/cont act</i>	<i>Description</i>	<i>Directio n</i>	<i>Designation</i>	<i>Signal description and parameters</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
XT4/1	INP1 («TO BE OPENED A»)	ENTRY	Command "TO BE OPENED FOR SINGLE / FREE ACCESS"	1) logical «0» (0÷2,2) V; 2) logical «1» (3 ÷5) V; 3) active level of signal (factory setting)
XT4/2	INP2 («TO BE OPENED B»)	ENTRY		
XT4/3	INP3 («PANIC»)	ENTRY	Command "SWITCHING TO PANIC STATE"	logical «0» 4) voltage on open input < 5 V
XT4/4	INP4	ENTRY	Not applicable	
XT4/5	INP5	ENTRY		
XT4/6	INP6	ENTRY		
XT4/7	GND		COMMON WIRE	
XT3/1	GND		COMMON WIRE	
XT3/2	OUT1 («ACCESS A IS OCCUPIED»)	EXIT	Signal is generated from the moment of blocking of the first IR barrier in the direction of movement and is removed after cancellation of the latter	1) type of output – open collector; 2) peak voltage on privacy key 55V; 3) peak current of public key 100mA; 4) resistance of public key (5 ÷ 7) Ohm; 5) active level of signal (Factory setting) – logical «0» (connection on GND)
XT3/3	OUT2 («ACCESS B IS OCCUPIED»)	EXIT		
XT3/4	OUT3 («DETECTION OF ACCESS A»)	EXIT	Signal appears during barring of the second last IR barrier and continues 0,2 sec.	
XT3/5	OUT4 («DETECTION OF ACCESS B»)	EXIT		
XT3/6	OUT5 («ALARM»)	EXIT	Output is active in case of unauthorized access attempt	
XT5/1	POW		«+» power supply	
XT5/2	B1		It is used for data transmission via serial port. It is used for connection of control panel.	Interface RS-485
XT5/3	A1			Interface RS-485
XT5/4	GND		COMMON WIRE	

Continued Table 5

1	2	3	4	5
XT1/1	BUZ		Output for connection of audible alarm. The output is active in case of unauthorized access	1) type of output – open collector; 2) peak voltage on privacy key 60V; 3) peak current of public key 250mA; 4) resistance of public key (0,48÷640) Ohm; 5) active level of signal (Factory setting) – logical «0» (connection on GND)
XT1/2	B2		It is used for data transmission via serial port.	Interface RS-485
XT1/3	A2			Interface RS-485
XT2/1	+ 12V		«+» power supply (energization of controller)	1) Power supply voltage 12V; 2) Consumption current < 150 mA
XT2/2	+ 12V			
XT2/3	GND (common)		«-» power supply (common wire)	
XT2/4	GND (common)			

1.6.2 Turnstile controller PCB.201.01.00.00

1.6.2.1 Appearance of controller PCB.201.01.00.00 is shown in *Figure 9*.

1.6.2.2 Description of operation

The controller is designed to control DC motor, intended to move the turnstile blades, and electromagnetic brake installed on motor shaft. Control is performed based on the signals coming from magnetic sensor as well as from motor current sensor. Control commands come to inputs "IN1" and "IN2" from the controller AUIA.206.21.20.00.

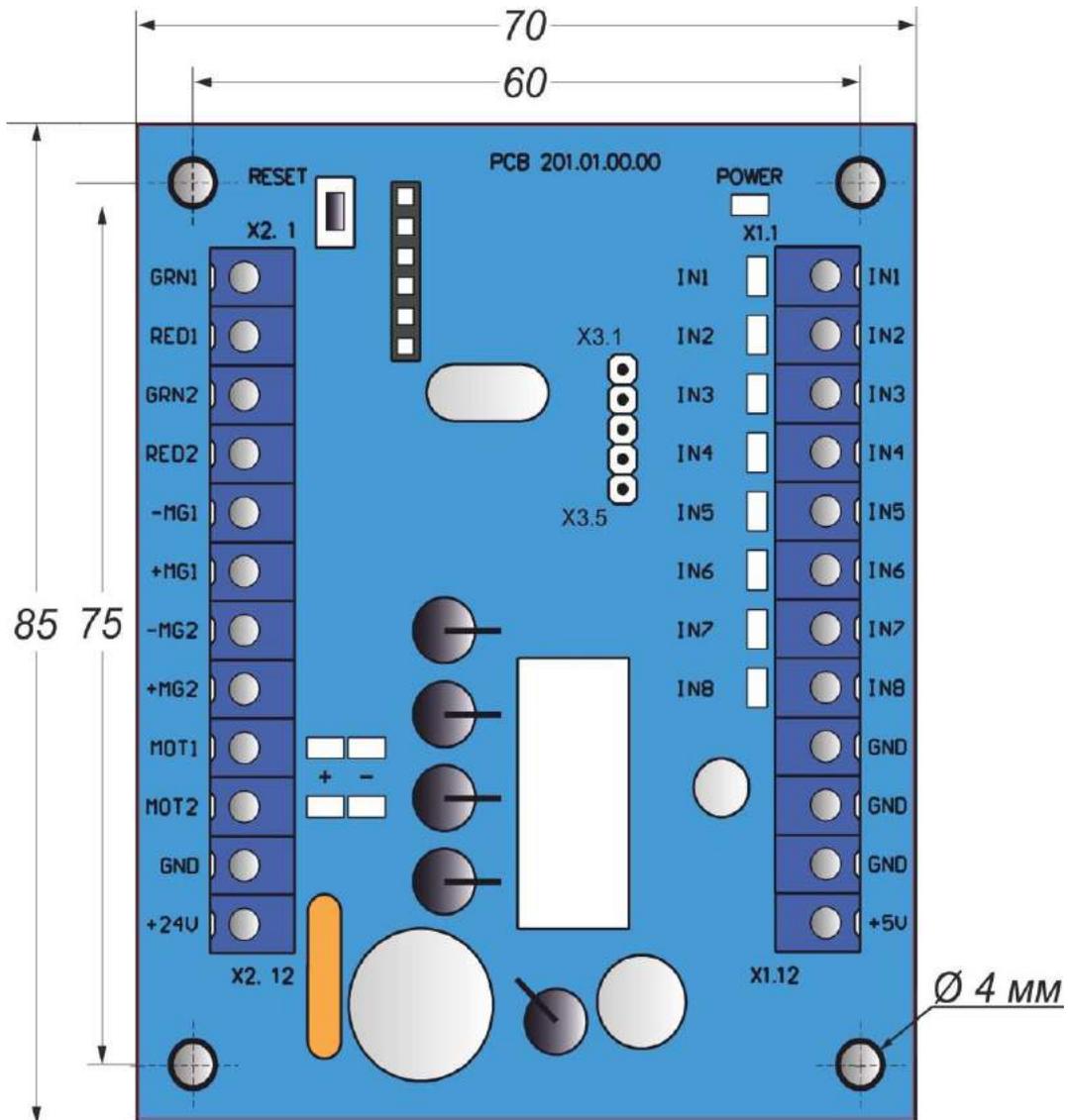


Fig. 9 – Appearance of controller PCB.201.01.00.00

Table 6

<i>N^o</i> <i>Connector</i> <i>/contact</i>	<i>Descriptio</i> <i>n</i>	<i>Direction</i>	<i>Designation</i>	<i>Signal description and</i> <i>parameters</i>
X1/1	IN1	ENTRY	«TO BE OPENED A»	1) logical “0” (0 ÷ 1,7) V; 2) 2) logical “1” (3,7 ÷ 5) V; 3) 3) active level of signal – logical “0”; 4) voltage on open input ≤ 5 V
X1/2	IN2	ENTRY	«LOCK»	
X1/3	IN3	ENTRY	Not applicable	
X1/4	IN4	ENTRY	Not applicable	
X1/5	IN5	ENTRY	To be connected to magnetic sensor	
X1/6	IN6	ENTRY		
X1/7	IN7	ENTRY		
X1/8	IN8	ENTRY		
X1/9	GND		“-“ power supply (common wire)	
X1/10	GND			
X1/11	GND			
X1/12	+5 V	EXIT	Not applicable	
X2/1	GRN1	EXIT	Not applicable	
X2/2	RED1	EXIT	Not applicable	
X2/3	GRN2	EXIT	Not applicable	
X2/4	RED2	EXIT	Not applicable	
X2/5	-MG1	EXIT	Not applicable	1) type of output – open collector; 2) peak voltage on privacy key 50V; 3) peak current of public key 5A
X2/6	+MG1	EXIT	Not applicable	
X2/7	-MG2	EXIT	Not applicable	
X2/8	+MG2	EXIT	Not applicable	
X2/9	MOT1	EXIT	Connection of motor	1) voltage (10 ÷ 27)V; 2) current ≤ 4 A
X2/10	MOT2	EXIT		
X2/11	GND		“-“ power supply (common wire)	
X2/12	+24 V	ENTRY	“+” power supply (energization of controller)	1) voltage (10 ÷ 27)V; 2) current ≤ 4 A
X3	X3	ENTRY/ EXIT	Communication port	1) logical “0” (0 ÷ 1)V; 2) logical “1” (3,5 ÷ 5) V

2 INTENDED USE

2.1 Operation restrictions

2.1.1 The turnstile must be used in the environment specified in p. 1.1.4 of this document subject to the specifications listed in section 1.2.



IT IS FORBIDDEN:

- 1) TO MISUSE THE TURNSTILE (See Section 1 "DESCRIPTION OPERATION");
- 2) TO USE THE TURNSTILE UNEARTHED;
- 3) TO USE HEATING PIPES AND RADIATIONS AS WELL AS PIPES CENTRAL OF WATER SUPPLY FOR EARTHING;
- 4) TO REPAIR AND ADJUST WITHOUT DEENERGIZATION.
- 5) TO RELOCATE THE OBJECTS EXCEEDING THE ACCESS WAY THROUGH WIDTH THE TURNSTILE ACCESS AREA;
- 6) TO JERK AND IMPACT ANTICROSSING BLADES, LED DISPLAY OR PARTS OF THE PRODUCT, WHICH MAY CAUSE THEIR MECHANICAL DISTORTION OR DAMAGE;

2.1.2 It is forbidden to use the turnstile:

- at the presence of mechanical rattle in movable parts of the turnstile;
- when metalwork of the turnstile and its components and accessories are mechanically damaged.

2.1.3 List of special conditions of operation

- Mean time of the turnstile access (in single access mode) equals to 2 sec.
- Escape door, portal or pedestrian gate can be installed near the turnstile to increase the turnstile traffic flow capacity in case of emergency.

2.2 Layout and installation

2.2.1 The turnstile and components of the scope of supply to be delivered to installation site in factory packing. The turnstile to be unpacked only on installation site.

2.2.2 Preparation of the turnstile for installation (dismounting) and commissioning to be performed according to this OM with mandatory observation of safety measures according to in p. 2.1 and general electrical safety code.

2.2.3 Safety measures:

- Installation to be performed only by the persons briefed on safety and studied this manual;
- Only serviceable tools to be used during the turnstile installation;
- Connection of all cables to be performed only when power supply is OFF;
- **Cables to be laid in compliance with electric diagram ;**
- The turnstile to be installed by at least 2 installers.

2.2.4 Tools and accessories to be used (Fig.10):

- puncher;
- concrete drills (according to diameter of anchors included in the turnstile scope of delivery);

- extension cord;
- kit of end and pin wrenches;
- kit of hexagons;
- kit of screwdrivers;
- hammer;
- multimeter (tester);
- measuring tape;
- marker;
- pliers, side cutters;
- builder's level.



