

Flap Turnstile Swing Turnstile

User Manual

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1.Introduction

1.1 Description

Welcome to use our access gates, hope this user manual can bring you convenience when you installed it . Swing barrier and flap barrier is a intelligent channel management equipment, after years of research and production by our company, the device combine mechanical, electronic, microprocessor control and a variety of reader technology together organically. intelligent control and management of the channel 's implementation by configuring a variety of reading and writing equipment, control panels and software .

Equipment appearance of stainless steel stamping molding. Nice shape, rust-proof, durable, and the external standard electrical interface. Can easily integrated with bar code, ID card, IC card, fingerprint ,facial recognition reader; provide a civilized and orderly pass way, also can prevent illegal access. What's more, system is also meet the requirements of fire protection function, in case of emergency, keep passage open to facilitate the timely evacuation of personnel.

1.2.Features

- 1) Zero position self-test function, user-friendly maintenance and use;
- 2) Illegal entry with alarm function;
- 3) Programmable devices running setting by the small button in the main control board;
- 4) Anti-collision function, when the gate not received signal , the arm automatically lock;
- 5)Anti-collision function, when the gate signal is not received, the shutter (arm) automatically locked;
- 6) IR / mechanical double pinch function, when the meet resistance at the gate (swing) Reset process, within a specified time of the motor automatically stop working, and the intensity is very small, while the alarm signal;
- 7) Automatic reset function, pedestrians valid card read, if not pass the specified time in the system, the system will automatically cancel the access rights of pedestrians;
- 8) gate (arm) synchronization;
- 9) Normally open off-channel automatic power-on self-closing;

- 10) Sound and light alarm function: with unlawful entry, trailing alarm;
- 11) Unified standard external electrical interface with a variety of readers with hooks, and remote control and management by the management computer;
- 12) One-way or two-way control personnel access;
- 13) The entire system is running smoothly, low noise.

1.2.2 Extensible function

- 1) Counter function
- 2) Size/ material/color can option

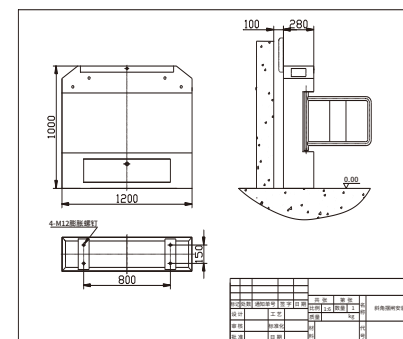
1.3 Specification

- 1) supply voltage: AC220±10% V、50HZ
- 2) motor: DC 24V/40W
- 3) working Temperature: -15OC - 60 OC
- 4) relative humidity: relative humidity≤90%、no condensation
- 5) input interface: dry contact signal, 12V level signal or pulse width>100ms 12V pulse signal, drive current>10mA.
- 6) passage width: Flap barrier, out of body 250mm. passage width 550-600mm, swing barrier arm length: 600-900MM .
- 7) Access speed: 40/min (normally open mode) and 30/min (normally closed mode)Time for open and close.
- 8) gate opening and closing time: 1 second block gates, swing gates 2-3 seconds.

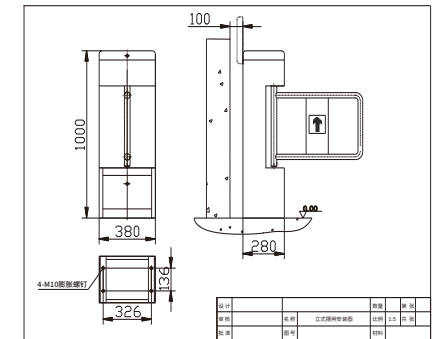
2 .Appearance size

2.1 Appearance size

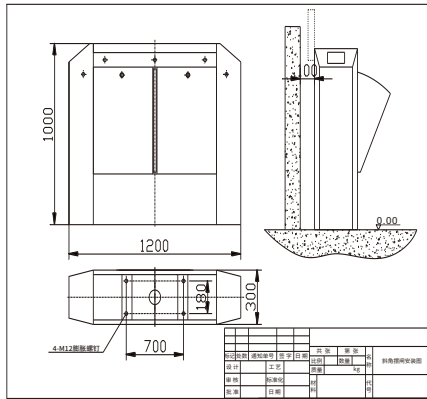
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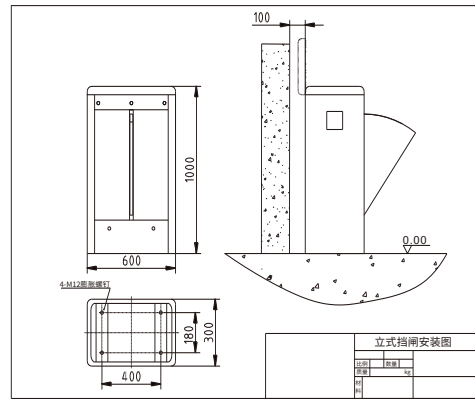
Bridge type bevel swing barrier
1200x280x1000



