

*Smartpower*

# Full Height Turnstile

## Manual



# Preface

## **Dear respected customers:**

Thank you for purchasing our Full Height Turnstile.

The Full Height Turnstile are available with standard electrical interface and compatible with several read-write devices such as MAG card, barcode, ID card, IC card etc, which is convenient for system integration.

They are widely used in hotels, factories and mines, residential, clubs, enterprises and other places where the intelligent access control management are needed.

The products you bought from our company are strictly verified by our QC team and the products are qualified. The product is highly technical equipment, for the sake of its safety and reliability; we made this User Manual which shows you the matters need attention during the operation.

Please read the instructions carefully before using the products you chose for fear of damaging the rights and interests of you by virtue of misoperation.

We hope this Manual can give you some help.

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## **1. Equipment introduction**

### **1.1 Summary**

Full height turnstile is intelligent access management equipment. The product, integrating with mechanism, electron, microprocessor and various identification technology, by configuring all kinds of identification devices and adopting reliable safeguard devices, alarm devices, direction indicator and well-extended LED counting display, is able to achieve access intelligentized control and management.

The framework of equipment is made of cold-rolled iron (or stainless steel). It's elegant, rustproof, and durable. With standard electric interface, the equipment can be compatible with several kinds of cards such as barcode, ID card, IC card which not only provides people with civilized, orderly transit manner but also prevent the illegal in and out. In the emergency, the equipment ensures the gate unlocking automatically for facilitating escape.

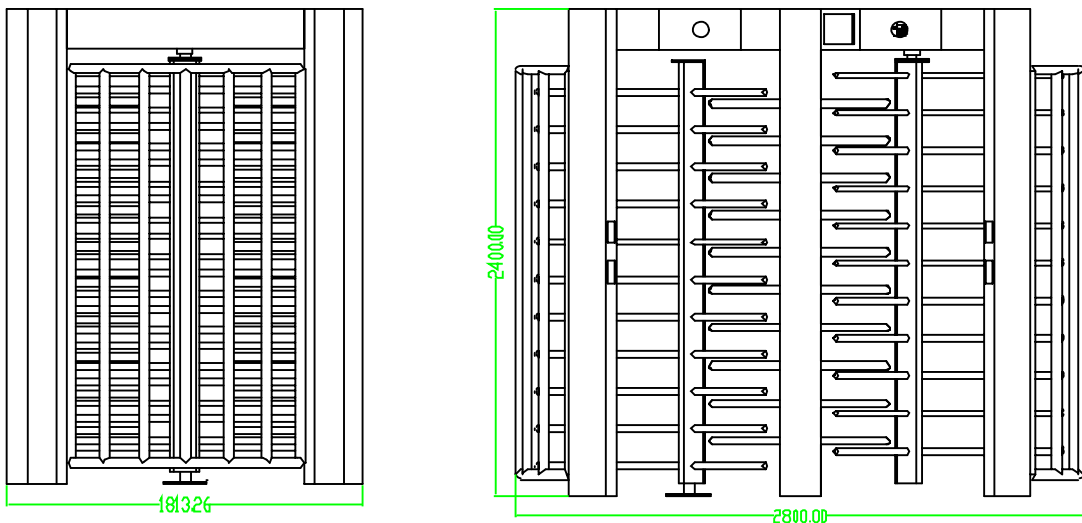
### **1.2 Functional characteristics**

- 1) Automatically reset function: It will automatically lock if the pedestrian hasn't passed through the channel in the pre-set time after the opening;
- 2) With standard electric interface, being able to connect with several card readers, being controlled and managed by remote computers;
- 3) Smooth running, with low noise;

### 1.3 Main technical parameters

- 1) Power: AC220±10% V、 50HZ
- 2) Driving electromotor: DC electromotor 24V/100W
- 3) Working environment temperature: -15<sup>0</sup>C - 60<sup>0</sup>C
- 4) Relative humidity: ≤90%
- 5) Input interface: 12V level signal or DC12V pulse signal with width of more than 100mA, driving current>10mA
- 6) Communication interface: RS485 electric interface
- 7) Communication distance≤1200m
- 8) Transit speed: 30persons/min(open-often model)  
20persons//min (close-often model)
- 9) Time of gate opening or closing: 1sec

### 2. Equipment Configuration dimensions



### **3. Structure of product and operational principle**

#### **3.1 Mechanical system**

The mechanical system the equipment is composed of framework and machine core. The framework works as a carrier, in which the direction indicator, read-write devices, the core etc. are installed. And the core contains magnet, shock absorber, drive shaft turnstile barrier etc.

