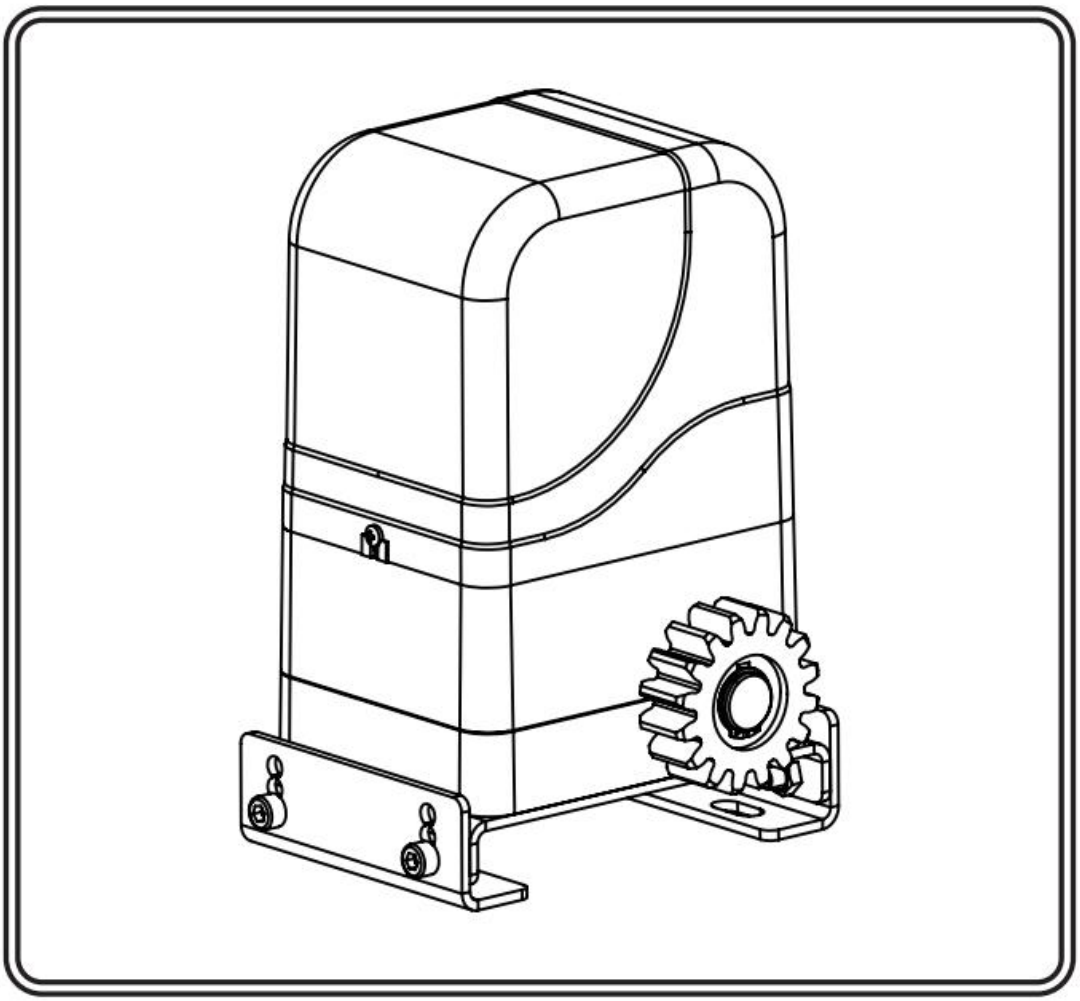
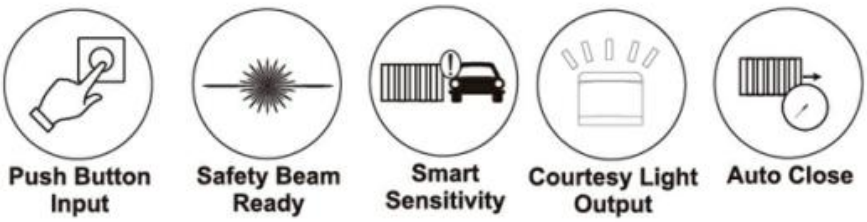
Sliding Gate Opener
User's Manual





V11.2.7

Contents

Thank you for purchasing our sliding gate opener. We are sure that the products will be greatly satisfying as soon as you start to use it.

The product is supplied with a user's manual which encloses installation and safety precautions. These should be read carefully before installation and operation as they provide important information about safety, installation, operation and maintenance. This product complies with the recognized technical standards and safety regulations.

Check Your Gate before Installation

1. General Safety

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or properties, should always request the assistance of qualified personnel.

● This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.

● The factory declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.

● Do not install the product in explosive atmosphere or where there is any danger of flooding.

● To AVOID damaging gas, power, or other underground utility lines, contact underground utility locating companies BEFORE digging.

● Disconnect the electrical power supply before carrying out any work on the installation or maintenance.

● Please ensure that the using power voltage matches with the supply voltage of gate opener (AC220V/110V±10% 50Hz / 60Hz).

● To ensure safety, before installing the motor, all potential hazards and exposed pinch points of the gate must be eliminated or guarded prior, and make sure Gate End Stop and a Gate Stopper mounted at each end of the rail to prevent the gate travelling off the track.

