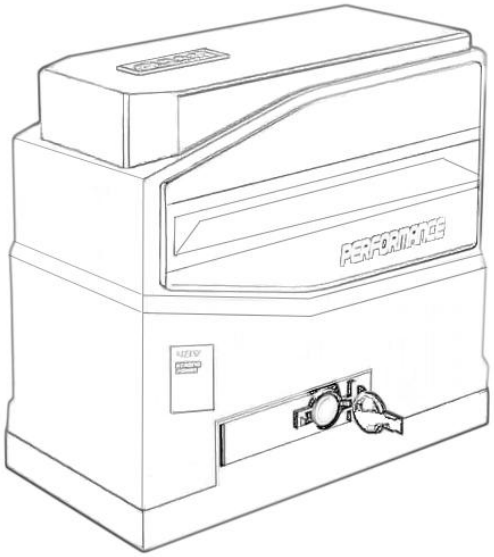
Sliding Gate Opener User Manual

AC1000/AC1500/AC2000/FC1200/FC1500 /FC2000/FC3000/FC4000

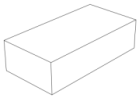
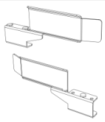


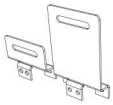
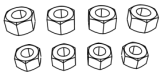
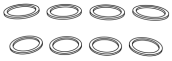
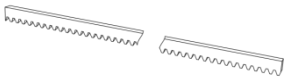
Dear User,:

Thank you for choosing this product. Please read the instructions carefully before installing and using this product. If you forward the product to a third party, please do not omit the instructions.

1. **Safety instructions** Make sure that you are using a supply voltage that matches the supply voltage of the host.Do not allow children to touch the controls or play with the remote control.The remote control is a three-button or single-button control mode. (For details about how to use the remote control, refer to the manual.), the remote control indicator will flash when the remote control button is pressed. The release wrench can unlock the host and the door body, and the unlocking back door can be manually operated.When opening and closing doors, ensure that others are away from the host and the door. If the host needs to be repaired or maintained, please suspend the use. The installation and maintenance of the product must be performed by professionals.Please read these instructions carefully before installing, using, maintaining and maintaining this machine. The Company shall not be responsible for any personal injury or property damage caused by the operation of the door opener, the wrong use or the modification of the door opener without authorization. If necessary, an infrared protection switch can be installed to detect obstacles to prevent injuryHarm or damage to objects.Do not install the product in an environment with explosive gases or any flooding hazard.

2. **Packing List (standard)**

No.	Picture	Name	Quantity
1		Motor	1
2		Manual Release Keys	2
3		Remote Controls	2
4		it Switch Accessories Box/ Magnetic Limi Accessories Box	1
4-1-1		Spring Limit Switch Stop	1 set

No.	Picture	Name	Quantity
		Spring Limit Switch Stop Mounting Screw M6X10	4
		Mounting Plate	1
4-1-2		Magnetic Limit Switch Stop	1 set
		Magnetic Limit Switch Stop Mounting Screws M6X18	4
5-1		Nuts M8	8
5-2		Flat Washers φ10	8
5-3		Spring Washers φ10	4
No.	**icturePackaging list (optiona**	**Name**	**Quantity**
1		Galvanized Gear Rack	1m/pc
2		Nylon Gear Rack	1m/pc
3		Infrared Photocell	1
4		Wireless Keypad	1
5		Alarm Lamp	1

Additional remote controls: Spare/Additional remotes for the automatic gate kit, these will need to be paired to the motor.

Infrared photocell: Detects pedestrians, vehicles and objects that cross an infrared beam and prevents the gate from closing.

Wireless keypad: Allows secure access through the gate used with a user set code.

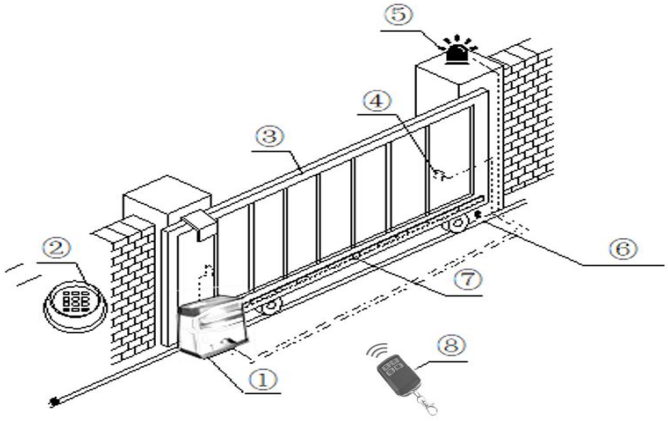
Wired control: Allow users to control the opening and closing of the door through an external push-button.

