

FULL HEIGHT GLASS TURNSTILE

User Manual

Manual of Glass Full Height Turnstile



Dear Customers

Thank you very much for choosing and purchasing the Intelligent Turnstile Gate System made by our company.

The product is a kind of hi-tech device; in order to ensure safe and reliable operation, the manual has marked the special cautions for the system operation. Please read the Manual carefully before your use; for fear that your rights may be damaged due to improper operation.

The unit of all the dimensions without special specification in the Manual is mm. Some product properties specified in the Manual should be performed under the support of infrared sensor, such as alarming for intrusion, inspection by infrared sensor and automatic close gate when passing by infrared sensor.

The above functions will not be represented if the products selected by customers are not used together with infrared sensor.

Please read the Manual carefully before your use; for fear that your rights may be damaged due to improper operation.

Copyright Statement

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Note: Due to advances in technology to better our products if there are any revisions on this manual we would not give special notice.

Customer Service and Technical Support Commitments

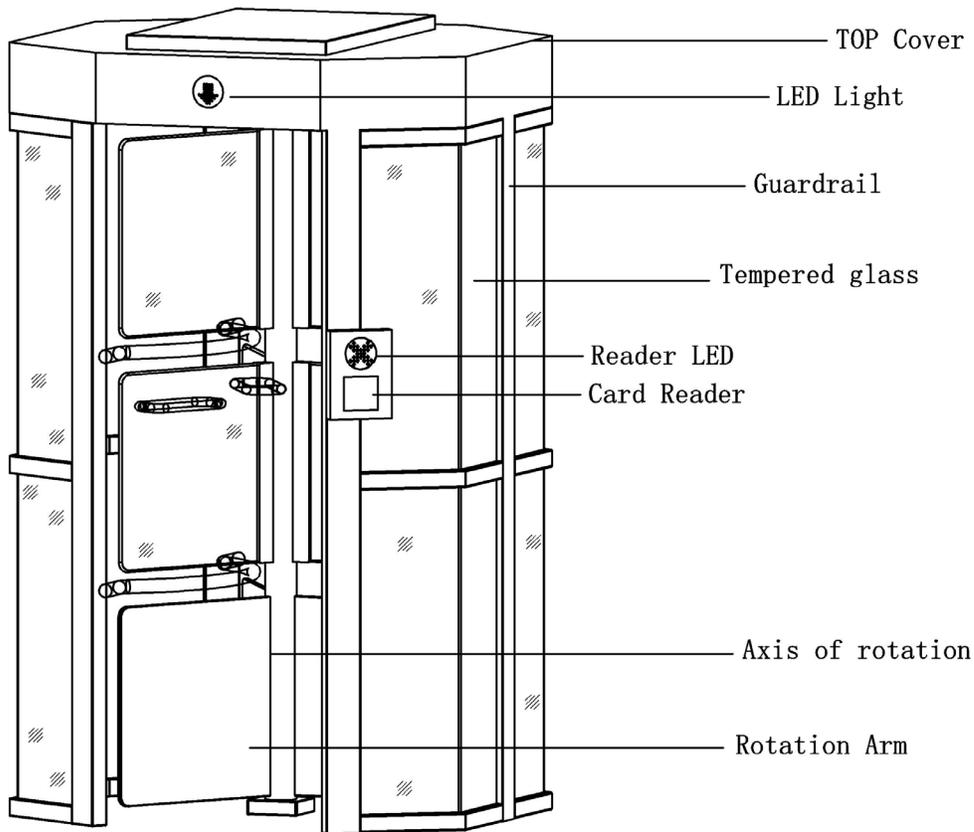
2M Technology will provide one-year free warranty and free technical support, and implement lifetime maintenance; it will only charge the maintenance cost if it exceeds the free warranty period. The commitment automatically terminates if users have the following behaviors towards this series of products:

- 1) The users refit, disassemble and conduct other operations failing to ensure the software and hardware integrity of the product.
- 2) Users fail to conduct correct use according to the content of this manual, resulting in complete or partial damage to the product.

Safety Warning

The product is a hi-tech device; if there is any accident when using the product:

- 1) The user or manager shall inform our company's after-service department or authorized service organizations to dispose the problem,
- 4) Never detach the product willingly for to avoid further damage.
- 2) There is high voltage in the machine when the device is working,
- 3) The ground system needs to be inspected regularly to avoid causing personal harm or damage to the product.
- 4) Read the manual carefully about the product's interface electrical properties, to avoid damaging the product and other devices.
- 5) This series of products have not been equipped with anti-explosion devices. Keep this product away from flammable and explosive environments. For devices specifically designed for highly corrosive or highly explosive environments visit our company's website or call us for other products which would be more suitable.



