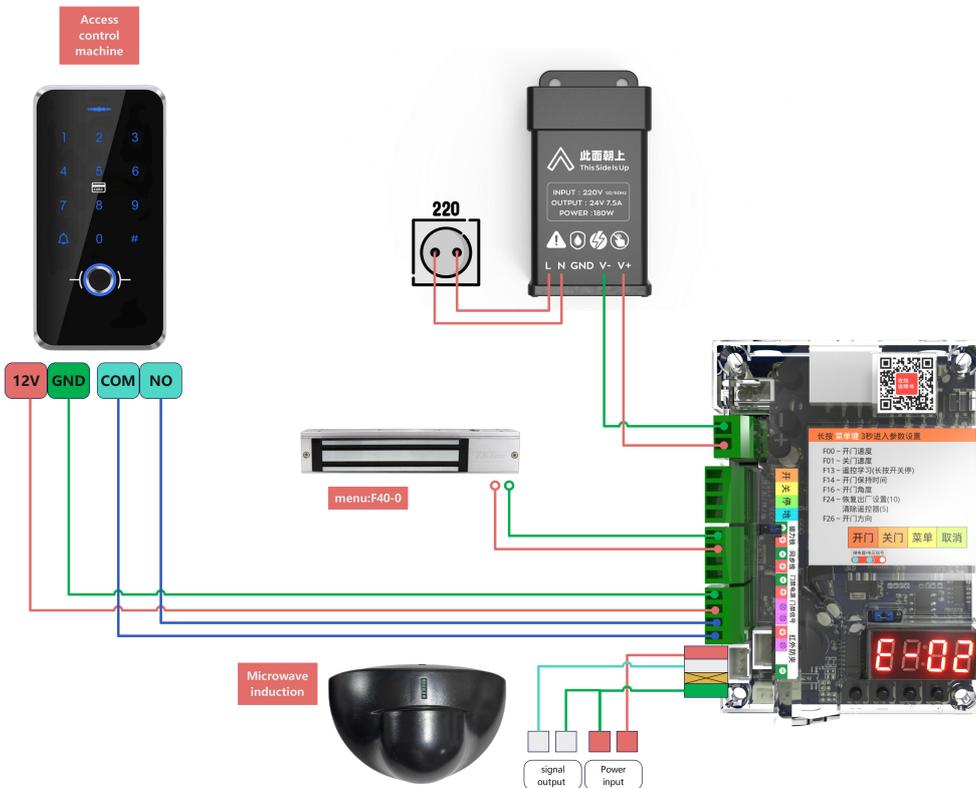
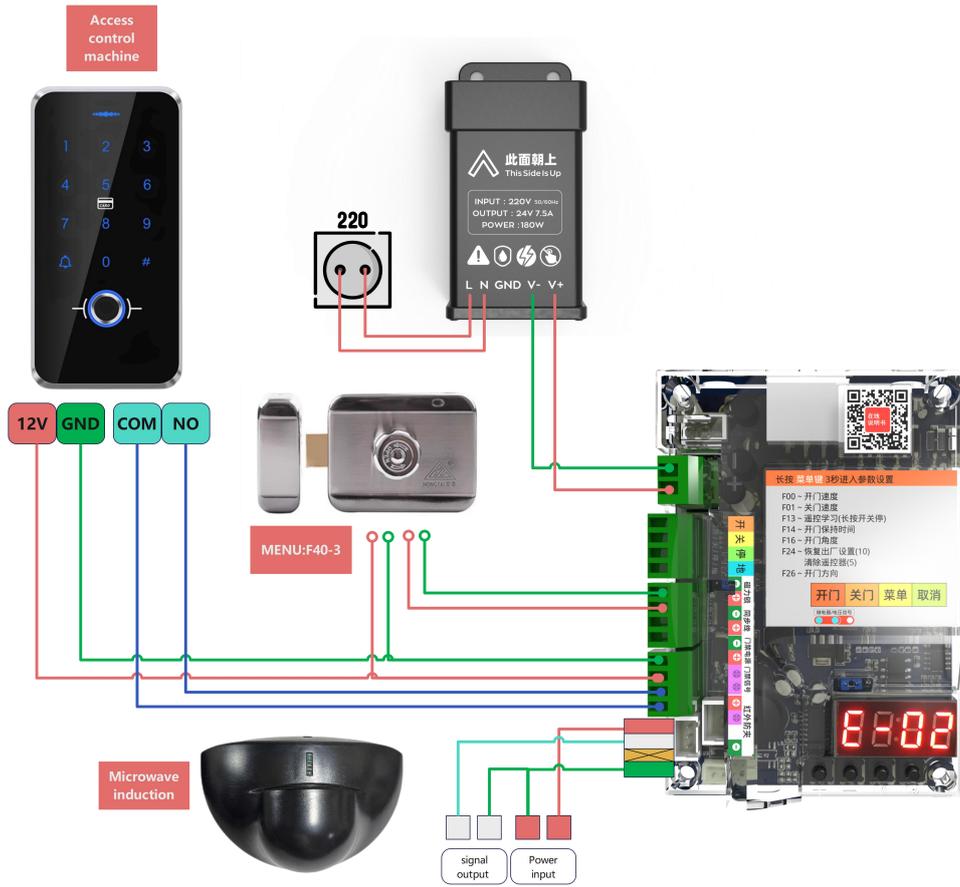


