LA BARRIÈRE AUTOMATIQUE
manufacturer

THE VEHICLE AND PEDESTRIAN ACCESS CONTROL SPECIALIST

OPERATING INSTRUCTIONS
TURNSTILES
LBAT10, 20 et PMR

Before installing or repairing your equipment, we recommend that you read these user and operating instructions carefully.
We are at your disposal for any additional information or comments.
Please contact our After-Sales Service on +33 (0)4 78 86 02 86, from Monday to Friday, 9 am to 6 pm.

LA BARRIÈRE AUTOMATIQUE
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Contents

1 General

1.1 Introduction

Thank you for choosing the La Barrière Automatique to regulate and make your access points secure. Rest assured that your purchase will give you complete satisfaction for many years.

However, we recommend that you read the following service instructions and the quick installation guide attached before installing your equipment.

We have taken a great deal of care in writing this information. However, should certain points seem incorrect or not clear, please let us know; we are at your disposal for anything you'd like to say or any additional information you may need.

Before installing or repairing the turnstile, read these instructions carefully.

The turnstile must be installed and maintained by a professional fitter, in accordance with the instructions and regulations in force.

Compliance with all instructions is important to prevent any harm to individuals. Failure to comply with these instructions can cause physical injury which can be serious in certain cases.

1.2 Information

Installing a turnstile or physical obstacle makes you liable for the safety of users. Please therefore consider the following comments:

- The key to open the turnstile hatches, which gives access to the mechanism and the electrical part, must be used by personnel fully aware of the risks of electrocution and crushing they are running in the event of careless handling. Workers are required to check that the hatches are locked properly before leaving.

You alone are responsible for the instigation of and compliance with appropriate signs.

1.3 Limits of liability

Failure to comply with the provisions listed below releases La Barrière Automatique from any liability for damage caused to individuals or objects:

- If the equipment malfunctions, cut off the power supply to the motor immediately and operate the turnstile manually until the fault is found and eliminated
- Do not modify any part of the product if this is not provided for in the manual nor approved by the manufacturer
- Equipment must be modified or dismantled exclusively by authorised, qualified personnel
- Prevent parts from the automatic control system from being placed near heat sources or coming into contact with liquid substances.
- Use the appropriate power supply cables
- Use La Barrière Automatique accessories for the ideal operation of the automatic control system
- The equipment must be installed, inspected and switched on as per the standard in force
- Dispose of waste materials in compliance with the local standard in force

1.4 Intellectual property right

It is forbidden to pass on the service instructions to third parties without the manufacturer's written consent.

The contents, texts, drawings, figures and other illustrations are protected by intellectual property law and enjoy the resulting intellectual property rights. Any fraudulent use is subject to sanctions.

Reproductions, even partial and regardless of their type and form, and the use and/or communication of the contents are forbidden without the manufacturer’s written consent.

1.5 Warranty

Under normal use of the product, where these service instructions have been followed and no unauthorised intervention has taken place, La Barrière Automatique will be held accountable for any technical or manufacturing defect of mechanical and/or electrical parts in accordance with the contract drawn up at the time of sale.

1.6 Customer service and after-sales service

Be it before, during or after the sale of the equipment, La Barrière Automatique can be contacted at the following address for all technical questions:

LA BARRIERE AUTOMATIQUE
451 chemin de Champivost
69760 LIMONEST
France
Tel.: +33 (0)4-78-86-02-86
Fax: +33 (0)4-78-51-18-76
E-mail: contact@barriere-automatique.fr

***Comment:* So that we can deal with your request more efficiently, please have available, when possible, the information found on the turnstile's rating plate (type, serial number, date of manufacturer) before telephoning.**

1.7 Declaration of conformity

The turnstiles comply with the following European standards:

305/2011/EC : Construction Product Regulations
2006/42/EC : Machinery Directive
2014/35/EC : Low Voltage Directive
2014/30/EC : Electromagnetic Compatibility Directive
2011/65/EC : ROHS Directive
NF EN 61800-3 amendment A11, Table 2: Minimum immunity requirements for harmonics, second environment
NF EN 61800-3 amendment A11, Tables 3 and 4: Immunity requirements for voltage deviations, imbalances and frequency deviations, second environment
NF EN 61800-3 amendment A11, Table 6: Immunity requirements for high-frequency disturbances, second environment
NF EN 61800-3 Chapters 6.1.1, 6.1.2, 6.1.3 and 6.1.4: Low-frequency emissions
NF EN 61800-3, Tables 6 and 7: High-frequency emission, first environment
NF EN 61800-5-1: Adjustable speed electrical power drive systems
NF EN 60034-1: Rotating electrical machines

1.8 Protecting the environment.

Incorrect disposal of components or the turnstile is likely to cause environmental damage.
Please comply with and respect the local and national laws and directives in force before dismantling a turnstile.

2 Safety

2.1 Compliant use of turnstiles

La Barrière Automatique turnstiles are designed exclusively to regulate the entrance and/or exit of pedestrians in set areas.

The turnstile must be operated by electrical energy only.

2.2 Non-compliant uses of turnstiles

Non-compliant use of the turnstile can result in hazardous situations and risks of serious injuries.

All the following uses are deemed non-compliant:

- The control of pedestrian, bicycle and/or animal traffic
- The connection or fitting of accessories that are not approved by La Barrière Automatique in advance
- Any use other than those described in the compliant uses

Any request for compensation of any type whatsoever following non-compliant use of the turnstile will be rejected.

The user of the turnstile is alone liable for damage resulting from non-compliant use.

2.3 User liability

The user must in all circumstances fulfil his legal obligations in terms of safety.

The user must in particular:

- ► Enquire about the legislation in force relating to protection at work
- ► Check regularly that the use instructions given are in line with the current state of the regulations and adapt them as a result
- ► Distribute clearly the skills of the personnel intended to use the turnstile during its installation, use, maintenance or cleaning.
- ► Make sure that these personnel have read and understood this user manual
- ► Make sure that these personnel are clearly provided with personal protection equipment for any operation on the turnstile of any kind whatsoever.

In addition, it is incumbent on the operator to:

- ► Train the personnel at regular intervals in handling the turnstile and advise them of the potential risks
- ► Maintain the turnstile in good condition
- ► Comply with the turnstile maintenance and cleaning times

2.4 Modifications and transformations

Any modification or transformation of turnstiles or the complete installation can lead to unexpected risks.

Please contact the manufacturer before any operation of this type.

2.5 Qualified personnel

Any use, even compliant, of the turnstile by unqualified personnel can result in hazardous situations and risks of serious injuries.

The following personnel are deemed to be qualified:

- **The personnel trained** by the operator in the tasks entrusted to them and on the potential risks
- **Electrotechnically-qualified personnel** capable of working on electrical installations and themselves recognise the potential risks
- **La Barrière Automatique maintenance personnel** who are chosen, trained and authorised by La Barrière Automatique to carry out maintenance and servicing work on the turnstiles

3 Identification

Each turnstile has a rating plate fixed on the housing that indicates the type of turnstile, serial number and date of manufacture:

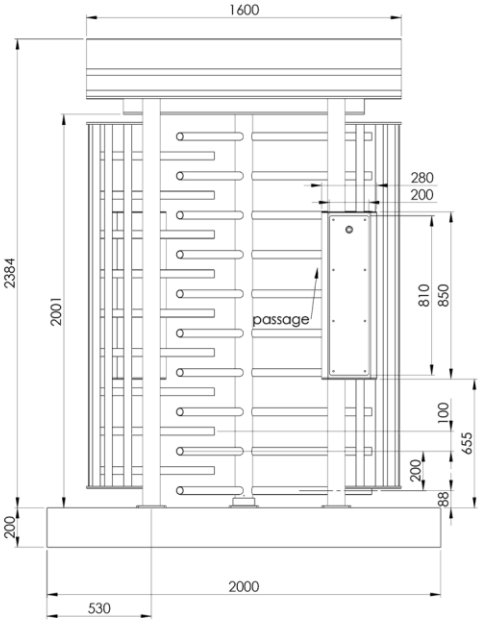
Date of manufacture:	**MM YY** (MM: month; YY: year)
Serial number:	**Six-figure code** starting with the first two figures of the year of manufacture
Type:	**LBA X**

The telephone number for technical assistance is also shown.