1. Introduction

Turnstiles are suitable for highly controlled areas, and can effectively prevent climbing and overtaking. The transfer gate can deny the entry to unauthorized personnel.

The turnstiles are divided into half-height 90° turnstiles, half-height 120° turnstiles, full-height 90° turnstiles, and full-height 120° turnstiles.

The main suitable places for the transfer gate include: prisons, military management areas and factories with very strict access management (such as chemical plants, construction sites, etc.).

The mechanical part of the equipment includes an emergency control device.

When the power is cut off, the rotating arm can rotate freely to ensure the smooth passage; when the power is turned on, it is automatically locked. Applicable to all built environments,

It can also solve all the control problems of pedestrian entrances and exits.

It can control whether the gates are locked or unlocked.

It has upgrade functions and is convenient for users to expand functions.

The device organically integrates mechanical, electronic, microprocessor control, various RFDI and biometric technologies.

The appearance of the equipment is made of stainless steel sheet stamping and forming, with tempered glass and streamline traffic indicator, it is rust-proof and durable, and adopts standard electrical interfaces to the outside.

It can easily integrate face recognition, fingerprint recognition, palm print recognition, iris recognition, ID card recognition, barcode card, RFID card and other card readers on this device.

Provide an orderly way of access for people entering and exiting, and at the same time prevent illegal people from entering and exiting; in addition, the system is also specially designed to meet the fire protection requirements. In the event of an emergency, ensure that the passage is unobstructed and facilitate the evacuation of personnel in time.

This product adopts high-end technology.

In order to ensure safe and reliable operation and ensure safe operation, the instruction manual provides precautions for the use of the system. It is recommended that users read the instruction manual carefully before using the equipment, so as not to damage your rights due to your improper operation.

This instruction manual describes the operation and components of the turnstile in detail.

2. Safety protection measures

2.1 Common safety precautions

The access gate is designed, produced and tested according to the latest technology. Although the product is completely operational and safe when it leaves the factory, these must be implemented in the correct installation. It is important the operating instructions be read and followed carefully.

In the case of incorrect operation and deliberate sabotage, the manufacturer can refuse to bear any responsibility and/or guarantee.

The power supply used by the equipment is high enough to endanger personal safety and/or death. Therefore, before performing maintenance or repair, you must **ensure that the equipment is disconnected from the power supply** and check to confirm that it is completely disconnected.

Before assembling and installing the turnstile, read all the instructions in this manual carefully. The proper use will extend the life of the product and benefit you from all the features of the product.

2.2 Safety precautions

- When doing maintenance, disconnect all external switch devices (access control, console, etc.).
- There must be a suitable installation foundation, it is not allowed to install channel gates otherwise.
- Must have a main power switch or other current operating device.
- Before commissioning, ensure that all electrical and functional characteristics have been tested
- The wiring of the access gate must follow the attached wiring diagram.
- Only professionally certified and trained electrical technicians can perform electrical connections.
- Only professionally certified and trained electrical technicians can move the case cover and plug it into a power outlet, power receiver or wire.
- During maintenance work, if necessary, bolts must be checked and tightened.
- Live parts such as switching power supplies, motors, resistors, motor housings and lamps, etc., will burn your skin under working temperature conditions. Please do not touch them.
- During the use of the product, it is forbidden to sit on the turnstile or forcedly squeeze, otherwise unnecessary damage to the channel turnstile will occur.
- It is recommended that the user use the correct device interface according to the electrical characteristics, otherwise the device and other devices of the user will be damaged.
- The equipment is not equipped with explosion-proof device, so it is not allowed to be used in dangerous flammable and explosive environment.

3. Product description

3.1 Technical details

- This product is compatible with various face recognition, fingerprint recognition, palm print recognition, iris recognition, ID card recognition, bar code card, ID card, IC card, etc. modules.
- It has normal open and closed working modes.
- Real-time fault self-check and alarm indicators (alarm is optional) to ensure safe and smooth operation of the system and reduce maintenance.
- Direction instructions to guide pedestrians in and out
- Sound and light alarm indication function.
- Entering and leaving mode to keep a count of pedestrians.
- You can set the card with or without memory function.
- Reasonable speed in the normal open/closed mode to effectively increase pedestrian flow.

