instruction for installation

INSTALLATION MANUAL

Table of Contents

01 installation instructions

1. Installation Requirements
2. Starting installation

02 Equipment Adjustment

1. Equipment Commissioning
2. Parameter Description

03 Troubleshooting and Maintenance

1. Ticket Gate Troubleshooting
2. Precautions and Maintenance



Chapter 1: Installation Instructions

Installation Requirements

1、 The finished surface of the turnstiles must be level.

2、 For outdoor installation, use concrete grade C30 or higher;

3、 The concrete thickness for outdoor installation shall be 200 mm;

4、 The foundation must consist of frost-free soil with adequate bearing capacity;

5、 Power supply requirements: the equipment must be grounded;

6、 The power cable shall be no smaller than RVV3×2.0;

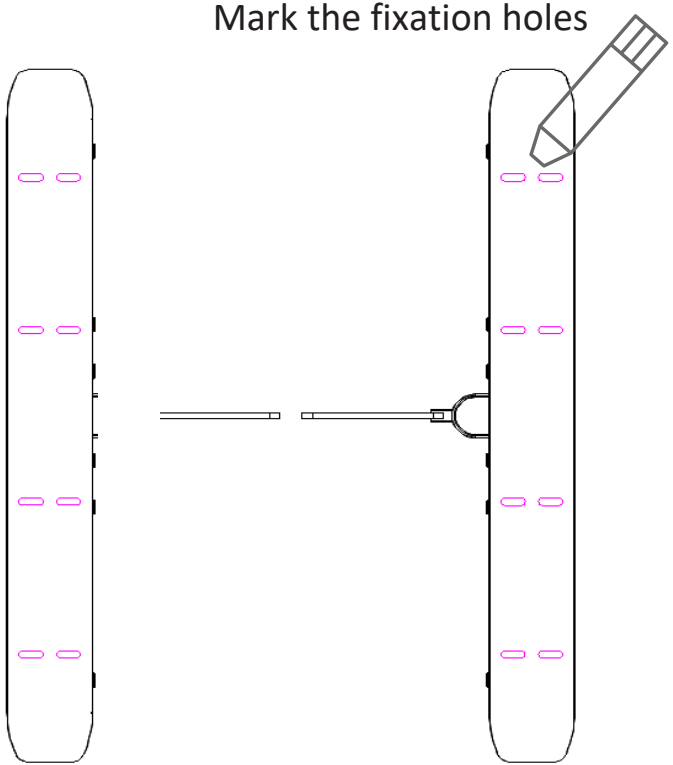
7、 When installing the equipment, ensure that the machine frame is level and the rotating shaft is vertical.

Starting installation

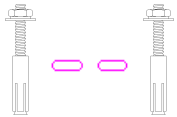
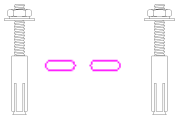
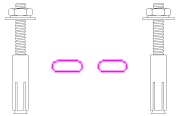
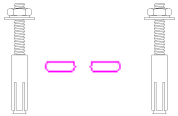
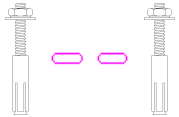
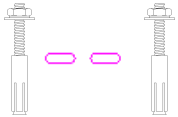
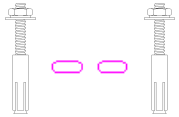
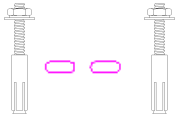
Based on the channel requirements, position the equipment properly to ensure that both ends of the equipment are flush and that the channel width remains consistent.



