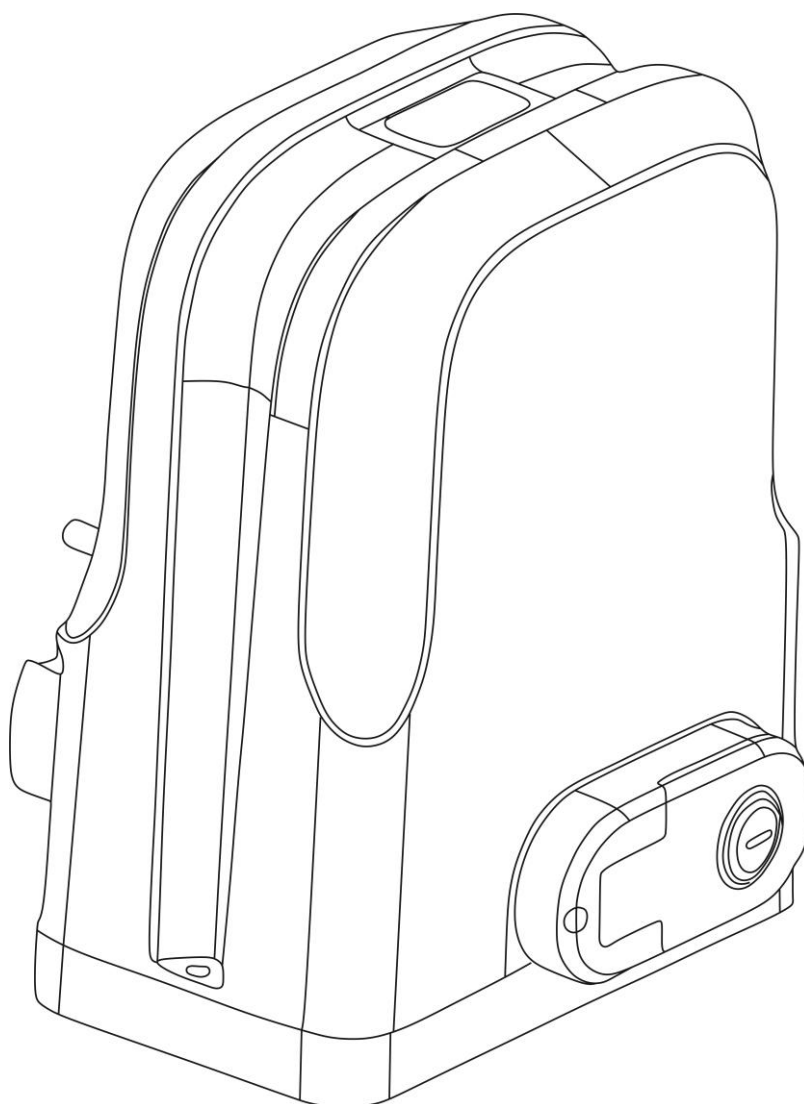




Sliding Gate Opener SLG5280X User Manual (With control board SL07XX)



Dear users,

Thank you for choosing this product. Please read the manual carefully before assembling and using it. Please do not leave out the manual if you send this product to a third party.

1. Safety Instruction



Please ensure that the using power voltage matches with the supply voltage of gate opener (AC110V or AC220V); kids are forbidden to touch the control devices or the remote-control unit.


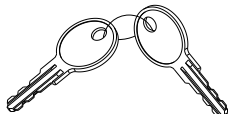
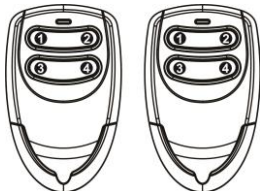
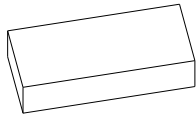
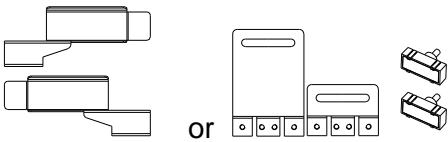
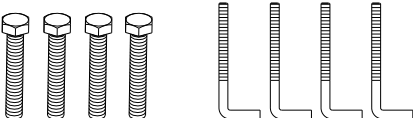
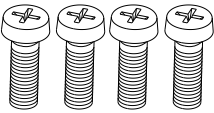
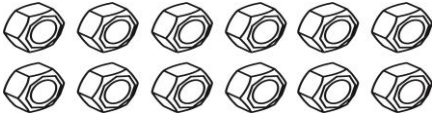
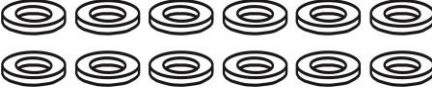
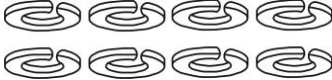
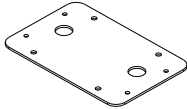
The remote-control unit is controlled by a single button mode or three button mode (please refer to the instructions of the remote control in accordance with the actual gate opener type). The indicator light on the remote-control unit will flicker when the button on it is pressed. Main engine and gate can be unlocked by disengagement wrench and the gate can move with manual operation after disengagement.

Please ensure that no one is around the main engine or gate when the switch is operated and it is usually demanded to examine the stability of installation. Please temporarily stop using if the main engine needs repairing or regulation.

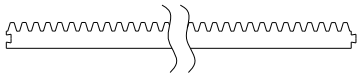

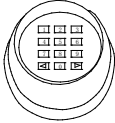
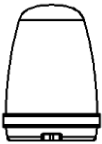
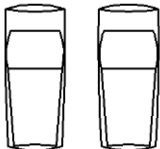
External Safety Edge (8.2 K Ω resistance)

The installation and maintenance of the products must be carried out by professionals.

