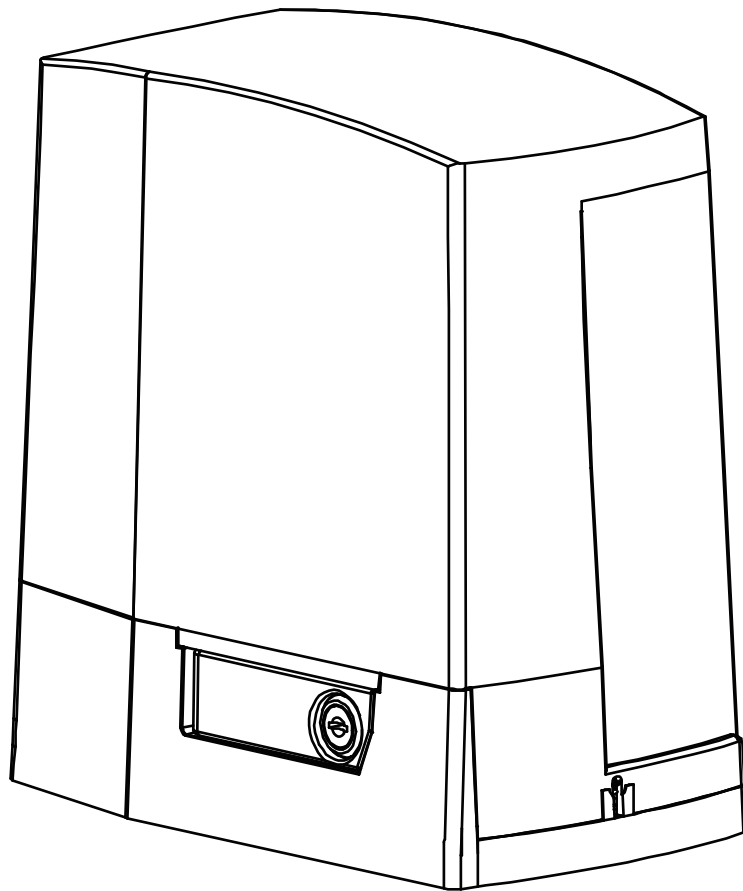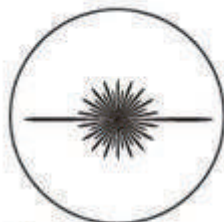# Automatic Sliding Gate Opener

User's Manual

Push Button Input
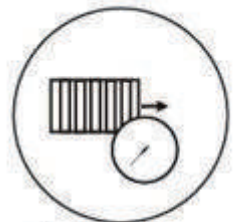
Safety Beam Ready

Smart Sensitivity

Courtesy Light Output

**Auto Close**

Contents

1. Summary

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

270mm

50mm

256mm

218mm

70mm

109mm

Diagram 1
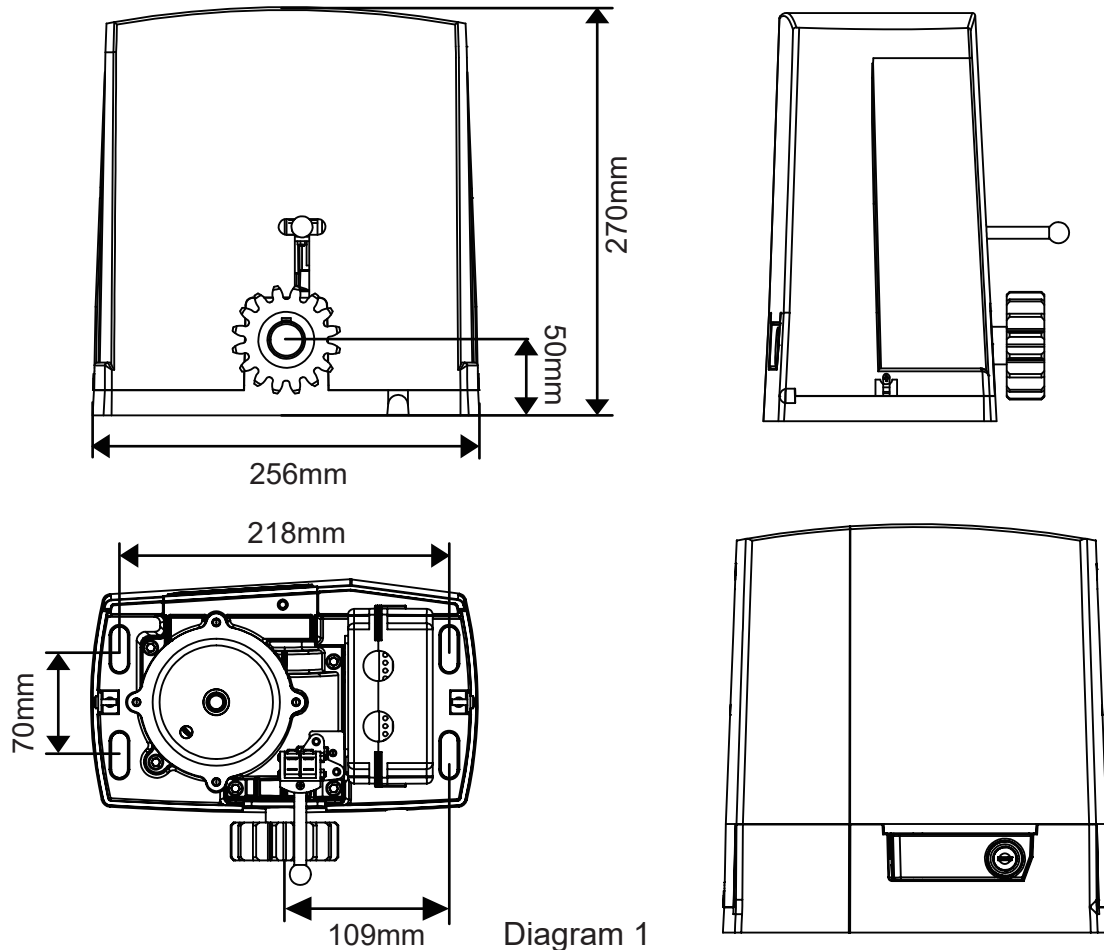
Part list
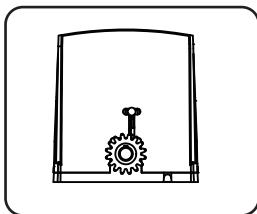
Motorx1

