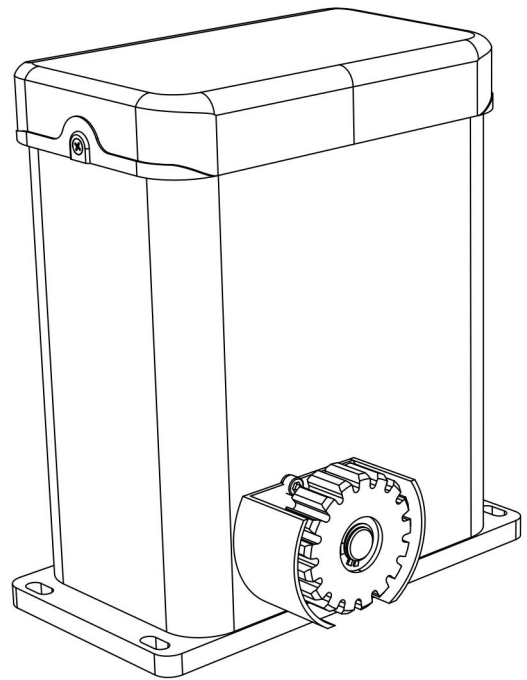
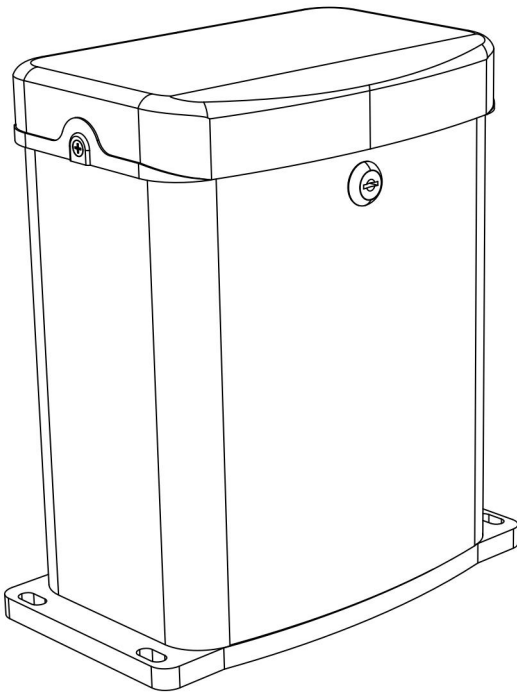


Sliding Gate Opener

User Manual

PY300DC



WARNING

Instructions must be read before installation. Please follow these instructions carefully, incorrect installation could affect gate operation.

When mounting and positioning this product please ensure the power cable is unplugged.

The motor cover will need to be removed to mount the motor to the mounting plate or directly to the concrete footing. Any changes to the settings on this product can only be made by a licensed electrician. This product can be powered by AC110V/220V power supply or backup battery power and solar power.

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Default Setting Instruction

The gate opener will open the gate to the right-hand side as its default setting. By default, the opener mounts on the right-hand side. (Figure 1)

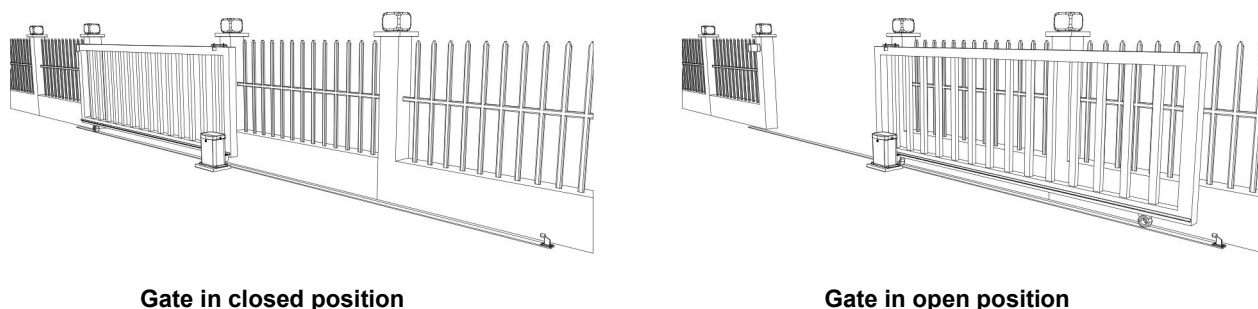


Figure 1

Before installation: Test the gate opener by plugging it into a power source and pressing the remote. Press the opening button, the output gear rotates, then press the stop button, the output gear stops rotating. Finally, press the closing button, the output gear rotates to the opposite direction. This will give you an understanding of the way in which the opener will move the gate.