DOOR OPENER CONTROLL MANUAL

Product Advantages:

- Safety: Powered by a 24V DC power supply, ensuring personal safety.
- Energy saving: Static power less than 1 watt, maximum power during operation 60W;
- Adjustable speed: Independent adjustment of door opening and closing speed.
- Smooth work: Multi stage speed design ensures a linear and stable working state.
- Quiet: Work noise below 50dB;
- Supports multiple signal inputs, relay signals, voltage signals;
- Multiple protection: motor overcurrent, overload, short circuit protection, motor fault protection, power reverse connection protection;
- Pedestrian protection: rebound in case of obstruction and collision prevention function;
- Support external remote control input;
- Supports multiple types of doors, including single door, double door, and mother and child door;
- Supports 485 communication and enables simultaneous opening and closing of two doors;

Controller wiring diagram:



Controller debugging manual:

Instructions for using motherboard buttons:

The control board has four buttons, namely "On/+", "Cancel", "Menu", and "Off/-", which can be used to set various parameters of the control board.

"On / +": Under normal working conditions, pressing this button can open the door. After entering the setting state, you can use this button to add menu items and adjust the setting value upwards. In the parameter setting state, short press to add one at a time. Long press to continuously increase until the maximum value is reached, and then start adding up from the minimum value. If pressed for a long time, continuous acceleration will increase speed.

"Cancel": When working normally, this button is not defined and a buzzer will sound. In the setting state, you can exit the setting state or cancel the set value.

"Menu": Enter the setting state and confirm the set values.

"Off / -": Press this button to close the door under normal working conditions. After entering the setting state, you can use this button to reduce menu items and adjust the set value downwards. In the parameter setting state, short press to subtract one each time. Long press to continuously decrease to the minimum value and then start decreasing from the maximum value. If pressed for a long time, continuous deceleration will increase speed.

Screen information display instructions:

Content	Meaning
IDLE	Motor not connected, or motor Hall fault, possibly due to loose wiring
STOP	Close in place
CLOS	Closing
OPEN	Opening
HOLD	Open in place

★ Fast mode:

Open mode:

After the door is in place, long press the remote control "stop" for 3s to enter the regular open mode, and press "close" to cancel the constant open function;

Cancel the human body induction door opening mode:

After closing the door in place, long press the remote control "off" for 10s human body induction open function failure, press "open" to remove this mode;

List of the controller functions :

