Tripod turnstile manual book

Índice

Appendix

1. Product Introduction

1.1 Brief introduction

This tripod turnstile is a smart channel management device developed, researched, and produced by our company. Through different reading and writing devices, the smart control and management of the channel can be completed. The shape of the entire product is stamped and formed by stainless steel, beautiful in appearance, rust-proof and durable, and the system adopts a standard electrical interface to the outside. Provide an orderly and civilized way of traffic and prevent illegal personnel from entering and exiting. At the same time, in order to meet the requirements of fire escapes, when power off the arms will drop in emergency situations to organize evacuation.

1.2 Main functions and features

1. With hardware watchdog circuit, never crash.
2. Automatically drop the arm after power off.
3. Automatic counting after people passes.
4. Direction indicating pass function.
5. Swipe the card with or without memory to choose.
6. The channel will be closed automatically when overtime.
7. Manually drop the arm.
8. Aging test of equipment.
9. Abundant status light indication function, all input signals and output signals are indicated, which is convenient for the use and after-sales maintenance of the equipment.
10. Abundant LED display functions, the status of the equipment is clearly visible.
11. Variety pass ways: can flexibly set in and out of the card pass or free pass.
12. The device can complete the channel normally open or normally closed function according to the set time period (optional).

1.3 The main technical parameters

1. Working voltage: 24V, 50HZWorking environment temperature: -25℃-60℃
2. Relative humidity: less than 95%, no condensation
3. Maximum channel width 510mm
4. Passing speed: 20-30 people/minute (IC card)
5. Electromagnet: 20W/24V

2. Parameter Setting Description

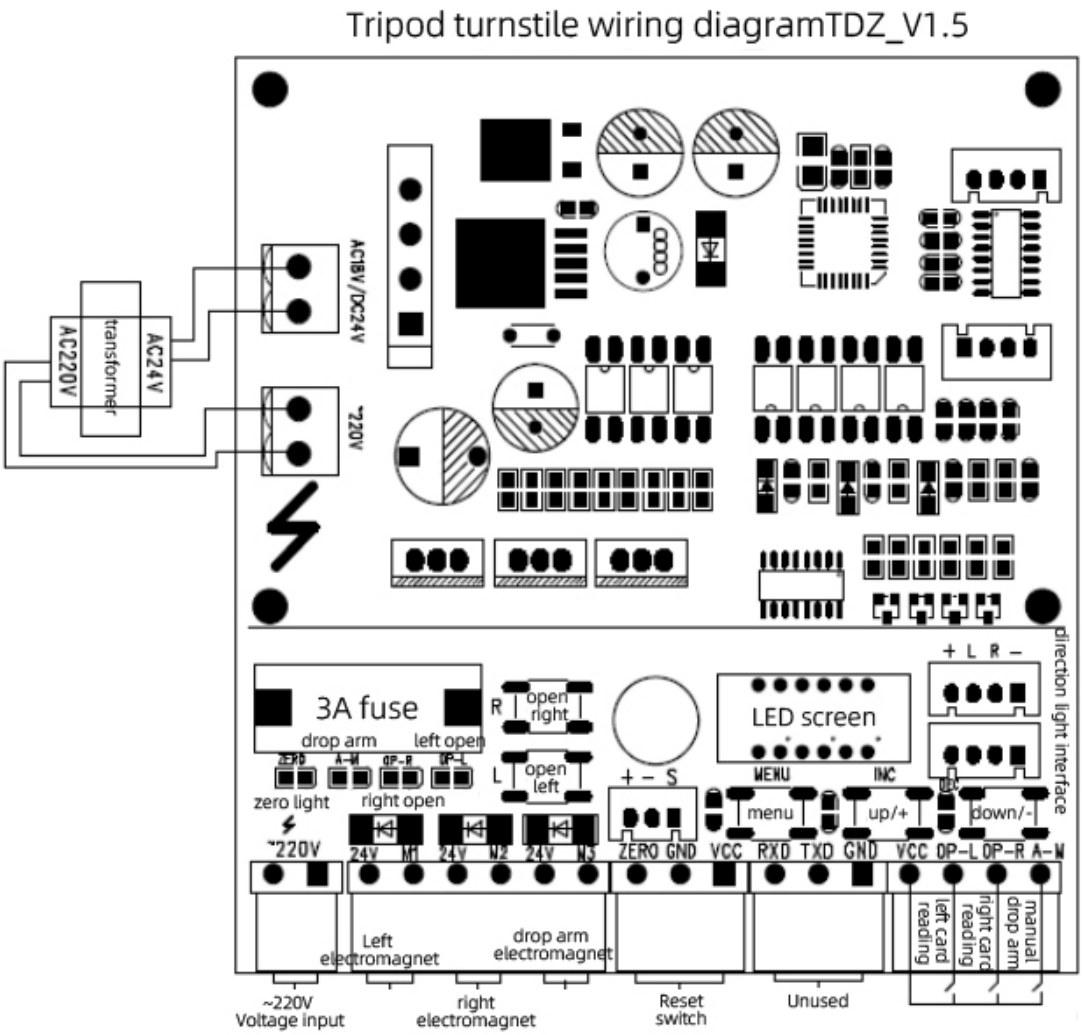
After the control board is powered on, the LED screen displays show <**Run**>。

