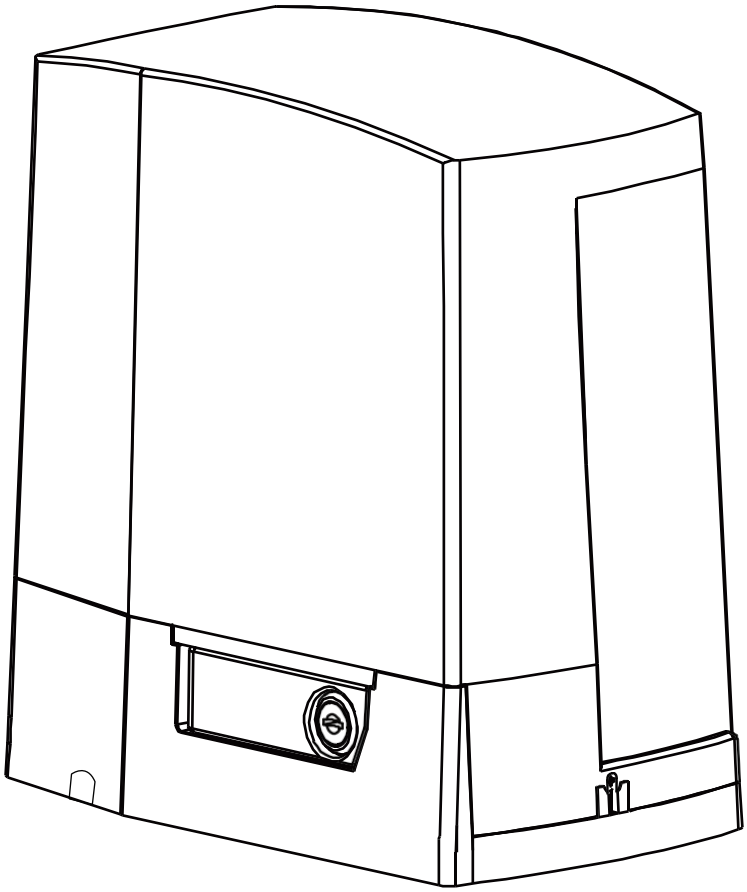
Sliding Gate Opener
User Manual



Email: smart01@x-house.net

★ Thank you for purchasing this product

★ Please read and follow all warnings, precautions, and instructions before installation and using

★ Periodic checks of the opener are required to ensure safe operation

★ Keep the manual for future reference

Table of Contents

General Safety

Warning: Incorrect or improper use of this product can cause damage to persons, animals or properties.

- Please ensure that the input voltage used matches with the supply voltage of gate opener (AC110V±10% 60Hz).
- All modifications to wiring or electrics, and any adjustment or maintenance to 110VAC MUST be done by a qualified electrician.
- To avoid damaging gas, power or other underground utility lines, contact the relevant authority BEFORE digging.
- All potential hazards and exposed pinch points of the gate must be eliminated or guarded prior to installation of this gate motor.
- 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.
- Ensure power plug is disconnected from the power socket during installation or maintenance.
- Keep remote control and other control devices out of children's reach, in order to avoid unintentional activation.
- Never allow anyone to hang onto the gate while moving.
- To ensure safety, before installing the main motor, make sure Gate End Stop and a Gate Stopper mounted at each end of the rail to prevent the gate travelling off the track.
- If required, install infrared photocells 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.
- Do not install the product in an explosive atmosphere or where there is any danger of flooding.
- 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.
- 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.
- The user must avoid any attempt to carry out any works or repairs on the motor, and should always request the assistance of qualified personnel.
- This motor is suitable for use on one sliding gate only.
- Anything which is not expressly provided for in these instructions is not allowed and will void warranty.
- Dispose of all packing materials (plastic, cardboard, polystyrene etc.) according to current guidelines.
- Save this manual.
- Any questions please contact with us by email address:**smart01@x-house.net** All your concerns will be replied.

Preparation for Installation

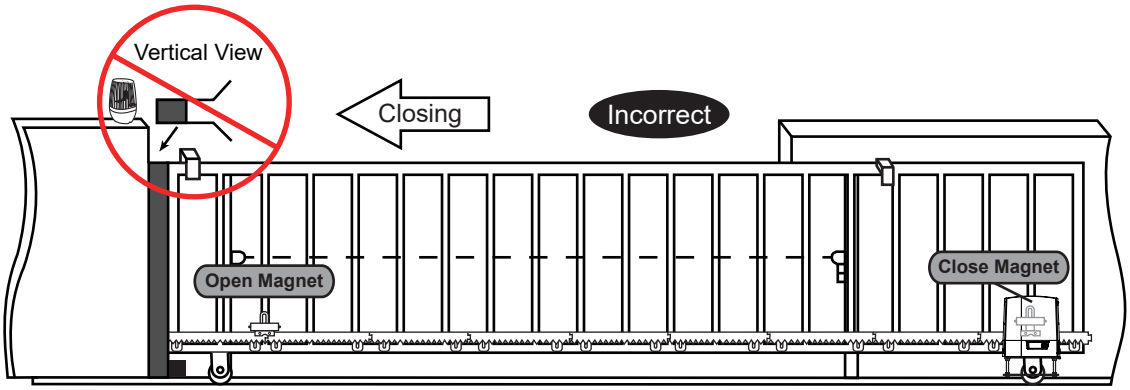
Before proceeding to your opener installation, check if your gate structure is in accordance with the current standards, especially as follows:

The gate sliding track is linear and horizontal, and the wheels are suitable， the gate should be mounted and moving freely. Check that the structure is sufficiently strong and rigid. Make sure that the gate is plumb and level. The fence posts must be mounted in concrete. The gate does not bind or drag on the ground. The opening and closing gate stops are positioned.

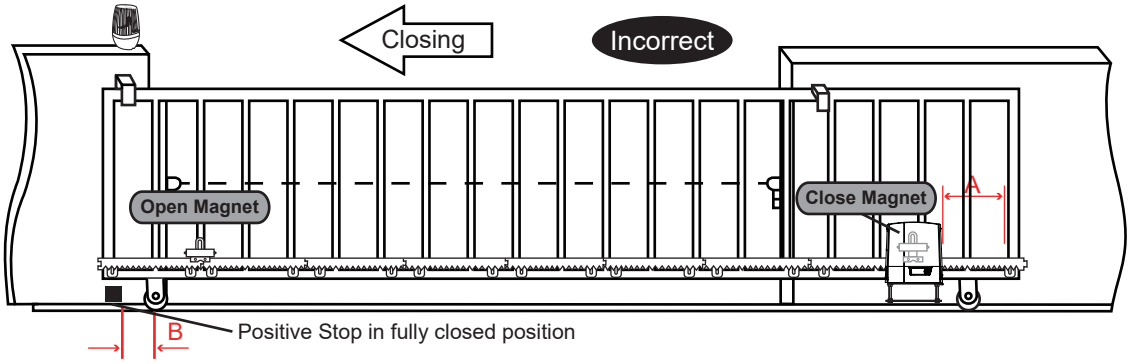
WARNING: Remember that control devices are intended to facilitate gate operation, but can not solve problems due to any defects or deficiency resulting from failure to carry out correct installation or maintenance. Take the product out of its packing and inspect it for damage. Should it be damaged, contact your dealer. Remember to dispose of its components (cardboard, polystyrene, nylon, etc.) according to the current prescriptions.

Refer to the following Figures for gate installation.

Using the post or wall as a stop, either directly or indirectly, is not recommended so as to protect the post or wall against damaging shock from the sliding gate



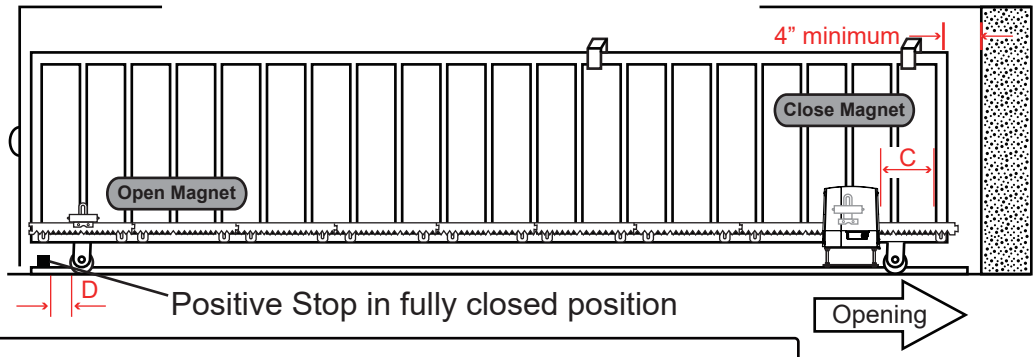
In sake of safety, a positive stop must be mounted on the two gate stop of ground track.



