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TS2000 Pro: Tripod Turnstile.

TS2011 Pro: Tripod Turnstile with Controller and RFID Reader.

TS2022 Pro: Tripod Turnstile with Controller and Fingerprint Reader with RFID function.

Please read this document carefully before installation and using the device.

1 Technical Specifications

| | | | |
|-----------------------|--------------------------------------|------------------------|-----------------------------|
| Input Voltage | AC 100~120V /200~240V, 50Hz /60Hz | Max. Tolerance of Arms | Center: 80 kg End: 40 kg |
| Rated Power | 60 W | Arm Length (mm) | 500 |
| Operating Environment | Indoor and Outdoor (shelter) | Net Weight | 42kg |
| Operating Temperature | -28°C ~ 60°C | Gross Weight | 48kg |
| Operating Humidity | 5% ~ 85% | Dimension(mm) Figure 1 | L = 1110, W = 280, H = 990 |
| Flow Rate | Max 30 passages / minute | Package Size (mm) | L = 1175, W = 370, H = 1070 |
| Input Control Signal | Dry contact | | |

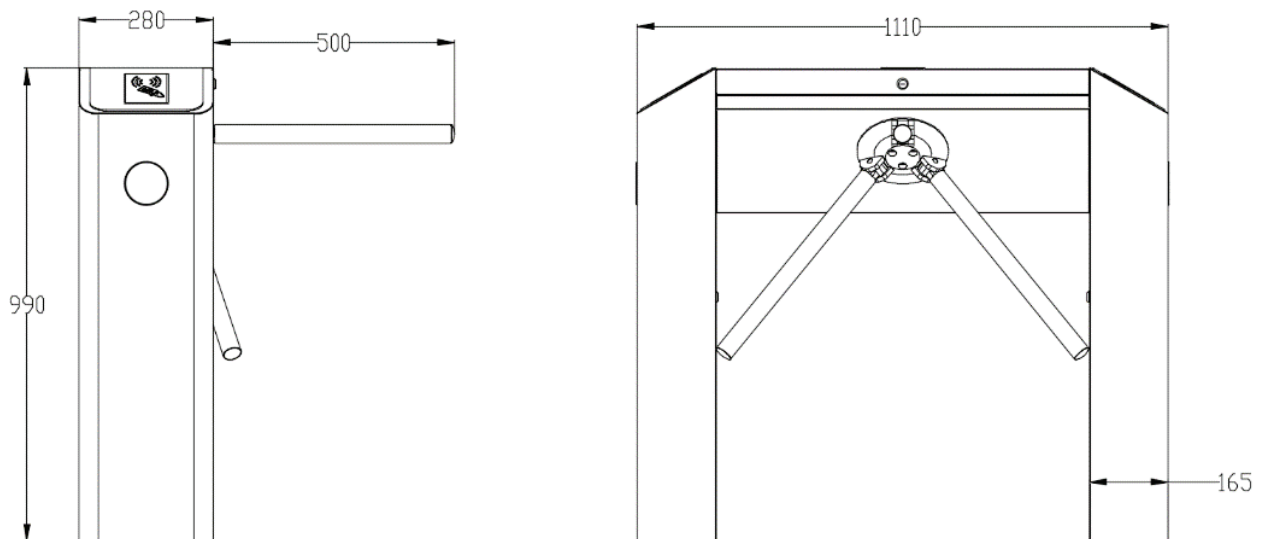


Figure 1

2 Arm Installation and Equipment Testing

2.1 Arm Installation Method

In order to keep the arm won't be damaged during the transportation. The arm wasn't install on device.

Installation procedure

Put arm kit into the hole of cabinet, make sure the screw holes match with mechanism core, then tighten 3 hex screws, as shown in Figure 2-1.