A) System menu description：

1) "**F 0 1**"
   Set the passage time. Within the set time period, the time will be automatically cleared after a person passes the turnstile, and if no one passes, the turnstile will automatically close when the time is up. (The system defaults to 5 seconds)
2) "**F 0 2**"
   Normally open function setting. 1: When normally open, only the left electromagnet is turned on. 2: When normally open, only the right electromagnet is turned on. 3: When normally open, open the left and right electromagnets. (The default value is 3, when normally open, both sides of the electromagnet are turned on)
3) "**F 0 3**"
   The working mode of the turnstile. 0: Free pass (commonly used on full height turnstiles) 1: power off arm drop (default 1 power off arm drop)

4) "**F 0 4**"
Memory function. Whether there is a memory function when opening or closing entrances and exits pass, it is generally used when someone swiped card but not pass, whether to remember the card swiping of other people. "Prohibited" means that after the first person who swipes the card and pass, the second person can swipe the card to be valid; "Allow" means that all the people who swipe the card are allowed to pass continuously. (The default value is 0, memory is prohibited)
5) "**F 0 5**"
Repeated turnstile opening and closing tests, are mainly used to test the stability and aging test of the turnstile control board.
Note: In the test mode, press the MENU button to exit the test
6) "**F 0 6**"
Zero position signal setting. 0: Detected the zero-position signal and immediately close the turnstile (standard mode of tripod turnstile, the main board is set to 0 by default); 1: Detected the zero-position signal, and then wait for the zero-position signal disappear then closing the turnstile (commonly used on full height) (default Value 0)
7) "**F 0 7**"
Turnstile normally open setting, the unit is second. This parameter is used to detect the continuous opening signal. When the duration of the continuous opening signal exceeds the parameter set, the system enters the normally open state (which side of the solenoid is normally open is determined by the F02 parameter, and the default of the F02 parameter is the normally open two solenoids). If the opening signal to the turnstile is a continuous signal, the turnstile will always be in the open state. After the continuous signal is disconnected, the turnstile will return to the standard mode. (The default parameter is 0 seconds, normally open and closed)
8) "**F 0 8**"
Opening delay. This parameter is only valid when the memory function is enabled. After the memory function is enabled, the turnstile opening delay when there are many people pass. This function can prevent the turnstile from opening again when the previous person has not passed the channel. (The default value is 0, no delay)
9) "**F 0 9**"
Reset. All parameters of the controller are restored to factory settings.
10) "**F 1 0**"
Exit the menu. Or automatically exit without key operation within 5s.

3. Wiring Diagram



4. Definition of Equipment

4.1、Definition of equipment

Left: Facing the chassis, the direction on the left-hand side
Right: Facing the chassis, the direction on the right-hand side