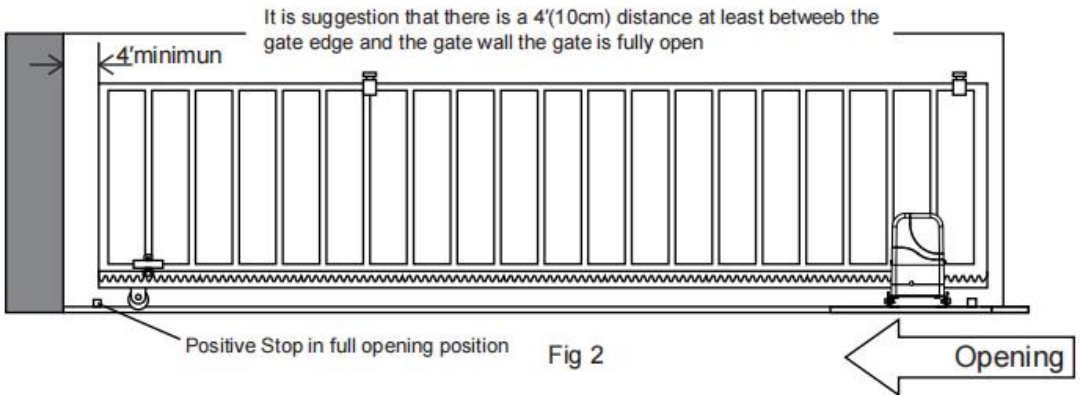
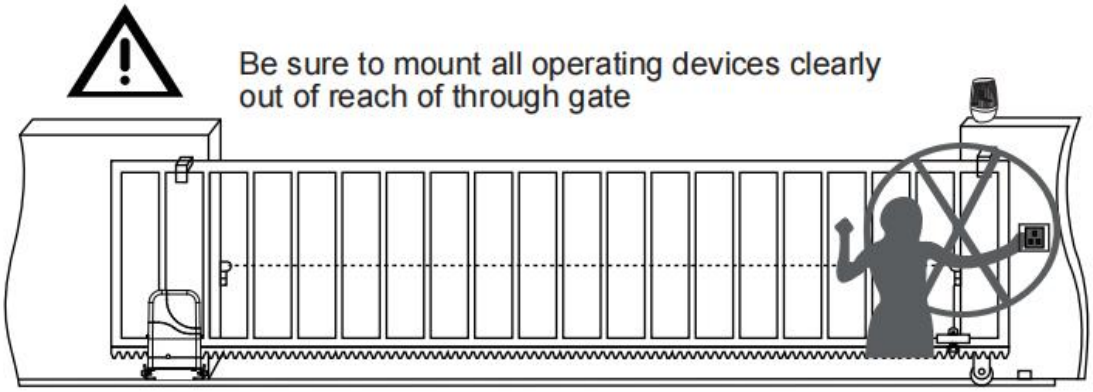


Fig 2

● Never mount any device that operates the gate motor where the user can reach over, under, around or through the gate to operate the controls. These must be placed at least 1.8m from any moving part of the moving gate.



● Keep remote control and other control devices out of children's reach, in order to avoid unintentional activation.

● If required, install infrared photocells (sold separately) to detect obstructions and prevent injury or damage.

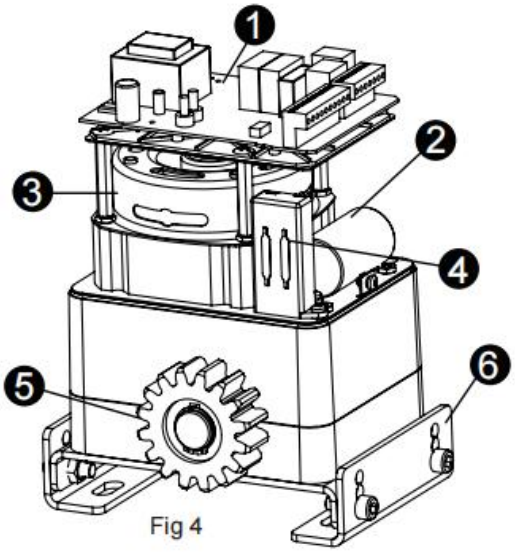
● Instruct all users about the control systems provided and the manual opening operation in case of emergency.

● Anything which is not expressly provided for in these instructions is not allowed and will void warranty.

● Only use original parts for any maintenance or repair operation. We decline all responsibility with respect to the automation safety and correct operation when other supplier's components are used.

2.Product Description

The sliding gate opener was designed as a device for moving sliding gates. The way of the gear works prevents the gate from moving when the motor is turned off, so there is no need to use an electric lock. Avoid a power failure, user can use the override key to unlock the clutch to manual open or close the gate.