Fig. 10 - Tools and accessories for layout and installation

2.2.5. Total configuration of the «JETPAN» turnstile access ways

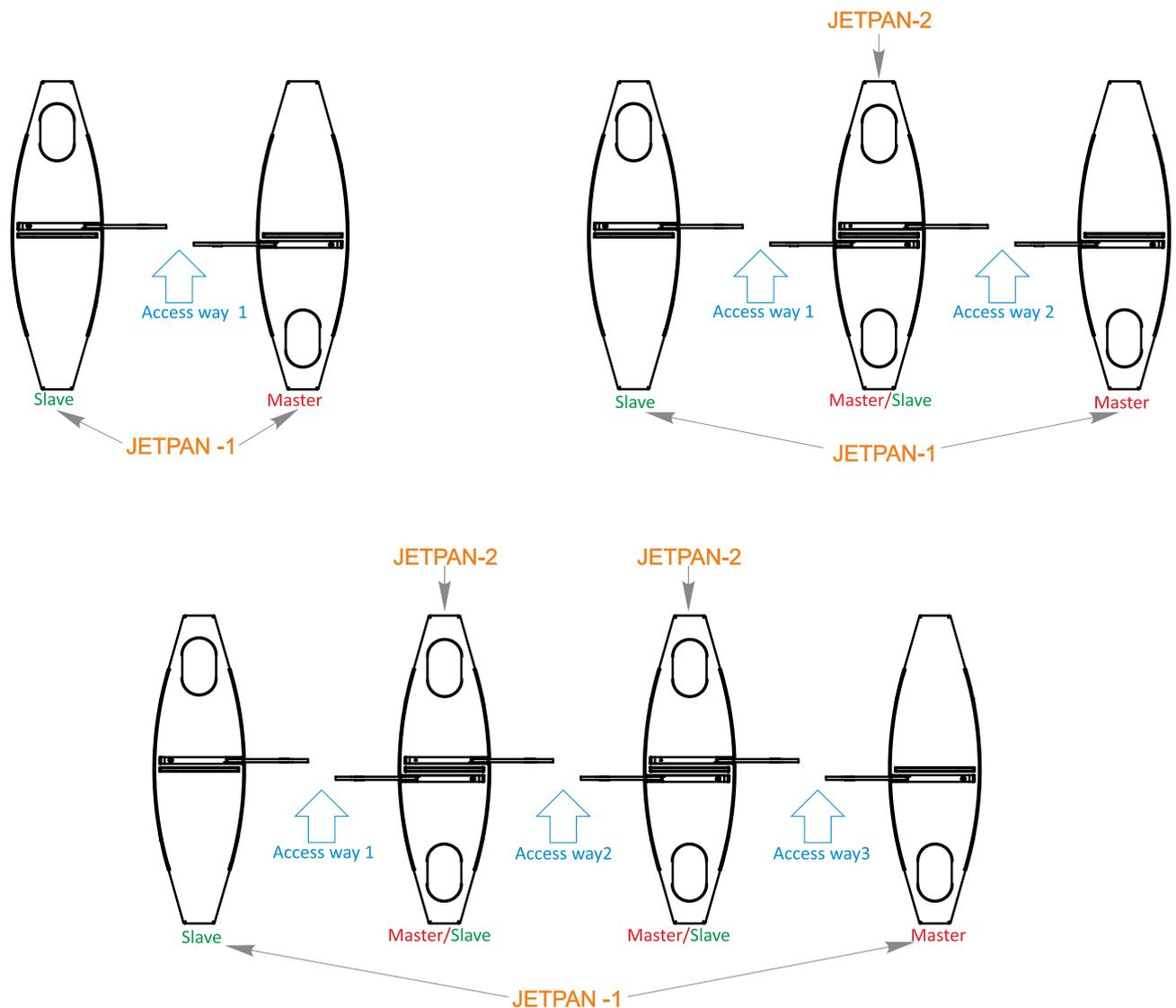


Fig. 11–The «JETPAN» turnstile access way arrangement options



WARNING:

The damages occurred during the turnstile transportation are not covered by the manufacturer's warranty liabilities.

2.2.6. Installation procedure.

The turnstile installation procedure is as follows:

1) The package integrity to be checked prior to unpacking. If package is damaged, then damages to be documented (picture to be taken, damage report to be made).

2) The turnstile to be unpacked and inspected for defects and damages as well as completeness to be checked according to the turnstile data sheet;



WARNING:

When the turnstile damages are detected or in case of shortage of delivery, installation work to be stopped and the turnstile supplier to be referred to.

3) Turnstile dismantling and relocation

The turnstile cabinet to be removed from pallet (See Figure 12). Top lid and interior lining (side panel) to be removed to provide access to the cabinet base fixation holes and terminal blocks. For this purpose:

- The turnstile lid to be removed by unscrewing screws on its butt ends from both sides;

- Interior lining to be removed by unscrewing screws on frame;

- Two screws fixing the turnstile frame base to transportation packing from both sides to be unscrewed (View A);

- The turnstile to be carefully removed from pallet and relocated to installation site;

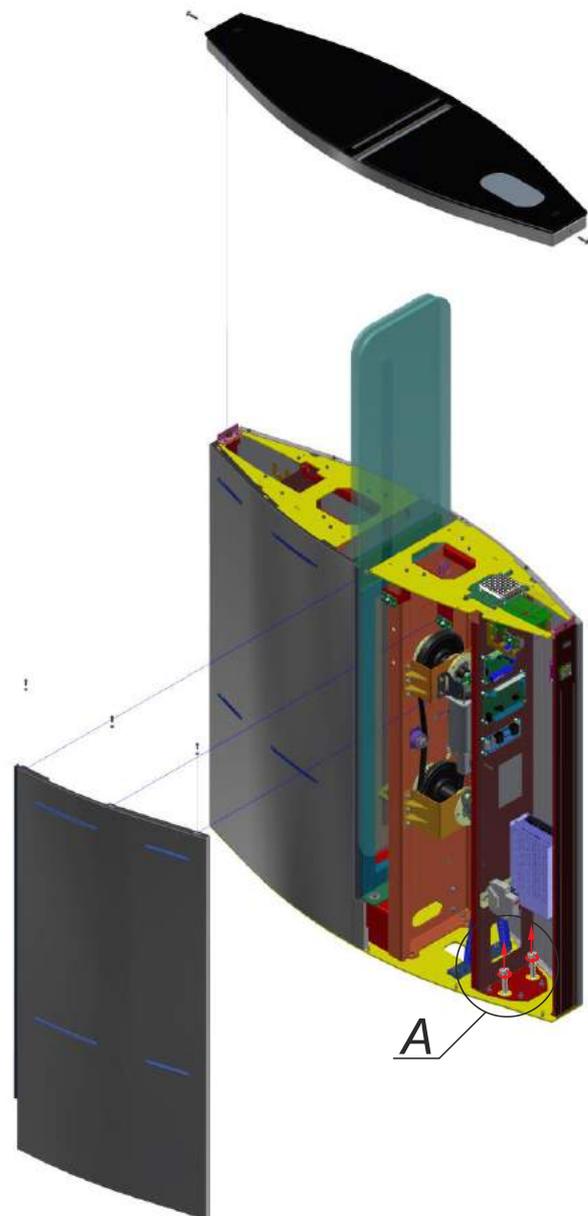


Fig. 12 – Turnstile dismantling and relocation from pallet

- 4) Make sure that the turnstile installation site is ready as follows:
- The installation site surface to be flat and horizontal;
 - Thickness of concrete blinding coat under the site to be at least 150 mm;



WARNING:

The turnstile to be fixed by means of Redibolt (with jacket and screw) included in the scope of delivery.

- 5) The turnstile fixation holes to be marked on the site surface according to Figure 13 (For the turnstile with 500 mm access ways). The turnstile itself can be used as a template, when installed upright at the installation site.



IMPORTANT! Cabinets are linked by control line optical sensor system requiring accurate cabinet positioning. The cabinet relative position and vertical installation of the turnstile to be complied with.

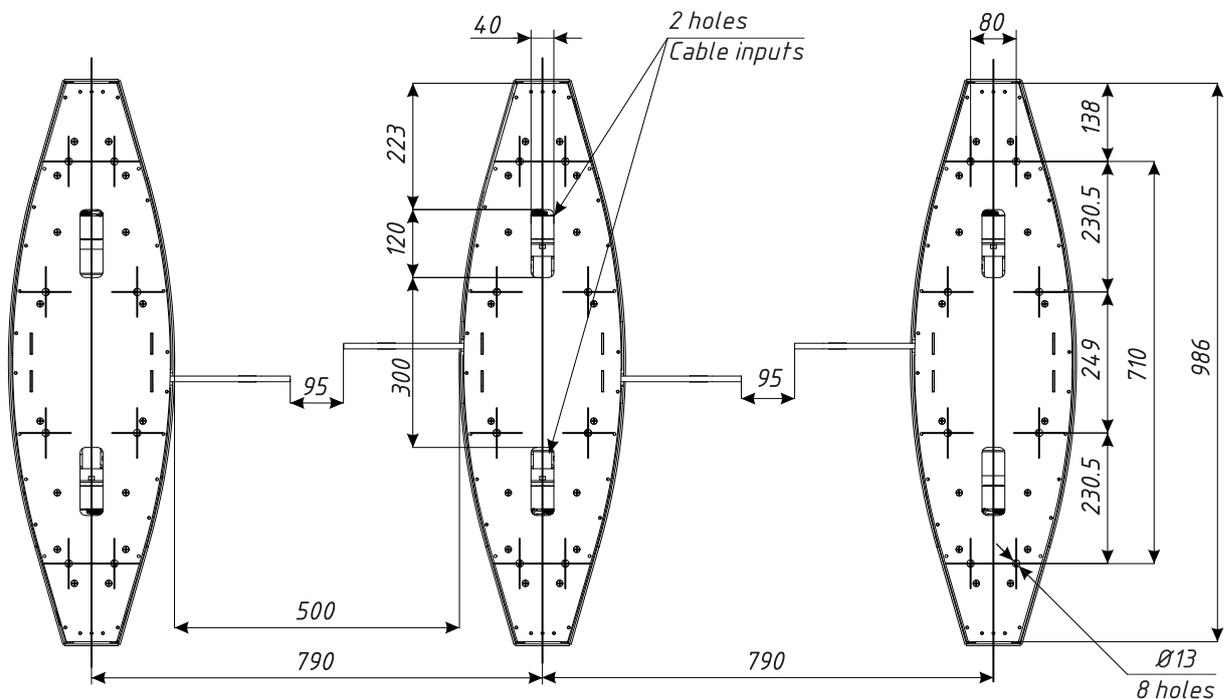


Fig. 13 – Installation dimensions of the turnstile set «JETPAN-1» and «JETPAN-2»

- 6) The relevant holes to be drilled on the surface according to the marking due to diameter of anchors (12×120M10) for the turnstile fixation.
- 7) Anchor jackets to be inserted into the prepared holes



WARNING:

The turnstile installation and fixation to be performed only after all electric cables are pulled.

- 8) The following cables to be run to the turnstile installation site (Fig.14);
- Power supply cable 230 V ~;
 - Control desk link cable;
 - Access Control System (ACS), if available, connection cables
 - Cables between cabinets (Fig.15);

Cables to be run in corrugated or metal pipes prior to pulling to prevent damages.