Mark the fixation holes

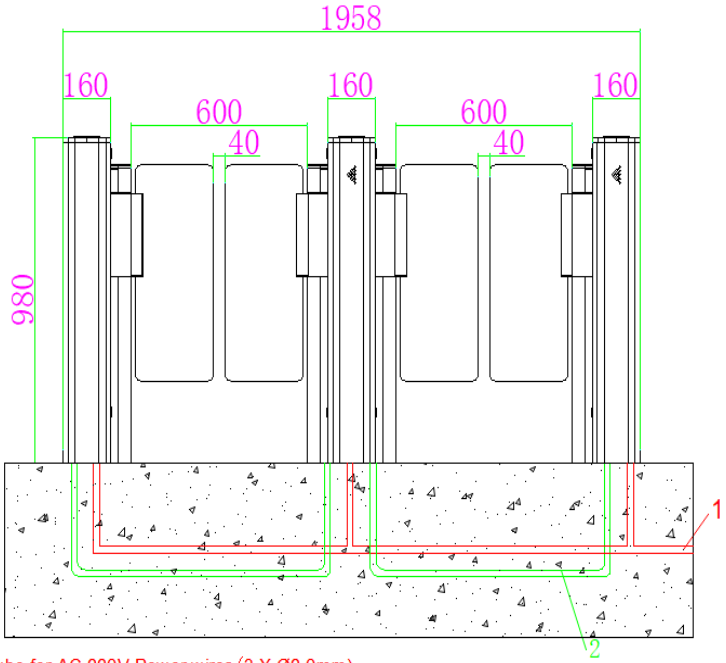


Remove the Equipment and Install Pre-Embedded M12×100 Expansion Bolts in the Marked Holes.

Pre-Embed Wiring According to the Wiring Diagram.

(Note: This device requires only a power cord; if installed, cabling can be arranged according to actual conditions.)



Installation Manual:

1 The Ø20mm PVC tube for AC 220V Power wires (3 X Ø2.0mm).

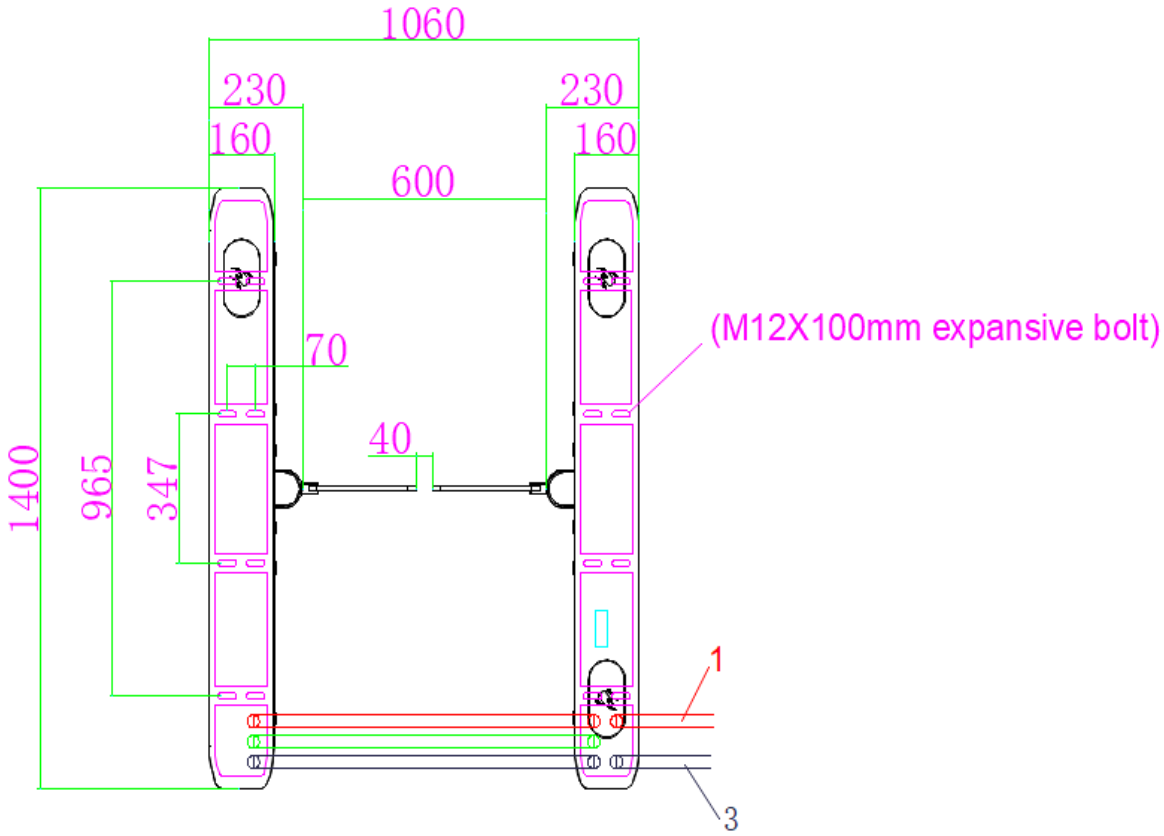
2 The tube for connecting vice-machine to master machine in the same lane (CAT5 network cables*2PCS, 6 * 1.0mm line*1PCS) .