Keep the 3” distance at least between operator and chain bracket if the roller hit the Positive stop in an accident.

A-B≥3”

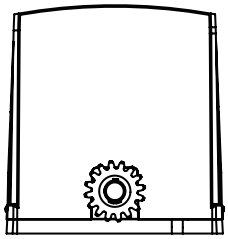
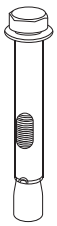
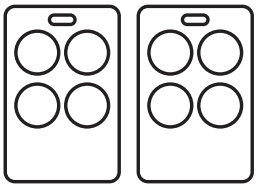
It is suggestion that there is a 4”(10cm) distance at least between the gate edge and the gate wall when the gate is fully open.

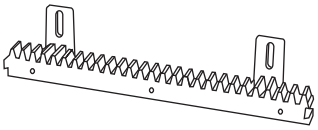
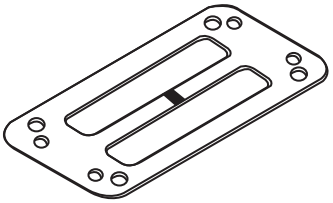
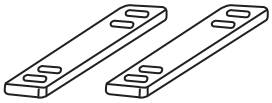
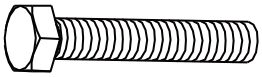
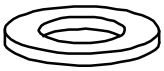


Keep the 3” distance at least between operator and chain bracket if the roller hit the Positive stop in an accident.

C-D≥3”

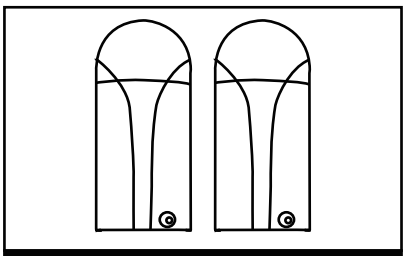
Sliding Gate Opener Part List

Main Components			
Item	Name	Qty.	Image
1	Main Unit	1	
2	Motor to mounting plate screws	4	
3	Clutch Keys	2	
4	Remote Controls	2	

Main Components			
Item	Name	Qty.	Image
5	Nylon gear rack	12	
6	Adjustable motor height plate	1	
7	Flat spacer for adjustable height	2	
8	Hexagon Socket Screws	4	
9	Screws	12	
10	Flat Washers	4	

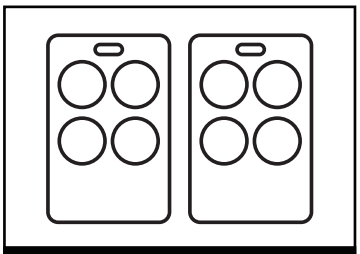
Magnetic Limit Switch Components		
Name	Qty.	Image
Magnet Limit Assembly	1	

• Accessories Parts (Included in some models, refers to the actual package)

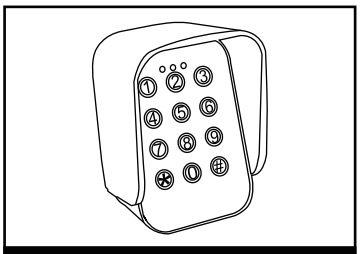


Photocell Sensor

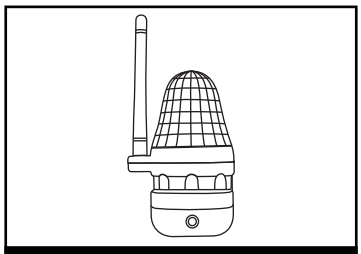
• Optional Accessories Parts List



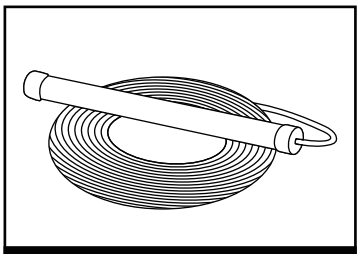
Remote Control



Wireless Keypad



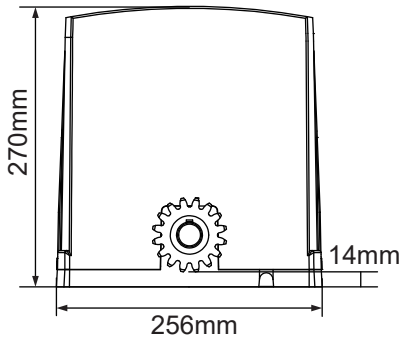
Flash Lamp

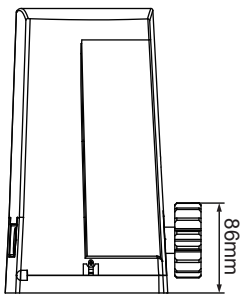


Exit Wand

Technical Specification

Model	PYM-K1800	PYM-K2700
Max. Weight of Gate	1800lb	2700lb
Motor Power	370W	550W
Photocell Sensor	Included (1 Pair)	
Power Supply	110 V AC	
Gate Moving Speed	40 ft/min	
Limit Switch	Magnetic Limit Switch	
Working Duty	S2, 20 min	
Max. Paired Remote Controls	100	
Frequency	433.92 MHz	
Working Temperature	-20°C ~ +70°C	





Feature

- Stylish appearance design and built-in control panel integrated inside the mechanism, no external controller or receiver needed.
- Built in limit switch allowing the motor to switch off once the cycle is finished.
- Built in manual override with 2 manual release keys in case of emergency or power failure.
- The motor is constructed of all metal gears make it durable and long lasting.
- Resistance sensitivity and auto-closing delay time are adjustable.
- Stop/Reverse in case of obstruction during the gate is opening and closing.
- Pedestrian mode.
- Easy installation, firm and solid structure, stable and reliable driving, permanently lubricated, low maintenance.

Installation Overview

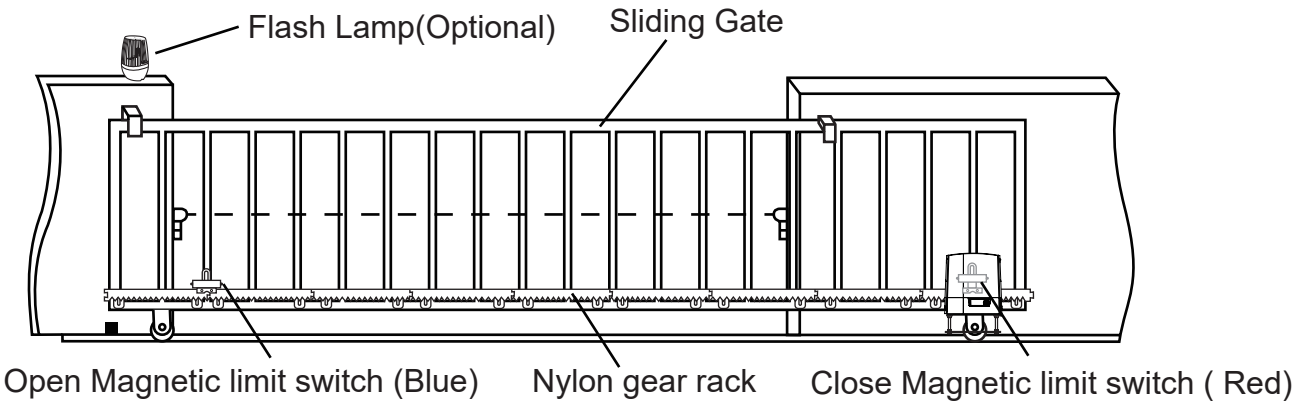


Diagram 1

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

• Motor mounting position diagram

Factory default the motor must be mounted on the right hand side of the gate. And the gate motor will open the gate to the from the left-hand to the right-hand side. (Refer to diagram 2)