1 Control Board

2 Capacitor

3 Motor

4 Magnetic Sensor

5 Output Gear

6 Aluminum alloy Base

Fig 1

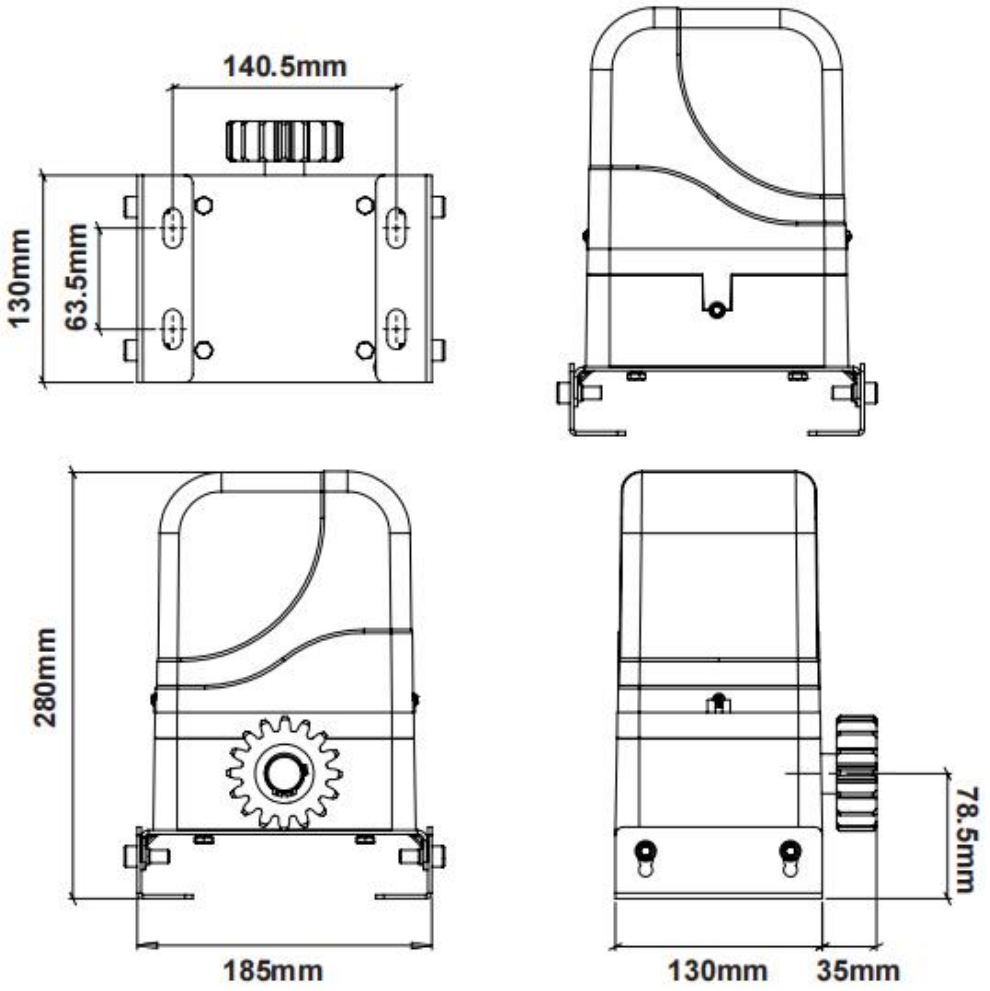


Fig 2

Part list


Motor x 1


Magnetic limit switch x 2


Expansion bolt x 4


Aluminum alloy Base x 2


Remote x 2


Manual release key x 1

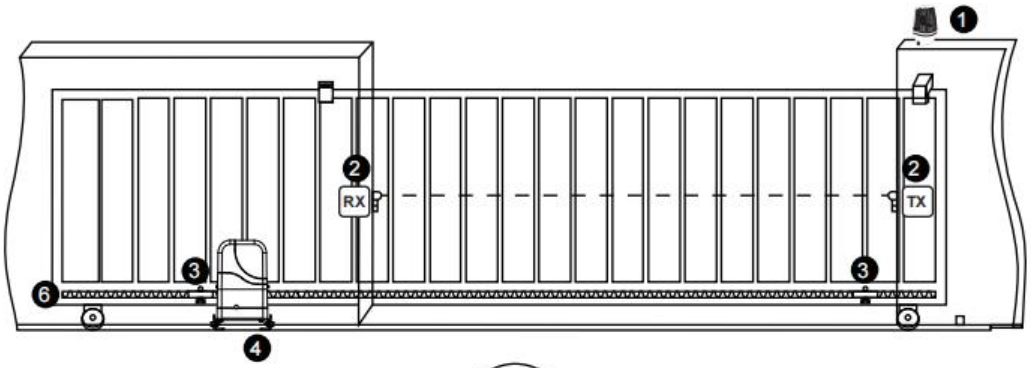
3.Parameters

Power supply	AC 220V / 110V ±10%	Output gear module	M=4
Motor power	AC 220V/ 110V	Output gear number	Z=16
Rated Power	130W	Limit switch	Magnetic limit switch
Open/close speed	20cm/s	Protection class	IP44
Load weight	300KGS	Work temperature	-25℃ ~ 50℃

Features of sliding gate opener

1.Stylish appearance design and built-in control panel integrated inside the mechanism, no external controller or receiver needed.
2.Pedestrian mode and condominium mode.
3.Built in limit switch allowing the motor to switch off once the cycle is finished.
4.Built in manual override with 2 supplied unique override keys in case of emergency or power failure.
5.The motor is constructed of all metal gears make it durable and long lasting.
6.Thermal protection against engine overheating.
7.Support max. 100pcs remote controls.
8. Possibility to connect external buttons and control devices (e.g.push button, WIFI controller, swipe card etc).
9. Automatic closing function adjustable from 0 to 60 seconds.
10. Anti-pinch protection in case of meeting an obstacle.
11. Easy installation, firm and solid structure, stable and reliable driving, permanently lubricated, maintaining-free.

Typical installation layout



❶ Flashing Lamp ❸ Magnet ❺ Remote Control

❷ Photocell ❹ Sliding Gate Motor ❻ Gear Rack

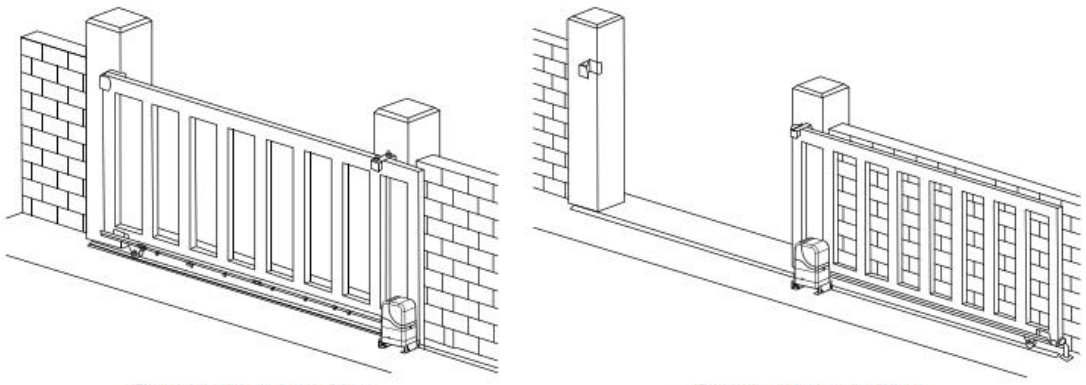
Fig 3

Note:
Before Installing, test the motor by plugging it into a power and pressing the remote. You will see the motor cog turn. When it stops (after approx 1 minute), press the remote again to see it turn in the opposite direction. This will give you an understanding of the way in which the motor will move the gate.

4. Installation Overview

Gate Opening Default Setting Information

The gate motor will open the gate from the left-hand to the right-hand side as its default setting (Refer to Fig 4)



Gate in closed position Gate in open position

Fig 4

If your gate needs to open from the right-hand to the left-hand (Fig 5), your motor needs to be mounted on the left-hand side as shown, you will need to switch 2 wires of motor (see Fig 13) at random. And swap over two magnets positions (Fig 11).

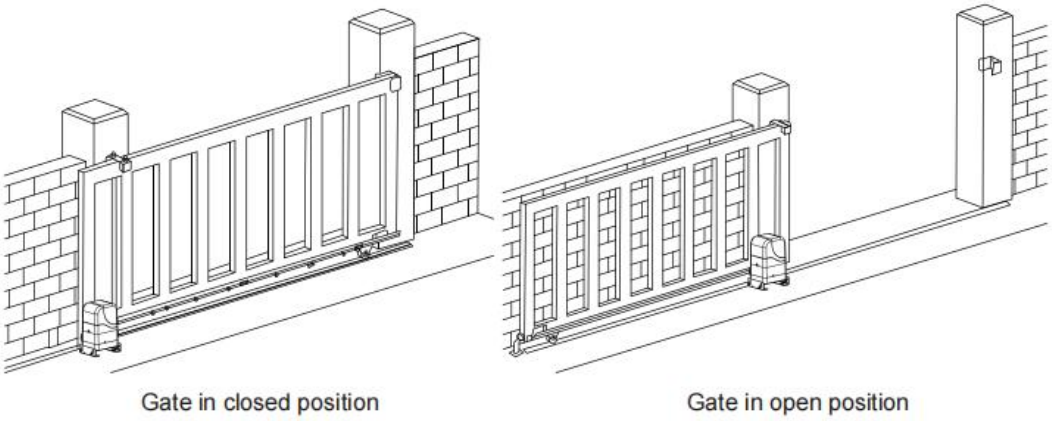


Fig 5

Any works done to the motor motor must be completed while the power is off, and the motor is unplugged.