RHS/LHS Limit Switch Striker Platex2

Motor to mounting plate screwsx4

Striker Plate Fixing Boltsx4

Remotex2

Override keysx2

3. Parameters

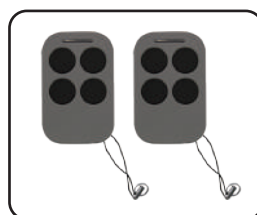|	
Power supply	220VAC±10%/110VAC±10% 50Hz/60Hz
Maximum load	1000KGS
Rated power	130W
Rated speed	1400RPM
Open(close) speed	v=16m/min
Output torque	22.0 N.m
Output gear module	M=4
Output gear number	Z=16
Remote control distance	≤50meter
Working humidity	≤85%
Maximum pull	1100N
Net weight	11KG
Protection Class	B
Working temperature of motor	-25°C～ +55°C
Packing	In a standard carton

4. Features of sliding gate opener

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

5. Installation of motor

The gate motor will open the gate to the right-hand side as its default setting (Refer to diagram 2).
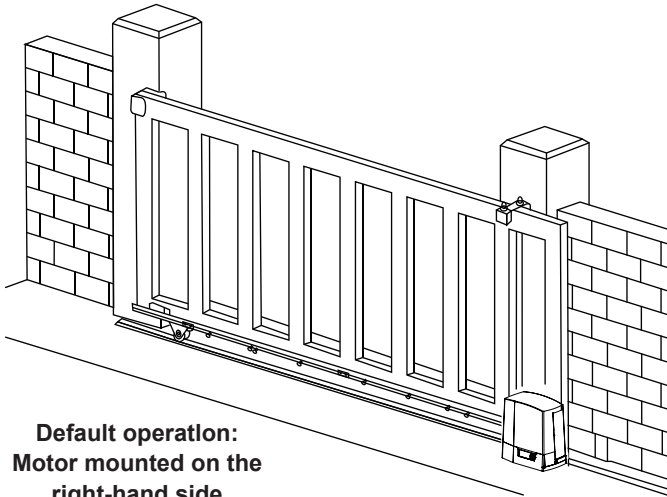
**Default operation:
Motor mounted on the
right-hand side**
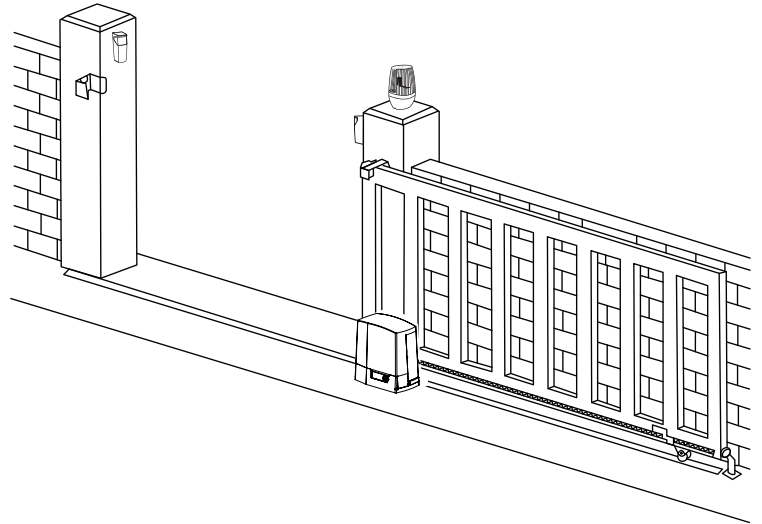
diagram 2

