

# SL-22003

AUTOMATIC SLIDING GATE OPENER  
USER MANUAL

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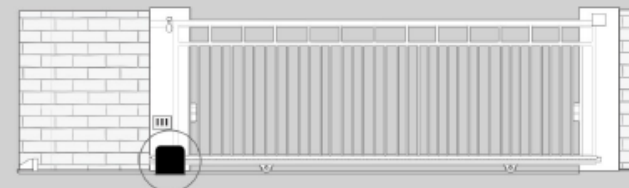


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# NOTES



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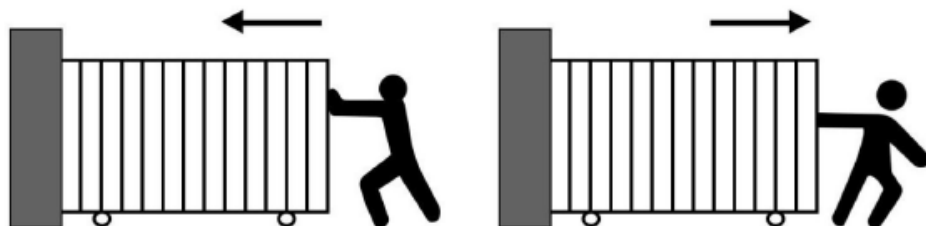
Thank you for purchasing our sliding gate opener. We are sure that the products will be greatly satisfying as soon as you start to use it.

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

## CHECK YOUR GATE

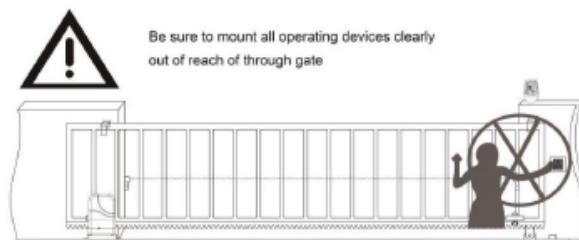
Before installation, please make sure that the gate itself can be opened and closed smoothly & freely BY HAND WITHOUT THE GATE OPENER.



## General Safety

**WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or properties.**

- Scrap packing materials (plastic, cardboard, polystyrene etc.) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.
- 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.
- The factory declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Check that earthing is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.

# NOTES



# NOTES

- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing.
- The factory declines all responsibility with respect to the automation safety and correct operation when other supplier's components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorized by the factory.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.

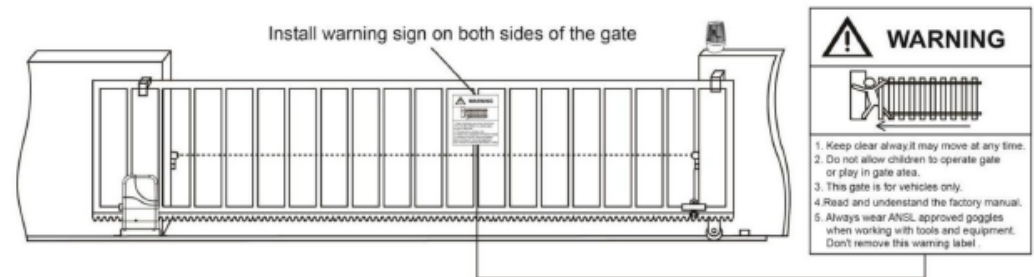


Fig 1

- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorized by the factory.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Do not allow persons or children to remain in the automation operation area.
- Keep radio control or other control devices out of children's reach, in order to avoid unintentional automation activation.
- The user must avoid any attempt to carry out work or repair on the automation system, and always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions is not allowed.
- Installation must be carried out using the safety devices and controls prescribed by the EN 12978 standard.