2. Packing List (standard)

No.	Picture	Name	Quantity
1		Main engine	1
2		Manual release key	2
3		Remote control	2
4		Spring limit switch accessories box / Magnetic limit switch accessories box	1
4-1		Spring limit switch block / Magnetic limit switch block	1
4-2		Outer hexagonal bolt M8X60 Foundation bolt M8	4 4
4-3		Spring limit switch block mounting screw M6X10 / Magnetic limit switch block mounting screw M6X18	4
4-4		Nut M8	12
4-5		Flat washer Ø8	12
4-6		Spring washer Ø8	8
5		Mounting plate	1

Packing list (Optional)

No.	Picture	Name	Quantity
1		Metal rack	1m/pc
2		Nylon rack	1m/pc
3		Keypad (different models are optional)	1pc
4		Flash lamp (different models are optional)	1pc
5		Photocell (different models are optional)	1pair

3. Technical parameters

Model	SLG52801	SLG52802	SLG52803	SLG52804
Power supply	110VAC/50Hz	110VAC/50Hz	220VAC/50Hz	220VAC/50Hz
Motor power	280W	280W	280W	280W
Gate moving speed	13m/min	13m/min	13m/min	13m/min
Maximum weight of gate	600Kg	600Kg	600Kg	600Kg
Remote control distance	≥50m	≥50m	≥50m	≥50m
Remote control mode	Single button mode / Three button mode	Single button mode / Three button mode	Single button mode / Three button mode	Single button mode / Three button mode

Limit switch	Magnetic limit switch	Spring limit switch	Magnetic limit switch	Spring limit switch
Noise	≤56dB	≤56dB	≤56dB	≤56dB
Output torque	14N.m	14N.m	14N.m	14N.m
Output shaft height	46mm	46mm	46mm	46mm
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	433.92 MHz
Working temperature	-20°C - +70°C	-20°C - +70°C	-20°C - +70°C	-20°C - +70°C
Package weight	10.10Kg	10.10Kg	10.10Kg	10.10Kg

4. Installation

SLG5280X sliding gate opener is applicable to gate weight less than 600kg, and length of the sliding gate should be less than 8m. The drive mode adopts the gear and rack transmission. This gate opener must be installed inside the enclosure or yard for protection.

4.1 Installation drawing

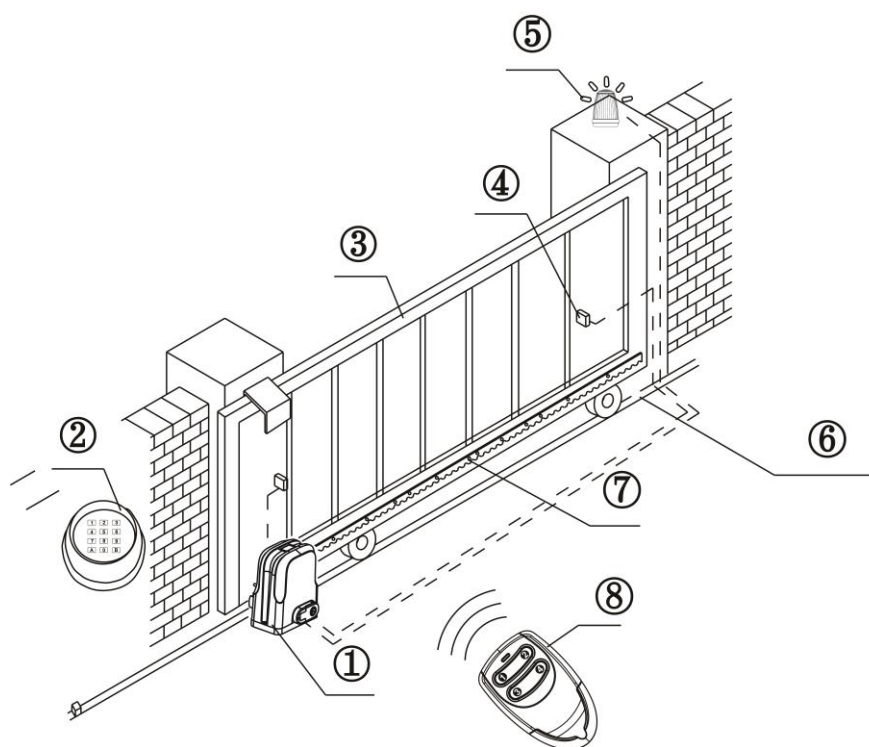


Figure 1

- ① Gate opener; ② Wireless keypad ; ③ Gate; ④ Infrared sensor;
 ⑤ Alarm lamp; ⑥ Safety stop block; ⑦ Gear rack; ⑧ Remote control;