#### **3.2 Electronic control system**

The electronic control system is composed of card reader, main control panel, limit switch, transformer, battery, magnet, relay etc.

Card reader sent signal (open signal) for transit to the main controller after reading and judging the information of user card.

#### **3.3 Operational principle of system**

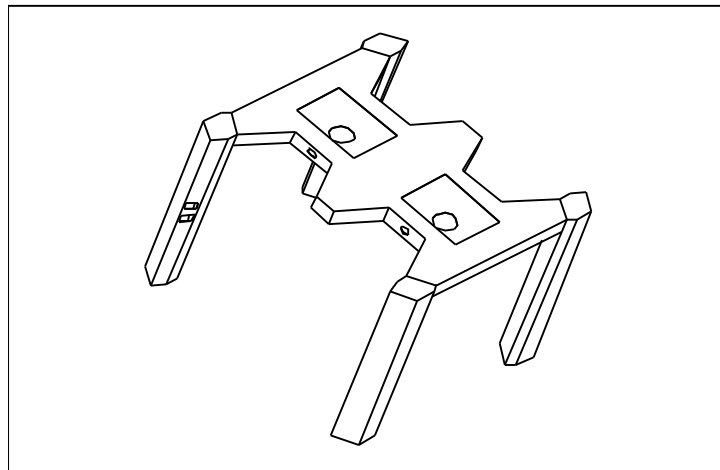
- 1) The system will get down to working in 3 sec after power on.
- 2) While a valid card is being read, the buzzer gives off the sweet sound to prompt the successful card reading. Meanwhile, the signal of the card is estimated and processed and then opening signal is sent to the main panel.
- 3) The main control panel sent a valid control signal, after it has received and processed the signal, to the electromotor to make it run. And the limit switch controller its running angle and then the gate is open for the pedestrian. (In the open-often model, the electromotor will not move.)

## 4. Installation and debugging

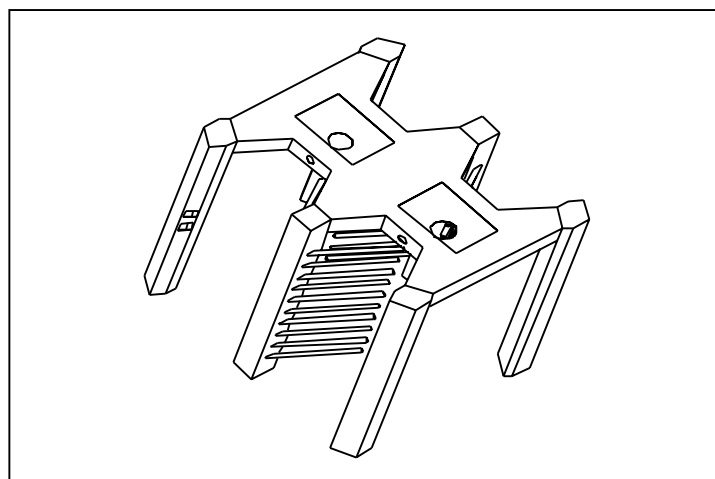
### 4.1 Installation of equipment

- ◆ Prepare tool for installation, check the parts according to the packing list;
- ◆ Make a comprehensive plan to start installation after understand the composition of the system;
- ◆ Put the equipment in order after the ground base has been built

