

S4T238FHS SERIES FULL HEIGHT TURNSTILE OPERATING MANUAL



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Thank you very much for buying the intelligent swing barrier produced by our company.kindly read this manual before installation and operating,and please note after working long time, the control board would heat up slightly and this is a normal phenomenon. Please make sure all these parts cool before doing the routine maintenance.



1. Product Introduction

Description	Parameters
Lane Width	550-570mm
IP	IP54
Pass Speed	25-30 persons/min
Power supply	AC220V/110V,50/60Hz
Drive Mode	Motor drive
Max Power Consumption	200W
Opening time	0.06S
Humidity	≤90% coagulation free
Noise	≤50dB
Service Life	3,000,000 cycles
Outside packing	210x115x109 cm 222*63*63 cm 163*30*40 cm
Working Environment	-20° C~+60° C
Gross Weight	350KGS

DIMENSION:

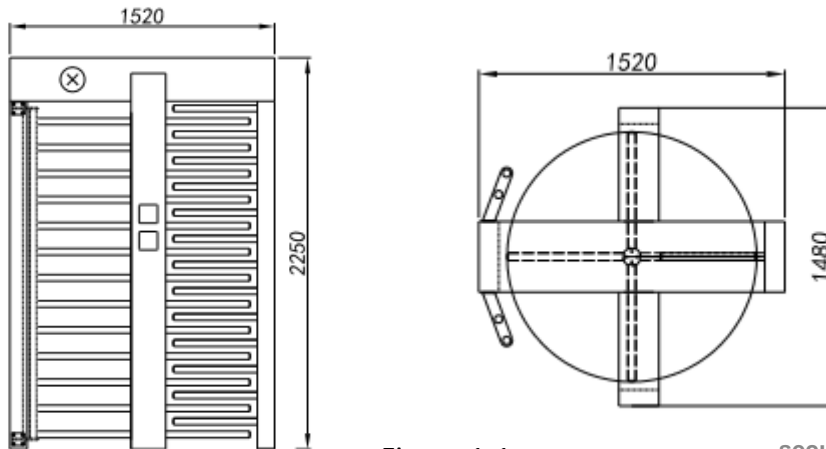


Figure 1-1

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1 EASY INTEGRATION

Easy integration with any third party access control or ticketing via dry contact interface.

2 MINIMUM MAINTENANCE

DC motor eliminate the need of changing carbon brush thus reducing maintenance work. Key internal parts is treated with anti-rust and anti-septic to ensure long term reliability.

3 HIGHER SECURITY

Full height turnstile design with high door panel to prevent unauthorized visitor from gaining access by climbing over or crawling under the gate.

4 60° ROTATION AUTO LOCK

If arm is rotated more than half, it will automatically fall forward to complete the rotation. If arm is rotated less than half, it will automatically fall backward to return to home position. This will avoid arm does not stop halfway that may allow unauthorized access.

5 ANTI TAILGATING

High performance IR sensor is used to detect tail-gating, illegal passing attempt and pass through direction to ensure maximum security at front gate. Door panel will be closed if tailgating is detected.

6 EMERGENCY RECOVER

During power failure, door panel will open automatically to allow free pass through. In the event of emergency such as fire alarm, sliding barrier can be manually trigger to open permanently to allow fast evacuation.

