

# User Manual

## TS200 Series Tripod Turnstile

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English

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

## 1 Technical Specifications

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

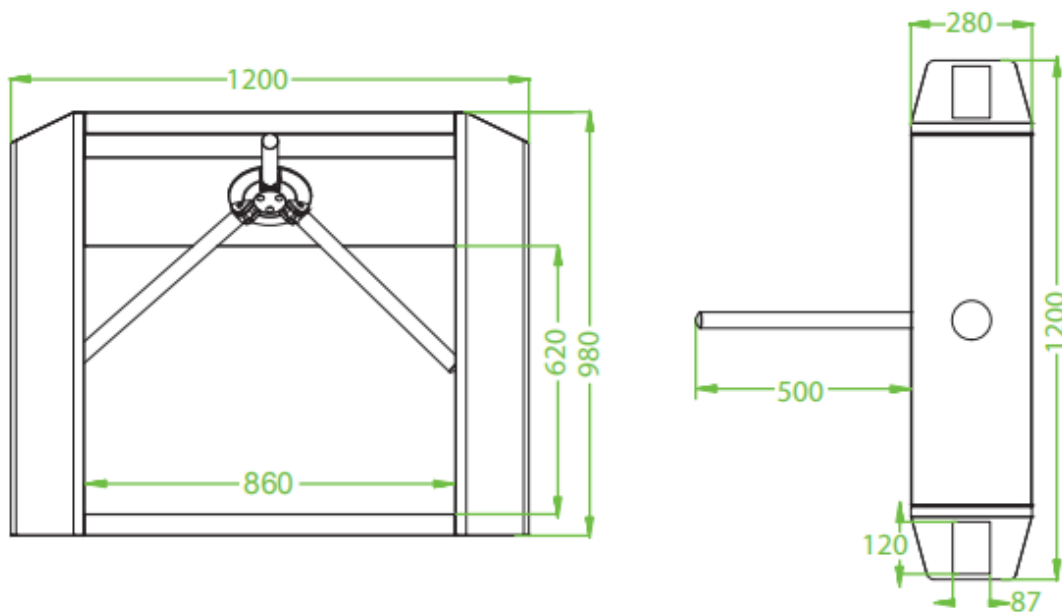


Figure 1

## 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.

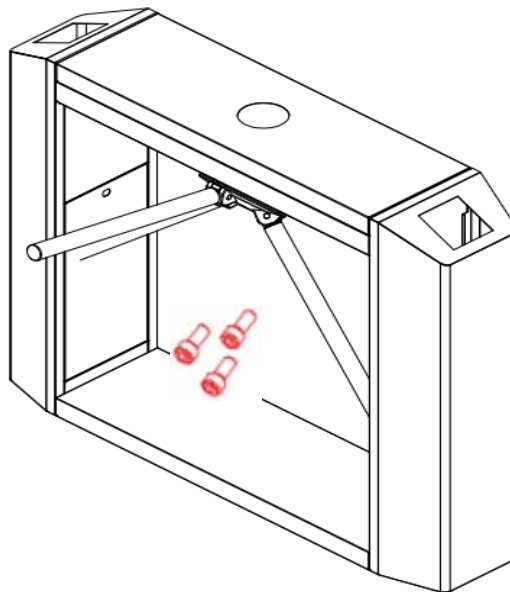


Figure 2-1

### 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.

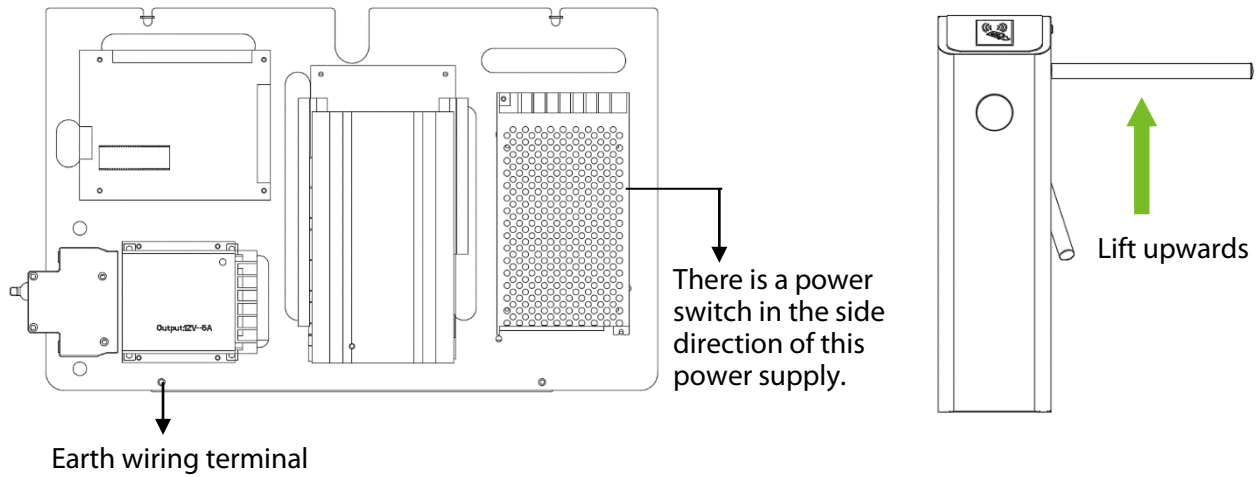