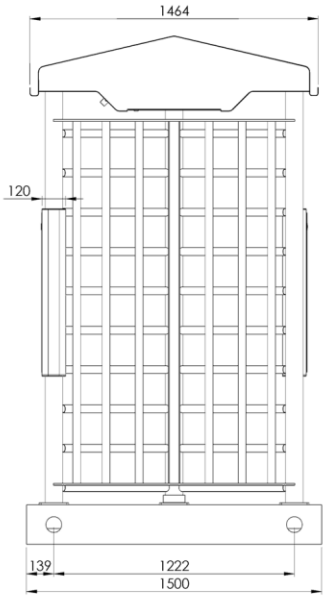
4 Technical data

4.1 Dimensions and directions

4.1.1 LBAT 10

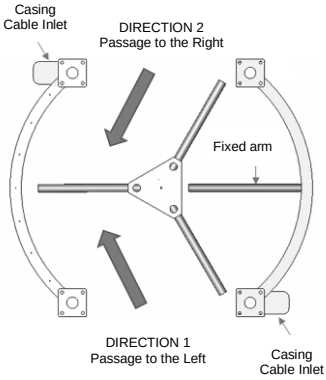


FRONT VIEW

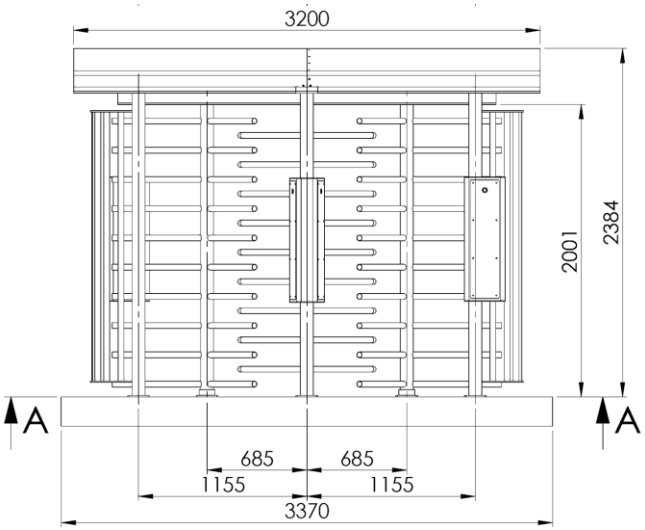


SIDE VIEW

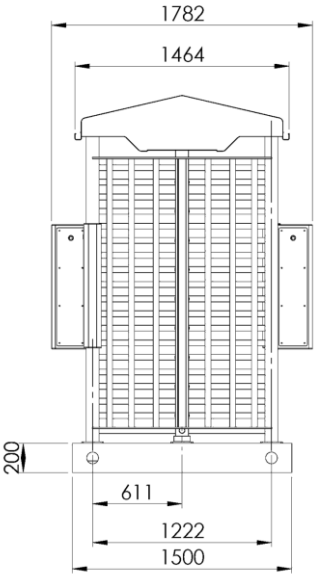
TOP VIEW



4.1.2 LBAT 20

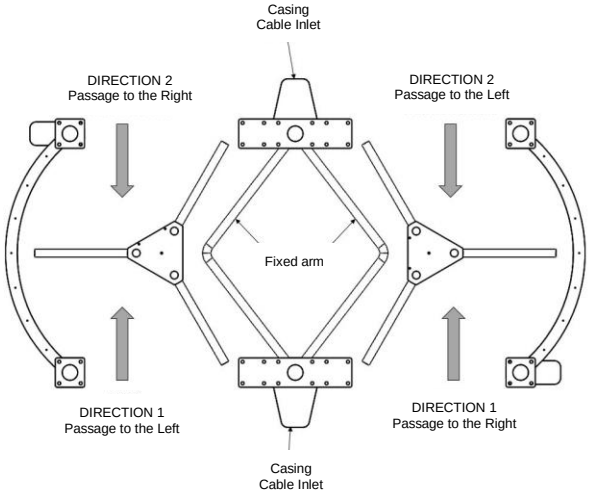


FRONT VIEW

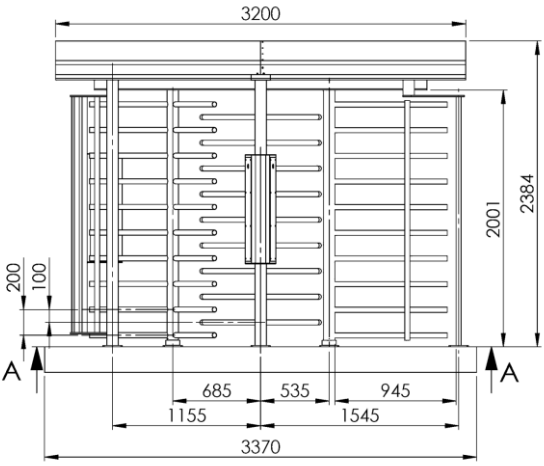


SIDE VIEW

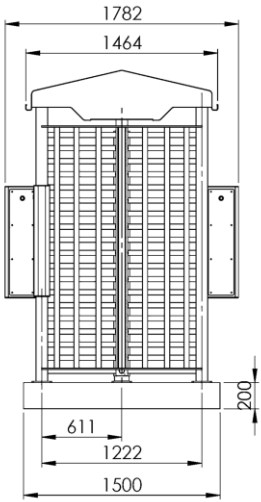
TOP VIEW



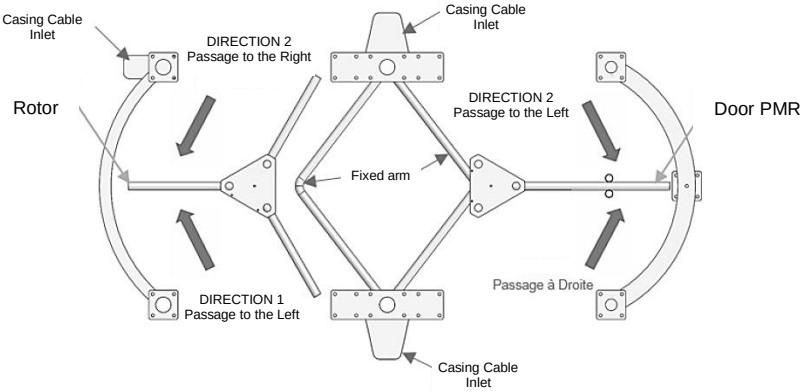
4.1.3 LBAT PMR (Person with Reduced Mobility)



FRONT VIEW



SIDE VIEW



TOP VIEW

4.2 Main characteristics

This turnstile comprises several sub-assemblies: structure, revolving door(s), roof, casings, drive system and electrical board.

Turnstile	LBAT 10	LBAT 20	LBAT PMR
Structure	Galvanised sheet steel		
Revolving door(s)	1 Ø 1300 mm steel revolving door comprising 3 x 10 Ø 40 mm horizontal arms	2 Ø 1300 mm steel revolving doors comprising 3 x 10 Ø 40 mm horizontal arms	1 Ø 1300 mm steel revolving door comprising 3 x 10 Ø 40 mm horizontal arms + 1 steel gate for persons with reduced mobility comprising 10 Ø 40 mm horizontal arms
Passage width	680 mm		680 mm (revolving door) 945 mm (gate for persons with reduced mobility)
Passage angle	120°		
Passage reducer (option)	Stainless steel passage reducer to be attached to the revolving door's arm. Reduces the passage angle from 120° to 83°.		
Heel guard (option)	Shock-absorbing foam sleeving, Ø 80, 20 mm thick, covered with a protective cover made of 550 g/m² PV coated fabric.		
Bearing system	Bearing integrated into the base of the revolving door. The base of the revolving door is made of stainless steel and waterproof.		
Roof	Plasticised aluminium sheet metal with rainwater drainage system, LED lighting system and access hatches (lockable) with drive and control systems.		
Casings	Galvanised steel casings, 860 mm high x 261 mm wide x 120 mm thickness closed with 810 mm high x 200 mm wide aluminium plates for integrating access control equipment. Red and green integrated LEDs for turnstile status display		
Paint	Structure, revolving door(s), roof and casing: RAL 9010 paint (other shades possible as option)		
Dimensions	2383 mm x 1600 mm x 1464 mm	2383 mm x 3200mm x 1782mm	
Drive system	Manual drive system. Two-way locking through the use of electromagnetic ratchets		
Control	Programmable logic controller		
Position sensor	0-10 V rotary sensor		0-10 V rotary sensor (revolving door) Inductive sensor (gate for persons with reduced mobility)
Off configuration	Each rotational direction can be configured free or blocked off (4 possible configurations)		

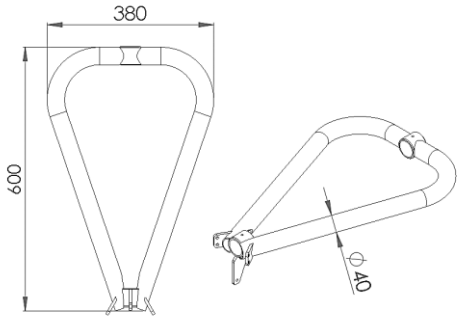
4.3 Additional information:

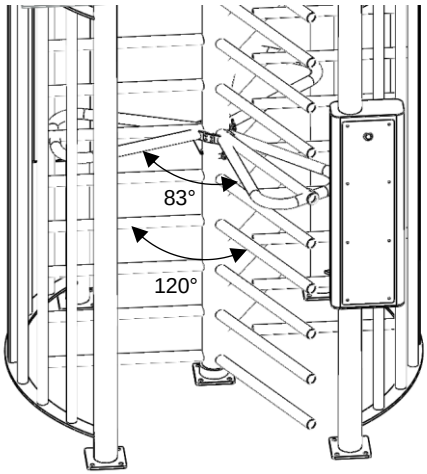
4.3.1 Passage reducer (option):

The revolving door can be equipped with a stainless steel passage reducer to prevent more than one person from passing through the turnstile at once.

It reduces the passage from 120° to 83°.