Alarm lamp: Alerts people near the gate and users that the gate is in operation.

Model	FC1200	FC1500	FC2000	FC3000	FC4000	AC1000	AC1500	AC2000
Power Supply	220VAC/50Hz					24VDC/50 Hz	24VDC/50 Hz	24VDC/50Hz
Gate Moving Speed	4-26m/min							
Maximum Loading Weight	1200KG	1500KG	2000KG	3000KG	4000KG	1000KG	1500KG	2000KG
Remote Control Distance	≥ 30m							
Remote Control Mode	Single button mode / Three button mode							
Limit Switch	Spring limit switch / Magnetic limit switch							
Working Noise	≤ 58dB							
Working Duty	S2, 20min							
Recording of up Remote Controls	Intelligent control board: 128							
Remote Frequency	433.92 MHz							
Working Temperature	-20°C - +70°C							
Package Weight	13.5KG	15KG	15KG	15KG	15KG	15KG	15KG	15KG

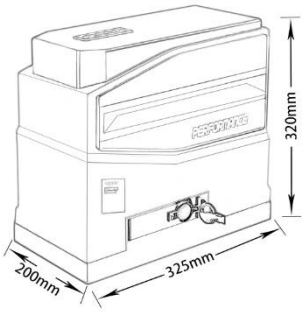
4. Install

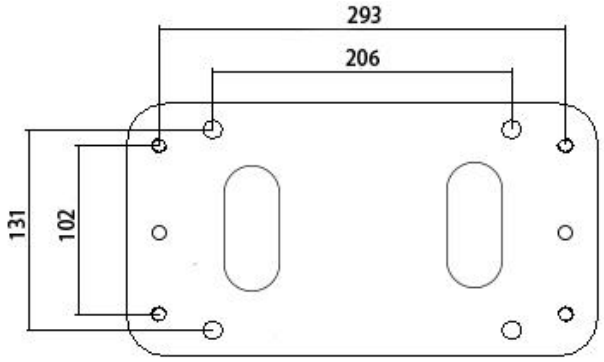
AC1000, AC1500, AC2000 door opener are suitable for the door weight less than 1000Kg, 1500Kg, 2000Kg translation door, door body length less than 20 meters. The driving mode adopts rack and gear transmission. The door opener must be installed in the fence or yard to avoid the door opener being damaged.



4.1 system installation diagram

1. Door Opener 2. Combination Lock (optional)3. Hilum; 4. Infrared Protection Switch (optional) ; 5. Warning lights (optional)6. Safety Blocks; 7. Rack; 8. Remote control;





4.2 mainframe and accessories dimensions

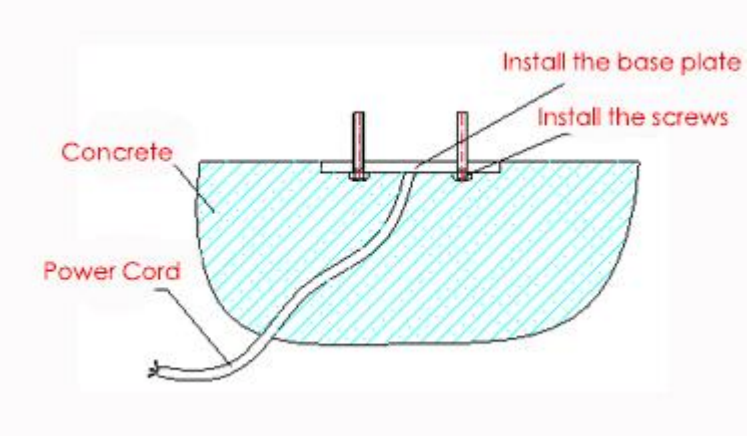
4.2.1 mainframe dimensions

4.2.2 dimensions of mounting base plate

4.3 installation step

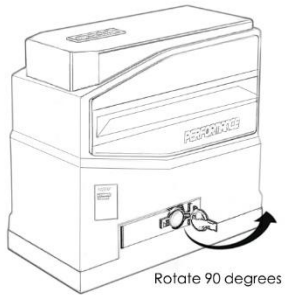
4.3.1 pre-installation of the main engine before installing the door opener, please make sure that the door body is properly installed to ensure that the door guide rail level and the door body can be easily operated manually. Cable installation in order to ensure the normal operation of the door opener, and to protect the cable from damage, please use PVC pipe buried motor and power cable, as well as control cable, and separate two PVC pipe, respectively buried (motor and power cable) and (control cable) . Concrete pedestal in order to firmly install the door opener, the concrete pedestal must be pre-poured with a size of 400mm × 250mm and a depth of 200mm.