- If the power is cut off, the turnstile will be automatically unlock to allow a rapid flow in case of an emergency and ensure a timely and smooth evacuation of people.
- With standard input or output ports, it is convenient for the integration of the system and other equipment, and is suitable for remote control management.
- Highly compatible, it can be used in combination with different types and series of access products, without affecting system performance.
- Remote control management, remote control of the pass mode function of the turnstile, in line with the special requirements of users and fire safety.

3.2 Main technical parameters

Movement: Semi-automatic electromagnetic unlocking reset buffer / fully automatic motor drive current deceleration reset

Power supply voltage: AC100~240V, 50Hz

Drive motor: solenoid, DC brush motor/brushless motor/servo motor. (Optional)

Limit sensor: magnetic encoder, metal sensor. (Optional)

Working temperature: -15°C ~ 60°C

Relative humidity: 0 ~ 95% (non-condensing)

Channel width: 550-900 (unit mm)

Passing speed: 20-40 people/minute

Motherboard voltage: DC 24V

Electromagnetic unlocking device: Voltage: DC-24V Current: 0.3A(at DC-24V 20°C)

Power: 7.2W

Drive motor: DC brushless motor 60W/24V (can be customized according to requirements)

Maximum current: 5A

Control panel LED digital function.

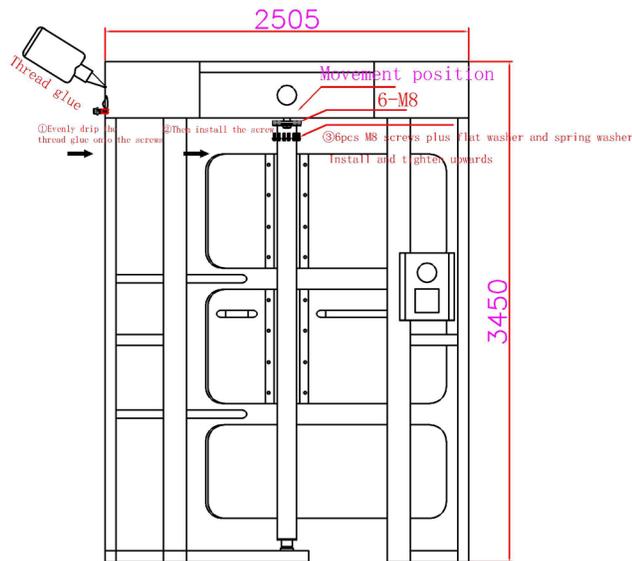
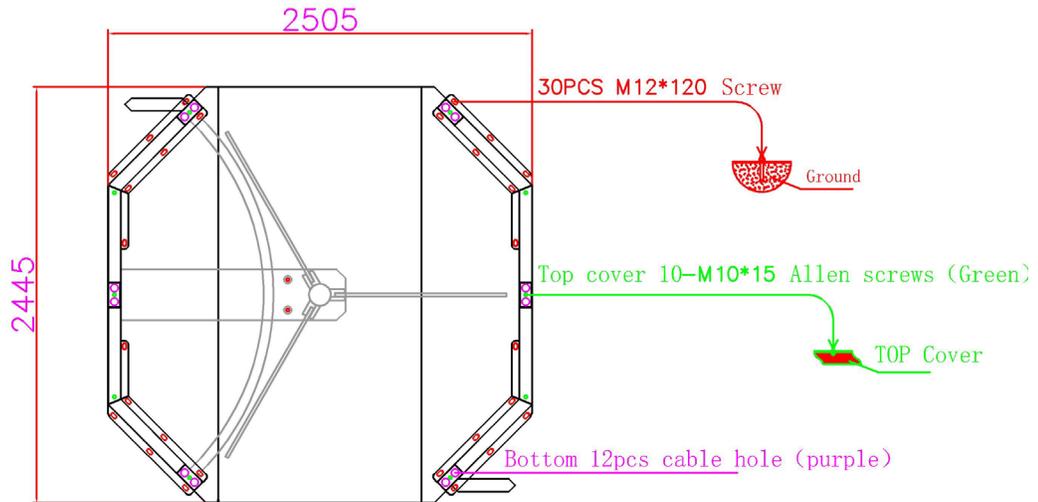
The control panel has alarm and sound indication functions. (Optional)

