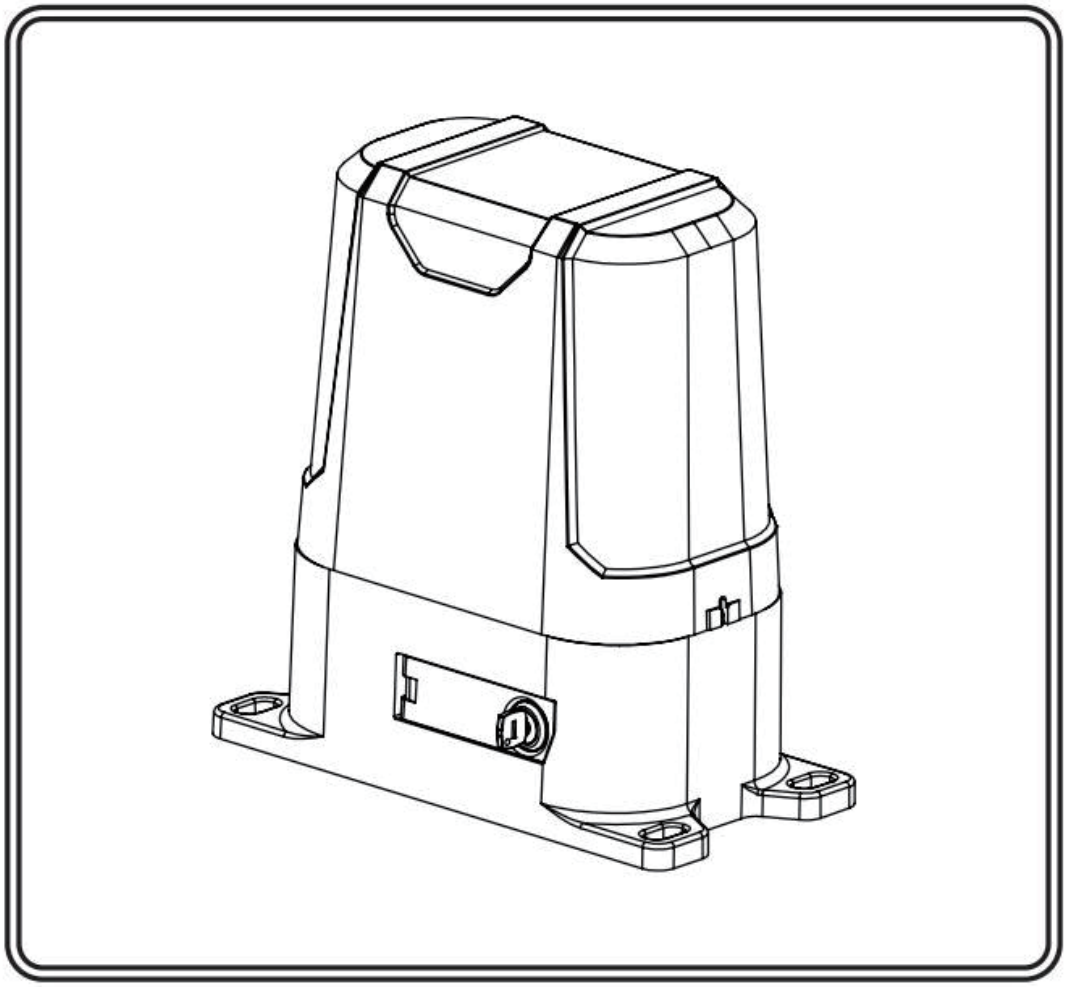
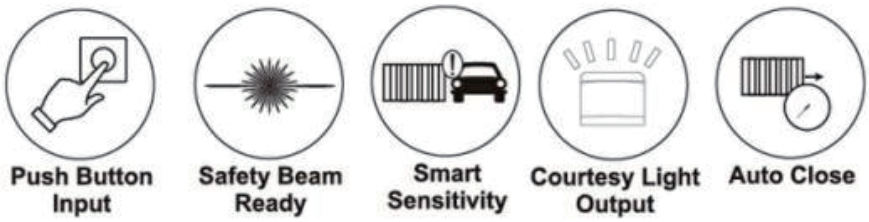
Sliding Gate Opener
User's Manual





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.

● 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.