3 TCP/IP ethernet cable for connecting access device to PC.

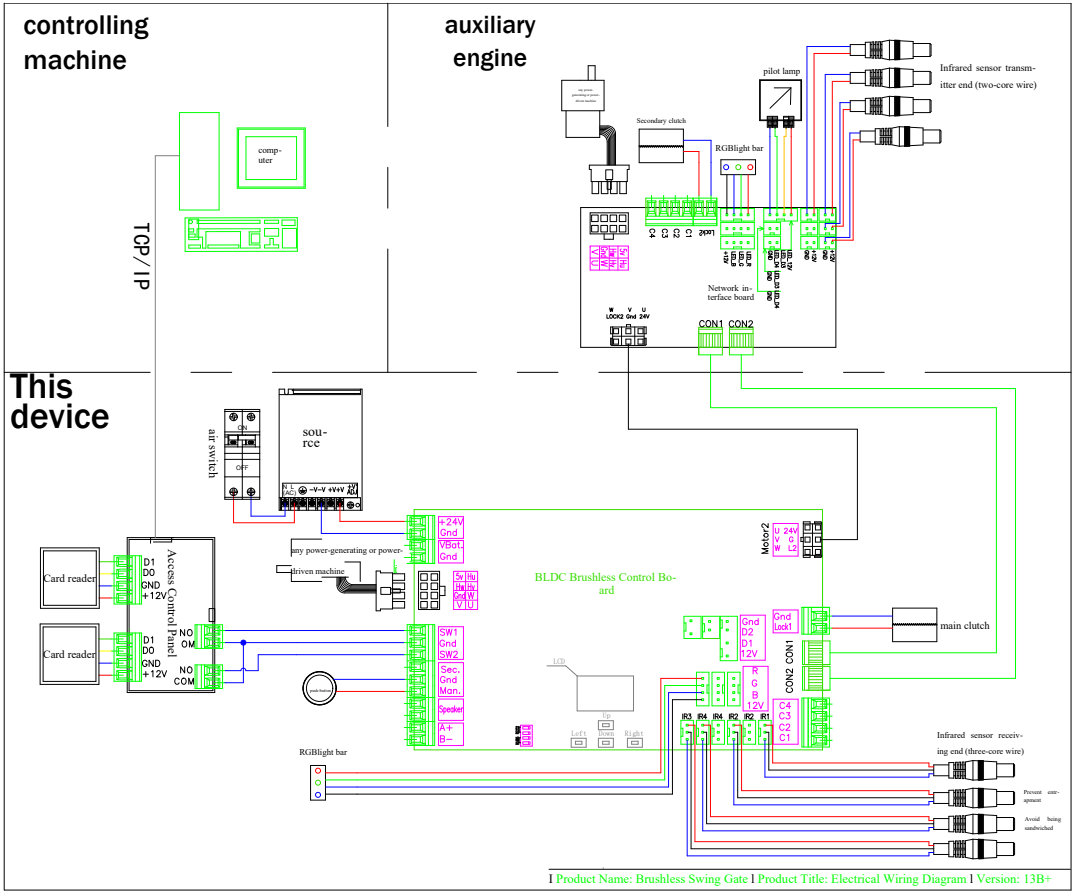
4 Control board .