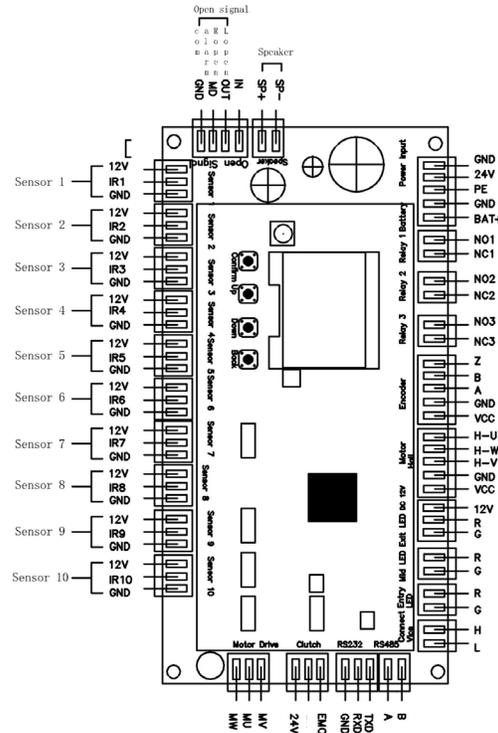
Emergency escape and traffic light function

Working environment: indoor/outdoor (recommended rain shed)

Input port: relay signal, 12V level signal, pulse width greater than 100ms, DC 12V pulse signal.

Dimensional drawing and wiring diagram





Menu setting instructions

Controller screen counter entering and exiting, also adjustment parameters by the menu.

Wake menu: press “confirm”, Input password, password “up” “up” “down” “down” “up” “down”, then Go to the menu

Option in menu:

1. Channel parameter
2. Arm parameter
3. Output setting
4. Voice setting
5. Time setting
6. System parameter

1. “Channel parameter”

1. “Entry mode” there are 3 options: Tap card; Free; Close

2. Function

1. Turnstile type: Tripod Turnstile; Swing Turnstile; Speed Gate; Flap Gate; Single Swing gate
2. Limit mode: Encoder; IR Sensor; Hall switch (come with motor)
3. Open speed: Speed Gate<0.3S
4. IR sensor type: 5 default layouts

5. Working type: Tap card in and tape card out; Tap card in and free out; Free in and Tap card out; Free in and Free out.
6. Opening angle: 45-90 ° can be set
7. Opening speed: 1--10 level can be set
8. Set the switch delay time.
9. The master and slave boards are connected via CAN bus.
10. Opening method: RS485 / RS232 / IO
11. Opening mode: Normal opening, emergency normally open
12. Voice support: Chinese, English
13. Personnel check output of TOP LED: LCD / relay

3. Swing arm parameters:

1. Master-slave mode: control board master-slave mode selection
2. Arm closing position adjustment: Set the zero position of the gate
3. Meet resistance: adjustable motor rotation force
4. Deceleration adjustment: adjust the deceleration position of the swing arm
5. Electronic brake: adjust the motor brake position
6. Arm open position adjustment: adjust the swing arm in-position
7. Motor direction: there are two options: forward and reverse
8. Limit mode: There are three modes: motor limit, limit switch limit and encoder limit.
9. Restart speed: adjust the speed of the motor at power-on
10. Electromagnet time: adjust the electromagnet release time
11. Traffic jam time: adjust the running time when the motor is jammed

3: Voice configuration:

- Voice prompts for Entry, Exit, in warning, trailing warning and stay time

4. Time setting:

- Can set overtime closing time, stay time, induction closing time, infrared invalid time and alarm delay time setting

5. System parameters:

1. Voice selection: There are two choices: Chinese and English
2. Parameter reset: reset all parameter settings
1. 3, Version check; view the current version number
3. RS232 rate: RS232 baud rate can be selected
4. RS485 rate: RS485 baud rate can be selected
5. Servo port: RS232 or RS485 can be selected

Common problems and solutions

Full-auto full height turnstile gate's arm offset zero is large.

Problem: Arm offset because the operation time of the full height turnstile gate is long, the number of hits of the arm is a lot, the encoder hoop screw is loose and needs to be reset to zero.

Solution: Tighten the encoder hoop screw again, find the set zero in the motherboard, pull the arm to the middle position after entering motherboard, and press the "Confirm".

No power indicator on the full-auto full height turnstile or the motherboard's display screen is not bright.

Problem: The motherboard has no power indicator and the display screen is not bright, the reason is that there is no 24V power input or the motherboard fuse is burnt. The screen is not bright but the full height turnstile works normally. The screen should be broken.

Solution: First, check whether the 24V power indicator is on. After checking the power supply, can be use multimeter to measure whether the 24V output and input voltage are normal.