Vertical swing barrier
380x280x1000



Bridge type bevel swing barrier
1200x300x1000



Vertical swing barrier
600x300x1000

3. Structure and working principle

3.1 Channel gate mechanical systems

Mechanical system is divided into two parts, housing and movement. Housing include electric cabinet , indicator, air switch, transformers, reading and writing devices, infrared radiation, etc. Movement include motor, rack, drive shaft, gate / arm, limiter ,etc.

3.2 Electronic control system

Electronic control system include control board, power board, battery, infrared, direction indicator, alarm buzzer , limit switches, transformers and other components.

■ **control board:** system control center which receives infrared reader and radio signals, and these signals with logic judge and processing, send order to direction indicator, motors, counters, alarms.

■ **Power board:** gate will open when power off.

■ **Infrared:** detection pedestrian position and play a security role;

■ **Direction indicator:** Displays the current pass way status, and guide pedestrians safe and orderly manner through the channel;

■ **Alarm buzzer:** system will alarm when illegally entered;

■ **Limit Switch:** control gate turning position;

3.3 Working principle

1) system into operation on 3 seconds after power on .
2) read the valid card , control board detection signal send the signal then door open.

3) Access control board receives the signal, give effective signals to direction light and motor, made the directional signs shows green arrow after comprehensive deal, if the system is normally closed mod the motor is running, move the limit switch controls the motor rotation angle at this time , gates open (normally open mode, the motor does not move), allowing pedestrians pass;

4) Pedestrian pass the channel according to the indicator, infrared sensor can monitor the whole process, and continue to send a signal to the control board until the pedestrian has completely through, then closing the door;

5) If a pedestrian forget or use the invalid card, the system will keep closed and will alarm until exit for channel or re-read valid card;

4. Equipment installation and commissioning

4.1 Equipment installation

◆ Ready tool to install equipment, need the impact drill, wrenches, hammers, expansion screws M10 * 15 or M12 * 15 of 4 pieces each machine.

◆ Multi-channel devices installed, please be sure to follow the numbering sequence on the machine display, the chassis number on the cover on the same side, are not free to replace the machine direction, in accordance with the number placed in the machine, ready to begin installation;

◆ After placing machine, then powered on, confirm alignment of flap turnstile and arm, every edge of the chassis is in the line. After make sure spacing on both sides of the chassis is same, mark hole positioning and burying position. Please be noted the space between swing arm is 50-100mm;

◆ After confirming the fixed line holes and hole locations, drilled holes, and embedded M10 or M12 expansion screws;

- ◆The strong and weak electric cables respectively cable with 3/4" PVC pipe, buried with cement to the appropriate location;
- ◆Each enclosure move to corresponding mounting position, level Bolt-bit one by one;
- ◆Check whether the system composition and working methods are correct or not, After check it is correct, then start the next step work;
- ◆Refer to wiring diagram, connect the power cord, control line and system protective ground line;
- ◆After check the state examination and functional debugging, then tighten the foot nut.

 **Warning**

1. Buried PVC pipe line depth should be more than 60mm, height above the ground shall be greater than 50mm, And exit of pipe is back to the bend, prevent water goes into pipes;

2. When installing access gates, each channel gate should be aligned ;

3. Connect the system protective ground line;

4. If the equipment is used outdoors, puzzle 100 ~ 200mm high concrete platform at the installation of the equipment to anti-damp, and plus roof and other sunscreen , rain-proof facilities ;

5. After installing equipment, state examination and functional debugging is right, then turnstile can be put into normal use.

4.2 Debugging device functions and access control installation

Equipment installation complete, testing by a manual switch. After the tests are normal, the following functions can be carried out commissioning! Swing turnstile/Flap turnstile commissioning instructions

1. Debugging preparation

Check the wiring follow the wiring diagram, Check the power supply wiring and other device wiring properly, power-on debugging after confirmation. Each machine is equipped with the wiring diagram on electric control box cover, When installing, operate against the wiring diagram. Protective equipment must be grounded, otherwise not allowed.