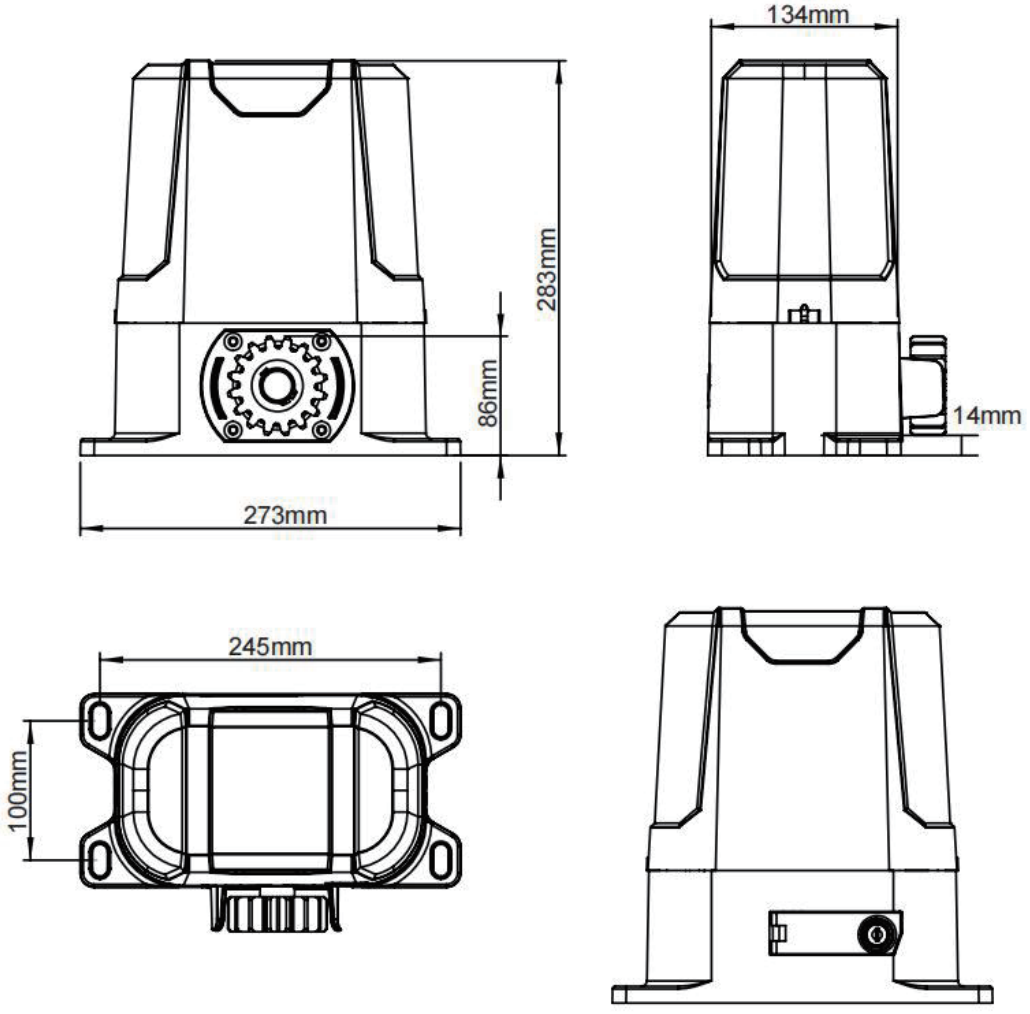
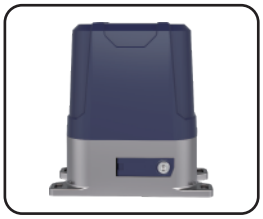
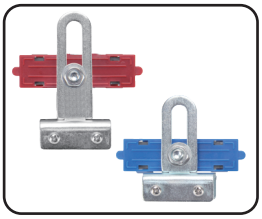


Diagram 1

Part list

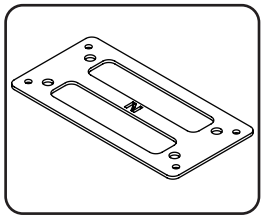


Motor x1

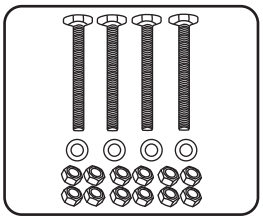


Magnet limit switch

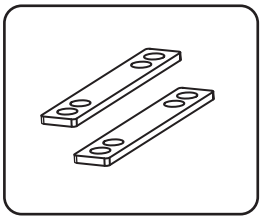
Fixed plate to ground x4



Motor base platex1



Adjustable height bolt



Flat spacer x2

Remote Control Optional

Remotex2

Override keysx2

3. Parameters

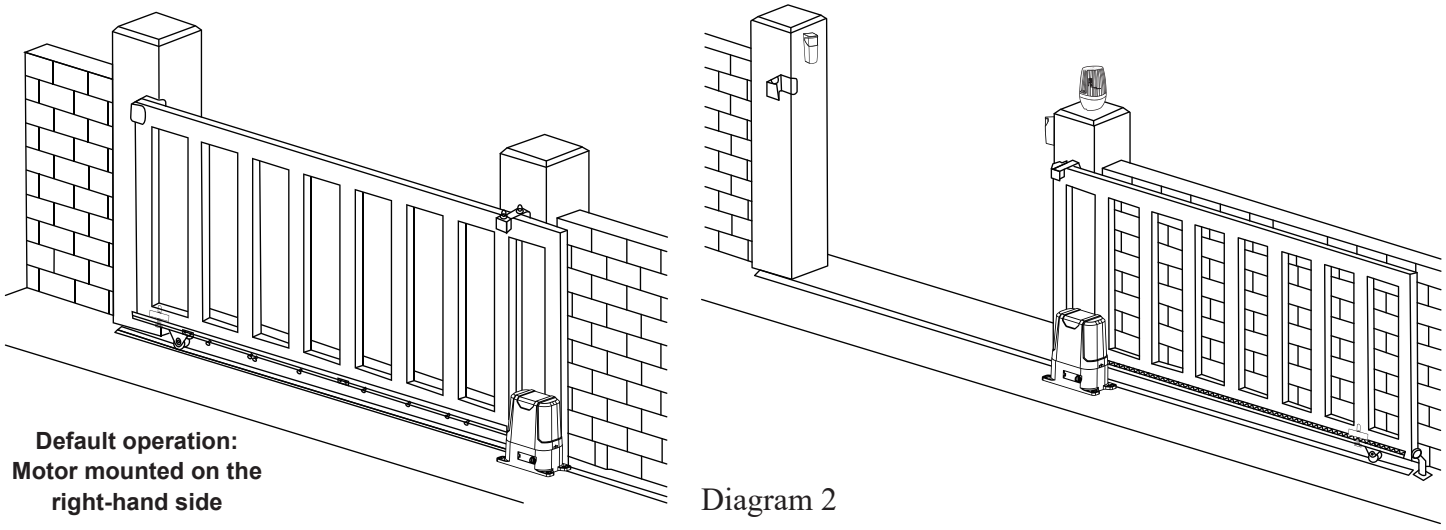
Power supply	AC 110V/220V±10% 50Hz / 60Hz
Maximum load	800KGS
Rated power	130W
Rated speed	1300RPM
Output Speed	50r/min±10%
Running speed	26cm/s
Output torque	21 N.m
Output gear module	M=4
Output gear number	Z=16
Remote control distance	≤50meter
Working humidity	≤85%
Maximum pull	950N
Noise	≤55dB
Protection Class	B
Working temperature of motor	-20°C～ +55°C
Net weight	12KG
Packing	In a standard carton

