

# INSTALLATION MANUAL

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01

# Installation instruction

## Installation Requirement

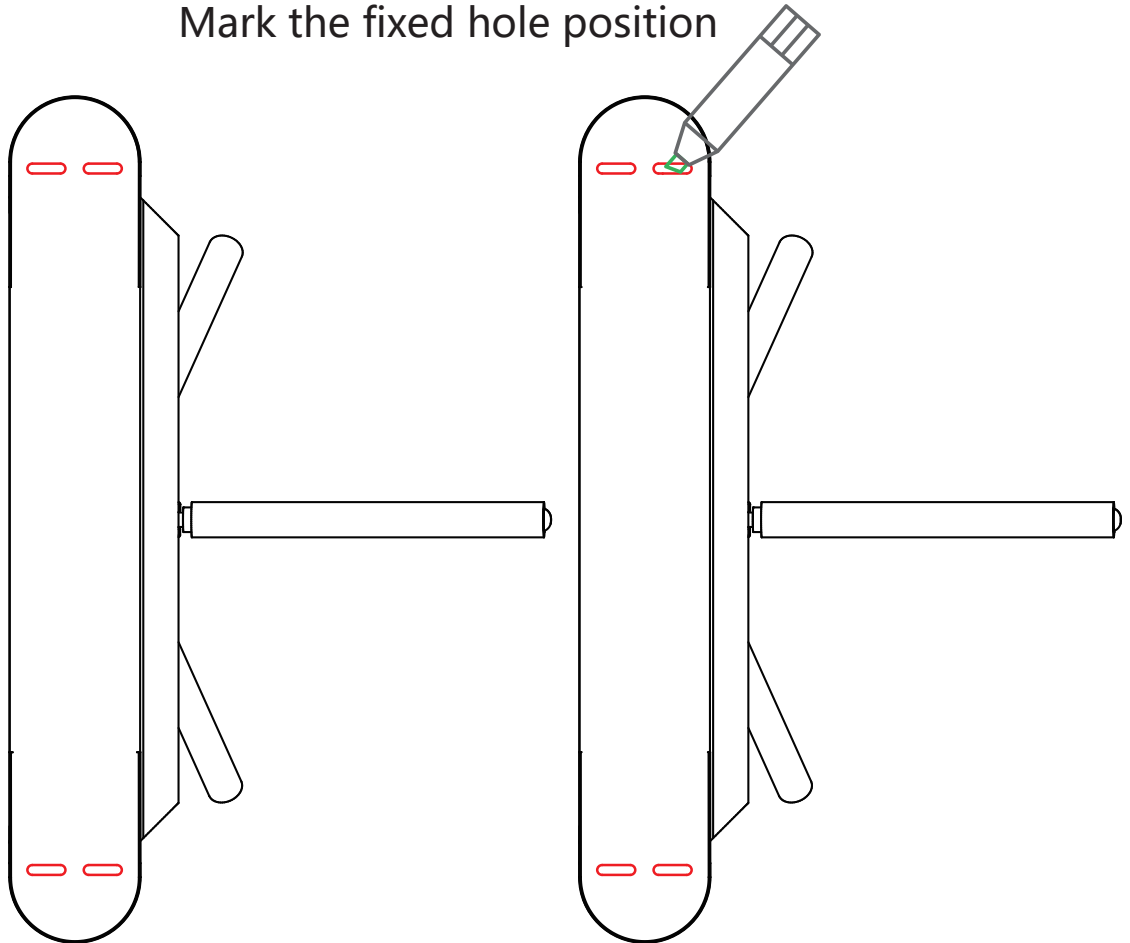
- 1、 The ground surface where the gate is installed should be level;
- 2、 The concrete grade  $\geq$  C30 (For outdoor installation);
- 3、 Concrete thickness  $\geq$  200mm;
- 4、 The ground must be frost-free and have good bearing capacity;
- 5、 The turnstile must be grounded;
- 6、 The power cord should be no less than RVV3\*2.0;
- 7、 When installing, make sure the body is horizontal and the turning bar is vertical.