2. Assemble And Installation

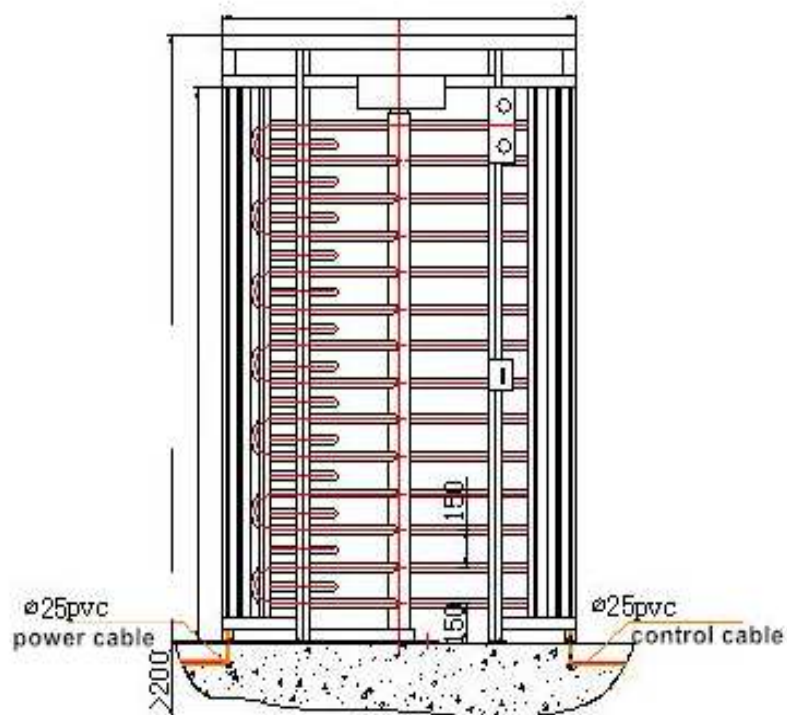


Figure2-1

2.1 Installation

Note: embed PVC pipe be rooted in 60 mm, and above 50mm of the ground, outlet winding to prevent the water

- 1) Put the turnstile into the bolt of the ground, screwing them.
- 2) According the Wiring Drawing, connecting the power wire, control wire to turnstile control board, and connecting the protection wire the all system.

Note:

- 1) All the above operation must be operated at the condition of no power and the all system protection wire working well.
- 2) When the equipment used outside, we demand to make a cement installation platform(50mm~100mm) for the turnstile to moistureproof, and add the shed for the turnstile to prevent rainwater and sunshine.

2.2 Equipment condition check up

- 1) According the System Wiring Drawing, check up the connecting conditoin, please make sure all is ok before connecting the power
- 2) With the power, check up whether the indicator lights and the counter ok.

Note: Indicator lights are including the direction indicator and passing right indicator; the direction indicator is dispalying arrowhead when passing, the other side is DragWaypoint.



3. Equipment Functional Test

The user may carry out one or several functional tests as given below in accordance with the requirements on the passage function of the turnstile.

3.1 Single time card reading passage:

- When the card of passenger is read at either direction, for a legal card, the passage indicator will change to a green passing mark, waiting for the passenger to enter. The barrier rod will move along the passing direction of the passenger as driven by passenger, and automatically return back to zero point and lock barrier rod. Then the passing indication will change into a red barring mark, and at the same time, the counter for passenger passing will automatically increase 1, completing a passing process.

3.2 Multiple time card reading:

- When the card of passenger is read for multiple time at either direction, Then it will wait for the passenger to pass through, until the passenger number is the same as the number of the card reading.

3.3 Card reading at one side and free passage at the other

- The passage test on card reading terminal may be carried out in accordance with Section 4.3.1 or 4.3.2. As to the free passage direction, when the barrier rod is pushed slightly along the passing direction and, the barrier rod will rotate toward the passing direction as driving by the passenger. As the barrier rod rotates to 60° , it will automatically return back to zero position and lock, at the same time, the counter will automatically increase 1;

3.4 Reset function

- When the card of passenger is read at either direction, for a legal card. At the same time, the passage indication indicator will change to a green passing mark, waiting for the passenger to enter. The equipment will reset automatically, cancel the passing right of the time and will not count, once no passenger passing at the stipulated time (set up by the users, the default being 10s).

3.5 Function of opening at power off

The barrier should be rod down when the power of the system is cut off

3.6 Prevent illegal forcely passing

The turnstile will lock by itself when the passing without the carder or other condition, the locking time can be setting by the user; and after several the arms will reset with the carder.



4. Drive Board Wiring

3.1 Drive board description

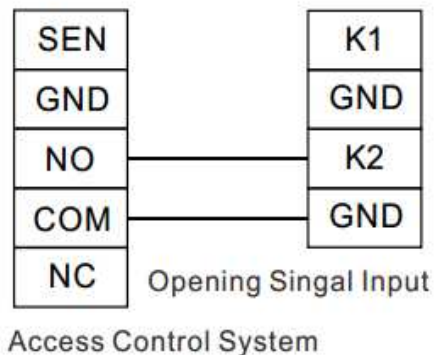
If you are buying access control system from supplier, all the connections between access control and turnstile control boards are done in factory, just plug in communication cable to access controller and do the setting.

