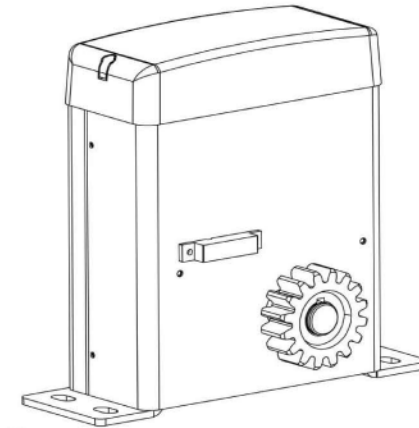




YOUR KEY TO AUTOMATION ↔



SL-2403

AUTOMATIC SLIDING GATE OPENER
USER MANUAL

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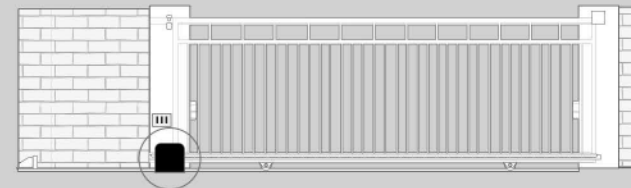


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NOTES

1. Summary

Thank you for using a Giant Alarm Sliding Gate Opener. To ensure you are fully familiar with all the functions and safe usage of the gate opener, please read this manual carefully.

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

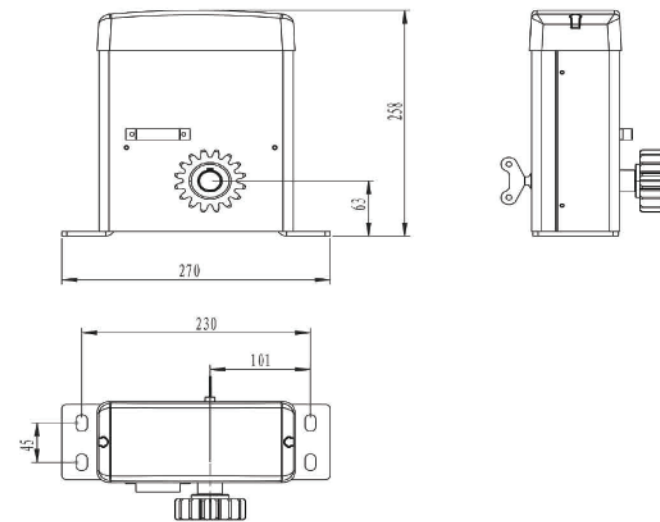


Diagram 1

3. Parameters

1. Working temperature of motor: $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$
2. Working humidity: $\leq 85\%$
3. Power supply: 24V DC
4. Rated power: 110W
5. Output gear module: $M=4$
6. Output gear number: $Z=16$
7. Open(close) speed: $v=12\text{m}/\text{min}$
8. Rated speed : 2400RPM
9. Maximum pull: 1100N
10. Maximum load: 400KG
11. Net weight: 8KG
12. Remote control distance : $\leq 20\text{meter}$
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

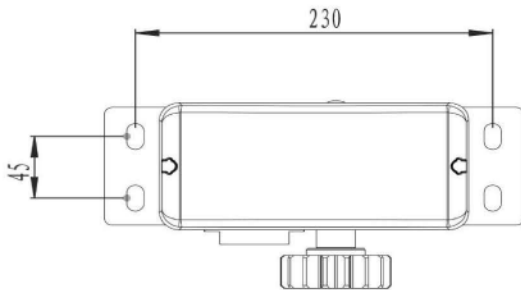


Diagram 2

2

4. When you open or close the gate by pressing key #1 and key #2 which have been programmed, gate will stop in mid-travel or reverse before reaching the fully limit position.

- a. The opening force or closing force is adjusted too small. Turn the Potentiometer 1 and 2 to increase the force.
- b. Gate is obstructed. Remove the obstruction.

5. The gate opens, but stops and will not return.

- a. Please note the two magnet brackets (fixed plate) are different: one is higher and another is lower. Please try to exchange the two brackets position.
- c. Please try to exchange the limit switch wires CL (close) and OP (open). There are two reed switches inside the magnetic limit switch: one is upper and another is lower. Maybe the magnet position was installed in the middle so it inducts both switches. Adjust the magnet upper or lower.

6. The gate can open, but fails to close.

- a. Photocell is obstructed. Remove obstruction.
- b. The limit switch is failed. Disconnect the limit switches and try it again.
- c. The start capacitor of the motor is failed. Replace the capacitor.
- d. The electric component on the control board has been damaged. Replace the electric component or replace the control board.