## Installation

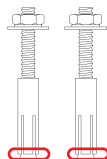
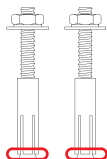
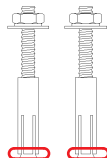
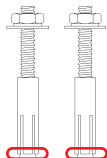
According to the channel requirements, place the equipment in good condition, ensuring that both ends of the equipment are level and the channel width is consistent



Mark the fixed hole position

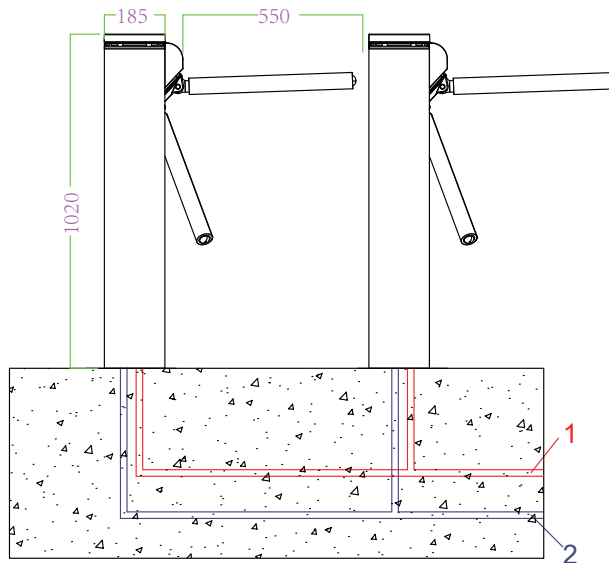


Move the device away and embed M12 \* 100 expansion screws according to the marked hole positions



## Buried wires according to wiring diagram ahead of time

(Note: This device only needs power cords. If other access control equipment is installed, wiring can be done according to actual conditions.)