Figure 2-2

### 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.

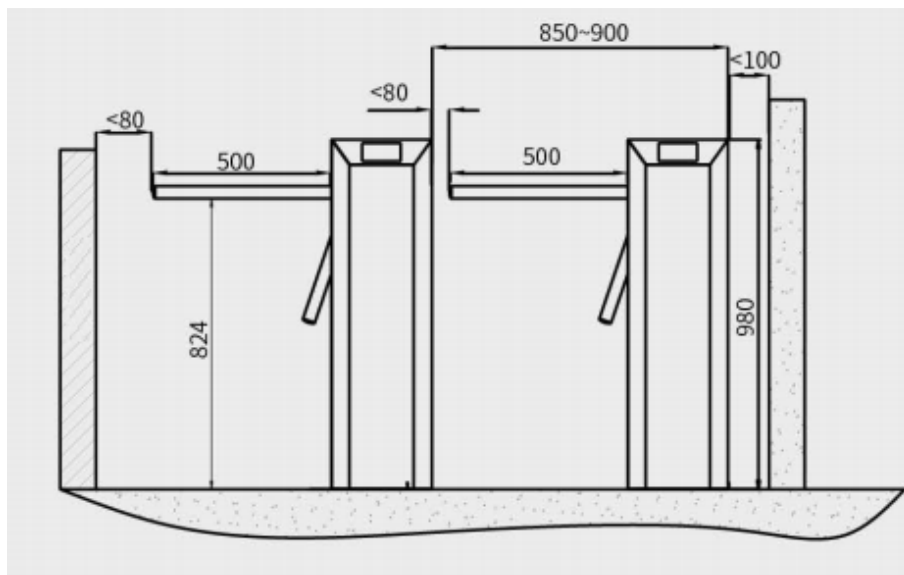


Figure 3-1

**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.

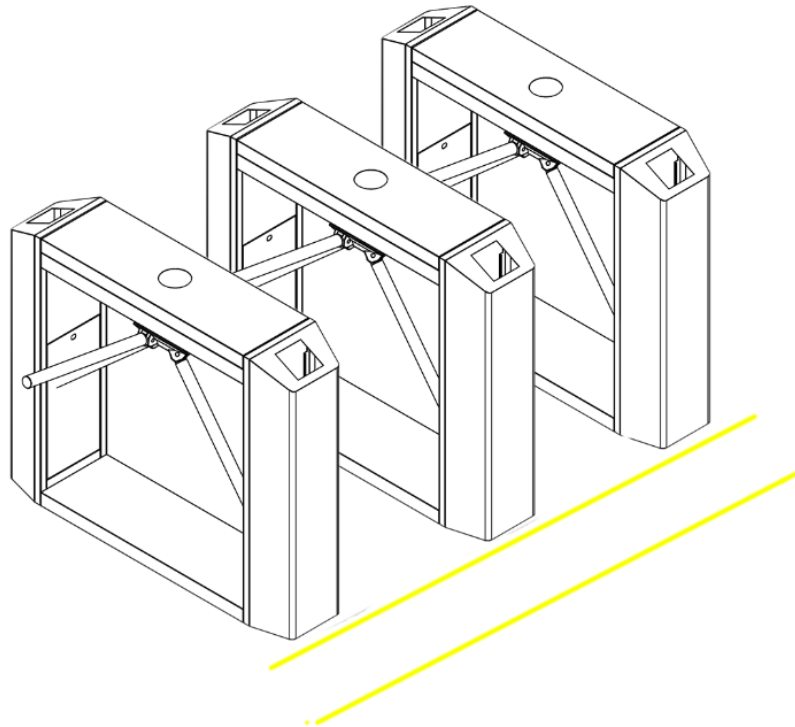


Figure 3-2

## 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.

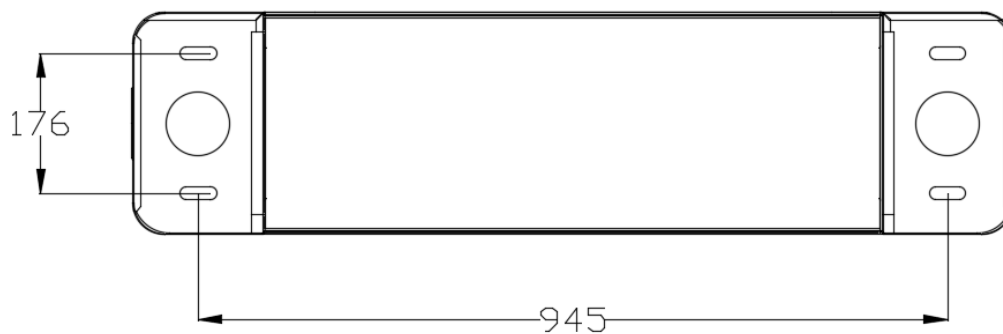


Figure 3-3

### 3.3 Installation

- Drill holes.

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

- 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.