If your gate needs to open from the other direction (to the left, refer to diagram 3) your motor needs to be mounted on the left-hand side as shown, you will need to switch the open and close wires of motor see(diagram 6) and move the jumper J1 from pin1 and pin No 2 to pin 2 and pin No 3.
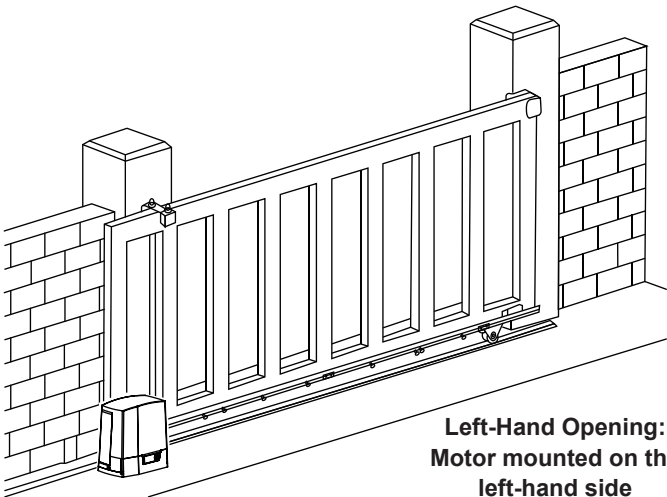
**Left-Hand Opening:
Motor mounted on the
left-hand side**
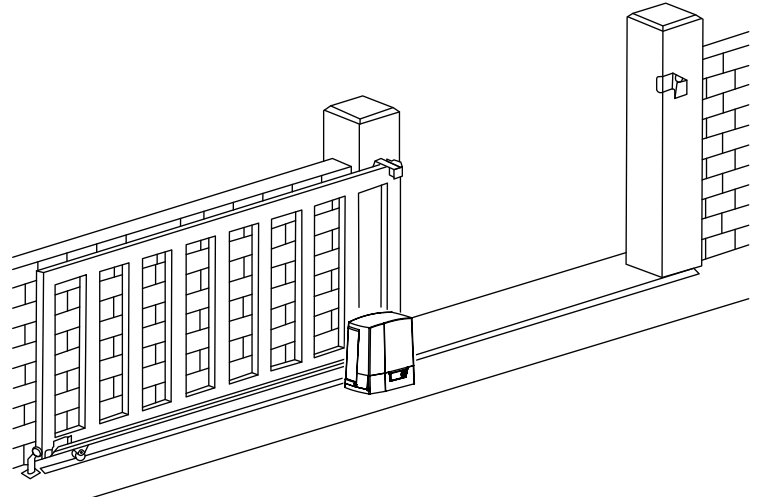
diagram 3

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

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.
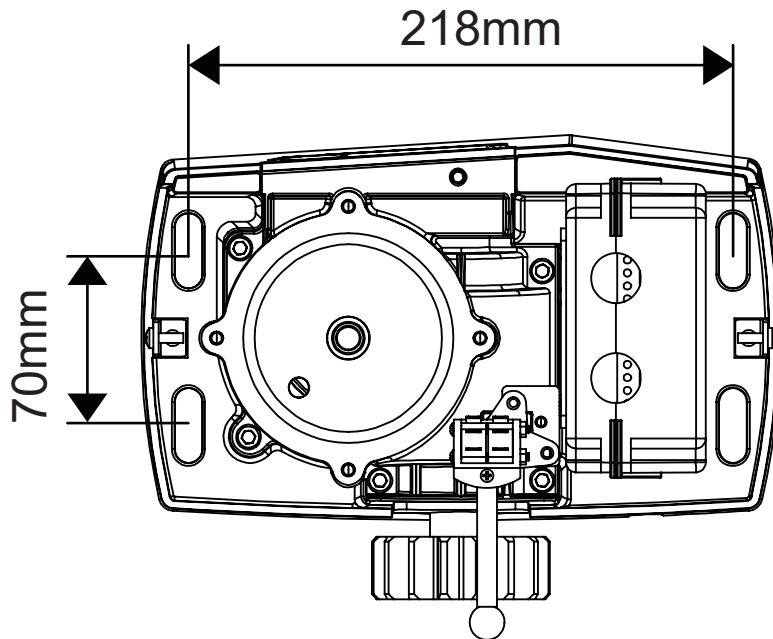
Diagram 4

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

5.2 Installation of gate opener

1. Put gate opener on base plate, use a random matching hexagon screw make the motor fixed on the base plate.

2. Unscrew the screws fixed the motors cover, remove motor cover. According electrical wiring diagram, connected power cord, after adjust in good position, then install cover and use screws to fixed it.

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 diagram3 with a small correction of the rack， after connecting right with racks 1 and racks 2 ,then fixed racks 1 and 2.