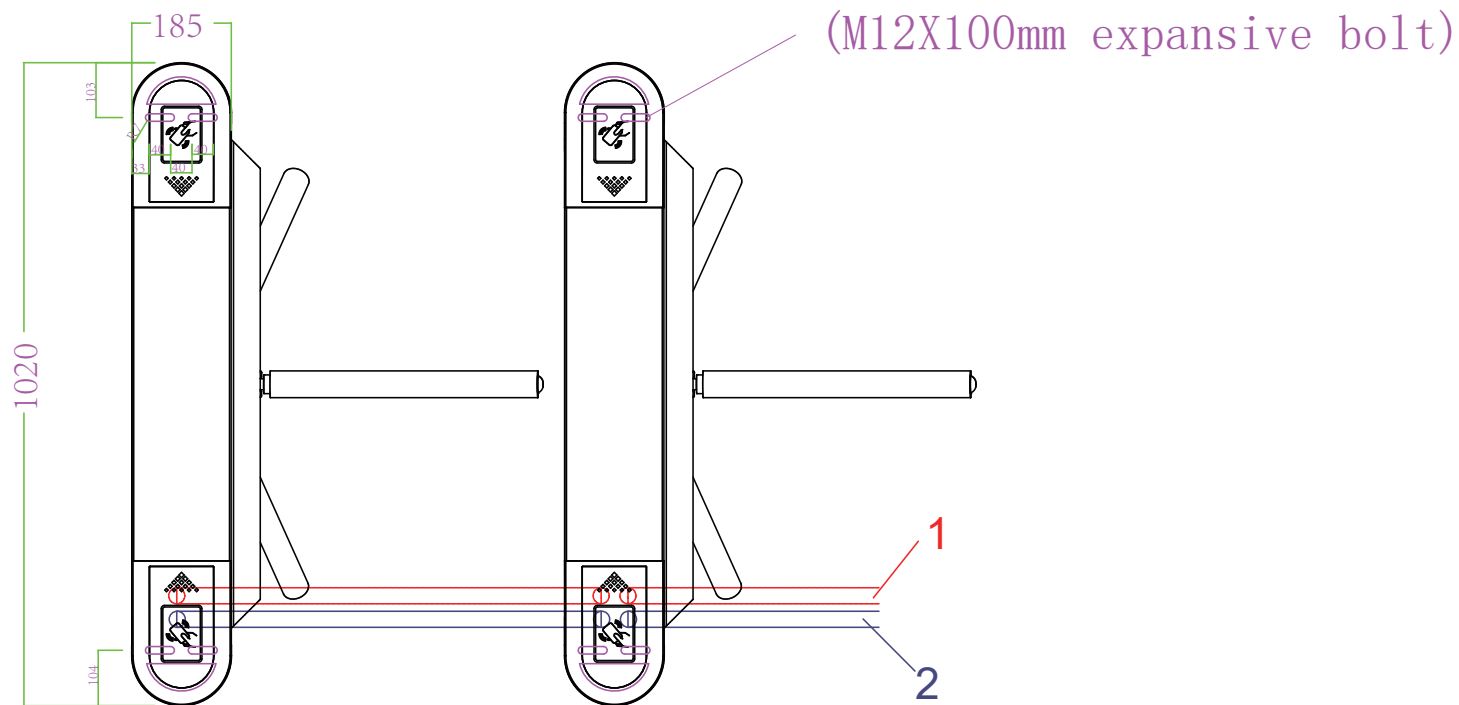


### Installation Manual:

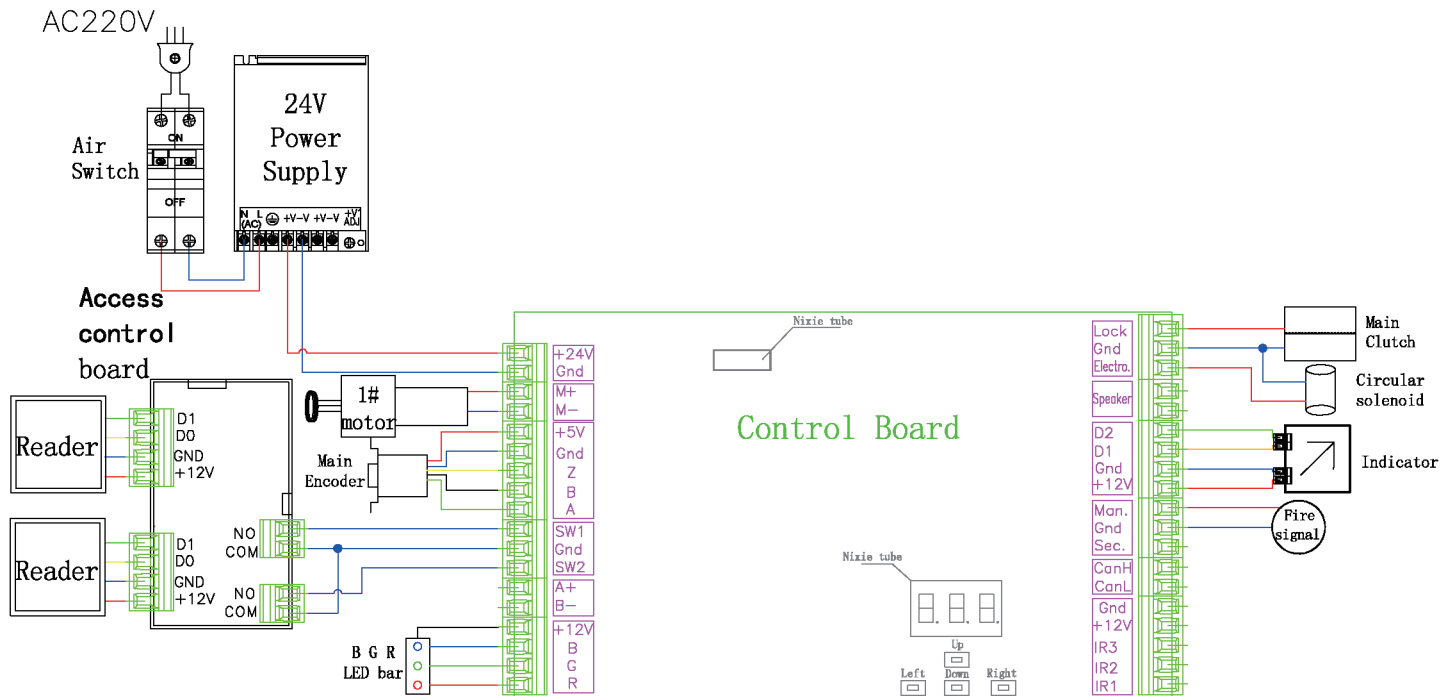
- 1  The Ø20mm PVC tube for AC 220V Power wires(3XΦ2.0mm) .
- 2  TCP/IP ethernet cable for connecting access device to PC.
- 3  Controlboard.
- 4  Fixing the equipment with M12X100mm expansive bolt.

Mark:All wires extending out of the ground shall be no less than 2M.

