User Manual

TS200-T Series Tripod Turnstile

Date: Jan 2022

Doc Version: 1.0

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.

About the Manual

This manual introduces the operations of **TS200-T Series Tripod Turnstile** product.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	**Description**
Bold font	Used to identify software interface names e.g. **OK**, **Confirm**, **Cancel**
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	**Description**
< >	Button or key names for devices. For example, press <OK>
[ ]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols

Convention	Description
	This implies about the notice or pays attention to, in the manual
	The general information which helps in performing the operations faster
	The information which is significant
	Care taken to avoid danger or mistakes
	The statement or event that warns of something or that serves as a cautionary example.

Table of Contents

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

1 <u>Technical Specifications</u>

Input Voltage	AC 100~120V /200~240V, 50Hz /60Hz	Arm Length (mm)	580
Operating Environment	Indoor and Outdoor (shelter)	Dimension(mm) (Figure 1)	L = 1200, W = 280, H = 980
Operating Temperature	-28ºC ~ 60ºC	Package Size (mm)	L = 1275, W = 370, H = 1063
Operating Humidity	5% ~ 85%	Flow Rate	Max 30 passages / minute
Input Control Signal	Dry contact	Rated Power	18 W

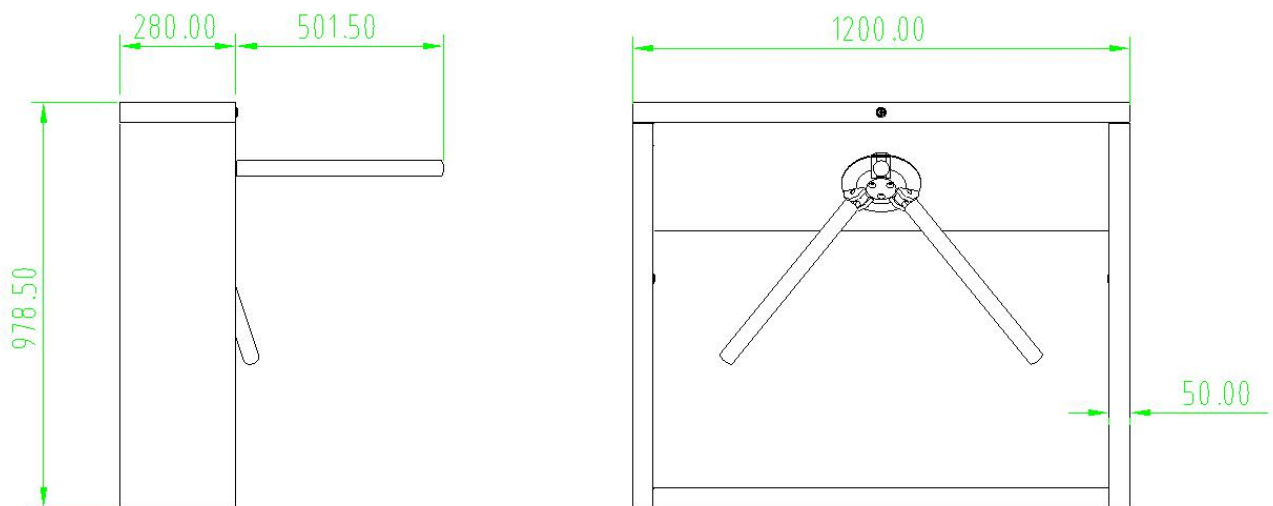Figure 1

2 Unpacking and Testing the Tripod Turnstile

2.1 Arm Installation

In order to prevent the arm from damaging during transportation, the arm will not be initially installed to the devices.

Installation procedure

Put the 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.
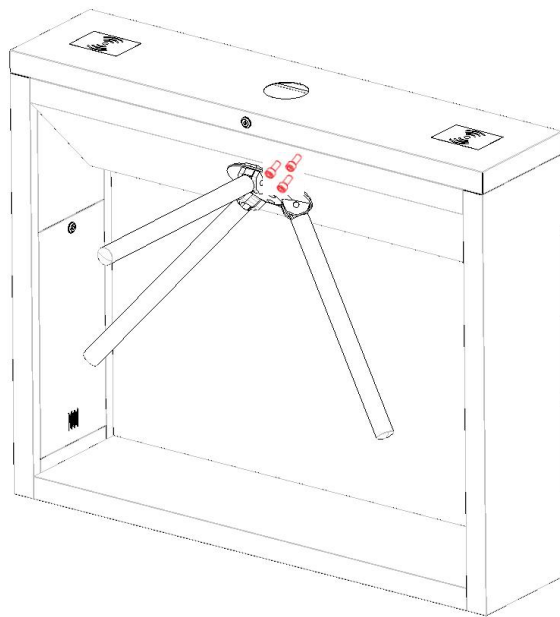
Figure 2-1

2.2 Power-on Test before Installation

1. Please make sure that the power requirements are strictly met to avoid permanent damages 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.