If you install access control system by yourself, you need to connect access control system to the main board, please check the content in this chapter carefully.

3.2 Input

- 1). 1#motor, 2#motor: for 1# electromagnet, 2#electromagnet.
- 2). G1, G2, GND: for housing top LED indicator, when unlock signal giving, the LED turned to be green.
- 3). AC220V input, AC220V output: for adapter
- 4). ALARM1, ALARM2: for alarm or emergency input, the signal is dry contact signal. If short-circuit these inputs, the relative gate will be unlock (or alarm, the LED indicator turned to be red).
- 5). 1# unlock input, 2# unlock input and GND: gate opening input interface, receive dry contact signal to open the gate.
- 6). MK1, MK2: open manually input, receive dry contact signal to open the gate.
- 7). DOW, GND: drop arm input, receive dry contact signal to open the gate.

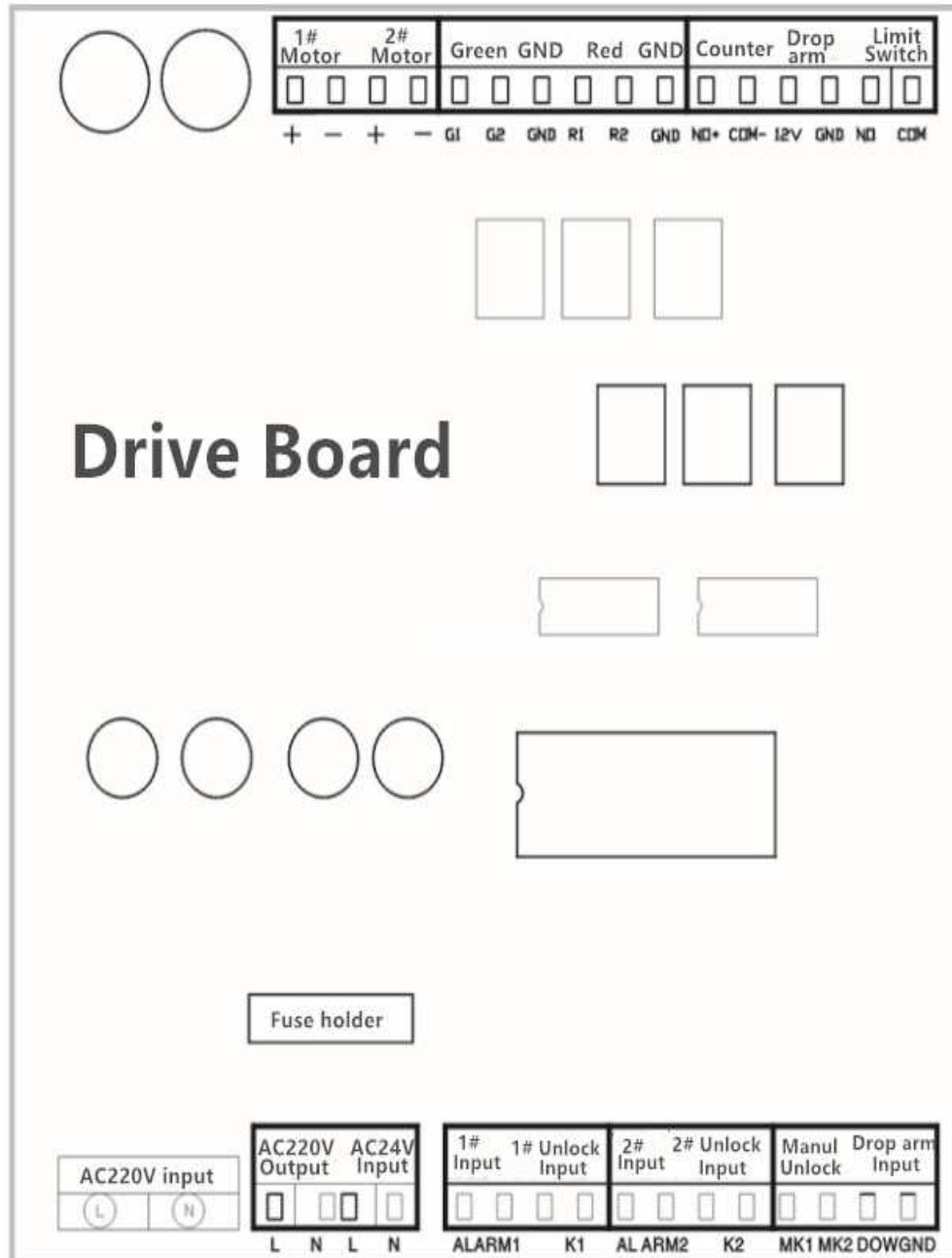
3.3 Connection between Access control system



