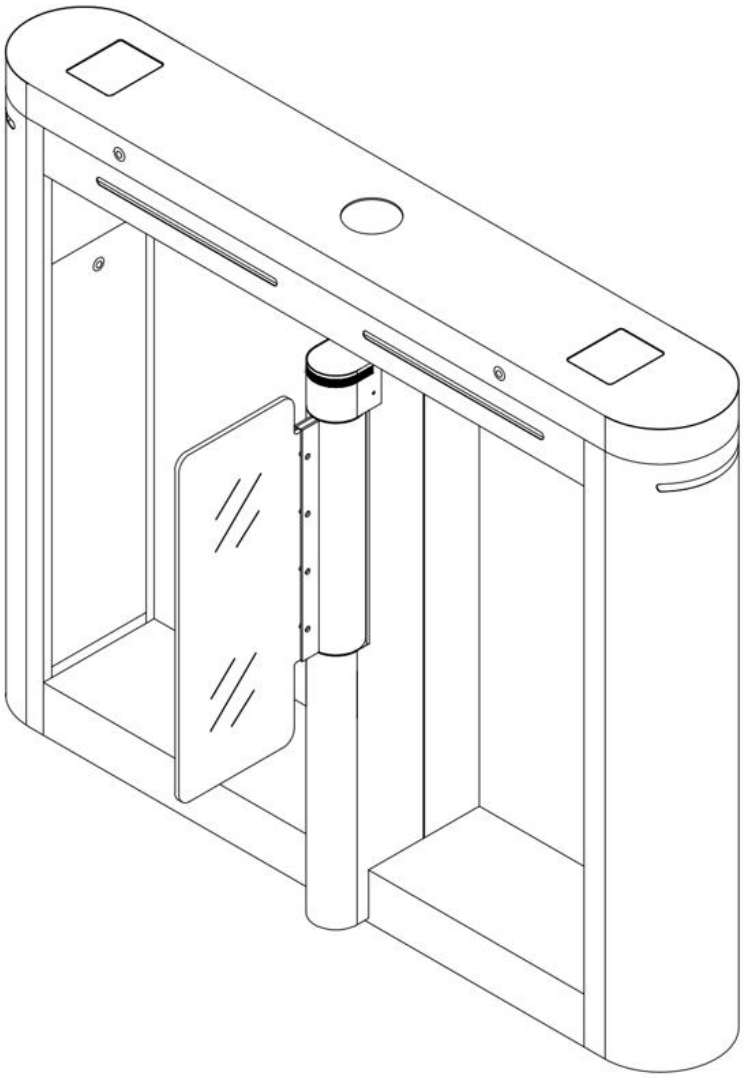
DC Brushless Swing Barrier

Manual



V1.0.0

Contents

1. Product Description

1.1. Product Introduction

The system adopts brushless control technology, detects the motor position in real time, has physical anti-pinch protection, and sensitivity can be adjustable; Supports access mode settings such as card reader, free, and forbidden at entrances and exits; It has access logic detection such as illegal intrusion, trailing passing, detention, reverse passing, and infrared anti-pinch.