Menu	function	Menu	function
F-00	Open the door speed	F-24	Factory data reset
F-01	Close the speed	F-25	Automatic testing
F-02	Open the door to slow down the Angle	F-26	Open the door direction
F-03	Close the door and slow the Angle	F-32	Stop buffer time
F-04	Open speed	F-35	Lock motor power
F-05	Closing acceleration time	F-36	Lock motor switch
F-06	Open the door to end the speed	F-37	Open the magnetic lock force
F-07	Closing speed	F-38	Close lock motor time
F-08	Open the speed constant speed Angle	F-40	Lock type
F-09	Close the door at a low speed and uniform speed Angle	F-41	Human induction port 1 redefinition
F-10	Close the door buffer Angle	F-42	Human induction port 2 redefinition
F-11	Closed brake time	F-43	Fight against strength
F-12	Uppower start speed	F-44	Adverse offset angle
F-13	Learn the remote control	F-45	Open the lock door in place
F-14	Open the door to keep the time	F-46	Door type
F-15	Card latency to open	F-47	Child gate switch delay
F-16	Learning door position	F-48	Child gate waiting angle
F-17	Lock door way	F-49	Bluetooth switch
F-18	Anti-collision sensitivity	F-50	The buzzer switch
F-19	Anti-collision strength	F-51	Open the door reversal
F-22	Motor type		
F-23	Edition		

Parameters are detailed:

MENU	FUNCITON	DEFAULT	RANGE	REMARKS
F-00	Open the door speed	32	10-100	The larger the value, the faster the door opens
F-01	Close the speed	32	10-100	The larger the value, the faster the closing rate
F-02	Open the door to slow down the Angle	60	45-90	Opening the door, they begin to slow down at this angle
F-03	Close the door and slow the Angle	40	0-60	When closing, start to slow down at this angle
F-04	Open speed	100	0-255	When opening the door, accelerate to the opening speed in 0.01 seconds
F-05	Closing acceleration time	100	0-255	When closing, accelerate to the closing speed in 0.01 seconds
F-06	Open the door to end the speed	15	1-60	Open the door in place
F-07	Closing speed	15	1-60	Close the door in place
F-08	Open the speed constant speed Angle	90	75-100	At the opening speed
F-09	Close the door at a low speed and uniform speed Angle	2	0-30	At the closing speed
F-10	Close the door buffer Angle	0	0-30	To this angle to start the brake
F-11	Closed brake time	0	0-255	Brake time, in 0.01 seconds
F-12	Uppower start speed	15	1-60	Go on and start to find the closing position
F-13	Learn the remote control	0	NONE	Up to 60 remote controls are learn
F-14	Open the door to keep the time	5	0-255	Unit: seconds, 0 does not close automatically

F-15	Card latency to open	1	1-20	Unit 0.1 seconds
F-16	Learning door position	无	无	Learn where the door is open and in place
F-17	Lock door way	0	0-30	0: Magnetic lock power at 45 degrees 1-30: lock the door in place and energize, and then tighten the motor at F-17 speed.
F-18	Anti-collision sensitivity	40	1-50	Unit of 0.05 seconds
F-19	Anti-collision strength	115	10-255	Crash force
F-22	Motor type	0	0-3	0: Hall positive polarity is positive. 1: Hall positive polarity reversal. 2/3: Click the negative polarity positive turn.
F-23	edition	NONE	NONE	Software version number
F-24	factory data reset	NONE	NONE	Set the various parameters to the default values
F-25	automatic testing	0	0-255	Automatic test interval, 0 is normal operation
F-26	Open the door direction	0	0-1	0: open left. 1: open right
F-32	Stop buffer time	50	10-255	Unit: 0.01 seconds
F-35	Lock motor power	10	0-20	Dangerous, with caution! The larger the number, the greater the lock motor current
F-36	Lock motor switch	0	0-1	0: Close 1: Open
F-37	Open the magnetic lock force	0	0-100	The bigger the number, the bigger the magnetic force lock is
F-38	Close lock motor time	0	0-100	Lock the motor for a period of time after closing in place
F-40	Lock type	0	0-3	0: electromagnetic lock 3: Mechanical lock