Lift upwards

There is a power switch in the side direction of this power supply

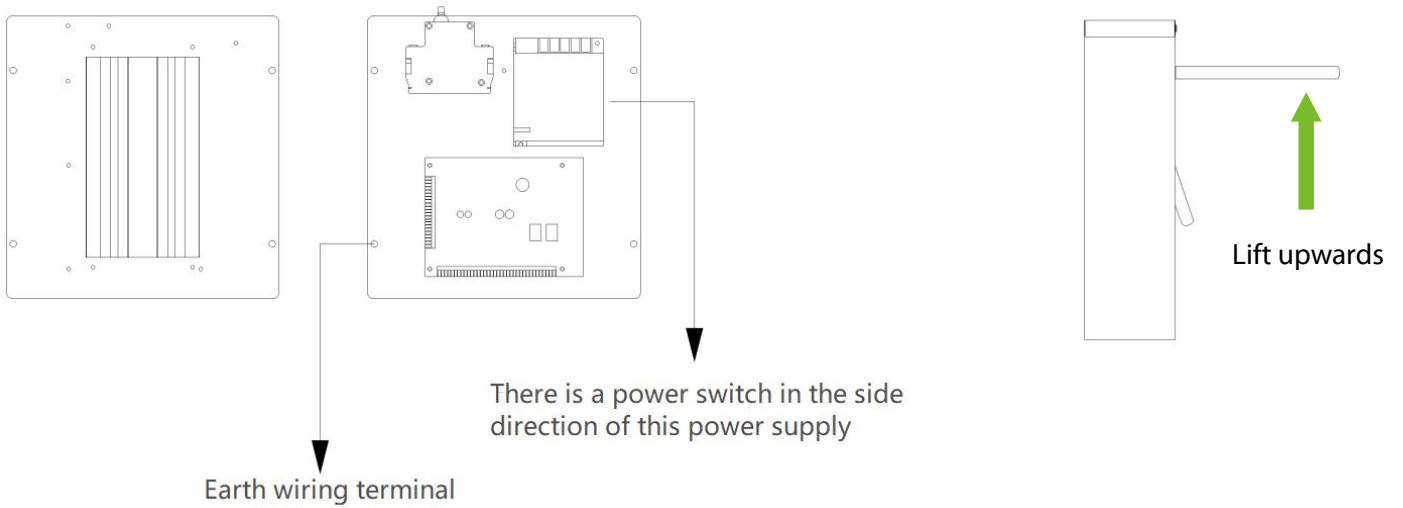Earth wiring terminal

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.

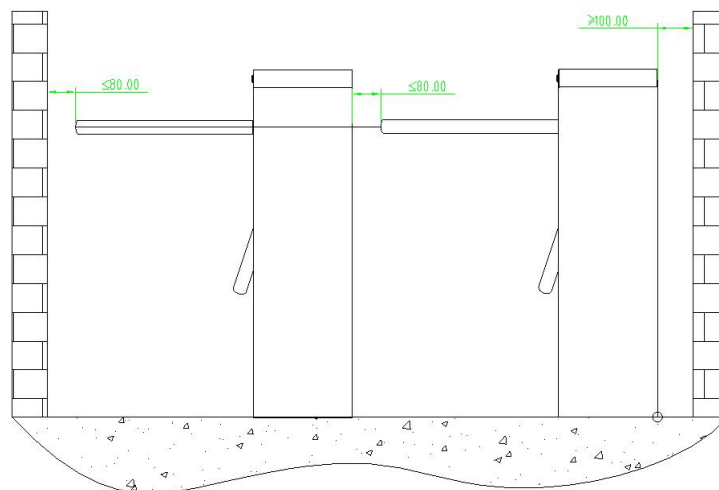You are suggested to install an assistant framework or fence to form a passageway, as shown in Figure 3-1.