1.2. Features and Functions

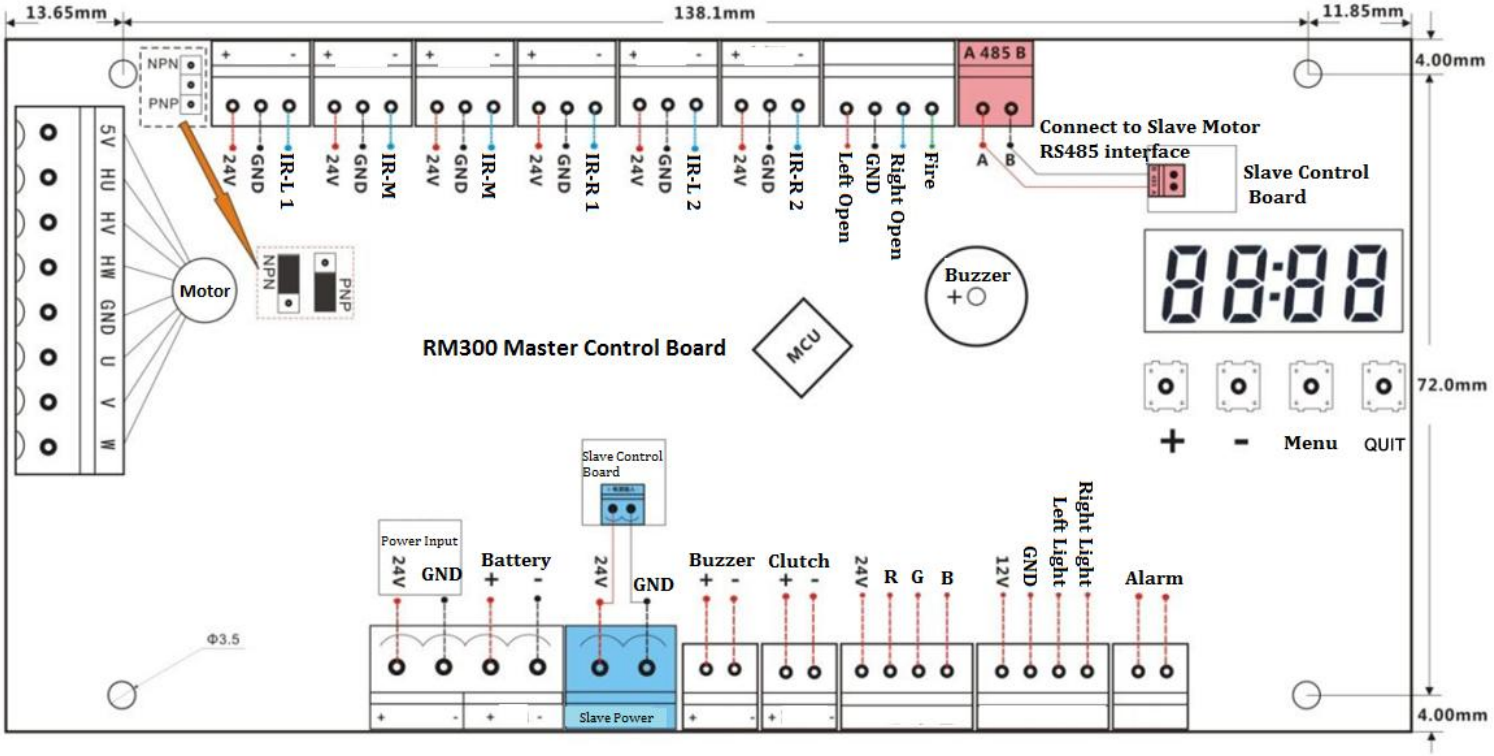
1.2.1. Opening & closing speed is adjustable (0.2~1 seconds).
1.2.2. Opening when power off, DC12V backup battery optional.
1.2.3. Support voice function, trumpet optional.