4.1 Installation of the Opener

Necessary Tools

◆ The following tools may be necessary to install the Gate Opener.

◆ Screwdrivers. ◆ Electric drill. ◆ Wire cutters. ◆ Wire stripper. ◆ A socket set.

Caution

◆ Be sure that the opener is installed in a level and paralleled position and is properly secured and the gate can be moved smoothly push or pull by hand before installing motor(Fig 5).

◆ Improper installation could result in property damage, severe injury, and/or death.

◆ Before starting installation, ensure that there is no point of friction during the entire movement of the gate and there is no danger of derailment.

◆ Wheels and guide rollers should rotate easily and be free from dirt/grime.

◆ Ensure that the Warning Signs are present.

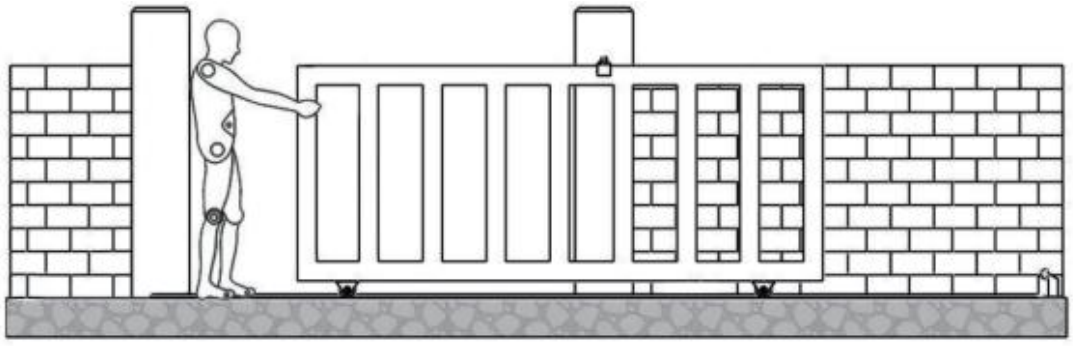


Fig 6

4.2 Example Sliding Gate Setup

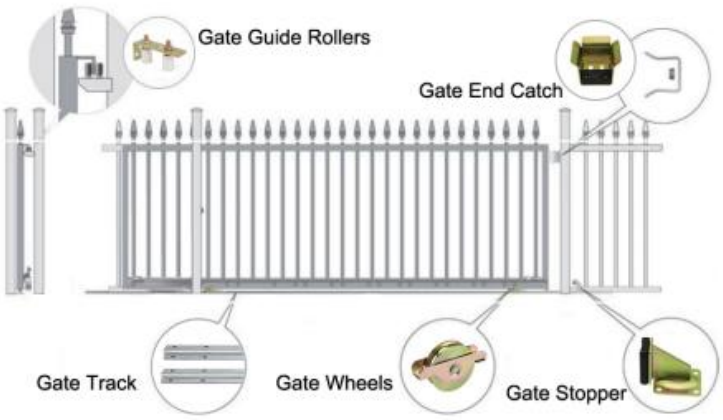


Fig 7

Note:
Before motor installation , sliding gate must installed well with hardware kit .If any gate hardware kit require, please contact with us.

4.3 Installation procedures

1.The limit default setting is for gate in close position. Before installation, please make sure gate is closed.
2.Prepare one or more conduits for the electrical cables. Cable conduits have to pass through the hole in the base plate.
3.Pour concrete and before it starts to harden, check that it is parallel to the gate leaf and perfectly level.
4.The four anchor bolts must be set into the concrete when it is poured, make sure the position of anchor bolts was placed according to the position of mounting holes on the base plate before concrete become harden.
5.Mount the base plate to the concrete pad.
6.Place the opener onto base plate. Check that it is perfectly parallel to the gate, and then screw the four bolts and washers supplied. It's only temporary installation. Further adjustment will be required when install the rack.

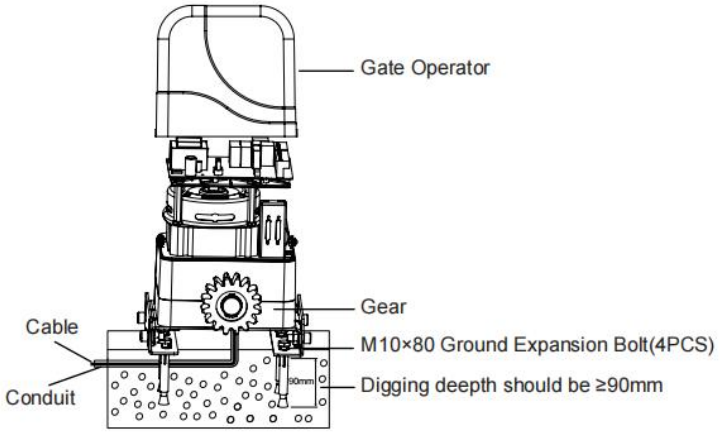


Fig 8

4.4 Manual release the clutch

1.Using the supplied key unlock manual override and pull out manual override lever (see Fig 9) then manually close the gate.
2.Insert the key in the key, barrel and turn the key, clockwise and pull to allow the manual override lever to swing out.