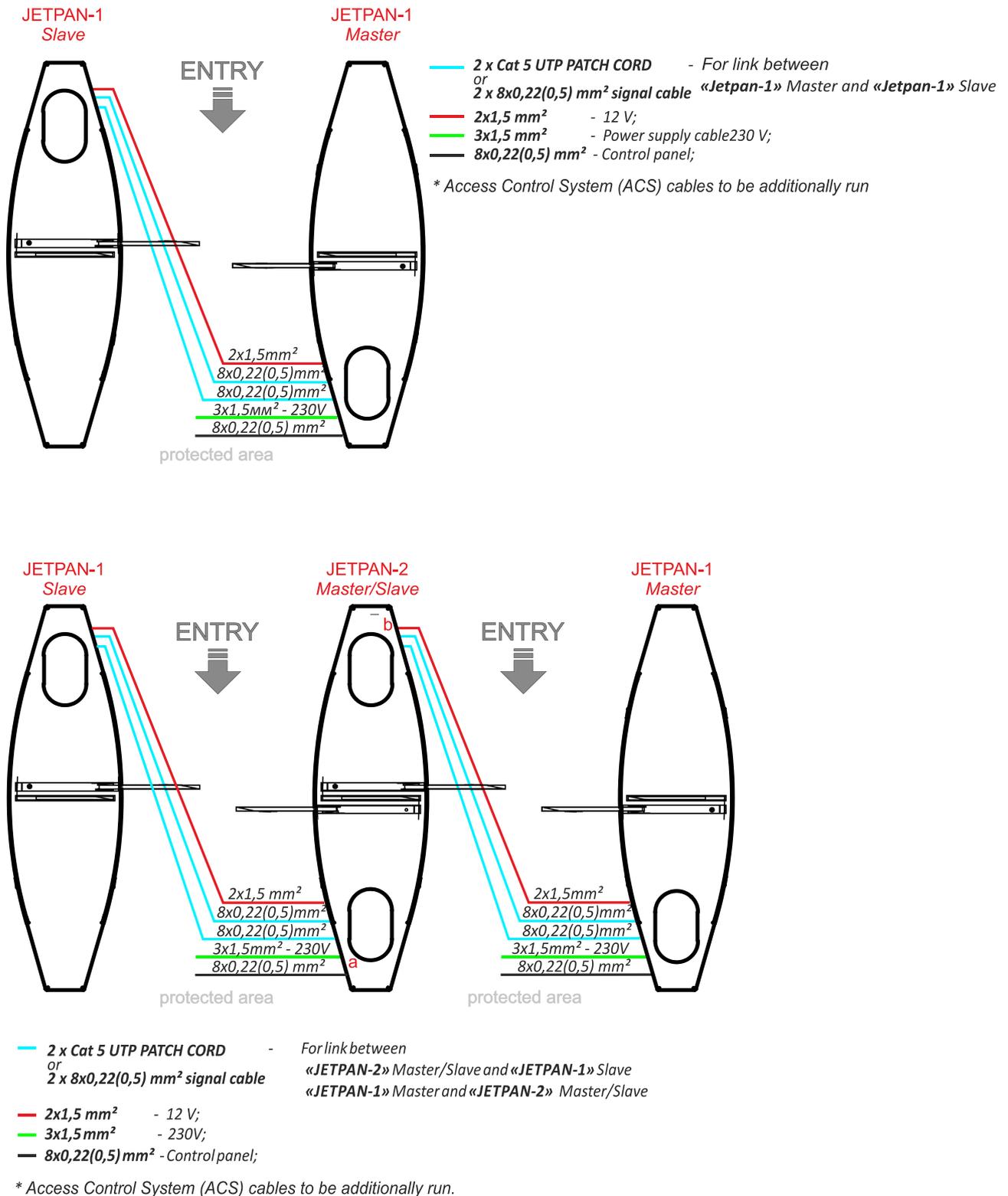
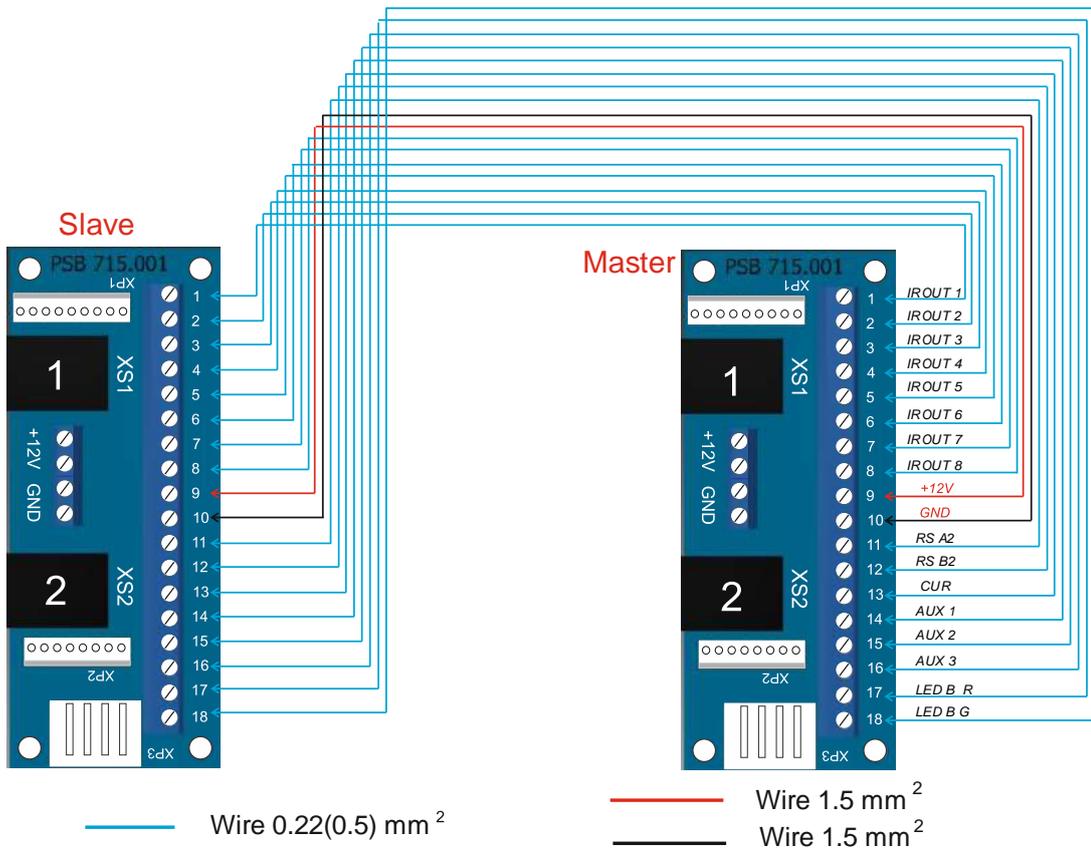


Fig. 14 – General view of connection between cabinets

Option 1



Option 2

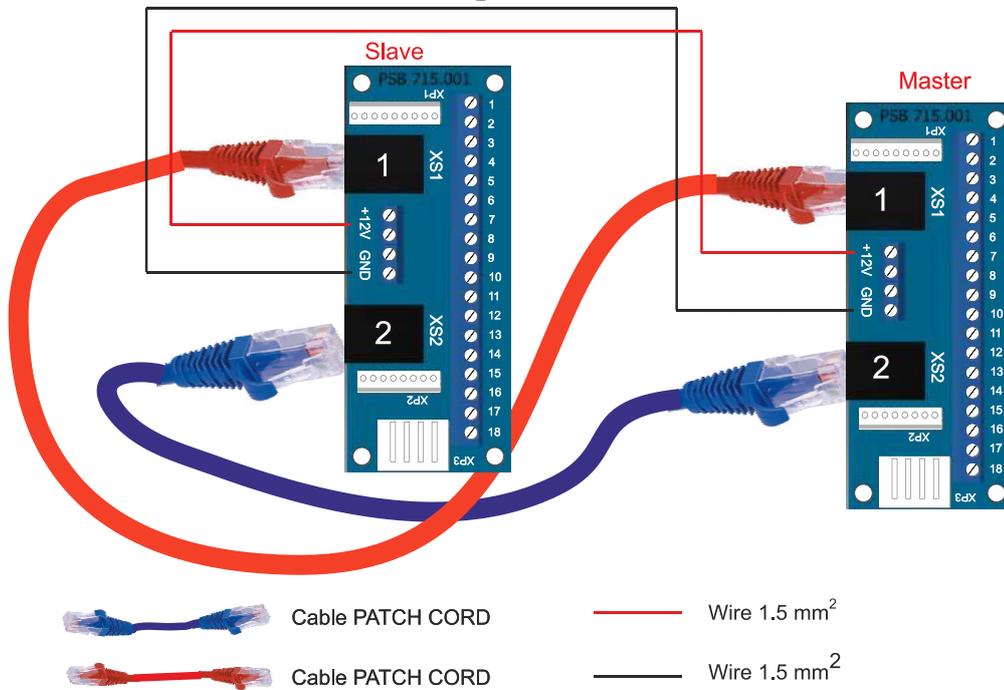


Fig. 15 – Options of cable connection between cabinets Master and Slave

9) The length of cable free ends to be at least 1 m to provide their entry termination and connection to the relevant terminals in the turnstile rack (on control desk).

10) The cable outlet point to be aligned with the hole on the turnstile frame mounting plate.

11) To provide access to fixation holes and terminal blocks from both sides of cabinet it is required to:

1.- remove the turnstile lid by unscrewing screws on butt ends (See Fig. 16);

2. - remove lining by unscrewing screws on the turnstile frame;

3. - The turnstile to be installed upright at the prepared location;

- Cables to be pulled through available service hole in the turnstile rack bottom end part by reclining the turnstile;

4. - align fixation holes at the turnstile bottom plate with the prepared surface holes according to the marking shown in Fig.13;

The turnstile to be fixed by means of anchors included in the scope of delivery

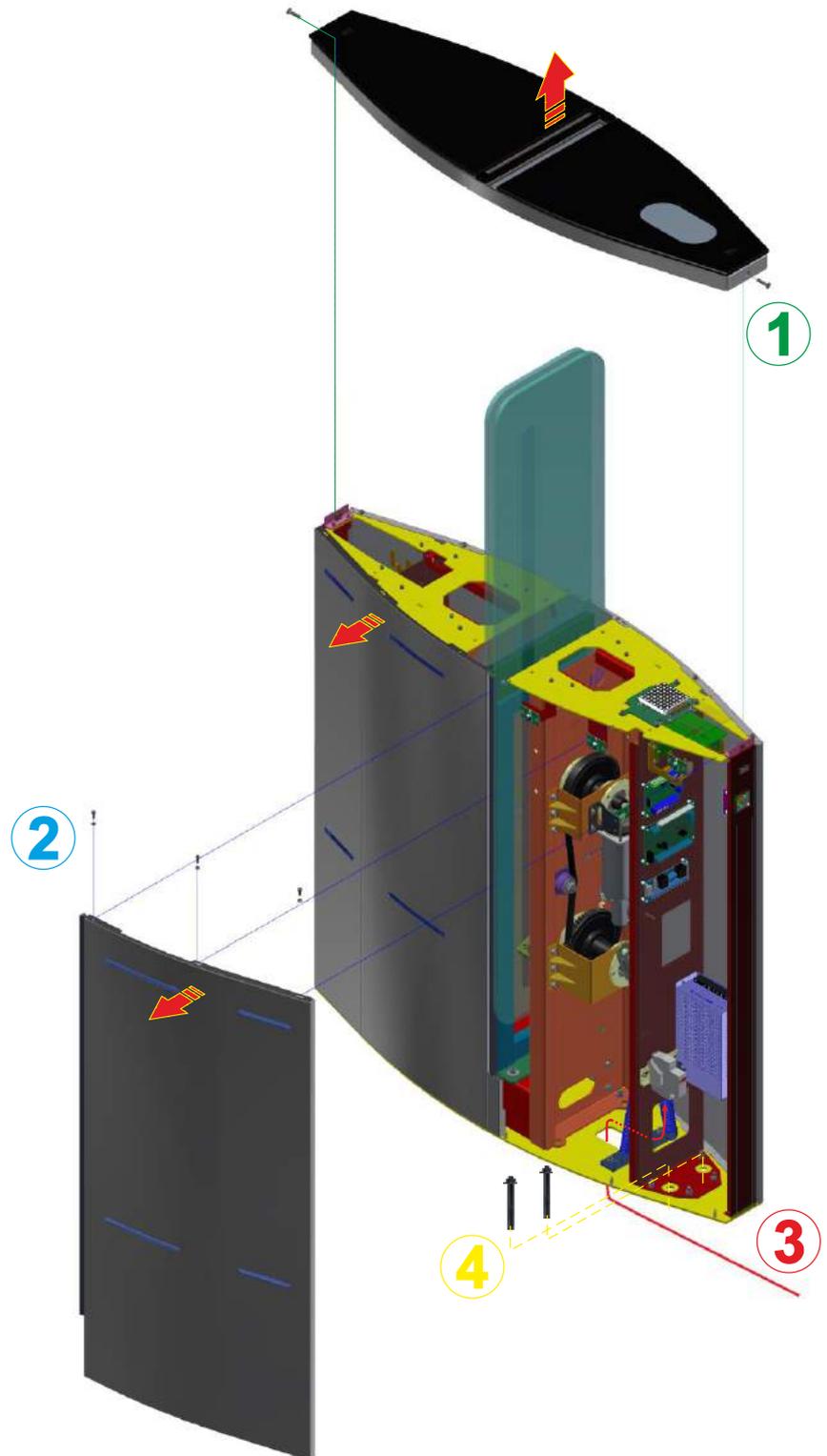


Fig. 16 - General view of the «JETPAN-1» turnstile cabinet installation

12) Turnstile connection:

a) Power supply cable ~230 V to be connected (Fig. 17):

- Phase (L) - to be connected to circuit breaker;
- Neutral (N) to be connected to terminal

~230V;

- Earth (PE) to be connected to earthing terminal (PE).

b) Control desk link cable to be connected to terminals (Fig.18):

- **P** (Power) – control desk power supply +12V;
- **G** (GND) - control desk common wire;;
- **A** (RSA) - RSA wire control desk link line;
- **B** (RSB) - RSB wire control desk link line;

c) The turnstile to be earthed and power supply cable to be connected the turnstile according to the wiring diagrams (See Annex C)

d) Proximity card readers to be installed if access control system (ACS) is available.