1.3. Technical Data

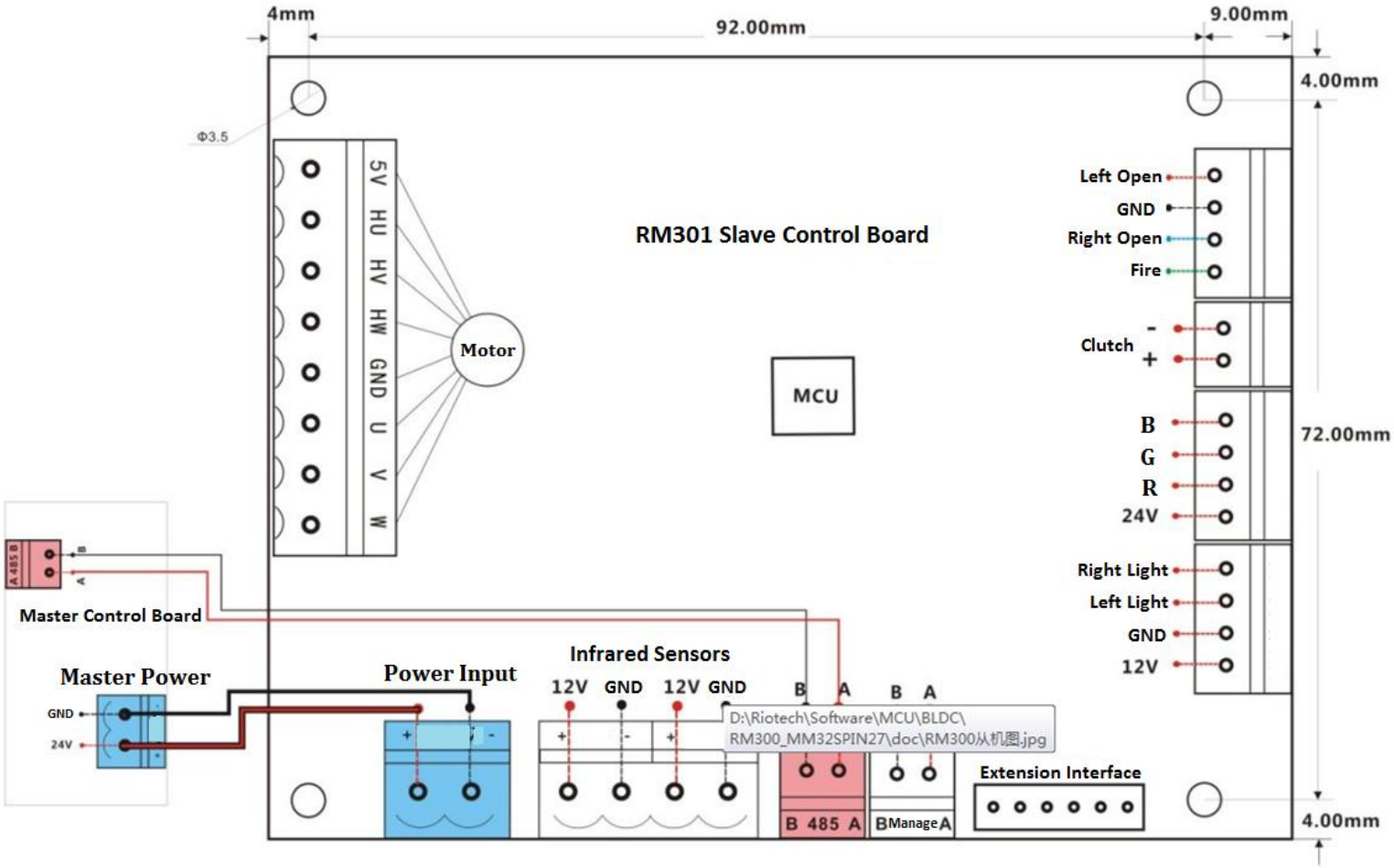
1.3.1. Working Temperature: -35℃ ~ +80℃
1.3.2. Input Voltage of Power Supply: AC100~240V
1.3.3. Input Voltage of Controller: DC24V
1.3.4. Motor Power: 50W
1.3.5. Relative Humidity: 90% (no condensation)

2. Control Board Interface Definitions

2.1. Master Control Board Interface



2.2. Slave Control Board Interface



3. Setting Operation

3.1. Keys Operation

The control board has four keys, which are " + ", " - ", "$\frac{\text{Menu}}{\text{Confirm}}$" and " QUIT " from left to right. Users can use these four keys to set various parameters.

"+": In the parameter setting state, short press to add one at a time. Long press will keep adding continuously to the maximum value and then add from the minimum value upwards. If the long press time is longer, the continuous addition will speed up.

"-": In the parameter setting state, short press to subtract one at a time. Long press will keep decreasing continuously to the minimum value and then decrease from the maximum value downward. If the long press time is longer, the continuous reduction will speed up.

"$\frac{\text{Menu}}{\text{Confirm}}$": This key has 3 functions:

1. In the normal working mode, press and hold the button for 3 seconds to enter the menu item selection state, and the LED will display "F-XX". At this time, you can press the "+" and "-" keys to select the menu item;
2. In the menu item selection state, short press "$\frac{\text{Menu}}{\text{Confirm}}$" to enter the parameter setting state;
3. After the parameter setting is completed, short press this key to save and exit the parameter setting.

“QUIT”: Press this key in the parameter setting state to exit the parameter setting state and return to the previous menu, and the value set will be invalid.

If there is no key operation in the menu selection state and parameter setting state within 60 seconds, the control board will return to normal operation after a long buzzer sound.