4. Features of sliding gate opener

1. Stylish appearance design and built-in control panel integrated inside the motor, no external controller needed.
2. Built in limit switch allowing the motor to switch off once the cycle is finished.
3. Built in manual override with 2 supplied unique override keys in case of emergency or power failure.
4. The motor is constructed of all metal gears make it durable and long lasting.
5. Pedestrian mode.
6. Overcurrent value and auto-closing delay time adjustable.
7. Stop/Reverse in case of obstruction during gate opening and closing.
8. Easy installation, firm and solid structure, stable and reliable driving, permanently lubricated, maintaining-free.
9. Single-phase self-lock, anti-pushing, anti-lifting ,safe and reliable.

5. Gate opening default setting information

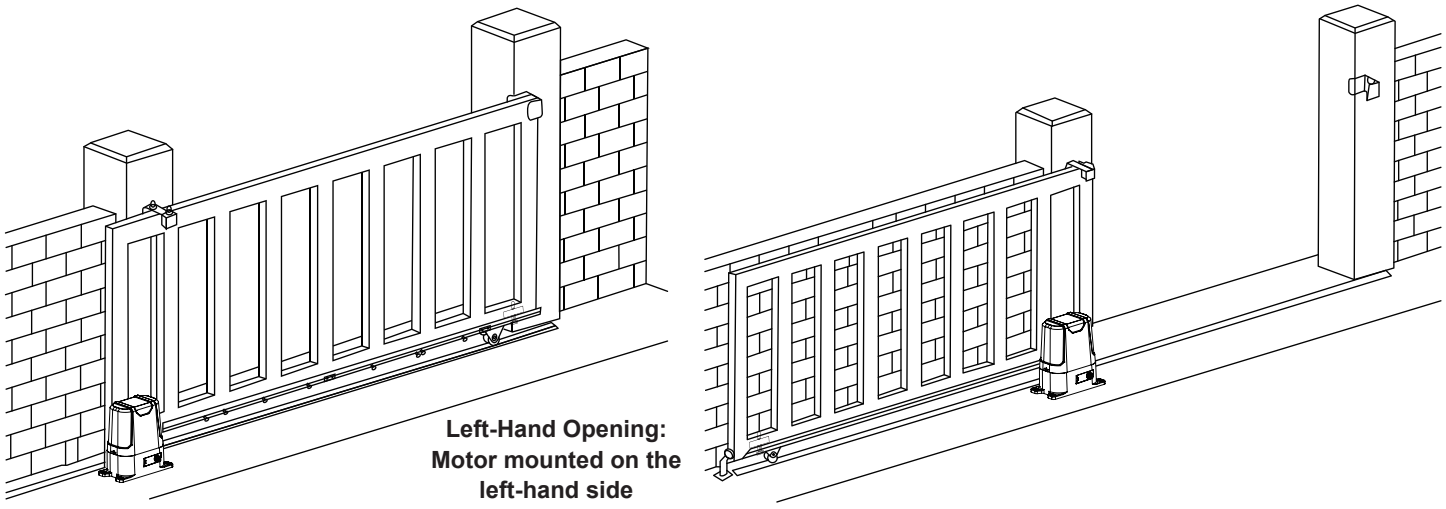
The gate motor will open the gate to the right-hand side as its default setting (Refer to diagram 2).



Default operation: Motor mounted on the right-hand side

Diagram 2

If your gate needs to open from the other direction (to the left, refer to diagram 3)your motor needs to be mounted on the left-hand side as shown, you will need toswitch the open and close wires of motor see diagram 11.



Left-Hand Opening: Motor mounted on the left-hand side

Diagram 3

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

6. Installation of motor

6.1 mstallation of motor base plate

1. Factory provied the adjustable height base plate, flat spacer and bolts which can help you to adjust the installation height for motor if needed. Then depending on the installation size of the motor and mounting height of racks,

afterdetermine 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. (Refer to diagram 4)