Rack 1

Correction of
the rack

Rack 1

Diagram 3

4

5.4 Installation of limit levers

There are 2 limit levers supplied. Note there is a left hand and a right hand lever. The levers should be installed one at either end of the rack. See Diagram 4.
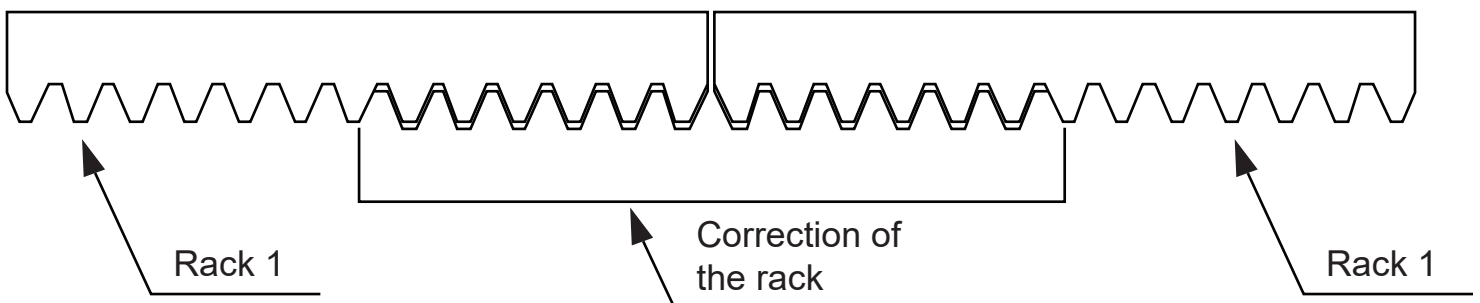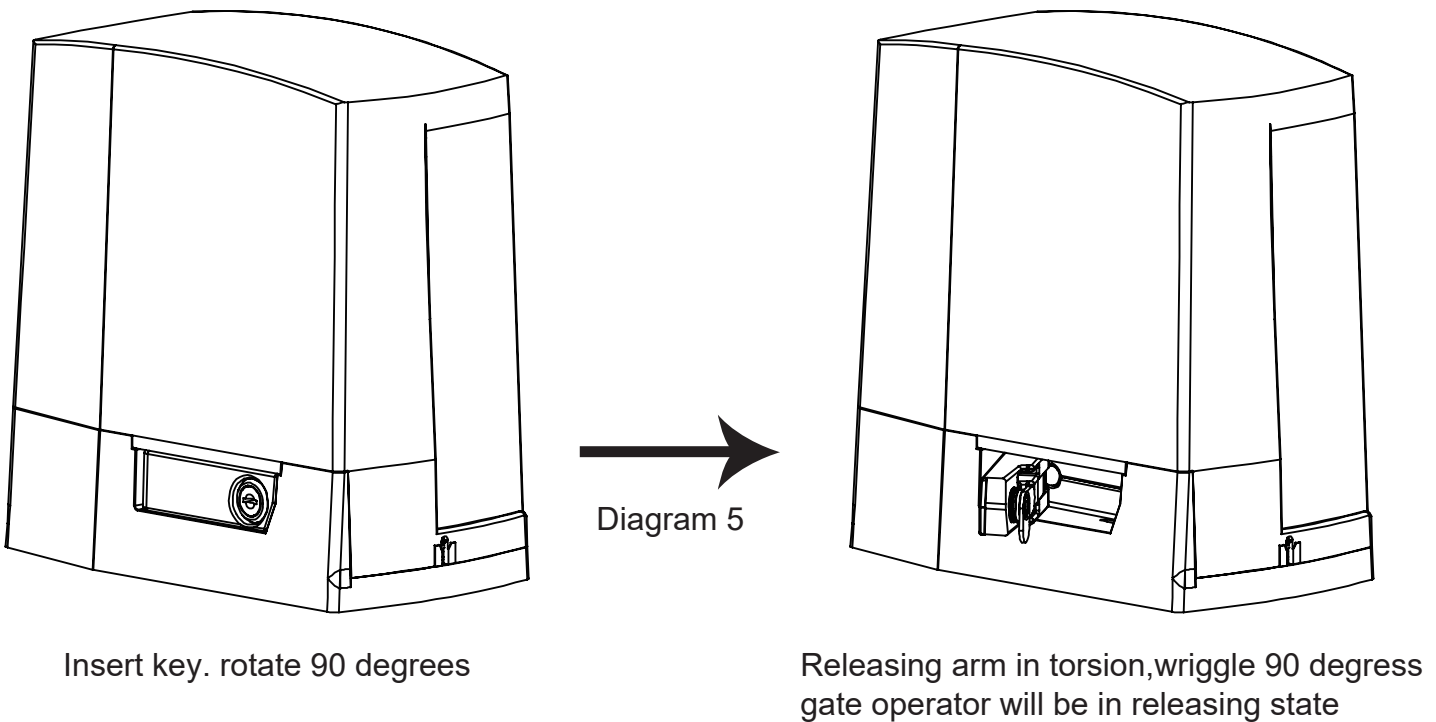
To install the levers in the correct position, open the clutch door and press the 'CLOSE' button on the remote, the motor will run but will not drive the gate. Close the gate manually and adjust the limit lever to contact the toggle switch and switch the motor off at the desired gate position. To adjust the stop position of the gate when it is open, press the 'OPEN' button, manually open the gate and adjust the other limit lever to contact the toggle switch and switch the motor off.

When you are satisfied the levers are in the correct positions, tighten the screws in the levers 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 levers if necessary.

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

Insert key. rotate 90 degrees

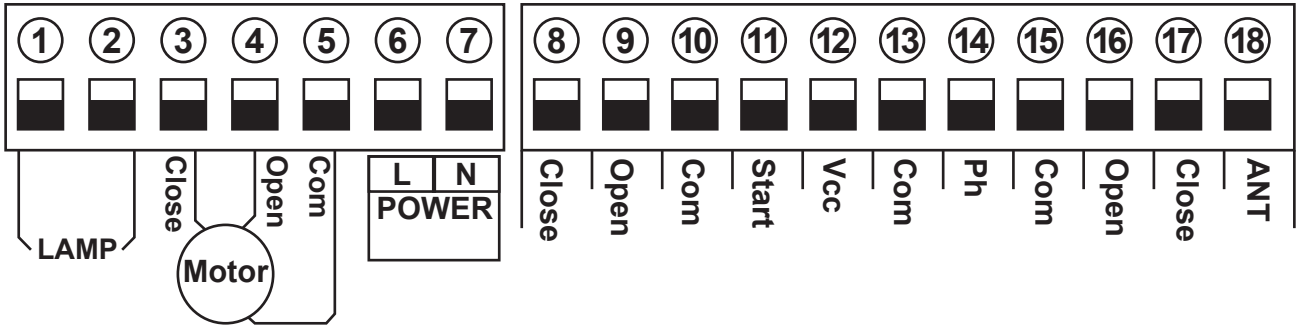Releasing arm in torsion,wriggle 90 degress gate operator will be in releasing state

6.Control board

6.1 Technical Parameters

1. Power supply: AC110-220V / 50Hz/60Hz

2. Application: AC sliding gate opener

3. Remote control: Giant customized rolling code

4. Remote control memory: max support 50pcs

6.2 Terminal and Buttons instruction

1&2. Lamp: used for connecting with flashing light, output voltage is AC 220V.