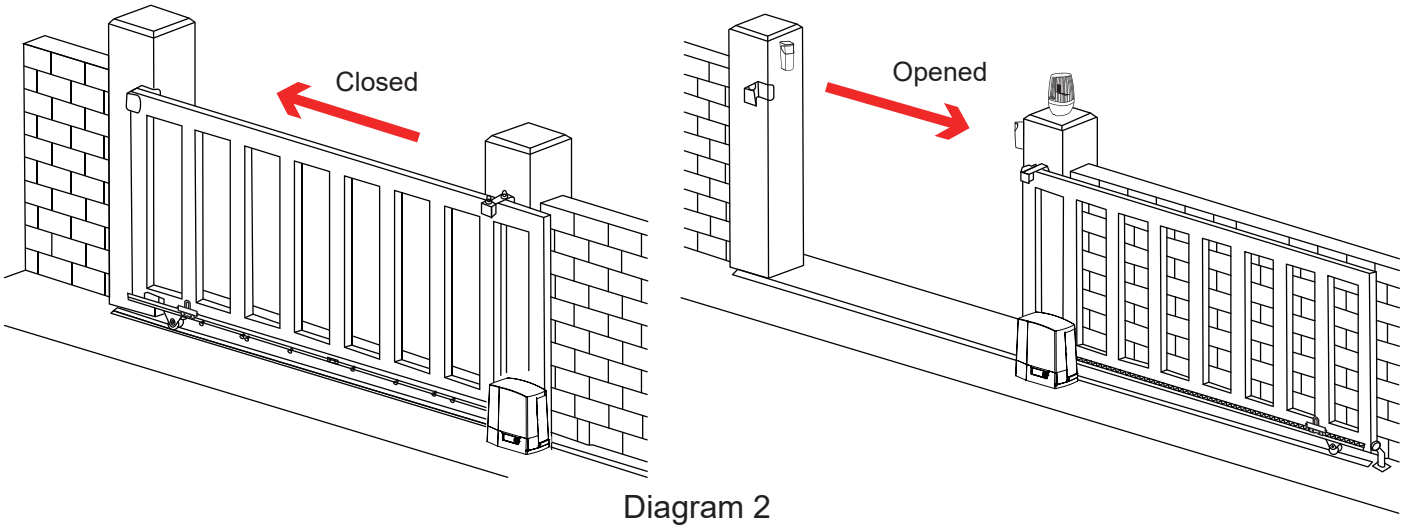


Diagram 2

If your want to open the gate from the right-hand to the left-hand side (refer to diagram 3), please mount the motor on the left-hand side as shown. And you need to swap the open and close wires of motor (on the circuit board) and move the jumper J1 (on the circuit board) from pin No 1 and pin No 2 to pin No 2 and pin No 3.(see diagram 12)

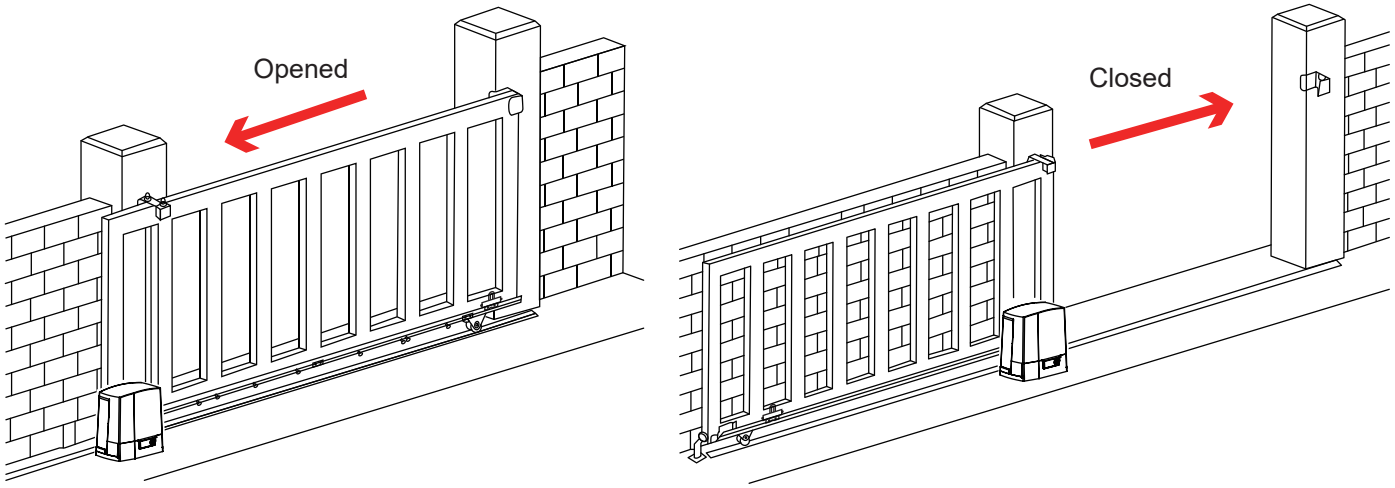
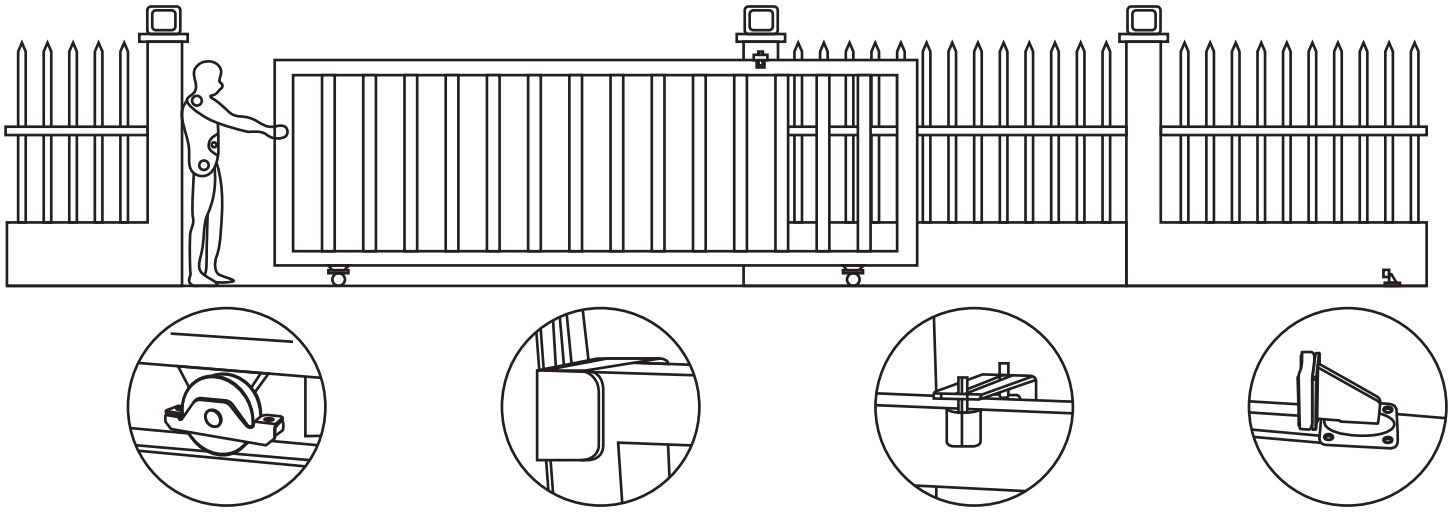


Diagram 3

Step 1. Gate preparation

Ensure that the sliding gate is correctly installed.
The gate is horizontal and level and the gate can glide back and forth smoothly when moved by hand before installing the gate opener.
Wheels and guide rollers should rotate easily and be free from dirt or grime. Track should be flat, level and firmly affixed.
Any misalignment in the gate will affect performance of the automatic gate opener.