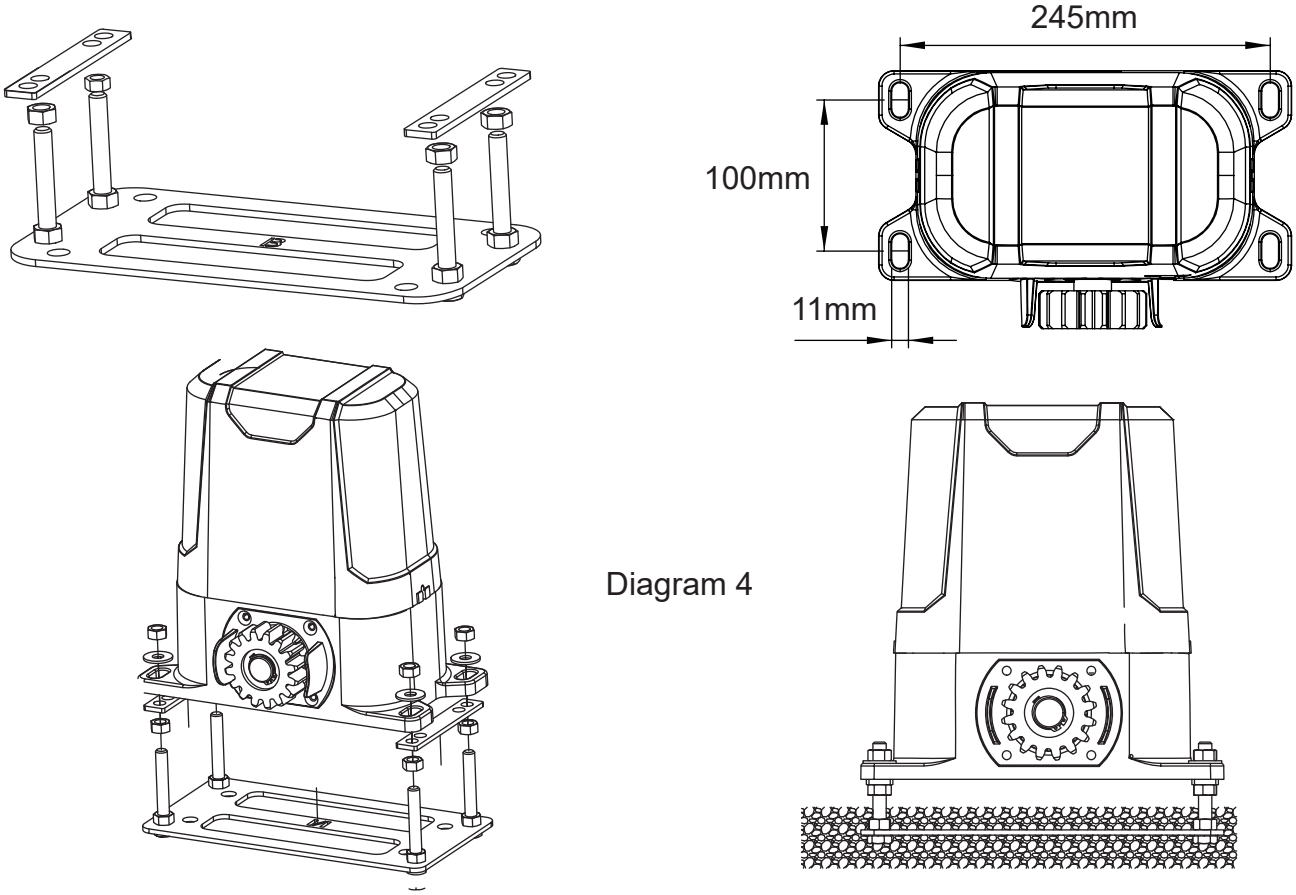


Diagram 4

2. If gear rack has been installed on gate, motor can be fixed on it, use override key rotation to clutch “off ” position, after motor gear and gear rack match well to determine position of base plate, then remove motor and fix base plate.

6.2 Installation of gate opener

1. Put gate opener on base plate, use a random matching hexagon screw make the motor fixed on the base plate.
2. Unscrew the screws fixed the motors cover, remove motor cover. According electrical wiring diagram, connected power cord, after adjust in good position, then install cover and use screws to fixed it.

6.3 Preparing and install gear racks

1. Using the supplied key unlock manual override and pull out manual override lever(see diagram 5) then manually close the gate.
2.Insert the key in the key, barrel and tur the key, clockwise and pull to allow the manual override lever to swing out.

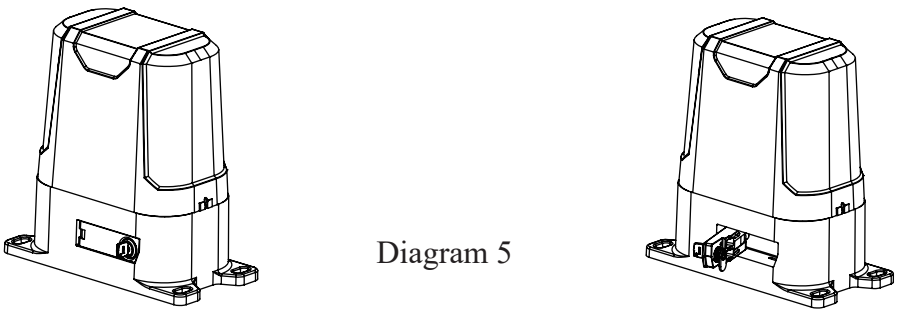


Diagram 5

Insert the key, rotate 90 degrees

Releasing arm in torsion. wriggle 90 degrees.

6.4 Install the gear rack onto the gate

1. Each piece of rack will interlock into the next piece (see diagram 6)

- The best method for installation is to first close the gate using the manual override, sit the first piece on the gear of the motor (make sure it is 100% level first) then fix directly to the gate in the centre of the fixing hole of the rack.Now loosen the fixing and adjust the spacing between the motor gear and the gear rack (allow 2-3mm gap).

- Re-tighten and fix the next remaining holes on the rack.

Move the gate manually forward and backward along the installed rack to ensure that the gap between the rack and the gear is consistent throughout.

Clip in the next piece of rack into the first (make sure it is 100% level first) then fix directly to the gate in the centre of the fixing hole of the rack.

