BRUSHLESS SWING GATE

USER MANUAL

1 PRODUCT INTRODUCTION

1.1 INTRODUCTION

The brushless 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 more MCBF and more 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

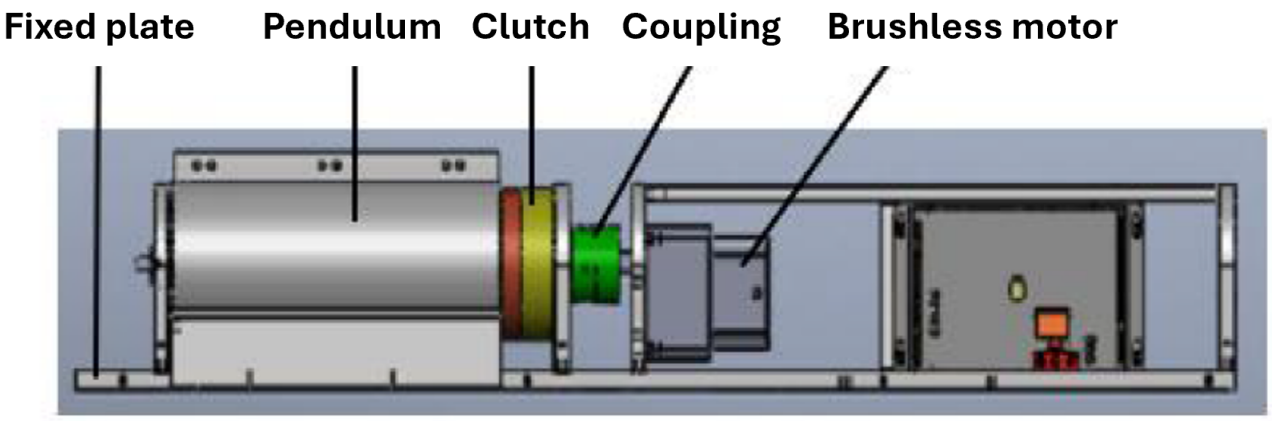
11) Gate will automatically open when power failure (with 12V battery connected)

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

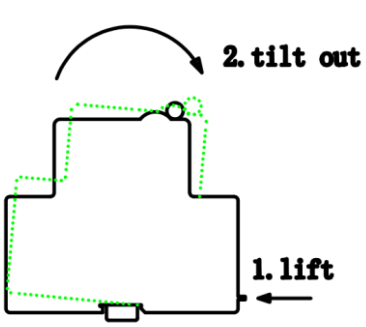


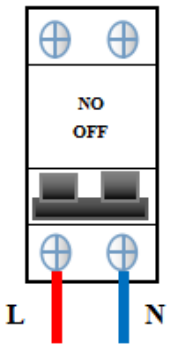
Electric control system

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 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	Position sensor	Detects and controls the opening and closing position of the gate
5	Indicator	Display the current channel statuss
6	Brushless 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