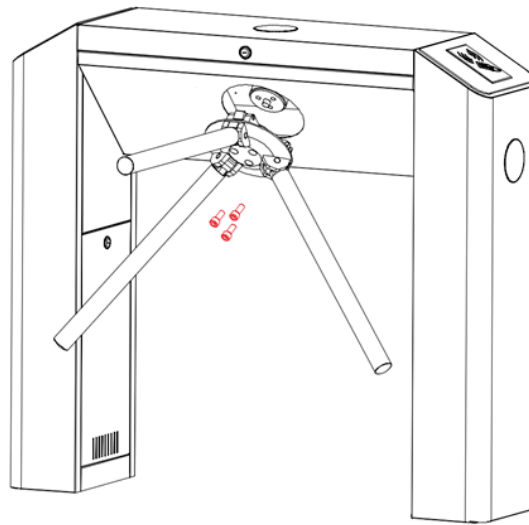


Figure 2-1

2.2 Power-on Test before the Installation of Device

1. Please make sure that the power requirements are strictly met to avoid permanent damage to the unit. Input voltage: AC 100~120V /200~240V.

Note: The tripod turnstile must be connected to the ground (earth).

2. Power on and wait 30s for the tripod turnstile to finish the self-check program.
3. Lift the arms manually, as shown in Figure 2-2.
4. Check whether the tripod turnstile and the LED indicators work properly.

If there is any problem, please contact the supplier.

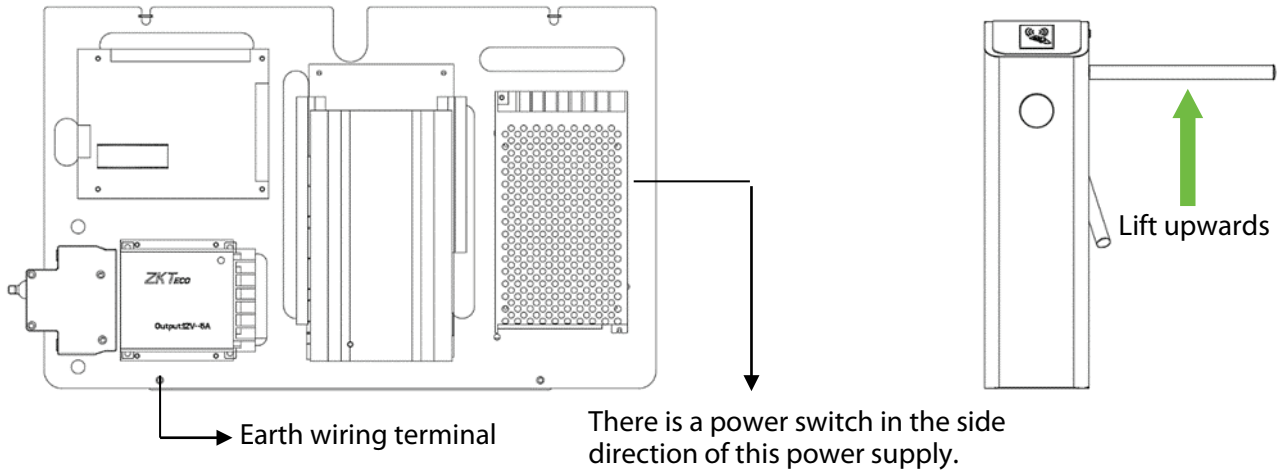


Figure 2-2

3 Equipment Installation

3.1 Installation Conditions

The equipment must be installed on concrete ground, ensuring that expansion bolts can be secured firmly.

You are suggested to install an assistant framework or fence to form a passageway, as shown in Figure 3-1.