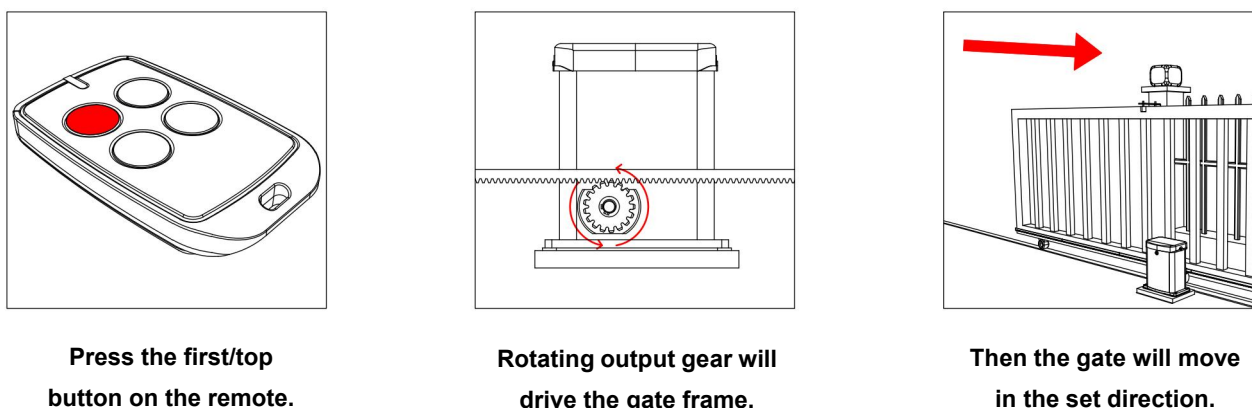


Figure 2

Note: Ensure that the gate opener is unplugged before proceeding with installation. Please keep fingers away from the motor output gear whilst it is turning.

If your gate needs to open from the other direction (to the left, refer to figure 3), your opener needs to be mounted on the left-hand side as shown, the relative wires need to be swapped over, please check under “Terminal Instructions” for swapping. (Factory default setting is for right-hand opening: opener mounted on the right-hand side).

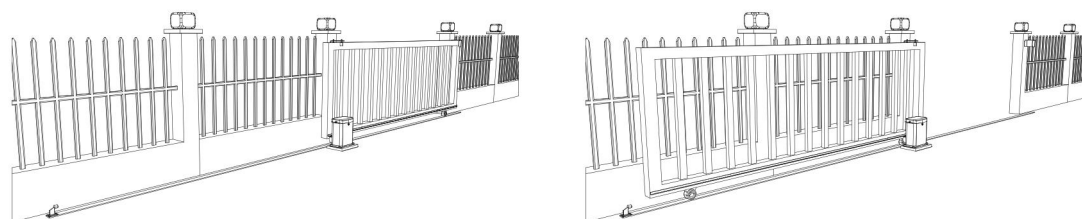


Figure 3

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

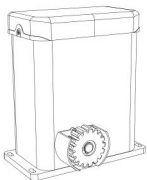
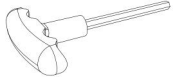
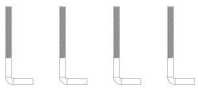
Safety Instruction

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.
- All modifications to wiring or electrics, and any adjustment or maintenance to input voltage must be done by a qualified electrician.
- All potential hazards and exposed pinch points of the gate must be eliminated or guarded prior to installation of this gate opener.
- Never mount any device that operates the gate opener where the user can reach over (under, around or through) the gate to operate the controls. These must be placed away from any moving range 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.
- To ensure safety, before installing the motor, mount a Gate End Catch and a Gate Stop at each end of the rail to prevent the gate travelling off the track.
- If required, install infrared photocell to detect obstructions and prevent injury to person or damage to property.
- Instruct all users about the control systems provided and the manual opening operation in case of emergency.
- Ensure that the power cable is connected to a RCD protected weatherproof power outlet installed by a qualified electrician.
- Do not install this 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. Our company declines all responsibility with respect to the automation safety and correct operation when other supplier's components are used.
- Do not modify the automation components, unless explicitly authorized by our company.
- The user must avoid any attempt to carry out any works or repairs on this product, and should always request the assistance of qualified personnel.
- This product 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. Keep plastic bags and polystyrene out of children's reach.
- Save these instructions for future use.