The turnstile doors and side panels (Fig.17) to be installed, on their fixation locations after the required mounting is completed. Countertop to be fixed with screws.

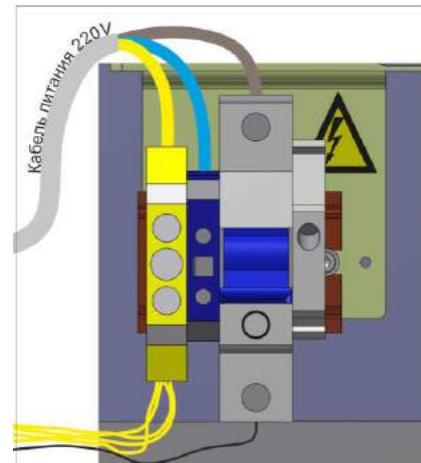


Fig. 17– Connection of power supply cable

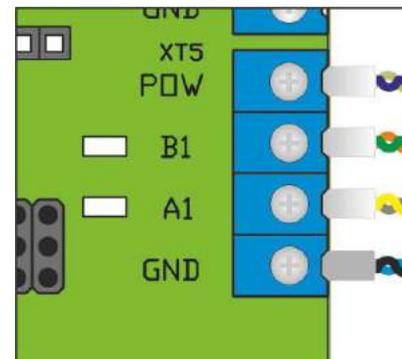


Fig.18– Connection of control desk link cable to terminals PCB.206.21.00.00

13) Installation of proximity card reader* upon availability of access control system (ACS) See Fig. 19.

1 - The turnstile top lid (a) and interior finishing to be removed;

2 - Screws to be unscrewed and protective screen (acrylate) (b) to be removed. The card reader (d) bracket (c) to be adjusted;

3 – Card reader to be connected to ACS. The maximum dimensions of the identification card reader (d) to be installed is 80x80x30 mm (See Fig. 19);

4 - Protective screen (b) to be fixed with screws in the previous position. The turnstile lining and top lid to be installed and fixed with screws in the previous position;

* *Optional*

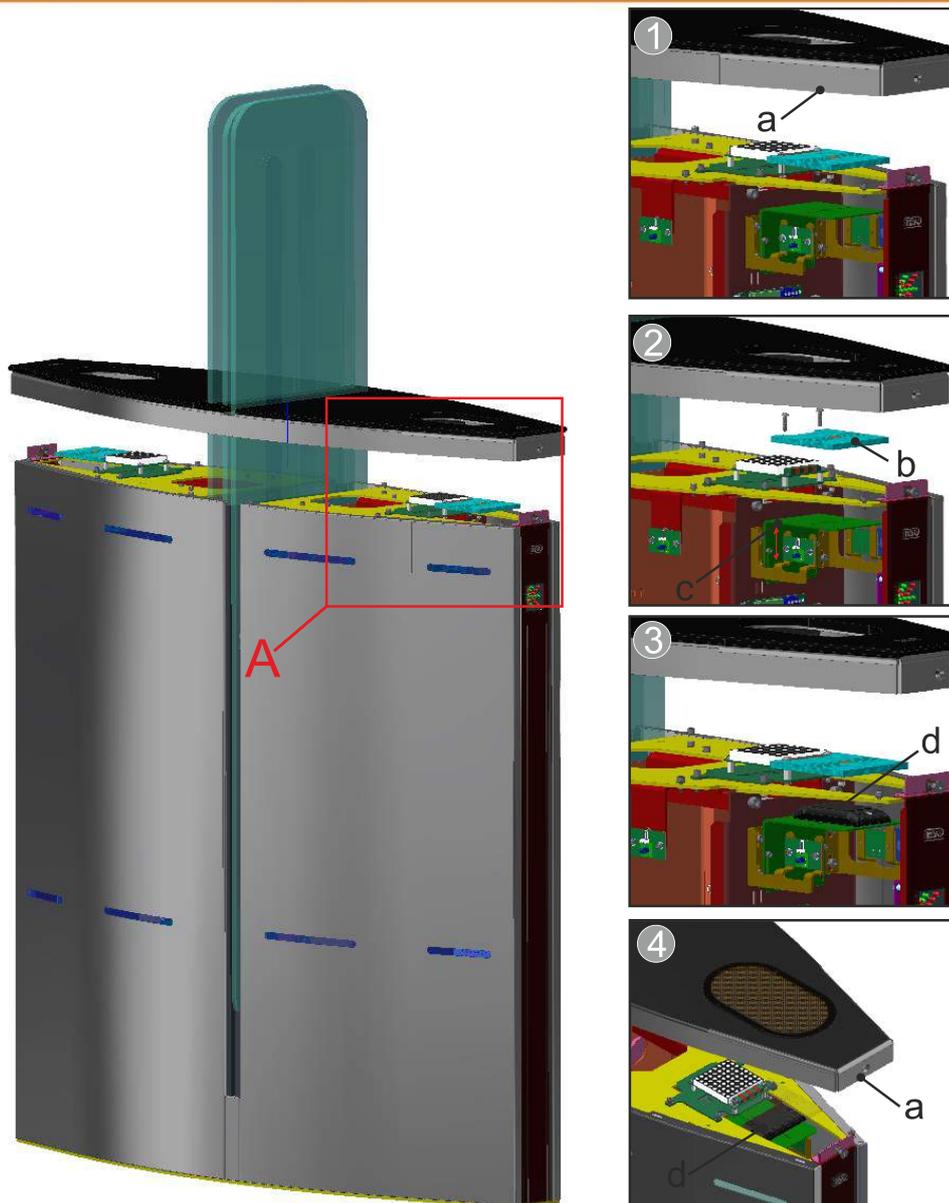


Fig.19 – Installation of card reader into the turnstile pedestrian gate «JETPAN»

2.3 Turnstile preparation for use

2.3.1 Commissioning guidelines

Prior to the turnstile energization:

- 1) make sure of proper connection and good condition of all connecting cables;
- 2) clear the turnstile leaf swing area from foreign particles.

When mains cable of power supply unit is connected to the network the turnstile operating mechanism is energized: leaves are locked from swinging in both directions barring access.

The turnstile is put in initial state: Entry and Exit LED display is blue.

The turnstile performance to be checked at least 10 times in both directions upon generation of the appropriate opening command (entry, exit).

2.3.2 Required inspections

2.3.2.1 When the turnstile is commissioned it is necessary to perform the inspections specified in Table 7. During inspections the wiring diagram according to Annex C and the control desk according to Annex B to be used

Table 7

<i>Operation Mode</i>	<i>Mode Setting</i>	<i>LED display</i>	<i>Functional check</i>
<i>1</i>	<i>2</i>	<i>3</i>	
1. Turnstile is closed in both directions (initial state)	–	Blue LED brightness is changed. Glass partition blue backlight is lit	Make sure that glass leaves are locked and they can't be pushed inside the turnstile
2. Single access in one direction	"SINGLE" button to be pushed for access in chosen direction («A» or «B»)	Green arrow of authorized single access in chosen direction is lit and blue LED brightness is changed in opposite direction. Glass partition backlight is lit green	Glass leaves are pushed inside the turnstile opening access in the intended direction
3. Single access in both directions	Both "SINGLE" buttons to be pushed for access in both directions («A» and «B»)	Green arrows of authorized single access in both directions are lit. Glass partition backlight is lit green	Glass leaves are pushed inside the turnstile opening access in the intended direction
4. Free access in one direction	"FREE" button to be pushed for access in chosen direction («A» or «B»)	Green arrow of authorized free access in chosen direction is lit and blue LED display is lit in opposite direction	Glass leaves are pushed inside the turnstile opening access in the intended direction
5. Free access in both directions	Both "FREE" buttons to be pushed for access in both directions («A» and «B»)	Green arrows of authorized free access in both directions are lit	Glass leaves are pushed inside the turnstile opening access in the intended direction
6 Single access in one direction and free access in opposite direction	"SINGLE" button to be pushed for access in chosen direction («A» or «B») and "FREE" button to be pushed for access in opposite direction	Green arrow of authorized single access in chosen direction is lit and green arrow of authorized free access in opposite direction is lit	Glass leaves are pushed inside the turnstile opening access in the intended direction
7 Single access in one direction and locked access in opposite direction	"SINGLE" button to be pushed for access in chosen direction («A» or «B») and "LOCK" button to be pushed to lock access in opposite direction	Green arrow of authorized single access in chosen direction is lit and red LED display of locked access in opposite direction is lit	Glass leaves are pushed inside the turnstile opening access in the intended direction

Continued Table 7

1	2	3	4
8. Free access in one direction and locked access in opposite direction	"FREE" button to be pushed for access in chosen direction («A» or «B») and "LOCK" button to be pushed to lock access in opposite direction	Green arrow of authorized free access in chosen direction is lit and red LED display of locked access direction is lit	Glass leaves are pushed inside the turnstile opening access in the intended direction
9. Locked access in one direction	"LOCK" button to be pushed to lock access in chosen direction ("A" or "B")*	Red LED of locked access in one chosen direction is lit	Make sure that glass leaves are locked and they can't be pushed inside the turnstile
10. Locked access in both directions	Both "LOCK" buttons to be pushed to lock access in both directions ("A" and "B")**	Red LED of locked access in both directions is lit	Make sure that glass leaves are locked and they can't be pushed inside the turnstile
11. Activation of "panic" mode	"PANIC" button to be pushed and hold within at least 7 sec.**	Green arrows of authorized free access in both directions are lit	Swing panels are opened in different directions
12 Deactivation of antipanic device	"PANIC" button to be pushed	Blue LED brightness is changed. Glass partition blue backlight is lit	Make sure that the glass doors are locked and cannot be pushed inside the turnstile
* In this case other control desk buttons of single and free access in chosen direction are locked. ** In this case all control desk buttons of single and free access in both directions are locked			

2.3.2.2 After all checks are completed and satisfactory results are achieved, the turnstile is ready for long-term operation.

2.4 Contingency actions

For emergency human escape (in case of fire, acts of God etc.) and enabling free access the turnstile to be unlocked from control desk by issuing the relevant command. For full opening of access way the "PANIC" function to be used or "PANIC" button on control desk to be pushed and held for more than 7 seconds or a signal is sent to the relevant input (in3) of the turnstile controller. In case of mains power failure the turnstile automatically switches to power supply from backup battery (optional).

If the mains power is not recovered and battery is discharged, the glass blades are fully put manually to the turnstile cabinet slots to make access way free.

3 MAINTENANCE

3.1 General guidelines

3.1.1 Commissioning and subsequent maintenance of the turnstile to be performed only by the staff being in charge of the turnstile.

3.1.2 The turnstile to be serviced only by the staff having the relevant electrical safety qualification level according to the national requirements.