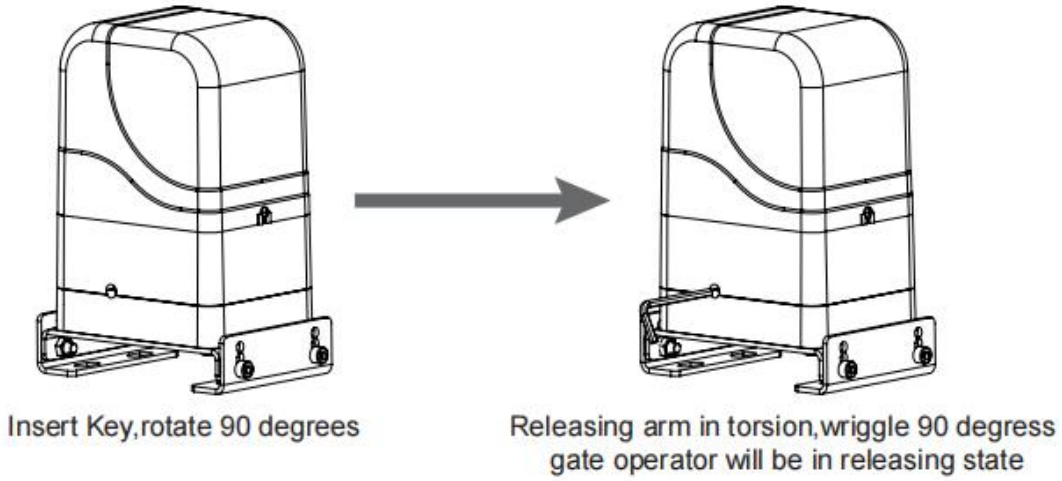


Fig 9

4.5 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 shake or jammed, rack and joint clearance must be corrected.
Suggest use this way (Fig 10) with a small correction of the rack, after connecting right with racks 1 and racks 2 , then fixed racks 1 and 2.

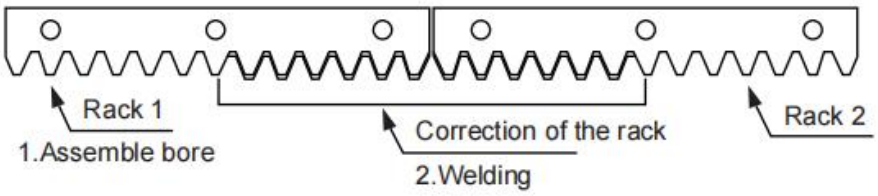


Fig 10

4.6 Installation of magnetic limit switch

1.Included in your gate motor kit are two magnetic limit travel stops which must be fitted to the gear rack on your gate to ensure safe operation.
2.The magnetic limit travel stops are designed to set the desired opening and closing position of your gate. These limit travel stops activate when the magnets travel past a magnetic limit switch sensor under the motor cover.

3.Two limit magnets were supplied, the higher limit bracket with magnet needs installed on the CLOSE position, lower limit bracket with magnet needs installed on the OPEN position. If not, the motor cannot run normally, as below Diagram 9 shows. (NOTE: The lower side limit, that magnet needs to adjust to the lowest position. And higher side limit, that magnet usually adjusts to the highest position--or just in some conditions, only adjusts to the higher side magnet position).
4.Release the clutch with the manual key and push the sliding gate manually to predetermine position, fix the magnet to the gear rack and then tighten the clutch with the key. Power on the control board, running the motor with the remote control, and adjust the magnet to the proper position until the gate can auto-stop at its correct position when fully opened or fully closed.

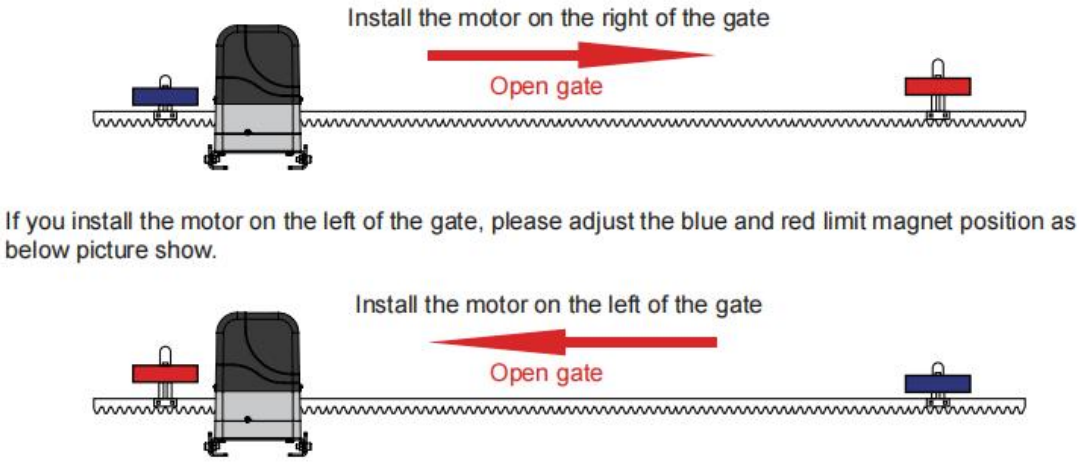


Fig 11

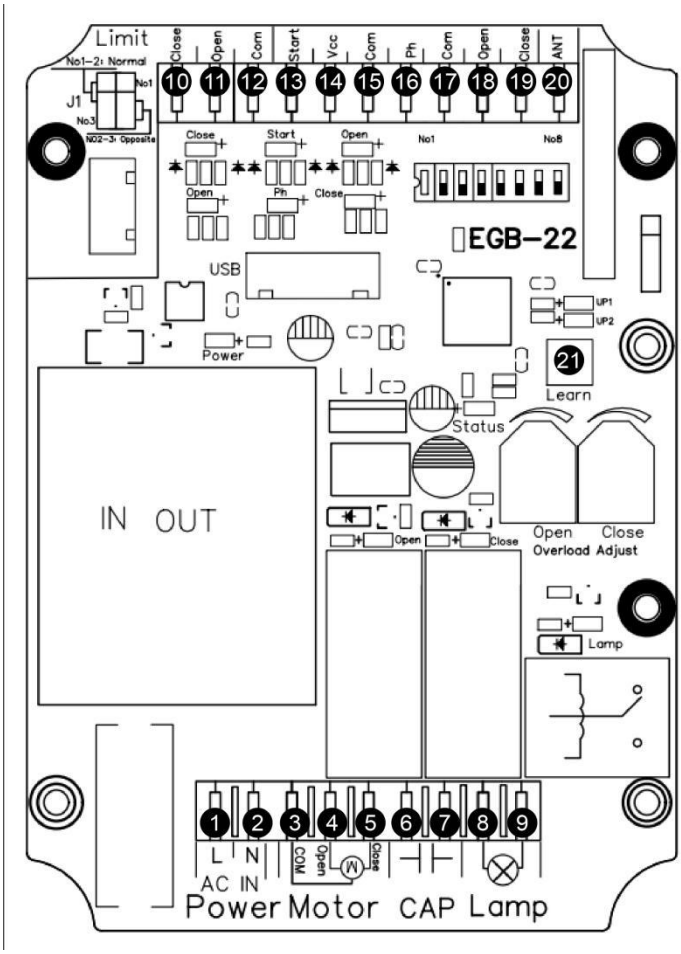
5. Control Board

5.1 Technical Parameters

1.Power supply: AC 220V/110V
2.Remote control: Giant customized rolling code
3.Remote control memory: Max support 100pcs.