Figure 3-1

Notes:

1. When installing the tripod turnstile against the wall, please reserve a distance of at least 100 mm in order to open the cover for future adjustment and maintenance.

2. The spare space from the end of the arm shall not be greater than 80 mm (see Figure 3-1).

3. You are also recommended to set a warning line for card swiping (see Figure 3-2). The warning line prompts users to swipe cards in a particular area, which would greatly reduce the probability of equipment failure caused by improper operations.

Figure 3-2

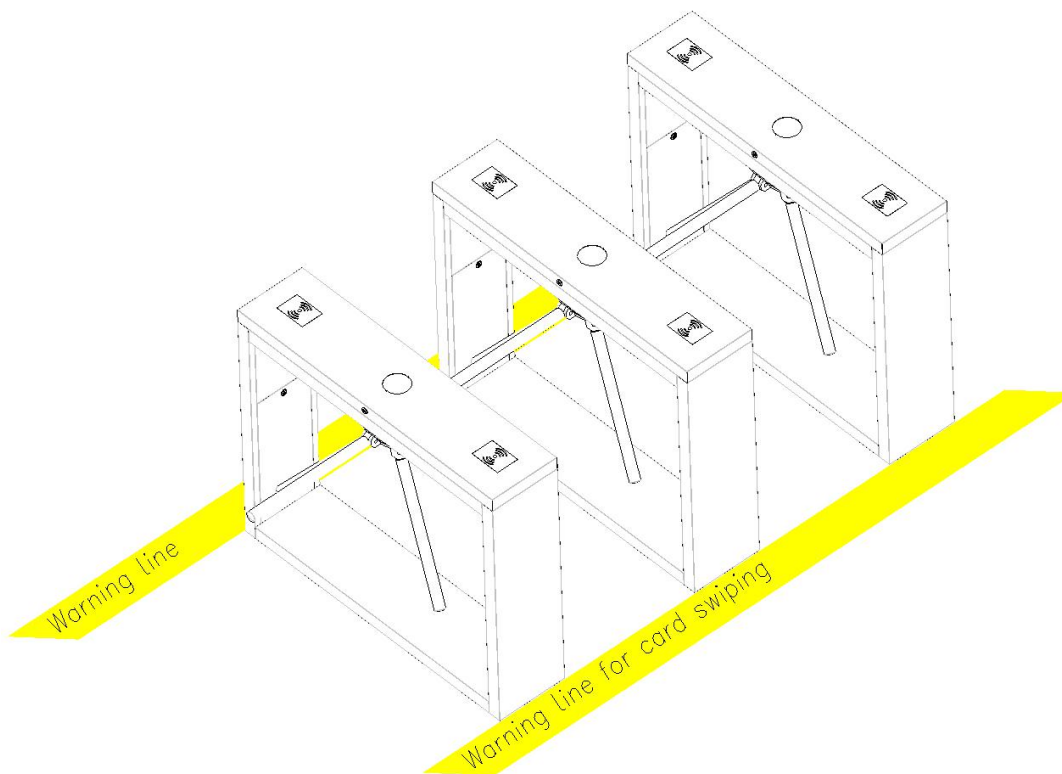## 3.2 Cabling

There are inlets in the bottom plate for cabling, as shown in Figure 3-3. Units of all data 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.
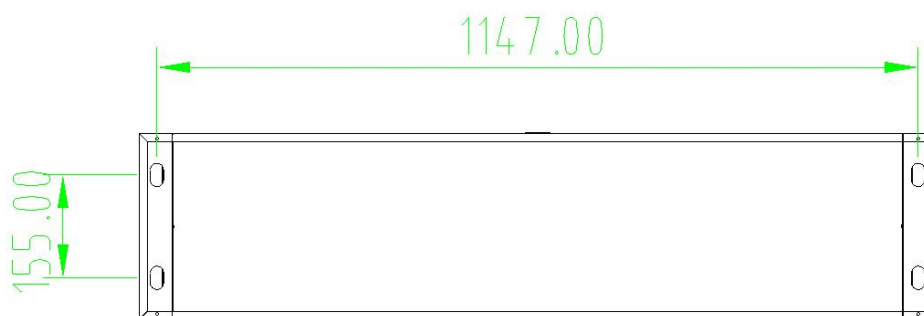

Figure 3-3

3.3 Installation

1. Drill holes.

Drill holes according to the locations of holes as shown in Figure 3-3.