F-41	Human induction port 1 redefinition	1	0-7	Set to different values, the human body sensing port has different functions
F-42	Human induction port 2 redefinition	1	0-7	
F-43	Fight against strength	20	0-100	After opening in place, the door is artificially pushed away from the door position, and the strength of the door returns to the normal door position is used with F-44
F-44	Adverse offset angle	5	0-45	The door is pushed away beyond the set angle and the motor starts to move the door back to its normal position for use with the F-43
F-45	Open the lock door in place	0	0-1	0: Unlock 1: Lock it up
F-46	Door type	0	0-4	0: Single door 1: Double door, main door 2: Double doors open from the door 3: Master gate of the master door 4: Mother door from the door
F-47	Child gate switch delay	10	0-100	When the door type is set to the main door of the master door, the time of delayed opening and closing is measured in 0.1 seconds
F-48	Child gate waiting angle	15	0-90	When the gate type is set as the main gate of the child master gate, if the master gate is not in place at the set Angle, the mother gate will stop at this Angle, and the mother gate will continue to close after the master gate is completely closed.
F-49	Bluetooth switch	1	0-1	0: Turn off the Bluetooth module. 1: turn on the Bluetooth module
F-50	The buzzer switch	1	0-1	0: Bezzer off 1: Bezzer on
F-51	Open the door reversal	0	0-5	0: Open door reverse closed open for reverse seconds Unit: 0.1 seconds

Parameters are detailed:

■ The F-00 door-opening speed

The larger the value, the faster the door opens. The speed involved in the article is a percentage of full speed. If full speed is 100, 20 is 20% of full speed. Press the Menu button to display the speed currently in use. The door opening speed can be selected according to the actual environment, and it will take effect immediately after the setting is completed.

■ F-01 closing speed

Open the same speed.

■ F-02 door opening deceleration Angle

When opening the door, drive to this position and start to slow down.

■ F-03 Close the door for the deceleration Angle

When closing, closing to this angle begins to slow down.

■ F-04 Open-door acceleration time

Unit: 0.01 seconds, the time needed to speed up to the opening speed when opening the door. The smaller the value is, the faster the acceleration is.

■ F-05 closing acceleration time

Unit: 0.01 seconds, the time needed to speed up to the closing speed. The smaller the value is, the faster the acceleration is.

■ F-06 door opening end speed

End up by opening the door at that speed. The larger the value is, the faster the speed is. The speed may cause the door to shake at the end of the door, which reducing the value. City-state motor default value: 10.

■ F-07 closing end speed

End the closing door at that speed. The larger the value is, the faster the speed is. Excessive speed may lead to hitting the door during the closing process, when the value can be reduced. If the door is not closed, you need to increase the value. City-state motor default value: 6.

■ F-08 open door low speed uniform Angle

This parameter sets a low-speed uniform zone at the end of the door opening. During the opening of the door, run at F-06 until the opening is complete. This function is invalid if the parameter is set to

90 or equal or to less than the angle defined by the F-02 door deceleration angle.

I F-09 closing low speed running angle

This parameter sets a low-speed uniform zone at the end of the closing process. During the closing process, reach this Angle and run at the F-07 closing speed until the closing is complete. This function is not valid if the parameter is set to 0 or to an angle greater than the angle defined by the F-03 closing deceleration angle.

I F-10 closing buffer start position

From this position, close at the closing speed. If the door closing vibrates greatly, the value needs to be reduced. If it is 0, there is no brake.

I F-11 closing and brake time

Brake time when closing, in 0.01 seconds, set a brake point at the starting position of closing buffer. If the closing stop speed and the closing buffer start position are adjusted to the limit value or the closing vibration is large. This case is generally the door inertia is larger, can set a brake time, the default is 0 that is not brake.

I F-12 speed for closing position

After the control board is powered on, it is necessary to find the origin position at a speed. If the speed is too large or too small, it can be set through this parameter. The bigger the number, the higher the speed. City-state motor default value: 20.

I F-13 remote control learning

Entering the remote control learning menu item shows is the number of currently learned remote controls. Study in the order of open-> off-> stop.

In order to ensure the reliability of learning, each key needs to be pressed for a second, and after learning, the buzzer will call.