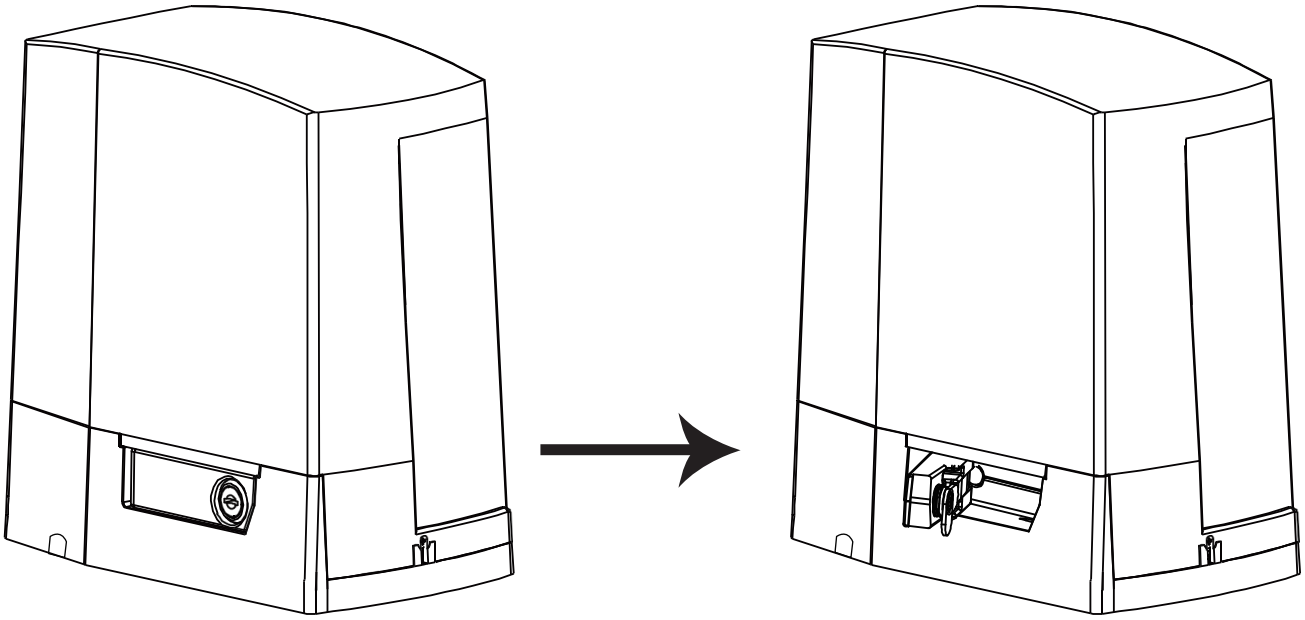
Gate Track and Track Wheels | Gate End Catch | Gate Guide Rollers | Gate Stop

Diagram 4

The gate should slide smoothly by hand before attempting to install the gate opener.

Step 2. Installation of motor

1. Dismantle the motor's plastic housing before installation and keep relevant fasteners properly.
2. Prepare the power line for connection of the mounting plate and the motor.
3. Insert the key and open the manual release bar by turning it 90° (Diagram 5) to put the motor into manual mode. Check that the motor gear rotates freely by hand.



Insert key. rotate 90 degrees

Diagram 5

Releasing arm in torsion,wriggle 90 degrees gate operator will be in releasing state

4.Assemble the adjustable plate base if you need to use it to adjust the motor mounting height to match the gear rack installation height.(see diagram 6)
5.Mount the motor onto the adjustable height plate, ensuring the power cable is positioned into the end slot of the plate in the direction of the power point, make sure there are no pinch points.

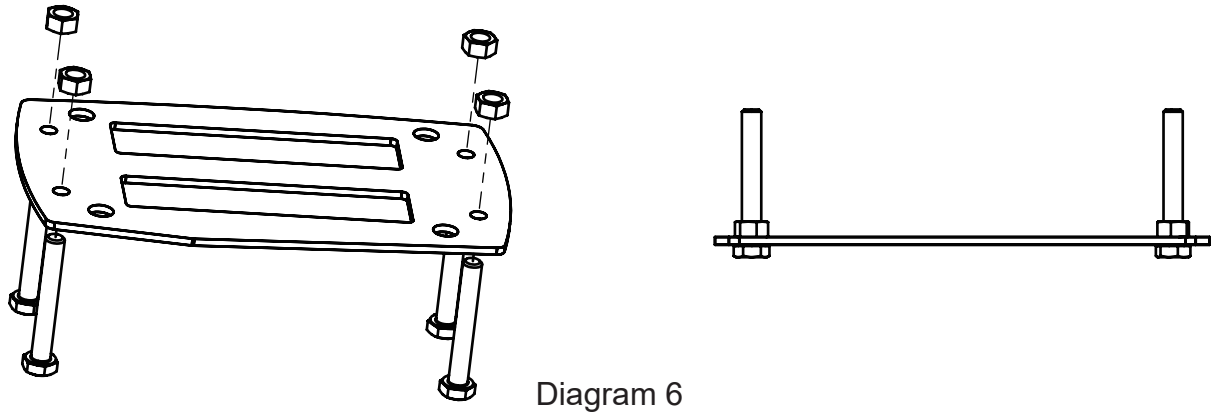


Diagram 6

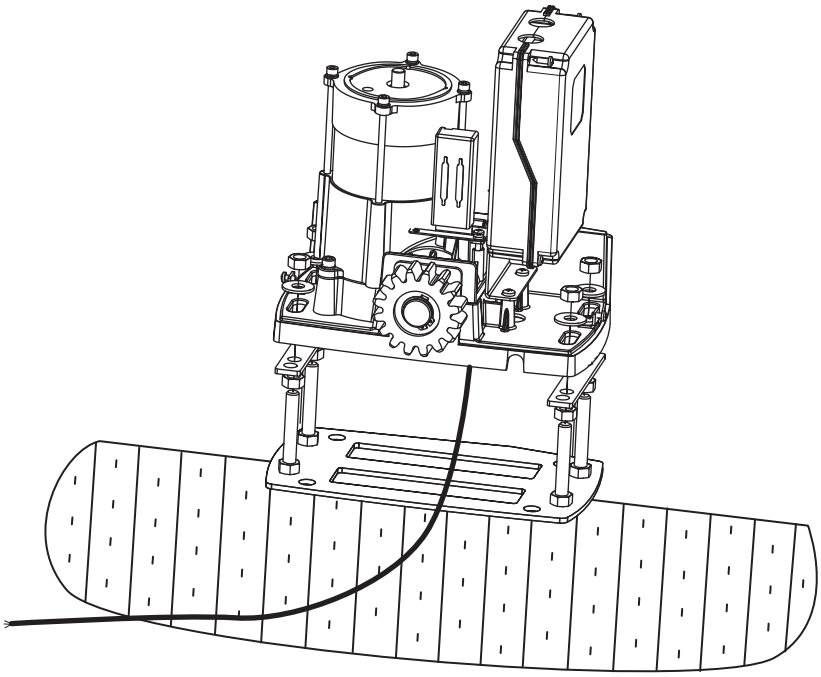


Diagram 7

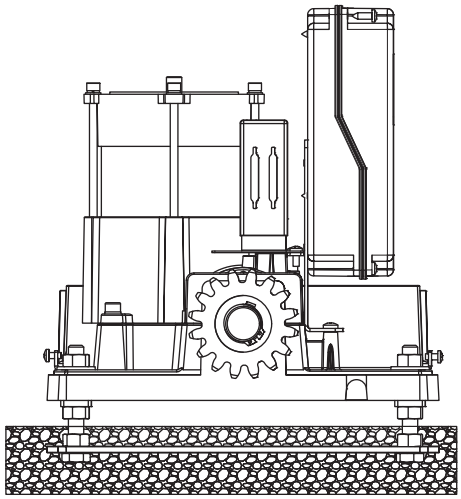


Diagram 8

Step 3. Installation of gear rack

1.After the motor is installed,the racks teeth the down, then put it on the gear of motor and lock them in the gate by screws. Push the gate manually to test whether the motor can move smoothly. If yes, tighten the screws to fixed the gear rack in the gate.

2.Gear rack adopt unit assembly, in order to avoid gate running jitter or jammed, rack and joint clearance must be corrected. Suggest use this way (see diagram 9) with a small correction of the rack, after connecting right with racks 1 and racks 2, then fixed racks 1 and 2. There are snap-in slots at both ends of the nylon rack, just snap it in.