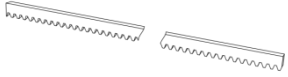
Parts List

Parts List (standard configuration)

No.	Picture	Name	Quantity
1		Motor	1
2		Manual Release Keys	2
3		Remote Controls	2
4		Accessories Box	1
5		Manual Release Bar	1
6		Anchor Bolts M8	4
6-1		Nuts M8	8
6-2		Flat Washers φ8	8
6-3		Spring Washers φ8	8

Note: Extra flat washers and spring washers are spare parts.

Parts List (optional)

No.	Picture	Name	Quantity
1		Galvanized Gear Rack	1m/pc
2		Nylon Gear Rack	1m/pc
3		Infrared Photocell	1

No.	Picture	Name	Quantity
4		Wireless Keypad	1
5		Alarm Lamp	1
6		Mounting Plate	1
7		Hexagon Head Bolt M8X40	4

Additional remote controls: Spare/Additional remotes for the automatic gate kit, these will need to be paired to the motor.

Infrared photocell: Detects pedestrians, vehicles and objects that cross an infrared beam and prevents the gate from closing.

Wireless keypad: Allows secure access through the gate used with a user set code.

Wired control: Allow users to control the opening and closing of the door through an external push-button.

Alarm lamp: Alerts people near the gate and users that the gate is in operation.

Technical Parameters

Model	PY300DC
Power Supply	110VAC/60Hz; 220VAC/50Hz
Motor Power	100W
Gate Moving Speed	13m/min
Maximum Loading Weight	300KG
Remote Control Distance	≥ 30m
Remote Control Mode	Single button mode
Limit Switch	Electronic limit switch
Working Noise	≤ 60dB
Working Duty	S2, 20min
Recording of up Remote Controls	20
Remote Frequency	433.92 MHz
Working Temperature	-20°C - +70°C
Battery Specification	12V 4.5Ah*2pcs
Package Weight	11.32KG

Installation

Before You Start

- PY300DC Sliding Gate Automation Kit is suitable for powering the opening and closing motion of gates up to 300kg in weight, up to a length of 8m.
- Gate motion is achieved by the rotating output gear of the gate opener driving the gear rack (sold separately) fitted to the moving gate.

- The gate opener requires you to press the remote control once to open, and once again to close. This is a safety feature to ensure safe operation.
- The opener must be fitted within private property, never externally to a property's boundary.

Any works done to the gate opener must be completed whilst the power is off and the opener is unplugged. Any modifications/alterations/works to AC power components must only be completed by a licensed electrician.

Tools Required

- Tape measure
- Level
- 12mm concrete drill and hammer (when uses expansion screws)
- Phillips head screwdriver
- Straight screwdriver