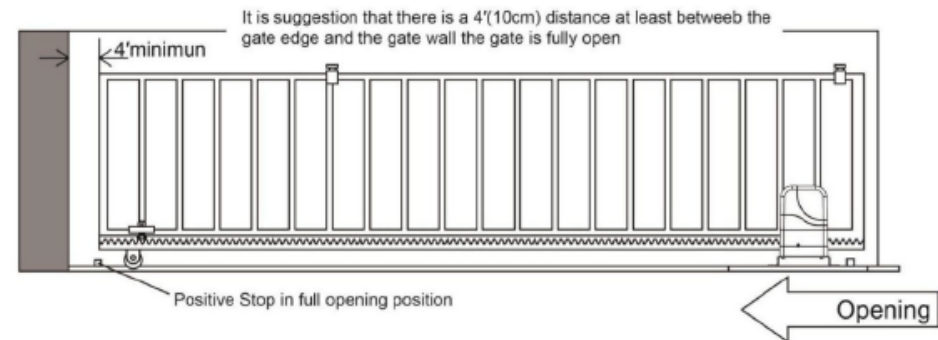


Fig 2

## Part list:

Version 1 with lead acid battery:

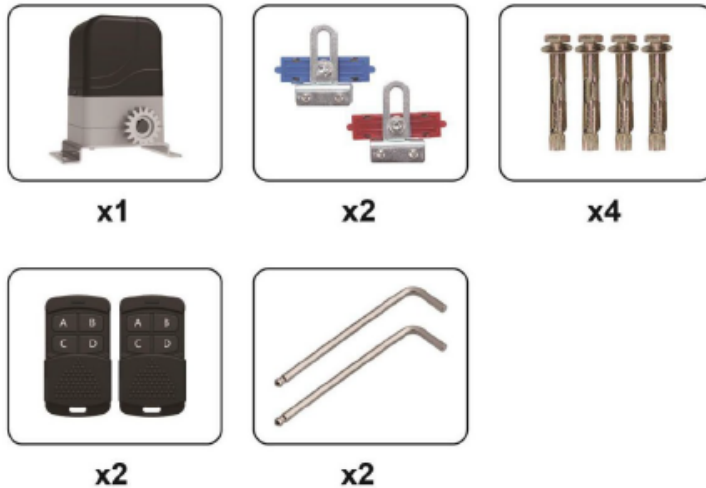
1\* sliding gate motor

2\*remote control

2\* magnet

2\*manual release key

4\*expansion bolt



## Technical Specifications & Features

### Specifications:

- Power supply: 220V±10%/50Hz
- Motor: 220VDC
- Absorbed motor power: 130W
- Gate moving speed: 12 m/minutes
- Max gate weight: 300KGS
- Environmental conditions: From -25°C to +50°C
- Protection class: IP44
- Dimensions: 24cmX13cmX27.5cm (L\*W\*H)
- Remote control distance: 30-50m in the open area
- Output gear module: M=4
- Output gear number : Z=16

### Features:

- Easy to install and low maintenance.
- Quick selection for gate open/close direction.

### Infrared : use for gate meeting resistance

When gate closing, if meet resistance, gate will stop and open. After stay open 2s, it would auto close. now the auto close not controlled by the auto close function.

Note : If gate on opening, the infrared sensor function disabled

Connect terminal ① to the "GND" of photocell RX.

Connect terminal ③ to the "IR" of photocell RX.

For get power from control board, so connect terminal ⑥ to the "+" of photocell RX and TX.

Connect terminal ⑦ to the "-" of photocell RX and TX.

### Wired Keypad/Swipe CARD connection

Terminal ① and ② connect to wired keypad.

Terminal ⑥ and ⑦ to supply power for wired keypad.

### Push button /External Receiver connection

Start terminal : signal input of control circularly. use for connecting external device for control open/stop/close gate

Terminal ① and ② connect to push button/external receiver.

Terminal ⑥ and ⑦ to supply power for push button/external receiver.

### Flashing light connection

Lamp terminal: used for connecting flashing light. The lamp light is on when the gate running. Dip switch Bit 6-8 for setting lamp light off timer,

Bit: 6-7-8

000 : flashing light will turn off after gate full close 30s.

001: flashing light will turn off after gate full close 60s. (default)

010: flashing light will turn off after gate full close 5min.