2. Fix the mounting plate to its original position.

Place the mounting plate properly, then apply screw securing glue on the surface and 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 levelled, adjust it with the gaskets provided. Note that all the four expansion bolts must be installed properly, as shown in Figure 3-4.

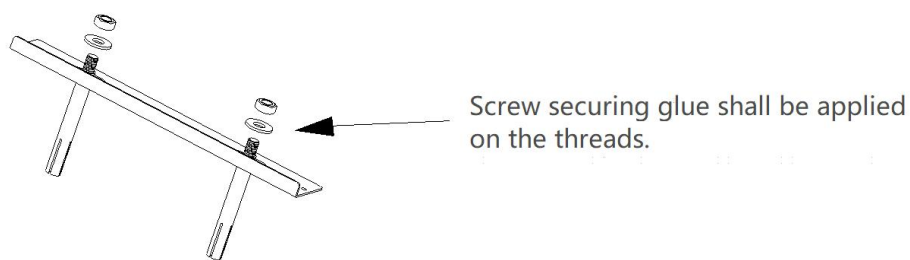Screw securing glue shall be applied on the threads.

Figure 3-4

3. Install 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 levelled,you can place gaskets to adjust, as shown in Figure 3-5.
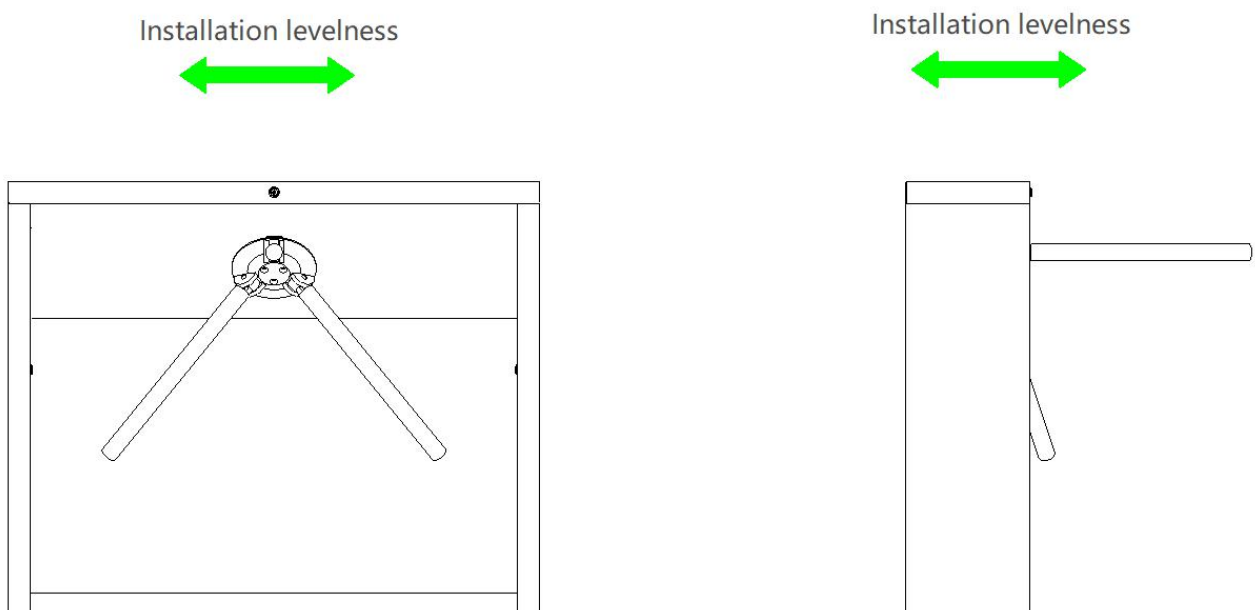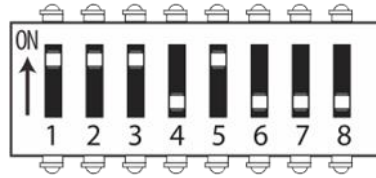

Installation levelness

Installation levelness

Figure 3-5

4 Function overview

4.1 DIP Switch function

Dial code description:

The DIP switch is divided in eight dial codes from KE-1 to KE-8(KE-4 and KE-5 are disabled in SATT1.4). 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):
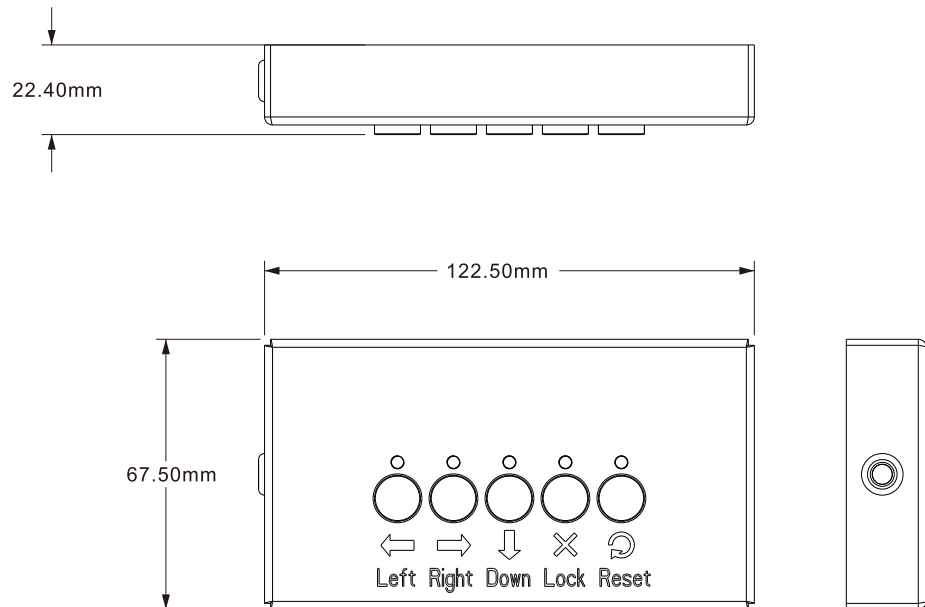
Dial 1(ON) to tun on.

Dial 0(OFF) to turn off.

Turn on Alarm Mode (KE-8)

Dial 1(ON) to turn on.

Dial 2(OFF) to turn off

4.2 Wired Remote Control（option）

- **Wired Remote Control**

The wired remote control has five buttons, which are the Left button, Right button, Down button, Lock button, and Reset button. These five independent buttons have individual functions as well as combined functions. Pressing two buttons within the specified time interval can call up a predefined mode.

The following tables describe the modes of different button press actions:

4.2.1 Independent functions:

Buttons	Description
←	Press the button once to open the tripod turnstile on the left and can pass by swiping the card from the left.
→	Press the button once to open the tripod turnstile on the right and can pass by swiping the card from the right.
↓	In emergency mode, press the button once to fall the gate lever. Then the left and right sides get open and can pass freely without swiping the card.
✕	Press the button once to raise the gate lever. Then the left and right sides are controlled by the tripod turnstile. The card becomes invalid, and no pass is allowed.
↺	Press a button once to restore the default left and right swipe card pass mode of the gate.

4.2.2 Combined functions:

Status	Description
Left free, Right swipe	Press " ⬅ " twice to open the tripod turnstile on both sides. The left side is free to pass without swiping card and can pass by swiping card from the right.
Left swipe, Right free	Press " ➡ " twice to open the tripod turnstile on both sides. The right side is free to pass without swiping card and can pass by swiping card from the left.
Left free, Right free	Press " ⬅ " and " ➡ " at the same time to open the tripod turnstile on both sides and both left and right sides can pass freely without swiping the card.
Left forbidden, Right free	First press " ✖ " once, and then press " ➡ " once, then the left side is forbidden to pass, and the right side is free to pass without swiping the card.
Left free, Right forbidden	First press " ✖ " once, and then press " ⬅ " once, then the right side is forbidden to pass, and the left side is free to pass without swiping the card.
Left swipe, Right forbidden	First press " ⬅ " once, and then press " ✖ " once, then the right side is forbidden to pass, and the left side needs to swipe the card to pass.
Left forbidden, Right swipe	First press " ➡ " once, and then press " ✖ " once, then the left side is forbidden to pass, and the right side needs to swipe the card to pass.