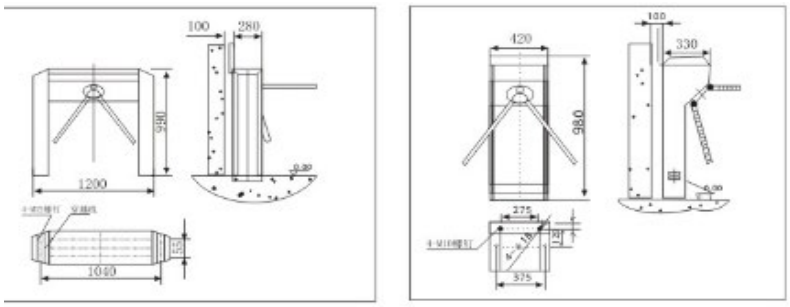
4.2、Electrical List

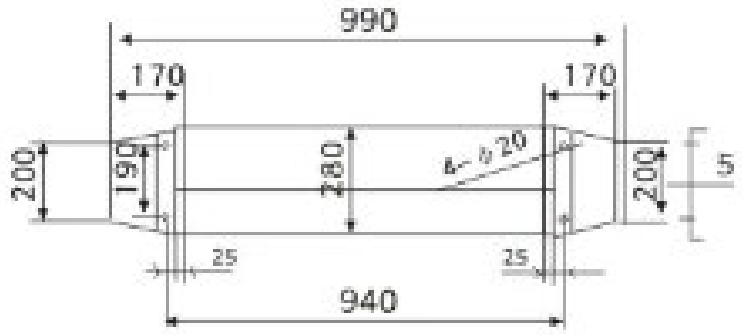
NO.	name	Specification	quanti ty	unit	note
1	Electromagnet	24VDC/0.6A	2	piece	Power on attraction, power off disconnect
2	Drop arm Electromagnet	24VDC/0.3A	1	piece	Power on attraction, power off disconnect
3	Reset switch	12VDC, PNP, normally open	1	piece	Used to detect the rotation of the arm; output high level when there is metal approaching;
4	controller		1	piece	
5	transformer	20VAC/60W	1	piece	Input 220VAC
6	Direction indicator board	12VDC,0.2A	1	piece	Left and right signals are high level

5. Equipment Size

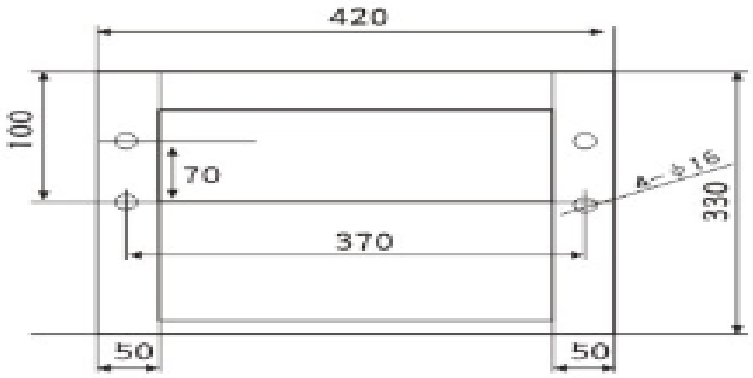
5.1 Equipment size

The varieties and specifications of tripod turnstile, the appearance of the chassis can be divided into bridge-type fillet tripod turnstile, bridge-type inclined tripod turnstile, bridge-type disc-shaped tripod turnstile, bridge-type arc tripod turnstile, bridge-type octagonal tripod turnstile, vertical tripod turnstile and double-pillar tripod turnstile. Its appearance and dimensions are shown in the figure below:





Bottom of bridge tripod turnstile (Figure 4).



Installation drawing of the bottom of the vertical tripod turnstile (Figure 5).

6. On-Site Installation and Debugging of Equipment

6.1 On-Site Installation of Equipment

1. Check the accessories according to the packing list
2. According to the specific system composition, the use site and the selected model, determine the installation location of each turnstile.
3. According to the installation requirements shown in the figure below, determine the installation hole position, and pre-arrange 4 M12 anchor bolts or 4 M12 expansion bolts at the installation position

4. Thread the strong cable and the weak cable with 3/4" PVC pipes and bury them in the corresponding positions with cement.

Notice:

The depth of the buried PVC line pipe should be greater than 60mm, the height of the exposed ground should be greater than 50mm, and the outlet should be bent back to prevent water ingress.

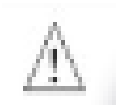
5. Open the cabinet door, align the bolt holes of the machine base with the anchor bolts, and tighten the nuts.
6. According to the system wiring diagram, connect the power line, control line and the main control board line of turnstile well, and connect the system's protective ground wire.

Notice:

1. All the above operations should be performed when the power is off, and the protection ground wire of the system should be properly connected and securely connected.
2. When the equipment is used outdoors, a 100-200mm high cement installation platform should be built under the equipment to prevent moisture.

7. Equipment use Instruction

7.1 After ensuring that the equipment is working properly, it can be put into use
7.2 During the reading and writing period, the passer can't squeeze, lean on, or push the arm before the pass indicator turns green, so as not to affect the normal operation of the equipment.
7.3 When the equipment is not in use, it is strictly forbidden to sit or press hard on the arm to avoid unnecessary damage to the gate
7.4 When passing, the passer only needs to push the arm slightly, instead of forcefully pushing the arm to move during the passage.