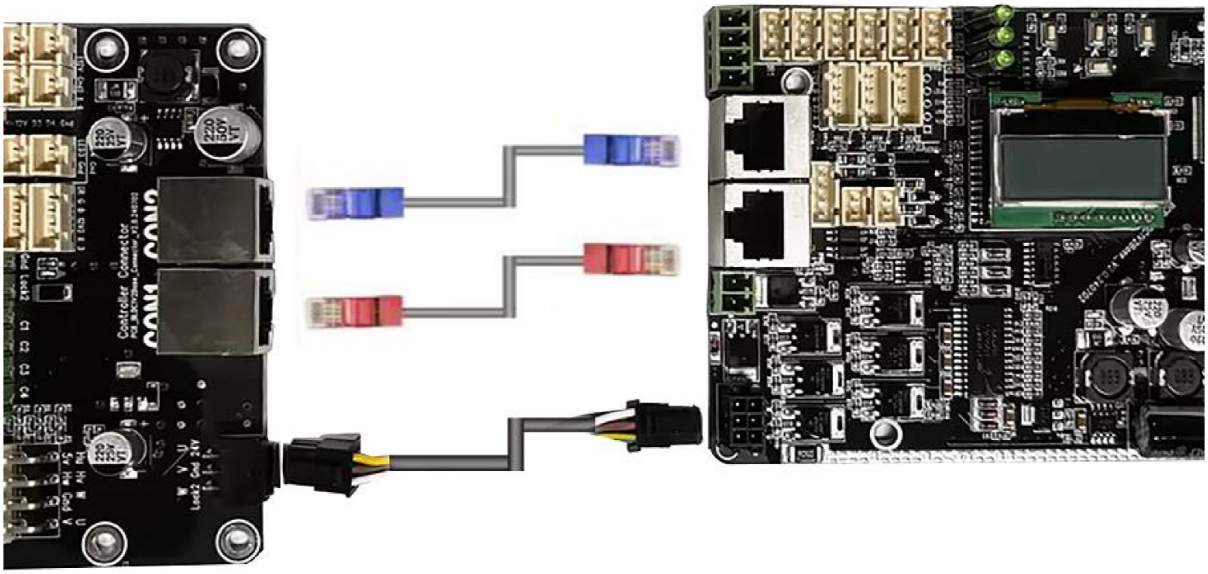
Connecting AC 100~220 V power input

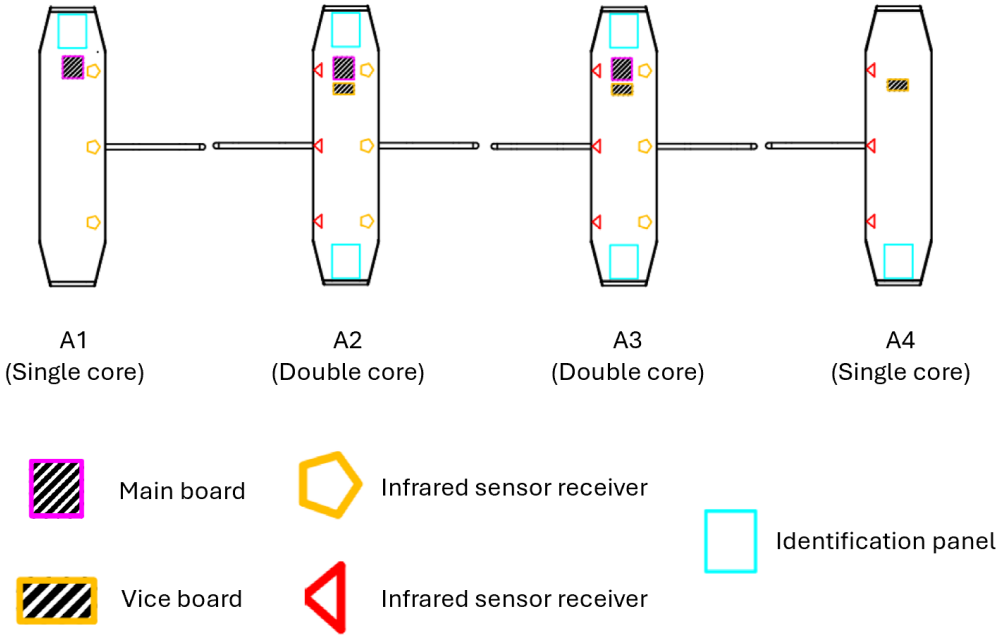




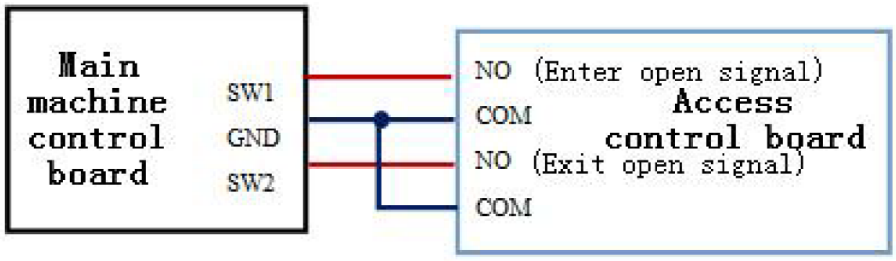
AC100-220v Input connecting wires

Connection between main machine and vice machine

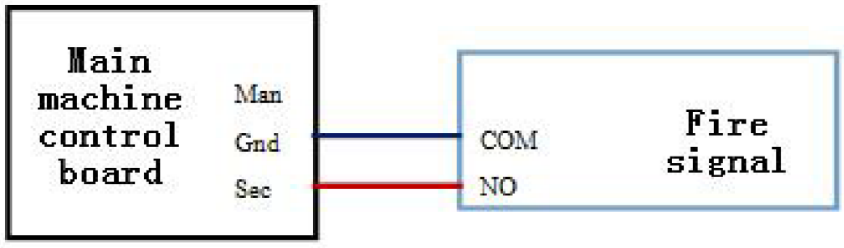




Access control device connection

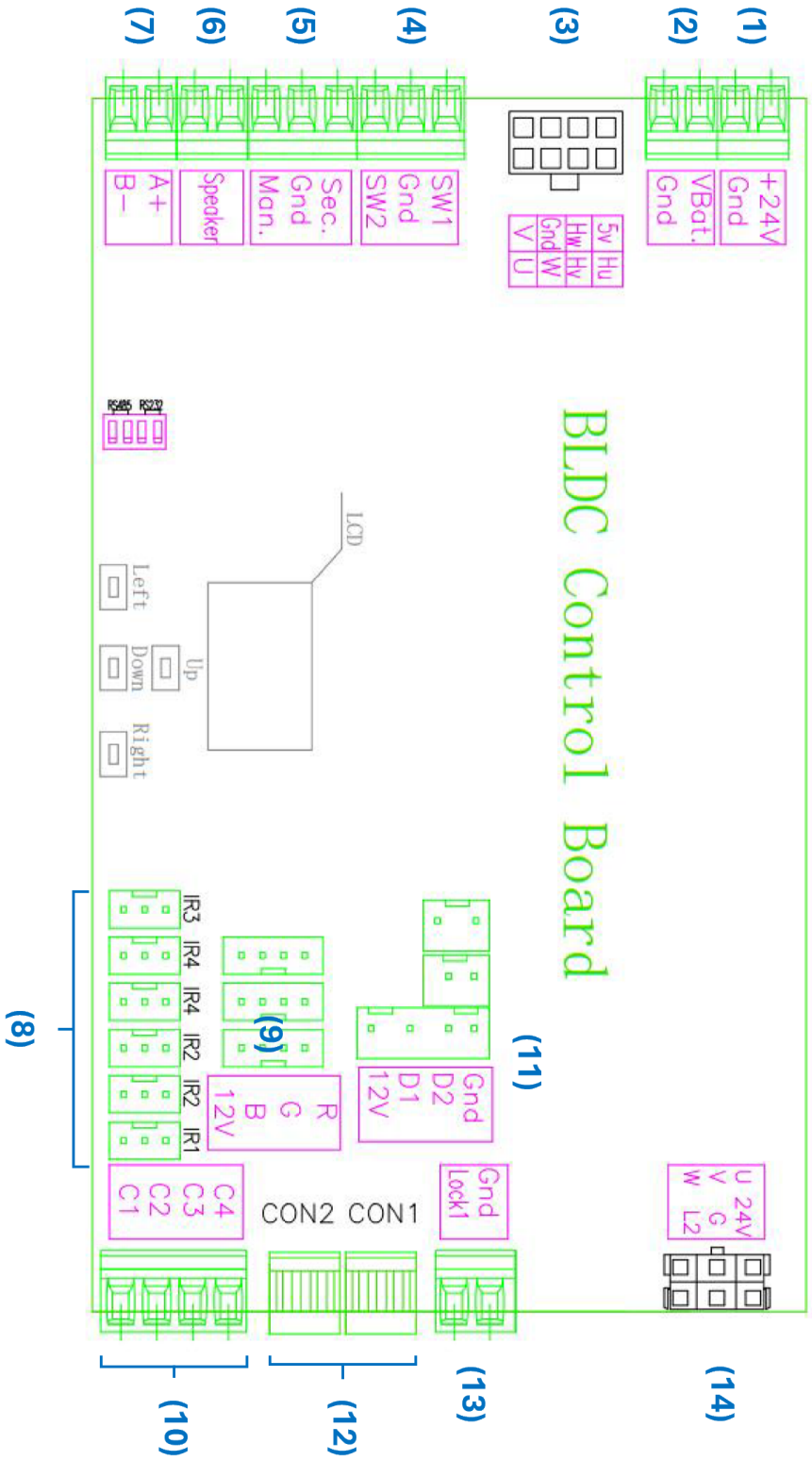


Fire signal connection



3 MAIN BOARD CONNECTION

3.1 BOARD INSTRUCTION



Port	Instruction			Mark
(1) PWR IN	1	+24V	24VDC power supply	Connect to 24V DC power supply
	2	GND		
(2) BAT IN	3	BAT+	12V battery input port	Connect the 12V battery
	4	GND		
(3) Motor 1	5	W	Motor 1 output	Output voltage until the motor drives the moving gate to open and close.
	6	V		
	7	U		
	8	GND	Motor hall sensor	
	9	HW		
	10	HV		
	11	HU		
	12	+5V		
(4) Enter SW1 Exit SW2	13	SW1	Enter open signal input	Connect to access device: NO-SW1/COM-Gnd Connect to access device: NO-SW2/COM-Gnd
	14	GND		
	15	SW2	Exit open signal input	
(5) Sec Gnd Man	16	Sec	Fire alarm input	Short for normally open. Close immediately when cancel
	17	Gnd	GND	
	18	Man	Normally open input	
(6) Speaker	19	+	Voice expansion port	
	20	-		
(7) (485)	21	A+	RS485 communication	
	22	B-		
(8) IR sensor	23	IR1	Enter infrared sensor	Control board alarm when sensor be block.
	24	IR2/4	Pinch infrared sensor Exit	
	25	IR3	infrared sensor	
	26	+12V	12V output for infrared	
	27	GND		
(9) B G R +12V	28	+12Vx3	+12V for LED bar	Connect to LED bar
	29	Bx3	Negative of LED blue	
	30	Gx3	Negative of LED green	
	31	Rx3	Negative of LED red	