3.2. Menu Display

The control board has a four-digit LED display, which can be used to display the working status of the swing barrier, parameters, menu items and other information. If there is no key press, after 60 seconds it enters low power mode and the LED brightness is dimmed to reduce power consumption. After 30 minutes, if no key is pressed, the LED display will be turned off. It enters the lowest power consumption state.

3.3. Parameter Setting

Code	Function	Defaults	Range	Remarks
F-00	Opening Speed	80	0 ~ 99	Bigger the value, faster the opening speed. 1-XX: Master motor opening speed 2-XX: Slave motor opening speed
F-01	Closing Speed	80	0 ~ 99	Bigger the value, faster the closing speed. 1-XX :Master motor closing speed 2-XX: Slave motor closing speed
F-02	Gate Opening Deceleration Position	45	1 ~ 90	The angle at which the gate opening starts to decelerate, unit: degree
F-03	Gate Closing Deceleration Position	45	1 ~ 90	The angle at which the gate closing starts to decelerate, unit: degree
F-04	Gate Opening Acceleration Time	15	0 ~ 200	The time from static acceleration to F-00 gate opening speed, the smaller the value, the faster the acceleration, the unit is 0.01 second
F-05	Gate Closing Acceleration Time	15	0 ~ 200	The time from static acceleration to F-01 gate closing speed, the smaller the value, the faster the acceleration, the unit is 0.01 second
F-06	Gate Opening Limit Position Speed	3	0 ~ 99	1-XX: Master gate opening limit position speed 2-XX: Slave gate opening limit position speed
F-07	Gate Closing Limit Position Speed	3	0 ~ 99	1-XX: Master gate closing limit position speed 2-XX: Slave gate closing limit position speed
F-08	Low Speed Running Angle for Opening	90	10 ~ 90	Low speed running angle of the last stage of opening, running at F-06 speed
F-09	Low Speed Running Angle for Closing	0	0 ~ 90	Low speed running angle of the last stage of closing, running at F-07 speed

Code	Function	Defaults	Range	Remarks
F-10	Left Open Alarm Voice	16	0 ~ 23	Left open alarm voice index
F-11	Right Open Alarm Voice	16	0 ~ 23	Right open alarm voice index
F-12	Self-learning Speed when Power On	25	1 ~ 80	Look for limit speed when power on first time
F-13	Left Open Pass Voice	0	0 ~ 23	Left open pass welcome language
F-14	Right Open Pass Voice	2	0 ~ 23	Right open pass welcome language
F-15	Rebound Sensitivity	5	0 ~ 40	Rebound response time, unit: 0.05s
F-16	Rebound Strength	50	0 ~ 250	The greater the value the greater the force
F-17	Learning Arm Position	NO	NO	Learning arm left open, right open and close position
F-18	Reserve	0		
F-19	Reserve			
F-20	Power Off / Fire Direction	0	0 ~ 1	0: Left Open 1: Right Open
F-21	Retrograde Mode	0	0 ~ 4	Retrograde treatment: 0: Allow Retrograde 1: Retrograde only alarm 2: Retrograde Alarm, exit closing the gate 3: Retrograde immediately close the gate and alarm, exit without opening the gate 4: Retrograde immediately close the gate and alarm, exit opening the gate
F-22	Left Open Mode	0	0 ~ 2	0: Swipe Pass 1: No Pass 2: Infrared Door Opening
F-23	Right Open Mode	0	0 ~ 2	0: Swipe Pass 1: No Pass 2: Infrared Door Opening
F-24	Resume Factory Setting	0	0 ~ 100	Set 10 resume factory setting
F-25	Automatic Aging Test	0	0 ~ 100	Automatic aging test interval, unit: sec
F-26	Delayed Closing Time	2	0 ~ 100	Delayed closing time after passers-by. Unit: 0.1 sec