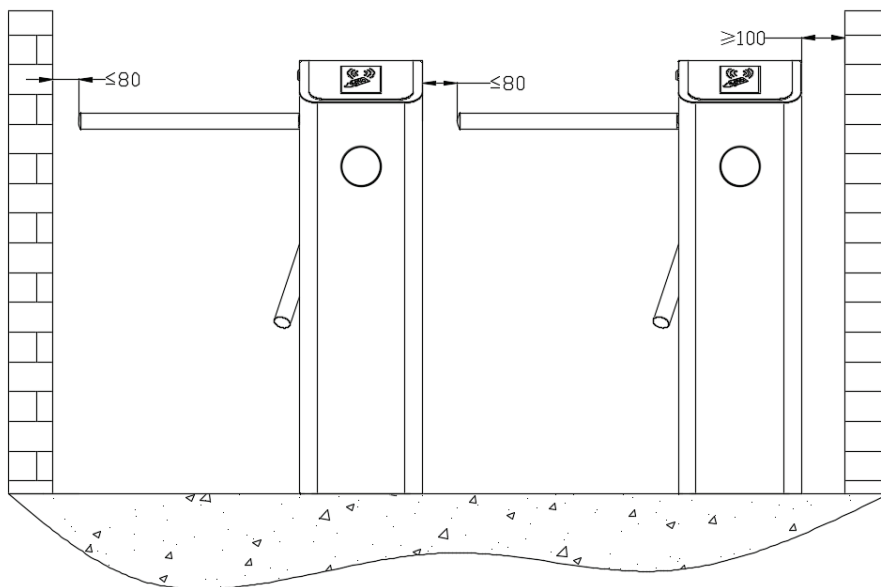


Figure 3-1

Notes:

1. When installing the tripod turnstile against the wall, please reserve at least 100 mm space in order to open the cover for future adjustment and maintenance.
2. The space at the end of the arm shall not be greater than 80 mm (see Figure 3-1).
3. Setting a warning line for card swiping (see Figure 3-2). A warning line is suggested to prompt users to swipe cards in a distance, which would greatly reduce the probability of equipment failure caused by improper operations.

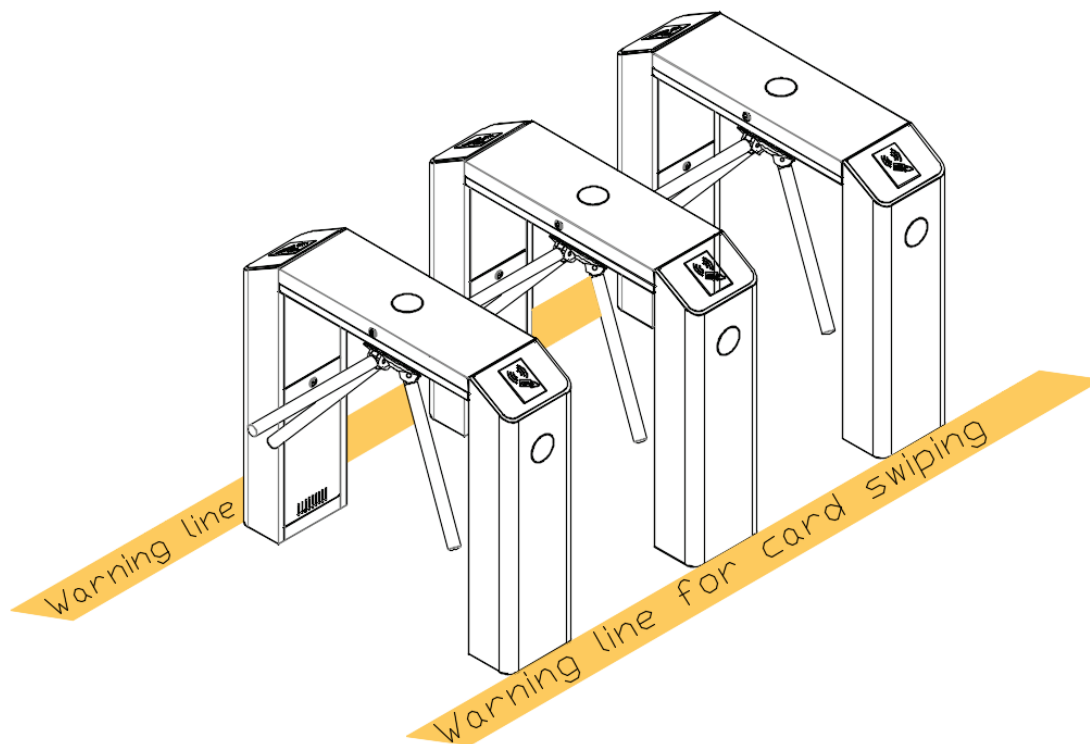


Figure 3-2

3.2 Cabling

There are inlets in the bottom plate for cabling, as shown in Figure 3-3, the unit is millimeter. Power supply and communication wire should go through the inlet. Cable protection covers are suggested to use if it is surface mounted.