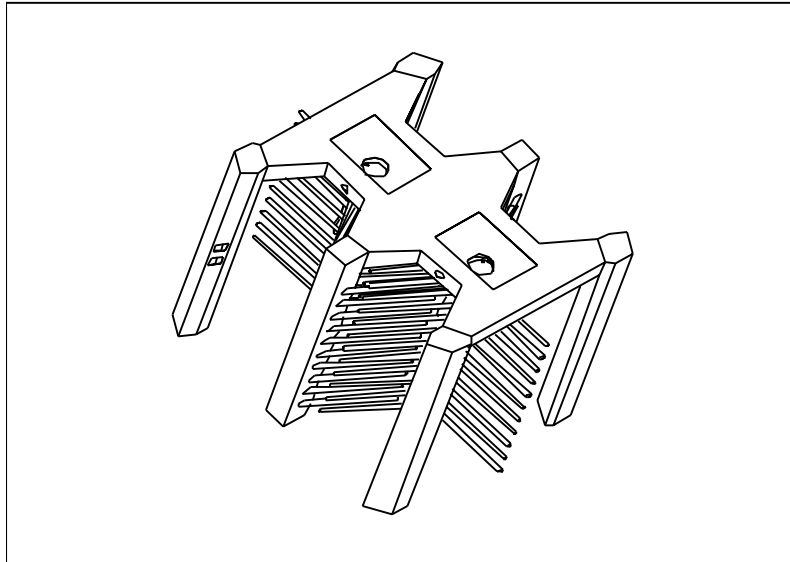
**I .The first step: connect the four jambs with the upper parts by screwing the four M12\*29 screws**



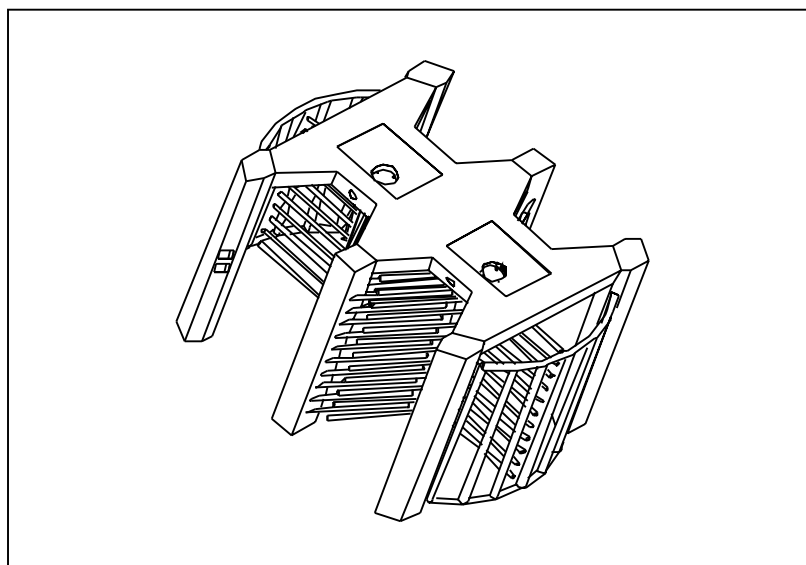
**II . The second step: Joint the two main pillars and the upper parts together with four M12\*20 screws**



**III. The third step: Joint the two turnstiles and the bottom base together with 6 M12\*20 screws, (Notice: The centre of gravity of the turnstile should be in the vertical direction )**

