BRUSHLESS SERVO SWING GATE

USER MANUAL

1 PRODUCT INTRODUCTION

1.1 INTRODUCTION

The brushless servo swing gate is a kind of 2-way speed access control equipment designed for places with high class security requirements, which has a motor with the biggest MCBF and the most controlled movement.

1.2 FUNCTION FEATURES

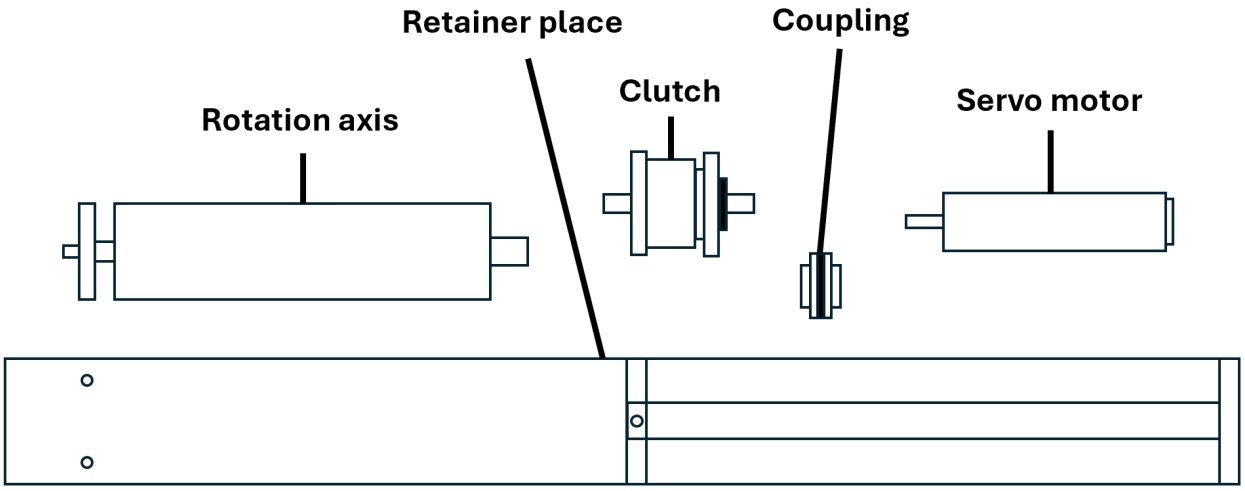
1) Varied pass mode can be chosen flexibly
2) Standard signal input port: can be connected with most of the access control devices
3) The turnstile has automatic reset function: if people swipe the authorized card, but don't pass through within the settled time, they need to swipe card again for entry
4) Card-reading recording function: single-directional or bi-directional access can be set
5) Automatic opening after emergency fire signal input
6) Infrared anti-pinch function and physical anti-pinch function (when the door is closed, it will rebound and open)
7) Illegal break-in and anti-tailgating control technology
8) Automatic detection, diagnosis and alarm and sound and light alarm
9) High light LED indicator, displaying passing status
10) Self diagnostic and alarm function for convenient maintenance and use
11) Gate will automatically open when power failure (with 12V battery connected)

1.3 PRODUCT STRUCTURE AND PRINCIPLE

1.3.1 Product structure

The structure of the product is mainly composed of mechanical system and electric control system