3.1.3 The turnstile to be installed and operated only by the qualified safety briefed staff having the relevant class of permit to work with electrical facilities with voltage up to 1000V, being aware of this OM, the turnstile design and principle of operation.

3.2 Safety Measures

3.2.1 During maintenance of the turnstile the relevant safety measures according to p. 2.1 to be observed.



**IT IS FORBIDDEN:
TO USE DEFECTIVE APPLIANCES, TOOLS, FUSES, INSTRUMENTATION
THE SERVICE LIFE OF WHICH HAS EXPIRED**

3.2.2 When instrumentations are prepared for operation it is necessary to strictly comply with the safety requirements specified in the instrumentation instruction manuals.

3.3 Maintenance procedure

3.3.1 The turnstile maintenance includes preventive measures which are taken according to the established frequency to maintain the turnstile in operational condition, decreasing of component wearing and prevention of faults and malfunctions.

3.3.2 Daily and periodic maintenance of the turnstile are recommended.

Normally the daily maintenance is carried out before the beginning of operation or during operational timeout and includes visual inspection of the turnstile body and, if required, troubleshooting of mechanical damages, surface corrosion and contamination.



**IT IS FORBIDDEN:
TO USE ABRASIVE AND CHEMICALLY ACTIVE SUBSTANCES DURING
CLEANING OF CONTAMINATED EXTERNAL SURFACES OF THE
TURNSTILE.**

The recommended stainless steel detergents are given in Table 8.

Table 8

<i>Detergent description</i>	<i>Manufacturer</i>	<i>Country of origin</i>
Stainless steel cleaning spray “Stainless Steel Cleaner And Polish”	3M	Group of European companies
Cleaning fluid “Well Done”	Well Done	Hungary
Stainless steel products and other metals cleaner “XANTO STEEL 3in1”	XANTO	United Kingdom
«Dr.BECKMANN»	Dr.Beckmann	Germany
Cleaning solution “Reinex Edelstahlreiniger”	Reinex	Germany
Cleaning spray “Stainless steel cleaner”	Onish	United Kingdom

3.3.3 Periodic maintenance for the purpose of defect detection and remedy is performed at least twice a year and includes as follows:

- visual inspection of the turnstile body, actuating mechanism and other components for absence of external damages (corrosion, warps and other mechanical defects and pollutions);
- visual inspection of connecting, network and earthing cable condition;
- verification of the turnstile performance;
- during manual control in the modes specified in Table 7 or when identification cards are used;
- verification of reliability of the turnstile screw joints and earthing connections;

4 ROUTINE MAINTENANCE

4.1 General guidelines

Minor malfunctions of the turnstile are listed in *Table 9* and to be remedied by the customer. More complicated malfunctions to be remedied by the manufacturer’s representative.



**IMPORTANT:
INSPECTION, CLEANING, REPAIR OF THE TURNSTILE COMPONENTS TO
BE PERFORMED ONLY AFTER THE TURNSTILE IS DEENERGIZED !**

4.2 Possible malfunctions

Possible malfunctions of the turnstile and their remedies are listed in Table 9.

Table 9

Description of the Fault	Possible Cause	Recommended Action
<i>1</i>	<i>2</i>	<i>3</i>
Turnstile does not operate when energized	There is no mains power supply. Idle power cable. Power supply unit is out of order.	AC power to be recovered. Power supply cable to be connected. Power supply unit to be replaced..

Continued Table 9

1	2	3
Blade does not open	Belt is damaged. Magnetic sensor is adjusted improperly. Magnetic sensor is out of order. Turnstile does not obtain actuation signal from ACS	Magnetic sensor to be replaced. Belt to be replaced. Magnetic sensor to be adjusted or PCB to be replaced. Proper connection of ACS to input - output terminals on controller board to be checked. Availability of actuation signal from ACS to be checked.
Blade knocks	Magnetic sensor to be checked.	Magnetic sensor to be adjusted or PCB to be replaced.
Control panel sends sound signal "communication"	Control panel is out of contact with controller	Wires to be checked. Control panel to be checked. Controller to be checked.
LED display is out of order	No contact with controller. Wires are damaged. LED display is out of order	Wires to be checked. LED display to be checked. LED to be replaced.
Continuous sound signal when turnstile is open	Infrared sensors don't see each other. Infrared sensors are out of order.	Plexiglas to be cleaned from dust. Infrared sensors to be checked. Infrared sensors to be replaced if they are out of order.
The wing stays in half opened position.	Magnetic sensor is out of order. Mechanism jamming.	Blade opening to be checked manually turning off power supply. Mechanism components to be checked. Sensor adjustment to be checked.
The wing stay open	Magnetic sensor is out of order. Mechanism jamming "FREE ACCESS" mode is set. Infrared sensors are out of order	Blade opening to be checked manually turning off power supply. Mechanism components to be checked. Sensor adjustment to be checked
The wing opens slowly	Mechanism jamming. Infrared sensors don't see each other. Infrared sensors are out of order. Magnetic sensor to be checked.	Check manually whether it operates or not. Mechanism components to be checked. Magnetic sensor to be adjusted or PCB to be replaced Magnetic sensor to be adjusted or PCB to be replaced. Wires to be checked.

4.3. «JETPAN-1» turnstile blade initialization procedure

Initial setting of the blade zero position at the first activation of the turnstile:

- 1) Turn OFF the power supply;
- 2) Motor to be disconnected from PCB 201terminal: MOT1 (Fig.7);
- 3) Blade to be set in the required zero position (Fig.20);

- 4) The turnstile to be energized;
- 5) Zero position setting button on magnetic sensor board to be pushed and hold for at least 1 second, then to be released (make sure that the button pressure force does not bend the board);
- 6) After the button on the magnetic sensor board is released the zero position LED to be lit;
- 7) Presence of signals of rotation angle changing, speed and zero position on controller PCB 201 - terminals: IN5, IN6, IN7, IN8. During blade opening and closing:
 - IN5, IN6 – should exchange winks.
 - IN7 – is lit brightly if the blade is not moved or is moved slowly. Brightness is decreased if blade is rotated rapidly.
 - IN8 – to be lit in just set zero position;
- 8) Turnstile to be deenergized;
- 9) Motor to be connected to PCB 201, terminals MOT1;
- 10) The turnstile to be energized;
- 11) Turnstile operation to be checked
- 12) New zero position setting is completed

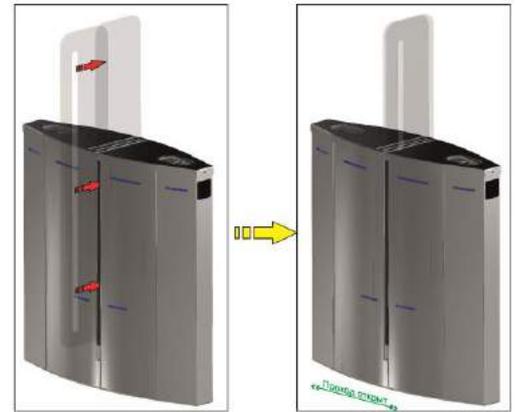
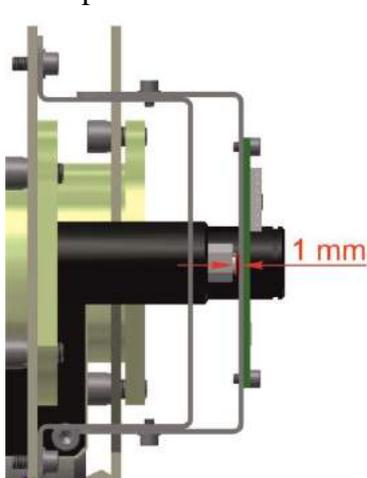


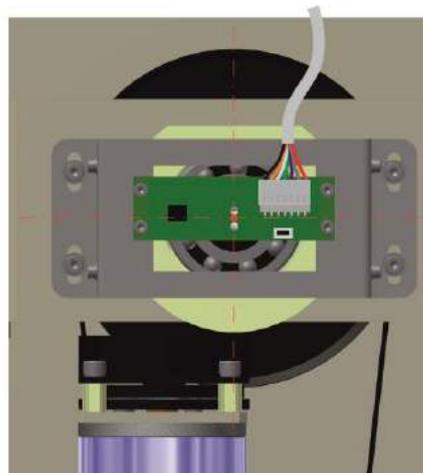
Fig. 20– Turnstile blade in zero position (access way is open)

Leaf initial position calibration (Fig.21).

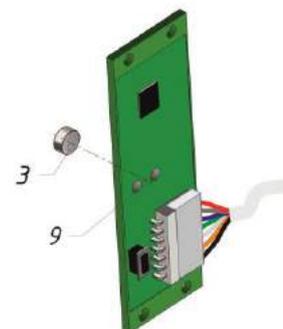
- 1) The initial position setting button on the magnetic sensor board to be pushed (care must be exercised to avoid the board bending due to the button pushing force);
- 2) The new leaf initial position to be set;
- 3) The button to be released;
- 4) After the button on the magnetic sensor board is released the initial position LED to be lit;
- 5) The presence of turning angle, speed and initial position change signals on controller PCB201 to be checked – terminals: IN5, IN6, IN7, IN8. When the leaf is turned:
 - IN5, IN6 to be exchanged winks.
 - IN7 is lit brightly when leaf is no turned or turned slowly. When it is turned quickly then bright will be reduced,
 - IN8 to be lit only in the set initial position;
- 6) The new initial position calibration The new initial position setting is completed.is completed



Gap between magnetic axis and magnetic sensor



Top view of the installed magnetic sensor



Layout of board over magnetic axis

Fig. 21– General view of the «JETPAN»turnstile magnetic sensor

Control of the space between the magnetic sensor and magnet.

Allowed space - 1 mm

- If LED lights, its meaning that that is not enough space or its too far.

Indication of locking position (Zero)

- If LED lights – its meaning that the magnet is in locking position.

Indication about the working state of the magnetic sensor.

- If LED it is blinking – the magnetic sensor is OK.
- If it lights or if it not light's – magnetic sensor is defected.

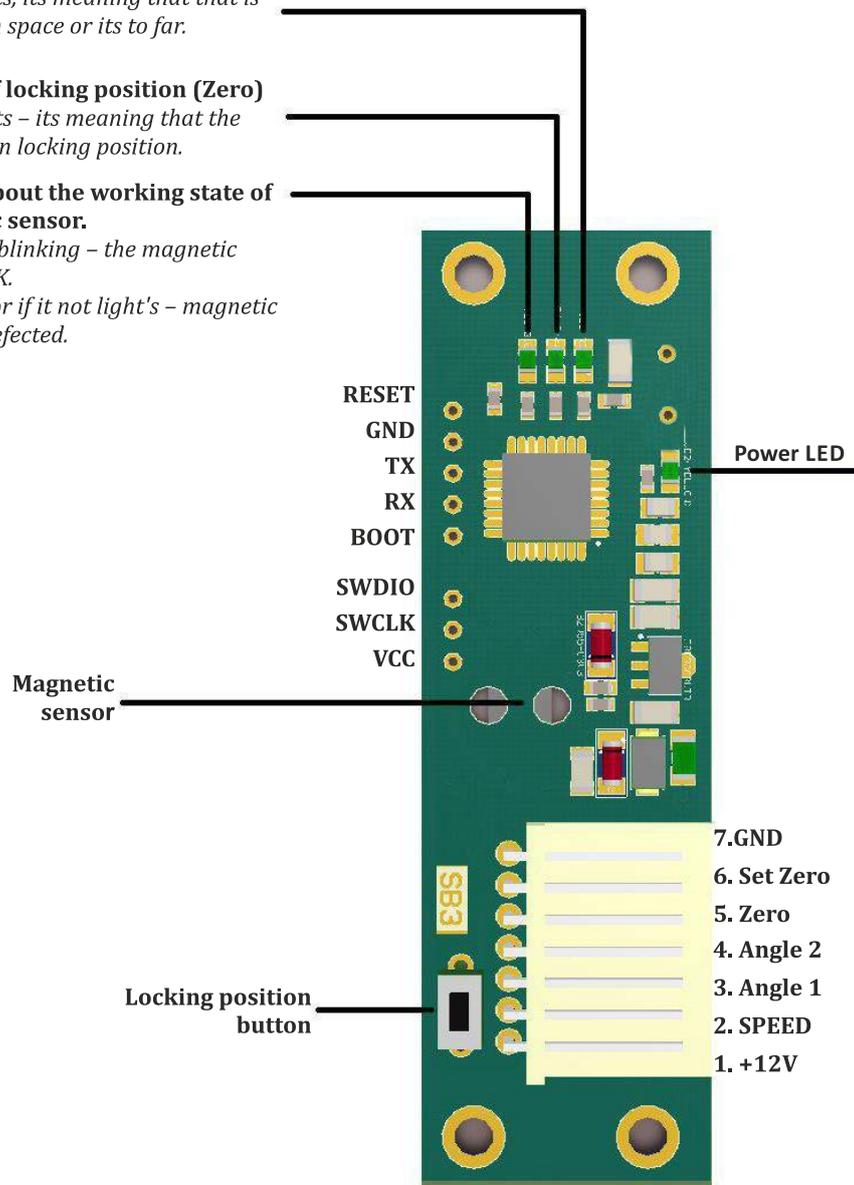


Fig. 22 – Magnetic sensor board PCB 730.01

4.4 Postrepair checkout

The turnstile performance is checked after repair according to p. 2.3.2 of this OM.