## Turnstile installation and fixation



# Wiring diagram



Model name: Full automatic Tri-pod Turnstile

Product name: Electrical wiring diagram

Revision: 6A

02

# Testing

## Testing

1. Check the wiring: According to the wiring diagram, check whether the online and power lines of the gate are connected correctly. Only after confirming that they are correct can the power be turned on. If there are any abnormalities during the power on process Always disconnect the power and check the connecting wires first.
2. Function debugging: After power on, the gate is opened and closed, then opened and finally closed. This process is a machine self-test, and the self-test is completed after two beeps of two seconds. Do not block the infrared during the process and do not stand in the channel.
3. Enter the lines without swiping card, the turnstile will always alarm; if no alarm, please check if the infrared sensors are aligned. When they are aligned, the infrared receiver lights up red; When they are not aligned, and then the infrared receiver will not light up red, please adjust and align the infrared sensors.
5. When flashing a valid card, the indicator light turns into a green arrow. If the direction indicated by the indicator light is incorrect or if the entrance gate is closed immediately and an alarm is triggered, switch to SW1 Simply swap the Gnd and SW2 Gnd wiring.
6. Carefully inspect and test to ensure that there are no abnormalities in the door opening and closing, the indicator lights are correct, and the infrared anti pinch function is normal before putting it into use.

## Parameter Description

| menu | illustrate                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Any parameter modification operation is not recommended                                                                                                             |
| F01  | Setting zero position "xxx" Encoder detected current angle 0-359                                                                                                    |
| F02  | Entry open angle 0-180, Flap barrier and swing gate default angle within 0-90 , the number is more bigger, which mean that the angle is more bigger (default 80-88) |
| F03  | Exit open angle 0-180, Flap barrier and swing gate default angle within 0-90 , the number is more bigger, which mean that the angle is more bigger (default 80-88)  |
| F04  | The buffer of entry close angle 0-120, The bigger value, The bigger buffer.                                                                                         |
| F05  | The buffer of entry close angle 0-120, The bigger value, The bigger buffer.                                                                                         |
| F06  | The lowest speed of motor 5-100 (default 20-25)                                                                                                                     |
| F07  | The fastest speed of motor 5-100 (80-100)                                                                                                                           |
| F08  | Pass model 1-13 1 : Normally close, use card for entry and exit (default )                                                                                          |
| F09  | Memory pass: "0" forbidden (default ), "1" allow                                                                                                                    |
| F10  | The max of pass time 10-255, unit 0.1s, (default 5)                                                                                                                 |
| F11  | Open delay 0-255, unit 0.1s, (default 0)                                                                                                                            |
| F12  | Close delay 0-255, unit 0.1s, (default 0)                                                                                                                           |
| F13  | Swipe card in lane "0" forbidden (default ), "1" allow                                                                                                              |
| F14  | Pass over and check position "0" exit, "1" anti-pinch                                                                                                               |

|     |                                                                                          |
|-----|------------------------------------------------------------------------------------------|
| F15 | Change status, automatic alarm "0" Forbidden, "1" allow                                  |
| F16 | Relay output, which use for account passenger "0" Forbidden, "1" allow                   |
| F17 | Clear accouter "0" cancel "1" clear                                                      |
| F18 | Number of turn-arm 2-6                                                                   |
| F19 | Stop work, whether use clutch or not "0" No use, "1" use                                 |
| F20 | Sensor infrared model "0" PNP, "1" NPN                                                   |
| F21 | The motor over-current protection value 0-200, unit 100Ma (Invalid)                      |
| F22 | Encoder resolution 0(360), 1(500), 2(512), 3(720), 4(800), 5(1000), 6(1024), default 500 |
| F23 | Reduction ratio, input speed 1-999                                                       |
| F24 | Reduction ratio, output speed 1-255                                                      |
| F25 | RS485 baud rate 1-9 4: 9600 (Default)                                                    |
| F26 | Versions                                                                                 |
| F27 | Factory reset "0" cancel, "1" Factory reset, "2" absolutely reset                        |
| F28 | Save current parameters as factory default                                               |
| F29 | IR Speed: 0-100                                                                          |
| F30 | Normally open mode, turnstile opening direction: 0 Entry (Default), 1 Exit               |
| F31 | Intrude Set: 0 None, 1 Alarm, 2 Alarm & Close                                            |
| F32 | Reverse Set: 0 None, 1 Alarm, 2 Alarm & Close                                            |
| F33 | Tailgating Set: 0 None, 1 Alarm, 2 Alarm & Close                                         |
| F41 | Entry Voice: 1-10, 0 no voice                                                            |
| F42 | Exit Voice: 1-10, 0 no voice                                                             |
| F43 | Alarm Voice: 1-10, 0 no voice                                                            |