- Again move the gate manually forward and backward along the installed racks to ensure that the gap between the rack and the gear is consistent throughout.

Repeat the above method to complete the racks installation and always be sure to move the gate manually forward and backward every time you install another piece of the rack.

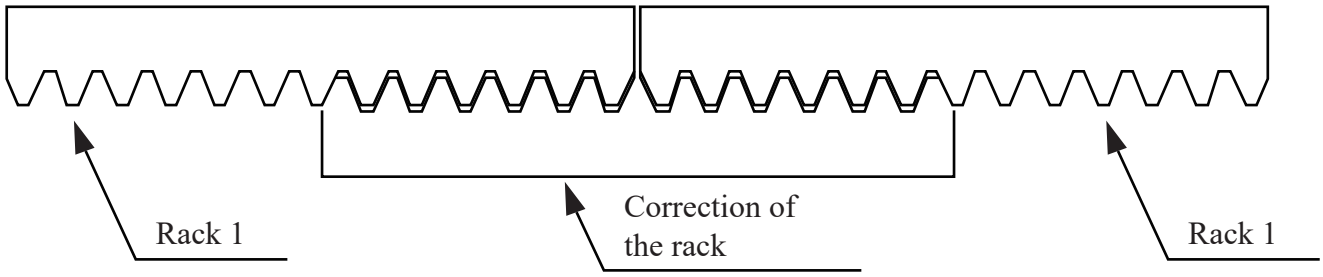


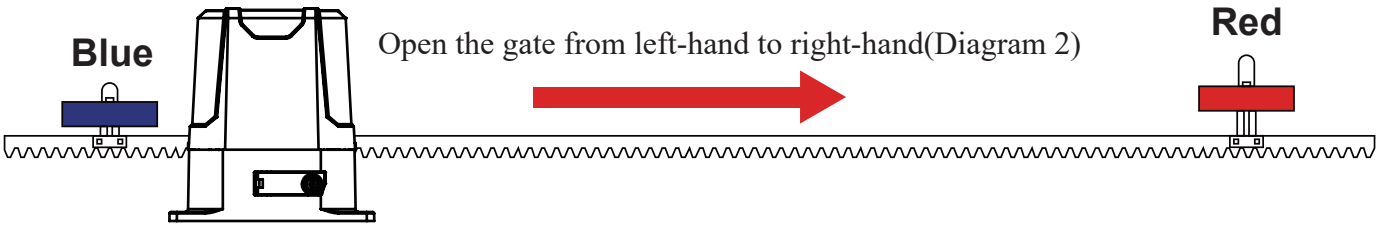
Diagram 6

6.5 Installation of the magnet limit switch

- here are 2 limit magnet supplied. Note there is a left hand and a right hand magnet. The magnet should be installed one at either end of the rack. See Diagram 7

- - To install the limit switch in the correct position, please manual release the clutch. Push the gate fully closed by hand. Locate and install the magnet limit switch so that the opener will stop at the desired close position when the close limit switch approaches it. Push the gate fully open by hand. Locate and install the magnet bracket so that the opener will stop at the desired open position when the open limit switch approaches it.

- When you are satisfied the limit magnet are in the correct positions, tighten the screws in the limit magnet 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 magnet if necessary.



lf you install the motor on the left of the gate, please adjust the blue and red limit magnet position as below picture show.

