User Manual
Sliding Gate Opener Kit

Contents

1. Summary

This equipment is one of the auto gate openers launched by our company adopting a new design and integrated control system. Our new sliding gate opener has many features such as: low noise, light weight, powerful starting torque, stability, reliability and is compact and stylish. The motor will still work for a short period of time using lower voltage. The control board has overload protection. When there is a power failure, the motor drive can be separated by the use of the clutch, by using the specified key the user has the ability to disconnect the clutch enabling the gate to be opened or closed manually. Using the optional infrared photocells the gate will automatically stop and re-open if an obstacle is sensed.

2. Appearance and dimensions

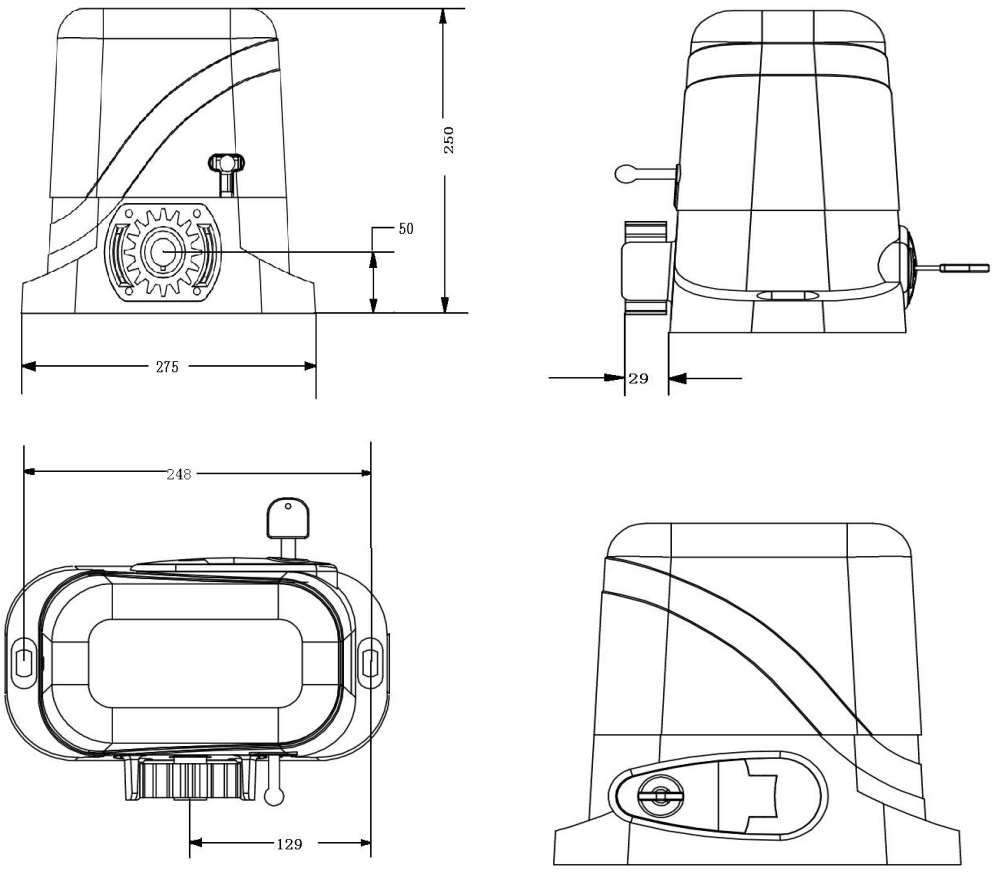

Diagram 1

3. Parameters

1. Working temperature of motor：-25°C～ +55°C
2. Working humidity：≤85%
3. Power supply：220VAC 50Hz
4. Rated power：90W
5. Output gear module：M=4
6. Output gear number：Z=16
7. Open(close) speed：v=12m/min
8. Rated speed ： 1400RPM
9. Maximum pull：1100N
10. Maximum load：600KG
11. Net weight：11KG
12. Remote control distance : ≤50meter
13. Packing : In a standard carton
14. Protection Class : B