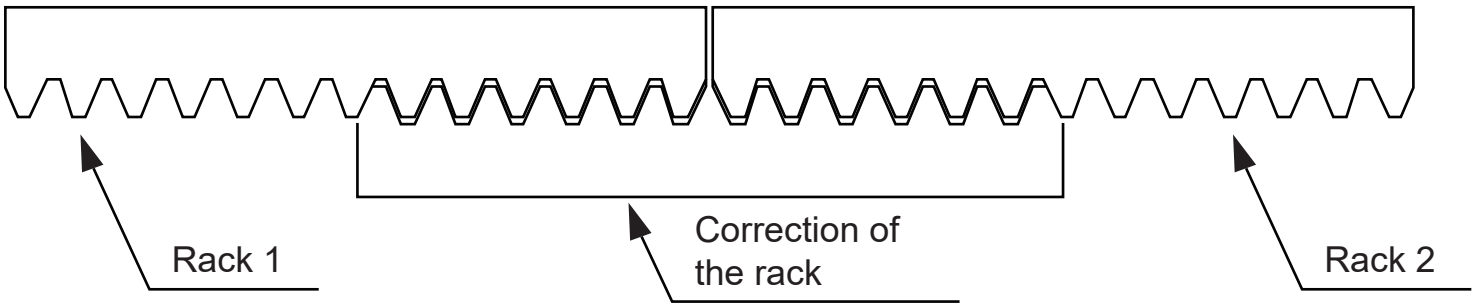


Diagram 9

Step 4. Installation of 2pcs magnet limit switch

Factory supplied 2pcs magnet limit switch with bracket, they are red and blue. 2pcs brackets should be installed one at either end of the gear rack. See Diagram 10.

For installing 2pcs magnet limit switch and brackets in the correct position, please release the clutch manually on the motor (see diagram 5) and open the gate in position by manual.

- Install the blue magnet limit switch with bracket on the gear rack and match the magnet limit switch of motor.

- Pull the gate to the middle position.

- Power on the motor, press the "Open" button on the remote, the motor will running but doesn't drive the gate and the "Open" indicator LED will lit up on the control board.

- Open the gate in position again by manually, if the motor stops running at same time, install the blue magnet limit switch successful. If not, please adjust the blue (open) limit switch position to make sure while you open the gate in position again, the motor will stop running. Power off the motor. Then fixed the bracket and tighten the screws.

- Close the gate in position manually. Install the red magnet limit switch with bracket on the other side of gear rack to make sure the red limit switch can match the magnet limit switch of motor.

- Push the gate to the middle position.

- Power on the motor again, press the "Close" button on the remote, the motor will running but doesn't drive the gate and the "Close" indicator LED will lit up on the control board.

- Close the gate in position again by manually, if the motor stops running at same time, install the red (close) magnet limit switch successful. If not, please adjust the red limit switch position to make sure while you open the gate in position again, the motor will stop running. Power off the motor. Then fixed the bracket and tighten the screws.

When you are satisfied both limit switch are in the correct position, power off the motor, tighten the screws to fixed 2pcs bracket on the gear rack and insert the manual release key to the clutch and close the clutch door. Power on the motor, press the remote control to check the gate opens and closes in position. Adjust the limit magnet if necessary.

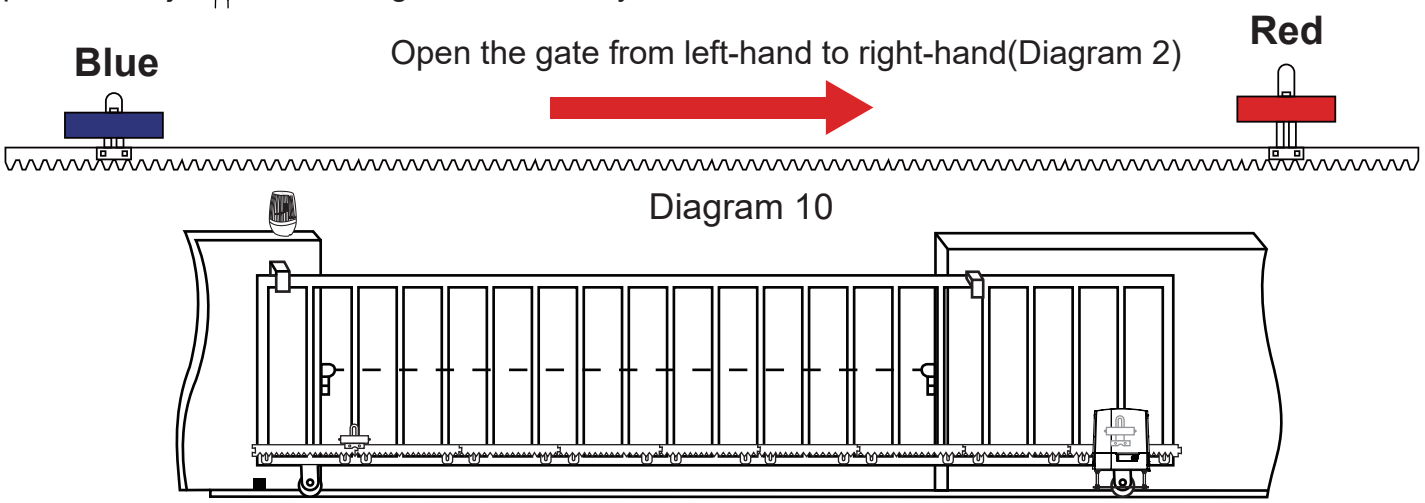
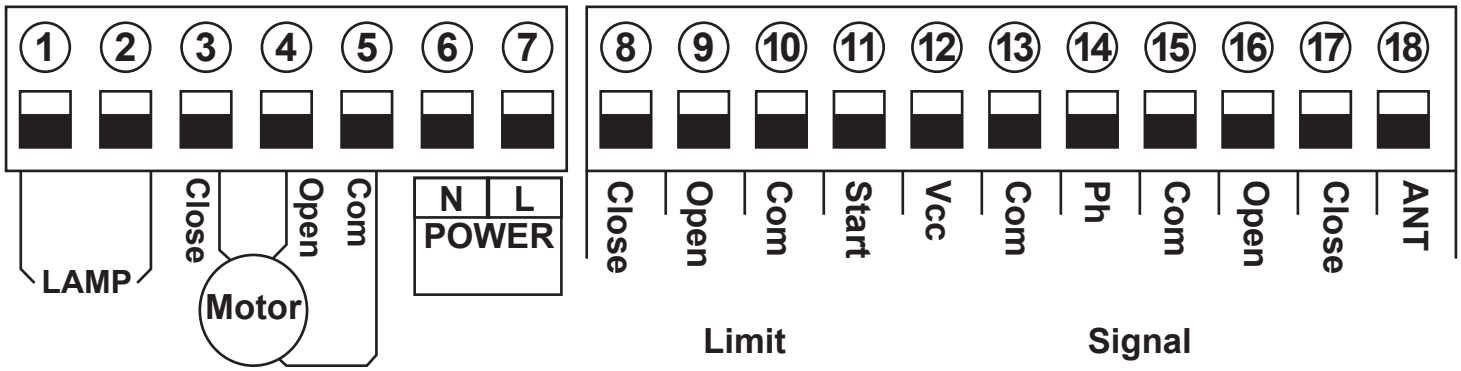


Diagram 10

Control Board

Terminal and buttons instruction



1&2. Lamp: used for connecting with flashing light, output voltage is AC 110V.
3&4&5.Motor: used for connecting with sliding gate motor's wire.
6&7.Power: used for connecting with AC 110V power.
8.Close(Limit): used for connecting with extra gate closing direction limit signal.
9.Open(Limit): used for connecting with extra gate opening direction limit signal.
10.Com: used for connecting with COM terminal or GND.
11.Start: It is a single button control mode switch for controlling the gate by "open - stop-close...
12.Vcc: DC 12V output used for connecting with external devices, max 200mA.
13.Com: used for connecting with COM terminal or GND.
14.Ph: used for connecting with the photocell sensor.
15.Com: used for connecting with COM terminal or GND.
16.Open: used for connecting with any external devices that will operate to open the gate.
17.Close: used for connecting with any external devices that will operate to close the gate.
18.ANT: antenna connection.
19.LEARN button: It is for programming/erasing the remote control.

Control board wire diagram

• Connect with sliding gate opener

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

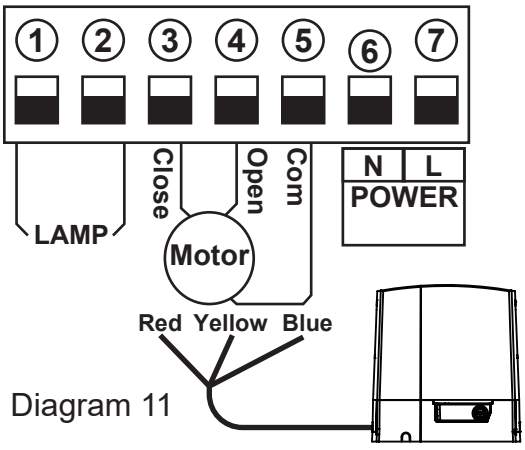


Diagram 11

Terminal ③, ④ determines the forward and backward direction of the motor
Terminal ⑤ is for connecting with Com(GND)

Please note: our factory setting is install the motor on the right-hand of gate! When you want to install motor to the left-hand side as diagram 3, please swap over the 3 and 4 motor wire as blow diagram 12. Then adjust the jump switch J1 position from No 1 and No 2 to No 2 and No 3.