Warning: The tripod turnstile must be connected to the ground (earth), there is wiring interface near the power switch.

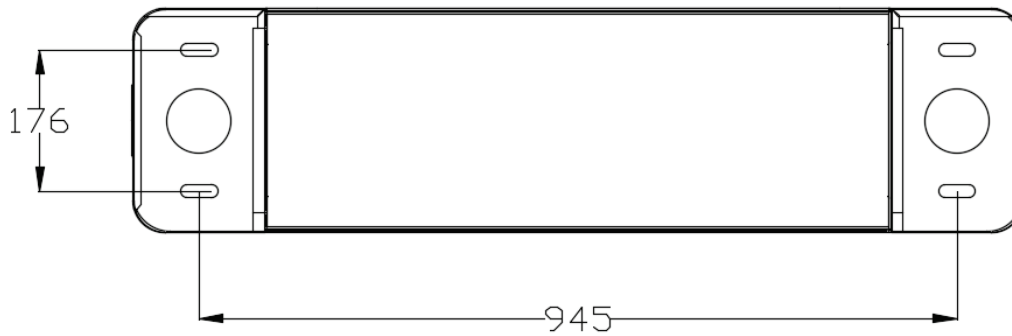


Figure 3-3

3.3 Installation

1. Drill holes.

Drill holes based on the locations of holes as shown in Figure 3-3.

2. Fix the mounting plate to its original position.

Placing the mounting plate properly and apply screw securing glue on the surface and the threads of the expansion bolts, install four expansion bolts to secure the mounting plate, and use a horizontal ruler to test the levelness of the mounting plate. If the mounting plate is not level, adjust it by the gaskets provided. Note that all the four expansion bolts must be installed properly, as shown in Figure 3-4.

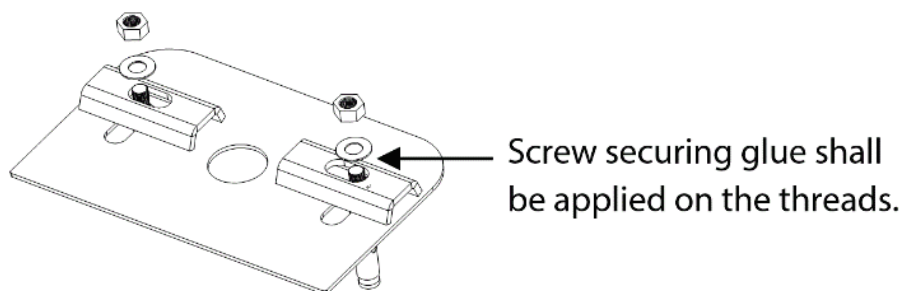


Figure 3-4

3. Put the turnstile on the mounting plate and tighten the screws. Apply screw securing glue before using and putting gaskets on the screws to adjust the direction of the turnstile. If the tripod turnstile is not level, you can place gaskets to adjust, as shown in Figure 3-5.