4. Features of control board

1. Totally integrated electrical mechanical system (excludes racks)
2. Control board interface for optional impact-proof infrared photocells
3. Alarm lamp interface
4. Automatic delayed closing
5. Adjustable resistance sensitivity
6. Gate will auto stop and re-open when an obstacle is encountered
7. Wireless remote control or wired remote control are optional

5. Installation of mechanical parts

5.1 Installation of motor base plate

1. Depending on the installation size of the motor and mounting height of racks, after determine the installation position of the motor base plate, first let the bolt embedded or use expansion bolt to make base plate fixed on watering good cement foundation. See diagram 2

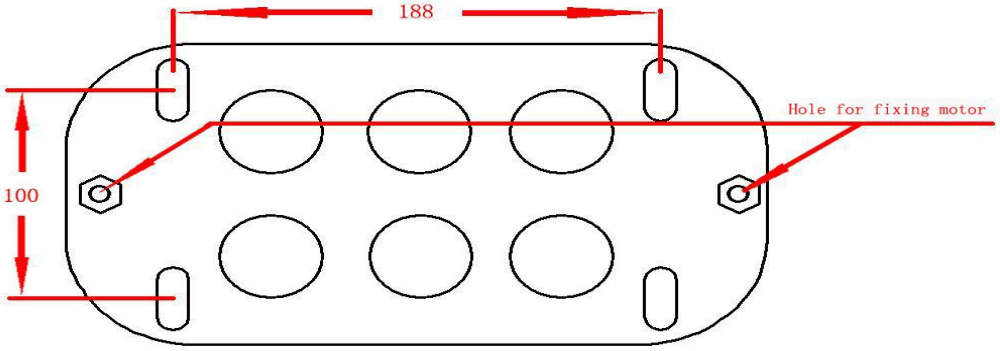

Diagram 2

2. If the rack has been installed on the door, the motor can be fixed on the base plate.use a allen key rotation to the clutch "off" position, the motor and the gear rack so as to better determine the position of the motor base plate, then remove the motor and fixed base plate.

5.2 Installation of gate opener

1.Let the sliding gate opener put on the base plate.use a random matching hexagon screw make the motor fixed on the base plate.

2.Unscrew the screws fixed the motors cover,and then remove the motor cover.according to the electrical wiring diagram ,connected the power cord,after adjust in good position,Then install cover and use screws to fixed it

5.3 Installation of racks

1. After the motor is installed,the racks teeth the down ,then put the gear on the motors.and final connected with screws and gate.push the door with hand.so can let door sliding it and can move it without any problem.after confirmed,fixed the racks.

2. Rack is usually unit assembly,in order to avoid gate run jitter or jammed, rack and joint clearance must be corrected.Suggest use this way,see diagram 3.with a small correction of the rack， after connecting right with racks 1 and racks 2 ,then fixed racks 1 and 2.

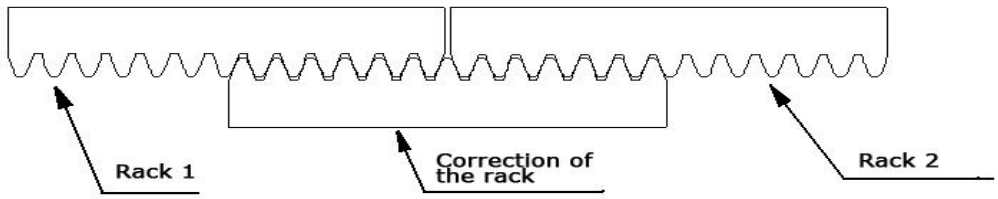

Diagram 3

5.4 Installation of limit levers.

There are 2 limit levers supplied. Note there is a left hand and a right hand lever. The levers should be installed one at either end of the rack. See Diagram 5.

