

# Manual

## Full Height Turnstile FHT2300

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## 1. Product profile

Full high switch is our intelligent channel company after years of development, production of management equipment. The device organically integrates mechanical, electronic, microprocessor control and various reading and writing technologies.

Equipment shape using stainless steel plate laser welding molding, beautiful shape, rust, durable, and external standard electrical interface, can convenient bar code card, ID card, IC card and other card reader integration on the equipment, to provide civilized, orderly access, and prevent illegal personnel in the way; in addition, the system is specially designed to meet the fire requirements of the function, in an emergency, to ensure the smooth channel, convenient personnel timely evacuation;

## 2 Functional characteristics

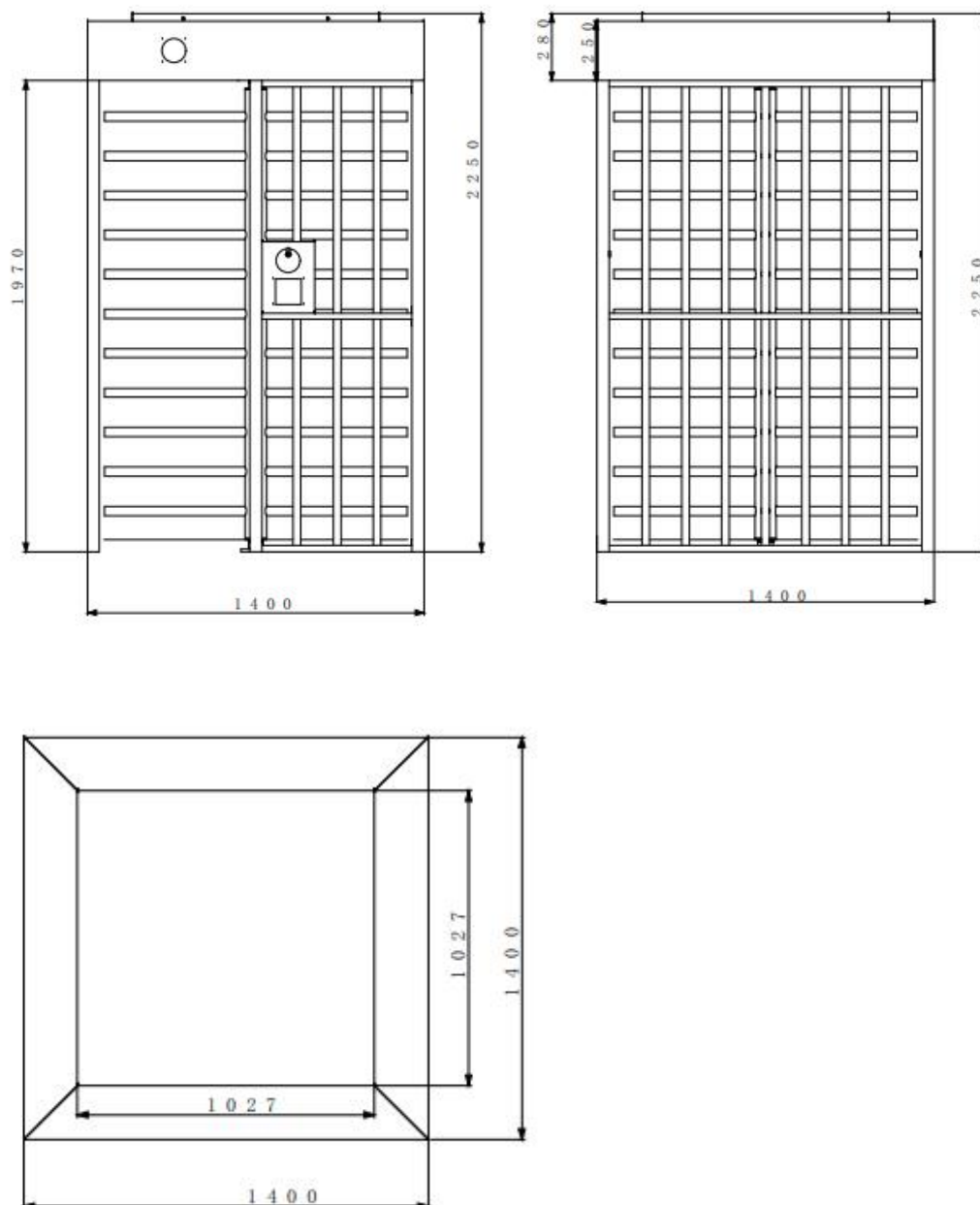
- 1) With free passage, credit card passage and other passage modes;
- 2) Anti-flushing function. When the opening signal is not received, the rotating bar is locked;
- 3) With the overtime automatic reset function, after reading the valid card, if the pedestrian does not pass within the system specified time, the system will automatically cancel the pedestrian passage authority and lock the transfer bar;
- 4) Unified standard external electrical interface, which can be connected to a variety of card readers, and can realize remote control and management through the management computer;