Before pouring the base, make sure the distance between the door body and the main engine is suitable. Embedded screws.



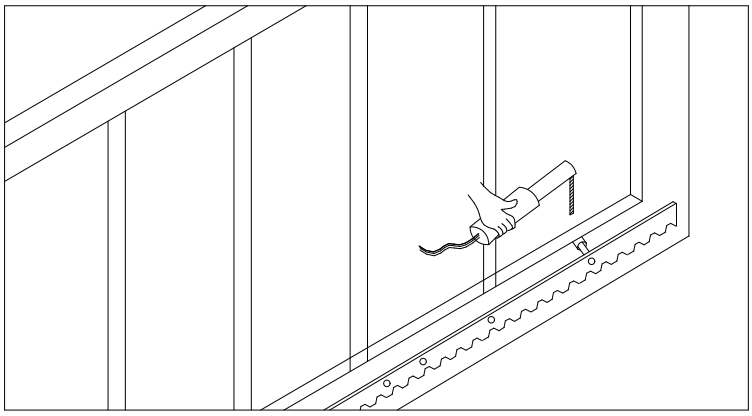
4.3.2 mainframe installation

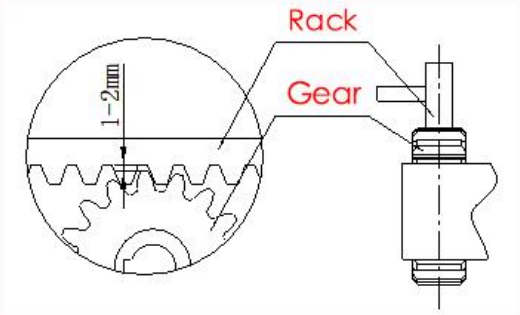
a) . Before installation, remove the plastic housing on the main engine and take good care of the relevant fasteners; b) . Due to the different installation environment, please bring your own power cord (no less than 3 cores, no less than 1.5 mm2, the length is determined by the user according to the situation of the installation site) . Before installation, please unlock the host first, unlock method: take out the key cover, insert the key, open the release wrench, until the release wrench rotation 90 degrees, as shown in Figure 5 state, then turn the output gear, gear can easily rotate;



4.3.3 rack installation,

first the rack installation screw and rack screw together, the rack on the host gear above, so that the rack and gear bite, then the rack installation screws and the door body welding (each screw first point a solder joint) , pull the door body (at this time the host in a free state) can easily move, and according to Figure 7 check rack and gear clearance between whether there is. There is no problem to install the rack screw welding firm, so that all the required rack installation, rack and rack to ensure that between the same line. After the installation, pull the door body, the whole trip to ensure flexible no card lag.





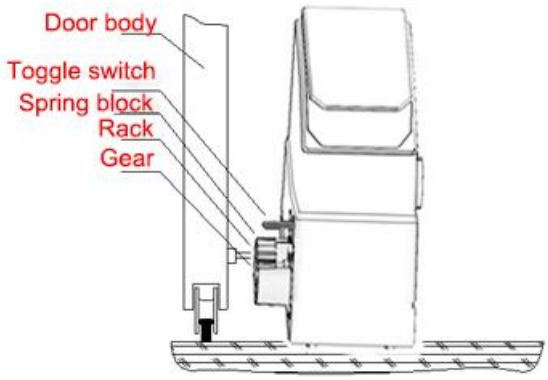
Gear Rack Fit:

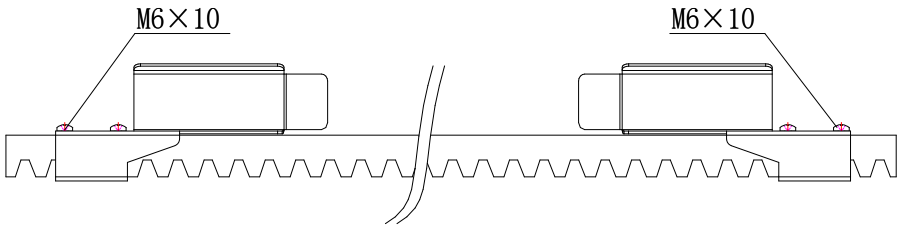
Warning:

in order to ensure safety, install safety blocks at both ends of the guide rail to prevent the door body from rushing out of the guide rail. Before installing the main engine, please confirm whether the door body safety blocks are installed in place, whether it has the function of preventing the door body from leaving the guide rail and running out of the safe range. Before installing the mainframe, please make sure that the mainframe and parts are in good mechanical performance and that the door body can be operated flexibly by hand. This product can only one control drive a host, otherwise it will cause damage to the control system. The installation of this product must be seen in the operation of the door to install leakage protection switch, installation height must be higher than 1.5 meters, so as not to be touched by children. After the installation of this product, please confirm again whether the mechanical properties are intact, whether the manual unlocking of the rear door body is flexible, and whether the infrared protection switch (optional) is installed correctly and effectively. 4.3.4 limit switches shall be adjusted and spring limit