7. The motor is run but the gate doesn't move.

The clutch for emergency release must be closed properly and is not slipping

Maintenance:

Every six months check the following items for proper operation of the unit.

- * Lubricate shafts and sprockets.
- * Keep operator clean at all times.
- * Check and tighten anchors bolts.
- * Check for loose or corroded wire.
- * Ensure the operator is well earthed, and correctly terminated.
- * Always check the Stop/Reverse in case of obstruction function when performing any maintenance. If this function can't be made operable, remove this operator from service until the cause of the malfunction is identified and corrected.

NOTE:

- 1.The right motor function condition should be like:
when gate opening, blue indicator LED lit up; when gate closing, red indicator LED lit up.
- 2.Only the gateon the right function direction, then could realize the swipe card, infrared,PED mode etc function.
- 3.In the gate motor system, the magnetic limiter must be installed at the closing limit to prevent the door from rushing out of the track due to the counting error of the code disc.
- 4.After each power-on, the first action is the door closing action, and the stroke is corrected after reaching the door closing limit.

Trouble Shooting:

Have a multimeter to check voltage and continuity. Use caution when checking high voltage terminals.

1.Motor only runs toward one direction.

- a.The limit switch is failed. Disconnect the limit switches and try it again.
- b. Wrong wiring of photocell or other safety sensor. Check the wiring of the wiring of safety sensor.
- c. The electric component on the control board may be damaged.
Replace the electric component or replace the control board.

2.The gate will not open or close.

- a.Check the power supply if it is good.
- b. The limit switches are failed. Disconnect the limit switches and try it again.
- c. Connecting wires or terminal blocks are too loose. Check the connecting wires and terminal blocks.
- d. The motor has been damaged. Replace the motor if necessary.
- e. The thermal protector is working because the high temperature after long working time.
Please wait for 20 minutes to let the motor become cold.
- f. The electric component on the control board has been damaged.
Replace the electric component or replace the control board.

3.Remote control does not work.

- a.The distance you use the remote is too far away from the opener. Try it again closer.
- b.Remote control is not suitable for receiver. After making sure the codes are correct, erase remote controls and then re-program the codes in the device.
- c.Broken receive board. Replace receive board.
- d.The indicator light of remote control is not on. Check the battery in your remote control.
Replace the battery if necessary.

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.

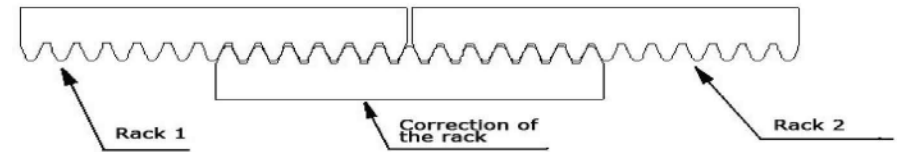


Diagram 3

5.4 Installation of limit magnet.

There 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 4

To install the magnet 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 magnet 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 magnet to contact the toggle switch and switch the motor off.

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.



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.

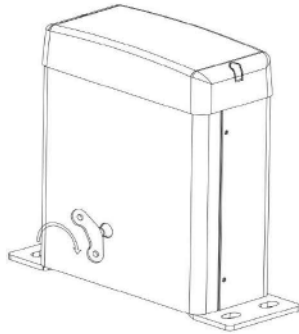


Diagram 5

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.