## 3. Technical parameters

Box material	304, Stainless steel	Enter the power supply	AC220±10% V、50HZ;
working voltage	24V DC	relative humidity	Relative humidity is 90%, not condensation
working temperature	-30 ℃ - 70 ℃	Pass speed	Between 20-30 persons / min



#### 4. contour size of the unit



#### 5. Composition and principle of the equipment

##### 5.1. Product composition

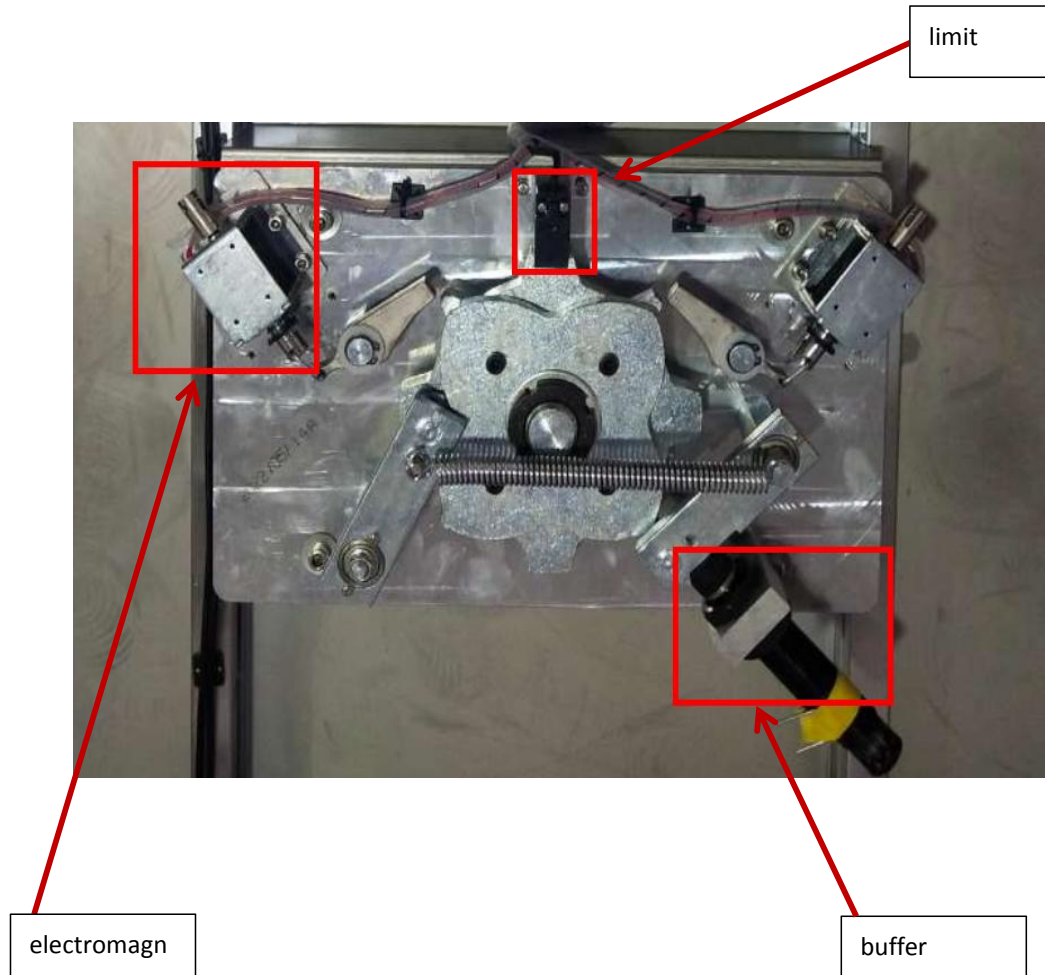
##### 5.1.1 Mechanical system

The channel gate mechanical system is divided into two parts: chassis and movement. The chassis, as a carrier, is equipped with directional indicator lamp,