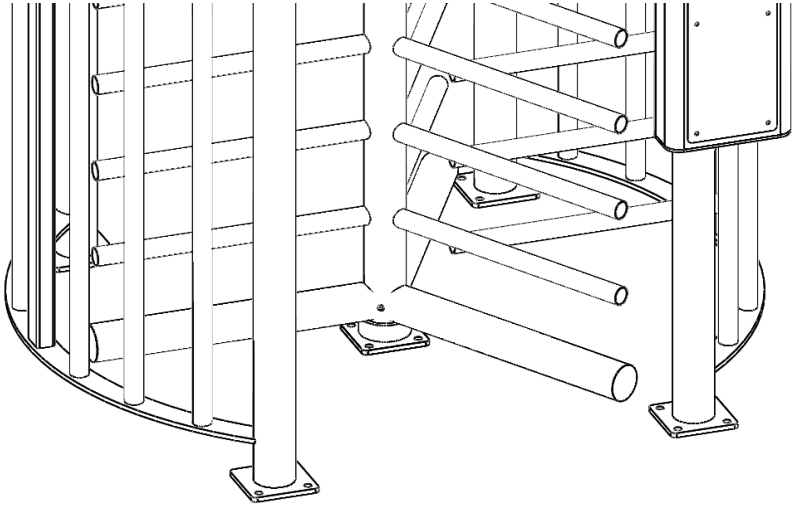
It is attached directly to the revolving door's arms (one on each door leaf).





4.3.2 Heel guard (option):

The lower arms of the revolving door can be equipped with heel guards made of Ø 80 mm shock-absorbing foam to improve user safety.



4.4 Power supply

Description	Unit	Min.	Typ	Max.
Power supply	Vac	210	230	250
Frequency	Hz	48	50	52
Consumption	W	-	180	250

4.5 Conditions of use

Immunity	Level or standard code
Operating temperature	-30°C to +55°C
Brownouts	Immunity against brownouts of less than 100 ms
Humidity	Maximum humidity rate: 95% up to 30°C; 50% above 30°C
Water spray	Code AD5: washing with sprayed water jet in all directions or high-pressure washing at minimum distance of 1 m
Solid bodies	Code AE4: protection against particles larger than 1 mm
Wind	Resistant to winds up to 140 km/h
Corrosive substances	Code AF2 plus special conditions such as salt mist and vehicle exhaust gas.
Shocks	Code AG3
Vibrations	Code AH2
Flora and mould	Code AK2
Fauna	Code AL2
Electromagnetic, electrostatic or ionising influences	Code AM6
Solar radiation	Code AN2
Lightning	Code AQ2

4.6 Performances

Turnstile	LBAT 10	LBAT 20	LBAT PMR
MTBF	> 10,000 h		
MCBF	1,000,000		
No. of passages	Up to 20 people per minute (depends on the access control)		
MTTR	< 30 min.		
IP	IP 54		

With:

- **MTBF:** Mean time before failure
- **MCBF:** Mean cycles between failures
- **MTTR:** Mean time to repair
- **IP:** Protection rating

5 Operating principle

The turnstile comprises two sections: a mechanical section (structure, roof, revolving door(s), drive system) and an electrical section (control panel, sensors, display LEDs, etc.).

The electrical section commands the mechanical section.

There is a drive system and control panel for each revolving door (or gate for persons with reduced mobility).

The drive system comprises two electromagnets for releasing or blocking the rotation of the revolving door in one direction or the other using mechanical ratchets.

Each electromagnet corresponds to one direction.

The control panel comprises a programmable logic controller which controls the drive system's two electromagnets.

The rotary sensor, positioned at the top of the drive system axis, indicates the position of the revolving door to the PLC and which subsequently allows it to control the electromagnets.

During a passage command, the ratchet corresponding to the direction of passage is unlocked and the turnstile is therefore released in the required direction of rotation.

After manual rotation, the ratchet will lock again to prevent a second passage.

If no one passes through the turnstile after the command, it will automatically lock after a certain length of time (adjustable) and cancels the command.

The customer is provided with passage reports, in dry contact form (one for each direction). These contacts close when the revolving door rotates beyond 60°, the angle after which the user can no longer pass back through.

Passage commands are only taken into account when the revolving door(s) is in "operating" position, which corresponds to the turnstile's waiting position, when it is locked correctly.

Each direction of passage can be configured free or blocked off.

The control panel also manages the red and green revolving door status display LEDs. There is one red and green LED for each direction of passage. They have 3 possible states:

- Solid red: turnstile locked
- Solid green: turnstile unlocked
- Flashing red: turnstile not back in position. No command will be taken into account

6 Transport and storage

6.1 Transport instructions

For reasons of safety, the transport instructions are as follows:

- ► Any person whomsoever involved in loading, transporting or unloading turnstile components must be provided with personal protection equipment.
- ► Use a suitable transport tool (pallet truck or fork lift) to unload or handle packaged products
- ► Use an appropriate lifting means to move the turnstile structure (pallet truck, etc.)
- ► Use an appropriate lifting means to move the turnstile roof (straps, etc.)

6.2 Post-transport inspections

When the delivery is received, it must be inspected to ensure that all parts are present and that no damage has been caused during transport.

In the event of visible damage due to the transport or lack of parts:

- ► **Do not accept the delivery, or with reservations only**
- ► **Note the extent of the damage on the delivery slip**
- ► **Send a claim to La Barrière Automatique**

6.3 Storage instructions

Please store the turnstile components in the following conditions:

- Inside
- In dry area
- Immobile
- Away from dust, radiation and fluid sprays
- Storage temperature: -30 to 70°C,
- Ambient humidity: max. 95% (50% beyond 30°C)
- In the event of long-term storage, check the general state of the different turnstile components on a regular basis

7 Assembly and installation

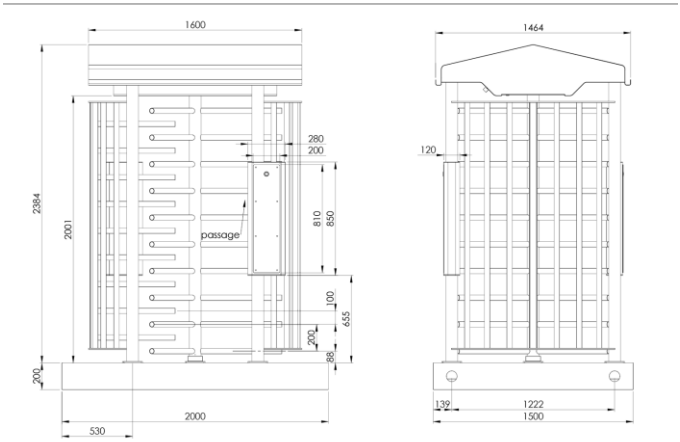
7.1 Foundations and ducts

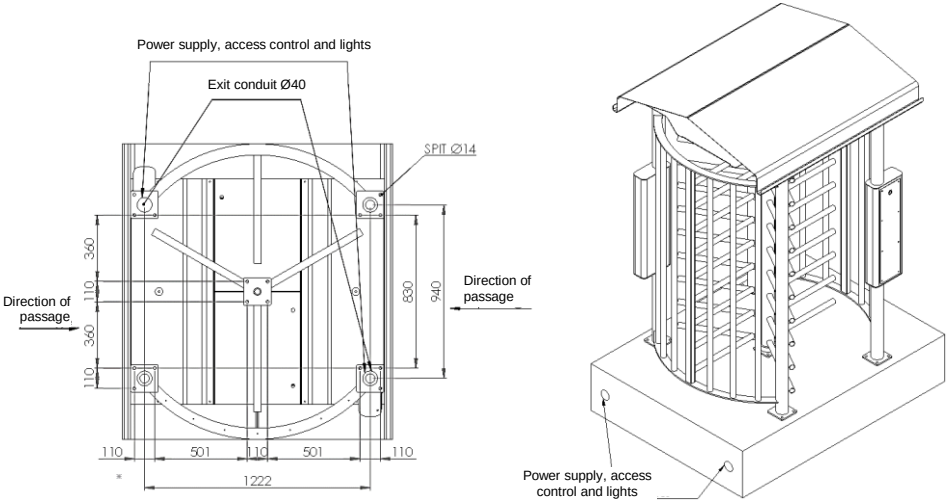
7.1.1 LBAT 10:

Construct a 2000 x 1500 x 400 concrete foundation to install the turnstile according to the following recommendations.

The slab must be perfectly horizontal and placed at least at finished ground level.

The ducts must reach the turnstile's columns (preferably those on which the casings are located).