5 TRANSPORTATION AND STORAGE

5.1 Turnstile storage

It is forbidden to subject the turnstile to jerks and impacts during storage. Transportation trolleys to be used for handling of the turnstile. In storage facilities there should not be aggressive

gases and vapours causing metal corrosion. Air temperature during storage should not be below +5°C and above +40°C and relative air humidity should not be more than 80% at the temperature 20°C.

5.2 Turnstile transportation

The ready-to-install turnstile to be transported according to the transportation regulations related to the relevant mode of transport, such as:

- in railway or special containers;
- in closed vehicles;
- waterborne (in ship's hold) .

Transportation on open platforms is allowed. In this case the packed turnstile should be covered with canvas. Air temperature during transportation should not be below -40°C and above +50°C.

After transportation or storage of the turnstile at negative temperatures or increased humidity the turnstile to be kept indoor with normal climatic conditions without original packing within 12 hours before commissioning:

- 1) ambient temperature: + 15°C to +35°C;
- 2) relative humidity: 45% to 80 %;
- 3) atmospheric pressure: 84,0 to 106,7kPa (630-800 mm

6 DISPOSAL

The turnstile design does not contain materials environmentally hostile and hazardous to health and special measures are not required for its disposal.

7 MANUFACTURER'S WARRANTY AND TERMS OF WARRANTY MAINTENANCE

7.1. The manufacturer guarantees good state and declared quality of the turnstile if conditions of transportation, storage, installation and operation are observed by the consumer.

7.2. The warranty period of the turnstile from the date of sale is **12 months** unless otherwise specified by agreement.

7.3 During warranty period the Manufacturer undertakes to perform repair or replacement within 10 days (at the discretion of the Manufacturer) of the failed turnstile or its parts having proven factory defects (not due to nonobservance of storage, transportation, installation and operation conditions specified by this OM) preventing further use of the turnstile.

7.4 The Manufacturer does not bear responsibility and warranty liabilities for the turnstile damage due to nonobservance of the requirements specified by this OM and in case of the turnstile unintended use.

7.5 Warranty liabilities of the Manufacturer are valid only if sections 3, 4, 5 of this DATASHEET and warranty coupon are completed as well as the relevant signatures and seals are available. The turnstile to be repaired only by the authorized service center of the manufacturer with use of exclusively original spare parts. Warranty liabilities don't include free-of-charge arrival of technical staff to the Customer for repair.

7.6 The relationships between the Manufacturer and the Customer under warranty liabilities are regulated by the applicable law of Ukraine, concluded purchase contracts and these warranty obligations.

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Our equipment complies with requirements of the European Standards: EN ISO 12100:2010; EN 614-1:2006+A1:2009; EN 1037:1995+A1:2008; EN 60204-1:2006; EN 953:1997+A1:2009; ISO 3864:1995; EN ISO 13857:2008; EN ISO 13849-1:2006; EN 1088:1995; EN ISO 13732-1:2008 and is in conformity with requirements of the following EC Directives: 2014/30/EC; 2014/35/EC; 2006/42/EC

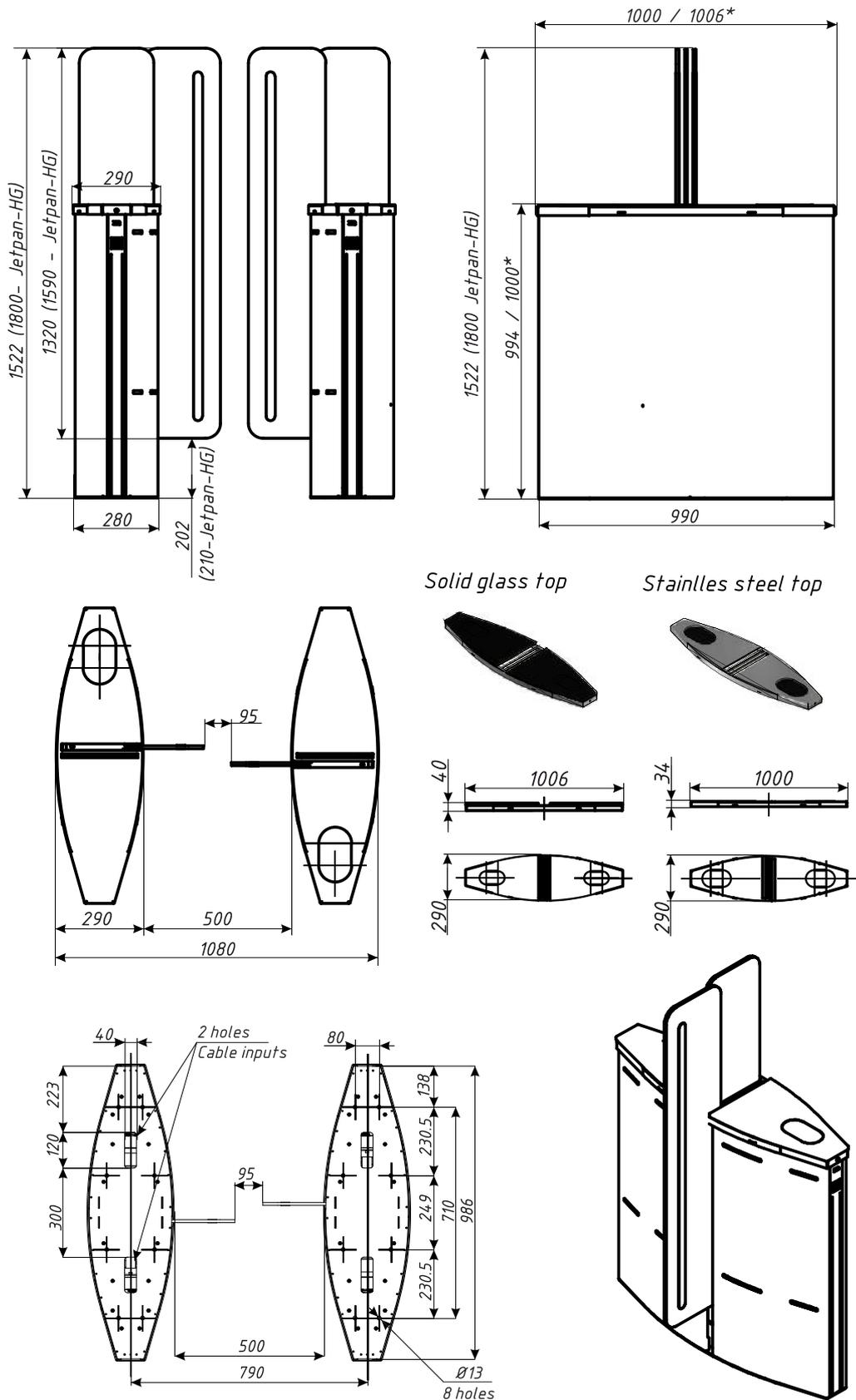
The manufacturer's quality management system has been certified according to the International Standard ISO 9001: 2015 - Certificate UA 18 / 819942484.



QR-code to be used to download the Operation Manual via Internet

Annex A
(mandatory)

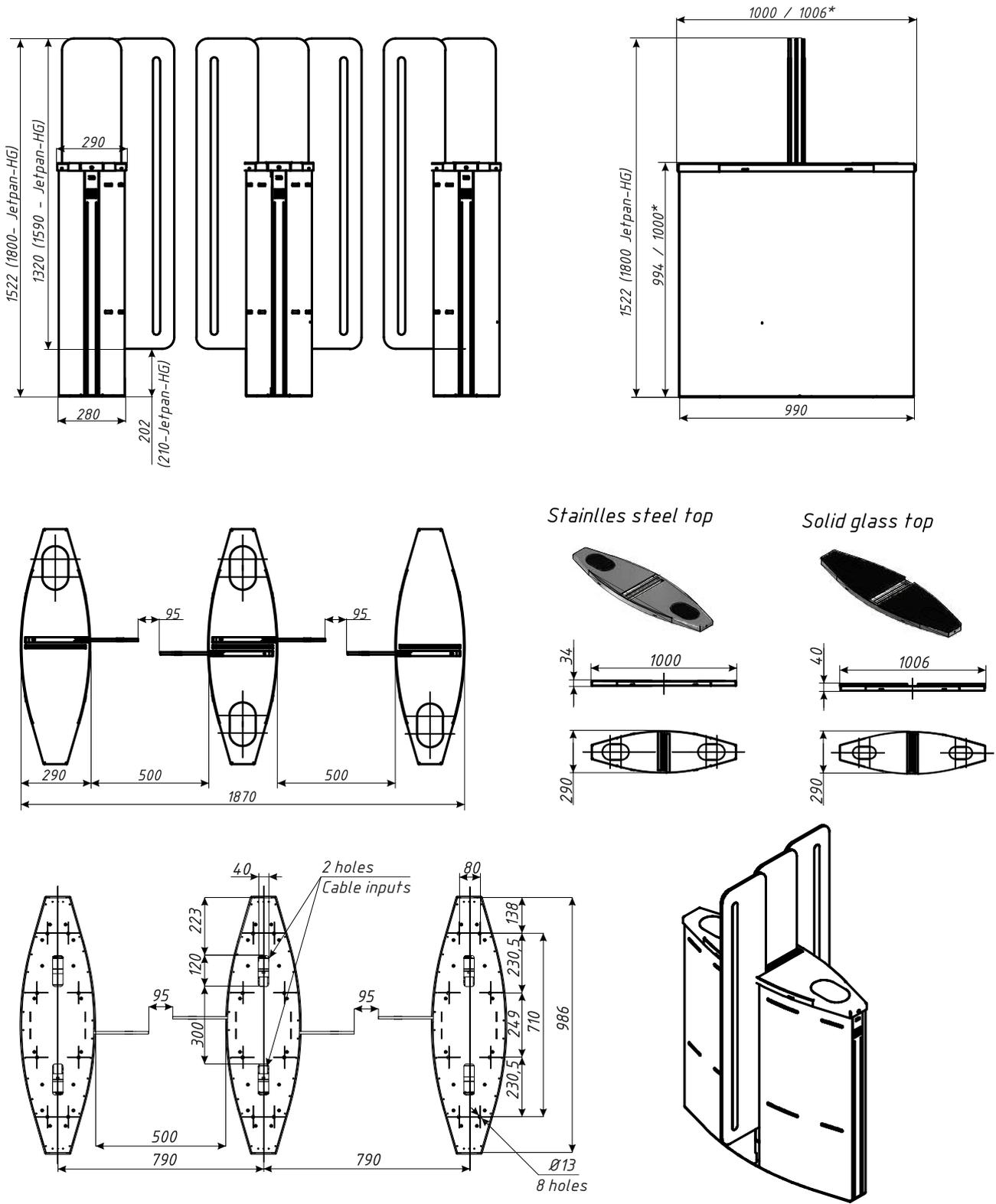
Overall and installation dimensions of the «JETPAN-1» type turnstile