Mechanical system

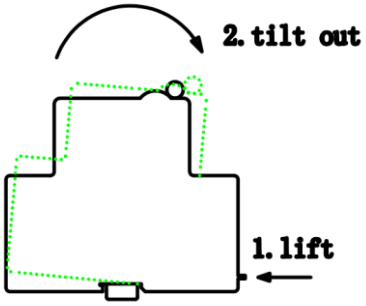


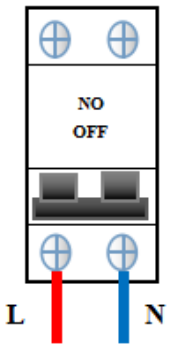
Electric control system

Nº	Name	Function
1	Access control device	IC/ID card access control, fingerprint, face recognition, code reader, access control device send delay signal to the turnstile board door signal (it is available according to actual use)
2	Brushless servo control board	The control center of the system: when receiving the access control device delay signal, it control motor running so that the gate opened. The direction indicator light turns green. While receiving core position sensor, infrared sensor, and judging and processing logic of these signals, keep the gate components of intelligent coordination work
3	Infrared sensor	Detect the passage of people in the lane
4	Servo motor driver	Control the starting, position, stop, speed of the servo motor
5	Indicator	Display the current channel statuss
6	Brushless servo motor	Drive the movement to accurately open or close the gate
7	12V battery	The gate will keep open the door automatically when power failure
8	Clutch	Illegal intrusion automatically locks the wing door
9	Power supply	Power supply to control board