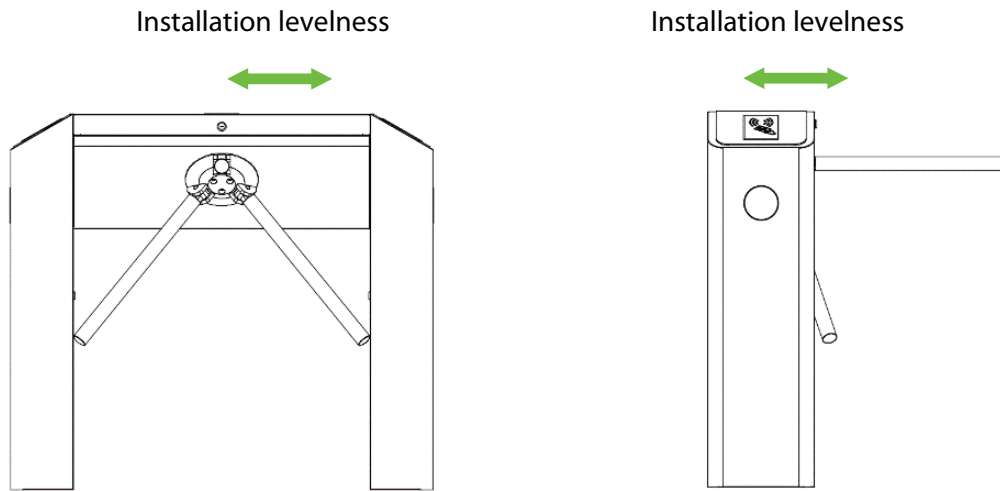


Figure 3-5

4 Cable Diagram

4.1 Wired Remote Control

Dial code description:

The DIP switch is divided in eight dial codes from KE-1 to KE-8. Move the switch up to turn ON and down to OFF.

Description of function Setting:

*Dial 0 to turn off

*Dial 1 to turn on

Dial code function item:

Unmanned passage time(KE-1,KE-2,KE-3):

| Switch Status | Time Period |
|--------------------------|--------------|
| 000 (OFF OFF OFF) | 5S (Default) |
| 001 (OFF OFF ON) | 10s |
| 010 (OFF ON OFF) | 15s |
| 011 (OFF ON ON) | 20s |
| 100 (ON OFF OFF) | 30s |

| | |
|------------------------|-----|
| 101 (ON OFF ON) | 40s |
| 110 (ON OFF ON) | 50s |
| 111 (ON ON ON) | 60s |

Memory Swipe Mode(KE-6):

Turn on Alarm Mode (KE-8)

Dial 1(ON) to tun on.

Dial 1(ON) to turn on.

Dial 0(OFF) to turn off.

Dial 2(OFF) to turn off

4.2 Wireless Remote Control★

To code:

1. First, power the controller of the tripod turnstile.
2. Short press the learning button on the controller, and a light corresponding to the button will flash slowly. Then press any switch on the remote control for acquiring the information. After the successful operation, the light turns off.

Clear mode:

Long press the learning button on the three roller gate controller for 3 seconds. The learning light stays on for a while then turns off indicating the code is cleared successfully. The original learning remote control cannot be used again and can only be remote-controlled by the code again.

Please read the **Remote Control of Tripod Turnstile User Manual** to get more information about the two types of remote controls.

5 Equipment Precautions and Maintenance

5.1 Precaution

1. It is recommended to purchase optional accessories to use in outdoor environment.
 - 1) It shall install optional cooling fans for the equipment if the working temperature is often above 50 °C.
 - 2) It is equivalent to IP54 waterproof under proper installation. However, it cannot work in the region that may suffer typhoon.
 - 3) If the temperature is -30°C, a heating plate is suggested to install. It might need multiple times to power on while getting hot automatically through the self-check program.
 - 4) The service life of this equipment may be shortened if it works outdoors in coastal areas or a region prone to acid rain.
2. If the power and signal cables are connected properly, this equipment can be immersed in water of 250 mm deep, but it must not be powered on for operating when it is immersed in water.
3. It is highly recommended that a card swiping warning line to set for prompting passers-by to swipe cards properly and a reasonable passage width shall be set to prevent passers-by from squeezing in illegally.
4. It is recommended that a warning sign is placed at a conspicuous position, and prompt: **"Please swipe your card outside the warning line and pass in order. Thank you!"**

The maximum tolerance of the tripod turnstile's arms

Please note that the maximum stress tolerance at the center of the arm is 80kg and at the ends of the arm is 40kg (See Figure 5-1).When the impact force on the tripod turnstile reaches the designed limit, the arms break down first to ensure that the whole equipment is not damaged and the passer-by is not injured.