3&4&5.Motor: used for connecting with sliding gate motor's wire.

6&7.Power: used for connecting with AC 220V 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 - stop - open" cyclically.

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.
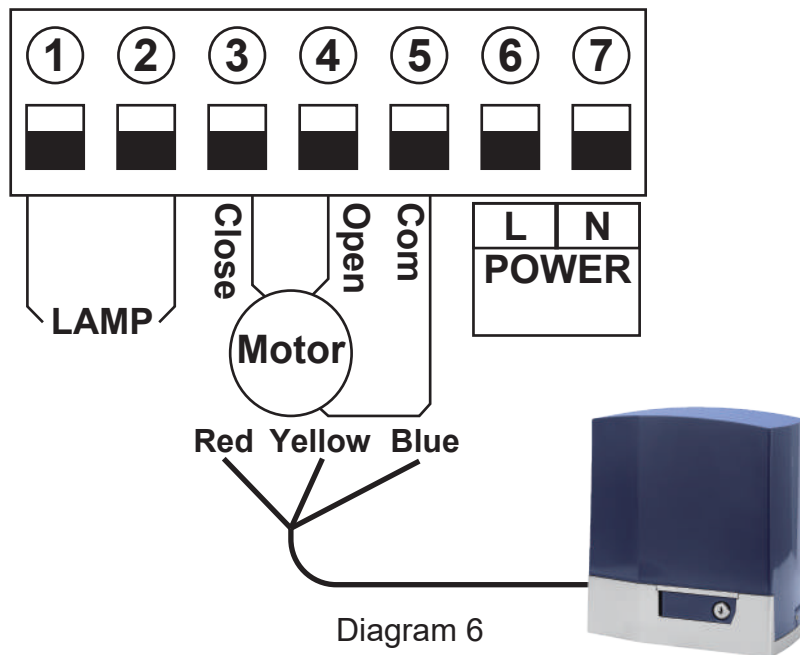
17.Close:used for connecting with any external devices that will operate to close the gate.

18.ANT: antenna connection.

19.LEARN button: It is for programming/removing the remote control.

6.3 Control board wire diagram

● Connect with sliding gate opener

Diagram 6

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

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 3 and 4 motor
wire . And please adjust the J1 ,short the cap simultaneously No2 and No3.
(More details please check part 7.2 Dip switch programming setting.)

● Connect with flash lamp

Diagram 7

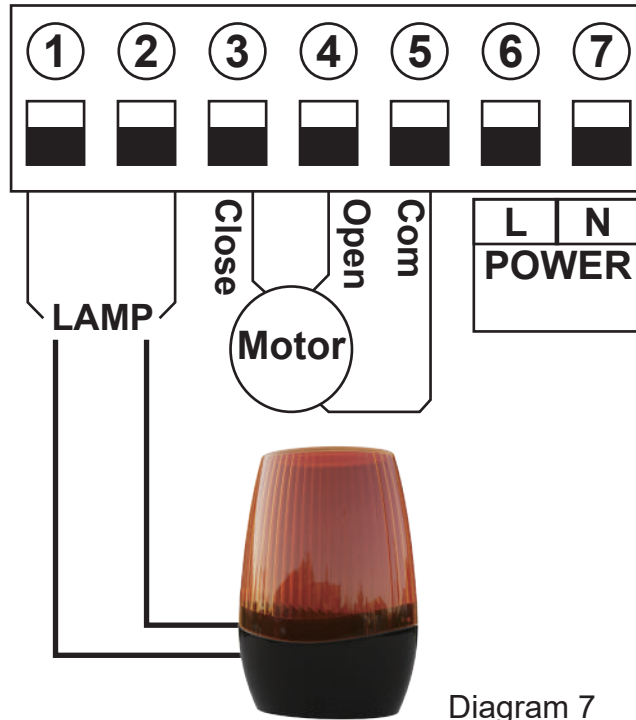Terminal ① and ② is for connecting with the flash lamp .

● Connect with start terminal
When you don't want to use the remote control to control the gate . Terminal ⑪ is
for you connect some external device , such push button, wired keypad, receiver etc.

Control gate open-stop-close-stop-open...

Terminal ⑪ and ⑬ connect to push button.
Terminal ⑫ and ⑬ to supply power for push button

Diagram 8

● Connect with photocell sensor

TX   RX   Diagram 9
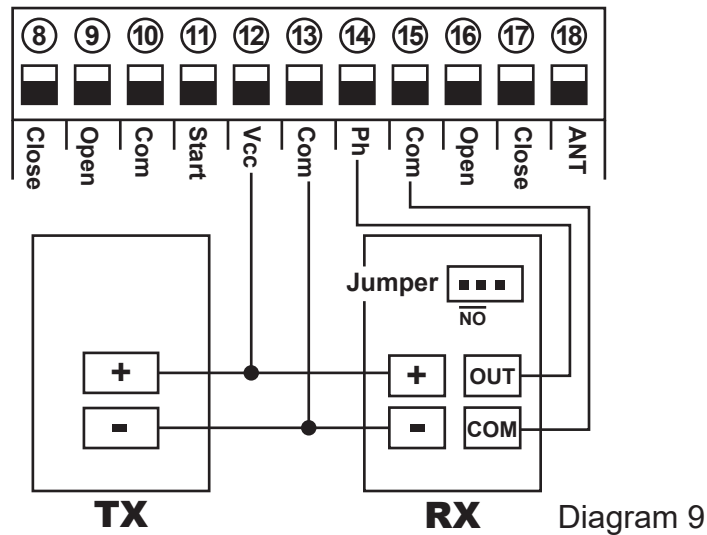
Connect terminal ⑮ to the "COM" of photocell RX.