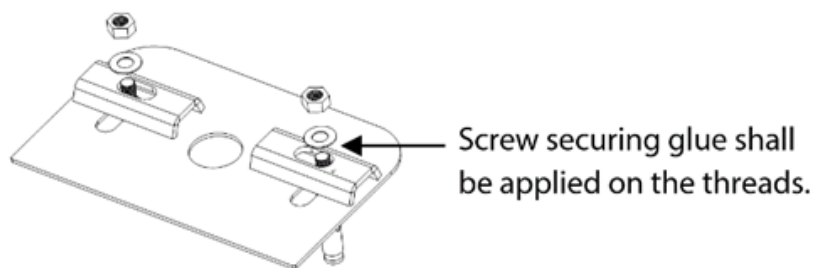


Figure 3-4

- 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.

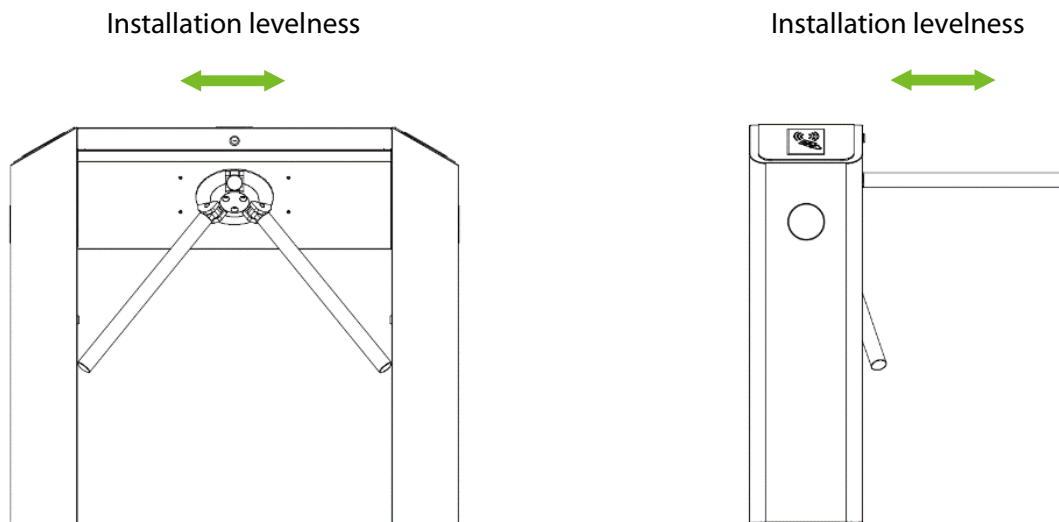


Figure 3-5

## 4 Cable Diagram

### 4.1 Connection Diagram of the Access Controller

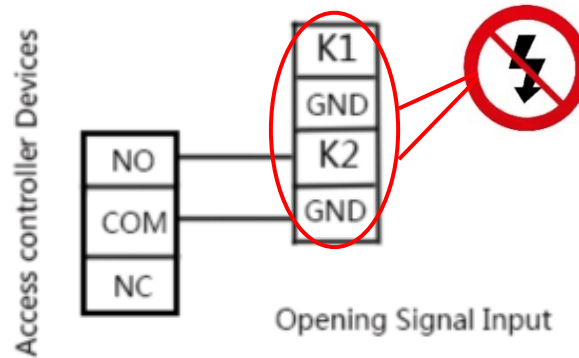


Figure 4-1

**Note:** The lock relay duration of access controller device needs to be set to 1s. Forbidden using electrically charged objects to connect to the port of Opening Signal Input, otherwise will damage the control board.