reading and writing device; the movement forms the main organic frame, drive shaft, transfer rod and limit plate;

➤ Movement structure



### 5.1.2 Electronic control system

The electronic control system is composed of card reader, main control board, limit sensor switch, direction indicator light, transformer and so on;

◆ card reader: after reading the information on the card and judging the processing, send out the application pass signal to the main control board (opening signal)



- ◆ main control board: the control center of the system, which receives the signals of the card reader and the limit sensor switch, and logically judges and processes these signals, and then issues the execution commands to the direction indicator lamp and alarm;
- ◆ direction indicator: display the current status of the passage, and guide pedestrians to pass safely and orderly;

order	name	function
1	entrance guard system	IC / ID card access control, fingerprint machine, face recognition, QR code equipment, to the gate
2	control pulse	The control center of the system, which receives the signals from the card reader and the infrared sensor, and logically judges and processes these signals, and then issues the execution commands to the direction indicator.
4	indicator	Show the current traffic status of the passage, and
5	limit switch	Open and close the gate and be in place for detection
6	Switching Mode Power Supply	Control board power supply

## 5.2. Operating principle of the system

The ◆ turns on the power supply, and the system enters the working state after 3 seconds;

When the ◆ card reader reads the valid card, the direction indicator light changes the color to prompt the card reading to be successful, and also judges and processes the information read from the card, and sends a traffic authorization signal to the main control board;

◆ main control board receives the card reader and limit switch signal, and after comprehensive treatment, to the direction indicator light and solenoid valve, emit effective control signal, make the direction indicator light change color, the main control control solenoid valve unlock, allowing pedestrians to pass;

◆ If pedestrians forget to read the card or read the invalid card to enter the



channel, the system will prohibit pedestrians from passing, and the valid card will be allowed only after rereading the valid card authorization;

The alarm is removed until the pedestrian exits; reread the valid card is allowed to pass.