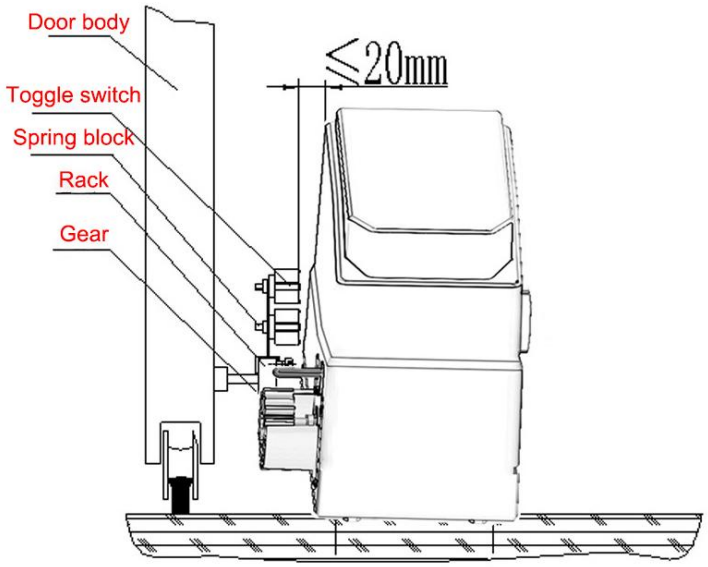
switches shall be installed at

Installation method of spring limit block:



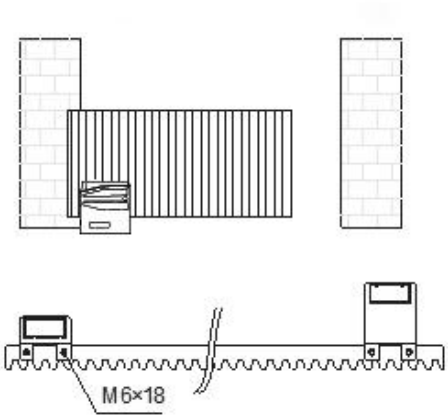


Mounting position of magnetic steel limit switch:

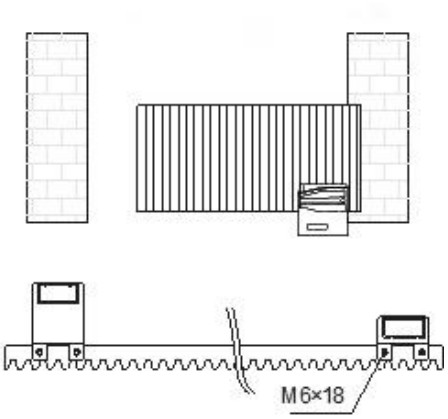


Installation method of magnetic steel limit block:

Door opener installed on the left



Door opener installed on the right



Note: the default factory door opener right (according to the actual situation, reference 4.3.5.1 and 4.3.5.2 notes, to adjust) .

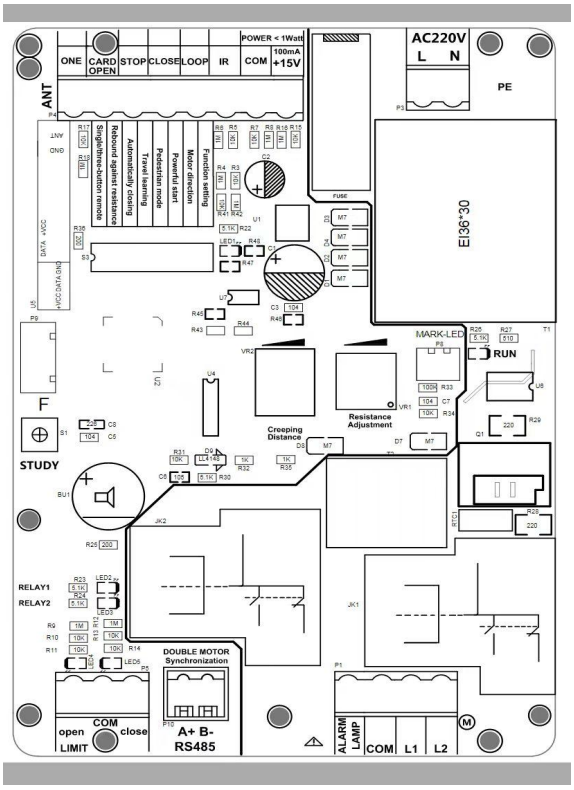
4.3.5 control board wiring

4.3.5.1 AC Sliding Gate Opener Controller Manual

(Please read the manual book carefully before using)

