Full Height Turnstile User Manual
Safety Instruction

Please follow below Security Instruction to protect you and your device.

■ In order to avoid damaging device and other users of the device, please strictly follow the installation instructions.
■ Please do not repair the device by yourself before you inform after-sale or service department.
■ Please do not open power box, when it is a thunderstorm, it may cause electric shock.
■ Please strictly follow Maintenance Instruction.

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1. Overview

TURNL600 three-pole single passage full height turnstile, the appearance design is unique, light beautiful and simple fashion. TURNL600 box frame with high-quality stainless steel, durable; core of device module adopts a damper too low noise, low power consumption and energy saving.

TURNL600 is dry contact signal input interface, compatible with kinds of access controller. It is used for military bases, prisons, factories, residential and other high security sites.

TURNL600 has been tested OK before leave factory, but to ensure the safe and reliable operation of the product, it is recommended that users carefully read the product user manual before using the product.

2. Definition

2.1. Full Height Turnstile

TURNL600 full-height turnstile combines the power box and 3-row rod, through the rotation of 120 degrees to discourage or release. Full height turnstile have mechanical full height turnstile, semi-automatic full height turnstile and fully automatic full height turnstile.

TURNL600 is semi-automatic full height turnstile, the device core is not motor-driven, with control circuit boards and other electrical accessories. After card holder provide valid open signal, he need push the bar manually.

2.2. Device Access Mode

A. Controlled Access: Controlled Access is default mode. It means that given valid open door signal, the gate open door and allowing access. The valid open signal can be open signal manually and access controller open signal.

B. Free Access: It is no need to give the device open signal, person only push the bar, device will open the door. Usually this mode is used to limit the flow of people for single-way access.
3. Safety Precautions

Although the device has been inspected by factory, users must be in strict accordance with the instructions to install and debug. Manufacturers will not bear any responsibility by improper operation. Before installing the product, please pay attention to the following safety precautions:

- No electrical certification or no electrical training person to operate high voltage working or other electrical connections.
- No installation fixed turnstile, if no fit installation foundation.
- Before maintenance, please turn off all system power(except turnstile power), for example access control, visitor system, ticketing system and etc.)
- User must be equipped with a leakage switch or other current control device.
- User must follow wiring diagram to connect devices.
- Before normal use, please make sure the turnstile function test is qualified.
- During maintenance, please check the fastening bolts.
- Do not touch charged parts, such as switching power supplies, resistors, lamps and etc., after power is applied to the system, because charged parts may be hot and burn the skin.
- Prohibit weight squeeze the device, otherwise, it may be damaged.
- Users are advised to separate the device from the power interfaces of other devices. Otherwise, they may be damaged due to mutual interference between devices.
- Device is not allowed to be used in flammable and explosive environments. If really needs, you can buy other turnstiles.

4. Product Structure

TURNL600 is composed of mechanical system and electrical system, size is showed as below.

4.1. Device Mechanical System

Device mechanical system is composed of power box and core, power box is showed as picture. 4.1 It is composed of double guard bar, single guard bar, top power box, axle sleeve, spindle, spindle base. Core is put on top it and it is composed of electromagnet, switch and core spindle.
TURNL600 one way full height turnstile is divided into six parts:

1. Double guard bar  
2. Single guard bar  
3. Spindle base  
4. Spindle  
5. Top power box  
6. Axle sleeve  

*Picture 4.1*
4.2. Device Electrical System

Device electrical system is composed of device controller board, infrared detector and power module, and user can select access control system.

5. Product System Working Principle

a. After start system power supply, device system self-test, the system enter standby mode

b. User provides enter / out valid open signal (access control system have open signal by card, device system open signal by button) to the device control board.

c. After device controller receive the enter / out open signal, it will send a control signal to electromagnet, device unlock for into / out and person can push bar and access

d. After person access, device controller send control signal to electromagnet and device close door, system enter standby mode.

e. If the pedestrian does not provide valid open signal and access, the system will lock bar and prohibit pedestrian access.

6. Product Installation Inspection and Debugging

6.1. Product installation

For the convenience of transport, the device will be separated as a single guard bar, double guard bar, top power box, spindle, axle sleeve, spindle base apart, the user need to re-install before use.

6.1.1. Power Box Assembly

User need read installation guide for full height turnstile to reinstall the device before use it.