011: flashing light will turn off after gate full close 10min.

100: flashing light will turn off after gate full close 15min.

101: flashing light will turn off after gate full close 20min.

110: flashing light will turn off after gate full close 30min.

111: flashing light will turn off after gate full close 1hour.

Terminal ⑪ and ⑫ is for flashing light.

### Lock connection

⑮& ⑯ LOCK terminal: used for electric lock

### Motor connection

Motor terminal: use for connecting 220VAC motor.

Terminal ⑧ and ⑨, ⑩ is for connecting motor wire.

**Please note : Our factory setting is install motor on the right of gate! When you want to install motor at the left of gate, please exchange ⑧ and ⑨ motor wire.**

### Capacitor connection

Cap Terminal ⑪ and ⑫ is for connection start capacitor.

Fig 3



## Terminal connection diagram

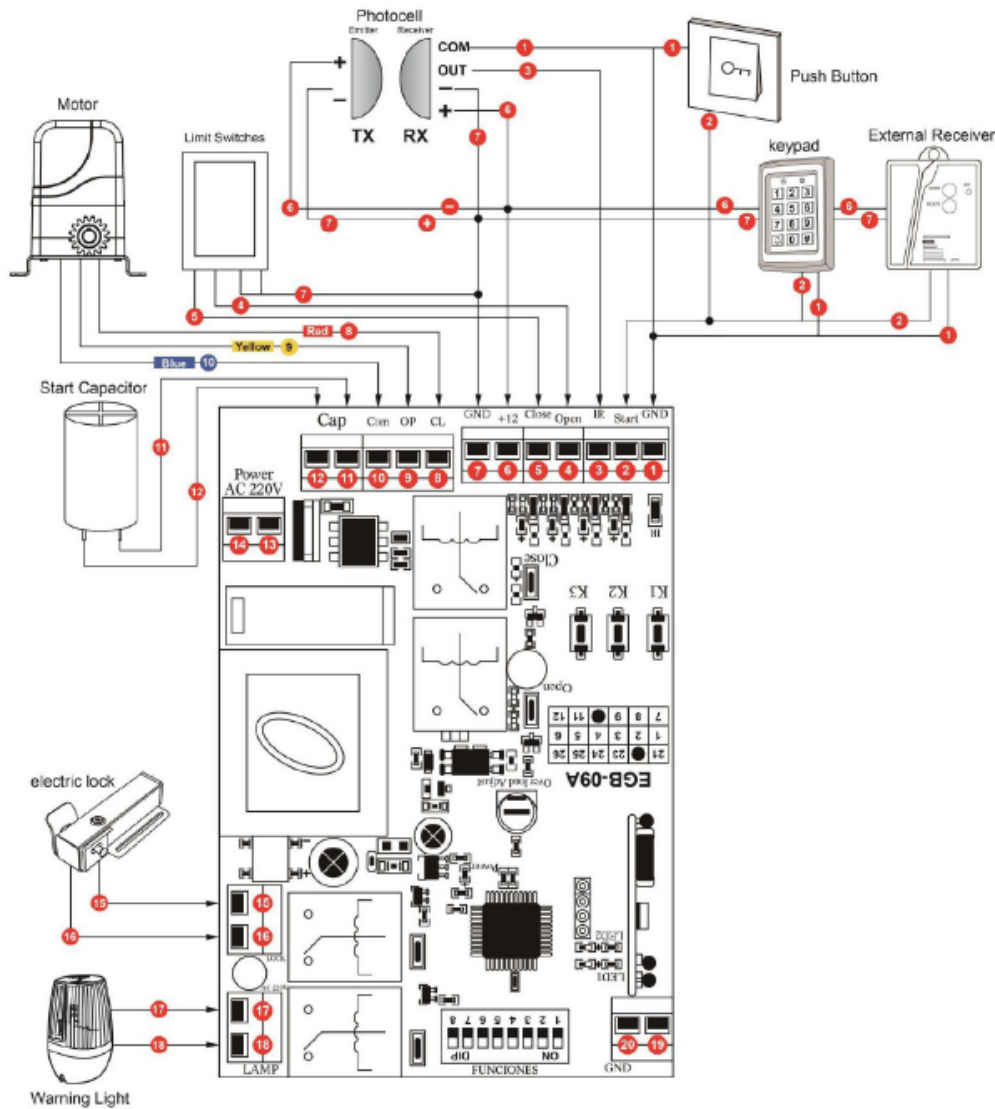