Full-auto full height turnstile give an open signal, the turnstile has no action.

Problem: Give an open signal, the gate doesn't have any opening or lifting action information, generally the opening signal line is loose. Or the motherboard shows that the find zero failed or the opening is invalid.

Solution: First, check the opening signal line, or short connect the opening signal terminal pin, check whether it will open the gate, eliminate the line problem. If the motherboard shows that opening is invalid, it should be that the arm is not back to zero.

The arm shakes when Full-auto full height turnstile closing

Problem: The full height turnstile's panel shake when open or close, because the door brake is not timely, the speed is too fast.
Or the screws holding the door panel loose, causing it shake.

Solution: First, check if the panel is loose. After checking the panel, adjust the parameters, find the deceleration adjustment in the arm parameters, decrease the value, or increase the value of the electronic brake, each adjustment parameter should not be too large.

Semi-auto full height turnstile's arm stuck or strength is too small

Problem: The arm is stuck or the strength is too small, it can't turn around.

Solution: On the shock absorber on the side of the motor, adjust the spin button of the shock absorber to the direction with a smaller number. Turn the bar again to check if there is a stuck or still needs more strength to turn it.

In addition, it may be that the tripod turnstile disc friction against the case wall, please check if the disc and case wall dimension is balanced. Adjust the screws fixing the motor so that the clearance between the disc and the case wall is properly balanced.

Semi-auto full height turnstile's motherboard no electricity

Problem: The 24V power supply is burned out or the motherboard fuse is burned out. First, check whether the 24V power indicator is on. After checking the power supply, check the motherboard fuse if in good condition. Finally, use a multimeter to measure whether the output and input voltage of 24V are normal.

Solution: If the fuse is broken, replace the 3A, make sure if the motherboard can still work normally. Or replace the 24V power directly.

Troubleshooting of configuration series does not open

The configuration series has access control, ticket system, remote control, key switch and so on. Depending on which module you refer to, see that manual.

Access control

Problem: Swipe card but can't open the turnstile

Solution: Please listen to the sound of the reader when swiping the card, if there is a "di" sound, to check if the reader is in good condition. Make sure the reader is normal, check if the background of the access control system has read the card number information, display invalid card, invalid time period or entry and exit events, etc. Prompt the event of entry and exit, please confirm whether the line between the access control board and the turnstile control board is loose, press the control key of the main board, check if it can open the gate.

Once the problem has been pinpointed, repair it on site or contact after-sales assistance for repair.

Ticket system

Ticketing has two kinds of opening modes: switching signal or serial port protocol

Problem: Sweep the ticket to indicate success, but can't open the turnstile. Or no response to the ticketing system after scanning.

Solution: Make sure the control board of the turnstile is in good condition and can open normally.

1. After scanning the ticket, it is suggested that successfully, but gate not open,
2. Confirm whether the communication of switch signal line 485 or 232 is normal and whether the line is loose.
3. Check the serial port protocol, check whether the communication serial port line has output instruction, cross - adjust with normal turnstile to test serial line, IPC and access control board, finally confirm the problem.

Remote control system

Problem: Press the remote control can't open the gate

Solution: Confirm whether the relay of the remote control receiver is jumping after pressing the remote control, the most intuitive is open the shell of the receiver module, you can see the relay jumping with lights on.

If all normal, please check whether the line from receiver to the control board of turnstile is loose.

Check whether the signal light on the turnstile's control board is on after each remote control is pressed.

There are two modes for remote control:

1. Usually open mode (two ways to close the door), jump two pins, a total of three pins. One group is press the release button to close the gate after opening, another on group is after opened and then pressed the open key again it will close.
2. One pin, just give a signal, the door will close automatically when the control time is up.

Switch system

The switch system is the short switch signal, no special element, except the line problem, only the turnstile control board own reasons.

Functional debugging should be done before the device is used, it can only be used after normal debugging.

Do not stand in the passage after the turnstile power on. Swiping card pedestrians are not allowed to enter the passage until the indicator light turns green.

REMINDER

- Pedestrians are not allowed to stay in the passage after enter the passage.
- Pedestrians are not allowed to enter the passage crowded, and a distance should be kept between pedestrians
- It is not allowed to pass through the passage at a fast speed
- It is not allowed to hit or shake the turnstile. It should be properly managed when the turnstile cannot operate.
- When the turnstile is closed, it is not allowed to force push or pull, or hit the turnstile.

NOTE: Do not use the system when there is lightning, otherwise the system may be damaged.



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