5 Fixing the equipment with M12 X 100mm expansive bolt .

Equipment Installation and Fastening



hookup


controlling machine
auxiliary engine
comp-uter
TCP/IP
Secondary clutch
pilot lamp
Infrared sensor transmitter end (two-core wire)
RGBlight bar
Network interface board
CON1 CON2
This device
air switch
sou-rce
Card reader
Card reader
Access Control Panel
my power-generating or power-driven machine
BLDC Brushless Control Board
Motor2
main clutch
LCD
Up
Left
Down
Right
RGBlight bar
Infrared sensor receiving end (three-core wire)
Prevent entrapment
Avoid being sandwiched
I Product Name: Brushless Swing Gate I Product Title: Electrical Wiring Diagram I Version: 13B+



Chapter 2: Equipment Commissioning

Testing of equipment

1、 Inspect the wiring: Refer to the wiring diagram to verify that the gate control connection wires and power wires are correctly connected; only after confirming that everything is correct should the power be applied. If any abnormality occurs during the power-on process, disconnect the power immediately and inspect the connection wires.

2、 Functional debugging: After powering on the machine, open the turnstile, close it, then reopen it, and finally close it again; this sequence constitutes the machine's self-check. The self-check will be completed after two beeps lasting two seconds. During this process, do not obstruct the infrared sensors, and do not stand in the passage.

3、 Under normal operating conditions, if the access gate is entered without swiping the card, the gate will trigger an alarm; if no alarm is triggered, please verify that the infrared sensor is properly aligned. In the absence of obstructions, the infrared receiver will display a red indicator light; if the indicator light on the receiver shows a different state, it indicates that the infrared emitters and receivers are not properly aligned, and they should be adjusted accordingly.

4、 The unlock time of the access control relay must be set to 0 seconds or 1 second.

5、 When using a valid card, the indicator light will turn into a green arrow; if the indicator light points in the wrong direction, or if the channel gate closes immediately and an alarm is triggered, simply swap the connections of SW1-Gnd and SW2-Gnd.

6、 Conduct a thorough inspection and testing to ensure that the door switches operate normally, the indicator lights function correctly, and the infrared anti-pinch feature operates properly before putting the equipment into service.

parameter declaration

Menu item	Explain
1. Common Parameters	
1.1 Number of passersby	Display the number of people who have passed through.
1.2 Gate Mode	1. The display shows the current menu of the control board. 2. Four buttons: up, down, left, and right; up/down for navigation; left for returning to the parent menu; long-press for 3 seconds; right-click "ENT" to proceed.
	Enter the menu, then simultaneously press and hold "ENT + Down Arrow" for 3 seconds to access "Advanced Parameters".
1.3 Travel time	Set the maximum passage time per person (0.1–25.5 seconds); default value: 5 seconds
1.4 Authorized Memory	Configure whether to enable card-swipe memory function; it is disabled by default in both directions.
1.5 Swipe your card at the turnstile	Configure whether card swiping in the channel is permitted; disabled by default.
1.6 Door opening delay	The delay before the door opens after authorization is set to 0 seconds by default (range: 0.0–25.5 seconds).
1.7 Door closing delay	The delay before closing the door after the passage ends (0.0–25.5 seconds) defaults to 0 seconds.
1.8 Minimum speed: 1	Set the power-on self-test speed of the host; the lower the value, the slower the speed.
1.9 Maximum speed: 1	Set the door opening and closing speed of the host; the higher the value, the faster the speed.
1.10 Minimum speed: 2	Set the power-on self-test speed of the secondary machine; the lower the value, the slower the speed.
1.11 Maximum speed: 2	Set the door opening/closing speed of the auxiliary machine; the higher the value, the faster the speed.
1.12 Passage complete	Set the infrared pedestrian passage end detection point (exit, anti-pinch) to the default exit.
1.13 Intrusion Alert	Configure the intrusion alarm mode; alarms are enabled by default.
1.14 Reverse traffic	Configure the warning mode for reverse traffic; enable warnings by default.
1.15 Follow-pass	Configure the trailing access alert mode; alerts are enabled by default.