To install the levers in the correct position, open the clutch door and press the ‘CLOSE’ button on the remote, the motor will run but will not drive the gate. Close the gate manually and adjust the limit lever to contact the toggle switch and switch the motor off at the desired gate position. To adjust the stop position of the gate when it is open, press the ‘OPEN’ button, manually open the gate and adjust the other limit lever to contact the toggle switch and switch the motor off.

When you are satisfied the levers are in the correct positions, tighten the screws in the levers to clamp them to the rack, close the clutch door and using the remote control check the gate opens and closes to the desired positions. Adjust the limit levers if necessary.

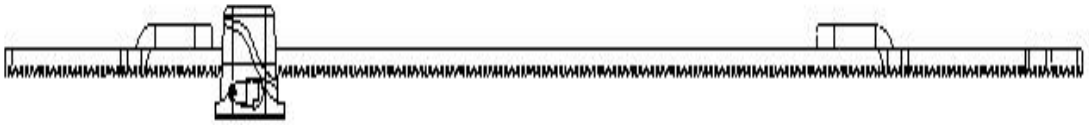

Diagram 4

5.5 Function of clutch

When the clutch is opened to the open position, you can manually push the door; when closing the clutch, electric door can run on, off, when touching limiting the bezel will stop automatically.

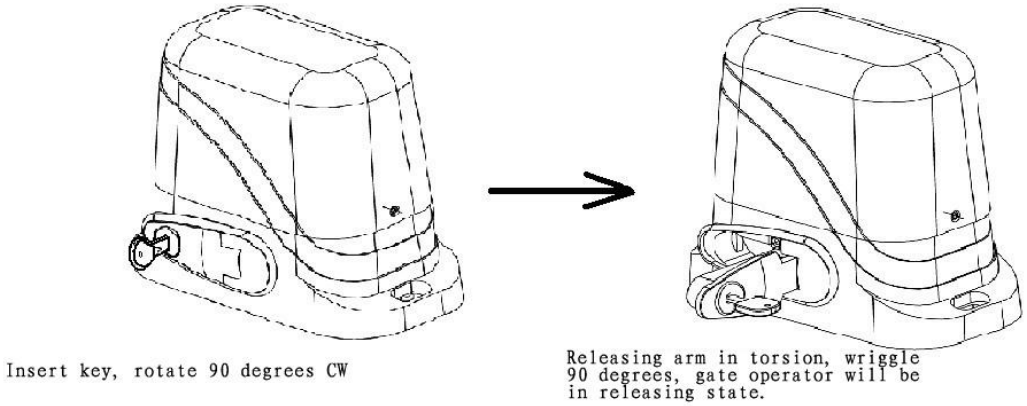

Diagram 5

5.6 Installation of infrared sensors(photocell)

1. Unscrew the screws on the motor and the remove the motor cover.
2. Let the signal line and power line coming in from outside ,and then connected it according to electrical wiring diagram
3. With screws fixed base plate in a fixed position
4. Close the motor cover and tighten screws
5. According to the required to adjust the transmitter and receiver height position
6. After installation,to test photocell and adjustment.to make sure can nomal work.