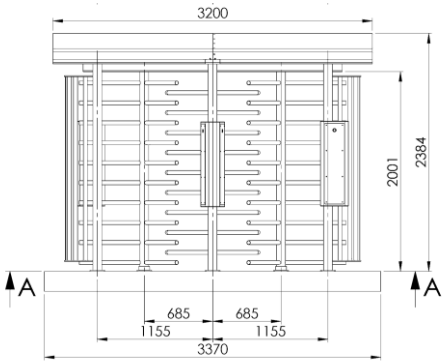


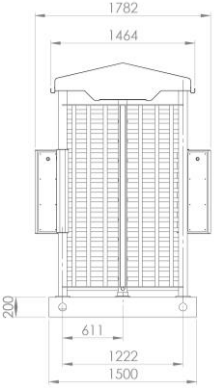
7.1.2 LBAT 20/PMR:

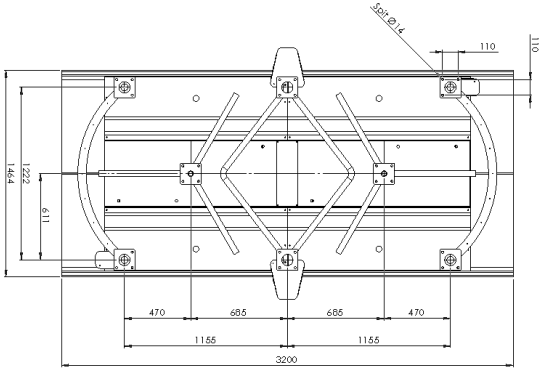
Construct a 3370 x 1500 x 200 concrete foundation to install the turnstile according to the following recommendations.

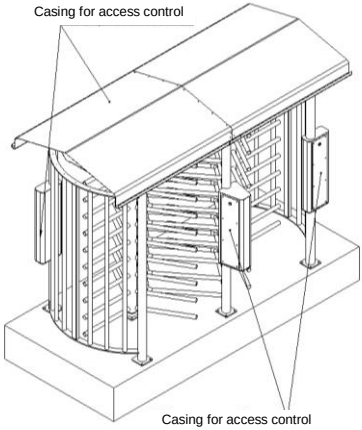
The slab must be perfectly horizontal and placed at least at finished ground level.

The ducts must reach the turnstile columns (preferably those on which the casings are located).









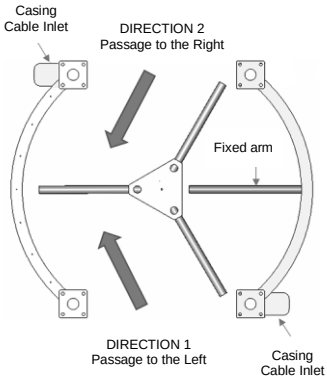
We will only cover the LBAT 10 turnstile below. The various procedures are the same for the LBAT 20 and LBAT PMR turnstiles.

7.2 Structure installation:

7.2.1 Introduction:

Before installing the turnstile, it is important to know the direction of passage decided when the order was placed to avoid any risk of inversing the installation. The two directions of passage are the following:

- Direction 1: clockwise rotation (“passage to the left”)
- Direction 2: anticlockwise rotation (“passage to the right”)



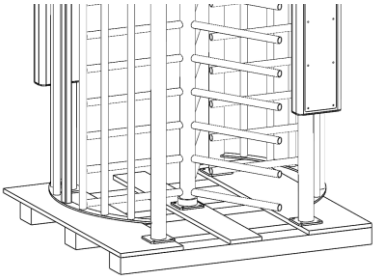
7.2.2 Installing the structure:

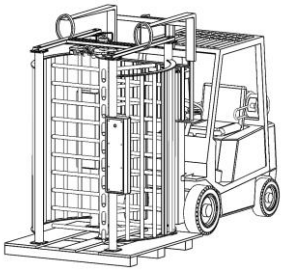
The fastening straps must not be removed because they are used to hold the structure + revolving door assembly in place during installation and prevent any misalignment problems.

The turnstile is delivered fully assembled (excluding the roof) and fixed on a pallet.

The structure is installed according to the following procedure:

A- Mark the location of the structure’s fastenings and bearing(s) using the marking stencil





B- Drill and install the fastenings delivered with the turnstile
C- Remove the screws holding the turnstile on the pallet (structure + bearing(s))
D- Place the bearing(s) on the ground in its(their) location(s)
E- Using a lifting means, lift the turnstile and position it in its location by placing the bearings on the ground under the revolving door(s)

Important:
- **Do not forget to install the ducts and cables**
- **Check that the turnstile assembly (structure, revolving door(s), bearing(s)) is level**

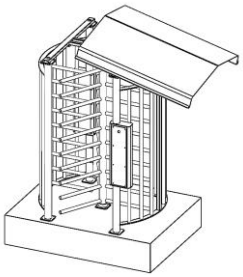
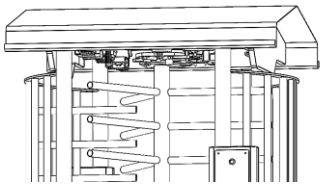
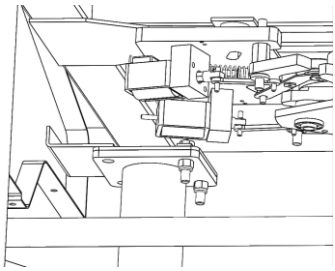
F- Install the nuts to secure the turnstile assembly

7.3 Installation of the roof:

7.3.1 Installing the roof:

The turnstile's roof is installed according to the following procedure:

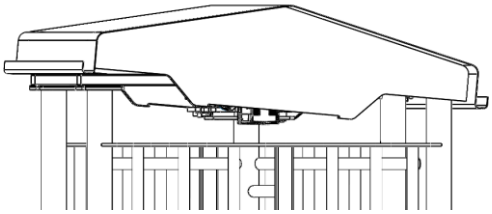
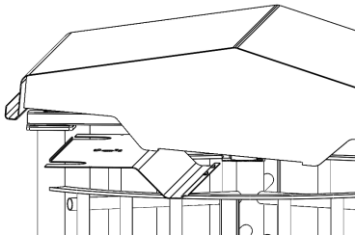
A- Check that the structure's fastening screws on the outside are not in place.

B- Place the roof on the turnstile's structure
C- Position it so that it is resting on the 4 supports.
D- Do not attach anything yet

7.3.2 Installing the casings:

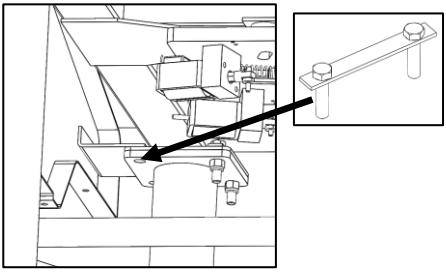
The turnstile's roof casings are installed according to the following procedure:

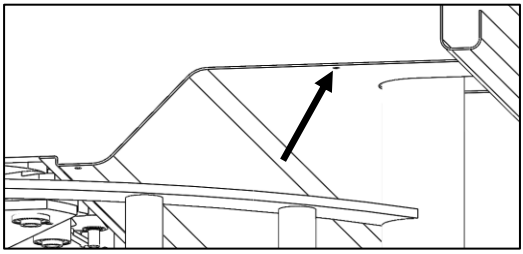



A- Lift the roof on one side
B- Insert the casing by passing it through the side of the turnstile
C- Then, pivot it so that it can be inserted inside
D- Place it on the rotor for the moment
E- Carry out the same operation for the 2nd casing

7.3.3 Attaching the roof and casings:

Once the roof has been installed and the casings finished, they need to attached according to the following procedure:

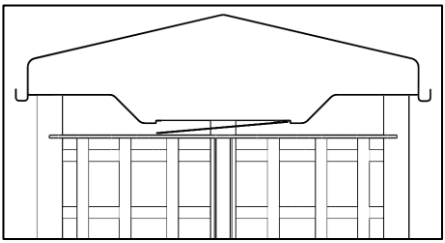


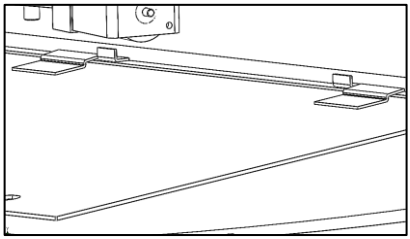


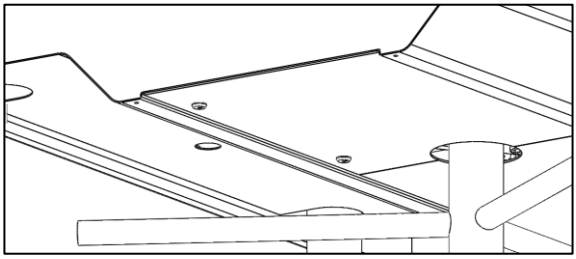
A- Install the 4 attachment lugs for holding the roof on the structure (screw head on top)
B- Install the M6 rounded screw heads for holding the casings on the roof

7.3.4 Installing the access hatches:

Once the entire roof has been installed and attached, you need to install the access hatches according to the following procedure:

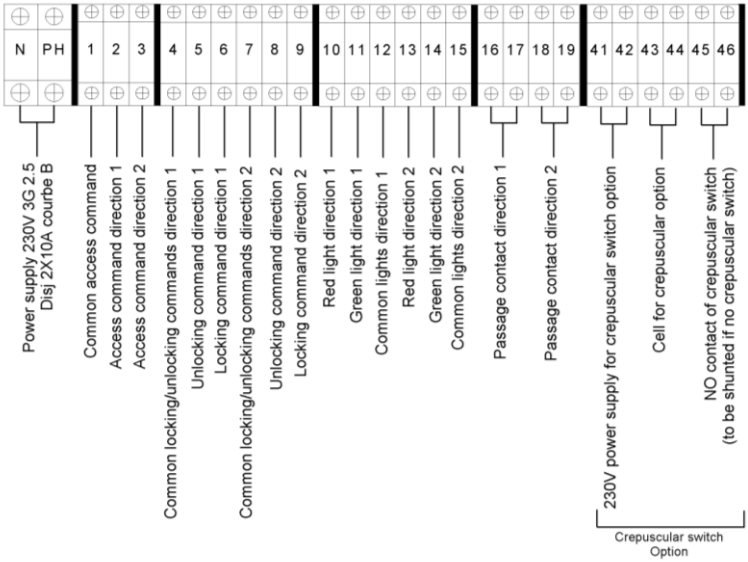






A- Insert the hatch above the casing
B- Position the hatch attachment lugs so that they coincide with those of the casing
C- Then, place the hatch horizontally and lock it using the 2 spanners
D- Carry out the same operation for the 2nd hatch.