1.16 Voice input	
1.17 Output voice	
1.18 Alarm voice message	
1.19 Advanced Parameters	Access the advanced parameter settings option
.1. Motor reduction ratio	Set the motor reduction ratio (1–120)
.2 KP1	
.3 KP2	
.4. Overcurrent Protection	Set the motor overcurrent protection threshold; the default value is 2.0 A.
.5. Door opening angle 1	Set the approach opening full-extend angle of the host machine
.6. Door opening angle 1	Set the open-end positioning angle of the host
.7. Door opening angle: 2 °	Set the approach angle of the auxiliary machine to the fully open position.
.8. Door opening angle 2	Set the full opening angle of the secondary machine's output door
.9. Buffering coefficient: 1	Configure the host to include a buffer when the door reaches the closed position.
10 Buffer coefficient: 1	Configure the host's outbound door-closing buffer.
11 Inlet buffer coefficient: 2	Configure the auxiliary machine's approach to the door-closing buffer zone.
12 Buffer coefficient: 2	Configure the secondary machine's output to include a buffer upon full closure of the door.
13 Level of resistance	Counterforce required to operate the gate in standby mode (no clutch mode)
14 Output Control 1	Display of host angle value and Hall effect sensor position
15 Output Control 2	Display of auxiliary motor angle and Hall effect sensor position
16 Clutch engaged	Set the clutch (1. Disabled 2. Enabled)
17 Save as default	Set the current parameters to factory defaults.
18 Automatic Reporting	Whether to automatically report status changes of the turnstile via RS485 is disabled by default.

19 Motor Direction 1	Set the rotation direction of the main motor (1. Forward; 2. Reverse)
20 Motor Direction 2	Set the rotation direction of the auxiliary motor (1. Forward; 2. Reverse)
21 Motor type	Select motor type (1. Standard motor; 2. Integrated motor)
22 Indicator light mode	Set default parameters for indicator lights (static running light, square light)
23 Relay counting	Whether to use the relay for passage counting; disabled by default.
24 Change equipment type	Set the controller device type (swing gate, flap gate, three-roll gate)
2. System Settings	
2.1 Language	Set the display language for the menu
2.2 device type	Display the device type of the control board
2.3 Version Information	Display the software and hardware version information of the control board
2.4 device address	Set the device's logical address
2.5 485 baud rate	Set the baud rate of the RS485 communication port
2.6 Reset to factory settings	All parameters have been restored to their factory default settings.
2.7 Restart device	Reboot
3. function testing	(The following features are available only to qualified engineers)
3.1 Door/Window Switch Test	Door opening and closing cycle test
3.2 Set the zero point	1. Press and hold the right-side "ENT" button for 3 seconds to access Menu Option 3: Functional Testing. Alternatively, press and hold both the "ENT" and "Down" buttons simultaneously for 3 seconds to access 3.2: Zero-Point Setting.
	3. Right-click to access the settings, adjust the alignment baffle, and confirm the settings; then left-click to exit.



chapter three

Fault Diagnosis and Maintenance

Gate Fault Troubleshooting

Basic Concepts:The bidirectional infrared sensor consists of a transmitter and a receiver. The green indicator light at the end of the transmitter remains constantly lit; when the receiver (equipped with three wires: brown for 12V, blue for Gnd, and black for the signal line) is unobstructed, the red indicator light at the end of the receiver does not illuminate, and no voltage is output between the black signal line and the blue wire; when the receiver is obstructed, the red indicator light at the end of the receiver illuminates, and voltage is output between the black signal line and the blue wire.