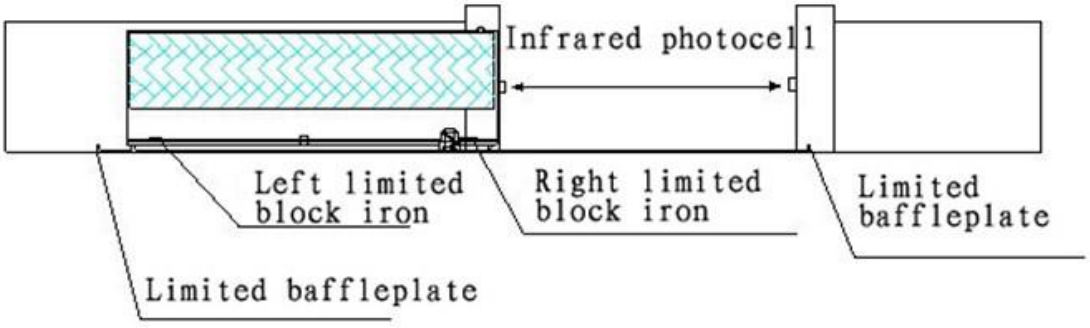

Diagram 6

6. Installation diagram of electrical parts

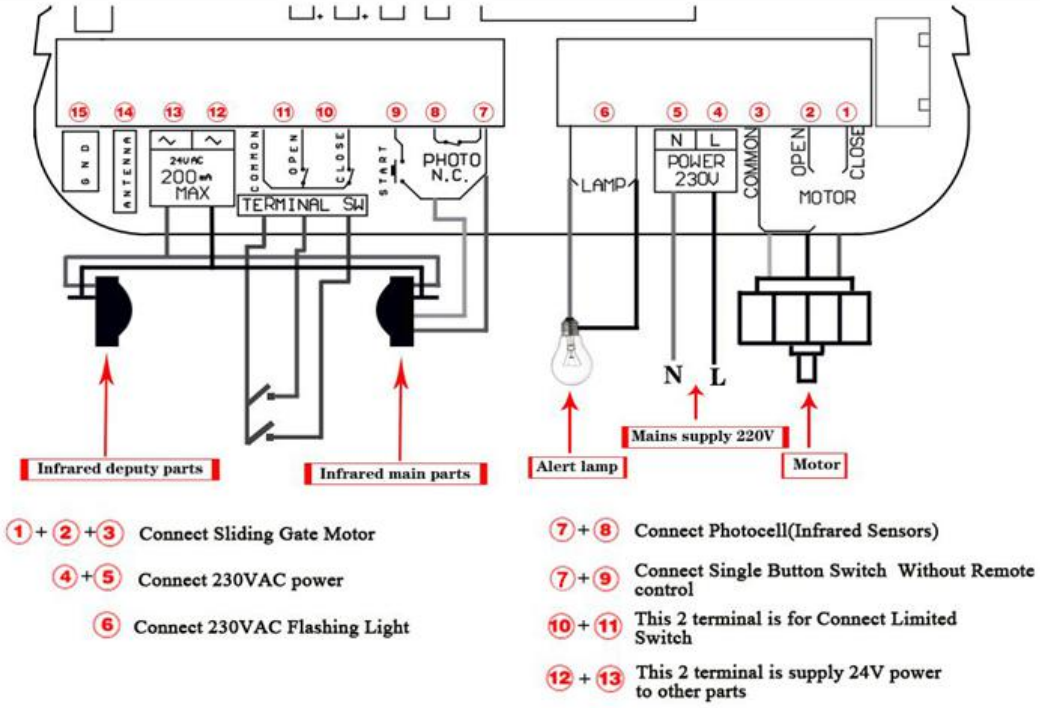

Diagram 7

7. Function Testing

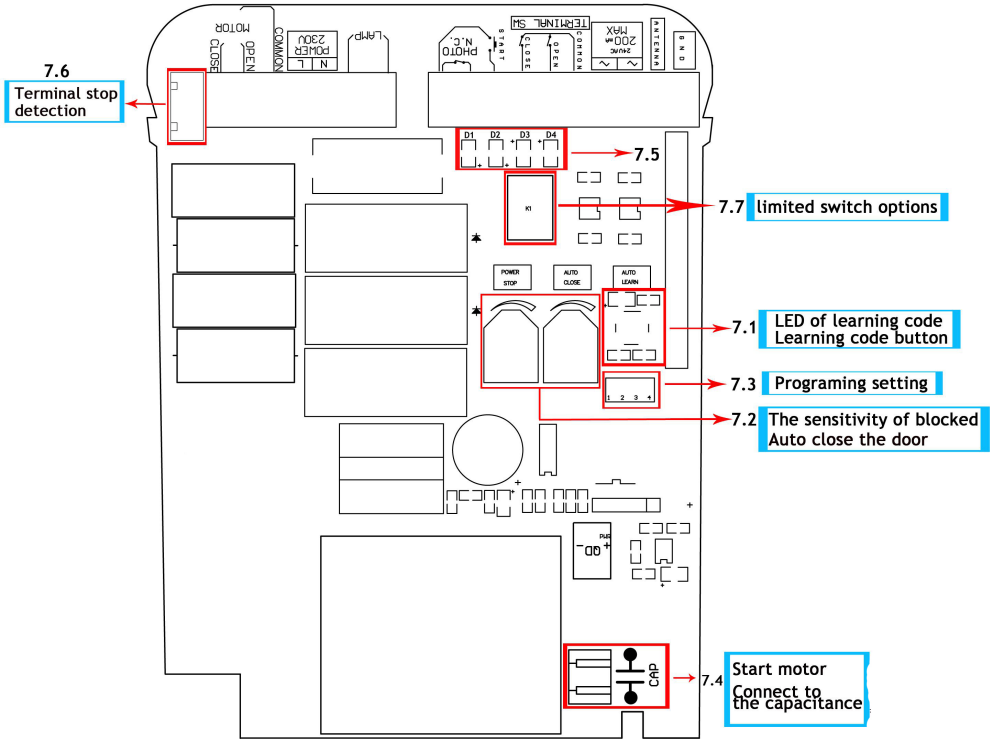

Diagram 8

The following functions refer to the diagram above.

7.1 Learn remote control code:

A. Control panel can memory more than 15pcs remote control

B. Press board "AUTO LEARN" button,LED -D5 will lighting for 10 seconds.during this time,we just press the button of remote control.its code will learning and went in.if receiver the code,LED-D5 will go off and motor will start.

C. If we not press any buttons, LED-D5 will go off after 10 seconds,and receiver will automatic quit learning functions.