Features

- Built-in circuit board with s soft start and slow stop
- Irreversible motor. The motor is irreversible, so there is no need to install an electric lock. When there's power failure, the gate can be manually controlled by release key.



❖ **Functions**

1. Automatic closing
2. VR1 adjustment when against resistance**.** The motor has a resistance rebound function. Adjusting VR1 can set the operating resistance of the gate. It also has the ability to automatically detect resistance and provide protection.
3. The operating route can be memorized. Automatically stop after the opening and closing time has expired.
4. The motor running direction can be changed without re-adjusting the wiring.
5. Dual-machine RS485 command synchronization, single button or three button control, strong start, motor running direction adjustment.
6. Lock setting, air coding, long distance adding transmitter without disassembling the case.
7. VR2 creeping distance. Gate creeping distance adjustment 0-15s.
8. Single-button cycle, open, stop, close linear interface, ground-sensing infrared and external APP interface (close the gate and the infrared rebounds and stop in the open limit or the remote control command a stop)

❖ **Dial Switch Descriptions**

DIP1: Single and three-button remote control: When the dial is turned upward and set to ON, the single-button remote control function is used. when the dial is turned downward and set to OFF, the three-button remote control function is used.

DIP2: Rebound against resistance: When the dial is turned upward and set to ON, the gate will rebound against resistance. when the dial is turned downward and set to OFF, the gate will stop when resistance.

DIP3: Automatically closing: When the dial is turned upward and set to ON, the gate will automatically close with set closing time after the gate opens in place. when the dial is turned downward and set to OFF , automatic closing is invalid.

DIP4: Travel Learning: This function takes effect after the travel time is set. when the dial is turned upward and set to ON, it will automatically stop when the motor is in place; when the dial is turned downward and set to OFF, the running time defaults to 90S.

DIP5: **Pedestrian mode**: When the gate is closed and the dial is upward and set to ON, the gate will open only 1.1 meters wide to for pedestrian passing.

DIP6: Powerful start: when the dial is turned upward and set to ON, the soft start is turned off. It is suitable for low temperature weather or heavy gates.

DIP7: Motor running direction: if you find that the motor direction is reversed, just adjust the DIP7 dialing position after the motor stops running.

DIP8: Function setting: When dialed down and set to OFF, the motor is in normal running state; when dialed up and turned ON, it is in the setting state (cooperate with DIP3/DIP4 or DIP5 to achieve the corresponding functions). For details, Check the below special function settings.

❖ **Special Function Settings.**

1. Automatically closing time setting.

DIP8 and DIP3 are dialed up to ON at the same time, and the other DIPs are dialed down to OFF. Pressing the function key button F (S2) and the sound will beep, one beep for 1s. Set it to the time you need. Then continue to dial DIP5 down to OFF and the setting is completed.

2. Travel time setting

DIP8 and DIP4 are dialed up to ON at the same time, and the other DIPs are dialed down to OFF. Pressing function key button F (S2) for more than 5s, the gate will automatically open and close once, memorizing the travel time. Then dial DIP6 down to OFF. After the setting is completed, the gate will slow down when approaching to open and close limit.

3. Turn on/off slave mode in dual-machine synchronization scenario [factory default is off]

DIP8 and DIP5 are dialed up to ON at the same time, and the other DIPs are dialed down to OFF. Press and hold the function button F (S2) for more than 5 seconds. Two beeps mean the slave mode is turned on, and three beeps mean the slave mode is turned off. Then dial DIP8 and DIP5 down. The setting is completed. [Remarks: Slave mode only receives 485 commands from the host, not receive remote control signals!]