Code	Function	Defaults	Range	Remarks
F-27	Open and Hold Time	6	1 ~ 200	No pedestrians pass after opening, the time when the gate machine is kept open, automatically closes the door after time-out. Unit: Sec
F-28	Reserve		0 ~ 600	Unit: 10 ms
F-29	Infrared Number	0	0 ~ 1	0: 4 pair infrared 1: 6 pair infrared
F-30	Lock Power	15	0 ~ 30	Digital greater lock current bigger
F-31	Reserve			
F-32	Reserve			
F-33	Reserve			
F-34	Detection Input Signal			Test infrared, left open, right open, fire signal is normal or not
F-35	Reserve			
F-36	Reserve			
F-37	Reserve			
F-38	Voice Test		0-23	Test each voice
F-39	Set Volume	5	0 ~ 15	Set volume size
F-40	Fine Adjustment of The Closing Position	2	0 ~ 99	1-xx: Left closing offset of the master motor 2-xx: Right closing offset of the master motor 3-xx: Left closing offset of the slave motor 4-xx: Right closing offset of the slave motor
F-41	Adversarial Force	50	0 ~ 100	The strength of manually pushing the door to rebound after the channel door is closed in place with a force
F-42	Reserve			
F-43	Someone Swiping Their Card in the Channel	1	0 ~ 2	0: Someone swiping their card in the channel does not open the door, without memory

Code	Function	Defaults	Range	Remarks
				1: Someone swiped their card to open the door in the passage, without memory 2: With memory, if someone swipes their card and does not open the door in the opposite channel, they will exit and open the door
F-44	Memory Function	1	0 ~ 1	0: Without memory function, only one person can pass through multiple card swipes. 1: With memory function, swiping the card several times can pass several people.
F-45	Anti-tailing Mode	0	0 ~ 2	0: No tailing prevention 1: Someone in the passage is not closing the door 2: Anti tailgating
F-46	Low Voltage Action Time	1	0 ~ 50	Power off and door opening function. If the power supply voltage is lower than the time set by F-47 and exceeds the time set by F-46, the response to power off and door opening is 0.05 seconds
F-47	Low Voltage Thresholds	16	15 ~ 22	Used in conjunction with F-46. When the power supply voltage is below F-47 for more than the time set by F-46, it responds to a power outage and opens the door. Need to connect to the super-capacitor backup power module.
F48	Reserve			
F49	Reserve			

3.4. Voice Content Table

Setup Code	Voice Content	Setup Code	Voice Content
0	Welcome	12	Thank you for your patronage. Please take your time
1	Welcome Home	13	You have entered the regulatory area
2	Bon Voyage	14	Entering the construction site, please wear your safety helmet correctly
3	Have a safe journey	15	Please swipe your card
4	Wishing you a pleasant journey	16	Illegal entry, please swipe your card
5	Wishing you a safe journey	17	Unauthorized, please swipe your card
6	Welcome Again	18	No Passage
7	Welcome to our next visit	19	Unauthorized access prohibited
8	Thank you for coming	20	Unauthorized
9	Please Pass	21	Please Swipe Card or Face Verification
10	Thank you for your patronage	22	Wishing you good health
11	Thank you for your patronage. Please take your leave	23	Wishing you peace