Hitch	Analysis and Processing Methods
1、 Is the indicator light not lit?	Switch to another test unit, or swap it with a working one, and then check the wiring.
2、 Is the direction of one of the indicator lights incorrect?	Connect the wiring of control panels D1 and D2.
3、 After swiping the card, one of the door flaps remains stationary?	Check whether the wiring is loose; disconnect the power supply and verify that the connection wires are properly engaged; then individually inspect the motor ports W, V, and U on the control board to ensure that the wire colors correspond exactly to their respective ports.
4、 Do the gates open as soon as you enter the passage?	Change the control panel menu's pass mode from bidirectional free access to card-swipe mode.
5、 After swiping the card, the passage triggers an alarm and the gate closes.	The gate-open signal is connected to the two terminals of the opposite-phase control board: SW1 GND and SW2 GND.

Precautions and Maintenance



Why does 304 stainless steel rust?

Scientific research has demonstrated that the primary environmental factors contributing to the corrosion and rusting of 304 stainless steel are the widespread presence of hydrogen ions and chloride ions. For instance, in environments containing table salt, sweat stains, seawater, sea breeze, or soil, stainless steel can corrode rapidly—sometimes even faster than ordinary low-carbon steel—in the presence of helium ions. Consequently, specific environmental conditions must be met when using stainless steel, including regular wiping to remove dust and maintaining a clean, dry surface.

Stainless Steel Turnstile Maintenance Manual

Dear valued customer,

Dear Customer, thank you for purchasing our products. We hereby formally assure you that all personnel access channel products you purchase are manufactured from 304 stainless steel, feature superior manufacturing processes, and have undergone rigorous quality inspections, ensuring that the product quality meets all standards. However, during installation and operation, due to improper handling or adverse climatic conditions, certain components may inevitably experience wear and degradation, which could lead to rusting of the product surface and adversely affect your customer experience. We recommend that you perform regular maintenance and care on your products to ensure they remain in optimal condition over time.

Type: Surface dust, chemical liquids, grime, and acidic or alkaline substances

Processing method: Dip a soft non-woven fabric into water for cleaning, then wipe it clean; subsequently, wipe it with alcohol, and finally wipe the entire surface of the turnstile with WD-40 rust preventive spray.

Maintenance period: Weekly maintenance



Type: The surface exhibits iridescent patterns or appears dull in color.

Processing method: First, dip a soft cotton cloth in warm water, rinse it thoroughly, and then wipe it clean. Next, wipe the surface with alcohol, and finally wipe the entire gate with WD-40 rust preventive spray.

Maintenance period: Weekly maintenance



Type: Inspect the moving parts for abnormal noises or looseness.

Processing method: Apply butter to the movable areas.

Maintenance period: Quarterly maintenance



Type: Inspect the fasteners for looseness and the electrical circuits for any abnormalities.

Processing method: If fasteners are loose, re-tighten the fasteners (e.g., screws) and troubleshoot any electrical abnormalities.

Maintenance period: yearly maintenance



Maintenance Tools and Materials

1、 Cleaning agents: Choose a mild, stainless steel-specific cleaner; avoid using cleaners containing acidic or alkaline ingredients.

2、 Soft cloth or sponge: for applying cleaner and wiping surfaces.

3、 Clear water: For rinsing surfaces.

4、 Drying cloth: Used to wipe away moisture from surfaces.

5、 WD-40 Rust Remover: For use on parts that have been exposed to corrosive environments for extended periods and exhibit signs of corrosion.

6、 Lubricating oil: for bearings, locking arms, and transmission joint components

Matters Need Attention

1、 Avoid using cleaners containing acidic or alkaline ingredients, as these ingredients may damage the surface of stainless steel.

2、 Avoid physical damage: Do not use sharp or hard objects to scratch the surface of the turnstile, as this may compromise its aesthetic appearance.

3、 Keep the surface dry and avoid exposing the stainless steel surface to damp environments for extended periods, as moisture can lead to corrosion. If any moisture remains on the surface, promptly wipe it clean with a clean cloth.

4、 Perform regular inspections and maintenance, including periodic checks of the stainless steel surface to promptly identify and address any issues. If rust or scratches are detected on the surface, immediate repair or replacement should be carried out.