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| F93                         | Input test                                                                                 |
| F94                         | Output test                                                                                |
| F95                         | Automatic close and open test                                                              |
| F96                         | Slave device communication test                                                            |
| F97                         | Device address 2-127                                                                       |
| F98                         | Device remark "0" No use, "1" The host device, "2" The slave device                        |
| F99                         | Setting device address 2-127                                                               |
| Abnormally code instruction | "EC.1" CAN bus fault _STUFF                                                                |
|                             | "EC.2" CAN bus fault _FORM                                                                 |
|                             | "EC.3" CAN bus fault _ACK                                                                  |
|                             | "EC.4" CAN bus fault _BIT1                                                                 |
|                             | "EC.5" CAN bus fault _BIT0                                                                 |
|                             | "EC.6" CAN bus fault _CRC                                                                  |
|                             | "EC.7" CAN bus fault _UNUSED                                                               |
|                             | "E33" Can not defect encoder (During self-test)                                            |
|                             | "E34" The fault of encoder resolution(The tri-pod turnstile can detect it)                 |
|                             | "E35" Can not find zero position (During self-test)                                        |
|                             | "E48" Motor 1 direction and encoder test direction is inconsistent (During self-test)      |
|                             | "E49" Can not test motor 1 (During self-test)(Maybe PCB Board ADC fault, please try again) |
|                             | "E50" Motor1 blocked off(over current protection)(Invalid value)                           |
|                             | "E51" Motor1 can not stop( When stop, but still have current)                              |
|                             | "E52" Motor 1 can not arrived zero position when entry open timeout                        |

|                         |                                                                      |                                                       |
|-------------------------|----------------------------------------------------------------------|-------------------------------------------------------|
|                         | "E53" Motor 1 can not arrived zero position when entry close timeout |                                                       |
|                         | "E54" Motor 1 can not arrived zero position when exit open timeout   |                                                       |
|                         | "E55" Motor 1 can not arrived zero position when exit close timeout  |                                                       |
|                         | "E64" Motor 2 direction and encoder test direction is inconsistent   |                                                       |
|                         | "E65" Can not defect motor 2                                         |                                                       |
|                         | "E66" Motor2 blocked off(over current protection)                    |                                                       |
|                         | "E67" Motor2 can not stop( When stop, but still have current)        |                                                       |
|                         | "E68" Motor2 can not arrived zero position when entry open timeout   |                                                       |
|                         | "E69" Motor2 can not arrived zero position when entry close timeout  |                                                       |
|                         | "E70" Motor2 can not arrived zero position when exit open timeout    |                                                       |
|                         | "E71" Motor2 can not arrived zero position when exit close timeout   |                                                       |
|                         | "E96" Force entrance alarm "E97" Reserve entrance alarm              |                                                       |
|                         | "E98" Trailing alarm "E99" External Alarm                            |                                                       |
| Status code instruction | "U00" Turnstile have closed(free)                                    | "U01" Turnstile have closed (Fire)                    |
|                         | "U02" Turnstile have closed (Power off)                              | "U03" Turnstile have closed (Free)                    |
|                         | "U04" Turnstile have closed (Fire)                                   | "U05" Turnstile have closed (Manual)                  |
|                         | "U06" Turnstile have closed (Exit)                                   | "U07" Turnstile have closed (Entry)                   |
|                         | "U08" Close turnstile when entrance                                  | "U09" Close turnstile when exit                       |
|                         | "U10" Close turnstile when entrance                                  | "U11" Close turnstile when exit (Have people in lane) |
|                         | "U12" Open turnstile when entrance                                   | "U13" Open turnstile when exit                        |
|                         | "U14" Push the flap for entrance by manual                           | "U15" Push the flap for exit by manual                |
|                         |                                                                      |                                                       |