8 Electrical connection:



The turnstile is connected electrically to the terminal board on the bottom of the control panel. There is one panel for each revolving door. Each revolving door is separate. The terminals are as follows:

- **Direction 1 and direction 2 access commands (terminals 1 to 3):**

These are normal access commands. The commands must be NO pulsed dry contacts.

  - **Direction 1:** clockwise rotation (“passage to the left”)
  - **Direction 2:** anticlockwise rotation (“passage to the right”)

- **Forced locking/unlocking commands (terminals 4 to 9):**

Forced commands are direct accesses to the electromagnets and are used to force the locking or unlocking of the turnstile in one direction or the other. Forced commands must be maintained NO dry contacts.

These commands are forced and maintained commands. They must not be used in place of normal access commands (terminals 1 to 3).

- **Red and green display LEDs (terminals 10 to 15) (already connected):**

The red and green display LEDs are used to display the turnstile's current status in each direction of passage. They have 3 possible states:

  - **Solid red:** turnstile locked in the corresponding direction (awaiting an access command)
  - **Solid green:** turnstile unlocked in the corresponding direction (an access command has been taken into account)
  - **Flashing red:** turnstile not back in position (no access command will be taken into account)

- **Passage information reports (terminals 16 to 19):**

Passage reports are NO dry contacts that close for 0.5 s when the turnstile rotates beyond 60°, the angle after which the user can no longer pass back through. The customer must use these two contacts for its access control to count the number of passages or perform an anti "pass-back".

- **Dusk-to-dawn switch (terminals 41 to 46) (option):**

A dusk-to-dawn switch can be connected to manage the intensity of the roof's LEDs based on the luminosity.

- **Power supply (terminals N and Ph):**

The supply cable must be wired last to avoid all electrical risks.
It must be type 3G 1.5 mm^2 or 2.5 mm^2 (depending on the cable distance).
Provide electrical protection at head-end (differential circuit breaker 10A-30 mA/turnstile)

The power cable earth must without fail be connected to the earth strip next to the terminal board.

Once installed, the turnstile must be powered to prevent any inside condensation

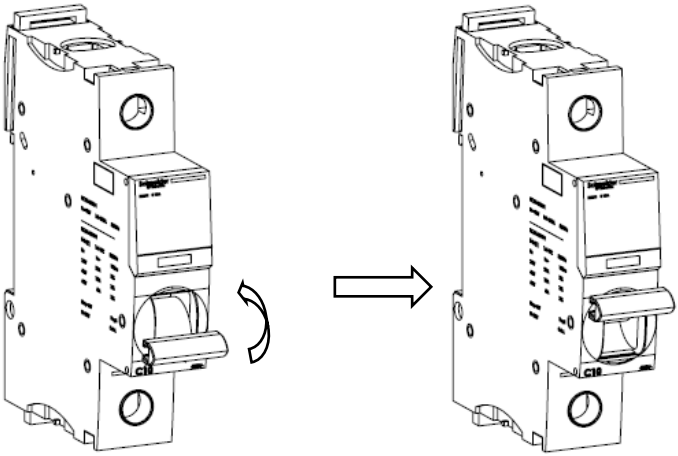
9 Commissioning and adjustment

9.1 Introduction:

The turnstiles are tested and adjusted in the factory. However, an adjustment on site may be necessary to optimise the turnstile.

9.2 Commissioning the turnstile

To commission the turnstile once it has been connected electrically, simply close the main disconnector and the circuit breakers by raising the switches.



9.3 Adjusting position sensors

9.3.1 Rotary sensor self-learning (revolving door(s))

By pressing on the PLC's "ESC" + "UP arrow" keys, the turnstile's rotary sensor self learns.

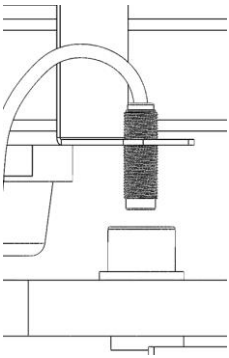
The following message must appear on the PLC:

/ ! \
Self-learning
completed
successfully
/ ! \

9.3.2 Adjusting the inductive sensor (gate for persons with reduced mobility)

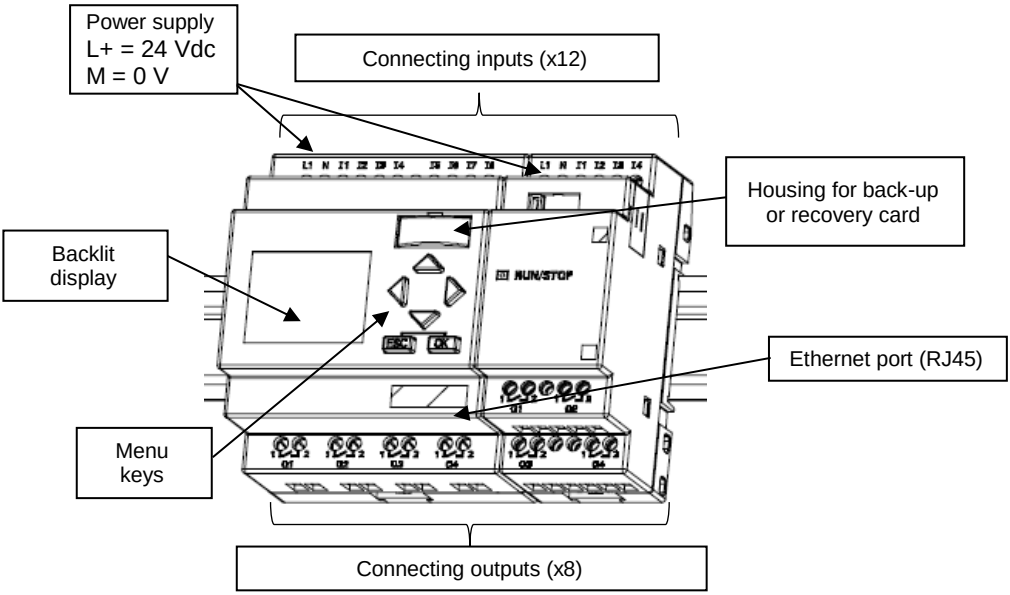
The position inductive sensor is adjusted in the following way:

1- Adjust the sensor so that it is activated (the sensor lamp should be lit) at about 2 mm from the metal screw head
2- The gate should then lock in closed position
3- Once this is adjusted perfectly, tighten the nut using a 17 spanner



9.4 PLC adjustment

9.4.1 Presentation of the interface



Menu keys:

"Directional keys": Navigation keys in the messages and menu

"ESC": Cancellation, back and enter/exit from menu key

"OK": Validation key

9.4.2 Commands and display

- **Local commands:**

Command	Function
Up arrow/down arrow	Display of different messages then counters then date and time
Right/left arrows (from the date screen)	Display of inputs/outputs
ESC + Up arrow	Rotary sensor self-learning

- **Turnstile status, counters and program version:**

A message is shown on the screen when the PLC is operating. You can use the up  and down  directional arrows to display several different messages in the following order:

Turnstile Open Direction 1

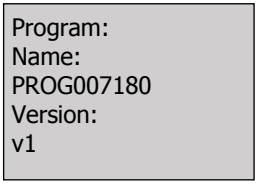
"Turnstile status": This message indicates the turnstile's status (locked, opened in direction 1, opened in direction 2, etc.)

Passage counters: Direction 1: 15 Mill. : 0 Direction 2: 23 Mill. : 0

"Counters": This message indicates the number of passages made through the turnstile in both directions
("Mill." = millions of passages)

Off Config. by default: Direction 1 free Inversion? Off Direction 2 blocked Inversion? On

"Configuration": This message indicates the off configuration of the turnstile and if this configuration has been changed
If "Inversion" states "On", then the off configuration of the turnstile in the direction in question (e.g., in this case, both directions are free off).



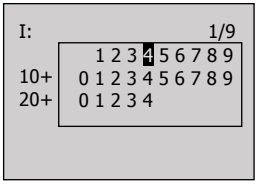
"Program": This message indicates the name and version of the program installed in the PLC.

"Date and time": This message indicates the date and time (not up-to-date if not requested)

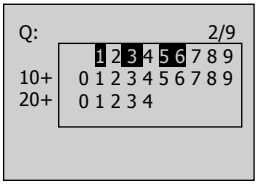
You can access the input/output status or the menu from this screen.