5.2 Connection of the power supply

WARNING: NEVER connect the gate opener to the power outlet before all the installations have been done.



1&2.POWER terminal: used for AC 110V/220V power connection.
3&4&5.Motor: used to connect with sliding gate motor's wire.
6&7.Cap(Capacitance): used for connect the capacitance.
8&9. Lamp: used to connect with flashing light, output voltage is AC 110V/220V.
10.CLOSE: used for connect limit switch , CLOSE limit switch.
11.OPEN: used for connect limit switch ,OPEN limit switch.
12.COM: use for connecting COM or GND.
13.START: signal input of control circularly, use for connecting external device for control open-stop-close gate.
14.VCC: DC 12V output used to connect with external devices, max 200mA.
15.COM: use for connecting COM or GND.
16. Ph: used for connecting photocell sensor.
17. COM: use for connecting COM or GND.
18.Open: used to connect with any external devices that will operate to open the gate.
19.Close: used to connect with any external devices that will operate to close the gate.
20.ANT terminal: Use for connecting Antenna.
21.Learn button: used to program or erase the remote control.

5.3 Control board wire diagram

- **Install the motor on the right-hand of gate**

The gate motor will open the gate to the right-hand side as its default setting (refer to the Fig 4).

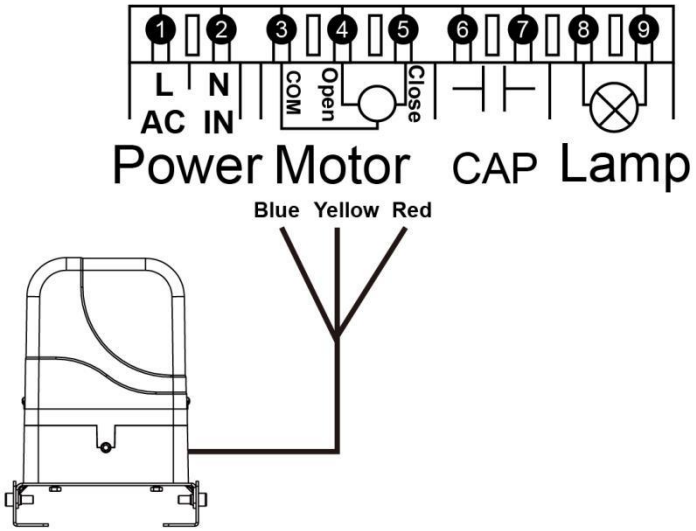


Fig 12

- **Install the motor on the left-hand of gate**

When you want to install motor in the left of gate, please exchange ④ and ⑤ motor wire.

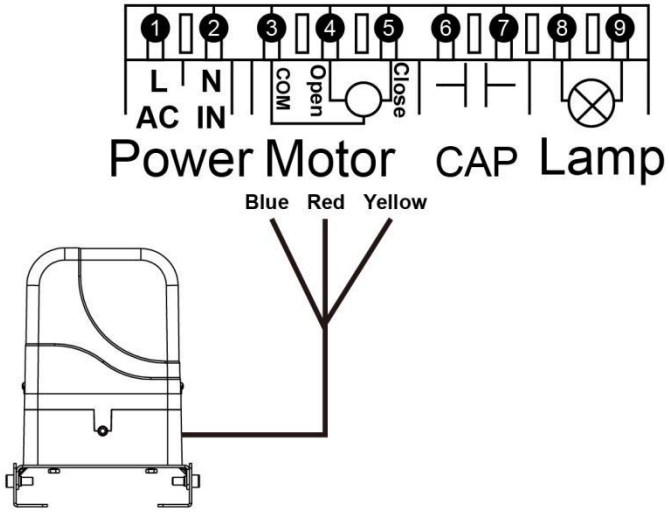


Fig 13

- **Connect with the start terminal**

Start terminal is used to connect with some external devices , such push button, swipe card, wired keypad etc.

Control gate by " open-stop-close-stop-open " mode

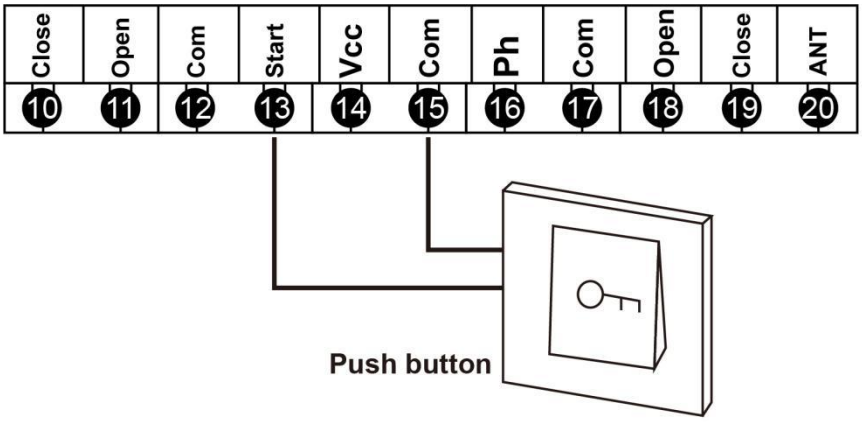


Fig 14

Terminal ⑬ and ⑮ are for connecting with the push button, etc devices.

Note! If you connect the swipe card or wired keypad, etc devices, please also connect with ⑭ Vcc and ⑮ Com to get the power supply.

- **Connect with photocell sensor**

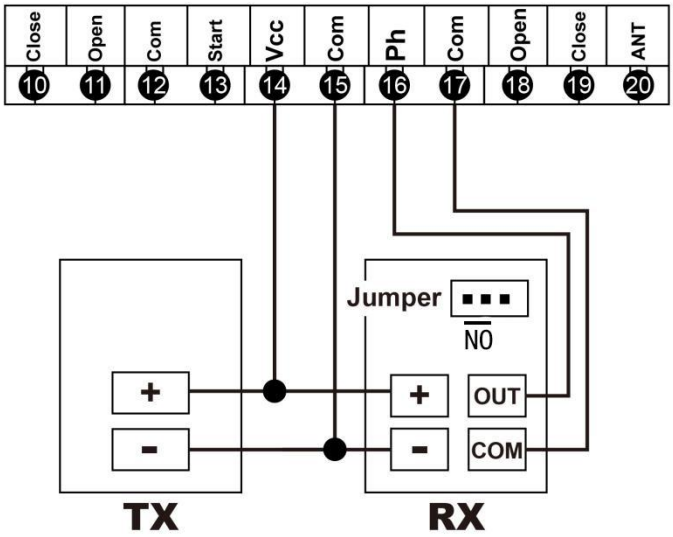


Fig 15

Connect terminal ⑰ with the "COM " of photocell RX.