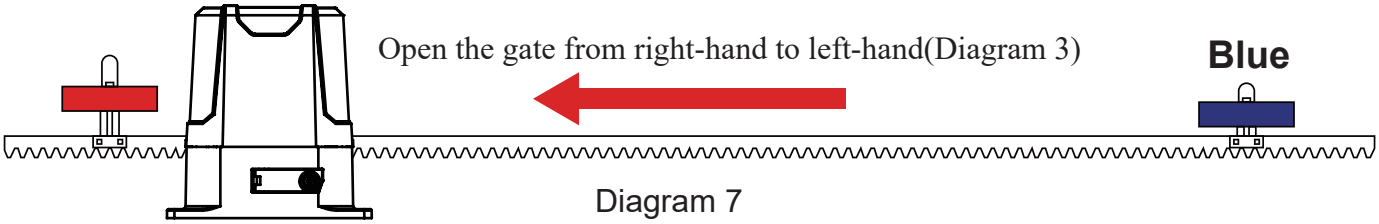


Diagram 7

6.6 Typical installation layout

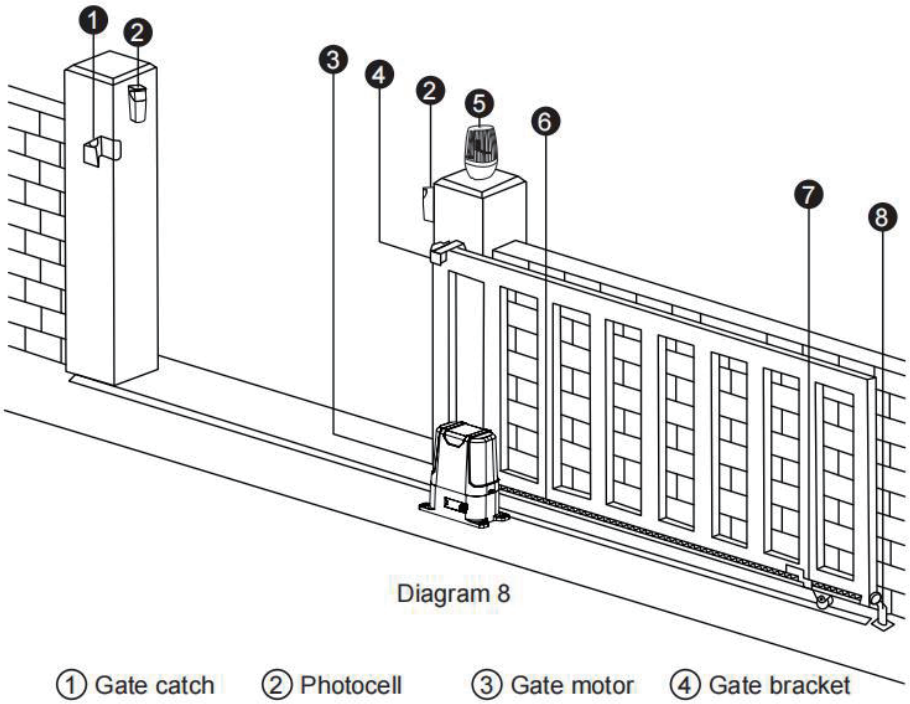


Diagram 8

① Gate catch ② Photocell ③ Gate motor ④ Gate bracket
⑤ Lamp ⑥ Gear rack ⑦ Limit plate ⑧ Gate stopper

6.7 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 normal work.

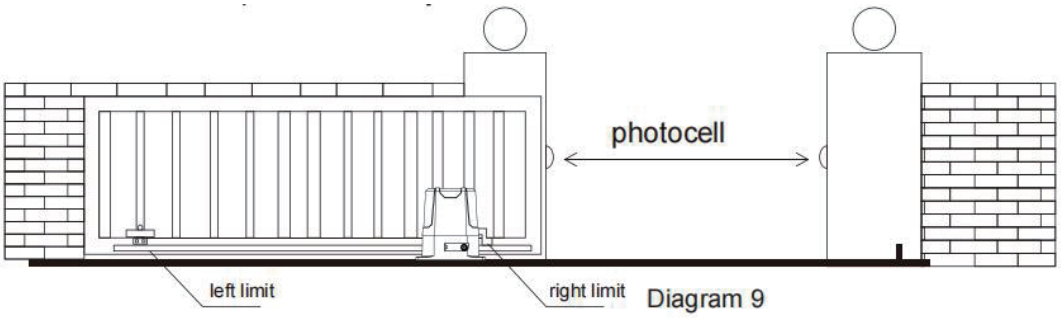


Diagram 9

7.Power up and testing procedure

- Check the operating direction wiring and switch again.
- Close the gate using the manual override.
- Re lock the manual override.
- Connect the power cord.
- Press number 1 on the remote control to start your test.
- The gate should open and stop when the limit switch spring is triggered.

If gate not stop when spring triggered then reverse the limit switch directions switch.

8. Control Board

8.1 Techinical parameters

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

8.2 Terminal and button instruction

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

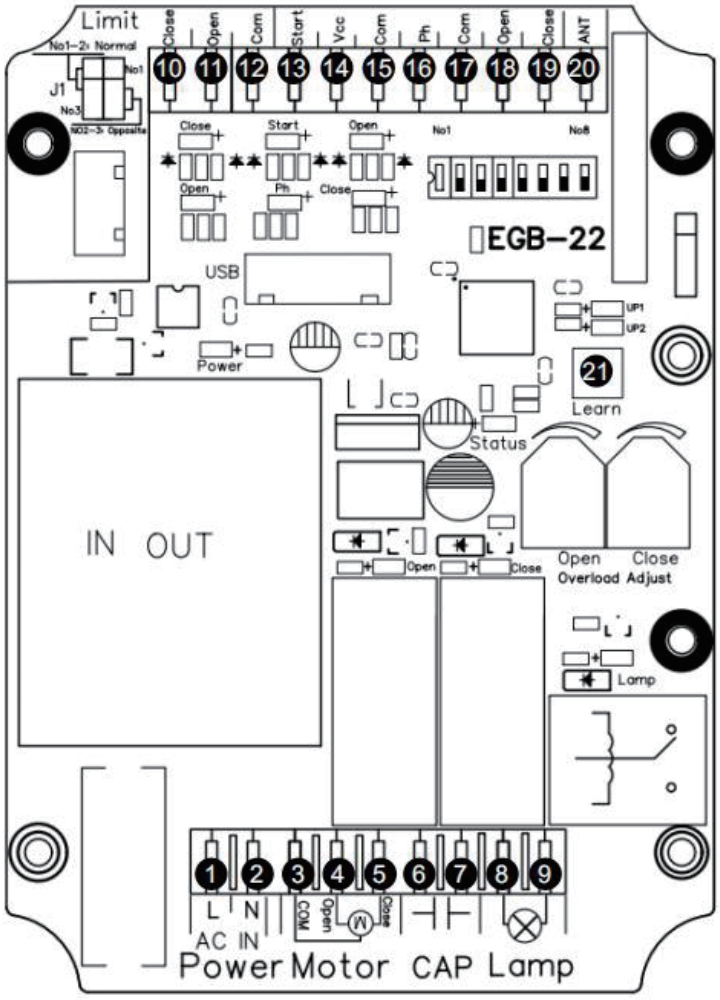


Diagram 10

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.

8.3 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 Diagram 2).