Fig 15

- Emergency release key in case of power failure
- Stop/Reverse in case of obstruction during gate opening/closing
- Can be equipped with wide range accessories
- Soft start soft stop
- Pedestrian mode

## Motor structure diagram

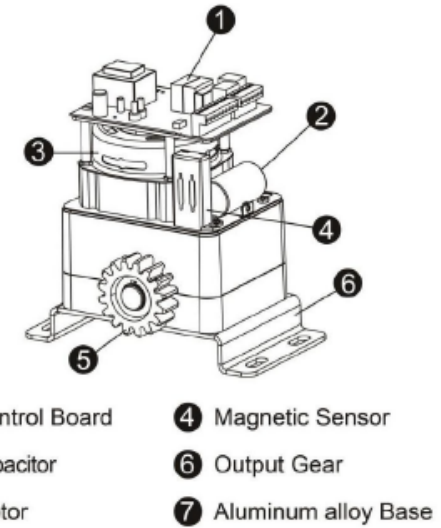


Fig 4

## Typical installation layout

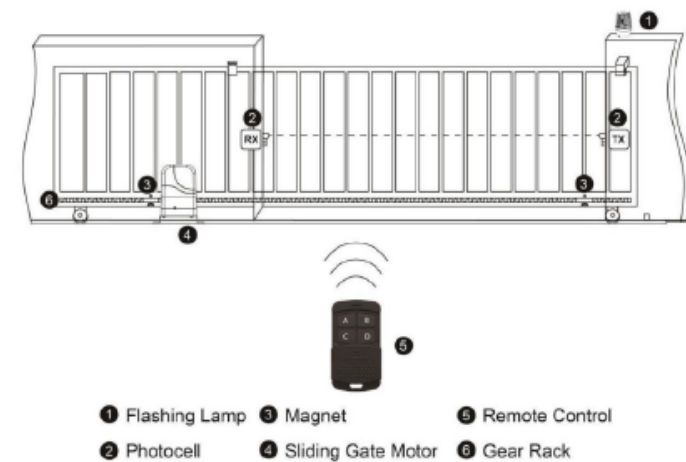


Fig 5

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

## Factory setting motor open direction:

The gate motor will open the gate to the right-hand side as its default setting ,as below picture(Fig 6):

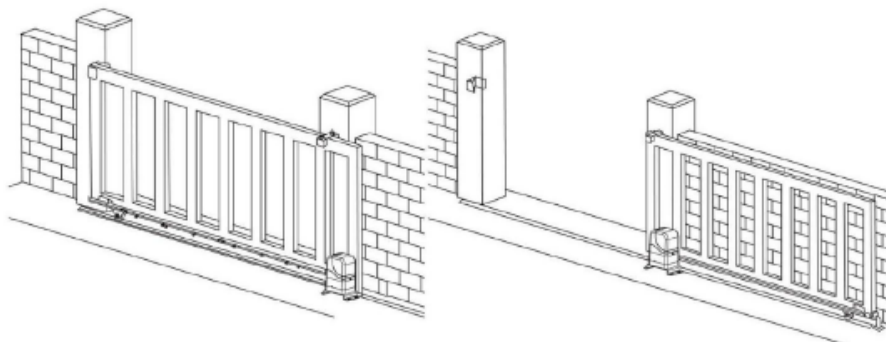


Fig 6

Gate in closed position

Gate in open position

If gate need to open to the left-hand , then motor need to be installed on the left side of gate, as below picture(Fig 7) showed,now you will need do below procedures:

- 1.Exchange motor open and close cable on the control board motor connection terminal
- 2.Swap over two magnets positions

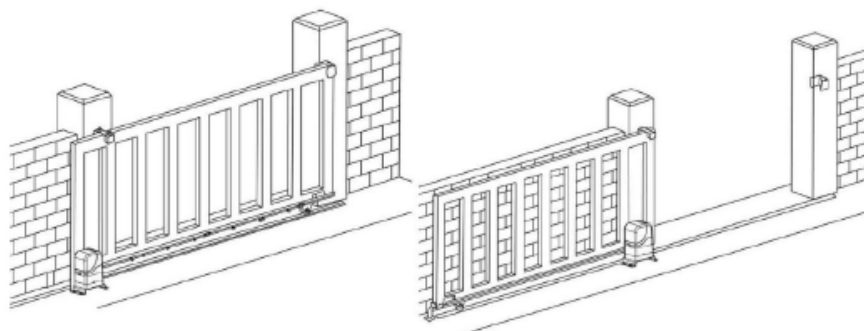


Fig 7

Gate in closed position

Gate in open position

**Noted:**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

6 & 7 +12&GND terminal: DC12V on board power supply for external device

8. CL(CLOSE) terminal: gate close

9. OP(OPEN) terminal: gate open

10. COM terminal: use for connecting COM or GND

11 & 12. Cap(Capacitance) terminal :used for connect the capacitance

13 & 14 POWER terminal: used for AC 220V power connection

15&16 LOCK terminal: used for electric lock

17&18 LAMP terminal: use for connecting flashing light( dry output)

19.ANT terminal: Use for connecting Antenna

20.GND terminal:used for Antenna shielding connector

## Buttons as following.

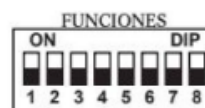
K1 button: K1 is LEARN button is for programming remote controls, exiting the menu settings

K2 button: k2 is FUN button sets the menu and travel limit learn

K3 button:K3 is FUN button resets and confirm whether the storage is successful

## DIP Switches

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



8-bit DIP switch

| FUNCTION                   | OFF  | ON                   |
|----------------------------|--|----------------------|
| 1. Limit switch mode       | Normally closed mode   | Normally open mode   |
| 2. Command control mode    | Normal mode  | Special control mode |
| 3. Soft start              | Turn off soft star   | Turn on soft star    |
| 4. Running speed           | High speed   | Low speed            |
| 5. Remote control mode     | Single button  | Three buttons        |
| 6, 7, 8, time programming. | Used for setting flashing lamp timer,PED mode timer,auto-close timer |                      |



## Control board Program

### Parameter:

- 1.Board power supply: AC 220V
- 2.Remote control: Giant customized rolling code
- 3.Remote control memory: max support 100pcs.

### Connecting of the Control Board:

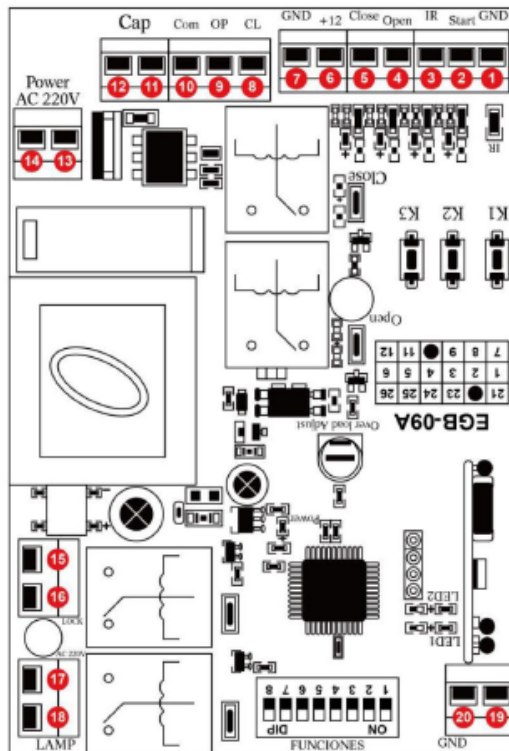


Fig 14

### Terminals as following:

1. GND terminal:use for connecting COM or GND
2. START terminal:signal input of control circularly.use for connecting external device for control open/stop/close gate
3. IR(Infrared) terminal :used for connecting photocell
4. OPEN terminal: used for connect limit switch ,OPEN limit switch
5. CLOSE terminal:used for connect limit switch , CLOSE limit switch