4. Condition-based Diagnosis

4.1. Product Condition

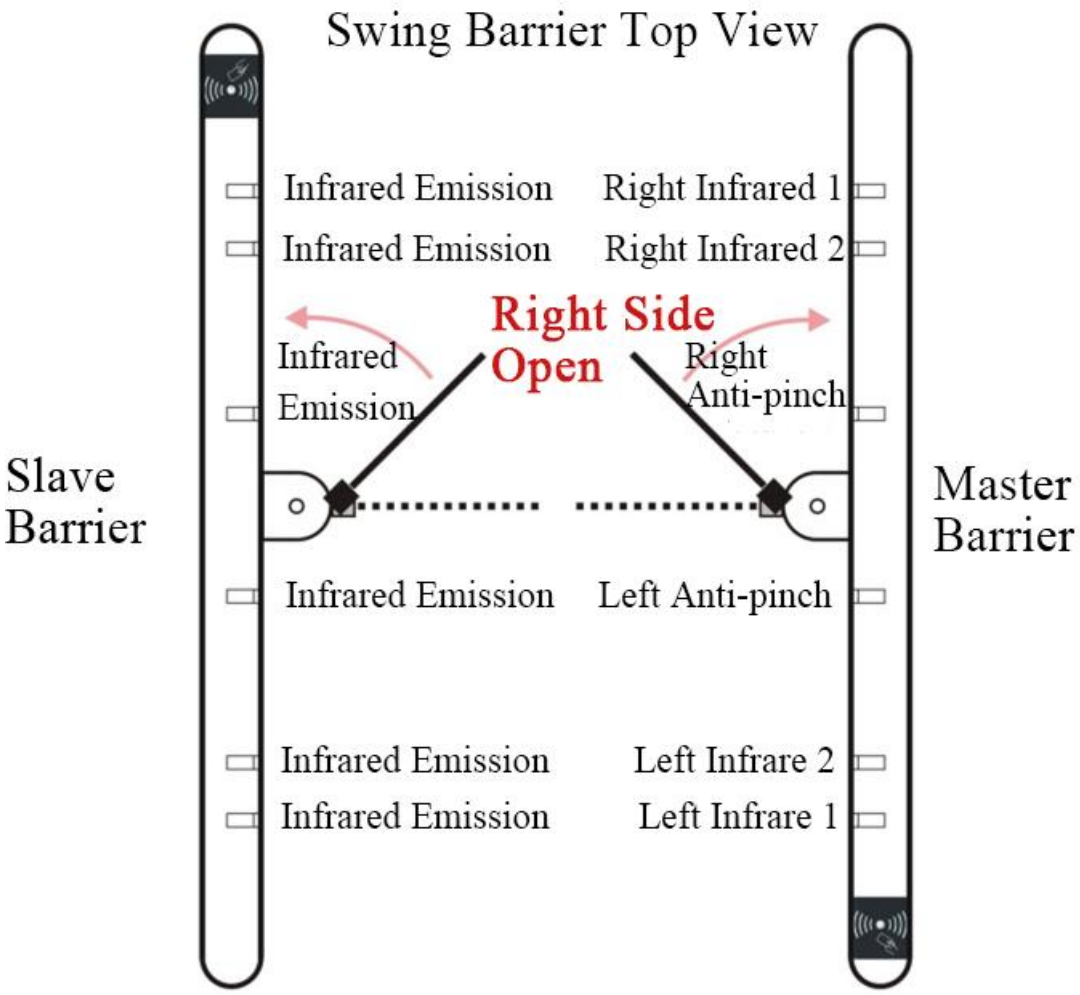
Content	Meaning
STOP	Closed in place
CLOS	During Closing
OPEn	During Opening
HOLd	Open in place