2 EQUIPMENT INSTALLATION

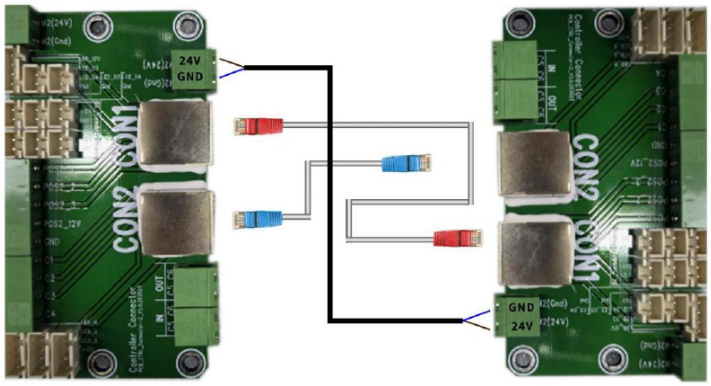
Connecting AC 100~220 V power input

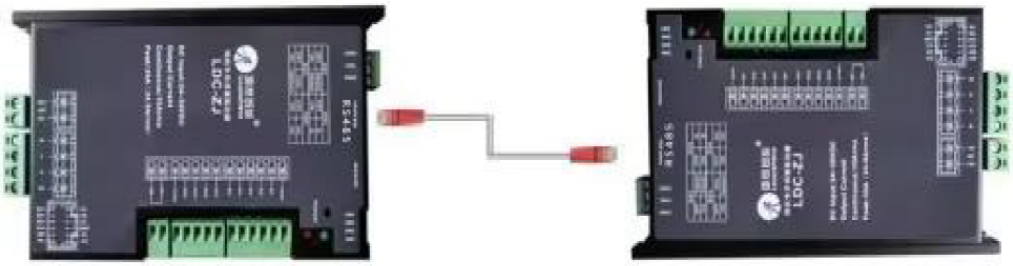


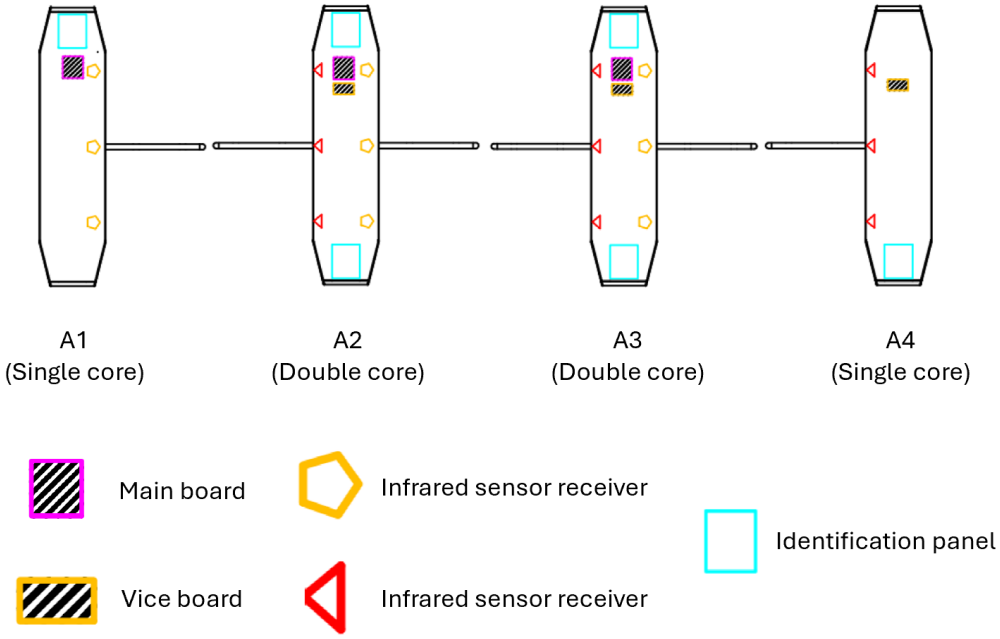


AC100-220v Input connecting wires

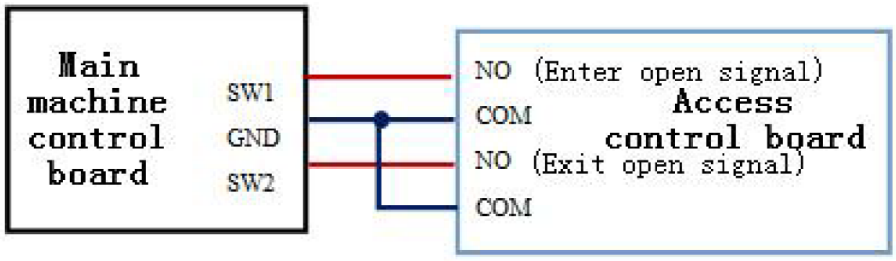
Connection between main machine and vice machine