After learning the three keys, the buzzer cries loudly, indicating that a remote control is learning correctly. At the same time, the LED display shows the number of learned remote control plus one. After learning a remote control, you can continue to learn the next one.

If it is the learned remote control, the buzzer calls three times in a row, suggesting that the remote control has been learned.

If there is no remote control button within 20 seconds, the buzzer will cry loudly, quit the learning

state, and enter the normal working state. The successful remote control will have a buzzer ringing in normal operation.

I F-14 door opening holding time

Range 0-255, in 1 second, default 5. After the door opens, stay at the specified time. If it is 0, it will not close down automatically.

I F-15 credit card opening time

Range 1-20, in 0.1 seconds, default 1. Wait for magnetic lock release.

I F-16 learning the Location of the gate

The door must be kept closed before entering the menu option. After entering the menu, you can manually adjust the door to the appropriate position, or press the "on / +" and "off / -" buttons on the control panel. After adjusting the position of the door, press the "menu" button to save the position of the door. If the door opening Angle is too small, the buzzer will call three times, and the LED displays an "E-01" error message. A learning failure, to relearn, you must start the previous steps again.

I F-17 door-locking mode

Range 0-30, default: 0. The main function of this parameter is to confirm the closure again after the door closing is in place. Ensure that the magnetic force lock can be locked.

0: the door will be about to close in place will open the magnetic lock in advance, this case will appear to close the door impact sound is larger, the advantage is that the door will not rebound.

Lager than 0: the magnetic lock is opened only after the door is in place, and the sound of closing the door is relatively small. The door close will be confirmed twice after the door lock. The larger the value, the greater the force it is to reconfirm the closing process. The value can be increased if the lock is unlocked.

I F-18 anti-collision sensitivity

Range: 1-50, default: 5. Unit: 0.05 seconds. Minimum time from crashing to reaction. The smaller the value, the higher the sensitivity, the higher the sensitivity, the more likely to receive interference. If the door stops during the normal opening and closing process, the value should be increased.

I F-19 anti-collision strength

Range: 10-255, the default value: 30. The higher the speed, the higher you need to increase the value, so if you change the opening or closing speed, you need to modify the parameter synchronously. This value and the F-18 collision prevention sensitivity jointly determine whether to hit a person. One determines the force of the crash, and one determines the reaction time.

I The F-24 restores the factory settings

This option has two functions, to clear the remote control and to restore the factory settings. To prevent misoperation, you need to set specific values and press the Menu key to start the operation. Enter the F-24 menu item is displayed as 0. The specified values need to be set to perform the different actions:

The F-24 is set to 5: clear the remote control

Set F-24 to 10: restore factory settings and restore the setting value to the default value.

After the operation is completed, the buzzer calls a success, and if the operation fails, the buzzer calls three times, because the setting values are not 5 and 10.

The default parameters of the control board can meet most scenarios, if not set properly during the setting process. You can use the Restore Factory Settings feature.

I F-25 automatic test

Range: 0-255, default: 0. Automatic test interval in seconds. Being 0 indicates turning off the automatic test. For automatic testing of doors and can be used for aging testing. This parameter is saved without power, so after the automatic test is to complete, the value needs to be set to 0 to restore the normal working state.

I F-26 door opening direction

Value range: 0-1, default: 0. 0 is the left door, and 1 is the right door.

I F-32 stop buffer time

Range: 10-255, default: 50, unit: 0.01 seconds. During the opening or closing process, press the stop button until the door is completely stopped.

I F-35 lock motor power

Range: 0-20, default: 10, the larger the number, the greater the current of the locking motor. Need to be used with the F-36 command.

I F-36 lock motor switch

Range: 0-1, default: 0, 0: Off 1: on. Use with F-35, if 1, press the stop button during opening or closing, and when in place. The controller locks the motor with the power set by F-35, so that the door does not shake.

I The F-37 opens the force of the magnetic lock

Range: 0-100, default: 0, the larger the number, the greater the magnetic lock force, 0, close the function. This function is used to solve part of the magnetic lock demagnetization, resulting in the magnetic lock can not open the door normally. The value is set to bounce open the magnetic lock at the set force.