4.2 Size of main engine and accessories

4.2.1 Size of main engine

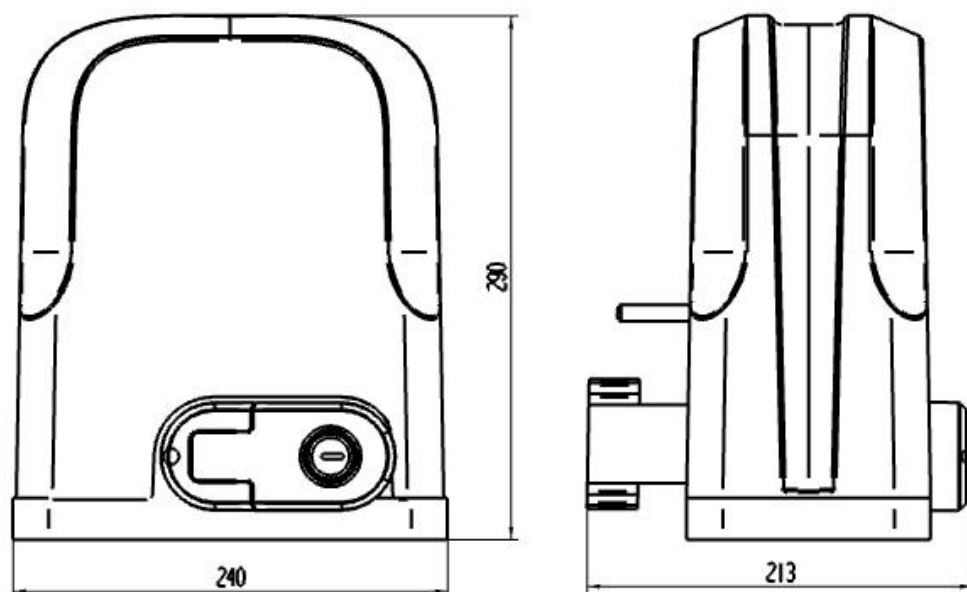


Figure 2

4.2.2 Size of mounting plate

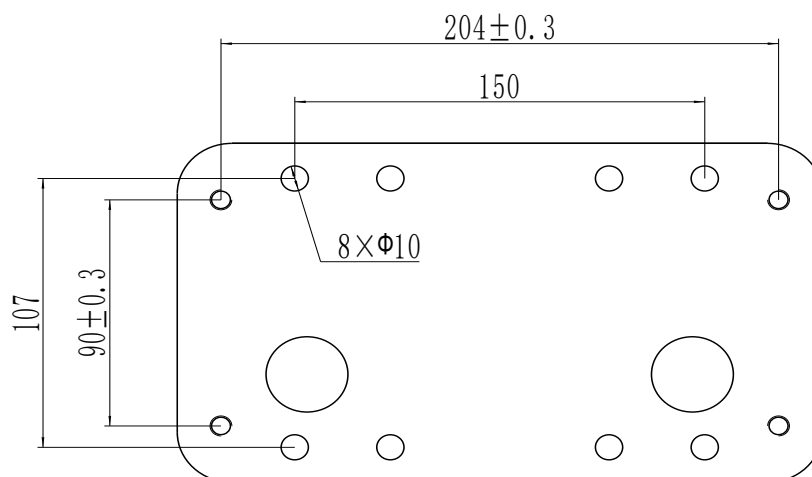


Figure 3

4.3 Installation procedures

4.3.1 Preparation work before installation

Please ensure that the sliding gate is correctly installed, the gate rail is horizontal, and the gate can glide back and forth smoothly when moved by hands before installing the gate opener.

Cable installation

Please bury the motor & power cable and controlling cable with PVC tube, and use two PVC tubes to bury (motor & power cable) and (controlling cable) separately, so as to guarantee normal operation of the gate opener and protect the cables from damages.

Concrete pedestal

Please cast a concrete pedestal with the size of 400mm x 250mm and depth of 200mm in advance, so as to firmly install SLG5280X gate opener. **Please verify whether the distance between the gate and gate opener is suitable before casting the pedestal.**

Embedded screws

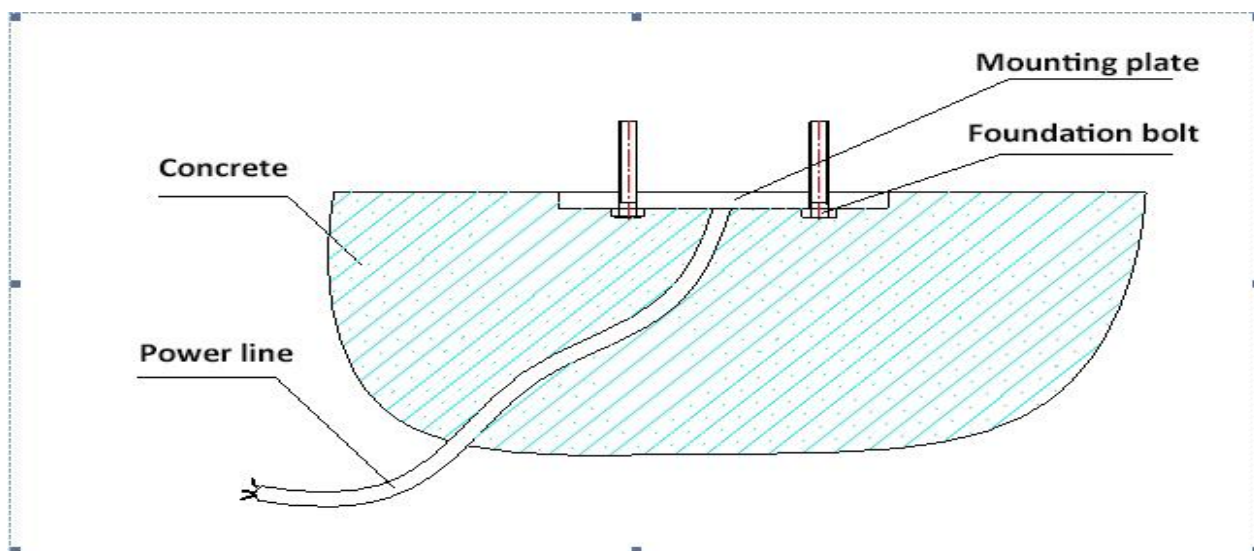


Figure 4

4.3.2 Main engine installation

- Dismantle the plastic housing on the main engine before installation and keep relevant fasteners properly;
- Please prepare the power line for connecting mounting plate and main engine (the number of power supply cable core shall not be less than 3 PCS, the sectional area of cable core shall not be lower than 1.5mm² and the length shall be determined by users according to the field situation) due to different installation environments;
- Please unlock the main engine before installation, the unlock method is: insert the key, and open the manual release bar till it rotates by 90° as shown in Figure 5. Then turn the output gear and the gear can be rotated easily;

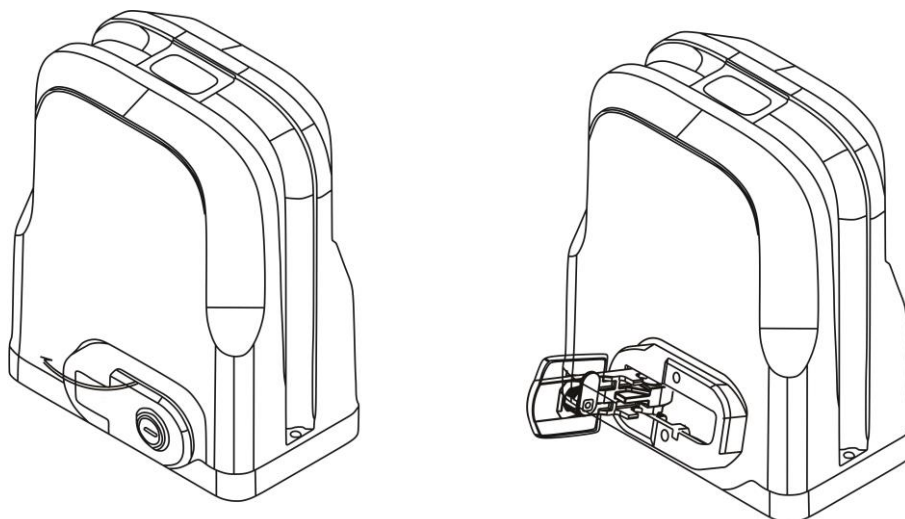


Figure 5: Turn on 90°

4.3.3 Gear rack installation

- Fix the mounting screws to the rack.
- Put the rack on the output gear, and weld the mounting screw to the gate (each screw with one solder joints firstly).
- Unlock the motor and can pull the gate smoothly.
- Please check whether there is a fit clearance between rack and output gear, as shown in Figure 7.
- Weld all the mounting screws to the gate firmly.
- Make sure that all racks on the same straight line.
- Pull the gate after installed, make sure the entire trip is flexible no stuck.