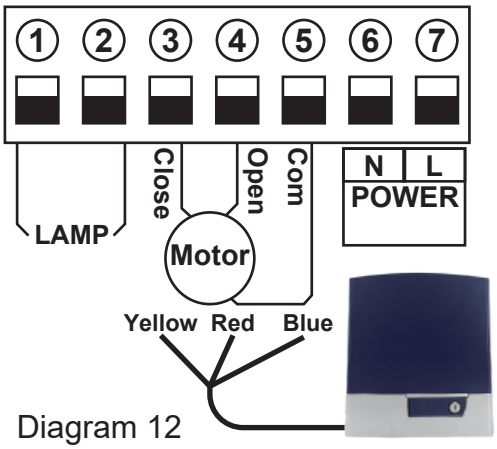
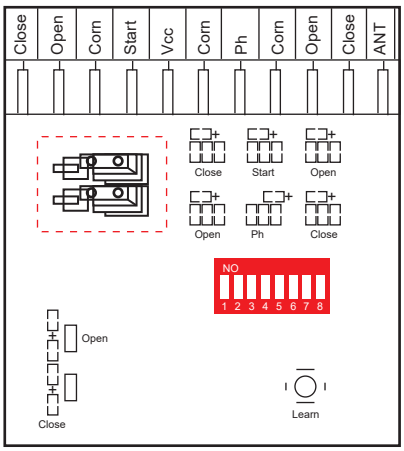


Diagram 12



Important Tips:

- When the gate is opening, the “open” indicator LED will lit up blue. Otherwise, the gate is closing and the “close” indicator LED will lit up red. After the gate is opened or closed in position, the “open” or “close” indicator LED will turn off.
- When the gate is opened in position, the “open” indicator light of blue (open) magnet limit switch would be lit up with blue. And the gate is closed in position, the “close” indicator light of red (close) magnet limit switch would be lit up with red.
- If not, please check whether you already swap the 3 and 4 wire and adjust the jump switch J1 position.

Any questions please feel free to contact with smart01@x-house.net

• Connect with flash lamp

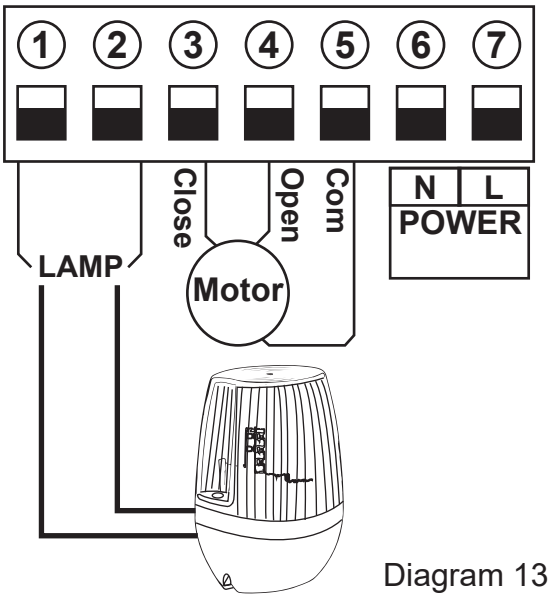


Diagram 13

Terminal ① and ② are for connecting with the flash lamp .

• Connect with photocell sensor

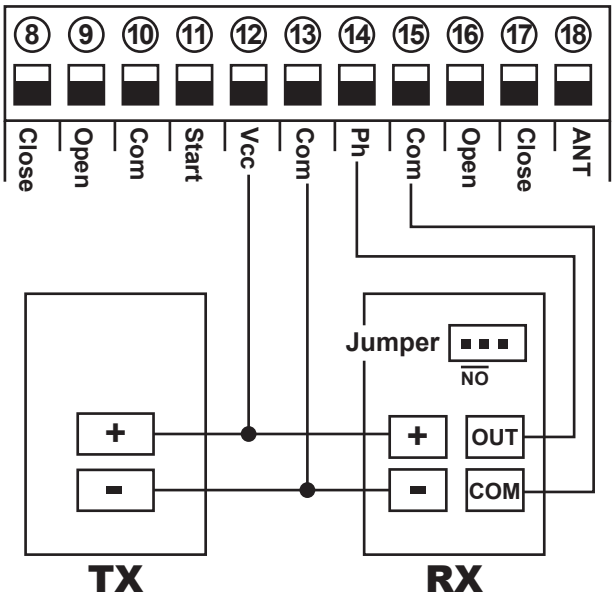


Diagram 14

Connect terminal ⑮ with the “COM” of photocell RX.
Connect terminal ⑭ with the “OUT” of photocell RX.
Connect terminal ⑫ with the “+” of photocell RX and TX.
Connect terminal ⑬ with the “-” of photocell RX and TX.

• Connect with start terminal

The start terminal is used for connecting with some external devices , such push button, wired keypad, receiver etc.

Control gate by “open-stop-close-stop-open” mode.

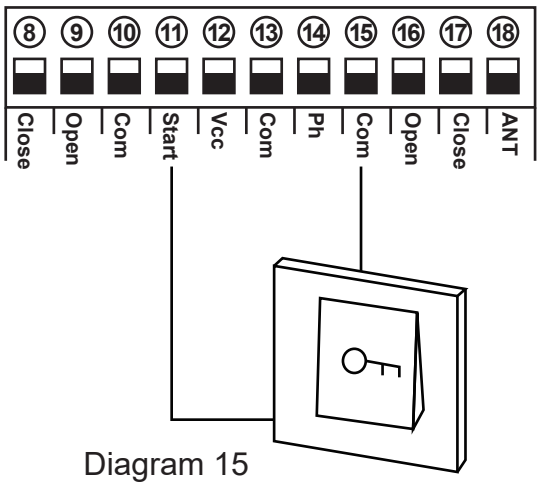


Diagram 15

Terminal ⑪ and ⑮ are for connecting with the push button.
Note! If you connect the swipe card or wired keypad, etc devices, please also connect with ⑫ Vcc and ⑬ Com to get the power supply.