Connect terminal ⑭ to the "OUT" of photocell RX.

Connect terminal ⑫ to the "+" of photocell RX and TX.

Connect terminal ⑬ to the "-" of photocell RX and TX.

● Connect with open device

Terminal ⑯ is open only , for external device, such push button, wired keypad, receiver etc.
Only control gate open

Diagram 10
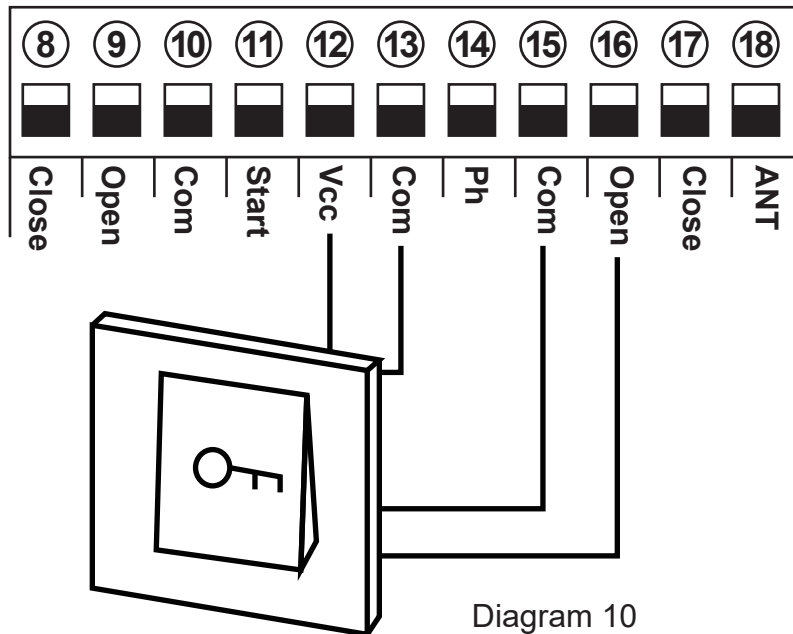
Connect terminal ⑮ to ⑯ connect to push button.

Connect terminal ⑫ to ⑬ to supply power for push button.

● Connect with close device

Terminal ⑰ is open only , for external device, such push button, wired keypad, receiver etc.
Only control gate open
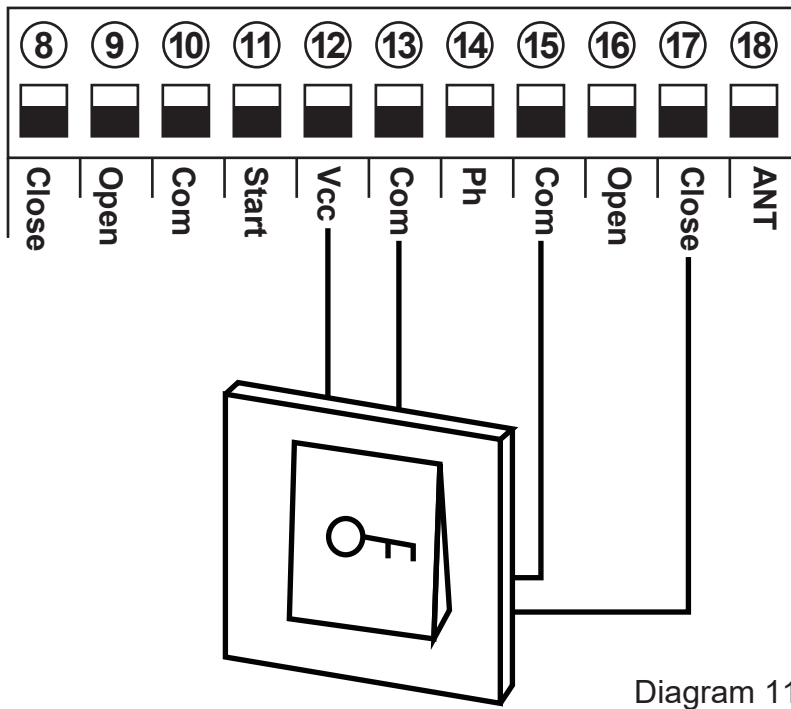
Diagram 11

Terminal ⑮ and ⑯ connect to push button.

Terminal ⑫ and ⑬ to supply power for push button.