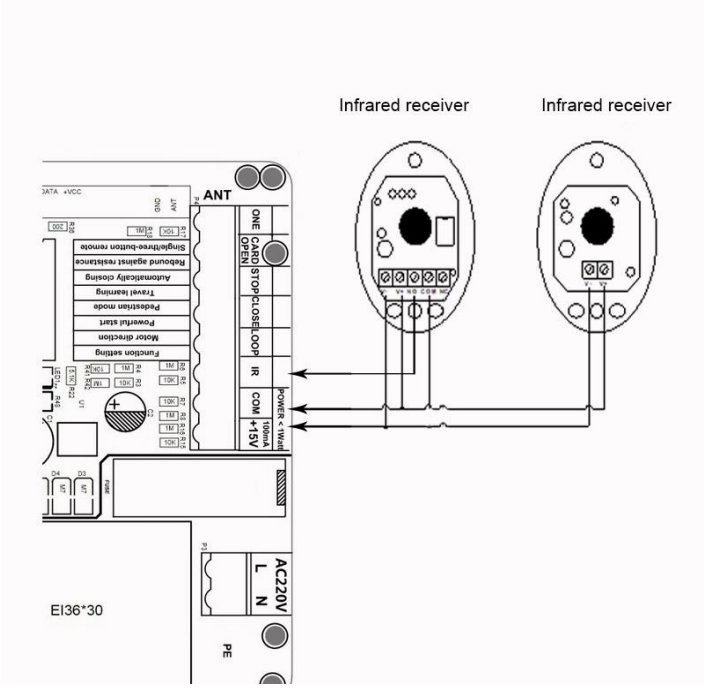
4. Add and delete remote control

(1) Add remote control: Press and hold the function button F (S2) until the light turns on, press the [open] button twice, the learning is successful, and this button is also successfully set for single-button use.

(2) Delete remote control: Press and hold the function key button (S2), the light will turn on, press the [oepn] and [close] button once each and the light will flash to delete the currently operating remotes. Press the [open] and [close] button twice each to delete all learned remotes.

(3) Add a transmitter by air coding: pressing and hold the [Open + Lock] button of the learned remote for more than 3 seconds, hearing the buzzer beep three times (one long and two short), and then press the [open] button twice of the transmitter to be learned, when you hear the buzzer beep three times, the learning is successful. Repeat the above steps to learn the next one.

Infrared protection switch (Figure 13)Functions of the infrared protection switch: In the process of closing the door, if people or objects move within the operating range of the door, the door can be quickly turned to open the door to protect the safety of personnel or property.The distance between the receiving end and the transmitting end of the infrared protection switch shall not be less than 2 meters, otherwise the infrared protection may be affectedThe sensor effect of the switch.If an IR protection switch is connected, remove the short wire between IR and GND on the X5 terminal.



Remote control learning and operation

Remote control operation

When the remote control mode is three channels, the three buttons of the remote control respectively control the opening/closing/stopping of the host.

When the remote control mode is single channel, one button of the remote control cycles to control the opening/stopping/closing/stopping of the host.

Adding and deleting transmitters

(1) Additional transmitter: Press and hold the function key F (S2) to turn off the light, press any remote control key twice, and the learning is successful. This key is also successfully set for single key use.

(2) Delete transmitter: Press and hold the function key F (S2) for more than 5 seconds, the light flashes and the buzzer sounds, then all learned transmitters will be deleted.