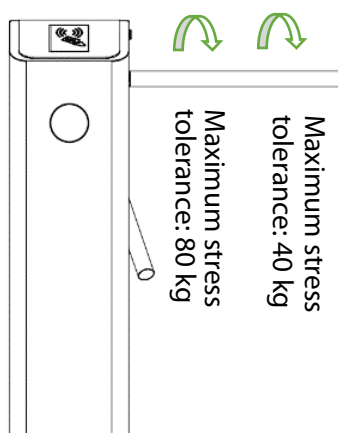


Figure 5-1

In case of emergencies

This equipment is designed to drop down arms automatically if there is power failure thus make the passage being open to the public. And there is interface in the turnstile control board to connect an emergency switch (J6 Drop Arm) which would make the tripod turnstile keep open in case of emergencies. Note after power restoration, wait for more than 6s and then lift the arms manually.

5.2 Maintenance

Forming maintenance consciousness

The tripod turnstile needs to be maintained regularly and repaired once it is damaged. It is recommended that warning signs being placed at conspicuous positions for prompting passers-by to pass in a proper way and in good order. Reasonable maintenance consciousness helps to guarantee long-term usage of the tripod turnstile.

Regular maintenance

Cleaning and protection liquid dedicated for stainless steel are recommended to wipe the outer shell of the equipment regularly. The tripod turnstile used outdoors or in an environment with lots of dust must be maintained once a year at least, for example, clean up the dust and add appropriate lubricating oil to Disk Wheel. Note regular maintenance should be performed after power off the equipment, as shown in Figure5-2.