D. Press and hold the button 6 seconds,LED-D5 will flashes ,and then release the button,all the code will be cleared that has been memoryed in control board,

7.2 Blocked detection:

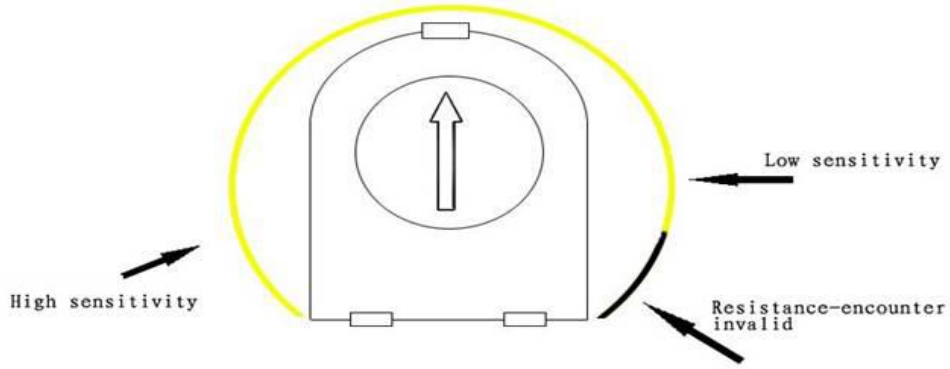

Diagram 9

As picture show,we can rotate "POWER STOP "that parts.so we can adjust the sensitivity of blocked.

A. Hig sensitivity : when the motor is rotation,will meet some minor resistance,then control board will send a signal to let motor stop rotating.

B. Low sensitivity : when the motor is rotation,will meet greater resistance,then control board will send a signal to let motor stop rotating.