6.1.2. Power Box Installation

a. To prepare installation tools, they will includes allen wrench, Phillips screwdriver and socket wrench.

b. Confirming the system structure and working mode, after finish system plan, start to install device.

c. Respectively put strong /weak cable into 3/4 PVC tube, then bury them in the right place.

d. After find correct position, to drilling a hole, and then embedded M10 or M12 expansion bolt.

e. To move the power box to the mounting position, align with the anchor bolts.

f. To select one device for reference.(suggest to select the middle one for reference), the chassis of the bolt holes were aligned with the anchor bolts, and then initially tighten the nut.

g. The bolt hole of nearly device button aligned with the anchor bolts, then initially tighten the nut.

h. According device connection diagram, to connect to power cable, control cable and system ground cable correctly.

i. Checking system structure and running mode.

j. After make sure function debugging is OK, fixed anchor bolt and nut.

Notice:

✧ The buried depth of PVC pipe should not be less than 60MM, the height of the ground should be more than 50MM, PVC pipe to bend back in order to prevent water inflow.
All of the above operations should be done after power off, to ensure that the ground wire is correct.

6.2. Product Status
After user install device, user must check device status, detailed steps as below:

a. To check all controller parts connection are correct.

b. Power on the device system after check the Electrical accessories connection.

After device system self-test, it will enter standby mode.

d. To check the movement status of the access lever: When device is in standby mode, the door is opened by the test button or other open Signal, to push lever and return to normal, if device lever run abnormal, please contact with supplier.

Attention: When you get the products, they were tested. but in order to ensure device run stable, after correct installation in the field, professional person should check device stable.

6.3. Product Function Debugging
To check the state of device, user need to check the function of the device, the detailed detection of the contents includes power self-test function test, normal access test, enter/out access mode debugging, emergency escape function debugging.

6.3.1. Power-on self-Test Function
Device should be self-inspection after the power, under controlled mode, the lever should be locked by electromagnet.

6.3.2. Normal Access Test
Device in the standby mode, device closed, pedestrians provide device a valid device signal, pedestrians can access. During valid access time (usually 6S) pedestrians can normally access. After access time over, one of rod should be return and close.

6.3.3. Device Emergency Escape Function Debugging
To power off the device 220VAC input, the bar should be unlocked, device allow access for two-way.

7. Product Use
The device access principle is that read card outside of yellow line, one card one person, no trailing and reverse access.

Notice: The principle means that card holder swipe valid card outside of yellow line, one valid card is read, only one person can access. It is prohibitive trailing without valid card read and reverse access.

7.1. Device One-Way Access
As shown in Figure 7.1. In the full-height rotation of the standby state, pedestrian A in the forward / out of the yellow line to the full rotation of the rotation gate to provide a forward / out of the law to open the door signal, gates open the door, pedestrian A putter, pedestrian A after the end of the gate, the device closed.
7.1 Device One-way Access

7.2. Device One-Way Access Continuously
    Device under standby mode, person A swipe valid card outside of yellow line, device open door, after person A access, device close door. When person A access, person B wait outside of yellow line. After person A finish access, person B swipe valid card to access, device door close. Please find picture 7.2-1 for person A access status and picture 7.2-2 for person B access status.

    Notice: When it is two-way access, card holders can not access at the same time. White for person A, black for person B.

8. Product Cleaning and Maintenance
    The cleaning and maintenance of device will directly affect its service life, so device need to be cleaned and maintenance.

    8.1. Product Daily Cleaning
        a. Cut off power, and clean surface dust on outside of stainless steel on turnstile body by duster cloth.
        b. To clean the bottom of the turnstile body and the surrounding floor to ensure that the bottom of the turnstile body is dry.
        c. To clean the ordinary floating dust, please use clean solvent and duster cloth. Finally dry with a dry cloth.
        d. To clean plastic dust, cotton cloth coated with a small amount of diesel lightly wipe.

    If there is no diesel oil can use deal with ordinary floating ash method, also adopt 30% of
medical alcohol as clean solvent water.
   e. To clean scratches on the surface of the organic glass, please daub some toothpaste on the cotton cloth and scrub it for 5 minutes.
   f. Inside: Cut off power and open turnstile little door, clear all dust with a air dust gun for, circuit boards, switching power supply, the gap, and the bottom of the box to ensure clean and dry surface.

8.2. Product Daily Maintenance
   a. Prohibit non-professionals to open the device box for debugging, maintenance and product services. Prohibited using hard objects to clean the surface of device, it is easy to be scratched.
   b. Prohibit to incorrect cleaning by water, otherwise it will electrical short-circuit and affect the device working.
   c. In order to avoid connection loose each other, please remember to regularly check device seams.
   d. Lubricants should be used periodically to lubricate the core components, and check the electrical system ground connection to prevent leakage.
   e. Check the socket and the wire connection periodically to ensure the stability of the wire connection.
   f. After finish the inspection and maintenance, please make sure device system is power on and close the door.