* Overall dimension for the turnstile with glass countertop

Figure A.1 – Installation dimensions of the single turnstile T3.KCD.XK_/500/500

Continued Annex A
Overall dimensions of the «JETPAN-1» and «JETPAN-2» type turnstile

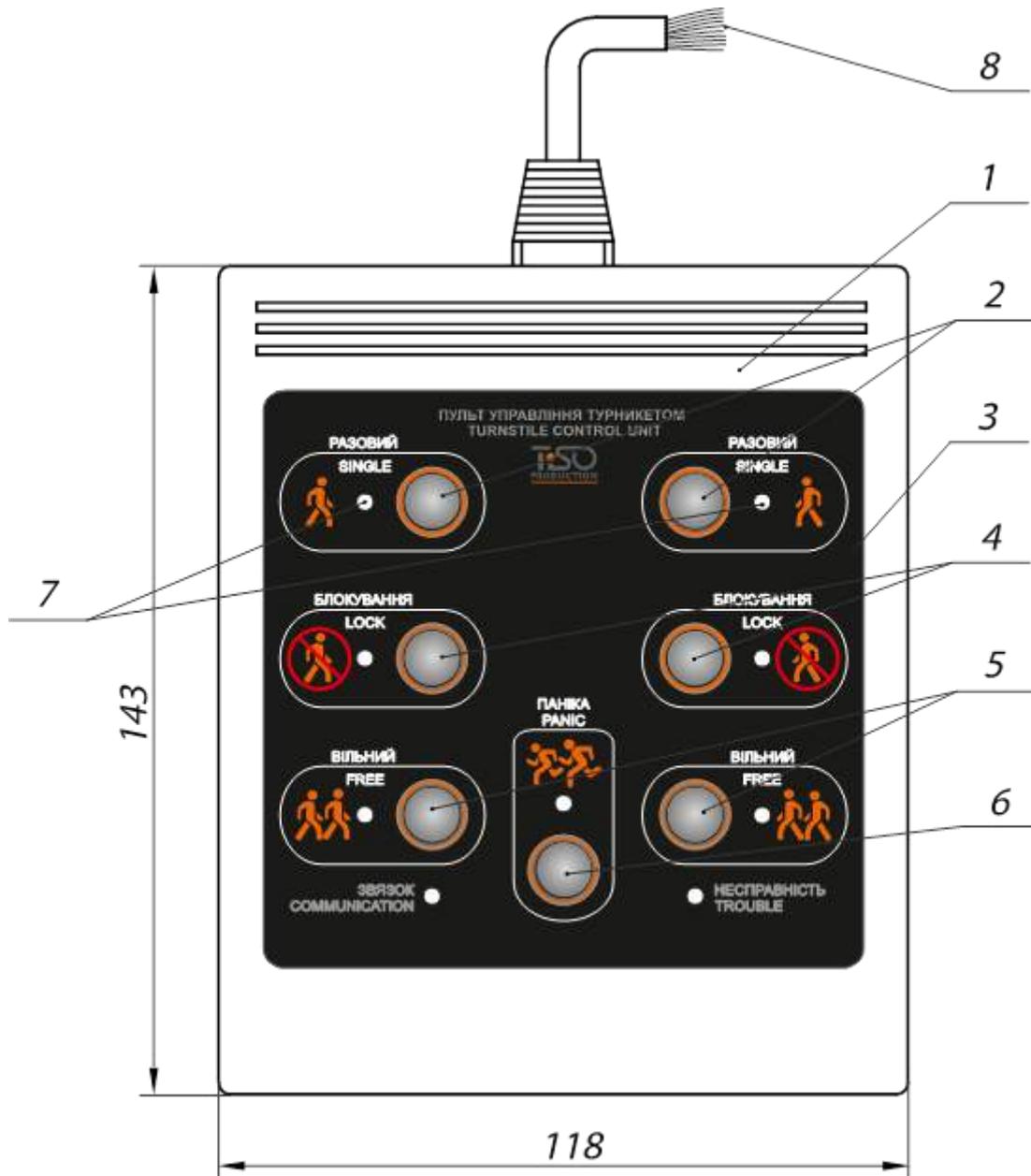


* Overall dimension for the turnstile with glass countertop

Figure A.2 – Installation dimensions of group of the turnstiles
 T3.KCD.XK.X/500/500 and T3.KCD.XK_/500/500

Annex B
(mandatory)

Control desk and connection diagram



1 – control panel body;
2 – "SINGLE ACCESS" mode control button
3 – front plate;
4 – "LOCK" mode control button;

5 – "FREE ACCESS" mode control button
6 – "PANIC" mode control button
7 – access direction LED display;
8 – controller connection terminals

Figure B.1 – Control panel AUIA.114.02.00.00

Continued Annex B

Control panel and connection diagram

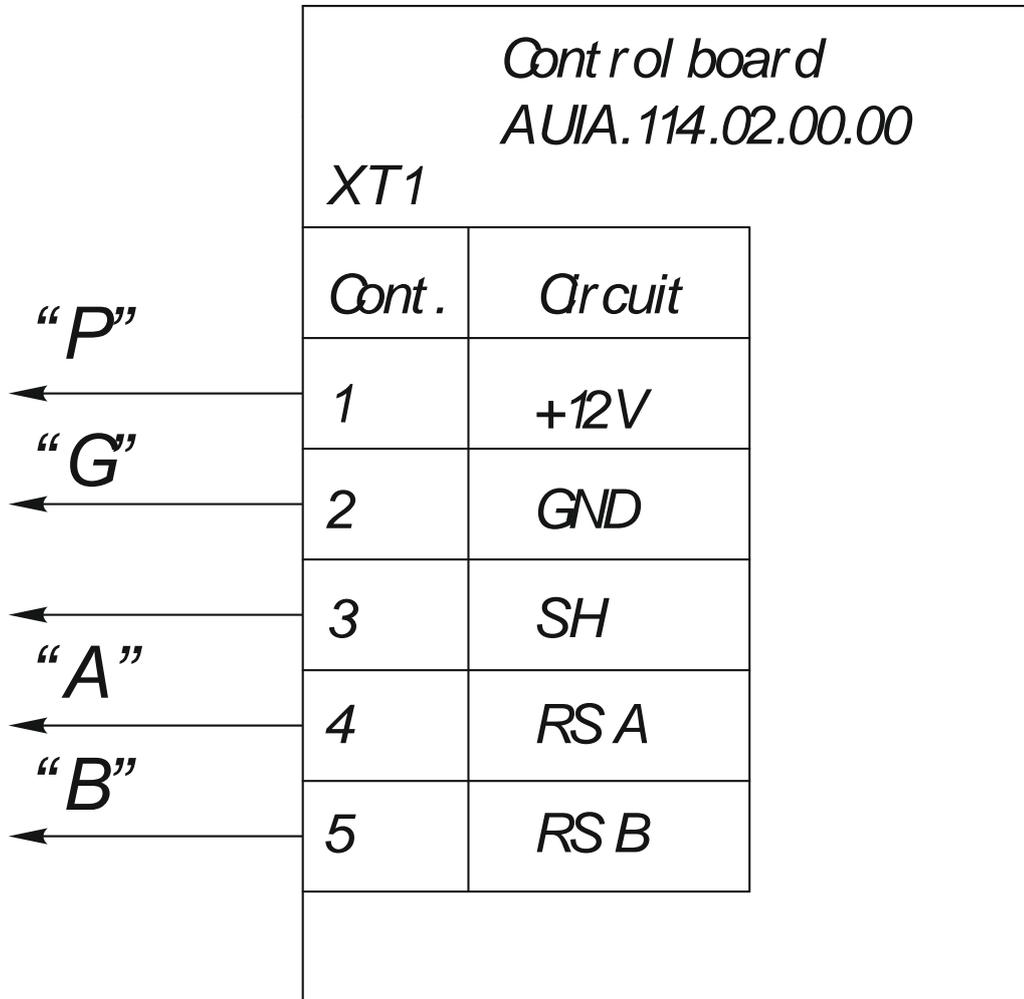
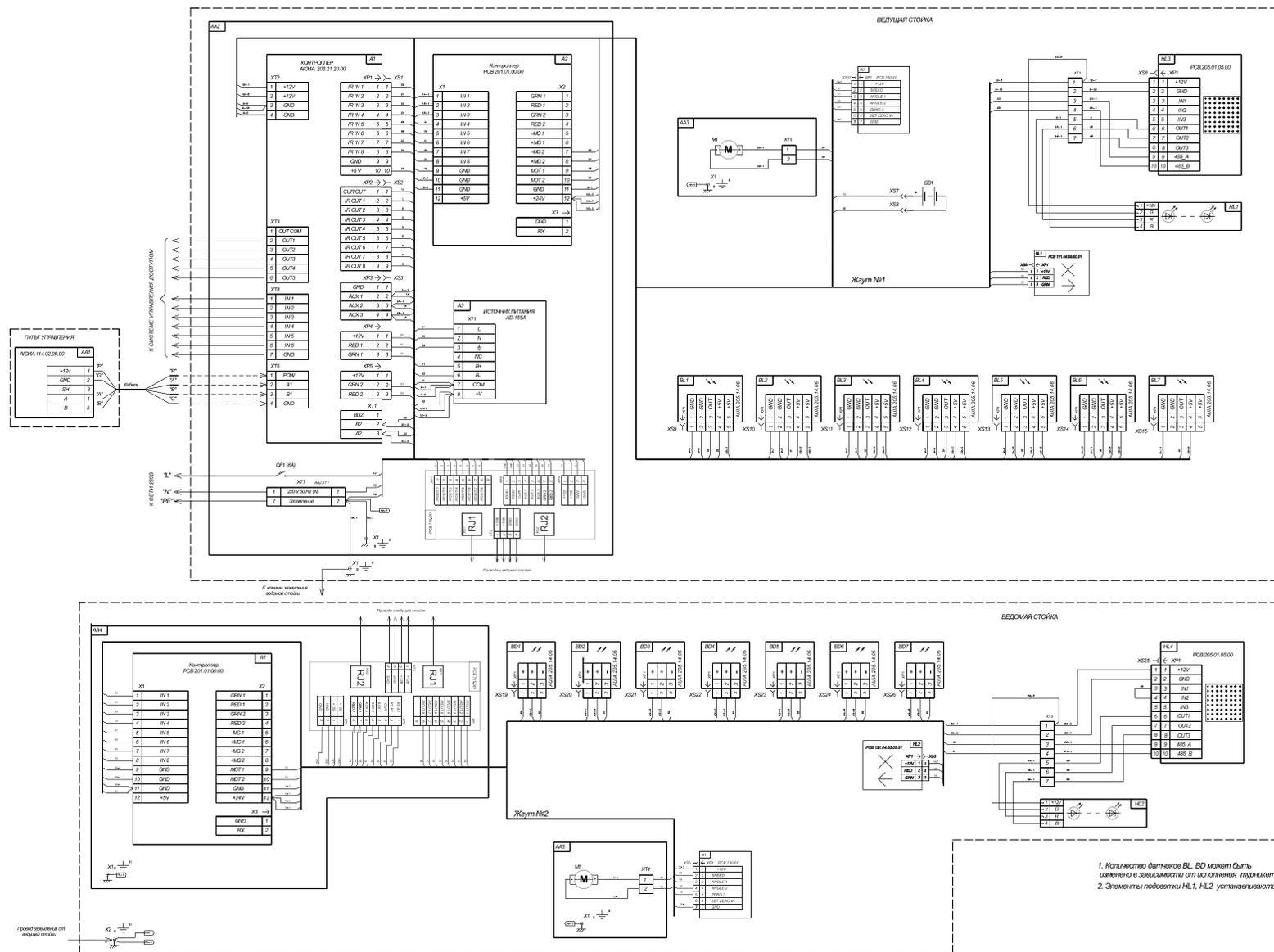