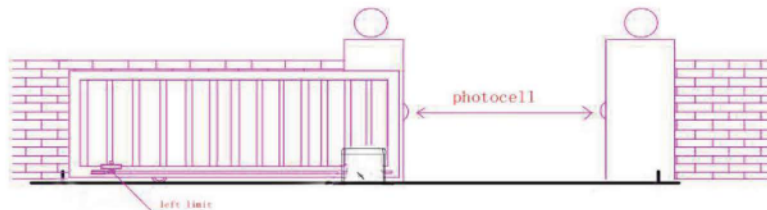


Diagram 6

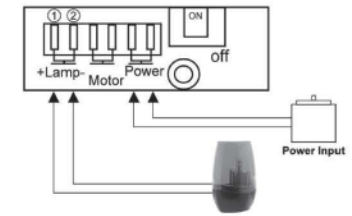
<p>Limited and Resistance functions</p>	<p>Limit: during the motor is running, the motor will stop running after reaching open & close limit. The open limit realizes the travel limit through the code disc count.</p> <p>The closing limit is realized by the internal magnetic limiter. Meet Obstacle: If meet obstacle when opening the door, the door will stop.</p> <p>The code disc counting function is used to detect whether the door is stuck when it encounters obstacles, and the resistance function can prevent the car from being smashed.</p> <p>Through Overload (resistance adjustment), the appropriate resistance can be adjusted for the resistance limit. This resistance adjustment is only effective when the resistance is encountered at low speed.</p>
<p>MOTO intelligent change speed system</p>	<p>The motor can adjust the running speed through auto travelling learning, has the soft start, high speed, slow speed, soft stop function.</p>
<p>Auto travel learning</p>	<p>Before the auto travel learning, The gate should always inclose limit position(close limit indicator is off). Any interruption happen during the auto travel learning process will cause the failure.</p> <p>(If the gate is not closed completely , hold on the close button to close the gate)</p> <ol style="list-style-type: none"> 1.Press and hold on the set button about 3s and release, the LED light on , means the motor enter the auto travel learning mode. 2.Press and hold on the open button on the control panel, until the gate is opened completely , release the button. 3.Press the set button to store , you will hear a bee sound , that means the operate successfully. If failure , the set indicator will blink , please repeat the operation. <p>Note: while you operate the auto travel learning , you must press and hold on the open / close button , the motor will running. If you release the button , the motor will stop running right now.</p>

Code learning	Press the control panel's learn button about 1s and release it, the LED indicator on, now press the button of remote control, the LED indicator blinks 2 times, and hear a beep, that means the transmitter already be programmed into the control panel successfully. Otherwise, the control panel doesn't receive any signal from the transmitter within 5s, the LED indicator off, and exit the program mode.
Code clearing	Press and hold on the control panel's learn button 5s (the LED will light on), until the LED Keep blinking, that means clear code successfully.
Single button control mode START	Terminal start for controlling the door as "open-stop-close-open" mode
Open the gate control mode	While the gate stop, the user can activate the terminal to open the gate. While the gate is on closing, and the user activate the terminal, the gate will stop first, then open it. The terminal of open can be used to connect with swipe card or other smart devices for opening the gate.
Close the gate control mode	While the gate stop, the user can activate the terminal to close the gate. The terminal of close can be used to connect with smart devices for closing the gate.
IR mode (meet resistance infrared)	If the gate meets obstacles during the closing, It will auto stop and auto open. After The gate is completely open to its place, it will auto close again. If the obstacle disappears within 2s, if not, it will not auto-close until to the obstacle disappear
Auto close	Auto-closing function only activated after the open limit switch enabled Auto close time adjustable through digital display from 0-180s. When the auto-closing time starts countdown, the indicator blinks every 1 second to indicate. After the gate auto closing countdown, if the infrared still exists, wait for the infrared to disappear for 2s and then auto close the gate
Alarm lamp output	While the gate is moving, the lamp will light on. Otherwise, while the gate stop, the lamp will light off.

Wiring of the Control Board

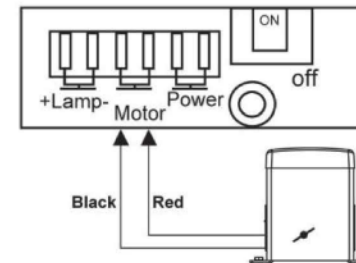
1.Lamp

1&2. Lamp terminal: use for connect flashing light. Lamp light on when gate running. Output voltage is DC24V.

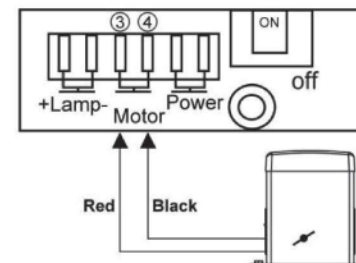


2.Motor

A. Install the motor on the right of gate (factory setting)

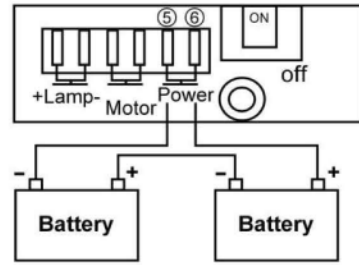


B. Install the motor on the left of gate.



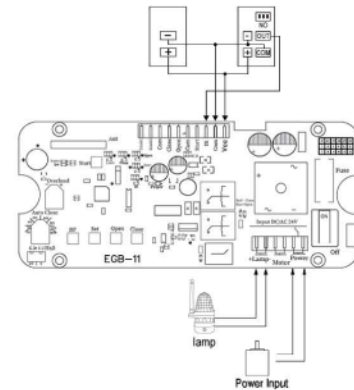
3.Power

5&6. Power terminal: used for connecting back up battery, which could be charged by electric supply power. Charge current is 20-50mA. The battery would supply the power automatically when without the electric power supply. When UPS supply power to board, the standby current is 20mA, the current is about 5-10A when motor running.