- **Connect with open gate device (Loop detector, swipe card, etc)**

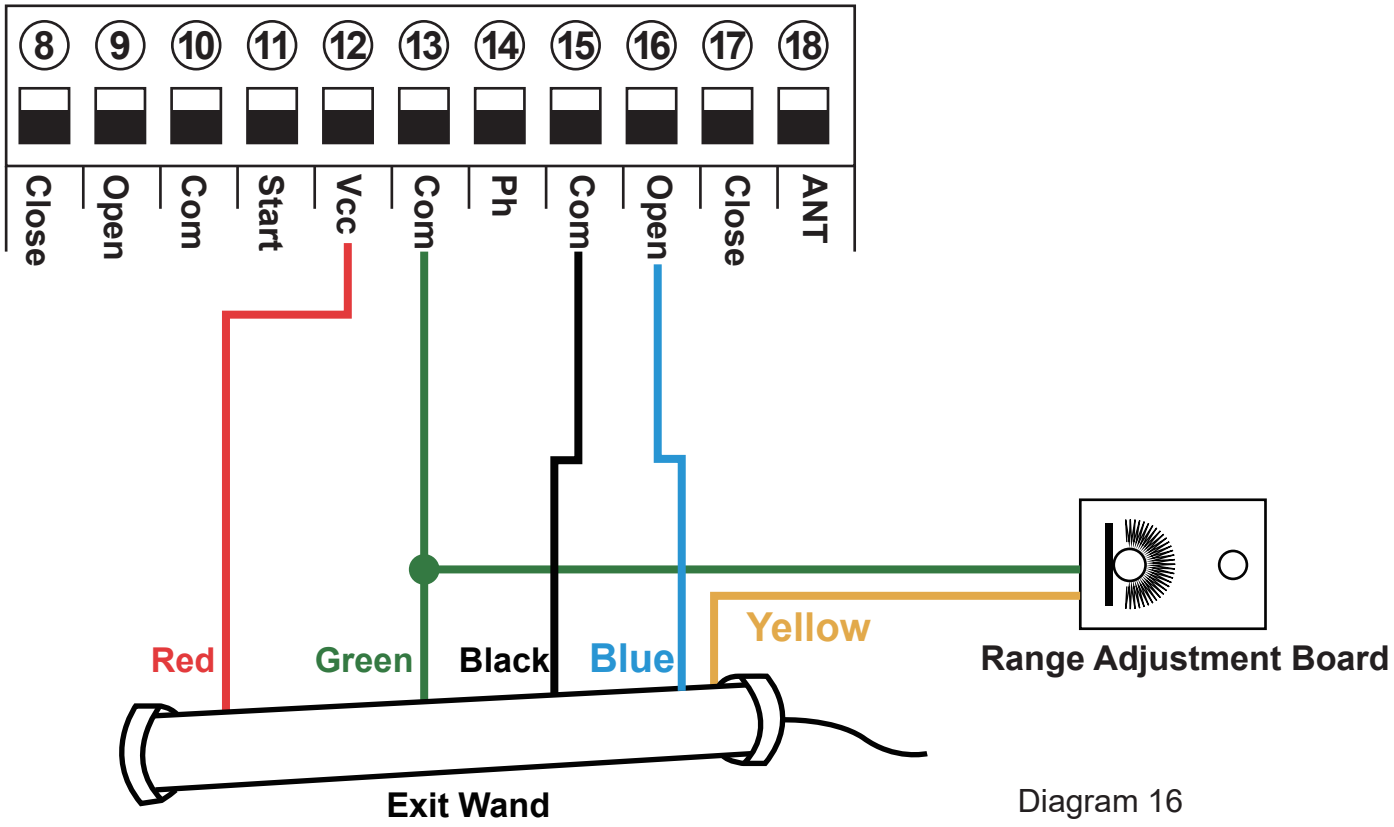


Diagram 16

- **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)

- **Loop detector wire diagram:**

Red wire: connect with terminal ⑫.
Green wire: connect with terminal ⑬ and range adjustment board.
Black wire: connect with terminal ⑮.
Blue wire: connect with terminal ⑯.
Yellow wire: connect with range adjustment potentiometer.

Function Testing

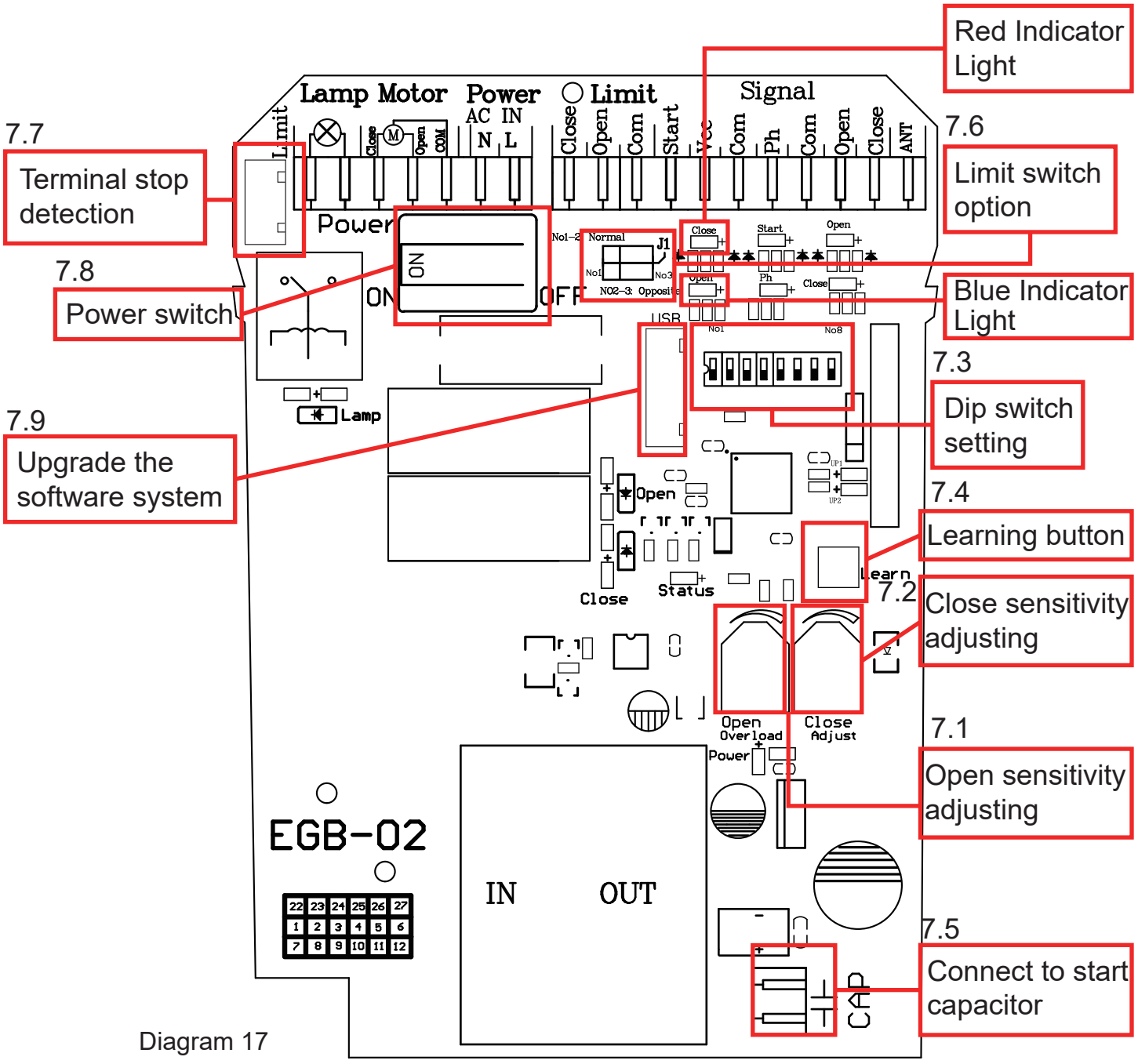


Diagram 17

Blue indicator light: It is opened gate limit switch indicator LED, will lit up blue light when the gate is opened in position and the magnets snap together.

Red indicator light: It is closed gate limit switch indicator LED, will lit up red light when the gate is closed in position and the magnets snap together.

7.1 Gate open blocked detection:

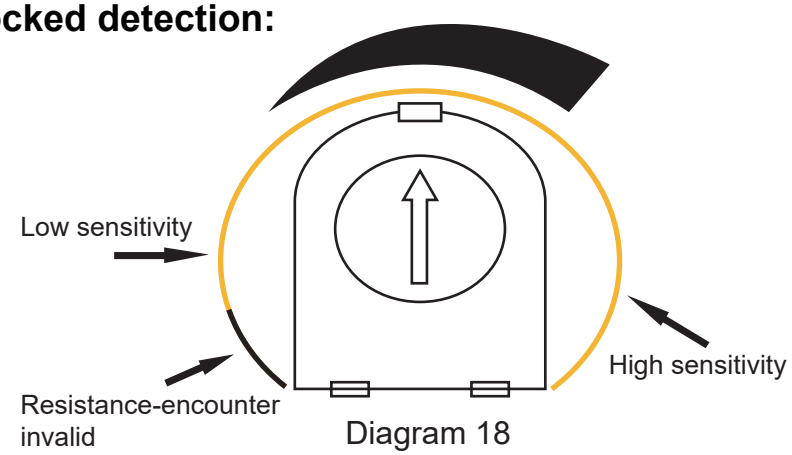


Diagram 18

As picture show, we can rotate "Open Overload " potentiometer to adjust the motor open sensitivity of blocked.

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

B. High sensitivity : when the motor is rotation, will meet greater resistance, then control board will send a signal to let motor stop rotating. If the gate stops moving before fully opening, please rotate "Open Overload " potentiometer to right (Rotate to the high sensitivity side).