Note:when motor is rotation .If LED-D5 flashes,that show system is working now .

C. As picture show， when pointer rotate to black part ,the control panel will quit this system,and when the motor is working ,LED-D5 will not lighting .

7.3 Auto close the door :

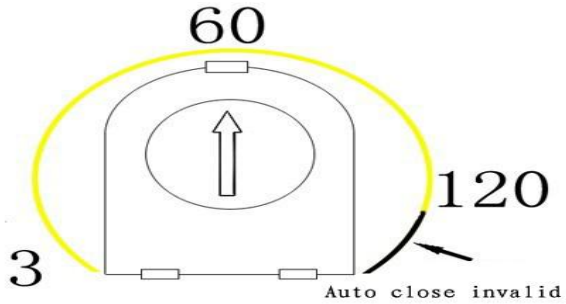

Diagram 10

A. When the door is open (as long as there is open),we rotate the pointer to

yellow part.the control panel will control the motor to auto close the door,this time can be adjusted in 3 seconds to 120 seconds

B. As picture show,we rotate the pointer to black area.control panel will automatically exits the colsed system.

7.4 programming setting:

A. Dial-up 1→off: when motor is working, lamps will always lighting.and motor will stop and after 1 minutes the lamp is off .

Dial-up 1→on： As long as the motor is working,lamp will flashes.the motor is stop and light is off.

B. Dial-up 2→off： Motor control(Including the use of control and short start),motor working as follows
open→stop→close→stop→open……

Dial-up 2→on： Motor control(Including the use of control and short start),motor working as follows
open→stop→close→stop，then automatic open the door ……

C. Dial-up 3→off：when the system is closed state ,there are obstacles to the infrared sensors,the motor will stop it and automatically open the door.

Dial-up 3→on: when the system is closed state ,there are obstacles to the infrared sensors,the motor will stop it.

d. Dial-up 4→off：the resistance encounter is set for high sensitivity.
Dial-up 4→on：the resistance encounter is set for a lower sensitivity.

NOTE: In dial up 4, ‘on’ position, can let you have more choices for the motor power.

7.5 Motor Start Capacitors:

Capacitors are connected with control board. before use motor,pls confirmed the interface of capacitors is secure.pls see diagram 8.

7.6 Led Indicator:

D1：The infrared sensors output signal instructions

LED ON：Infrared sensors detection, there is no obstacle.
LED OFF：Infrared sensors detection, if there have obstacle when colsed the door,the motor will stop working.

D2：

LED ON：We use a conductor ,make the START this terminal connected with

the right of second terminal.the lamp will lighting it.this will realize same function(use the remote control just press one time)

LED OFF：show that no operation.

D3：Limit switch of closing the door

LED ON：The door is not completely closed

LED OFF：The door has been completely closed

D4：Limit switch of opening the door.

LED ON：The door is not completely opened

LED OFF：The door is completely opened

7.7 Terminal stop detection interface:

Terminal stop detection have 2 type,one is open the door ,another is close the door.if normal working. 2 pointer will connect to two positions,when in right position,will break it.

Our products has set it and connected it before send to our customers.

7.8 Limited switch options (K1):

Limit switch is used to switch terminal stop detection interface,that direction of open and close the door

7.9 External wiring diagram:

Motor：The 220VAC motor have 3 lines. One is common.

Infrared： Connect the infrared sensors to NC terminals on the control board. There is also provision on the control board for 24V AC supply to the photocells.

Alert lamp：There have a port is output 220VAC.supply power to lamp.

24VDC：Supply power to photocells.

Preparation and testing :

Separating clutch,and then use hand push the door,let the door to sliding all journey,and check the door is flexible or not .and check racks happen stuck phenomenon of not ?if have,pls readjust motor position or racks position. untill let the door can move flexible.