## **6. Equipment installation and commissioning**

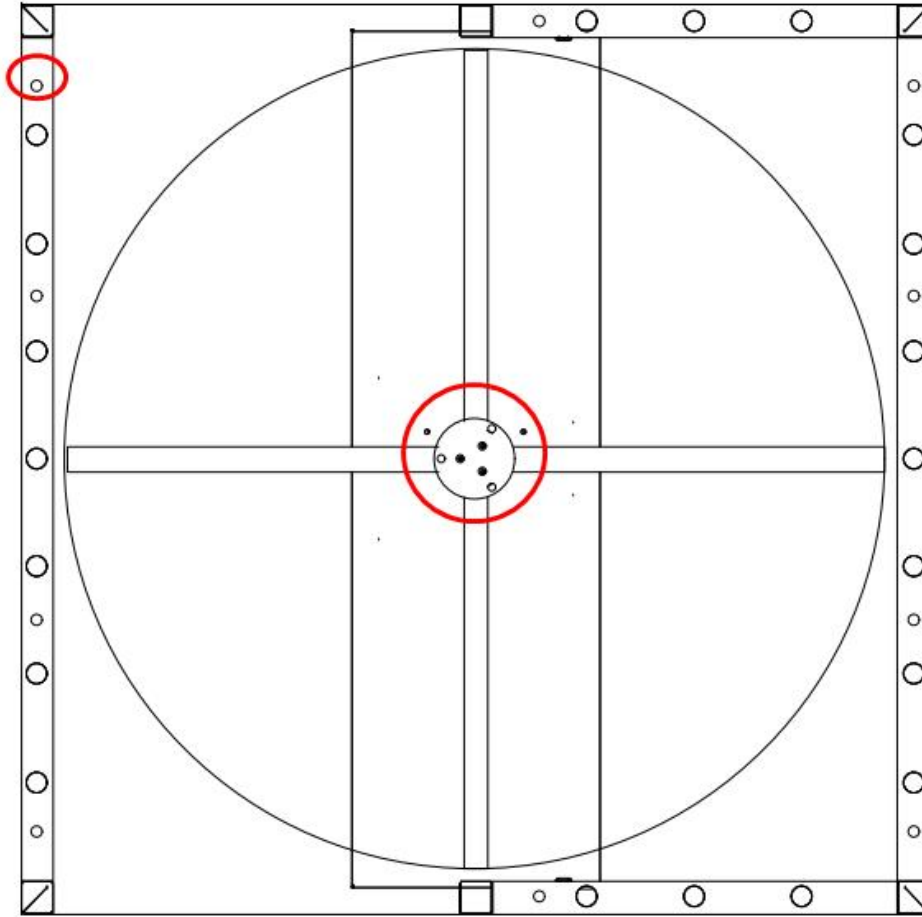
### **6.1., Equipment Installation**

- ◆ Prepare the tools for installing the equipment, and count the accessories according to the packing list.
- ◆ After the foundation surface of the installed equipment, the equipment is arranged to ensure that the horizontal alignment.
- ◆ After fixing the hole position, drill the hole, and embed the anchor bolts or expansion bolts of M12.
- ◆ Open a discharge slot, wear the strong electric cable with 3 / 4 " PVC cable pipe, and bury it with cement in the corresponding position.
- ◆ Put the equipment back to the installation position and secure the gate with factory pressure bars and expansion bolts.
- ◆ Refer to the wiring diagram, connect the power cord, and protect the system grounding wire.
- ◆ The following function debugging can be carried out only after the equipment status check is normal!

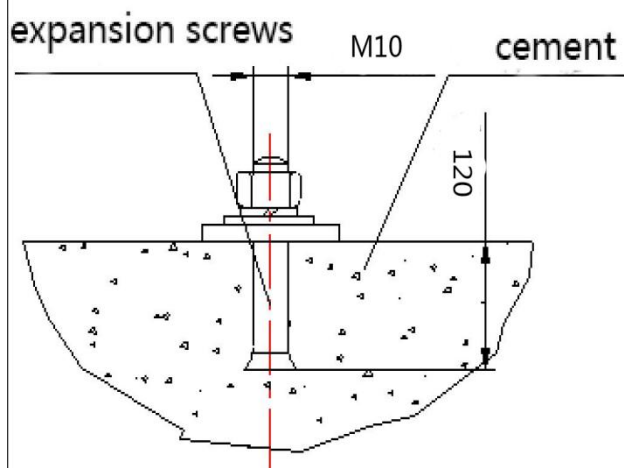
Check the wiring according to the wiring diagram, check the power wiring and other wiring of the whole equipment are correct, and can be powered for debugging.