Example Sliding Gate

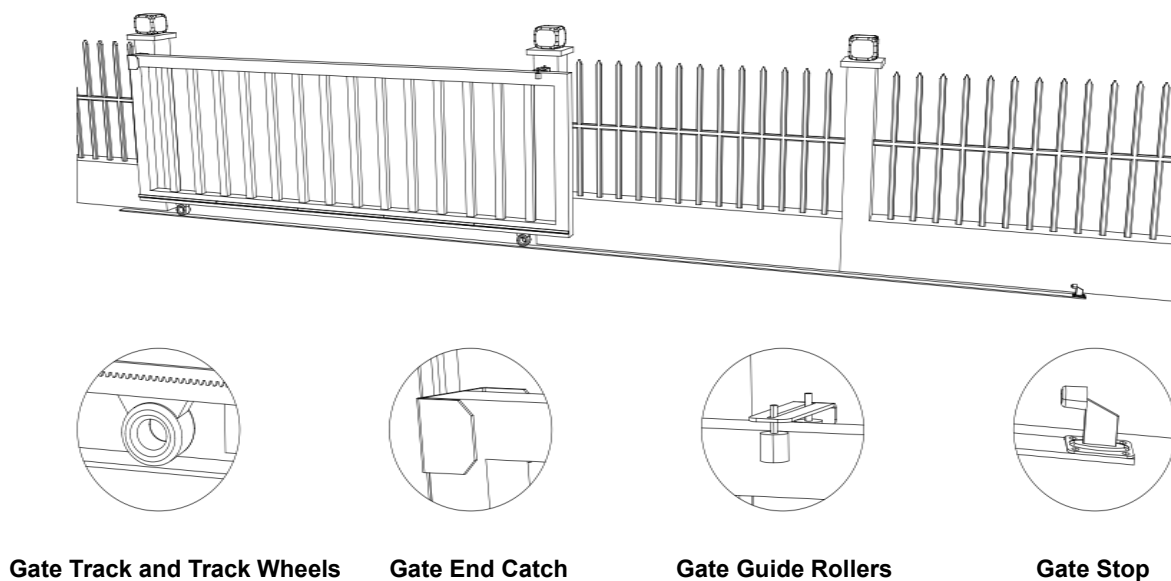
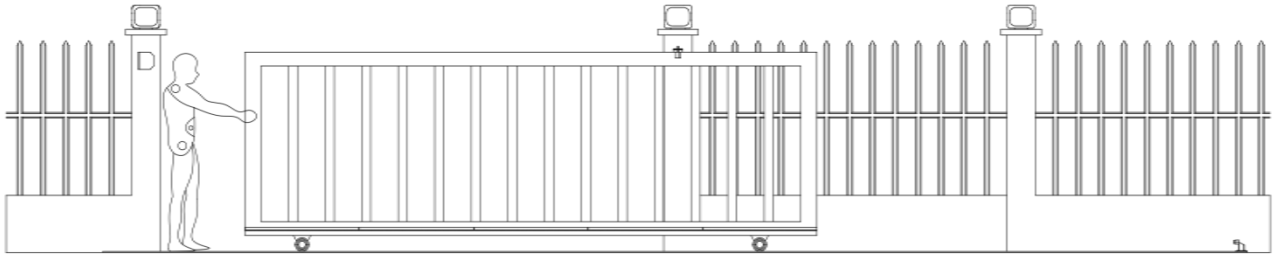


Figure 4

Please ensure that the gate opener power cable is not plugged in at any stage before Step 7.

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.

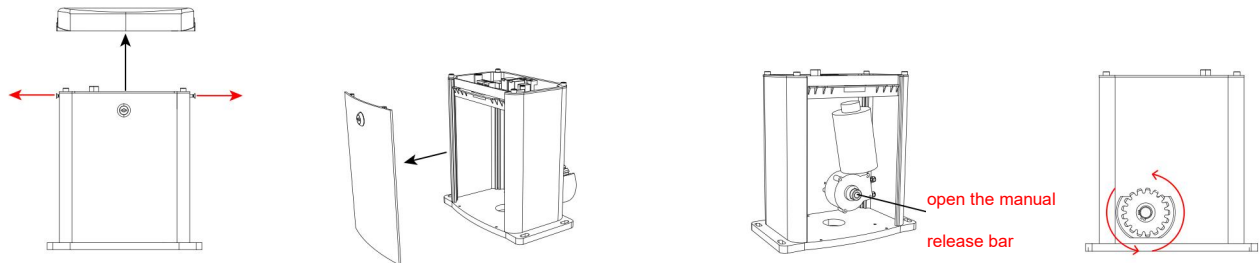


The gate should slide smoothly by hand before attempting to install the gate opener.

Figure 5

Step 2 - Checking Manual Release

- Insert the key and remove the motor case, open the manual release bar to enable the motor get into manual mode and check that the motor output gear rotates freely by hand (Figure 6).



To make the motor into manual mode, insert the key and remove the motor case, open the manual release bar as shown.

In manual mode, the gear can turn freely and the gate can be operated by hand.