### 4.2 DIP Switch Configuration for SATT-L-V1.1

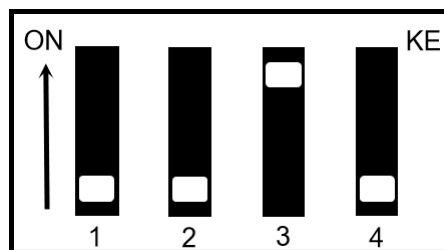


Figure 4-2

#### 4.2.1 Function Introduction

No.	Function Setting	Bit Setting	Tips
1&2	Opening Mode	00 (default)	Two-way Swipe
		10	Left Free, Right Swipe
		01	Left Swipe, Right Free
		11	Two-way Prohibited
3	Opening Duration	0	10S
		1 (default)	5S
4	Continue Passing Function	0 (default)	Open
		1	Close



## 4.2.2 Opening Mode

Card swiping means that you can open the door only after verification. Free means that you can pass the door without verification. Prohibited means that you can't pass the door, whether you have permission or not.

## 4.2.3 Opening Duration

This function refers to the period of time from opening to closing once the turnstile receives an opening signal. In the DIP switch, number 3 is used for duration settings. It can be set two different values: 5s or 10s.

## 4.2.4 Continue Passing Function

With the "Continue Passing" function, the turnstile could remember at most 20 swipes of one card at one time and allows up to 20 people to pass so they don't have to swipe card each time. This function can be enabled or disabled with number 4 in the DIP switch.

# 5 Equipment Precautions and Maintenance

## 5.1 Precautions

- 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°C, 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.
- 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.
- 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.
- 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.