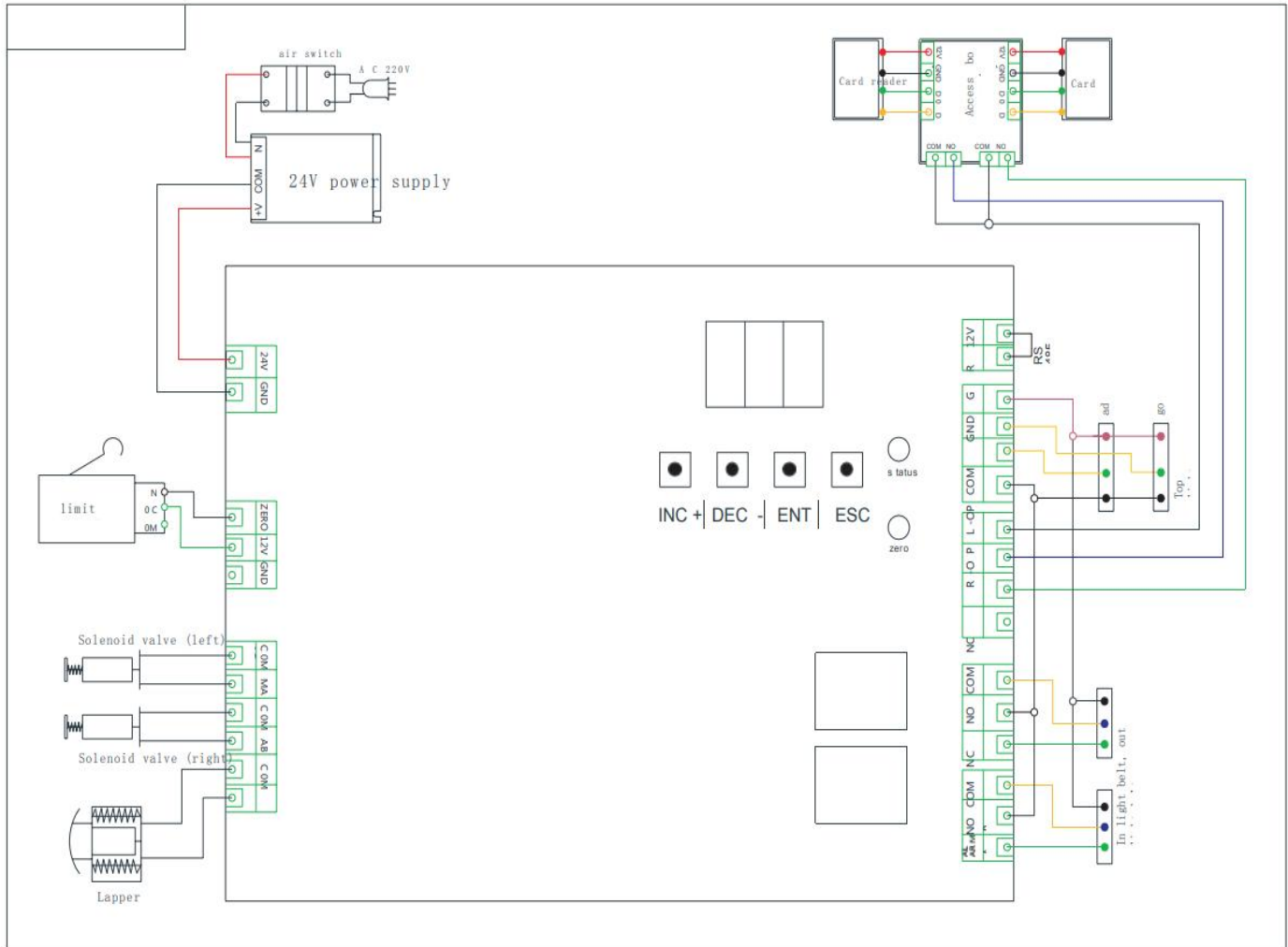
# Base Mounting:



Install the box with the M10 \* 120 expansion screw









## 6.2. Equipment function debugging

(Note: Our brake machine has been adjusted in the workshop before leaving the factory, and is now installed as required without debugging. Please to the following parameters and contact after-sales guidance)

### 6.2.1 Key description

Control board buttons: "EN T" menu key, "INC" on / add key, "DEC" under / undercut



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key;

EN T key: used to enter the menu item settings or the current parameter modification to determine the save;

ESC key: used to return to the previous level menu and exit menu;

#### 6.2.2 Menu wake-up

Step 1: Long press the "EN T" key for 3 seconds to enter the system menu, and use the "INC" and "DEC" key to check the "F 0 1" menu respectively (see below for menu instructions).

Step 2: Press the "E NT" key to enter the channel length setting interface.

Step 3: Use INC and DEC to add up and down respectively.

Step 4: After setting up, press EN T to save.

Step 5: Exit the menu: Press ESC to exit the menu

#### 6.2.3 Setting of function parameters

<Run> on the LED screen after power on the control board.

##### ➤ **《F 0 1》**

Set the passage time;

If no one passes within the setting time, the gate closes automatically.(System default for 5 seconds)

##### ➤ **《F 0 2》**

Allow and prohibit the passage of the channels;

Gate traffic mode. 0: Left free passage, right swipe card passage. 1: Left swipe card passage, right free passage. 2: All the free passage. 3: All swipe card pass (default).