4.3 Wireless Remote Control（option）
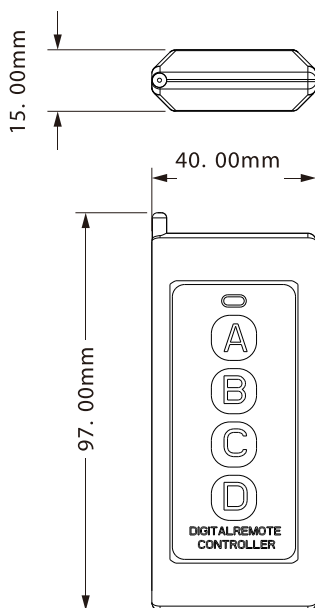
To code:

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 code:

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 cam 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 Precautions

1. It is recommended to purchase additional accessories to use the product outdoors.
   1) You may install cooling fans for the equipment if the working temperature is often above 50 °C.
   2) The device is rated IP54 waterproof under proper installation. However, its ability to stand in extreme weather conditions, such as typhoon, is not guaranteed.
   3) If the temperature is around or below -30℃, you are recommended to install a heating plate for the equipment. You might need to turn the power on multiple times to let the device automatically heat up 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 under water at a depth of 250 mm, but it must not be powered on when it is immersed in water.
3. It is highly recommended to set a warning card-swiping line to remind passers-by to correctly swipe cards at a reasonable distance from the device to prevent passers-by from being squeezed.
4. It is recommended to place a warning sign at a conspicuous position, and prompt: "**Please swipe your card outside the warning line and pass in order. Thank you!**"

The maximum stress tolerance of the tripod turnstile's arms

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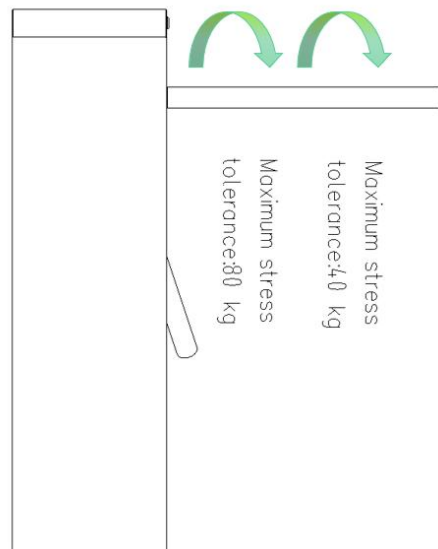
Figure 5-1

In case of emergencies

This equipment is designed to drop the arms automatically if there is power failure thus people can pass freely. Also, there is an interface on the turnstile control board connecting with an emergency switch (J6 Drop Arm) which keeps the tripod turnstile open in case of emergencies. Please lift the arms manually after at least 6 seconds after power restoration.

5.2 Maintenance

Forming maintenance consciousness

The tripod turnstile needs to be maintained regularly and repaired once it is damaged. It is recommended placing warning signs at conspicuous positions for alerting every passersby to pass carefully 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 at least once a year, for example, clean up the dust and add appropriate lubricating oil to the disk wheel. Please note that regular maintenance should only be performed after power-off, as shown in Figure 5-2.
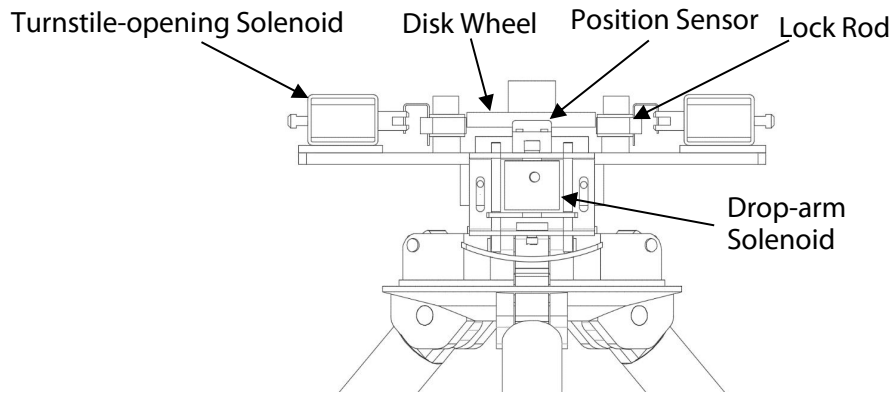
Figure 5-2

6 Troubleshooting

| Symptom	Troubleshooting
The indicator is not lit when the equipment is powered on.	It may be caused by the power supply or circuit. Check whether the connection cable and power cable are damaged, or whether the wiring is loosed.
The arms of the tripod turnstile cannot be lifted manually after the equipment is powered on.	It may be caused by the problem of related components or drop-arm solenoid. Check whether the drop-arm solenoid is operating, and check the working status of the solenoid, as shown in Figure 5-2.
The tripod turnstile does not grant an access after successful authentication.	It may be caused by lack of permission or a circuit problem. 1. Check whether the user has the permission to pass. 2. Use a multimeter to check whether the NO and COM ports of the access control system have a relay signal output. 3. Short-circuit the ports "K1, GND" and "K2, GND"; if the turnstile is successfully opened, the controller is not normal. 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 to continuously passing one-way side.	1. Check the turnstile-opening solenoid. 2. Check if the access controller "Lock driving duration" is set to 1s. 3. Check whether the turnstile-opening solenoid is operating and check whether something is stuck at the turnstile-opening solenoid, as shown in Figure 5-2.