2. Access Controller Installation

If the purchased equipment to install door controller and the reader, to guarantee the entrance guard controller output signals to switch (dry contact signals), such as voltage signal, please relay. Access controller please contact external power supply, don't take power from the device.

A channel in and out of swiping card, needs to configure the two-door control panel, access control output termination 2-way COM, NO, control board inputs of swing turnstile or flap gates is three ports of manually switch configured by our company, in the electronic control box 8P-1 position. Common is VDD, gate signal is the left open or right open.

If the prevailing direction is inconsistent with the swipe direction, reversed the access control two NO terminals or left open and right open signal lines can be interchanged that received from swing turnstile control board and access control board.

5. Equipment operating instructions

5.1 Pls use manual button to test before equipment put into using ,turnstile will be put into use after commissioning normally;

5.2 When poer on , ted to stand in the channel;

5.3 Pedestrian read card to go through, it is prohibited to enter the channel before the direction indicator turns green;

5.4 Pedestrians through the channel, do not stay long time in the middle of the channel;

5.5 Through the gateway, not crowded, should maintain a certain distance between people;

5.6 Prohibited without swipe the card and quickly through the gateway;

5.7 Recommend putting on machine access notice in a prominent place of device works, to guide pedestrian to go through channel safety and orderly;

5.8 Equipment should be properly managed, non-struck, shaking the device after work;

5.9 When the device is turned off, forbidden force sliding or impacting gates;

Warning

- 1. Do not use the machine outdoor when there is lightning to prevent damage to the machine;**
- 2. When the rain disabling, turnstile started again, please put enclosure door, lid open for ventilation, after stream drying, start the power, otherwise it will damage the circuit board;**

Annex I System parameters commissioning instructions

1. Universal Description

- 1) Display is 3 LED of the main control panel display from left to right, The default display RUN;
- 2) Three buttons from left to right is INC key, SET key, DEC key, SET key is used to enter and exit Menu function settings; INC key is for needed parameters setting plus 1; DEC keys are used to set the needed parameters minus 1;

2. Set to enter and exit the menu

- 1) Enter the menu: After pressing the SET button, hear the "beep" sound, release the SET button, Then the display shows the word "P00", mean the state has been set to enter the menu, At this time the available keys INC and DEC keys to select the setting function; Press INC, feature number plus 1, Press DEC key function number minus .
- 2) There are 18 kinds of function settings which need to use is:
 - P00: Exit menu settings function, when there is P00, press the SET button to exit the menu settings;
 - P01: the direction of the motor is powered up, = 000: On power forward, reverse = 001 on power. (Factory 001)
 - P02: gate maximum run time in 0.1 seconds. So time is six seconds to 60, the closing six seconds when not closed the gate to stop closing in place (the default is 60)
 - P03: pedestrians time, in seconds, so the time is 10 seconds to 10, after the passage of pedestrians credit card is not canceled within a set time the card. (Default is 10)
 - P04: mode (the default is 000) P04: Work (The default value is 000)
 - =000: Bidirectional swipe
 - =001: Into swipe card, out free
 - =002: Into free, out swipe card
 - =003: In free, out free
 - =004: Into open (single direction)
 - =005: out open (single direction)
 - P05: Into the opening speed :place of off In place to into direction open the gate in place. (The default value is 10)

- P06: Into the closing speed: place of into direction open gate in place to off in place. (The default value is 10)
- P07: Out the opening speed: place of off in place to out direction open gate in place. (The default value is 10)
- P08: Out the closing speed: place of out direction open gate in place to off in place. (The default value is 10)
- P09: the pass speech is considered to be one people every time (the default is 10)
- P10: counter date is cleared out in the entry , when the display P10 is displayed press SET button after C-L, After pressing the INC key system sends a clear signal to the counter, the entry date will clear.
- P11: counter date is cleared out in the exit , when the display P11 after pressing the SET button displays C-L, press the INC key system sends a clear signal to the counter, the exit date will clear.
- P12: with memory or without memory function set, the default bidirectional without memory function.
 - = 000: two-way with memory,
 - = 001: the entry without memory, the exit with memory,
 - = 002: the exit without memory, the entry with memory,
 - = 003: two-way without memory.
- P13: device address, ie few numbers machine. Range 1-255. (System default is 001)
- P14: Device Type
 - = 000: the equipment is swing gate
 - = 001: the equipment is flap gate
- P15: System Restore Defaults, press the SET button when display P15, press INC the system will Restore Defaults when display P-2 then press INC,
- P16: gate opening direction when the communications regulator. = 0 is one direction, then in the bidirection is = 1, If the swing turnstile open two gates in order to ensure the same channel in the same direction the side is set to 0 while setting 1.
- P17: Infrared delay functions: pedestrians through the system long delay closing the shutter is normal without delay, if the gate is long, pedestrian after pedestrian hit by immediately closing will be to adjust the delay to avoid beating here .
- P19: Aging test.
- P20: Gate open or not open when Infrared was covered.