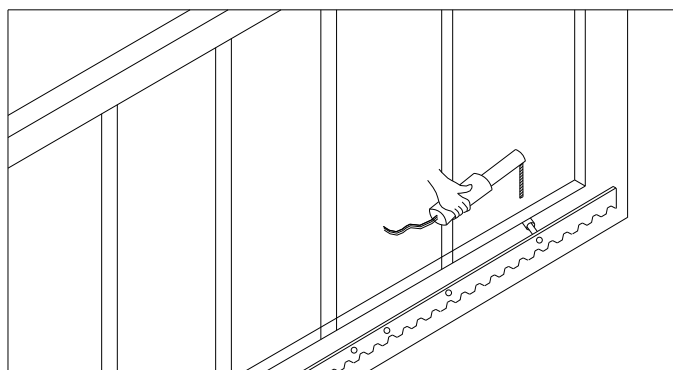


Figure 6

The fit clearance of output gear and rack is shown in Figure 7 below:

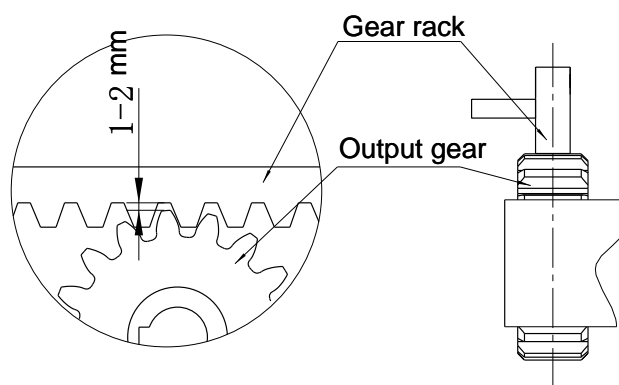


Figure 7



Warnings

- To ensure safety, install safety stop blocks on both ends of the rails to prevent the gate out of the rail. Before installing the main engine, make sure that the safety stop blocks are in place and whether it has the function of preventing the gate from moving out of the rail and out of the safety range.
- Please ensure that the main engine and its components have good mechanical properties, and the gate can operate flexibly when moved by hands before installing the main engine.
- In this product, one control can drive one main engine only, otherwise, the control system will be damaged.
- Earth leakage circuit breaker must be installed where the gate movement can be seen, and the minimum mounting height is 1.5m to protect it from being touched.
- After installation, please check whether the mechanical property is good or not, whether gate movement after manual unlocking is flexible or not, and whether the infrared sensor (optional) is installed correctly and effectively.

4.3.4 Limit switch adjustment

Spring limit switch - The installation site of spring limit switch is shown in Figure 8:

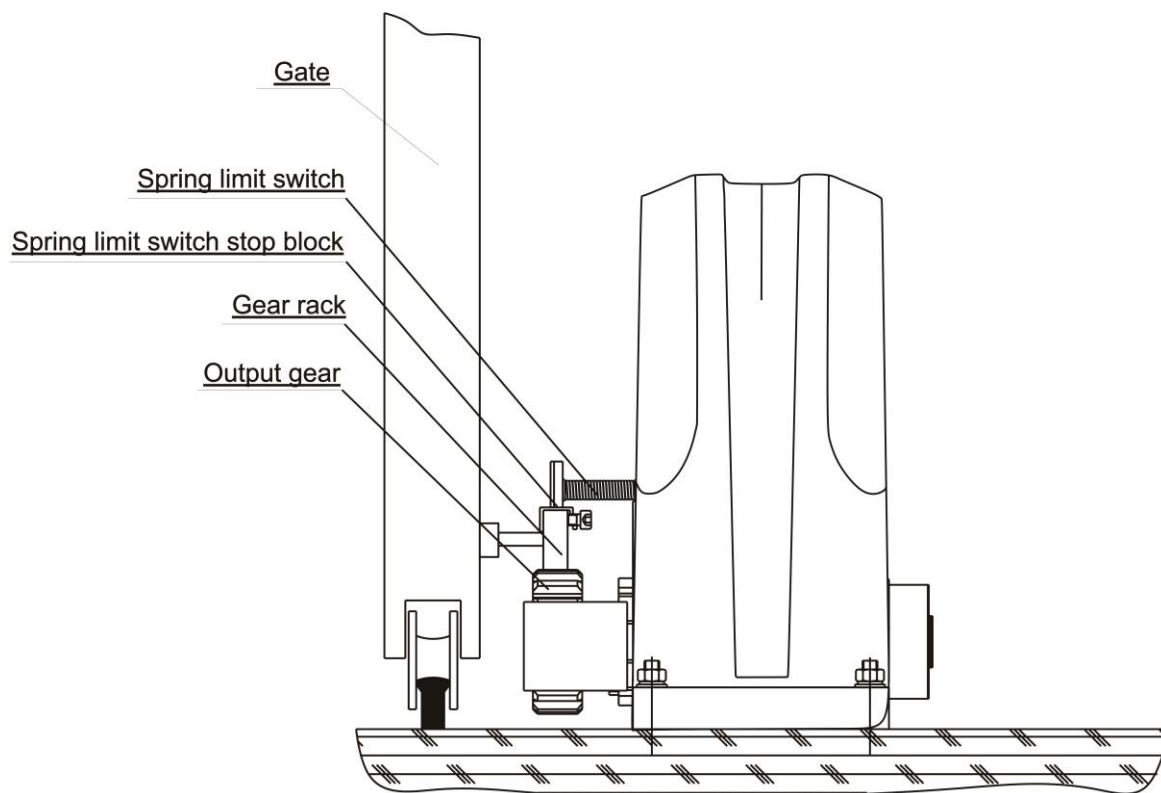


Figure 8

The installation of spring limit switch stop block is shown in Figure 9:

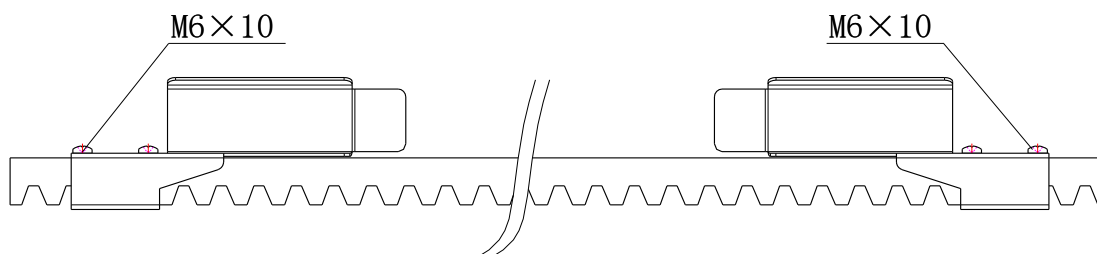


Figure 9

Magnetic limit switch - The installation site of magnetic limit switch is shown in Figure 10:

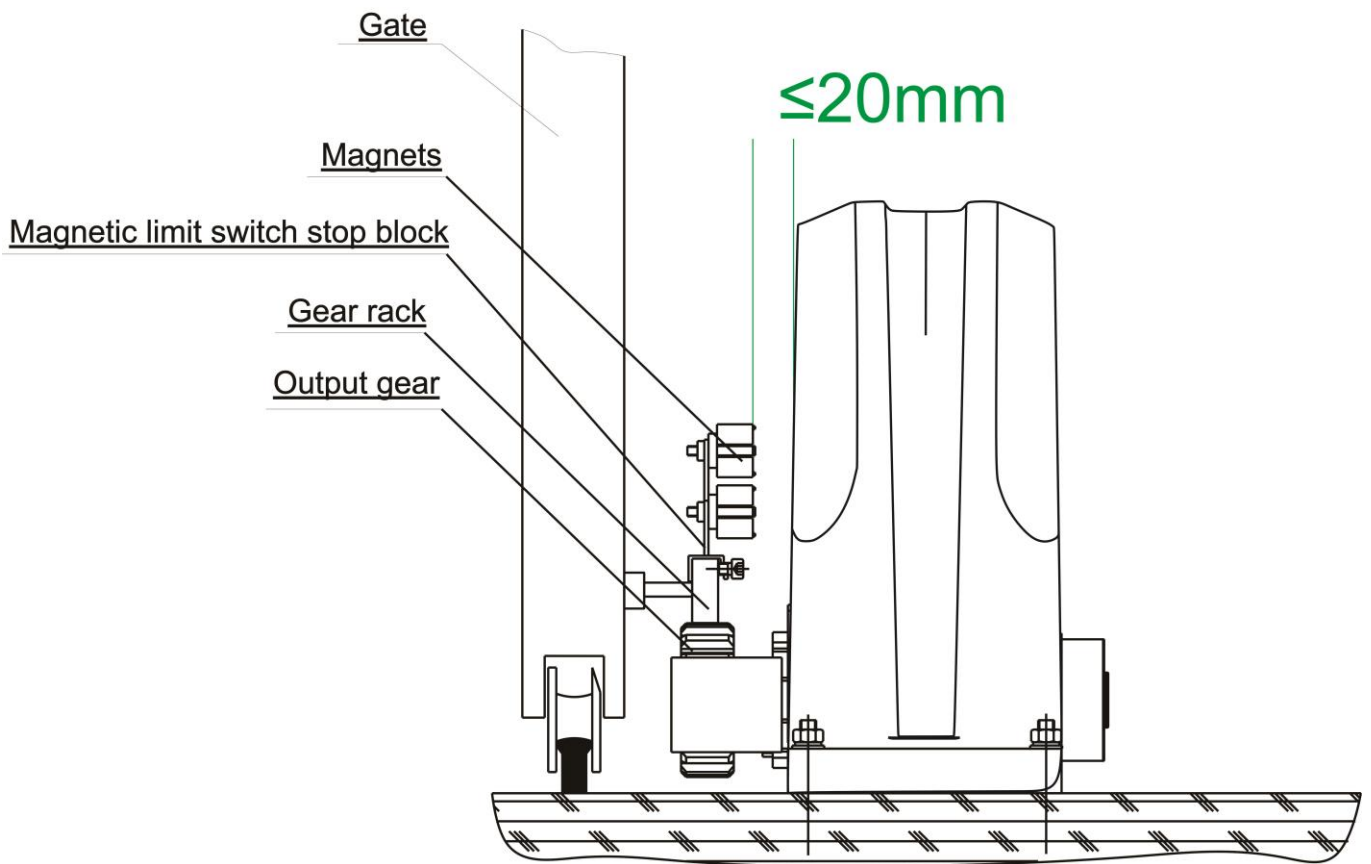


Figure 10

The installation of magnetic limit switch block is shown in Figure 11:

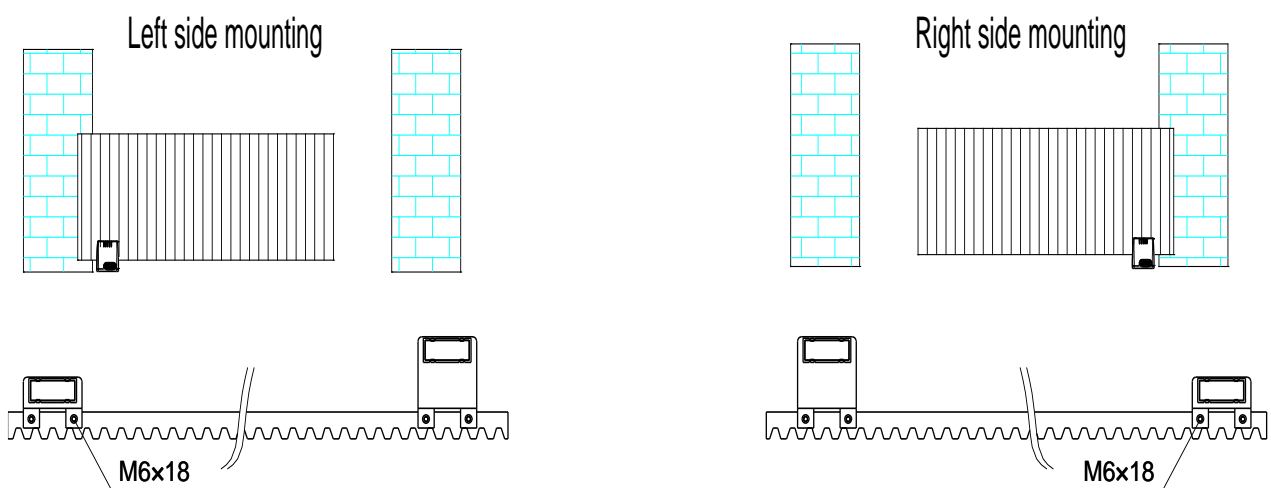


Figure 11

Note: The default setting is right side mounting. (According to actual situation, please refer to the “Note” of section 5.1 to adjust)