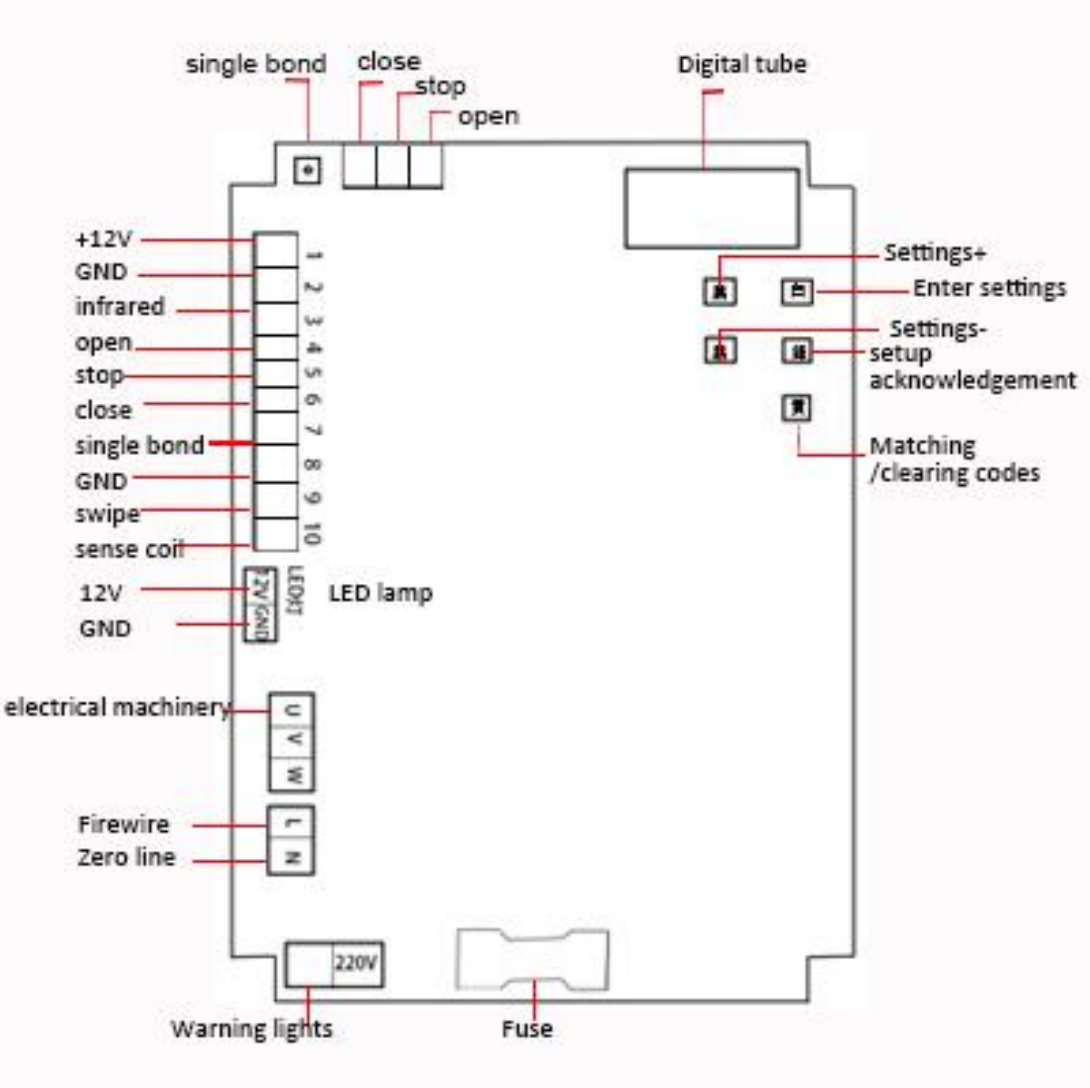
(3) Aerial code addition transmitter: Press and hold the [Open+Lock] button of the learned transmitter for more than 3 seconds, and hear the buzzer beep three times (one long, two short), then press the [Open] button of the transmitter to be learned twice. If you hear the buzzer beep three times, the learning is successful. Learn the

next step and repeat the above steps.

Description of Variable Frequency Sliding Door Control Board

This controller uses the latest digital processing chip DSP as the main control chip, motor vector algorithm, and has overcurrent/over temperature protection Equipped with rebound function when encountering resistance, ordinary asynchronous motors can adjust their speed in a full range of 40~100Hz, corresponding to a motor speed of 1400RPM

Ⅰ.Interface Description



Ⅱ. Setting instructions

White setting key S4 enters settings

On the black button: Settings+Data Plus

Black down key: Settings - Data subtraction

Yellow key for code checking and clearing: Short press S5 to enter code checking, long press for 15 seconds to clear all handles

Green confirmation key: S3 setting confirmation key. After adjusting the parameters, press the setting key to push it out

Press the green confirmation button for 5 seconds to enter the journey learning mode. The door will

automatically open and close once and save automatically

After entering the settings mode, long press the settings button to clear all previous settings and restore to the factory settings

III. Set operation display:

Press the settings button (white button) to enter the settings function

Function display:

The first digit on the left is the function display 0.XXX running display

1. Set the operating frequency of XXX door opening to 30-100 (the lower the frequency, the lower the speed, the higher the frequency, and the larger the number)

2. Set the frequency of XXX door closing operation to 30-100 (the lower the frequency, the lower the speed, the higher the frequency, and the larger the number)

3. XXX door opening resistance setting 0~100 OFF (the smaller the number, the more sensitive the resistance)

4. XXX door closing resistance setting 0~100 OFF (the smaller the number, the more sensitive the resistance)

5. XXX automatic door closing time swipe card automatic door closing time OFF (automatic door closing is controlled by remote control)