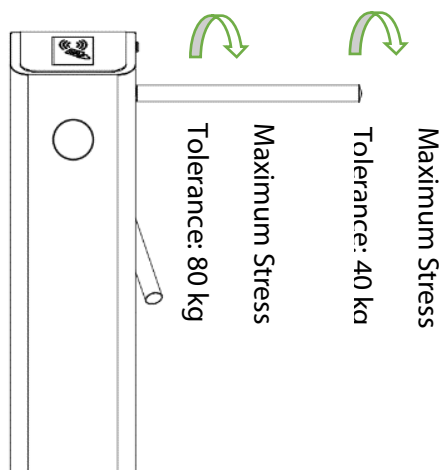


Figure 5-1

### 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.

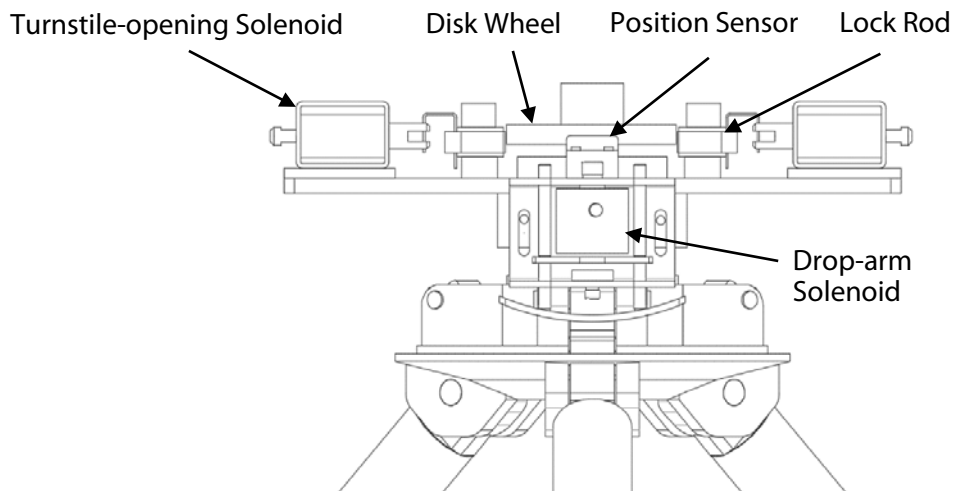


Figure 5-2

## 6 Troubleshooting

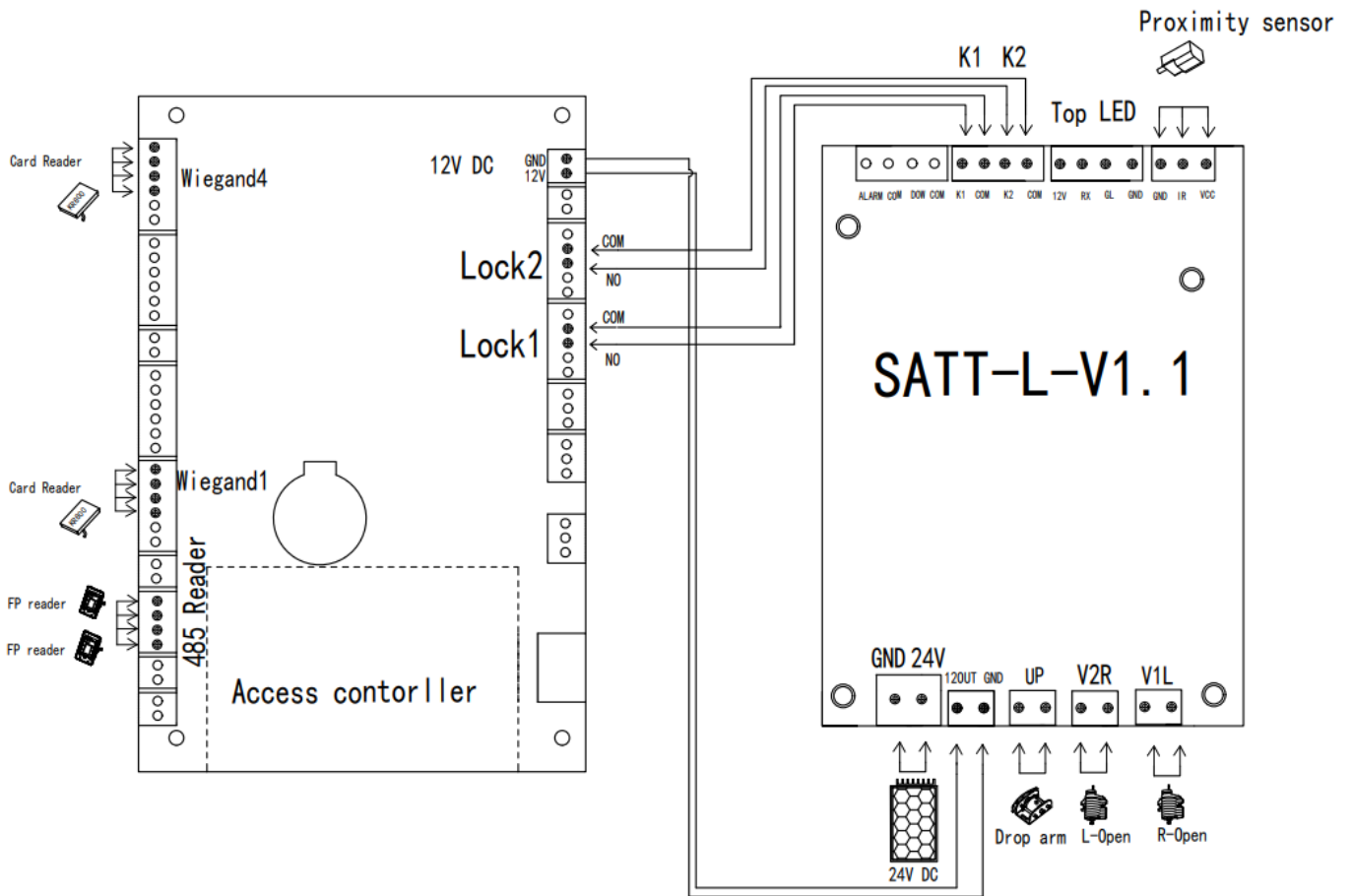
Symptom	Troubleshooting
The indicator is not lit when the equipment is powered on.	<p>It may be caused by the power supply or circuit.</p> <p>Check whether the connection cable and power cable are damaged, or whether the wiring is loosed.</p>
The arms of the tripod turnstile cannot be lifted manually after the equipment is powered on.	<p>It may be caused by the problem of related components or drop-arm solenoid.</p> <p>Check whether the drop-arm solenoid is operating, and check the working status of the solenoid, as shown in Figure 5-2.</p>
The tripod turnstile does not grant an access after successful authentication.	<p>It may be caused by lack of permission or a circuit problem.</p> <ul style="list-style-type: none"> <li>● Check whether the user has the permission to pass.</li> <li>● Use a multimeter to check whether the NO and COM ports of the access control system have a relay signal output.</li> <li>● 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 <a href="#">Attachment 2 Connection Diagram of Control board and Access Control Panel</a> to check the cable connection of the controller.</li> </ul>
The turnstile allows people to continuously passing one-way side.	<ul style="list-style-type: none"> <li>● Check the turnstile-opening solenoid.</li> <li>● Check if the access controller "Lock driving duration" is set to 1s.</li> <li>● 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.</li> </ul>

## 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 measures.