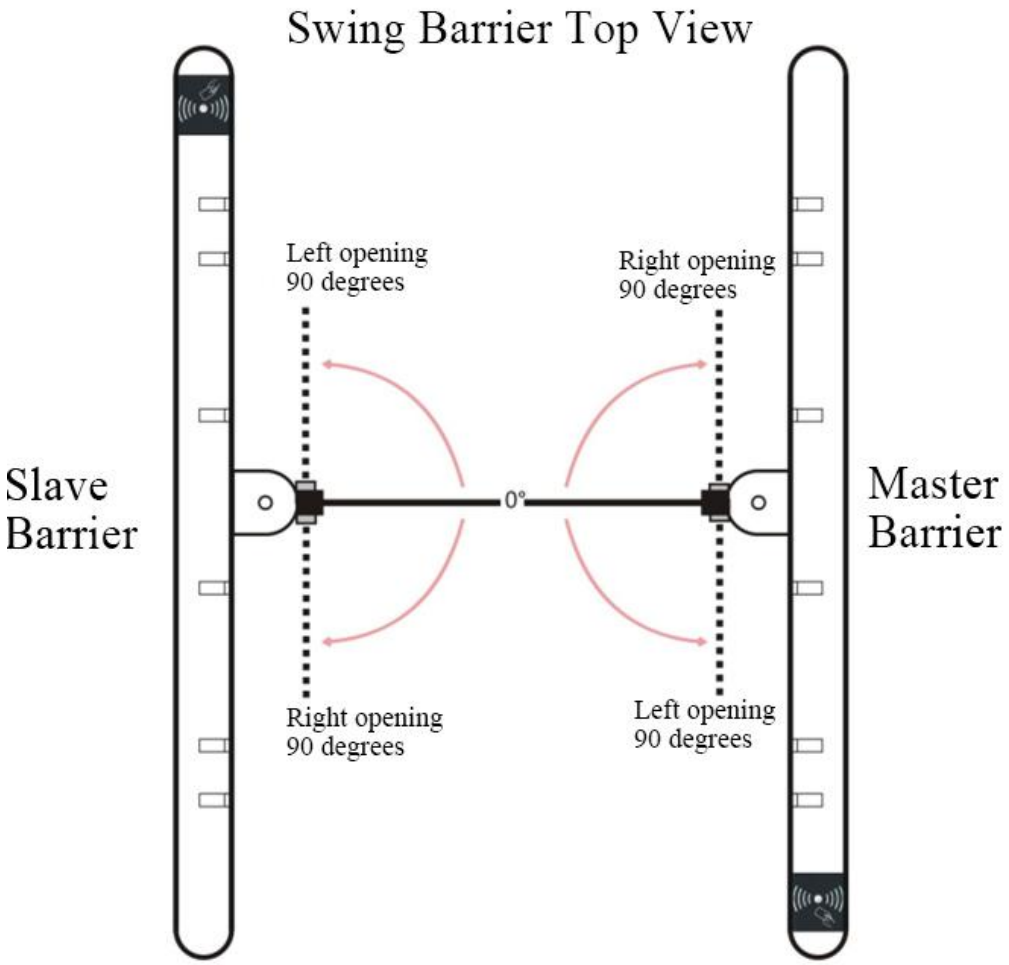
4.2. Error Alarm

Error Code	Error Information
E-00	Main motor Hall fault, possible cause: loose main motor wiring.

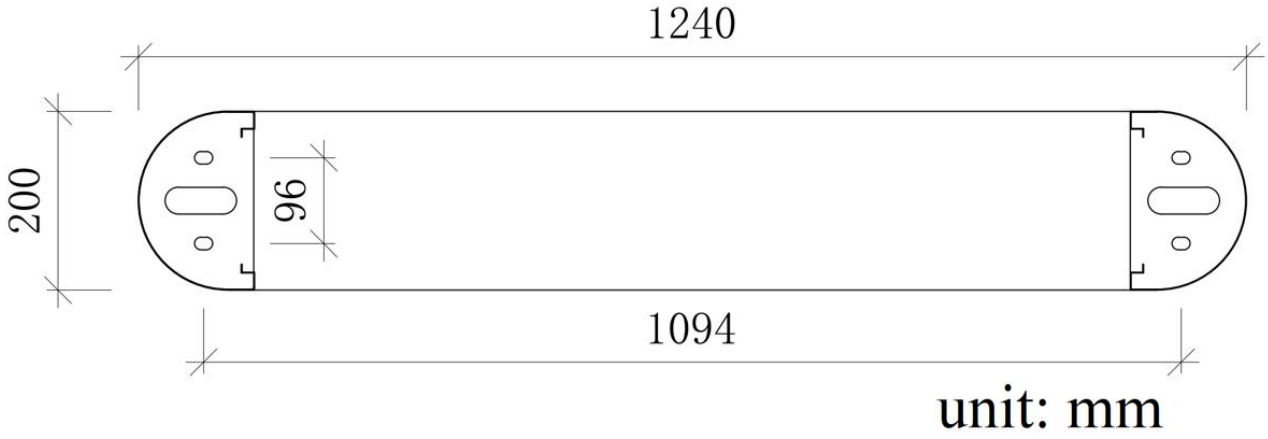
E-01	Slave motor Hall fault, possible cause: loose wiring from the motor.
E-02	The position of the swing arm of the learning gate machine is incorrect, possibly due to the wrong direction of pushing the door.
E-03	Anti pinch signal is valid when opening the gate
E-04	Anti pinch signal is valid when closing the gate
E-05	Left anti pinch infrared is valid when closed in place
E-06	Right anti pinch infrared is valid when closed in place
E-07	Open in place status anti pinch signal is valid
E-08	Open in place status fire signal is valid
E-10	Locked rotor during opening
E-11	Locked rotor during closing

5. Definition of Opening and Closing Angles




Swing Barrier Top View
Slave Barrier
Master Barrier
Left opening 90 degrees
Right opening 90 degrees
0°
Right opening 90 degrees
Left opening 90 degrees

6. Cabinet Base Installation Dimensions



Cabinet Base Installation Dimension