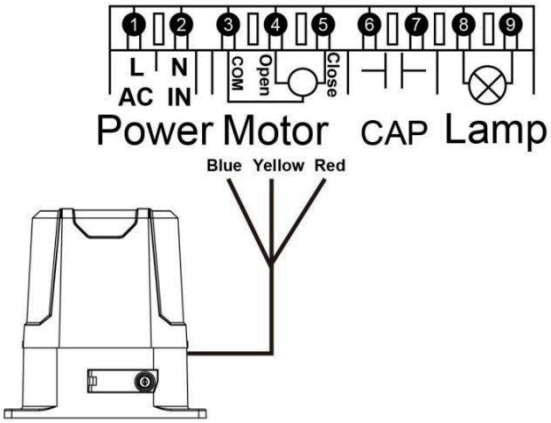


Diagram 11

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

- **Connect with flash lamp**

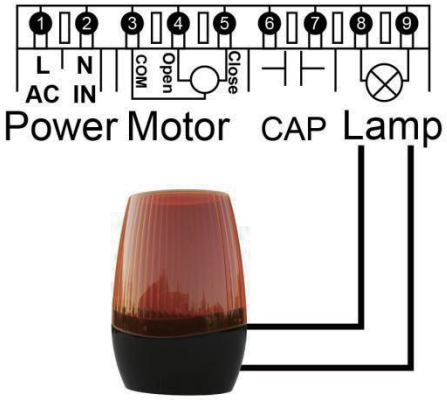


Diagram 12

Terminal ⑧ and ⑨ are for connecting with the flash lamp.