After installation of sliding gate opener system,pls confirmed the direction of open and close the door.push the door to a sliding door machine ,is located near the center of the door.then close the clutch.and check electrical lines ,to make sure all lines are have connected good.(according to connected electrical diagram 8 to connect it) .finally ,connected the power,and use remote control to control and move the gate,then trigger an infrared sensors.the gate will stop .show that door action is closed. Or, will delay closing the door,and time will shorter.Use remote control to control and move the door several seconds ,then closed .and waiting for door can automatic move.if not.use the remote control to control and move the door several seconds again.and then waiting for door can automatic move.if can automatic move,show this action is closed the door. if closing direction do not tally with the actual direction,that will show that remote control make the motor stop .and pls disconnect the power.Pls

change the motor and control panel connection,means change OPEN and CLOSE these 2 lines.

After test direction,pls adjust the motor limit switch .Adjust and test limit switch of opening and closing the door.recognize it and let the motor according to actual open and close the door .when motor open and close,we will use hand to toggle limit switch to simulate the door has been opened or closed in position.If door is stop,that show the limit in the right direction.if not stop,that show the limit in the wrong direction. so have to use remote control to control and stop moving.and then toggle limit switch(K1), make the limit in the right direction.

This gate opener has two type of security protection functions: when meet obstacles have anti-collision function. Infrared sensors anti-collision function.

When meet obstacles have anti-collision function: when gate opener is in the process of opening or closing the door.when the door meet resistance, the motor will stop rotating.

Infrared sensors anti-collision function. when the door is in the closed state,if a person or a car ,just in and out of the door ,the door will stop sliding,and will rebound.

Automatic closing the door： after opening the door,without use remote control to control ,after serveral time later,the door will automatically closed.

8. Maintenance

1. The rack and drive gear should be kept clean. Do not attach any objects to the gate that may interfere with the rack or drive gear.
2. Should frequent clean the sundries on the magnet limit.
3. Lubricate all moving parts every 3 months.
4. If the control circuit board is fitted with an optional back up battery, check the condition once a month and replace if necessary.
5. Check power cables and conduit have not been damaged.
6. During heavy rainfall or light flooding ensure the motor housing has had no ingress of water.

9. Trouble Shooting

Problem	Possible causes	Repair method
Gate fails to operate	1. Check the clutch states ,power-driven state or not ?	Recovery
	2. Power no indication,and power trip.	To restore power
	3. The fuse has broken	Change the fuse
	4. Remote control failure or invalid	Detection or change
	5. Damaged power cable	Detection and Repair
	6. Remote control or motor problem	Detection and Repair

Working distance of remote control reduced	1. Low battery power or demaged 2. Interference from equipment using the same frequency 3. The receiver of controller was damaged	Replace battery Wait eliminate interference Replace the control board
Gate fails to stop at start or end position	1.The terminal stop toggle switch is damaged or obstructed. 2. Limit switch of the motor and the limit detection of the interface PCB board plug off. 3. Limit of open and close is in wrong position.	Replace toggle switch or remove obstruction Insert and fixed it Adjust of limit switch(K1)
Press open and close key of motor, but cant working and operate	1. Blocked sensitivity is too high(set too big) 2. The gate has lifted off the track and disengaged the drive gear from the rack	Make blocked sensitivity lowered ,and check gear and racks can operate normally. Maintenance and replace.

10. Important Notes

1. When someone or obstructions between the door, do not open or close the door, to ensure safety.
2. The power supply for the control board should be equipped with a separate switch with a fuse rated at 10AMP.
3. The control section has a strong power, cut off the power before opening the motor cover.
4. Motor gear modulus M = 4, number of teeth = 16, use the corresponding racks
5. The door should be done straight,after making sure racks fixed good,and the door can be in a good position with motor gear.
6. Racks and gear should be controlled in good gap.so can make sliding steady.
7. Confirm the direction of the gate movment.and magnet limit should fixed in good position.to avoid failure causes the motor to run out of control.