Figure B.2 – Connection diagram of control panel AUIA.114.02.00.00

Annex C.1

(mandatory)

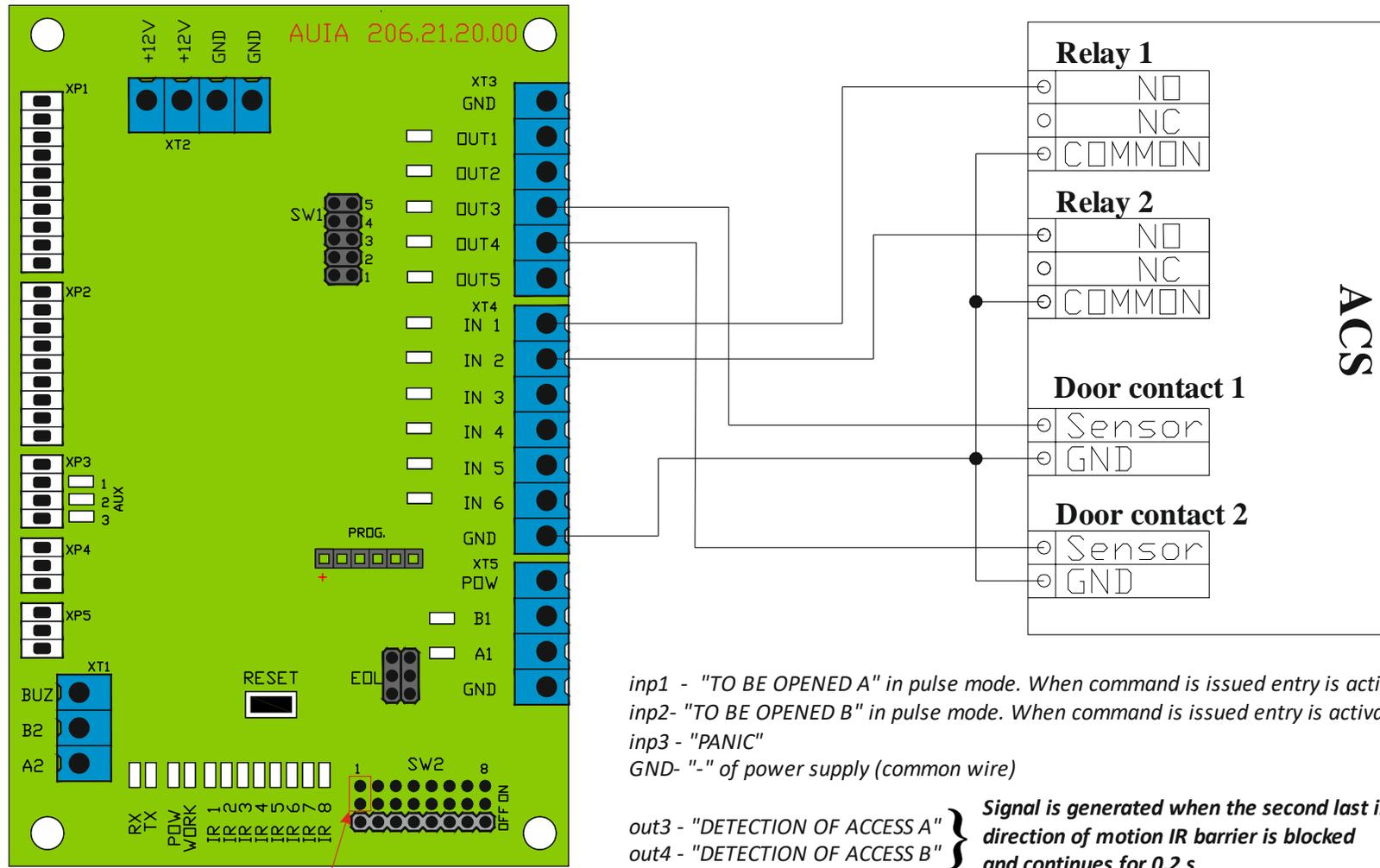
Wiring diagram of the «JETPAN» type turnstile



1. Количество датчиков BL, BD может быть изменено в зависимости от исполнения турникета.
 2. Элементы подсветки HL1, HL2 устанавливаются по требованию заказчика.

Annex D.1
(mandatory)

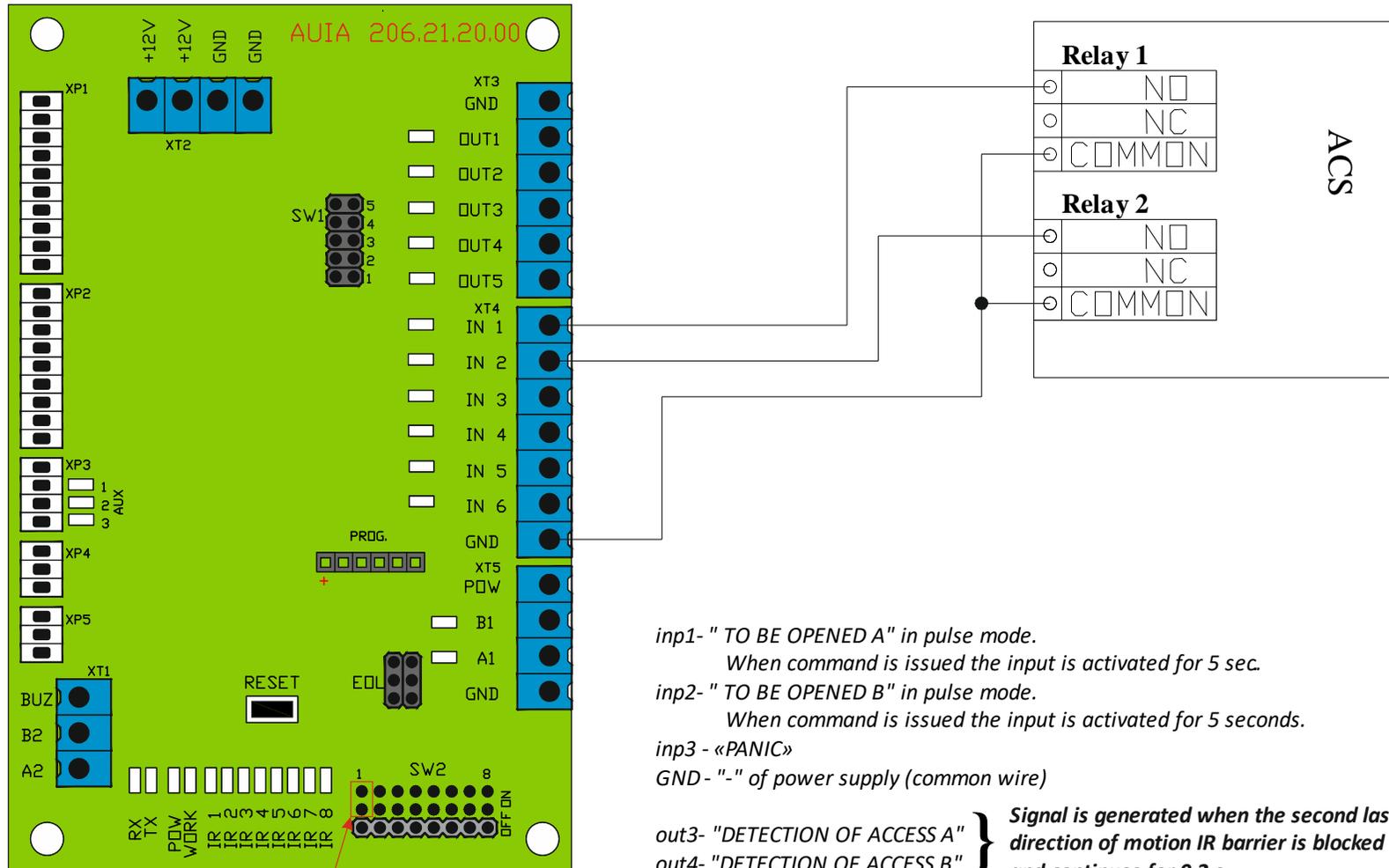
Diagram of the turnstile connection to access control system (ACS)



IN1 and IN2 with 5 sec. delay

Annex D.2
(mandatory)

Diagram of the turnstile connection to access control system (ACS)

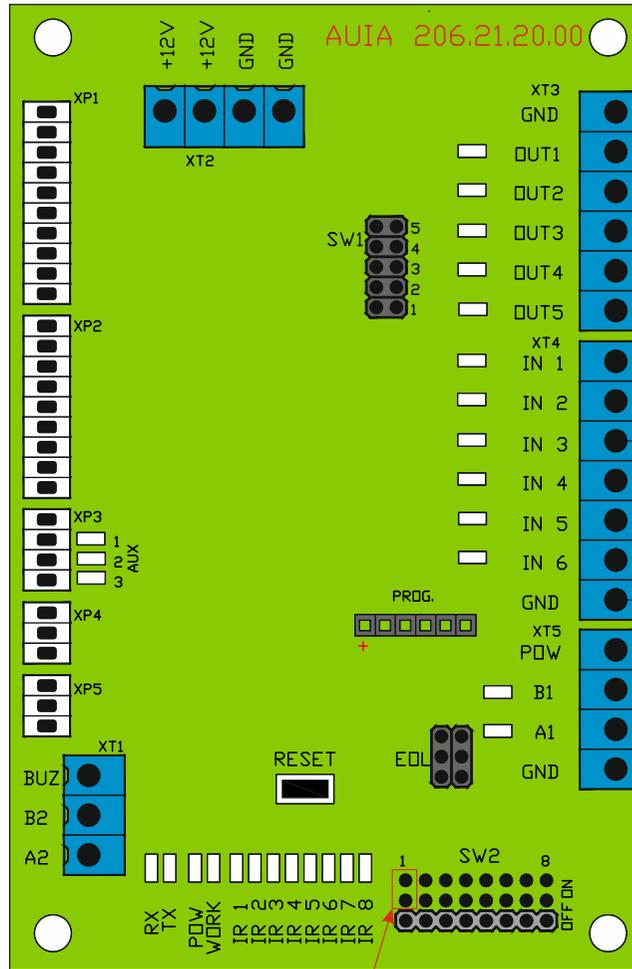


IN1 and IN2 with 5 sec. delay

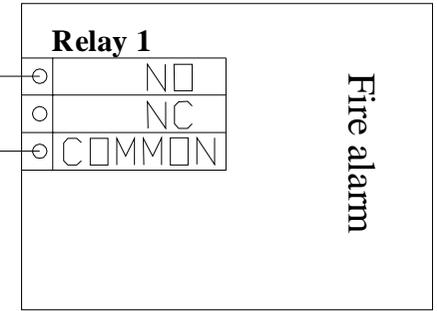
- inp1- " TO BE OPENED A" in pulse mode.
When command is issued the input is activated for 5 sec.*
 - inp2- " TO BE OPENED B" in pulse mode.
When command is issued the input is activated for 5 seconds.*
 - inp3 - «PANIC»*
 - GND - "-" of power supply (common wire)*
- out3- "DETECTION OF ACCESS A" } Signal is generated when the second last in the*
out4- "DETECTION OF ACCESS B" } direction of motion IR barrier is blocked
and continues for 0,2 s

Annex D.3
(mandatory)

Diagram of the turnstile connection to fire alarm (FA)



IN1 and IN2 with 5 sec. delay



- inp1- " TO BE OPENED A" in pulse mode. When command is issued the input is activated for 5 sec.*
- inp2- " TO BE OPENED B" in pulse mode. When command is issued the input is activated for 5 seconds.*
- inp3- «PANIC»*
- GND- "-" of power supply (common wire)*

- out3- "DETECTION OF ACCESS A"*
 - out4- "DETECTION OF ACCESS B"*
- } Signal is generated when the second last in the direction of motion IR barrier is blocked and continues for 0,2 s

Annex D.4
(mandatory)

Diagram of the turnstile connection to control panel