- =000:Open.
- =001: Not open.
- P21: Close door or not close when people retrograde.
- =000:Not close.
- =001:Close.

2.Exit menu settings: Press INC or DEC key, When display words P00

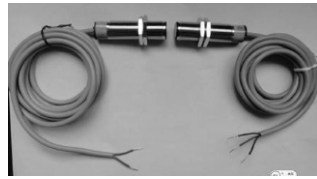
Note: 1.Without permission, the system may not add peripherals and take power from the machine;

2.In debugging process, the debug results are inconsistent with function. Please refer to the common faults.Basic Concepts

Annex II , common faults and analysis



Limiter



Infrared shooting



Hall switch

Basic Concepts

A. limit photovoltaic board (for swing gate) :have blocked off opto-rays when the yellow line terminal 12V pulse signal output , voltage output will limit red plate , no blocking light rays off opto coupler, always explain stopper plate damage.

B. Motor : DC24V DC gear motor , work -load current of about 300mA, the load current is less than 1.2A.

C. Power board :it has automatically open when power off functions for swing turnstile and flap gate.

D. Cylindrical infrared radiation : (alarm and signal detection with pinch of) from the transmitter and receiver composed of a 2- wire transmitter power input (Brown : +12 V, blue : GND), the normal power supply indicator light ; receiving end of a 2- wire power input (brown : +12

V, blue : GND) and a signal output line (black line : +12 V), when the region , which has an output signal when the output indicator lights off when people pass the time +12 V, contrary to 0V.

E. Cylindrical Hall switch : (swing turnstile control by position) There are three lines, two power inputs , Brown : +12 V, blue : GND and an output signal when the sensor head hit the magnet or metal objects (induction Distance Output +12 V 2-4mm) when , contrary to 0V.

Swing turnstile & flap turnstile failure analysis and processing

1. After power rear gate arm rotate back and forth or limited to bits

1) Determine whether the limit plate by bright light (usually outdoors installation and commissioning)

Detection methods: cover cover ; if necessary to open the case , please use dark colors opaque objects covered limit plates for debugging !

2) Test limit board

A. Check the zero position, left open place, the right place to open the stopper plate is powered, 4PIN check for loose or poor contact thread.

B. Use a screwdriver to turn off left in place, the right place and the zero limit board optocoupler optocoupler time position indicator off lights , and the output voltage of +12 V, the motherboard will light the lamp in place , otherwise the limit plate is damaged.

3) Check limit board and the board is connected reliable, check the control board terminals left in place , the right place , zero loose .

4) Limit board and main board connections are normal, the main board is damaged.

5) Check the power board voltage output is normal, if no voltage output for power supply board , the power board is damaged.

6) flap turnstile rotate back and forth or spacing when power on ,check the signal of hall line weather is loose ,check the hall wheather if aim to the magnet in the flap turnstile arm ,the distance is 2-5mm between hall switch and magnet ,if it is not aim correctly , pls lateral adustment the hall switch place ,if the magnet is drop ,pls installed it back to it' s position .the magnet has the north and south pole, magnet aim to the hall switch correctly ,yellow light of the hall switch will light ,

2. Gates no action when power on

1) Zero on the main board and the power indicator red light , normal , motor does not move.