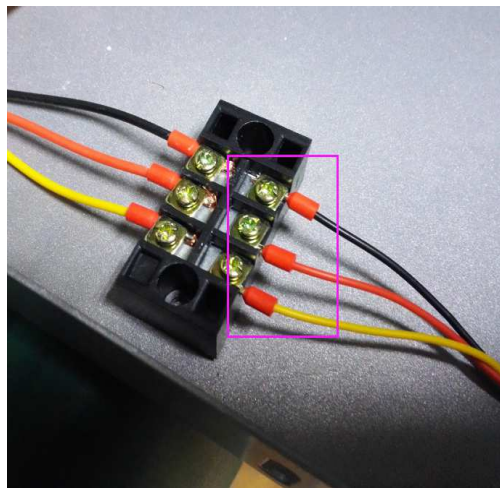
Picture 4-3

Note: The access control relay open duration should be no more than 1 second.

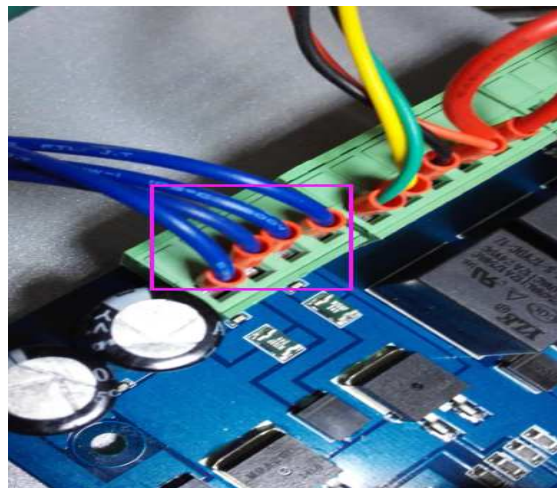




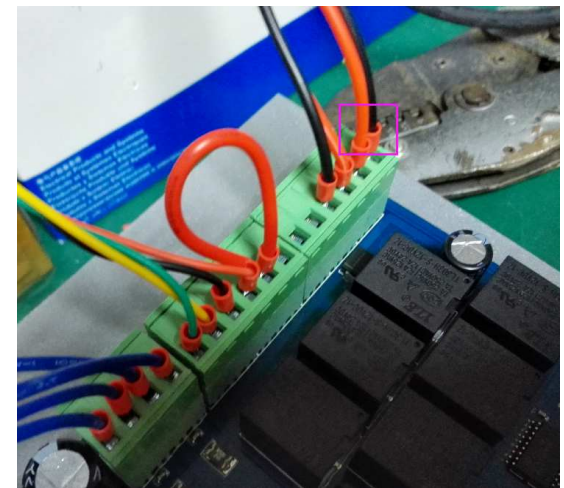
Picture 4-4
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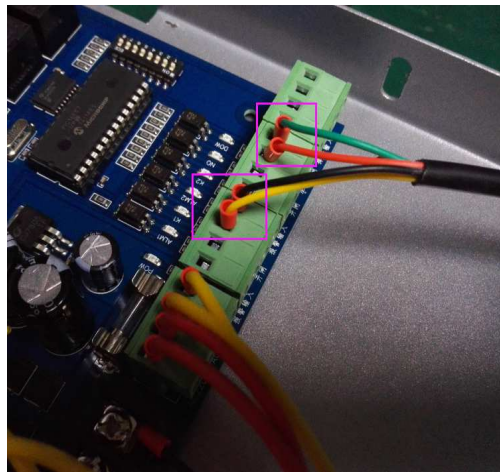
- AC220 connection