## Installation of the Opener

### Necessary Tools

- The following tools may be necessary to install the Gate Opener.
- Screwdrivers
- Electric drill
- Wire cutters
- Wire stripper
- A socket set

### Caution ⚠

- Be sure that the opener is installed in a level and paralleled position and is properly secured and the gate can be moved smoothly push or pull by hand before installing motor(Fig 8)
- Improper installation could result in property damage, severe injury, and/or death.
- Before starting installation, ensure that there is no point of friction during the entire movement of the gate and there is no danger of derailment.
- Wheels and guide rollers should rotate easily and be free from dirt/grime.
- Ensure that the *Warning Signs* are present.

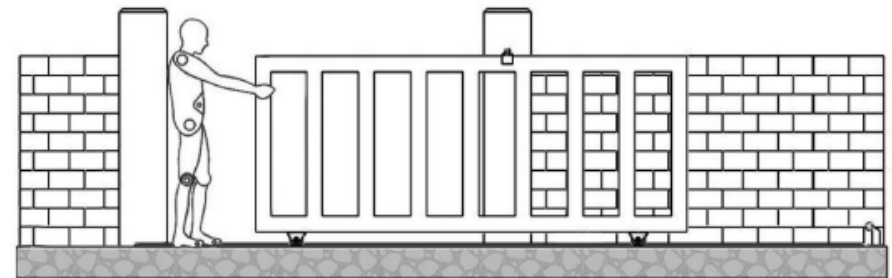


Fig 8

### Example Sliding Gate Setup

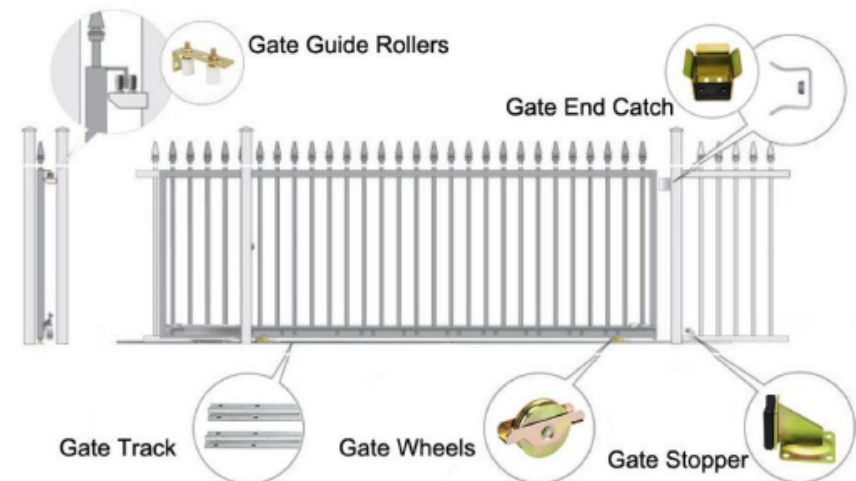


Fig 9

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

## Installation procedures

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

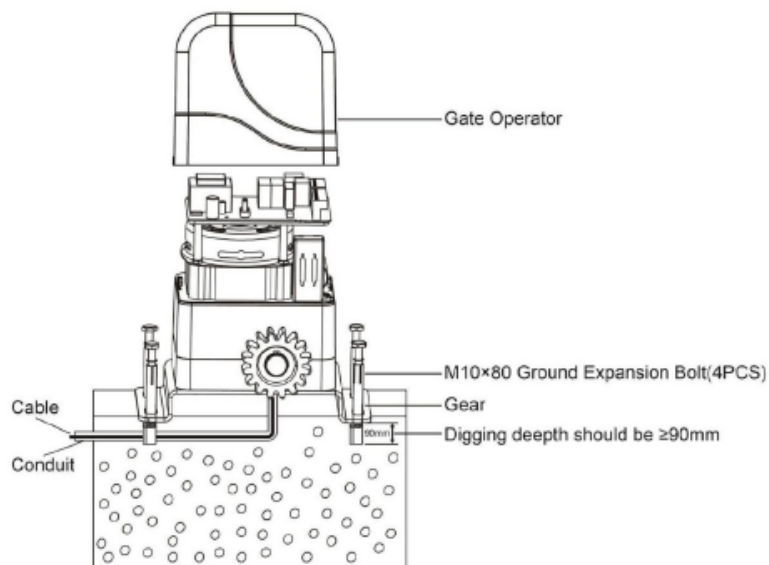


Fig 10

## Manual Operation

You can open the gated manual when power failure. And the opener should be put in the manual (emergency release) position before

fitting the rack and installing the opener and limit switch. The process is as follows:

- 1) Take off the rubber stopple.
- 2) Insert the Release Key (provided) and turn it clockwise four turns to disengage the clutch between the gear shaft and power output. Now the opener is in manual operation.

**Reminder Manual Clutch Release Limitations**

The manual clutch is designed to disengage after 5 rotations. Please do not exceed a maximum of 9 rotations to avoid potential damage to the release mechanism.