Attachment 1 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 5 seconds by default. Please set it to 1 second. Do not connect an electrically charged objects to any ports of Opening Signal Input, otherwise it will damage the control board.

Attachment 2 Connection Diagram of Control Board and Access Control Panel
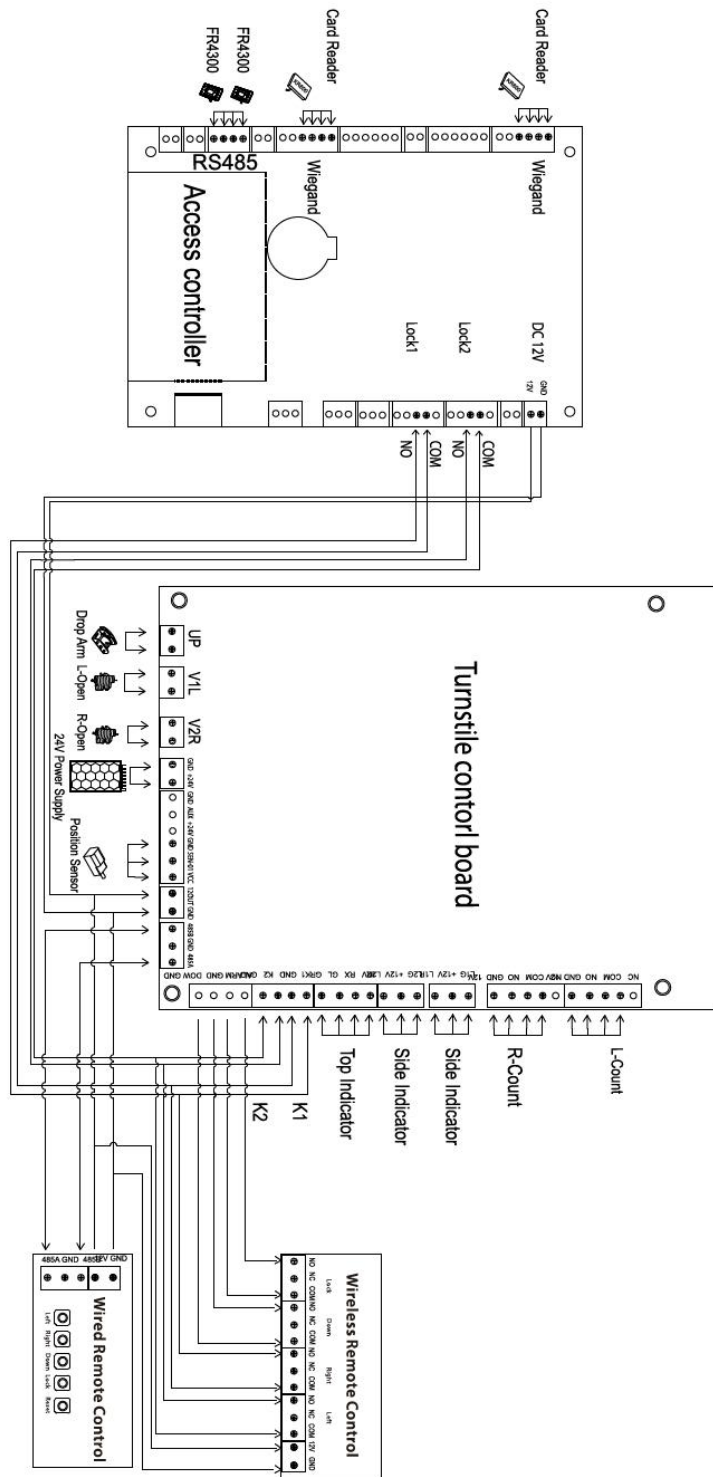
Warning: This is a class A product. In a domestic environment, this product may cause radio interference so that the user may have to take adequate additional measure.