Notice:

1) Do not use this machine when there is lightning to prevent damage to the turnstile.
2) Ensure that the protective ground of the system is reliably connected to prevent accidents such as personal injury.

8. Maintenance Instructions for Pedestrian Passage Turnstiles

Stainless steel will not rust is a misunderstanding that everyone knows, in fact, stainless steel will rust under certain conditions. The rust resistance and corrosion resistance of stainless steel will change with the chemical composition of the steel itself, the state of addition and mutuality, the use conditions and the type of environmental media. For example, 304 stainless steel is excellent in anti-rust and anti-corrosion in a dry and clean environment, but when used in a coastal environment, the large amount of salt in the sea fog can easily make it rust,316 stainless steel is relatively difficult to rust.

Therefore, the maintenance of the pedestrian passage turnstile is very important, and the maintenance directly affect the service life of the turnstile gates.

8.1External cleaning and maintenance

Pedestrian turnstile gates are made of 304 stainless steels, and it is recommended to clean the exterior once a week.

1. Surface cleaning: indoor with a scouring pad dipped in absolute ethanol, wipe the surface stains along the drawing direction; outdoor after the surface rain is dry, use a soft cloth soaked with absolute ethanol, and wipe the surface stains along the drawing direction.
   Do not scrub the exterior with hard objects to avoid scratching the surface. Apply Watanabe stainless steel maintenance water anti-rust oil. Do not wipe the freshly applied anti-rust oil. Wait 3-5 hours to dry naturally before touching it. Otherwise, it will destroy the surface anti-rust effect.
2. It is forbidden to flush with water, so as to avoid the short circuit of the electric control system caused by the water entering the equipment, which may cause equipment malfunction.
3. After a long time of use, especially when used outdoors, some rust spots may appear, which need to be cleaned with industrial alcohol. After cleaning, apply Watanabe stainless steel maintenance water anti-rust oil.

8.2 Component maintenance

1. Check every moving part of the equipment every 3 months to see if there is any loose firmware, so as to avoid malfunctions caused by long-term operation.
2. Check the connectors and connection points of the connecting circuit every 3 months to ensure reliable connection.
3. If it is installed in a scene with heavy dust, it is recommended to clean the dust on the channel control panel and the stopper every 3 months.

4. After the maintenance is completed, the circuit board protective cover must be installed, and the cabinet door must be closed.

8.3 Circuit power supply maintenance

1. Cut off the power supply and clean the surface dust. Note that it must not be cleaned with water to prevent short circuits.
2. According to the previous usage, check whether there is a problem with the circuit part. If there is no problem, check whether the circuit, power supply, wire, and each plug-in are exposed or loose, if so please bandage, arrange and tighten the plug-in. Check if there is any leakage of electricity, if the wire is aging, it needs to be replaced.

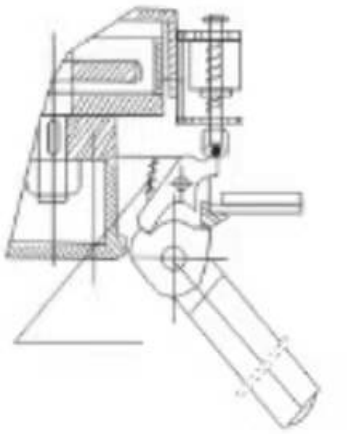
9. Daily Maintenance

9.1 The outer shell of this equipment is made of stainless steel. It is necessary to scrub the outer surface with a soft fabric frequently to keep it clean. Do not scrub the outer surface with hard objects to avoid scratching and affecting the beauty.
At the same time, it is forbidden to flush with water to avoid short circuit of the electric control system and damage to the equipment.
9.2 Regularly check the connection of each moving part of the equipment. If loose nuts, screws and other fasteners are found, they should be tightened in time to avoid long-term operation which will cause the malfunction of the turnstile gate.
9.3 Regularly check the connection of the system grounding protection to ensure its reliable access.
9.4 Regularly check the connectors and connection points of the connection line to ensure reliable connection.

10. Common Faults and Troubleshooting

10.1 After power on, the direction indicator, counter (optional), etc. have no display, and the card cannot be read
This fault is mainly caused by a problem with the power supply system of the equipment. Check carefully whether the 3A fuse of each main controller is damaged, whether the connector is loose, whether the power cord is disconnected, etc.