- **Status of inputs/outputs:**

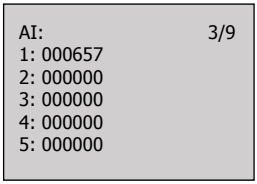
From the date and time display screen, you can display the status of inputs/outputs using the left and right directional arrows.



"I: Status of digital inputs
0 = non-greyed
1 = greyed



"Q": Status of digital outputs
0 = non-greyed
1 = greyed



"AI": Analogue input values.
Input 1 corresponds to the turnstile's rotary sensor (LBAT10/20 only).
(Value between 0 and 1000: 0 = 0 V; 1000 = 10 V)

There are other screens for the analogue outputs ("AQ"). There are no analogue outputs in this program.

9.4.3 PLC settings:

From the date and time display screen or one of the input/output status messages, you can also enter the PLC menu using the “ESC” 

key. The screen then changes colour to orange. You can browse in this menu using the different menu keys.

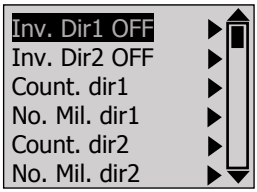
To access the program settings, click on “Program” then “Settings def.”. This brings up the list of the program settings.

Here is the list of settings:

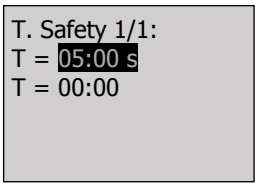
Setting	Description
Inv.Dir1 OFF	**Inversion of the turnstile’s configuration in direction 1 in the event of a power cut.** **On:** Inversion **Off:** No inversion Default configuration activated E.g.: if direction 1 is blocked by default during a power cut (see **“Off Config. by default”**), validate **“On”** to make it free.
Inv.Dir2 OFF	**Inversion of the turnstile’s configuration in direction 2 in the event of a power cut.** **On:** Inversion **Off:** No inversion Default configuration activated
Count. dir1	**Passage counter in direction 1 (non-modifiable).** This value is between 0 and 999999. Once the figure of 1000000 is reached, the counter of millions of passages in direction 1 is incremented.
No. Mil.dir1	**Millions of passages counter in direction 1 (non-modifiable).** This value is between 0 and 999999.
Count. dir2	**Passage counter in direction 2 (non-modifiable).** This value is between 0 and 999999. Once the figure of 1000000 is reached, the counter of millions of passages in direction 1 is incremented.
No. Mil.dir2	**Millions of passages counter in direction 2 (non-modifiable).** This value is between 0 and 999999.
T. Safety	**Time delay after which the turnstile unlocks, if locked in the wrong position. (default: 5 s)**
T. Canc.	**Time delay after which the order of passage is cancelled if no one has passed through. (default: 10 s)**
Impuls. Cmd	**Maximum duration of the order of passage, even if it is maintained. (default: 1 s)**
Return posM	**Time after which the “Operation” position (normal position of the turnstile) is validated and allows an order of passage to be restarted. (default: 0.5 s)**

9.4.4 Modifying a setting:

To modify a setting in the PLC you have to:



1- Select the setting you wish to modify using the directional arrows and the “OK” key

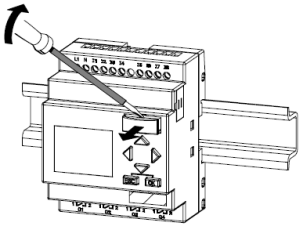


2- Press “OK” again and the value starts to flash
3- Adjust the desired value using the up and down arrows.
4- Press “OK” again to validate
5- Then press “ESC” to return to the list of settings

6- Press “ESC” again twice to exit the menu and return to the messages.

10 Backing up and/or loading a program

► RECOVERY: Transfer of the programming card settings to the PLC



Step 1: Open the card slot using a flat screwdriver.

Step 2: Insert the programmed card into the slot on the PLC on the left-hand side of this drawer and close it again

If no program is running in the PLC, move directly to step 5.

Step 3: Press the down arrow until the date and time are displayed then click on “ESC” to enter the main menu
Step 4: Stop the program by clicking on “Stop” and then “YES”

Step 5: Select “Card” and then “Load prog. <- card” to load the program into the PLC

The PLC is now programmed and you can start it using the command “Start” followed by “YES”

► BACK-UP Backing-up PLC settings to programming card

Step 1: Open the card slot using a flat screwdriver.

Step 2: insert the card to be programmed into the slot on the PLC on the left-hand side of this drawer and close it again

If no program is running in the PLC, move directly to step 5.

Step 3: Press the down arrow until the date and time are displayed then click on “ESC” to enter the main menu
Step 4: Stop the program by clicking on “Stop” and then “YES”

Step 5: Select “Card” and then “Rec. prog. -> card” to copy the program onto the programming card

The program has now been copied onto the programming card and you can restart the turnstile using the command “Start” followed by “YES”.

11 Cleaning and maintenance:

The power supply must be cut off before carrying out cleaning and maintenance operations on the turnstile.

11.1 Cleaning:

Cleaning frequency depends mainly on the environmental and climate conditions dictating turnstile use.

Do not use abrasive products for cleaning as they risk damaging electric cables or the turnstile coatings.

Protect the conductive components from damp and dust to prevent short-circuits.

Cleaning to take place:

- Outside cleaning, checking for lack of impacts, scratches, etc. that could encourage corrosion
- Inside dust removal from the mechanical and electrical sections

11.2 Maintenance schedule:

Frequency	Operation
Every six months	• Cleaning operations described previously • Checking that all the hardware including the ground fixing and the accessories are tightened • Checking the connectors on the control panel or PLC • Tightening wires, good contact in the terminals • Visual inspection of the position of the revolving door
Annual	• Checking the various turnstile settings • Checking that the display LEDs are working properly • Checking that the LED lights are working properly • Checking that the disconnector is working properly • Checking that the opening remote controls are working properly in both directions

12 Malfunctions

12.1 Passage in the event of no voltage

Off, the turnstile has 4 possible configurations:

- Direction 1 and 2 free
- Direction 1 free and direction 2 blocked
- Direction 1 blocked and direction 2 free
- Direction 1 and 2 blocked

If both directions are blocked off, we recommend the turnstile's unlocking mechanism to be inside a “fire” box. There is one “fire” box for each direction of passage.

12.2 Frequent failures and adjustments

Here is a table of frequent failures and adjustments:

Failure	Possible cause(s)	Fault remedying
The turnstile does not unlock during a passage command	The unlocking command is not reaching the PLC	Check the wiring of the unlocking command
	The unlocking command has not been taken into account because the turnstile is not back in position correctly (the LEDs are flashing red)	Check the position of the revolving door and put it back in locked position
	A forced locking command is active	Check the wiring of forced commands on terminals 4 to 9 of the terminal block
	The turnstile's rotary sensor is not working properly	Repeat rotary sensor self-learning (see "§ 9.3.1 Rotary sensor self-learning")
The turnstile does not lock after a passage	A forced unlocking command is active	Check the wiring of forced commands on terminals 4 to 9 of the terminal block
	The turnstile's rotary sensor is not working properly	Repeat rotary sensor self-learning (see "§ 9.3.1 Rotary sensor self-learning")
The turnstile's operation is inversed and/or inconsistent	The direction 1 and direction 2 passage commands are inversed	Check the wiring of passage commands on terminals 1 to 3 of the terminal block
	The operation of the electromagnets is inversed. The off configuration of the program in the PLC is not correct	Inverse the off operation of the turnstile in the PLC (see "§ 13.1.2 Step 2: electronic modification of the operation of the electromagnets"
	The operation of the electromagnets is inversed. The mechanical configuration of the electromagnets is not correct	Inverse the mechanical configuration of the electromagnets (see "§ 13.1.1 Step 1: mechanical modification of the configuration of the electromagnets")

For all other situations, please contact the La Barrière Automatique after-sales service on 04-78-86-02-86.

13 Repairs

The power must be cut off before any repairs are made to the turnstile.

When operations take place with power on, the turnstile must be disconnected from all access control systems to prevent any unexpected locking or unlocking of the turnstile.

13.1 Modification of the operation in the event of a power cut

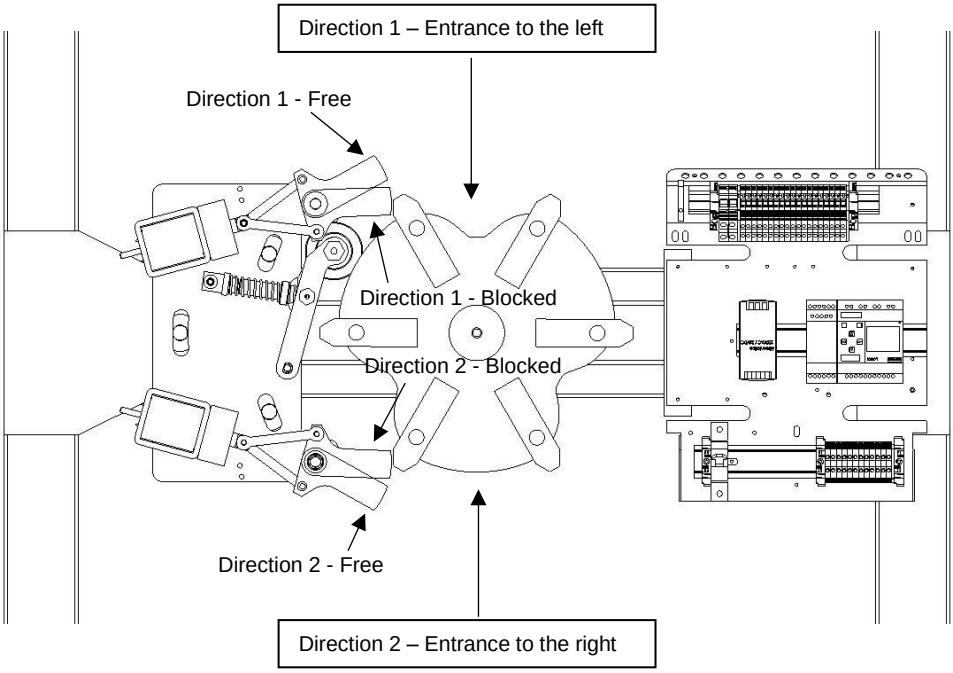
The turnstile has a default operation during a power cut. This was established when programming the turnstile but may subsequently be modified.