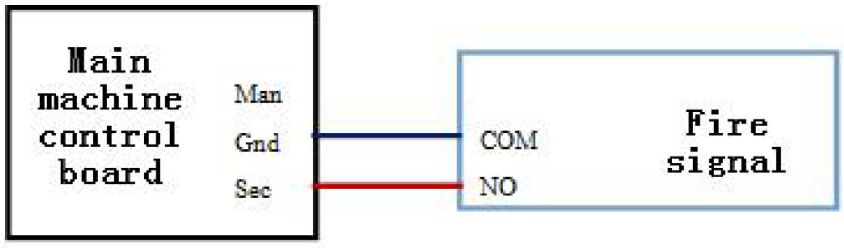




Access control device connection

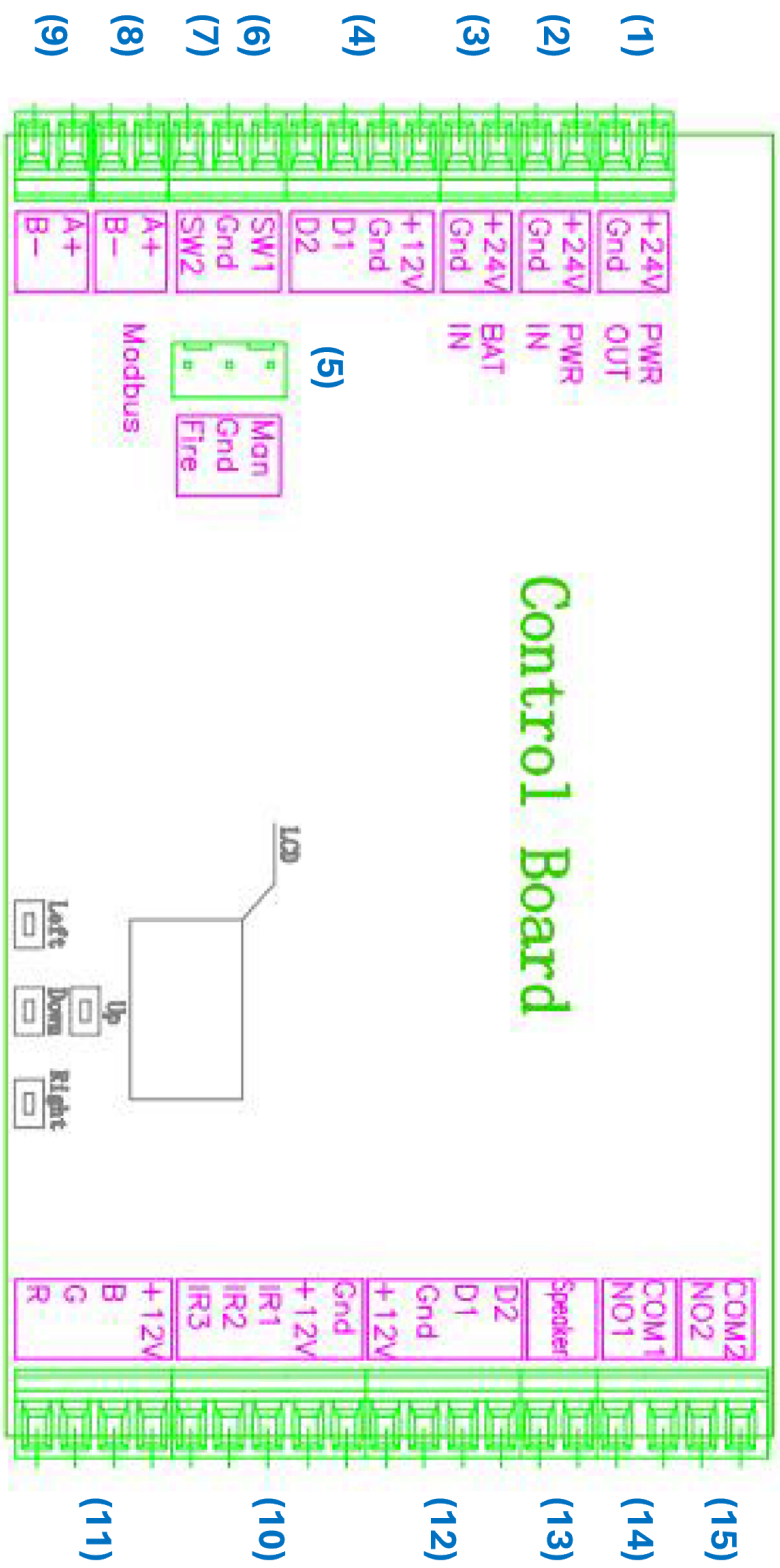


Fire signal connection



3 MAIN BOARD CONNECTION

3.1 BOARD INSTRUCTION



Port	Instruction			Mark
(1) PWR OUT	1	+24V	24VDC power output to the driver	
	2	GND		
(2) PWR IN	3	+24V	24VDC power supply	Connect to 24V DC power supply
	4	GND		
(3) BAT IN	5	24V	24V battery input port	Connect the 24V battery
	6	GND		
(4) Indicator 1	7	+12V	In direction indicator output port +12V/GND power supply D1/D2 for enter/exit direction	Connect to indicator 1
	8	GND		
	9	D1		
	10	D2		
(5) Sec Gnd Man	11	Man	Fire alarm input GND Normally open input	Short for normally open. Close immediately when cancel
	12	Gnd		
	13	Sec		
(6) Enter SW1	14	SW1	Enter open signal input	Connect to access device: NO-SW1/COM-Gnd
	15	Gnd		
(7) Exit SW2	16	SW2	Exit open signal input	Connect to access device: NO-SW2/COM-Gnd
	17	Gnd		
(8) COM1 (485)	18	A+	RS485 communication	Communication for servo motor driver
	19	B -		
(9) COM2 (485)	20	A+	RS485 communication	Communication for access device
	21	B -		
(10) IR sensor	22	IR1	Enter infrared sensor Pinch infrared sensor Exit infrared sensor	Control board alarm when sensor be block
	23	IR2		
	24	IR3		
	25	+12V	12V output for infrared	
	26	GND		
(11) RGB LED	27	R	Negative of LED blue Negative of LED green Negative of LED red +12V for LED bar	Connect to LED bar
	28	G		
	29	B		
	30	+12V		
(12) Indicator 2	31	+12V	Out direction indicator output port +12V/GND power supply D1/D2 for enter/exit direction	Connect to indicator 2
	32	GND		
	33	D1		
	34	D2		
	34	COM1		
(13) Speaker	35		Voice expansion port	
	36			
(14) Counter 1	37	NO1	Relay output for enter	
	38	COM1		
(15) Counter 2	39	NO2	Relay output for exit	
	40	COM2		

3.2 PARAMETER INSTRUCTION

The display screen is refers to the main control board of 3 LED display from left to right. Four buttons: UP and DOWN for switch, ENT for sub-menu and ESC for previous menu. Long press "ENT" 3 seconds unlock into the menu. Select Advanced Parameters and long press "ENT + DOWN" 3 seconds unlock into the menu.