##### ➤ **《F 0 3》**

Gate working mode;

0: Full high switch mode 1: three-roller gate mode (default three-roller gate mode)

##### ➤ **F 0 4 (continuous card swiping function)**



Memory function, open or close the memory function when the entrance or exit passage, is generally used to swipe the card to open the gate, in a person swipe card, whether to remember the other card card has not passed. "00 Forbidden" is the first person passed, after the second person swipe the card is valid; "01 allowed" is how many people swipe the card, that is, how many people are allowed to pass continuously. (Default forbidden by 00)

➤ **《F 0 5》**

Repeated opening and closing test, mainly used to test the gate control plate stability and aging test.

Note: In test mode, press ESC to exit the test

➤ **《F 0 6》**

Zero-bit signal setting;

0: Immediately close the zero signal (three roll switch standard mode, the motherboard default set to 0); 1: detect the zero signal, and then wait for the zero signal to disappear (commonly used on the full high switch) 2: detect the zero signal immediately close the gate.

➤ **《F 0 7》**

The lock machine is often open and set up;

This parameter is used to detect the continuous opening signal. When the continuous opening signal exceeds the set parameter, the system enters the normal open state. If the opening signal to the gate is a continuous signal, the gate opportunity is always open. After the continuous signal is disconnected, the gate will resume the standard mode. (The default parameter is 6 seconds, that is, press the opening button "Left open or right open" for more than 6 seconds, the gate is often open, the gate button is open, and the gate is restored)

➤ **《F 0 8》**

Opening time delay;

This parameter is effective when the memory function is opened. The function of the opening delay when there are too many people after opening the memory function can prevent the previous person from opening the gate when he has not passed through the channel.



➤ **《F 0 9》**

factory data reset;

All the parameters of the motherboard are restored to the factory settings.

➤ **《F 1 0》**

device address. The default address is 0.

➤ **《F 1 1》**

Zero-bit signal valid time setting. Default valid time.

➤ **《F 1 2》**

Active last traffic information setting. 0: No upload. 1: Uploaded data does not distinguish between left traffic and right traffic. 2: Upload the data to distinguish between left traffic and right traffic. (Default setting: 0 does not upload)

Normal passage:

F12=0: Do not upload the data

F12=1: Upload data is EB 00 6E 00 85 (address is 0)

F12=2: Left traffic upload data is EB 00 6E 01 84 (address is 0)

F12=2: Right traffic upload data is EB 00 6E 02 87 (address is 0)

Traffic timeout:

F12=0: Do not upload the data

F12=1: Upload data is EB 00 6E 80 05 (address is 0)

F12=2: Left traffic upload data is EB 00 6E 81 04 (address is 0)

F12=2: Right traffic upload data is EB 00 6E 82 07 (address is 0)

➤ **《F 1 3》**

Fire control input time gate access mode. 0: Left and right free communication, 1: around all prohibited, 2: left and right prohibited, 3: left and right prohibited.

## 7. Common fault handling

### 7.1. The three-roll gate does not open the gate

- 1) Check whether the main board receives the opening signal;
- 2) Check whether the opening signal line is loose and whether the solenoid valve line is loose;
- 3) Manually press the motherboard button after charging, to see whether the limit plate can be unlocked normally;

4) Use the universal meter to measure whether the motherboard solenoid valve (left / right) wiring port has 24V voltage output, if there is 24V voltage output, then the plunger solenoid without magnetic rod drop fault;

#### **7.2. The three-roller pole does not drop the pole**

1) Check whether the electromagnet drop rod bracket is loose, the spring activity is flexible without lag, and adjust the fixation;

#### **7.3. The power-on manual lifting of the rod is invalid, and the pole does not stand up**

1) Whether the electromagnet drop rod support is loose, and test whether the electromagnet has magnetism with metal objects;

2) Use the universal meter to measure whether the voltage output of the motherboard drop rod electromagnet wiring port is 24V, and determine whether the motherboard has a normal voltage output loss;

#### **7.4. The motherboard is not powered on after the power supply**

1) Use the universal meter to measure whether the output has 24V voltage at the switch power output port;





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