10.2 Occasionally there is a drop of the rod during use



There are two main reasons for this failure:

A. A: The two M6 hexagon socket screws for fixing the drop rod electromagnet are loose. Its exclusion method is:
   1) Open the upper cover of the cabinet with the key.
   2) Loosen the two M6 hexagon socket screws of fixing the drop rod electromagnet.
   3) Move the drop rod electromagnet slightly upward.
   4) Fasten the two M6 hexagon socket screws of fixing the drop rod electromagnet.
   5) Power on to check whether the fault is eliminated, otherwise repeat the method described, in 2-4 until the fault is eliminated.

B. B: The spring force in the brake head is not in the middle (see the figure below). Solution:
   1) Take off the three M8 inner hexagonal screws to remove the aluminum plate assembly.
   2) Check if the small lock head is strong by hand press, or if it can be returned.
   3) Replace the springs that cannot be returned or have no elasticity.
   4) Install the overall surface of the aluminum plate and tighten the M8 silver rod.

For the failure, we should promptly notify our company's after-sales service department or authorized service organization to replace it

10.3 The arm cannot be reliably locked during power-on or in use

The main cause of this fault is the damage of the drop arm electromagnet, or the broken wire, loose wiring, or the broken shrapnel as shown in the figure above.

10.4 Read the card once and pass multiple people continuously

The fault is mainly caused by the following reasons:

1) Reset the photoelectric board failure or loose wiring, please replace the photoelectric board.

2) The reset spring of the positioning arm fails, causing the positioning arm to be unable to be reliably reset and locked.

10.5 Cannot read the card normally

The fault is mainly caused by loose wiring between the card reader device and the main controller, or the card reader device is damaged. When the card reader is replaced, the solenoid wire is blocked, or the solenoid is broken.

10.6 The card reading is normal, and the direction is indicated as allowing passage, but it is not passable

The fault is mainly caused by the following reasons:

1) The 5A fuse on the main control board of the tripod turnstile is damaged.
2) The left and right opening electromagnets are damaged, or the wiring is loose.
3) The main control board of the tripod turnstile is damaged.

When the motor or main control board is damaged, you must immediately notify our company's after-sales service department or authorized agency for handling.

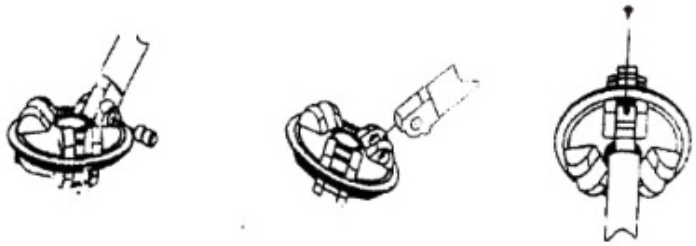
10.7 After one side of card reading and passed, the phenomenon of unlocking and passable in the other direction appears.

The fault is mainly due to the wrong connection of the left and right opening cable when the user connects the access control board, you only need to reverse the connection of the left and right opening cable.