7.Control board layout

7.6 Limit switch option

D1,D2,D3,D4

7.5 Limit switch terminal

7.7 Power switch

D6

D7

D5

7.2 Dip switch

Learn button

7.1 Stall force adjustm ent

D8
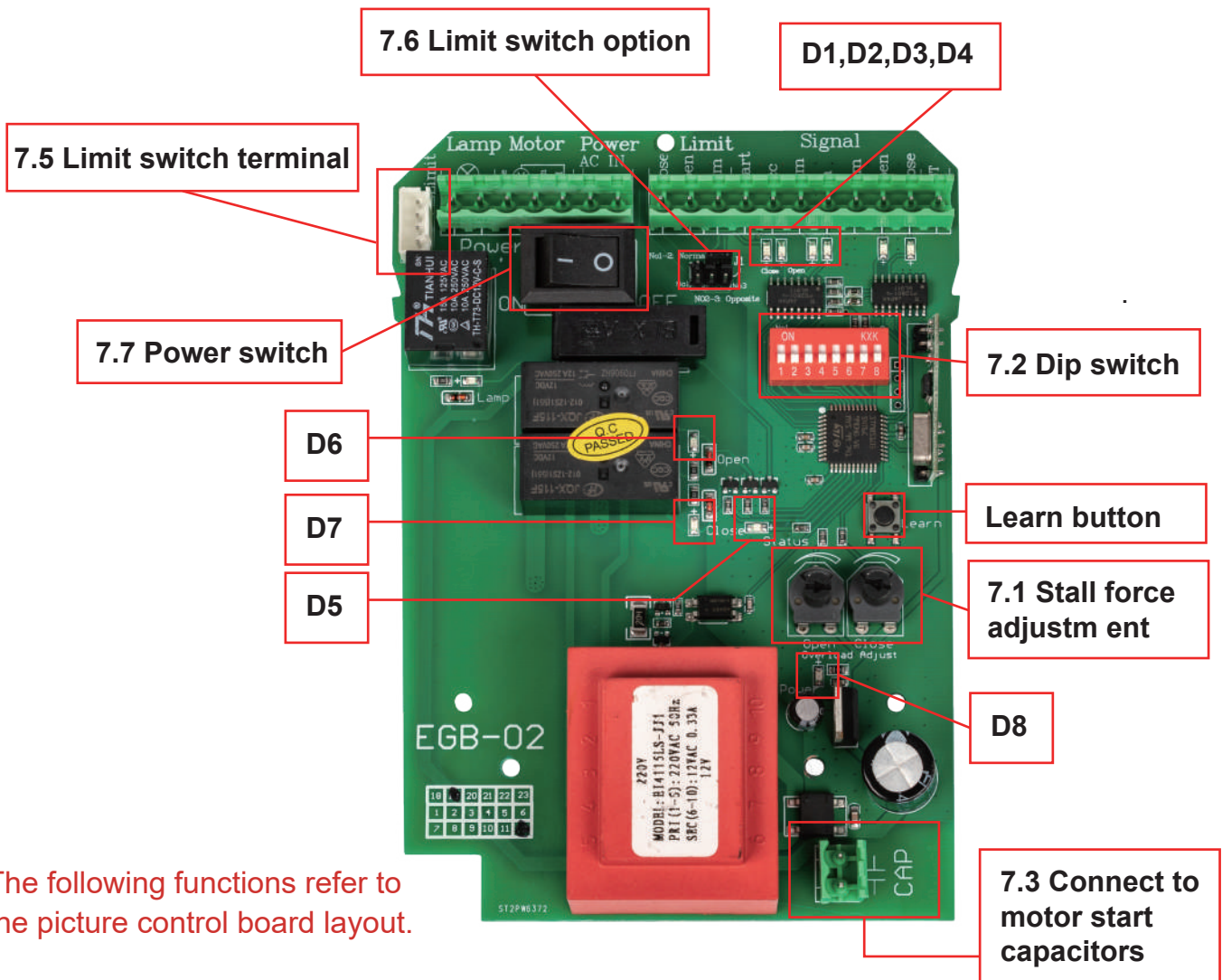
The following functions refer to the picture control board layout.

7.3 Connect to motor start capacitors

9

7.1 Stall Force Adjustment:

High sensitivity

Low sensitivity

Resistance-encounter invalid
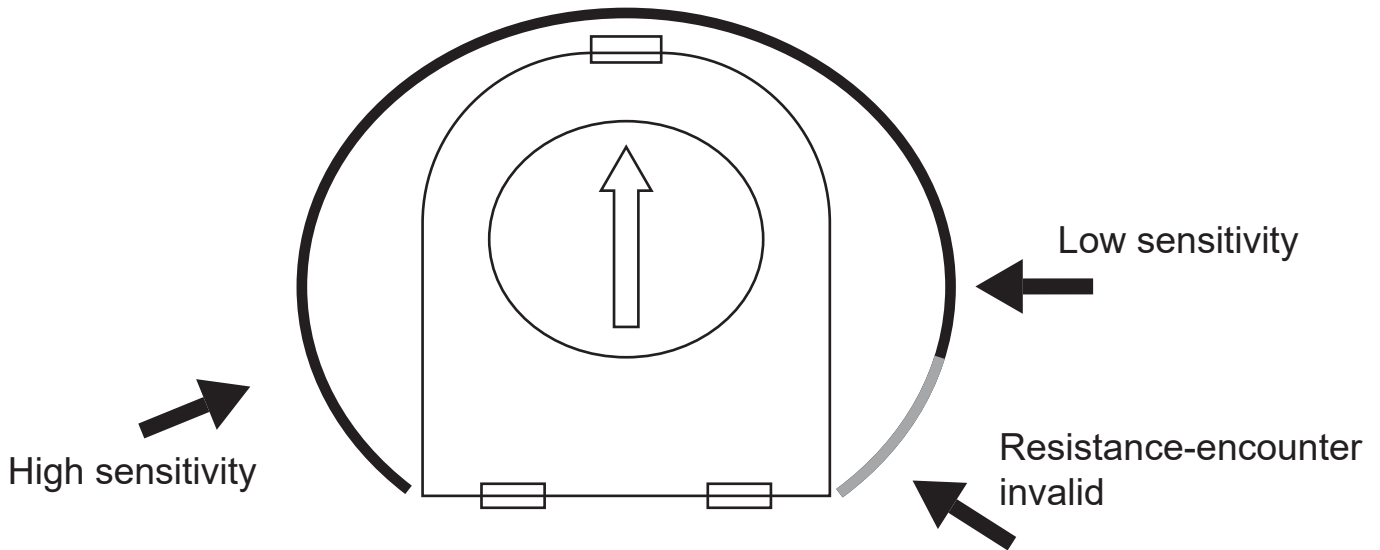
There are 2 potentiometers for "OPEN/CLOSE overload adjust to set the open and close stall force separately. Rotate clockwise to increase the force, counter-clockwise to decrease the force.