Connect terminal ⑯ with the "OUT " of photocell RX.

Connect terminal ⑭ with the "+ " of photocell RX and TX.

Connect terminal ⑮ with the "- " of photocell RX and TX.

- **Connect with swipe card**

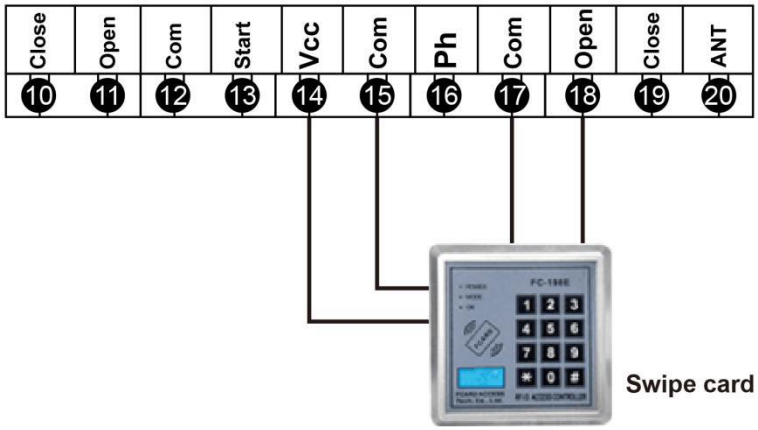


Fig 15

Terminal ⑱ is for opening the gate only , for external device such swipe card, wired keypad etc.
Terminal ⑱ and ⑰ are for connecting with the swipe card.
Terminal ⑭ and ⑮ are for supplying the power to the swipe card.

- **Connect with Loop detector**

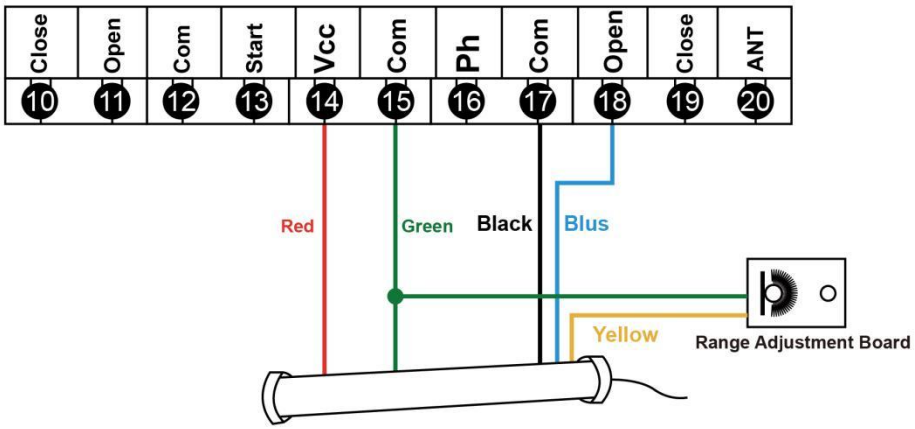


Fig 16

- **Loop detector wire information:**

Definition of the 5 –core cable:
RED →Input Voltage (+)
GREEN →Ground/Common (-)
BLACK →Relay's Common
BLUE →Relay's Normally Open
YELLOW →Range adjustment potentiometer (POT)

- Red wire: connect with terminal ⑭.
  Green wire: connect with terminal ⑮ and range adjustment board.
  Black wire: connect with terminal ⑰.
  Blue wire: connect with terminal ⑱.
  Yellow wire: connect with range adjustment potentiometer.

5.4 DIP switches setting

The dip switches are used to set the running time of the motor, enable/disable auto-close the function of the gate operator, etc.

8-bit DIP switch

Function	OFF	ON
1. Limit mode	Normal closed mode	Normal open mode (Default)
2. Safety beam mode	Normal open mode(Default)	Normal close mode
3/4. Auto-closing timer	Used for setting the auto-closing timer	
5/6. Auto-closing timer after pedestrian mode	Used for setting the auto-closing timer after pedestrian mode	
7. Condominium mode	Disable	Enable
8. Remote button function	Single button（Default）	Three buttons

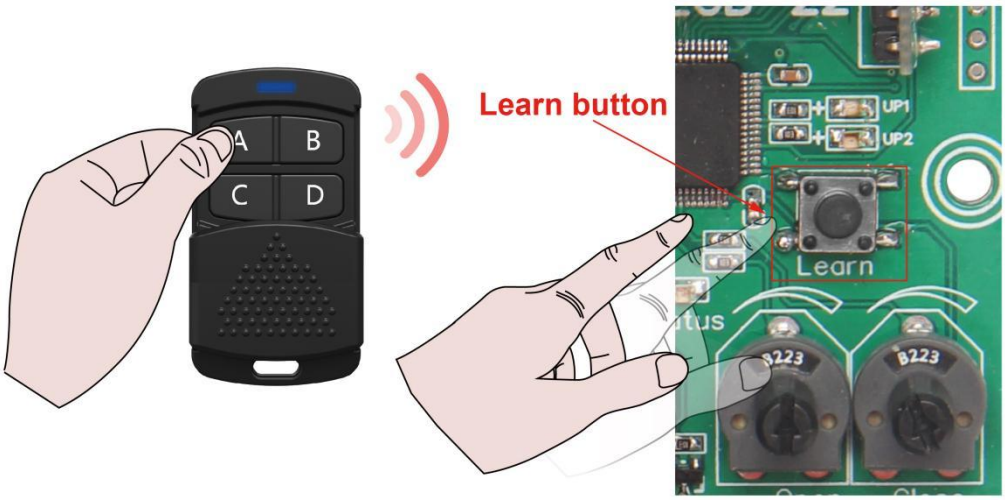
6.How to Operate Your Gate Opener

Each remote has 4 buttons, there are two remote control modes for optional.
The factory default is single button control mode.
If you want to change to use a three-button control mode, **please adjust the dip switch 8 to ON position, and program the remote into the control panel again, then operate the gate opener.**

● Single button control mode： the remote button 1st and 3rd are used to control the gate as “open-stop-close...”, and the 2nd and 4th button are used to control the pedestrian mode.
Beside, the button 1st and 2nd are used to control the first gate opener, and the button 3rd and 4th can be programmed into another gate opener controller.