- **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

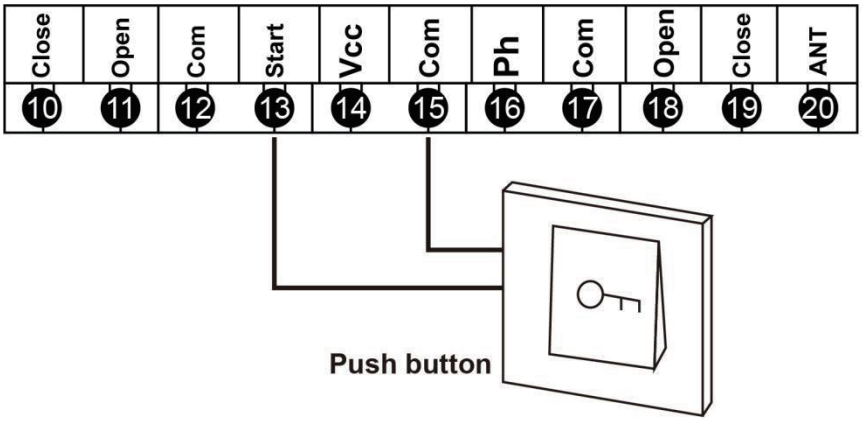


Diagram 13

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**

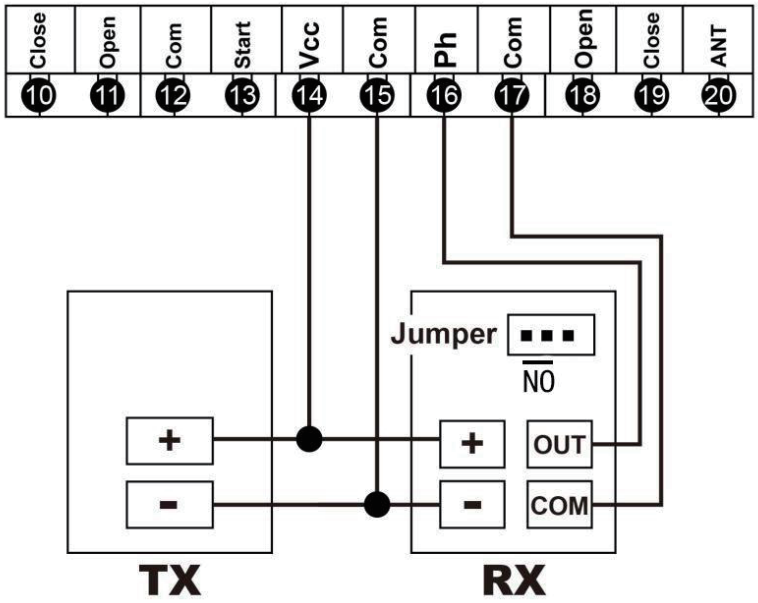


Diagram 14

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**

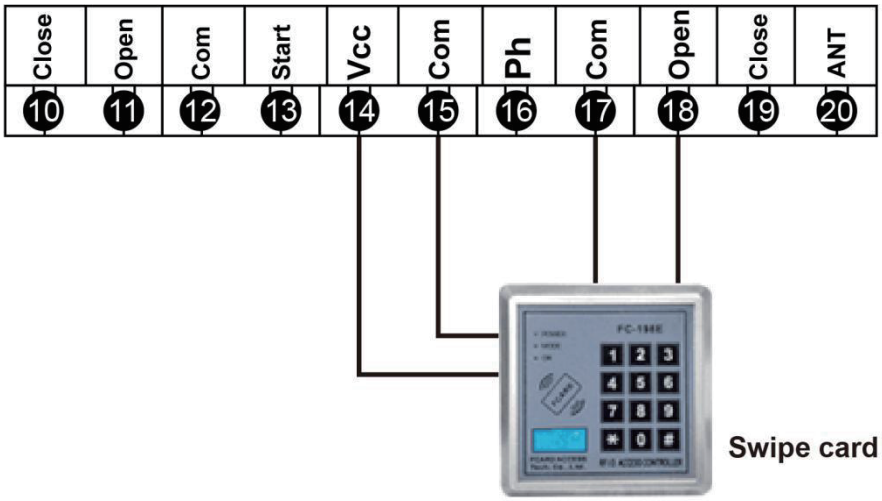


Diagram 15

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**

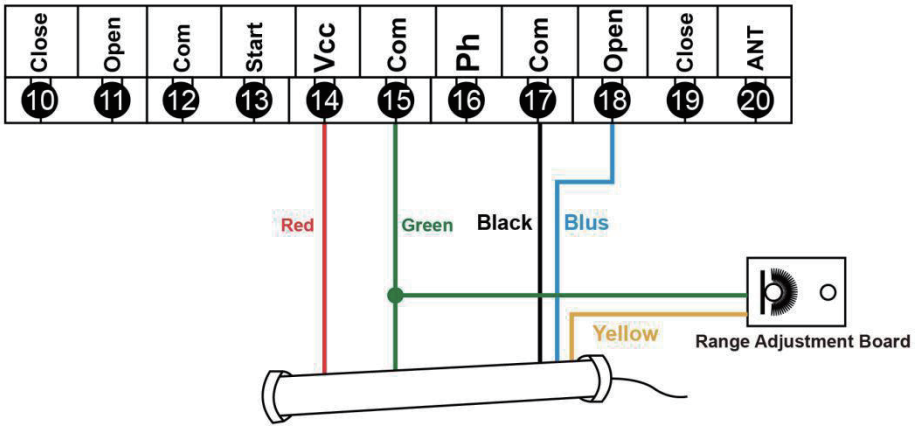


Diagram 16

- **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.

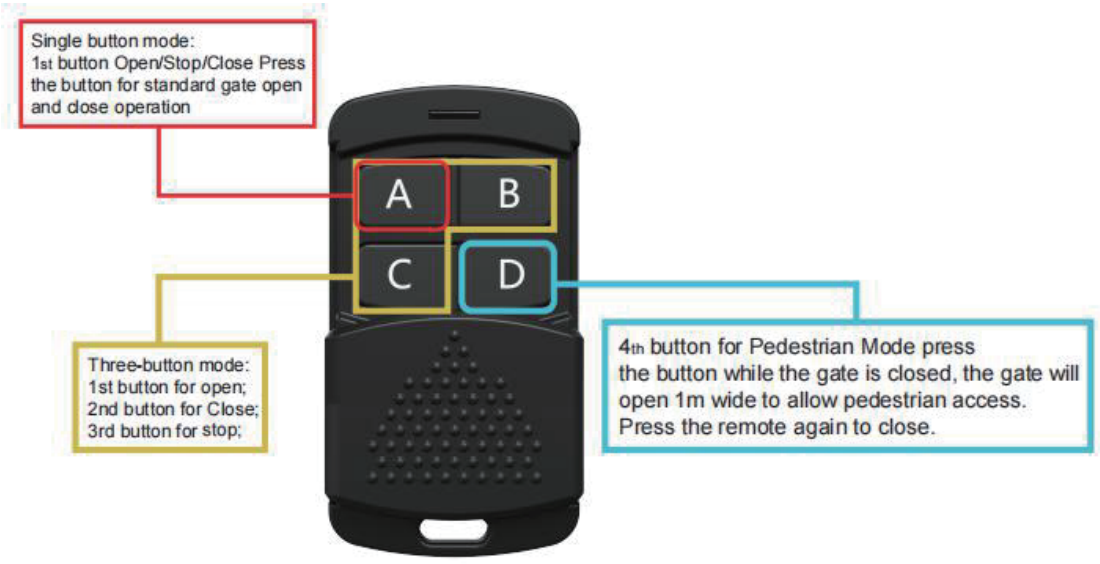
8.4 DIP switches setting

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

9. How to Operate Your Gate Opener



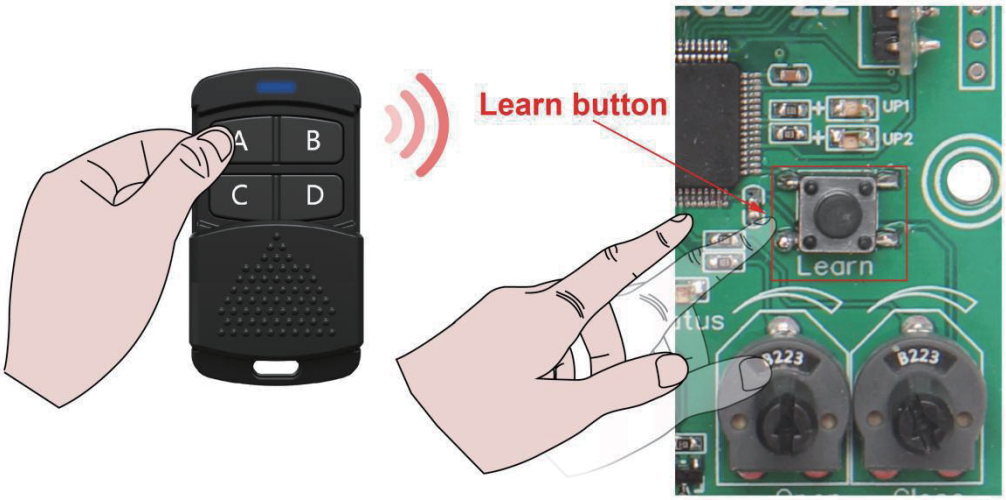
Each remote has 4 buttons, there are two remote control modes for optional. The factory default is single button control mode.

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.

10.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.

11.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 fully. 2.If set the auto-closing timer after fully opening, after the timer expires, the gate would be auto-closed.

	3. When gate is in opened position and the safety beam signal exists, the gate closing action will not be executed and the auto-closing timer after the safety beam signal is gone. 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 closing, 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 (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.