When stall force is enabled (potentiometer not in the right corner portion), the motor will detect obstacles and impacts to the gate.

If the gate is on opening, it will stop, if the gate is on closing, it will stop, and then re-open.

NOTE:

If the stall force is too low, the gate will stop or reverse very easily while there is no obstruction, or if there is additional resistance such as strong wind, rain or snow. If the stall force is set too high, some impacts may not be detected, and injury or damage could occur.

7.2 Dip switch programming setting:
A. Dial-up 1: Limit mode optional
    OFF: NC mode(Factory setting)
    ON: NO mode

Limit switch direction setting(J1):

Normal :Short circuit cap simultaneously No1 and No2 of J1 (Factory setting) If motor system install at left of gate . Please adjust the J1 ,short the cap simultaneously No2 and No3

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, ON-ON: 30S

Dial-up 3 & 4, OFF-ON: 60S

D. Dial-up 5&6: Auto close time setting when pedestrian mode activated

When remote control triggers the pedestrian mode (remote control button 2 or 4), the gate will stop after open 6s. If auto close function activated, the gate will auto close after gate open to 6s. 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, ON-ON: 10S

Dial-up 5 & 6, OFF-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 opened. When the gate is closing, trigger remote control and the start interface , the gate will stop to close and auto open until the opening limit is reached (the remote control and the start interface are invalid when the gate is opening).

7.3 Motor start capacitors:

Capacitors are connected with control board before use motor, please confirmed the interface of capacitors is secure. Please see picture **Diagram 11**

7.4 LED indicator:

D1： **Limit switch of close gate.**

LED ON： The limit signal of close gate is not sensed.

LED OFF： The limit signal of close gate is sensed.

D2： **Limit switch of open gate.**

LED ON： The limit signal of open gate is not sensed.

LED OFF： The limit signal of open gate is sensed.

D3： **"START" terminal working status.**

LED ON： External devices connected in "START" terminal is triggering.

D4： **Photocell indicator.**

LED ON： No obstacle sensed by photocell sensor.

LED OFF： Obstacle sensed by photocell sensor.

D5： **Remote code learn and erase.**

D6: LED (BLUE) ON: Gate is opening.

D7: LED (RED) ON: Gate is closing.

D8: LED (RED) ON: Control board with power on.

7.5 Limit switch terminal:

Wiring the spring or magnet limit switch cable to this terminal. The limit switch cable includes both open limit and close limit. The default setting from factory is right side open. If the limit switches are set correctly, the motor will stop when it reaches limit of either direction.

7.6 Limit switch options (J1):

Limit switch is used to switch terminal stop detection interface, that direction of open and close the gate.

7.7 Power switch:

Switch on /off power stop when do some setting on the control board.

8.How to program or erase the remote

● Program the remote: Press learn button then release it, the LED indicator will light on. Nowuser needs to press the button on the remote control, with the LED indicator flash 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 andexit the code learning statute.

● Erase the remote: Press and hold the learning button for 6 seconds, until the LED Indicator turn on and flash twice, release the button, which means the code ereasing is successful. Now all remotes can not control the gate.

9.How to use the remote to operate your gate opener

Each remote has 4 buttons. The remote 1st and 3rd button can be used to control the gate as
"open - stop - close - stop - open", and the 2nd and 4th button are used to control the PED mode.

So while user only prgram the 1st button into the control board, user will use the 1st button to control gate by "open - stop - close - stop - open" mdoe, use 2nd button to control PED mode. And now 3rd and 4th button have no function.

10.Maintenance

1. When someone or obstructions between the gate, do not open or close the door to ensure safety.
2. The power supply for the control board should be equipped with a separate switch with a fuse rated at 10AMP.
3. There is strong electricity in the control box. Please cut off the power supply before16 opening the cover.
4. Motor gear modulus M = 4, number of teeth = 16, use the corresponding racks.
5. the gate should be as straight as possible, making sure after racks fixed good and the gate can be in a good position with motor gear.
6. Racks and gear should be controlled in good gap. so can make sliding steady.
7. After confirm the direction of gate movement . please check if the limit block fixed in good position to avoid the motor run out of control due to failure

11.Trouble Shooting

Problem	Possible causes	Repair method
Gate fails to operate	1. Check the clutch states, power-driven state or not ? 2. Power no indication, and power trip. 3. The fuse has broken 4. Remote control failure or invalid 5. Damaged power cable 6. Remote control or motor problem	Recovery To restore power Change the fuse Detection or change Detection and Repair Detection and Repair
Working distance of remote control reduced	1. Low battery power or damaged 2. Interference from equipment using the same frequency 3. The receiver of controller was damaged	Replace battery Wait eliminate interference Replace the control board
Gate fails to stop at start or end position	1.The terminal stop toggle switch is damaged or obstructed. 2. Limit switch of the motor and the limit detection of the interface PCB board plug off. 3. Limit of open and close is in wrong position.	Replace toggle switch or remove obstruction Insert and fixed it Adjust of limit switch(J1)
Press open and close key of motor, but cant working and operate	1. Blocked sensitivity is too high(set too big) 2. The gate has lifted off the track and disengaged the drive gear from the rack	Make blocked sensitivity lowered,and check gear and racks can operate normally. Maintenance and replace.