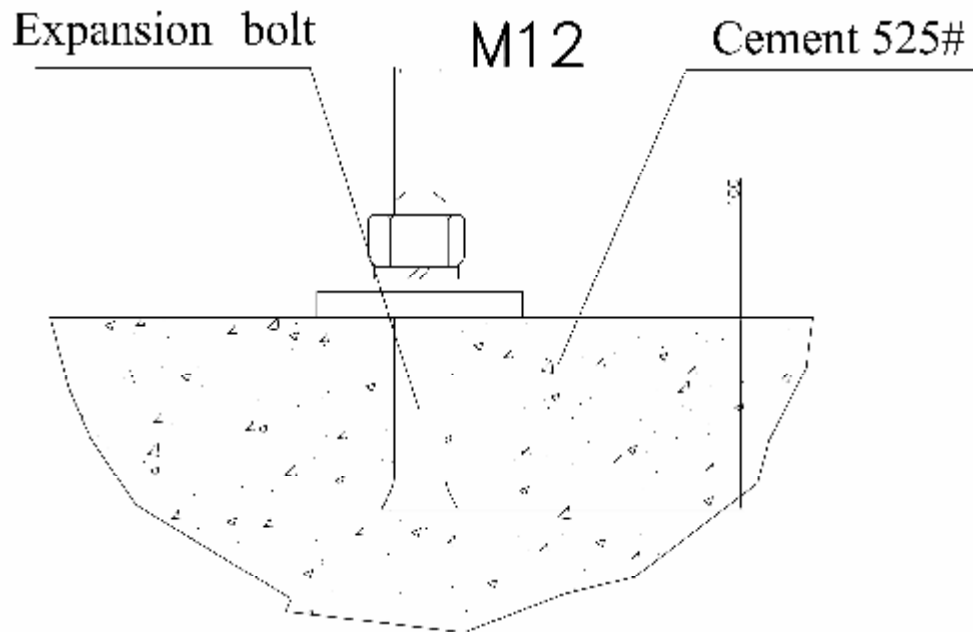


**IV. The fourth step: Fix the two rows of metal fences to the jambs using 4 pieces of M8\*15 screws respectively. Installation of mechanical parts is finished.**





- ◆ Fix and drill the holes, lay M12 foundation bolt or expansion bolt;



**Diagram of foundation installation**

- ◆ Put the strong electricity cables and weak electricity cables in the 3/4 PVC wiring tube separately, and then lay the tube in the corresponding position;
- ◆ Take the framework to the installation position, make the screws point at the screw boss;
- ◆ Check the composition and working model is all right, and then go to next step;
- ◆ Refer to the wiring diagram, link all the cables including earth line;
- ◆ Screw up the foundation bolt after the status checking and function debugging is over.

**⚠ Warning:**

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1. The PVC wiring tubes should be laid more than 60mm below ground, and the parts above earth should be 50mm high. And the end of the tube should be down bent for the case of waterproof.
  2. The barrier poles should be in the horizontal position.
  3. Ensure earthing is in good condition.
  4. Establishment for anti-sunshine or waterproof such as a tent etc. should be added if installation in the open air.
  5. Only after installation, status checking, function debugging, can the equipment be put into normal use.
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## **4.2 Debugging of equipment**

Function can be debugged as below only after the status of equipment is normal!

### **1) Preparation before use**

A copy of wiring diagram of turnstile, a set of turnstile

### **2) Check the wire connection**

Examine the wire connection according to the wire diagram, and the equipment should be well in earth line.

### **3) Adjustment of limit photoelectric switch**

System locking: The system is at locking position, when power on;

Unlock for fire protection: The access is open for bi-directional transit, when power off, which match with the requirement of fire-protection.

Unlock for transit: While a normal swipe of card, to be specific, a swipe

of card for going in, the turnstile unlock, and the entrance open but the exit close. The turnstile runs to zero position after the pedestrian go through. And the red indicators in the switch board for exit turn bright, the zero signal is transmitted out, ZERO indicator in the corresponding main board turn bright, which means that the equipment return to the locking status. And the operational principle is the same as the over going.

#### **4) System functional testing**

(1) A swipe of card for entry:

The turnstile will automatically unlock after a swipe of card, then the direction indicator turn green arrow, waiting for pedestrians to enter. After the pedestrian going out, the (turnstile) barrier runs to zero position. The transit time is 10sec. (The parameter can be set, hereinafter take 10sec for examples) When nobody go through the gate in the pre-set time, the equipment will automatically lock.

(2) A swipe of card for exit:

The operational principle is the same as over going. (ibid)

(3) The Power control:

Cutting off the power supply, the equipment will run to the unlock state, and the two direction are allowed to transit freely.

#### **5) Parameter specification**

(1) Enter menu:

Press set key, after hearing a sound “du”, loosen from SET key. At this

time, the word “poo” is displayed, which means that it’s in status of menu setup. And at this time INC key and DEC key can be chosen to setup function number: Press INC key for function number plus one, and press DEC key for function number minus one; there are 10 kinds of functions as below:

**P00:** Exit from menu setting, when POO appears, press SET Key to back;  
Press INC Key and DEC Key to choose setting parameters;

**P01:** Working mode of the equipment setup, there is 3 working

**P02:** The locking status setup:

=0 means not return to zero position

=1 means return to zero position

**P03:** Transit time setup

**P04:** Default value reset

(2) Go back from menu setup:

Press INC Key or DEC Key, when it display the word P00, press SET Key to back from menu setup.