03

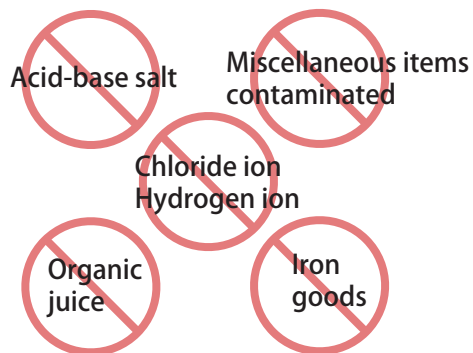
## Troubleshooting and Maintenance

# Troubleshooting

Basic concepts: Infrared radiation consists of a receiving end and a transmitting end. The green light at the tail of the transmitting end is always on, and the receiving end (with 3 wires, brown, 12V, blue, Gnd, black) When the signal line is unobstructed, the red light at the tail does not light up, and there is no voltage output between the black signal line and the blue line. When there is obstruction, the red light at the tail lights up, and the black signal. There is voltage output between the number line and the blue line

| Question                                                                          | Solution                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1、 The indicator light is not on?                                                 | Switch to another test machine or use a good one to check the wiring.                                                                                                                                                                                  |
| 2、 There is one indicator light with wrong direction?                             | Swap the connection between D1 and D2 terminals of control board.                                                                                                                                                                                      |
| 3、 After swiping the card, one side of the door wing remains stationary?          | Check if the wiring is loose; Power off and check if the connecting wires are properly connected; Check the electrical of the control board separately. The ports W, V, and U of the machine correspond one-to-one with the color of the line sequence |
| 4、 Open the gate upon entering the channel?                                       | Change the two-way free access mode of the control panel menu to card swiping mode.                                                                                                                                                                    |
| 5、 After swiping the card, enter the channel to sound an alarm and close the gate | Connect the opening signal to the two terminals of the anti adjustment control board, SW1 GND and SW2 GND.                                                                                                                                             |

# Note



## Why does 304 stainless steel rust?

Environmental factors can cause corrosion and rusting of stainless steel, especially the presence of hydrogen ions and chloride ions. For example, hydrogen ions and chloride ions are present in table salt/sweat/sea water/sea breeze/soil, etc. Stainless steel corrodes quickly in the presence of chloride ions, even more than ordinary low carbon steel. Therefore, there are requirements for the working environment of stainless steel, and it needs to be wiped frequently to remove dust and keep clean and dry.



## Stainless Steel Turnstile Maintenance Manual

Dear Customer ,

Hello! Thank you for purchasing our company's products. Our company solemnly promises to customers that the pedestrian turnstile products you purchase are all made of high-end stainless steel 304. The sophisticated production technology is applied thoroughly all production process. With strict quality inspection, the product quality is assured. Affected by improper operation and climate environment, various components will inevitably become worn and cracked, resulting in rust and poor customer experiences. Therefore, we recommend that you give your products regular maintenance and keep your products new.

Type: **Surface dust, chemical liquid, dirt and acid and alkaline substances**

Solutions: Wash with wet soft non-woven cloth, then wipe clean, then scrub with alcohol, and then wipe the whole body of the turnstile with WD-40 rust remover;

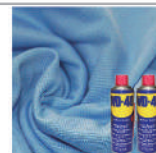
Maintenance cycle: Weekly



Type: **The surface has rainbow patterns or the surface color is dull**

Solutions: Wash with wet soft cotton cloth, then wipe clean, then scrub with alcohol, and then wipe the whole body of the turnstile with WD-40 rust remover;

Maintenance cycle: Weekly



Type: **Check the moving parts for abnormal noise or looseness**

Solutions: Apply butter to the moving part

Maintenance cycle: Quarterly



Type: **Check if fasteners are loose or not and circuits is abnormal or not**

Solutions: If the fastener is loose, then fasten. If the circuit is abnormal, eliminate the problems.

Maintenance cycle: Annual



## Maintenance tools and materials

- 1、Cleaner: Choose mild stainless steel cleaners and avoid using cleaners with acidic or alkaline ingredients.
- 2、Soft cloth or sponge: Spray cleaners on a soft cloth (or sponge) to clean the turnstile surface.
- 3、Water: wash surface dirt.
- 4、Drying cloth: wipe off surface moisture.
- 5、WD-40 Rust Remover: Remove rust caused by long-term exposure to corrosive environment.
- 6、Lubrication: lubricate bearings, locking arms, transmission joint components.

### Note:

- 1、Avoid using cleaners with acidic or alkaline ingredients, which may make the surface rust.
- 2、Avoid using sharp or hard objects to scratch the turnstile surface, which will affect the appearance of the turnstile surface.
- 3、Keep surface dry, Avoid making the turnstile in moisture for a long time. Water stains will cause stainless steel to rust. If there are water stains on the surface, wipe clean immediately.
- 4、Regular inspection and maintenance, regularly check the turnstile surface condition to promptly find and resolve existing problems. If there are rust or scratches on the surface, please maintain or replace in time.