The 4 possible configurations are:

- Direction 1 and 2 free
- Direction 1 free; direction 2 blocked
- Direction 1 blocked; direction 2 free
- Direction 1 and 2 blocked

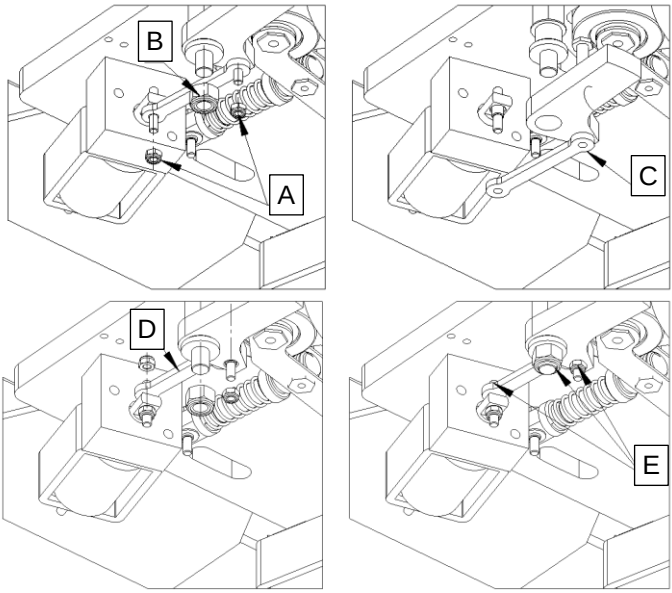
To modify this configuration, you must first switch off the turnstile's power and then open the two access hatches to the mechanism.

Here is the bottom view of the mechanism and the position of the electromagnets according to their configuration:



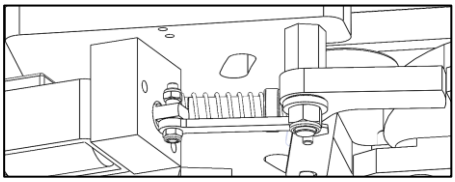
13.1.1 Step 1: mechanical modification of the configuration of the electromagnets

To change the configuration (here, direction 1), simply inverse the rod and the ratchet:

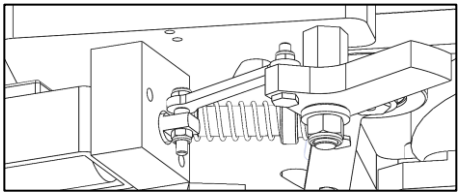


A- Remove the four M6 lock nuts holding the ratchet control rod
B- Remove the M12 lock nut holding the ratchet
C- Remove the rod and ratchet and pivot them 180°
D- Replace the rod and ratchet on the support taking care with the rod's position on the electromagnet:

- Ratchet open -> rod below the electromagnet



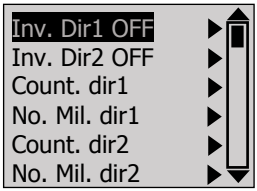
- Ratchet closed -> rod above the electromagnet



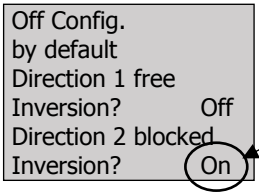
E- Reinstall the M6 and M12 nuts

13.1.2 Step 2: electronic modification of the operation of the electromagnets

You now need to modify the configuration in the program. For this, you need to change the “Inv.sens2 HT” (or “Inv.sens1 HT”) setting to “On” and validate (see “§ 9.4 PLC Adjustment”).