(10)	32	C1	Card reader reserved port	
	33	C2		
	34	C3		
	35	C4		
(11) Indicator	36	+12V	In and Out direction indicator output port +12V/GND power supply D1/D2 for enter/exit direction signal	Connect to indicator
	37	GND		
	38	D1		
	39	D2		
(12) CON	40	CON1	Connection between master and vice machine	Master/Vice machine: CON1/CON1 Master/Vice machine: CON2/CON2
	41	CON2		
(13) Lock 1	42	LOCK 1	Master machine clutch signal output	
	43	GND		
(14) Motor 2	44	W Lock2	Motor 2 output Vice machine clutch signal output	Output voltage until the motor drives the moving gate to open and close
	45	V GND		
	46	U +24V		

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, RIGHT for sub-menu and LEFT for previous menu. Long press "RIGHT" 3 seconds unlock into the menu. Select Advanced Parameters and long press "RIGHT + 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 MIN speed 1	Set master machine power-on self-check speed: the smaller the value, the slower the speed
1.9 MAX speed 1	Set master machine opening and closing speed: the higher the value, the faster the speed
1.10 MIN speed 2	Set vice machine power-on self-check speed: the smaller the value, the slower the speed.
1.11 MAX speed 2	Set vice machine opening and closing speed: the higher the value, the faster the speed.
1.12 Pass end	Set IR check passage end position: 1.Exit (default) / 2.Safety
1.13 Intrude	Set intrude alarm mode: 1.No alarm / 2.Alarm (default) / 3.Alarm and close

1.14 Reverse	Set passage from reverse alarm mode: 1.No alarm / 2.Alarm / 3.Alarm and close (default)
1.15 Tail-gating	Set tail-gating alarm mode: 1.No alarm / 2.Alarm / 3.Alarm and close (default)
1.16 Entry voice	
1.17 Exit voice	
1.18 Alarm voice	
1.19 Adv. param.	
.1 Gearbox_RR	Set motor reduction ratio (1-120)
.2 KP1	
.3 KP2	
.4 Motor protection	Set the motor over current protection threshold (default 2.0 A)
.5 Entry angle 1	Set master machine door opening angle for entry
.6 Exit angle 1	Set master machine door opening angle for exit
.7 Entry angle 2	Set vice machine door opening angle for entry
.8 Exit angle 2	Set vice machine door opening angle for exit
.9 Cushion entry 1	Set master machine door closing limit buffer for entry
.10 Cushion exit 1	Set master machine door closing limit buffer for exit
.11 Cushion entry 2	Set vice machine door closing limit buffer for entry
.12 Cushion exit 2	Set vice machine door closing limit buffer for exit
.13 Antagonism	In standby mode, the resistance to push the swing arm of the turnstile (no clutch mode)
.14 Output test 1	Master machine angle value. Hall value position display
.15 Output test 2	Vice machine angle value. Hall value position display
.16 Lock open	Set clutch: 1.Not allow / 2.Allowed
.17 Save factory settings	Save the current parameter to factory default: 1.OK / 2.Cancel
.18 Auto report	Set automatic report gate status when on change: 1.Disabled (default) / 2.Enabled
.19 Motor direction 1	Set direction of main motor rotation: 1.DIR_ON / 2.DIR_REV
.20 Motor direction 2	Set direction of vice motor rotation: 1.DIR_ON / 2.DIR_REV
.21 Motor type	Set motor type: 1.Motor1 / 2.Motor2
.22 LED mode	Set LED indicator default parameter: 1.Static LED / 2.Square LED
.23 Relay mode	Set add relay use for passed counter : 1.Disabled (default) / 2.Enabled
.24 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	Swing gate use, set the baffle closed position

4 TROUBLE SHOOTING

FAULT 1: gate automatically open when people in to first sensor

Change pass mode two way free to two way card in the menu.

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: there is an indicator that shows the wrong direction

Exchange the connect wire of indicator D1 to D2.

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

1) Check whether the connection wires is loose.

2)Turn off the power and use the polimeter to check whether the connection between the master machine and the vice machine is continuous.

3) Measure whether M1 or M2 has voltage output when restarting the power supply.

4) Check fuse in the board.

5 WIRING DIAGRAM