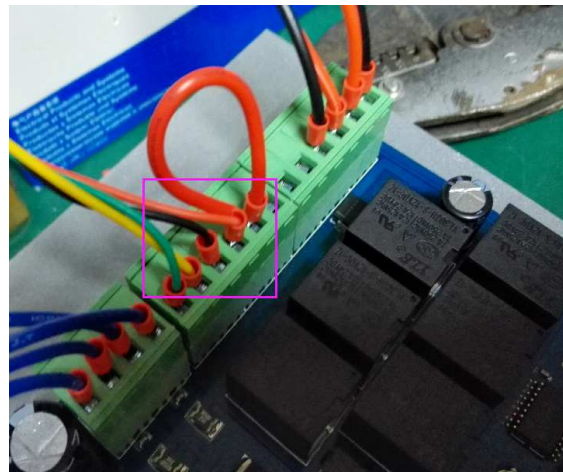
- Mechanism power connection



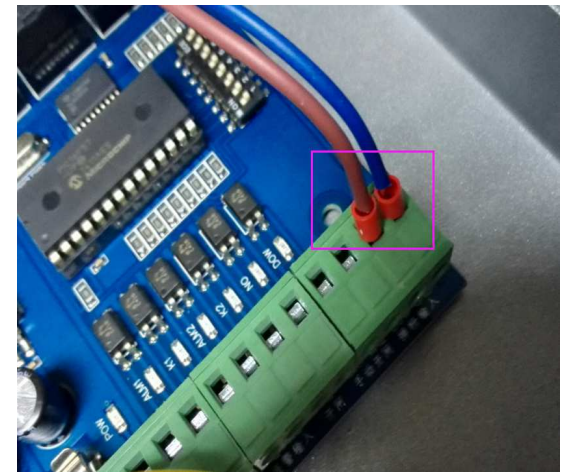
- Mechanism signal connection



- Unlock signal



- LED indicator connection



- Alarm connection



5. Operation Explanation

5.1 Operation principle

- 1). When power on, the arm will turn on automatically, then lift arm to right position by hand;
- 2). When access signal activated, the electromagnet is off power and the unlocking spring pulls away the locking plate from the triangle locking plate. The tripod arm is unlocked.
- 3). While the arm turns 120 degree after passenger flow, limit switch on the control board sends a signal to the control board and then the electromagnet is on power. Through this to counter the force of the unlocking spring and make the locking plate in clutch with the triangle locking plate.
- 4). The tripod arm is locked. At the same time, an access signal is sent to the counter output.
- 5). When the power off or emergency signal is activated, three electromagnets will be off power and the arm will drop automatically and the rotating plate can turn freely.
- 6). When authorized access signal is sent, the arm will lock within fixed time if there is no passenger access. If trying to reverse the arm in this condition, the magnet will be on power to avoid unauthorized access with alarm for 5 seconds.

5.2 The working mode

In order to facilitate the user, there are multiple working modes for the user to choose according to the actual situation of usage.

- 1). Bi-directional card reading and staff limiting
- 2). Left can read the card, while right can be forbidden to pass
- 3). Right can read the card, while left can be forbidden to pass

6. Regular Maintenance

6.1 Maintenance

1). The housing of the equipment is of a sub-polish stainless steel, it is required to clean regularly with soft cloth so as to keep a clean and polish surface. It is forbidden to clean the surface with a hard object; otherwise, the appearance may be affected.

It is also forbidden to wash it with water, otherwise, short circuit may occur in the electric control system and the equipment may be damaged. Ensure that the power supply is disconnected before the inspection to avoid electric shock.



2). It is required to check regularly the connection of various movement sections of the equipment. Fasten timely the loose fasteners such as nut and screw, otherwise, turnstile failure may be resulted due to long term cooperation.