Item	Explain
1.Parameters	
1.1 Counter	Display pass through count
1.2 Gate mode	Set gate mode (NO, NC and card, free or reject) of enter and exit: 1.NC both reject / 2.NC both free / 3.NC both card (default) 4.NC card/free / 5.NC card/reject / 6.NC free/card 7.NC free/reject / 8.NC reject/free / 9.NC reject/card 10.NO both free / 11.NO both card 12.NO card/free / 13.NO free/card
1.3 Pass timeout	Set maximum waiting time: 10-255, unit 0.1 seconds (default 5 seconds)
1.4 Memory	Set scan card with memory mode: 1.Two-way disable (default) / 2.Enter allow / 3.Exit allow / 4.Two-way allow
1.5 Read in lane	Set scan card after entry lane: 1.Disable (default) / 2.Allow
1.6 Open delay	Set authorized open door delay: 0-255, unit 0.1 seconds (default 0 seconds)
1.7 Close delay	Set close door delay after passage finish: 0-255, unit 0.1 seconds (default 0 seconds)
1.8 Open speed	Set master motor basic speed: 35-250
1.9 Close speed	Set vice motor basic speed: 35-250
1.10 Pass end	Set IR check passage end position: 1.Exit (default) / 2.Safety
1.11 Intrude	Set intrude alarm mode: 1.No alarm / 2.Alarm (default) / 3.Alarm and close
1.12 Reverse	Set passage from reverse alarm mode: 1.No alarm / 2.Alarm / 3.Alarm and close (default)
1.13 Tail-gating	Set tail-gating alarm mode: 1.No alarm / 2.Alarm / 3.Alarm and close (default)
1.14 Entry voice	
1.15 Exit voice	
1.16 Alarm voice	
1.17 Adv. param.	
.1 Set torque	
.2 Save factory	Save the current parameter to factory default
.3 Relay mode	Set add relay use for passed counter: 1.Disable (default) / 2.Enter allow / 3.Exit allow / 4.Both ballow

.4 Auto report	Set automatic report gate status when on change: 1.Disabled (default) / 2.Enabled
.5 NO direction	Set the normally opening direction (default: enter)
.6 Power lost	Set the normally opening direction when power failure (default: enter)
.7 Barriers	Signal or double machine work: 1.Double (default) / 2.Signal
.8 IR logic	Set use local IR sensor logic
.9 LED mode	Set LED indicator default parameter: 1.Static LED / 2.Square LED
.10 Set device type	Set controller device type: 1.Swing barrier / 2.Flap barrier / 3.Tripod turnstile
2.System Set	
2.1 Language	Set menu display language
2.2 Device type	Display controller device type
2.3 Version	Display hardware and firmware version information
2.4 Set address	Set device logic address
2.5 RS485 baud	Set the baud rate of the RS485
2.6 Reset	Reset all setting to factory default
2.7 Restart	Restart controller
3.Factory Test	
3.1 Cycle test	Open and close door cycle test
3.2 Set zero	Set barrier close position
3.3 Set enter position	Set barrier position of entry open in place
3.4 Set extit position	Set barrier position of exit open in place
3.5 Slid gate type	

4 TROUBLE SHOOTING

FAULT 1: board sound alarm when power on and the LCD dispal self-check fail

Check the connect RJ45 wires of two servo motor driver and check RS485 connect wire from servo motor driver to main board.

FAULT 2: swipe into the first sensor, gate give alarm and close immediately

This means that the signal connection is opposite, exchange the open signal connect terminal of SW1/Gnd to SW2/Gnd.

FAULT 3: indicator light is not bright

Take the other indicator or control board from other lane and check it.

FAULT 4: barries are not alignment

Reset barriers close position parameter of main board.

FAULT 5: one side of the wing door does not work

1) Check whether the connection wires is loose

2) Check the motor

5 WIRING DIAGRAM