5. Control board wiring

- 5.1 The opener should be install on the left side of the sliding door because it is set as clockwise when delivery . If needs to install on the right side of the sliding door ,the DIP switch 3 should be changed into the opposite side.
- 5.2 Disconnect the power and connect the wires by professionals
- 5.3 Open the top cover of the motor, and connect the wires according to the following figure (user just connects the interfaces of AC input, flash lamp, external control switch, photocell and 24VAC output),then install the top cover again after debugging.

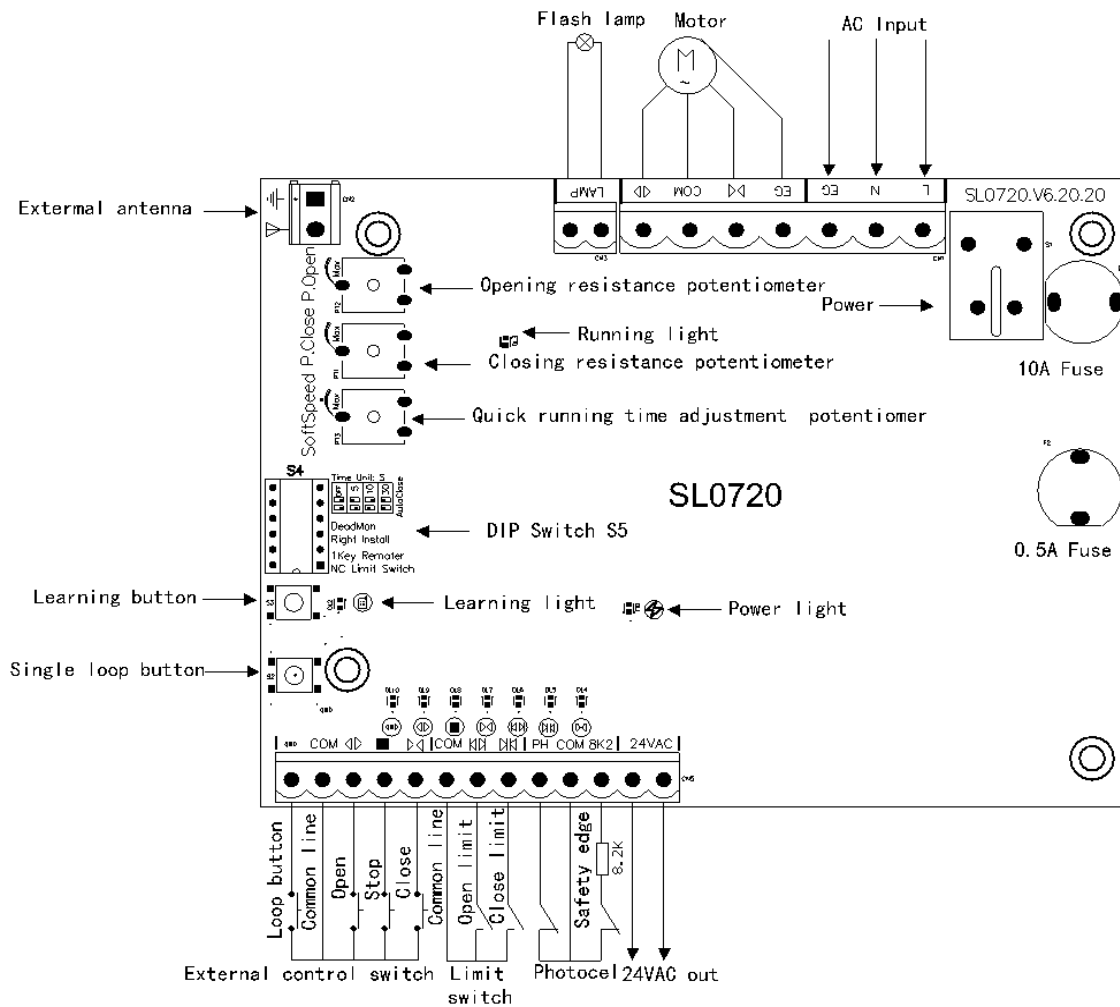


Figure 12

5.4 Controller wiring instructions

- 5.4.1 Flash lamp interface: for connecting the flash lamp (220VAC), it only work during operation.
- 5.4.2 The Photocell switch interface: for connecting the infrared protection switch (infrared switch NC contact) and 24VAC can be used as power supply. If you do not use the infrared protection interface, then you need to make the terminal shorted connect (Shorted in factory).
- 5.4.3 External control (COMMAND) interface: control switch connects normally open switch.

5.4.4 External safety edge interface (8K2): safety edge interface. If you don't need to install it, you need to connect an 8.2KΩ resistor between the 8K2 interface and COM (it has been connected at the factory).

5.4.5 Dip switch settings:

DIP1 External limit NC/NO switch	DIP2 Single/three button	DIP3 Right/left side installation
ON External limit NC switch	ON Single button control	ON Left installation
OFF External limit NO switch	OFF Three button control	OFF Right installation
DIP4 Latch and non-latch for remote control	DIP5	DIP6 Auto close time
ON Deadman, Latch	OFF	OFF No auto close
OFF Non-latch	OFF	ON 5S
	ON	OFF 10S
	ON	ON 30S

6. Set process

6.1 Learning and erasing transmitters: Press the learning button S3 in the board, LED DL2 is on, enters into the learning process; Press the same button twice, LED blinks for several times, then off. The learning process is successful. Press the learning button, continue pressing for 8s until LED turns off; Release learning button, LED will be on (about 1s) and then off; the erasing process is successful. (Ignore this step if transmitter already matches the opener before delivery).The board can learn 30pcs transmitters max.