A. Detecting the motor terminals MA, MB at both ends if there is voltage output (DC24V), if the output , connect the motor to detect the presence or absence desoldering ; whether the motor is damaged , check motor damage the motor directly to the red and black wire connected to the battery to see whether the motor has action

B. If the above checks are normal, the movement may have stuck state, the first red and black electrical line access batteries, let the arm back to zero, then the red and black wire motor recovery, with a manual switch test, if the manual switch arm will be action, but not smooth, indicating that the movement has impact damage in need of repair movement

2) Zero-board LEDs and the power indicator red light, the left or the right place to have a place also bright yellow, indicating zero stopper plate failure, replace the zero limit plate

3) board LEDs are off, the detection output of the transformer PA, PB voltage output (AC12V), PC, PD output voltage (AC18V), if the voltage output is normal, test fuse is blown. As described above normal, determine the motherboard is damaged; if the transformer output voltage, indicating transformer is damaged, replace the transformer

4) Check the lower right corner of the motherboard 4 iron sheet 9540 and 540 transistors, transistor roots is black, there are traces of burning; triode intermediate angle is common, use a multimeter to test whether there is resistance on both sides, if the resistance shows transistor burned, damage to the main board.

3. Effective gate signal given ,gate no action

1) The board LEDs normal, when the effective gate signals to the left or right gate gate lights, directional board will turn green arrow (herein contain two different directions signal), gates no action:

Detection methods: PC main board access detection output of the transformer of the Blue Line, PD position of the output voltage (AC18V) is normal, detect F2 (5A) fuse is blown; if normal, test the motor terminals MA, MB if there ends voltage output (DC24V), if the output motor connection detecting the presence or absence sealing off; if motor damage;

2) The board lights are off:

Detection Methods: transformer output PA, PB voltage output (AC12V); detecting fuse is blown. As described above normal, determine damage to the motherboard;

4. After the gate to the effective signal gates directional arrows backwards, traffic will alarm.

Access control gates connected to the main control panel reversed the signal line , the access control gate signal lines of two NO swap position

5.The gate not close after open

When pedestrians after the gates closed not reset (refer equipped with an infrared sensor function of gates)

1) detection method: first detecting infrared light is lit motherboard pinch, if there is no alignment of the infrared light is described pinch or damage, the anti-trap infrared alignment adjustment or replacement of infrared, or put a bad pinch IR the signal line removed.

2) If you do not pinch the infrared light, the zero light is bright illustrate zero limiter destruction or damage to the motherboard;

6.The gate no action after power on

1) detecting battery voltage (not less than DC9V);

2) Check the battery to the power supply board HB + 12V and GND wiring is loosening

3) Check the power board is damaged

7.The arm no spacing after power off and arm reverse after power on .

1) Arm no spacing after power off problems, see fault 1 treatment

2) After power swing reversal, look red and black electrical cable is reversed,

3) check the power board to the main board left in place OLMT cable is loose, left in place to detect stopper plate is damaged,

4) Check the motherboard P01 is set to 000, and 001 are subject to change please

8. When flap barrier or swing barrier run from opposite directionas open gate ,when cut off the infrared and the gate will open

1) Check the mainboard's menu feature set, P04 menu setting Function Select (For details, see menu Commissioning Instructions).

9. When flap barrier or swing barrier run from opposite directionas open gate ,the open time is different

1) Two gates P03 to set is different time, (see System parameter setting instructions) Check P03, P17 time parameter;

2) Check the cable line, the line is loose or sealing off.

3) left and right to adjust the swing turn stile stopper plate position, control arm with stroke

4) Adjust P05, P06, P07, P08 digital, P05, P07 is the gate speed, P06, P08 is closing speed, the greater the value, the slower the speed, the fast transfer of large numerical side of the machine to ensure that both sides of sync.

5) If it is off swing gates, swing gates adjust the stopper plate position, the control arm stroke can also adjust the synchronization of the two machines. 4) Adjustment of P05, P06, P07, P08 digital, P05, P07 is gate speed, P06, P08 is closing speed, the greater the value, the slower the speed, the faster side of the large value transfer machines to ensure both sides of the synchronization.

10. After swiping gate to switch repeatedly

First test by a manual switch first, gate open properly, swipe the switch several times, then adjust the door access controller delay, the door into a one second delay.

11. When the arm is in the closed position and can be pushed by hand.

First adjust the position of the intermediate stopper plate, alignment can not be pushed to the middle position; adjusted or not, it indicates that in the course of swing gates strike movement was caused

by the movement or prolonged wear, so that the movement clearance groove plate is too large, the movement groove disc space can only be adjusted, or replaced recessed pan movement

12. flap turnstile a direction is normal, a direction is spacing after swinpe card.

Check the control panel settings P14, set P14 into 001

Annex swing turnstile flap turnstile wiring diagram one

Annex swing turnstile flap turnstile wiring diagram two