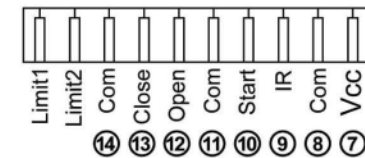
4.VCC & COM

Terminal 7&8, the power supply 12V for accessories, VCC mean +, COM mean -



5.IR(Normal Open)

Connect terminal 7 to the "COM" of photocell RX. Connect terminal 9 to the "OUT" of photocell RX. Terminal 7 and 8 are supplying power for external device. So, connect terminal 7 to the "+" of photocell RX and TX. Connect terminal 8 to the "-" of photocell RX and TX.



6.Start

START terminal :Single button control mode switch, used for controlling gate"open-stop-close-stop-open" cyclically.

(Note: if hold press the button for long time would effect some other function)

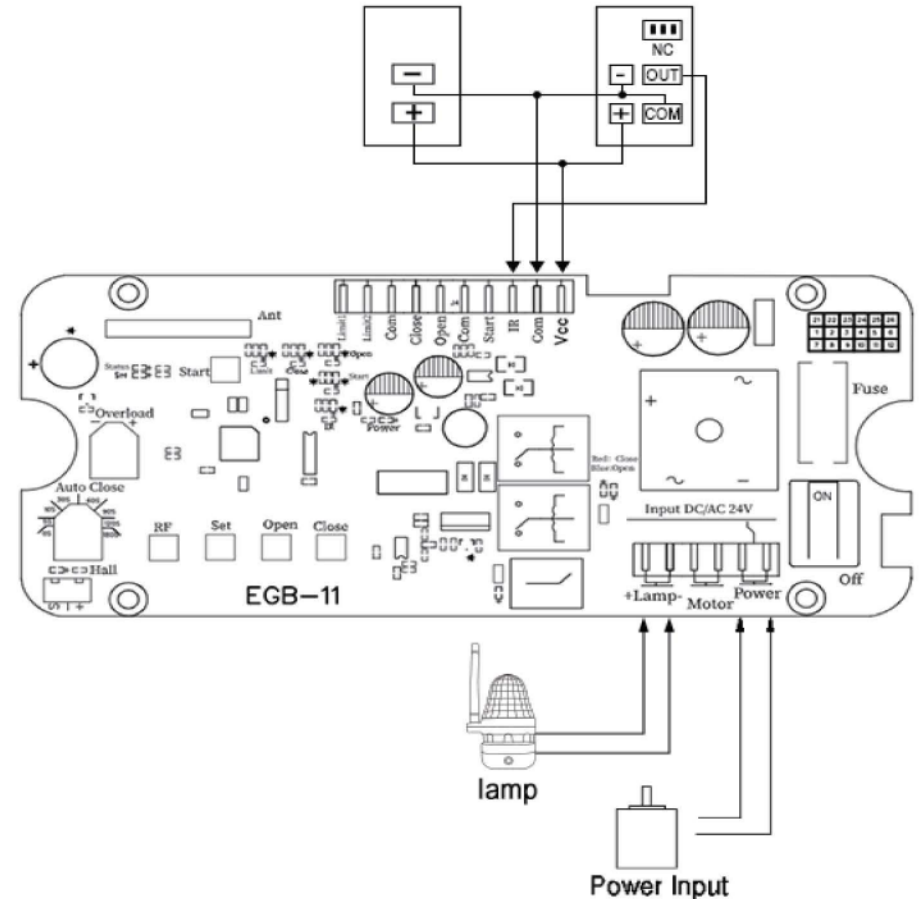
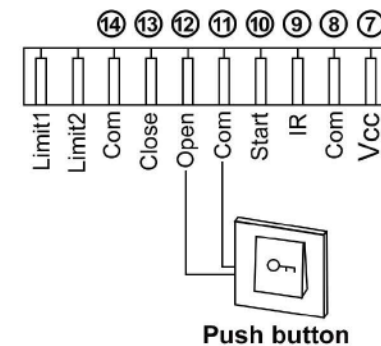
7.Com

COM Terminal: Used for connect COM terminal or GND

8.Open, Close & Com

A.Connect to open device Example for push button; Terminal 12 and 14 connect to push button. Terminal 7 and 8 to supply power for push button

(Note: Push button only need to connect terminal 12 and 13. Other open devices need to connect terminal 7&8)



Function Testing:

Status Indicator LED	After control panel power on, the status indicator LED lit up
Motor open-close instruction	Blue indicator LED lit up means gate opening. Red indicator LED lit up means gate closing.
Transmitters	Encoding format: Our own custom rolling code. 1st button : open the gate 2nd button : close the gate 3rd button : stop the gate 4th button : single button control mode, control the door as "open-stop-close-open". Maximum memory capacity of control panel: 120pcs transmitters.