Tip of Remote control self-learning function: Use the transmitter that already has been learned as old transmitter, press button 1 and button 2 at the same time and then press button 2 to let it enters into the learning process .In this way , new transmitter can be learned without press the learning button on the control board.

6.2 Opening/closing limit adjustment: Remote control the door (or move the door manually) , adjust the position of limit device to make sure the door would touch the limit switch when open or close the door .LED LD6/DL5 in the controller will be off when limit device touches limit switch(Limit switch is NC).

6.3 Resistance adjustment: Adjust potentiometer P.Open/P.Close to change the opening/closing resistance. Resistance increases when adjust it C.W .Make a resistance to door after the adjustment in order to check if it is appropriate .

6.4 Motor quick running time setting: Adjust PT3 to change the quick running time(3-120S adjustable), time increase when clockwise to adjust, time reduce when anticlockwise to adjust. Max motor running time=quick running time +slow running time=127S. Motor quick running speed is about 1/5M/S, slow running speed is about 1/17M/S.

6.5 External infrared switch: Photocell connector connects the NC contact of photocell switch , DL4 LED turn on after the connection, And DL4 LED turn off when blocking out the transmit or receive signal of photocell artificially. Infrared sensor doesn't react when door opening and the door will reverse to limit point if photocell signal disconnect when door closing. If no need of using photocell

protection, make the connector of photocell short circuit with terminated line(the connector is short circuit when leave factory).

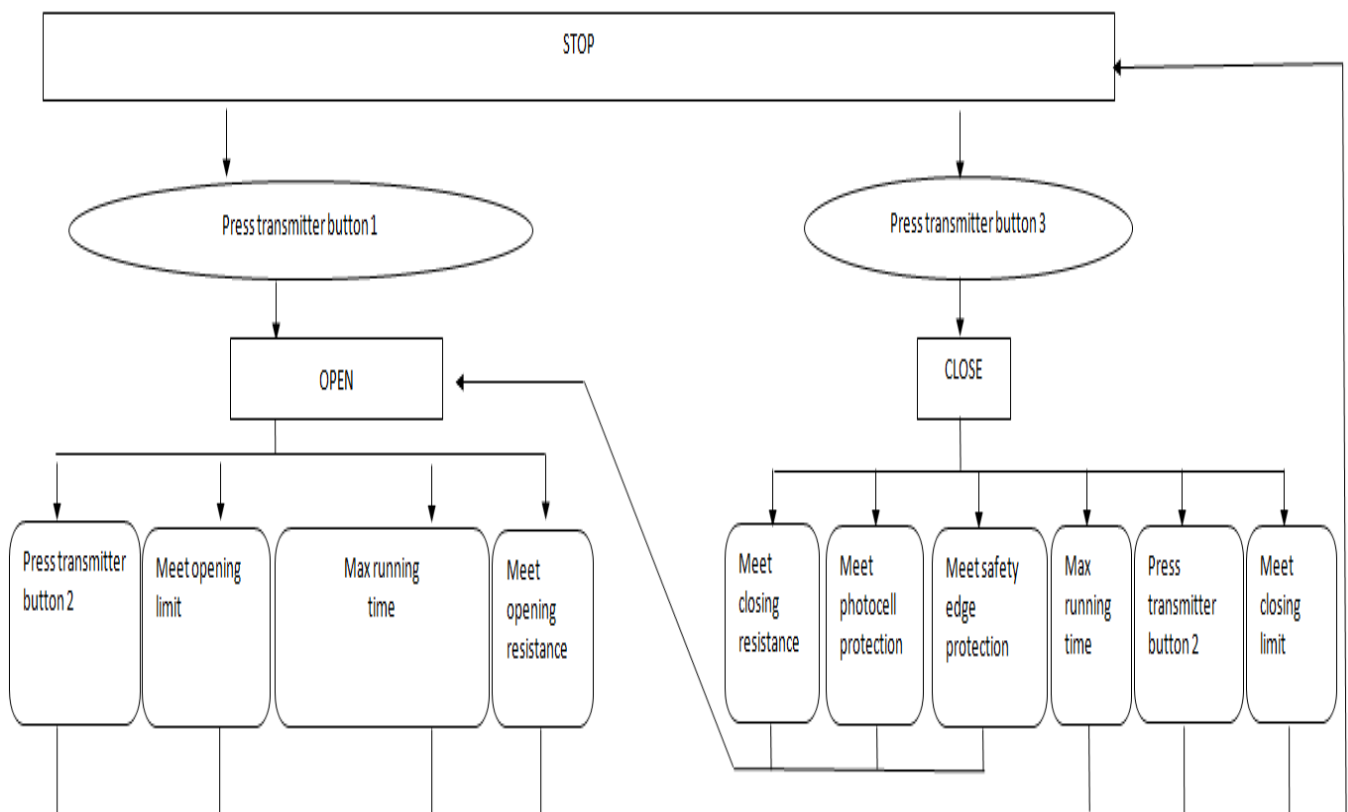
6.6 Pedestrian Mode: The NO4 button of the transmitter is for Pedestrian Mode, press No 4 button when the motor is not working, then the motor will open for 10 seconds and stop about 1.4 meters.(soft start 1 second, quick running 6 seconds, soft stop 3 seconds) (Note: Pedestrian Mode is only for 4 buttons transmitter)

6.7 External safety edge:The safety edge does not work when door is opening. When door is closing, if meet obstacle, door will reserve until reach limit. Note: If safety edge is not used, the safety edge port needs to be shorted with 8.2k resistor.(Short circuit has been made when leaving the factory)