3). It is required to check regularly the protection grounding of the system to ensure a reliable connection.

4). It is required to check regularly the connectors and line connection points to ensure a reliable connection.

6.2 Common failures and the remedy

1). No indication for LED and counter, and not able to read card after power on.

The failure is due to power system, it is required to check carefully the power supply or the 5A fuse in the drive board of the equipment for damage, and see if there exists any loose connector or broken power line.

2). Not available to read card normally.

The failure is mainly due to a loose connection between reading device and the main controller or the reading device may be damaged. Replace the reading device and carry out functional test for it.

3). Unable to unlock the gate.

The failure is mainly due to lack of permission or a circuit problem, firstly check if the user has permission to open the gate. Second, use a multimeter to check whether the NO and COM ports of the access control system has a relay signal output. Third, short-circuit the ports "K1,GND" and "K2,GND" if the gate is successfully panned, it would be the problem of controller. In this case, please refer to picture 4-3 to check the cable connection of the controller.

4). The arms drops drop during the use.

It may be caused by the problem of relative components or drop-arm electromagnet. Check whether there is any gap at the position as shown in figure 6-1. Check whether the drop-arm electromagnet is totally closed. If not, power off the device and power on it again 2 minutes later.

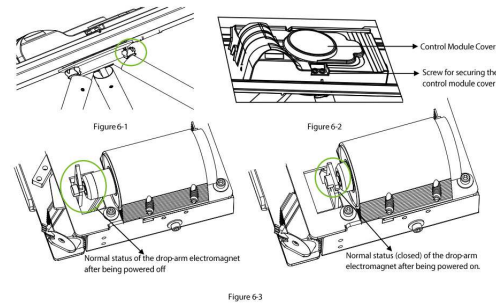
5). The arms of the tripod turnstile cannot be lifted manually after the equipment is powered on.

It may be caused by the problem of relative components or drop-arm electromagnet.



Check whether the stop base and turn plate withstands each other,as shown in below figure.

Check whether the drop-arm electromagnet is operating.Remove the upper cover of the framework,use a hex key to remove the cover of the control moduel and check the work status of the electromagnet as below figure.



7. Warranty and Service

1. 1 year warranty
2. Service for all the year with due charge accordingly
3. 24 hours online service

The circumstances of the following will not offer free warranty:

1. The user does not operate the product according to the manual, which causes the product broken.
2. Using the product in the conditions of unstable current, overload current or not in line with the national electricity standard
3. The user mismanages the product and causes the product problem.
4. Product damage is because of natural disaster.
5. Not in the warranty period.
6. Other services promised by distributors.

The manufacturer reserves the explanation rights to the manual and the warranty articles.

8. Package Items



Item	Name	Qty	Unit	Notes
1	Housing With Rotating Plate	1	Pc	Necessary
2	Tripod Arm	3	unit	Necessary
3	Mechanism	1	Pc	Necessary
4	Control Board	1	Pc	Necessary
5	Power Supply and Cables	1	Kit	Necessary
6	Air Switch	1	Pc	Necessary
7	Card Reader and its Cable	2	Kit	Optional
8	Counter and its Cable	2	Kit	Optional
9	Top LED light and its Cable	1	Kit	Optional
10	Access Control System	1	Kit	Optional
11	Mounting Bolts	Unspecified	Pc	Necessary

9. Appendix

9.1 Drive board command

```

COM1 9600 n 8 1
Initial flag  Command      Address      BCC Verify  Terminator
buff[0] buff[1] buff[2] buff[3] buff[4]
1BYTE 1BYTE 1BYTE 1BYTE 1BYTE
0x20 0x80<Unlock> 0x01-0xfe [1]^[2] 0x03
      0x30< Lock > 0xff
      0x50<Alarm>
SW25/SW26/SW27/SW28 ID = 0000 -1111
20 80 FF 7F 03 // Normally Open
20 30 FF CF 03 // Lock
20 50 FF AF 03 // Alarm
20 81 FF 7E 03 // 1# unlock
20 82 FF 7D 03 // 2# unlock

```