This precautionary measure is in place to protect the release mechanism and ensure the longevity of your gate opener



Fig 11

## Installation of the Gear Rack

1. Start with gate in closed position
2. Gear rack length depend on gate length, each gear rack is 1 metre. Put one end of rack on the output gear of motor as a temporary support. Make the rack horizontal and mark the rack mounting holes (three holes) on the gate. (Fig 12)
3. Weld the rack nut on the gate as mark and connect the rack to the gate using the bolt provided. Before weld, please keep 1.0mm space between the rack and the gear to avoid the weight of the gate effect on the opener.

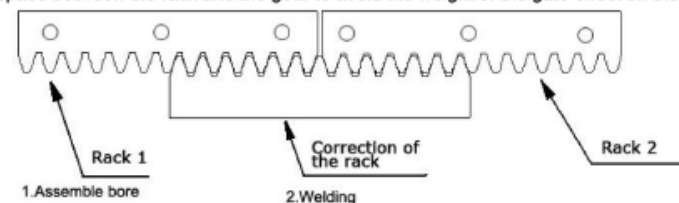


Fig 12

## Installation of limit magnet

1. To ensure motor auto stop correctly, it is recommended to install limit magnet at both ends of rails to prevent gate run out of rails. The rails must be installed horizontally.
2. Two limit magnets supplied, blue one for open limit, red one for close limit.
3. Release the clutch with manual key and push the sliding gate manually to predetermine position, fix the magnet to gear rack and then tighten the clutch with key. Power on control board, running the motor with remote control, adjust magnet to proper position until the gate can auto stop at its correct position when full open or full close.

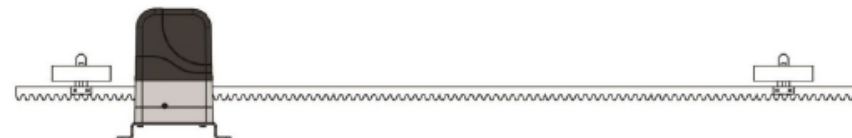


Fig 13

### Important:

1. Check that the gear rack teeth engages with the gear teeth throughout the full distance. If not, adjust the position of the opener and/or place a few shims between the rack and gate.
2. Manually slide the gate leaf to ensure the rack is properly installed on the gear of the gate opener.
3. IMPORTANT: The gear rack length must be longer than the actual travel distance of the gate. Cut away any excess gear rack not needed.