9. Top Power Box Structure and Parts Instruction
   9.1 Electrical Control Parts Instruction

9.2. Device Controller Board Instruction

![Diagram of the device controller board]

Input:AC100-240V 50/60hz
Output:DC24V/5A
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Interface

Power Input: DC24V power supply input port.

Limit Shift Switch: It will know any person access. If there is no this signal, controller will keep waiting (access time).

Anti-clockwise and clockwise access Input: After receive switch signal input, it will control clockwise output port or anti-clockwise output port.

Anti-clockwise Output Port: Output DC 24V.

Clockwise Output Port: Output DC 24V.

Barrier-up Control: This port output 24V. Barrier will up by it control electromagnet.

Direction Indicator: It displays access direction.

Port Instruction
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- **GND**: Power GND
- **24V**: 24V Power Input
- **ZERO**: Limit Shift Signal Wire
- **VCC**: Limit Shift Switch Power Wire
- **GND**: Limit Shift Switch GND
- **OP_L**: Anti-clockwise Open Signal
- **COM**: COM port (12V)
- **OP_R**: Clockwise Open Signal
- **12V**: 12V Power Output
- **+24V**: 24V Power output
- **M0**: Anti-clockwise Output Port
- **M1**: Clockwise Output Port
- **R**: Direction indicator Light Data 1
- **G**: Direction indicator Light Data 2

### 9.3. Auxiliary Parts Connection

- **Turn Plate**
- **Clockwise Electromagnet**
- **Anti-Clockwise Electromagnet**
- **Full Height Turnstile Core**
- **Direction Indicator Plate**
- **Limit Shift Switch**
Connection

10. Device Controller Board Function Instruction

10.1. Function Setup Instruction

There are five keypads on the main board. A and M are left open by manual and right open by manual. MENE is used to enter or exit from the menu. INC is up/plus, upturning, DEC is down/reduce Page down. It is used for menu setup.

**Menu Setup Instruction**

Controller board keypad: MENU is menu, INC is up/plus, DEC is down/reduce.

**Function key Instruction:**

MENU: 1. Long press it to enter System Menu when it is home screen. 2. After enter it, press the button for select the menu to enter parameters setup interface. After finish menu setting and press it to save and back to System Menu.

INC: It is used to +1 when upturning to select system menu and setting parameter.

DEC: It is used to -1 when down to select system menu and setting parameter.

NOTE: When enter system menu and menu setting, if do not press keys in five seconds, it is Auto – Exit and back to home screen.

For example: to change the access duration of passageway.

Step 1: Long press MENU to enter system menu, press INC and DEC to upturning and down to select F01 menu. (show as below).

Step 2: Press MENU to enter access time setting interface

Step 3: Press INC, DEC to up and down, it is used for set up.

Step 4: After finish set up, press MENU to save it.

Step 5: Exit the menu. To select F10 menu, press MENU to exit menu manually or 5 seconds without operation to exit menu automatically.

10.2. Parameter Setup Instruction

LED screen display RUN after the controller board is power on.
System menu Instruction:

1. F01: It is used to set access time. In this setting time, once person access, the time go to 0., if no one access, the door will closed automatically if time is up. (The system default 5 seconds).

2. F02: Allowed and prohibited access. 0: Left and right open is not allowed. 1: All are allowed. 2: Left open is not allowed, right open is allowed. 3: Right open is not allowed, left open is allowed. (Default all allowed).

3. F03: Working mode. 0: Free access (used on the Revolving Turnstile. 1: Power off-barrier down (default).

4. F04: Memory Function. It is used for opening door by card, a person present card do not access, whether remember other people present card. Prohibited means the first card holder present card and access, the second person can access by presenting card, Allow means multiple card holder present card continuous and allow to access. (default is prohibited).

5. F05: Testing for open and close door repeatedly, It is mainly used for testing the stability and aging time for controller test. Note: In the testing mode, press "MENU" to exit.

6. F06: Zero signal setting. 0: If detect zero signal, the turnstile will immediately turn off (close door). (tripod turnstile standard mode, the main board default is set to 0). 1: If detect zero signal, after zero sign, door will close (full height turnstile is used usually).

7. F07: Normal Open setup. The parameter is used to detect the continuous opening signal. When the continuous opening signal exceeds the set parameter, the system enters the normal open status. If device opening signal is a continuous signal, the door will keep opening, after continuous signal stop, the door restores the standard mode. (Default parameter is 6 seconds, It means that press the key to open the "left or right open" for more than 6 seconds, the door is normal open, if release button, the door restore).

8. F08: Door open delay. The parameter is effective when memory function is started. This function is used when multiple person access the door to delay. It can avoid door open again if previous person did no access.

9. F09: Restore factory Settings. It is used for restoring all parameters to factory setting.

10. F10: Exit Menu or exit if no operation within 5s.