C. As picture show, when pointer rotate to black part, the control panel will quit this system.

7.2 Gate close blocked detection:

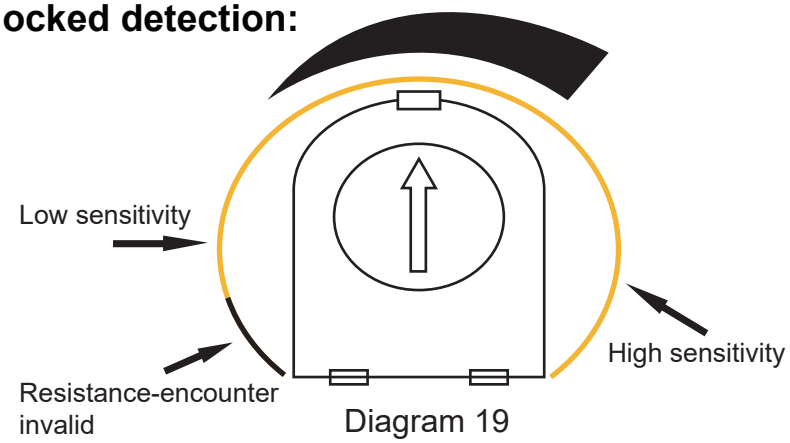


Diagram 19

As picture show, we can rotate "Close Adjust " potentiometer to adjust the motor close sensitivity of blocked.

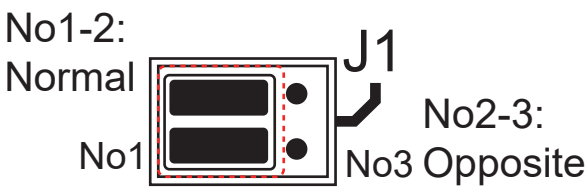
A. Low sensitivity : when the motor is rotation, will meet some minor resistance, then control board will send a signal to let motor stop rotating.

B. High sensitivity : when the motor is rotation, will meet greater resistance, then control board will send a signal to let motor stop rotating. If the gate stops moving before fully closing, please rotate "Close Adjust " potentiometer to right (Rotate to the high sensitivity side).

C. As picture show, when pointer rotate to black part, the control panel will quit this system.

7.3 Dip switch setting:

A. Dial-up 1: Limit mode optional
OFF: NC mode
ON : NO mode (Factory setting)
Limit switch direction setting(J1):
Normal :Short circuit cap simultaneously No1 and No2 of J1 (Factory setting)



B. Dial-up 2: Infrared mode
OFF: NO mode(Factory setting) ON: NC mode
If the gate meet obstacles during closing, It will auto stop and auto open. After the gate complete open to its place, it will auto close again if the obstacle disappear within 2s, if not , it will not auto close until to the obstacle disappear.

C. Dial-up 3 &4: Auto close time setting
Auto close function activated after gate complete open to its place and stop by limit switch.
Dial-up 3 &4, OFF-OFF: Auto close function disabled(Factory setting)
Dial-up 3 &4, ON-OFF: 10S
Dial-up 3 &4, OFF-ON: 30S
Dial-up 3 &4, ON-ON: 60S

D. Dial-up 5&6: Auto close time setting when pedestrian mode activated
When remote control triggers the pedestrian mode (by remote control button B or D), the gate will open for about 6s then stop or the gate will open fully within 6s. If the gate system set auto-closing function, it will enter the auto-closing timer countdown.
Auto close time setting as follows:
Dial-up 5 &6, OFF-OFF: Auto close function disabled(Factory setting)
Dial-up 5 &6, ON-OFF: 5S
Dial-up 5 &6, OFF-ON: 10S
Dial-up 5 &6, ON-ON: 30S

Note:
1. When the motor is running, the motor will stop immediately if triggers pedestrian mode.
2. After triggering the pedestrian mode to open the gate for 6s, no mater it enter the countdown to close the gate or stop status, If trigger again, the gate will close the gate immediately.

E. Dial-up 7: Condominium mode setting
OFF: Condominium mode disabled(factory setting)
ON: Condominium mode activated
When the gate is opening, trigger remote control and the start interface are invalid until the door is fully opened.
When the gate is closing, trigger remote control and the start interface , the gate will stop to close then auto open until the opening limit is reached (the remote control and the start interface are invalid when the gate is opening).

F. Dial-up 8: Remote control buttons mode
OFF: Single button control circularly
First button control gate open, stop, close, second button use for pedestrian mode.
ON: Three buttons control
First button control gate open, second button control gate close ,third button control gate stop, fourth button use for pedestrian mode.

Not: Please choose the remote control mode firstly before remote control code clearning to control board.

7.4 Learn remote control code:

A. Control panel can memory more than 100 pcs remote control.

B. Code learning: Press board "LEARN" button, LED indicator light on, press remote control first button, LED indicator flash twice, code learning succeed. If no remote control signals received within 6s, the receiver will automatic quit learning functions.

C. Code clearing: Press and hold the button 6 seconds, LED indicator flash twice, all the code that has been memorized in control board will be cleared.

7.5 Motor start capacitors:

Capacitors are connected with control board before use motor, please confirmed the interface of capacitors is secure.

7.6 Limited switch options (J1):
It is used to switch terminal stop detection interface, that direction of open and close the gate.

7.7 Terminal stop detection interface:
Terminal for connecting with the spring limit switch or magnetic limit switch.

7.8 Remote control mode switch:
Switch on /off power stop when do some setting on the control board.

7.9 Upgragde the software system for control board:
Plug a USB device which was supplied by the factory, and use to upgrade the software system.

How to program or erase the remote

- **Program the remote:** Press the learn button for at least 1 second and then release, the LED indicator will light on. Now user needs to press the button on the remote control, with the learn button indicator LED flashes twice, which means the code learning is successful.

After the user presses 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 code learning statute.

- **Erase the remote:** Press and hold the learning button for 6 seconds, while the learn button indiactor LED light on and flash twice, release the button. Now all remotes can not control the gate.

How to operate your gate opener

Each remote has 4 buttons, there are two remote control modes for optional.The factory default is a single-button control mode. If you want to change to use the three-button control mode, please reference the content of 7.3.

- Single button control mode： the remote button A and C are used to control the gate as "open-stop-close-stop", the B and D button is used to control the PED mode.
- Three-button control mode: remote A button to control gate open, B button to control gate close, C button to control gate stop. D button to control gate PED mode.

Note: If you adjust the remote control mode, please program the remote into your gate opener again to operate it.

Trouble Shooting

Problems	Possible Causes	Usual Solutions
Gate fails to open or close normally.	Check the clutch states, power-driven state or not?	Recovery.
	Power no indication, and power trip.	Switch on the power supply, to restore power.
	Fuse is burned.	Check the fuse, change the fuse if burnt.
	Remote control failure or invalid.	Detection or replace. (Note: If you want to replace, please look for our brand of remote control)
	Control board power wiring with problem.	Re wiring according to instructions.
	Damage to any electrical component on the control board.	Have the problematic component replaced with a new identical one.If necessary, have the control board replaced.

Problems	Possible Causes	Usual Solutions
The gate can open but cannot close.	Photocell wiring with problem.	If not connect photocell, please make sure that the infrared port and GND short circuit; if connect infrared sensor, please make sure the wiring is correct and the photocell is N.C.
	Photocell mounting with problem.	Make sure that the photocell mounting position can be mutually aligned.
	Photocell is blocked by objects.	Remove the obstacle.
	Blocked sensitivity is too high (set too big).	Reduce the sensitivity of obstacle.
Remote control doesn't work.	Battery level of the remote control is low.	Change the remote control battery (12V23A).
	Remote control learning is not completed.	Re-conduct remote control learning.
Working distance of remote control reduced.	Interference from surrounding environment.	Straighten the control board antenna.
	Interference from equipment using the same frequency.	Wait eliminate interference.
Press OPEN, CLOSE button, the gate is not moving, motor has noise.	Capacitor is broken.	Change capacitor.
	Capacitor is poor connected.	Check the capacitor wiring. Reconnect the capacitor interface and tighten it with a screwdriver.
	Gate moving is not smoothly.	According to the actual situation to adjust the motor or the gate.
Gate fails to stop at the open or close limit position.	The mounting of magnetic limit switch with problem.	Check whether the distance between magnetic limit switch and motor, and the height of the magnetic limit switch can reach up the mounting requirement.
	Limit switch of the motor and the limit detection of the interface PCB board plug off	Insert and fixed it.

Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us at **smart01@x-house.net** and we'll resolve your issue ASAP! Whatsapp: +86 18659522516