● Three-button control mode: remote 1st button to control gate open, 2nd button to control gate close, 3rd button to control gate stop, and the 4th button to control gate pedestrian mode.

7.How to program or erase the remote



● **Program the remote**: Press learn button with 2 seconds and then release, the LED indicator will lit up. Now the user needs to press the button from the remote control, and the control board LED indicator will flash twice, which means the programming is successful.
After the user pressed the learn button, within 6 seconds, if the controller doesn’t receive the signal from the remote, the controller’s LED indicator will turn out and exit the programming state.

Max capacity: 100pcs remote. If the LED flash 5 times, then means can not program more remotes.

● **Erase the remote**: Press and hold the learn button for 6 seconds, the control board LED indicator will flash twice, then release the button. Now all remotes can not control the gate.

8.Control board function description

Item	Description
Power indicator LED	After the control board powered on, the power indicator LED will keep lighting on.
State indicator LED	The system will enter self-checking, when the indicator LED light on and turn off, that means the system is working well.
Open/close gate indicator LED	While the gate opener work normally, opening the gate will turn on blue, close the gate will turn on red.
Overcurrent	The overcurrent function can achieve an anti-smashing car. While the gate is opening, it detects the overcurrent and stop. If the gate is closing and detects the overcurrent, it will reverse back to the opened position. Setting overcurrent for opening and closing the gate through the The overcurrent potentiometer independently. When the potentiometer is adjusted to the maximum, the overcurrent function is disable.
Limit mode	1. When the gate is fully opened/closed, and trigger the limit switch, the motor will auto stop. 2. The limit mode can be set through the **dip switch 1**, and there has NC and NO mode for optional. OFF: NC mode (Normal close). ON: NO mode (Normal open), it is factory default.
Limit switch stop direction (J1)	It is used to switch terminal stop detection interface, that direction of open and close the gate.
Stop reaction distance in limit switch	Trigger the limit switch, the motor will reverse to offset the inertia, improving the problem of overshoot.
Safety beam mode	1.While the gate is closing, if the Ph terminal is triggered, the gate will reverse back to open. 2.If set the auto-closing timer after fully opening, after the safety beam

	signal is gone, the gate will be auto-closed. If the safety beam signal exists, the gate closing action will not be executed and the auto-closing timer after fully opening will always be reset. 3. The safety beam mode can be be selected by dip switch 2. OFF: normal open mode(Factory default) ON: normal close mode.
Auto-closing timer	1. The auto-closing function is only triggered after the gate is fully opened, and the indicator LED will blink to remind the user. 2. Auto-closing time can be set through the dip switch 3 and 4. **Dip switch 3 and 4 will be set to ON or OFF position as below to set the time:** **OFF-OFF: No auto-closing timer (factory default)** **ON-OFF: 10 seconds.** **OFF-ON: 30 seconds.** **ON-ON: 60 seconds.** 3.If the auto-closing timer is countdown completely, and the safety beam signal exists, the gate will auto-closing after 2 seconds when the safety beam signal is gone.
Pedestrian mode (PED)	The 2nd and 4th button will triggers the Pedestrian mode 1.The gate will partially open for about 6 seconds, then stop. If user set the auto-closing timer after pedestrian mode, the motor will enter auto-closing timer countdown and close gate after time end. 2.Otherwise, after triggering the pedestrian mode, within 6 seconds if the gate is fully opened, it will stop. And if trigger the auto-closing timer countdown after pedestrian mode, the motor will enter auto-closing timer countdown and close gate after time end. The auto-closing timer after pedestrian mode can be set through the dip switch 5 and 6.

	Dip switch 5 and 6 will be set to ON or OFF position as below to set the time: **OFF-OFF: No auto-closing timer (factory default)** **ON-OFF: 5 seconds.** **OFF-ON: 10 seconds.** **ON-ON: 30 seconds.** Note: when the motor is moving, trigger the pedestrian mode, then the motor will stop right now. Trigger pedestrian mode to open the gate, after 6 seconds, the motor will enter the auto-closing timer countdown or stop, then trigger the pedestrian mode again, the gate will close right now.
Condominium mode	When the gate is opening, trigger the remote control or start terminal are disable, until the gate is fully opened. When the gate is opening, trigger the remote control or start terminal of stop operation, the gate will stop and reverse to back to fully opened. The condominium mode can be set through the dip switch 7. OFF: disable(Factory default) ON: Enable (Now the Pedestrian mode is disable)
Flash lamp mode	Flashing light will turn off 5 seconds after the motor stop.
Maximum motor working time protection	If motor works continuously more than 90s, motor will stop running for protection
Upgrade control board system by USB device	1. Power off the control board, set up the U disk and upgrade files as required, install the U disk upgrade module in the USB port on the control board, press and hold the Learn button, power on the system, release the button after 3 seconds, the UP1 and UP2 indicators flash quickly to enter the program upgrade burning interface, and the system will automatically restart and enter normal operation after the upgrade is successful. 2. Status indication description: 3. 1The UP1 and UP2 indicators flash alternately, indicating that the firmware is being upgraded and written to the chip. 4. The UP1 light is always on and the UP2 light is off, indicating that the U disk mode initialization failed. Please check whether it

	is plugged in properly. 5. The UP1 light is off and the UP2 light is always on, indicating that the U disk reading failed. Please check whether the U disk is connected or re-plug the U disk. 6. The UP1 light is always on and the UP2 light is always on, indicating that the upgrade file reading failed. Please check whether the firmware file to be upgraded is stored, or the file naming does not match. 7. All upgrade files of this series are named EGB-22.BIN. **Note:** You must use our U disk module (EG-USB). The USB flash drive used for the first time needs to be formatted as FAT32. After the upgrade, the original RF pairing data and menu setting data are still there.

Motor Operation Direction

After everything are ready, press the button 1 in the remote control to test the gate opener.
When the gate is opening, there has a blue indicator lit up in the control board. And if the gate is closing, there has a red indicator lit up in the control board.
During installation, please keep the gate is fully closed.