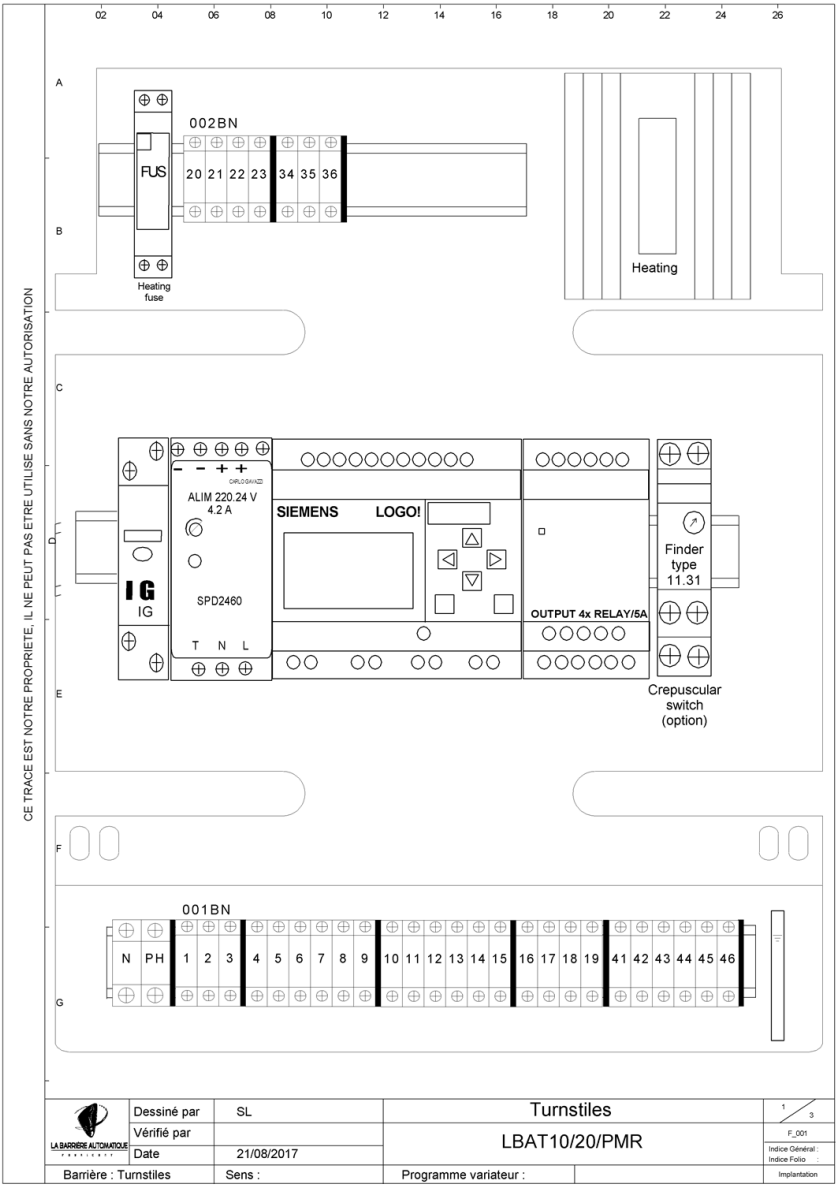


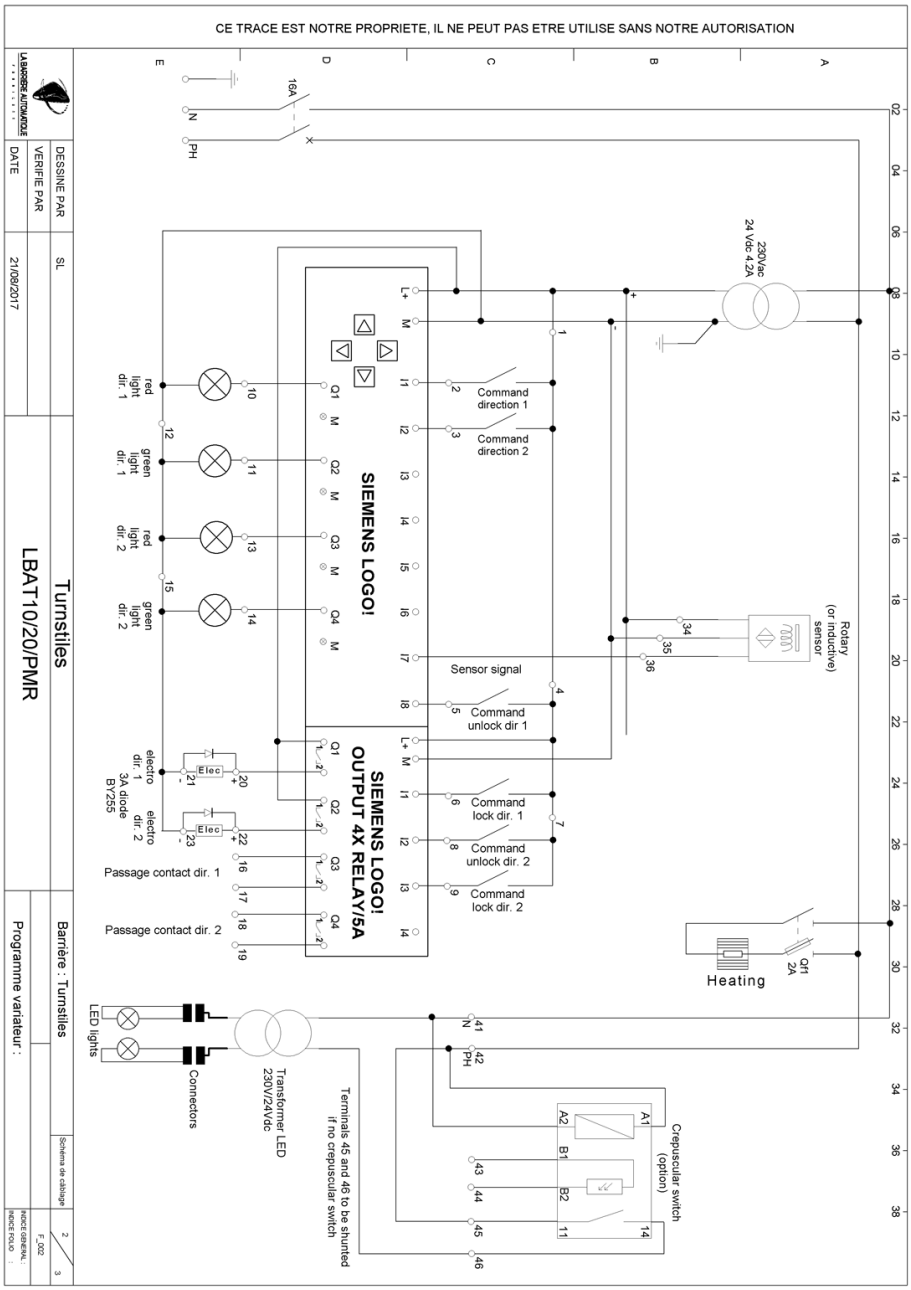
The procedure is then finished, you can check that the PLC has indeed taken the changes into account by displaying the **“Off Config. by default”** message:

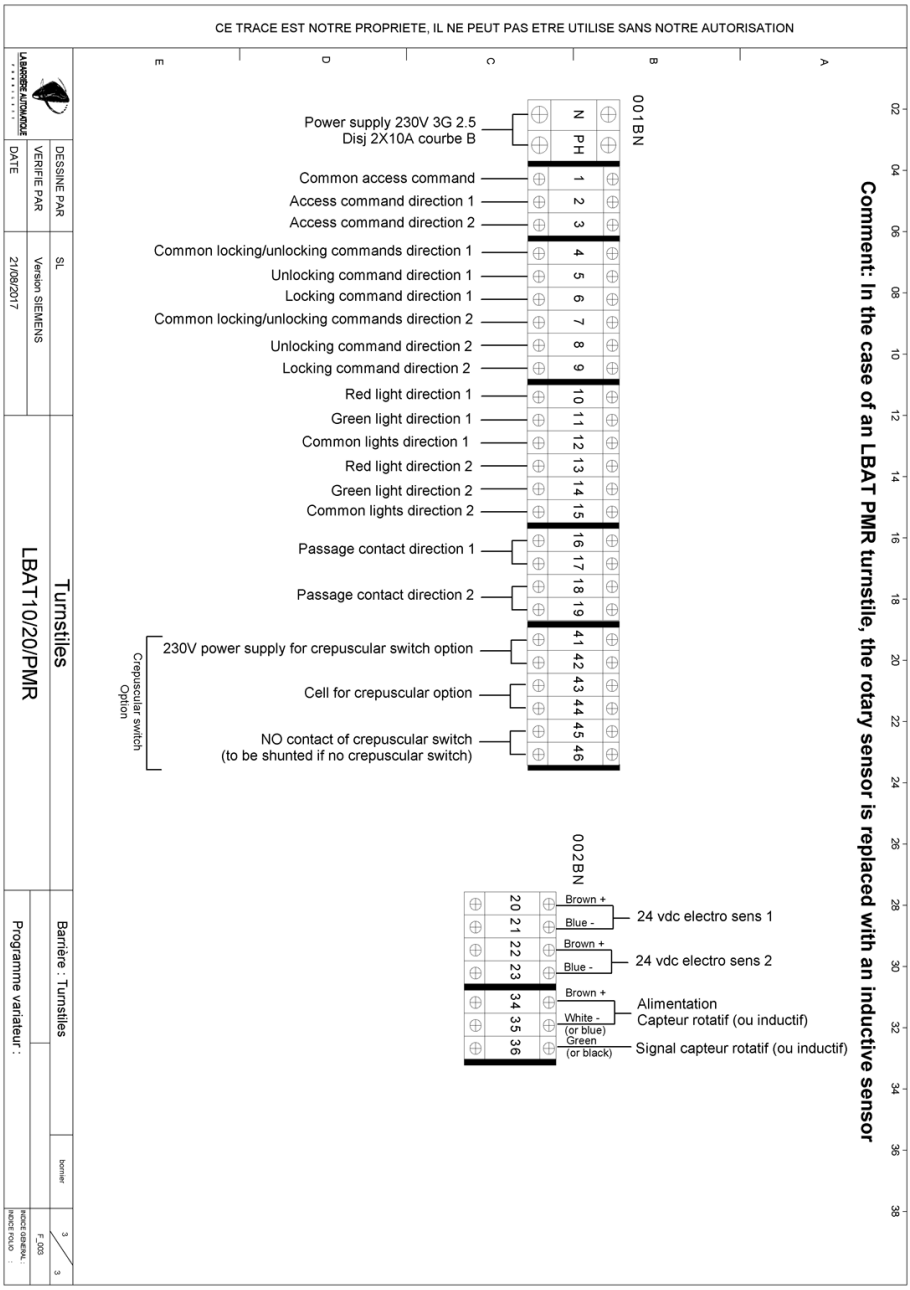


The PLC must then display “On” for the inversion of the direction 2 configuration.

14 Wiring diagram




CE TRACE EST NOTRE PROPRIETE, IL NE PEUT PAS ETRE UTILISE SANS NOTRE AUTORISATION
LA BARRIERE AUTOMATIQUE
DESSINE PAR SL
VERIFIE PAR
DATE 21/09/2017
Turnstiles
LBAT10/20/PMR
Barrière : Turnstiles
Programme variateur :
Schema de cablage
F_002
INDICE GENERAL
INDICE FICHE
16A
N
PH
230Vac
24 Vdc 4.2A
SIEMENS LOGO!
SIEMENS LOGO!
OUTPUT 4X RELAY/5A
Command direction 1
Command direction 2
Sensor signal
Command unlock dir 1
Command lock dir. 1
Command unlock dir. 2
Command lock dir. 2
Rotary (or inductive) sensor
red light dir. 1
green light dir. 1
red light dir. 2
green light dir. 2
electro dir. 1 3A diode BY255
electro dir. 2
Passage contact dir. 1
Passage contact dir. 2
Qf1 2A
Heating
LED lights
Connectors
Transformer LED 230V/24Vdc
Terminals 45 and 46 to be shunted if no crepuscular switch
Crepuscular switch (option)


CE TRACE EST NOTRE PROPRIETE, IL NE PEUT PAS ETRE UTILISE SANS NOTRE AUTORISATION
Comment: In the case of an LBAT PMR turnstile, the rotary sensor is replaced with an inductive sensor
001BN
N
PH
Power supply 230V 3G 2.5
Disj 2X10A courbe B
1 Common access command
2 Access command direction 1
3 Access command direction 2
4 Common locking/unlocking commands direction 1
5 Unlocking command direction 1
6 Locking command direction 1
7 Common locking/unlocking commands direction 2
8 Unlocking command direction 2
9 Locking command direction 2
10 Red light direction 1
11 Green light direction 1
12 Common lights direction 1
13 Red light direction 2
14 Green light direction 2
15 Common lights direction 2
16 17 Passage contact direction 1
18 19 Passage contact direction 2
Crepuscular switch Option
41 42 230V power supply for crepuscular switch option
43 44 Cell for crepuscular option
45 46 NO contact of crepuscular switch
(to be shunted if no crepuscular switch)
002BN
20 Brown +
21 Blue -
24 vdc electro sens 1
22 Brown +
23 Blue -
24 vdc electro sens 2
Brown +
34 White - (or blue)
35 Green (or black)
36
Alimentation
Capteur rotatif (ou inductif)
Signal capteur rotatif (ou inductif)
DESSINE PAR SL
VERIFIE PAR Version SIEMENS
DATE 21/09/2017
Turnstiles
LBAT10/20/PMR
Barrière : Turnstiles
Programme variateur :
bornier
3
F_003
3

Notes

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