7. XXX output power 370/550/750W (output power setting)

8. XXX 4 Four key/1 single key (remote control single key controller/4 key switch)

9. XXX 0ff: Turn off automatic door closing except for card swiping. On: Turn on automatic door closing except for card swiping (handle and button). A. XXX automatic travel learning. Learning must be done with the door in the middle (cannot be learned when reaching the limit state, use manual door closing before learning) and card swiping: automatic door closing. Card swiping defaults to automatic opening and automatic door closing, and the remote control's automatic door closing function needs to be set to open or close

10. XXX slow travel speed of 15-40MHz (which is the frequency of soft start and soft stop)

The remote control test requires the correct direction of opening and closing the door. Press the plus button to close the door first, then automatically open the door to the opening limit and automatically close the door to complete the travel learning E. Press the QR code key to enter XXX, press and hold for 15 seconds to clear the saved remote control code, and successfully return to the display

Ⅳ、 Installation and debugging instructions

After all circuit wiring is completed, test that the switch door limit is intact. First, manually move the door to the middle position, use remote control to check the code, press the remote control door open or close button to determine whether the motor wiring is correct. If the direction is incorrect, turn off the power and exchange the U-V wiring. The direction of power on should be correct with the direction of the remote control Manually move the door to the middle position, press and hold the (green key) to start learning the travel (note that learning is prohibited when in place and there is protection), (there will be a soft start and soft stop effect after automatic learning of the limit position. If there is a power outage in the middle, the first power on will slow down once, and once the limit is detected, it will return to normal)

5. Others

5.1 Maintenance

Check the door body once a month to check if it is running normally.

For safety reasons, it is recommended that each door be equipped with an infrared protection device and inspected regularly.

Please read all user manuals carefully before installing and operating the door opener.

Our company reserves the right to make changes without prior notice.

5.2 Troubleshooting

problem	Possible cause	resolvent
The door cannot be opened and closed normally, and the LED light is not on.	1. Power off. 2. The fuse is burnt out. 3. Control board power wiring issue.	1. Turn on the power switch. 2. Check the fuse (number FU) and replace it if it is burnt out. 3. Rewire according to the instructions.
The door can only be opened, not closed。	1. Infrared wiring issue. 2. Infrared installation issue. 3. The infrared protection switch is obstructed by an object. 4. The recoil force is too small when encountering obstacles. (Intelligent) 5. Hall components are damaged. (Intelligent)	1. If it is not connected to infrared, please ensure that there is a short circuit between the infrared port GND; If infrared is connected, ensure that the wiring is correct and the infrared status is NC. 2. Ensure that the infrared installation positions can be aligned with each other. 3. Remove obstacles. 4. Increase the recoil force. 5. Replace the Hall components.
The remote control is not working.	1. The battery level of the transmitter is low. 2. The transmitter has not learned.	1. Replace the transmitter battery. 2. Learn the transmitter again.
Press to open or close, the door body does not move, and the motor makes noise.	1. Capacitor damage. 2. Poor capacitor contact. 3. The door body is not flexible enough.	1. Replace the capacitor. 2. Check the capacitor wiring. 3. Adjust the motor or door body according to the actual situation.
Keep opening and closing the door to the limit without stopping	1. The direction of the limit is incorrect. 2. Installation issue with magnetic steel limit.	1. Check if the wiring of the limit switch is consistent with the actual operating direction. 2. Check whether the distance and height between the magnetic steel limit and the door opening machine meet the installation requirements。
Leakage switch tripped.	Short circuit in power line or motor line.	Check the wiring.
The remote control distance is too short.	The signal is blocked.	External receiver antenna, 1.5 meters above ground.

Stop or reverse the door when it reaches the middle position。	1. The motor output force is insufficient. (Intelligent) 2. The motor encounters insufficient resistance. (Intelligent) 3. The door body is obstructed.	1. Adjust VR4. 2. Adjust VR1. 3. Remove obstacles.
Automatic door opening	The automatic door closing function has been activated, but the opening direction of the door opener is incorrect.	Refer to the precautions in sections 4.3.5.1 and 4.3.5.2 of the manual to change the direction of the door opening machine.

Maintenance

The gate should be checked every month to make sure it operates normally.
For the sake of safety, each gate is suggested to be equipped with infrared protector, and regular inspection is required.
Before installation and operation of the gate opener, please read all instructions carefully.
Our company keep the right to change the instruction without prior notice.

Warranty Form

Warranty (Notice) Regulations

（1） Repair within the warranty period with this certificate and invoice;

（2） Warranty period: One year from the date of sale;

（3） Any user who fails or is damaged due to product defects without disassembly will be repaired or replaced with parts free of charge by our factory;

（4） Due to improper use, mechanical damage caused by human factors is not covered by warranty.

Maintenance records

Maintenance date	Maintenance content	Repairman