I The F-38 is open in place for the door lock time

Range: 0-100, unit: seconds, after closing in place, the motor is locked for a period of time, if it is 100, it is always locked.

I F-40 lock type

Range: 0-3, default: 0, different values correspond to different lock types.

0: electromagnetic lock, power on to lock, power off to unlock;

3: mechanical lock, power unlock, door by the inertia of the door to push, similar to the household dark lock;

I F41: IN 1 port redefinition:

I F42: The IN 2 port is redefined:

Range: 0-7, default: 1, this parameter is used for human sensing port IN 1, set to different values, with different functions.

0: Prohibit;

1: human body induction function, did not detect the door immediately;

2: Human induction function, closed after the delay opening time;

3: External signal input is received only after the shutdown is in place, and it is not detected during the shutdown process;

4: open function, ban + access control-effective;

5: Open function, access control + access control-invalid;

6: Guan;

7: Stop;

F-41 and F-42 two parameters, any one of the selected access control + and access control-invalid, then access control + and access control-port is prohibited.

I F-43 is confrontational strength

Range: 0-100, default: 20, after opening in place, the door is artificially pushed away from the door position, the strength of the door back to the normal door position needs to be used with F-44. If set to 0, it will not return to the normal door position.

I F-44 against the offset angle

Range 0-45, default: 5, the door is pushed away beyond the set angle, the motor starts to make the door back to the normal position, and use with F-43, if set to 0, will not return to the normal door position.

I F-45 opens in place to lock the door

Range: 0-1, default: 0, after the door is opened in place, use the motor to lock the door, so that the door will not swing.

Set the F-36 lock motor switch to 1 and the F-41 to 1. Because the switch is opened, as long as the door is in place, the motor will continue to be energized, so keeping the door for a long time may cause the motor and main board heat.

0: Unlock

1: Lock it up

I F-46 gate type

Range: 0-4, default: 0, where:

0: Single door

1: Double door main door, the other door must be set to 2;

2: Double door opening from the door, and the other door must be set to 1;

3: the main door of the master door, the other door must be set to 4;

4: the child master gate from the door, the other door must be set to 3;

Double door and master door are paired, one side of the main door, the other side is from. Otherwise, an E-01 error appears.

I F-47 AB gate switch delay

Range: 0-100, default: 10, unit: 0.1 seconds. This parameter is valid only if F-46 is set to 3 (master gate).

In the process of opening doors, the main door is opened first, the door will delay the set time before opening, in the process of closing doors, the main door will be closed first, and the door will delay the set time before closing.

I F-48 AB gate waiting angle

In the first process of finding the limit, the main door and the door will open the Angle set by F-48, and then start the door to find the limit. If it is the main door of the master door, the door needs to close the door in place before the motherboard began to close. In the normal opening and closing process, after the main door is closed to the Angle set by F-48, and before the main door is in place, the main door will stop and wait for the main door to close after the main door is in place.

I F-49 Bluetooth module switch

Range 0-1, default: 1, turn off Bluetooth module for 0, turn on Bluetooth module for 1.

I The F-50 buzzer switch

0: Open 1: Close

I F-51 door opening reversal

It is suitable for electric lock. When opening the door, the electric opportunity is reversed to release the thrust brought by the outside world to the door, so that the electric lock lock tongue can be withdrawn.

Description of jumper cap:

The control board has 2 jumper caps. Open door signal type for selecting magnetic lock voltage and access control respectively. Each vault-required place board has a detailed text dimension.

12V / 24V: Select the supply voltage according to the specification of magnetic lock.

Relay signal / voltage signal: according to the output signal of access control, the relay signal is digital signal, if the access control output is the relay door, select the relay door.

The voltage signal is the access control output of 5-24V voltage.

Common fault code:

Error code	Cause of error
E-00	Communication failure, possible cause: the communication line is not connected, and the motherboard door type at the other end does not match
E-01	Door type does not match. For example, one door type is double door and the other door is master door.
E-02	Motor Hall fault. Possible causes: loose wiring or poor contact, or damage to the Hall inside the motor.