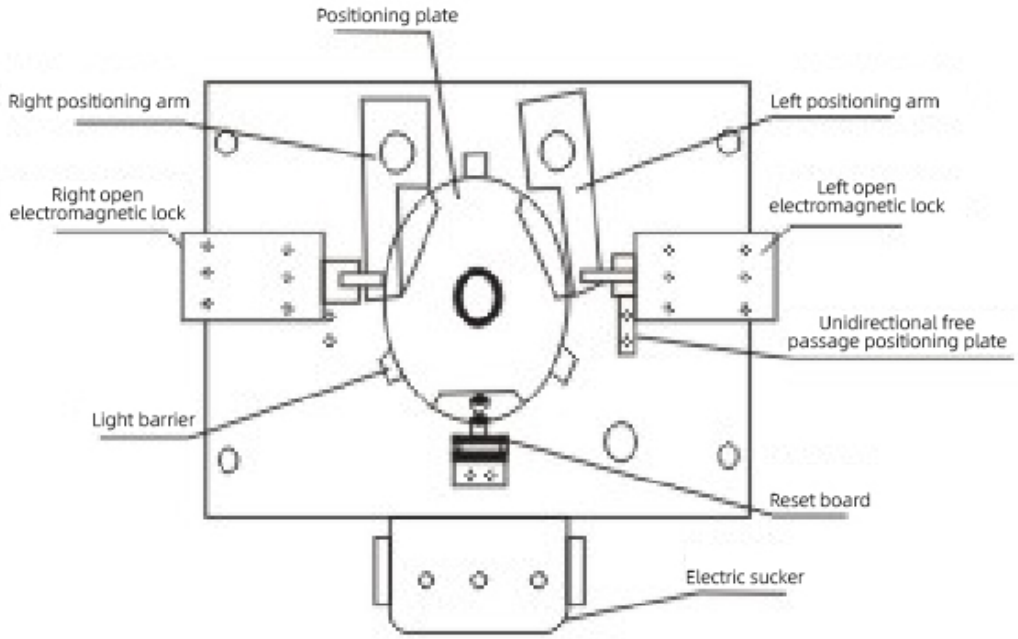
Appendix

1. Arm Installation Method

1. Put the arm into the aluminum plate according to the serial number to install the precision.
2. Put the pin into the pin of the aluminum plate.
3. Then put the pin in place and fix it with screws.



Adjust the one-way free passage, adjust the one-way machine screw and lock the positioning arm, so that turnstile gate can pass freely in one direction.



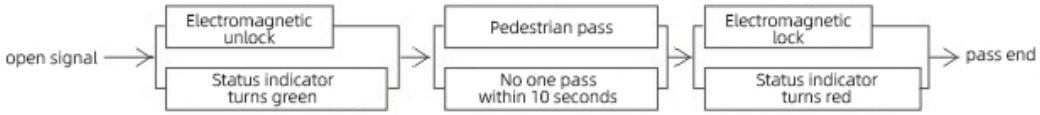
2. Preparation Before Debugging

1. 1 copy of the wiring diagram of the electric tripod turnstile, 1 copy of the machine core position, a set of electric tripod turnstile equipment to be debugged, and carefully read the `electric three-roller gate menu
2. Setup instructions ».
3. Left and right definition: facing the tripod turnstile, the left-hand side of the tripod turnstile is the left side, and the right-hand side is the right side.
4. Install the arm (as shown in the picture above)
5. Check whether the wiring is consistent with the wiring diagram, check whether all plugs are loose; make sure that the mechanical part is not stuck, the operation is flexible, the protective ground of the equipment must be reliably grounded, and it can be powered on for debugging after confirmation.
6. The wiring diagram of tripod turnstile, connect the power supply and the gate

opening signal according to the identification of the wiring bar.

3. System Function Test

1. Connect the power supply.
2. Method of raising the arm: first use the pressure arm to the bottom and then lift it to the horizontal position to jam.
3. drop arm function test: cut off the power supply, the arm drops:
4. Function test of turnstile:



4. System Function Test

1. Open the door on the left to pass when there is a left door open signal, the tripod turnstile will automatically unlock, and the direction indicator will change to a green pass mark, waiting for pedestrians to enter; when the pedestrian enters, push the tripod turnstile to rotate at a certain angle to make the reset photoelectric switch effective After turning, the system automatically completes the locking action, and the direction indicator changes to a red prohibition sign
2. Open the door on the right to pass when there is a right door open signal, the tripod turnstile will automatically unlock, and the direction indicator will change to a green pass mark, waiting for pedestrians to enter; when the pedestrian enters, push the tripod turnstile to rotate at a certain angle to make the reset photoelectric switch effective After turning, the system automatically completes the locking action, and the direction indicator changes to a red prohibition sign. The maximum time for each pass is 4 seconds. When no one passes after the set pass time, the settings will automatically reset.
3. Drop arm function test: Cut off the power and the arm drop. After the power is turned on, the electromagnet will generate magnetic force, and then the arm can be manually raised. The method of raising the rod: first press the arm hard and then lift the arm to the horizontal position to be stuck.

5. Notice

1. Without permission, do not add peripheral devices to the equipment and ensure that the system is grounded reliably to ensure the safety and reliability of the equipment.
2. When the equipment is used outdoors, it should be installed under the equipment with a water-mixed installation with a height of 100mm-200mm, so as to prevent moisture
3. Do not use this equipment when there is lightning to prevent damage to the turnstile
4. If the above guidelines are unclear, please contact the supplier.

6. Warranty

Within one year from the date of purchase, our company will be responsible for free maintenance if there is a performance failure that is not artificially damaged.

The following conditions are not covered by the warranty

- Damage caused by abnormal operation and man-made or natural disasters.
- Disassemble and replace any part (such as wiring, parts) in the machine by yourself and causing damage.
- Do not accept machines that fail due to unauthorized modification or installation of other functions.