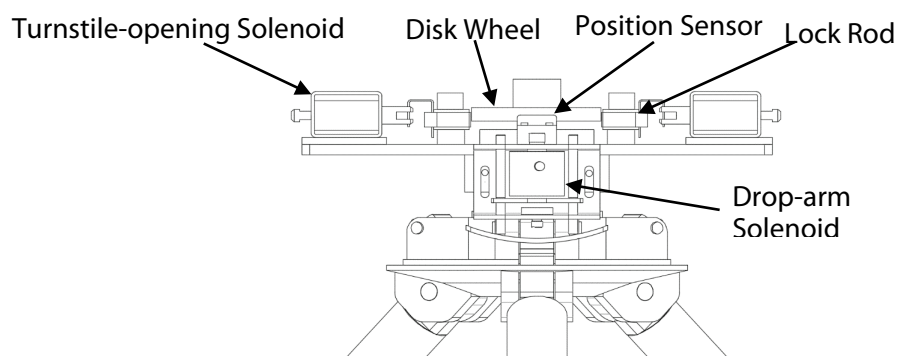


Figure 5-2

6 Troubleshooting

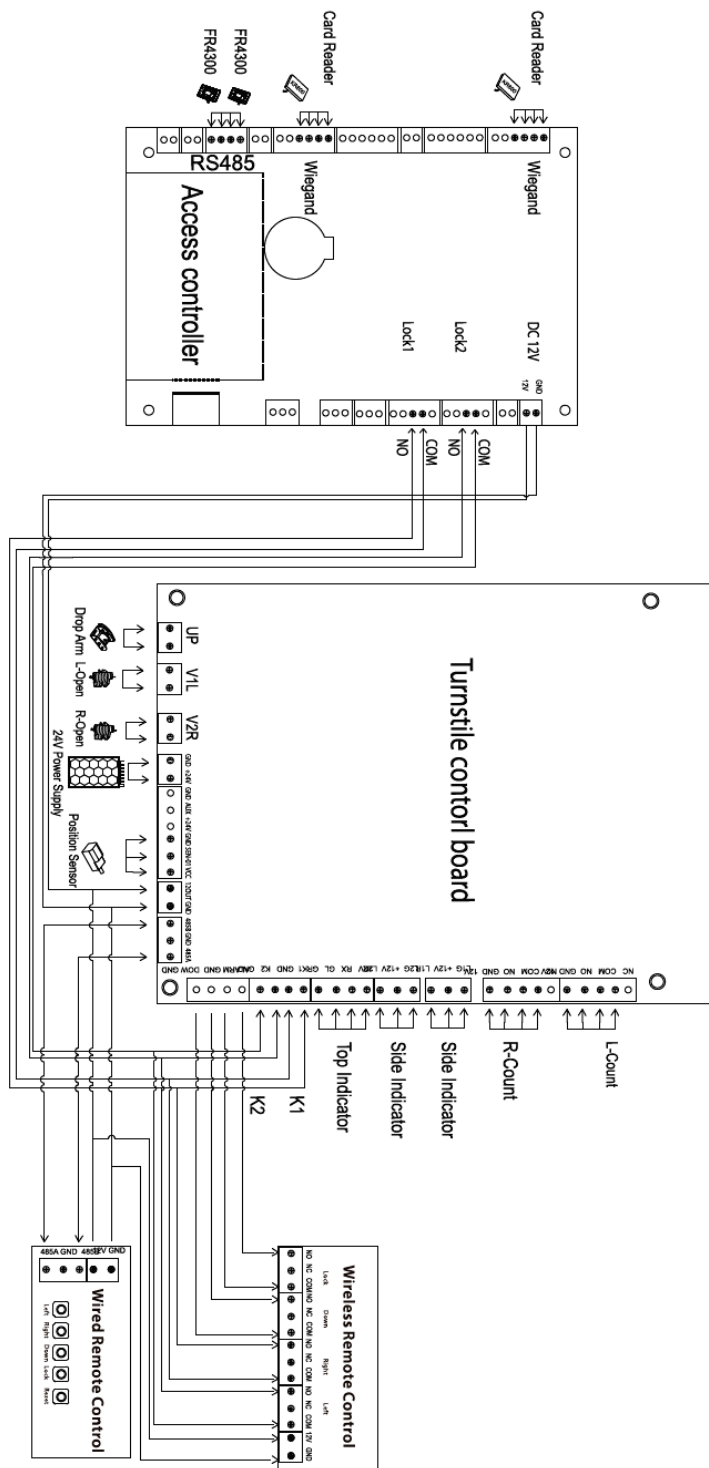
| Symptom | Troubleshooting |
|---|--|
| The indicator is not lighted when the equipment is powered on. | It may be caused by the power supply or circuit. Check whether the connection cable and power cable between are damaged, or the wiring is loose. |
| The arms of the tripod turnstile cannot be lifted manually after the equipment is powered on. | It may be caused by the problem of relative components or drop-arm solenoid. Check whether the drop-arm solenoid is operating, and check the work status of the solenoid, as shown in Figure 5-2. |
| The tripod turnstile does not open after authentication. | It may be caused by lack of permission or a circuit problem. <ol style="list-style-type: none"> 1. Check whether the user has the permission to open the turnstile. 2. Use a multimeter to check whether the NO and COM ports of the access control system has a relay signal output. 3. Short-circuit the ports "K1, GND" and "K2, GND", if the turnstile is successfully opened, it would be the problem of controller. In this case, please refer to Attachment 2 Connection Diagram of Control Board and Access Control Panel to check the cable connection of the controller. |
| The turnstile allows people continue passing one-way side during the use. | <ol style="list-style-type: none"> 1. Check the Turnstile-opening Solenoid. 2. Check the access controller 'Lock driving duration', whether set to 1s. 3. Check whether the Turnstile-opening solenoid is operating and check whether the Turnstile-opening solenoid is stuck, as shown in Figure 5-2. |

Attachment 1 Default Factory Settings

| No. | Function | Default |
|-----|-----------------------------|---------------------------------------|
| 1 | Lock Driving Duration | 5s |
| 2 | Door Sensor | None |
| 3 | Verification Interval | 1s |
| 4 | Controller Communication | TCP/IP: 192.168.1.201 |
| 5 | Turnstile Opening Duration | 5s |
| 6 | Passing Direction Indicator | Passing is allowed in both directions |
| 7 | Continue Passing Function | Disabled |
| 8 | Alarm Function | Disabled |

Note: The Lock Driving Duration is default 5 seconds, please set to 1 second. Forbidden using an electrically charged objects to connect to any one port of Opening Signal Input, otherwise will damage the control board.

Attachment 2 Connection Diagram of Control Board and Access Control Panel



Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