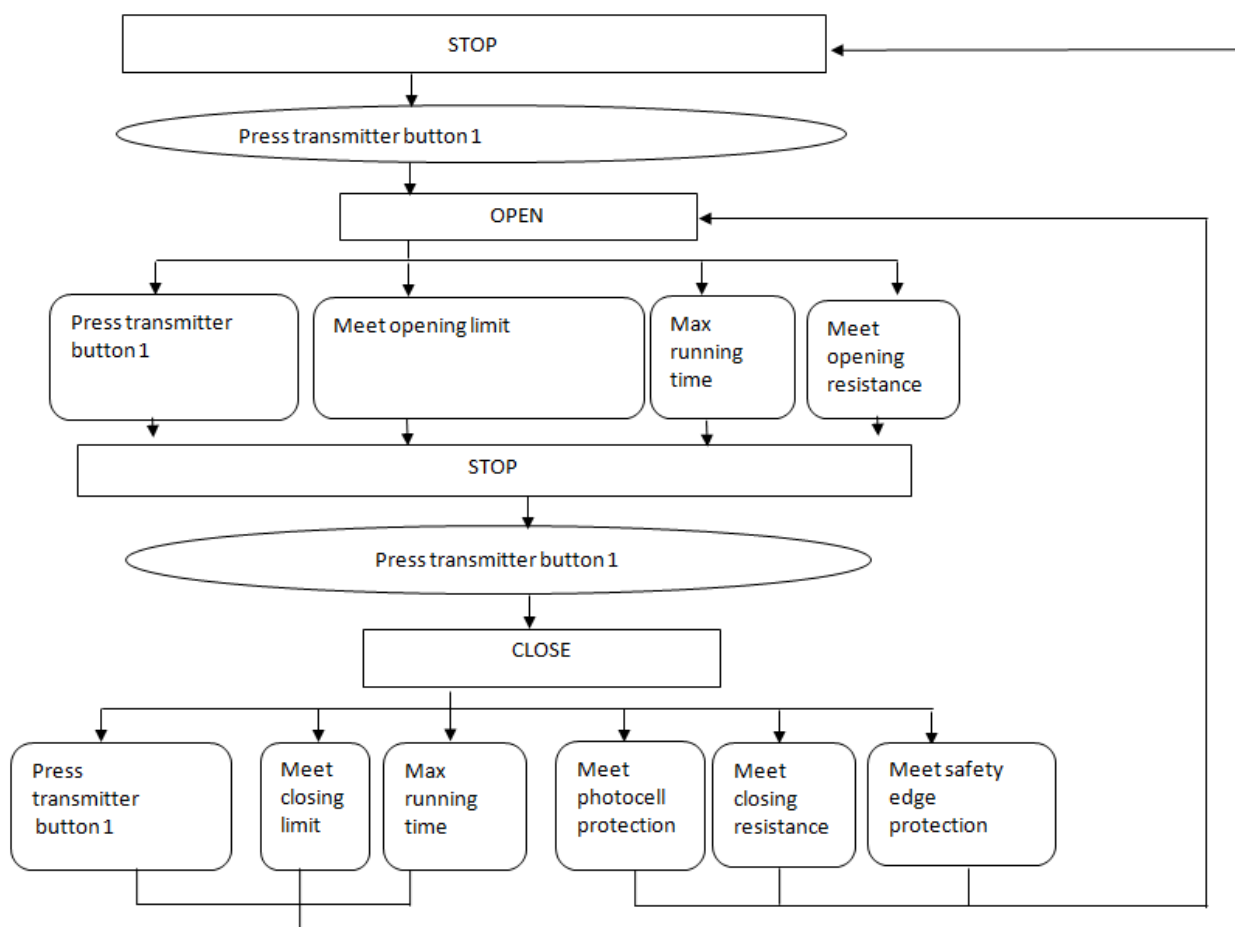
6.8 Safety protection function detection (if the safety protection switch is not installed, this step is omitted): In the process of closing the door, if the safety edge protection switch is touched manually, the sliding gate opener should stop immediately and run in the reverse direction to the door opening limit.

7. Operational processes

7.1 Three button control process (DIP 2 at OFF position)



7.2 Single button control process (DIP 2 at ON position)



Description:

Single button control , press-open-press-stop-press-stop; Only the learned button is effective in the transmitter, original button is not effective any more when a new button has been learned in the same transmitter (For example, button 1 was learned firstly, button 2 or 3 has been learned of the same transmitter afterwards , then button 1 was not effective any more)

7.3 Pedestrian Mode: The NO4 button of the transmitter is for Pedestrian Mode, press No 4 button when the motor is not working and in the closing limit, then the motor will open and run 10 seconds, then stop about 1.4 meters.(soft start 1 second, quick running 6 seconds, soft stop 3 seconds).
(Note: Pedestrian Mode is only for 4 buttons transmitter)

8. Maintenance

- 8.1** Check the door once a month to see if door is running properly.
- 8.2** Check reverse when meets resistance feature once a month, if not working well then must be re-adjust.
- 8.3** In order to be safe, it is recommended that each door install with infrared protection device and checked on a regular basis.

9. Exception handling

Problem	Possible causes	Solutions
Door cannot open or close, LED is not working	<ol style="list-style-type: none"> 1. Power off 2. Fuse burned 	<ol style="list-style-type: none"> 1. turn on power 2. replace the fuse
Door only can open and cannot close.	<ol style="list-style-type: none"> 1. Infrared protection switch is blocked. 2. If interface is reliable shorted when infrared switch protection switch is not installed. 3. Losing efficacy when touching the safety edge. 4. Whether the short-circuited 8.2K ohm resistor is not connected properly. 	<ol style="list-style-type: none"> 1. Remove the blocking. 2. shorted infrared switch interface, the DL2 LED lamp light as normal. 3. Untouch the safety edge. 4. Reconnect the resistor.
Remote control problem	<ol style="list-style-type: none"> 1. remote control is not learned 2. remote control battery is low (remote control battery life 6-12 months, depending on frequency of use) 	<ol style="list-style-type: none"> 1. learn remote control again 2. replace the remote control batteries
Limit switch does not work	<ol style="list-style-type: none"> 1. If door limit switch cable is opposite 2. If magnet on the door has reached the magnetic limit-free parts 3. dip switch in the controller and did not make to the OFF side 	<ol style="list-style-type: none"> 1. replace limit switch connections 2. adjust the position limit magnets 3. set the dip switches to the OFF side
Door stops or reverse when working	<ol style="list-style-type: none"> 1. the door was stuck by something 2. resistance potentiometer setting too low or changes after long time 	<ol style="list-style-type: none"> 1. remove the resistance 2. reset the resistance potentiometer

The interpretation and ownership of this manual belong to Hiland company. Any change of the product can be without prior notice.