Figure 6

Step 3 - Removing / Installing Motor Cover

- Unscrew the two cover screws located at each side of the motor cover.

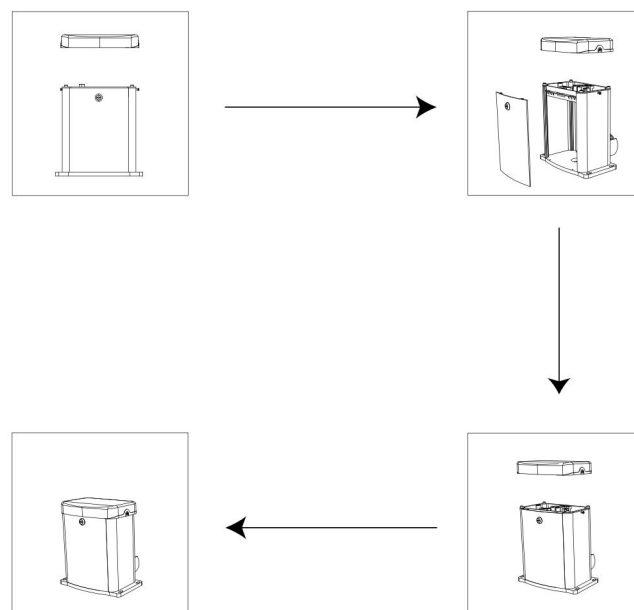
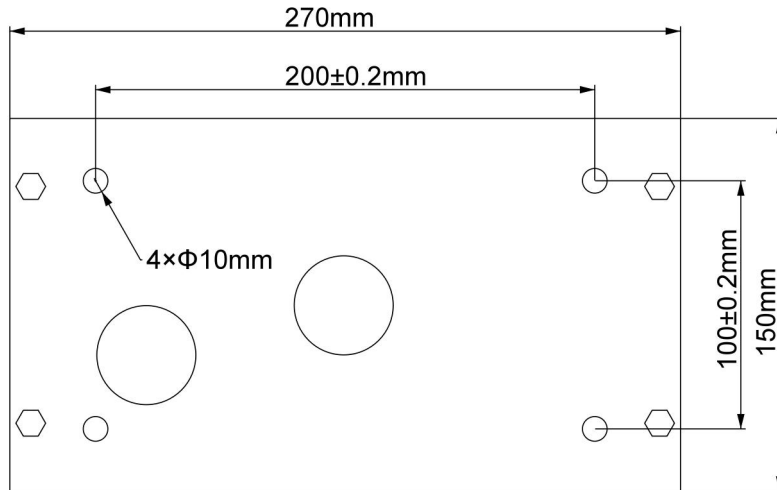


Figure 7

Step 4 - Motor Pad Footing

- The motor pad concrete footing requires an area of no less than 450mm long x 300mm wide and a minimum depth of 200mm (Standard requirement).
- Ensure surface is level and parallel to the driveway.



Mounting Plate Dimensions

Figure 8

Step 5 - Fitting Mounting Plate and Motor

Without Mounting Plate

- Pre-embed the anchor bolts according to holes in motor base before concreting (as per Figure 9).
- After concrete hardening, bolt the motor with M8x40mm bolts, spring and flat washers provided and tighten as required. (The height can be slightly adjusted by bottom bolts as per Figure 10).

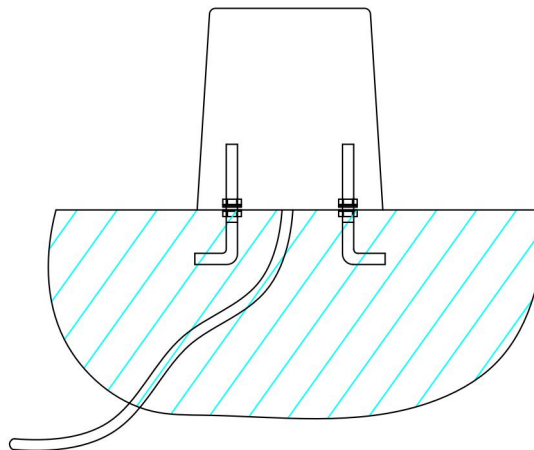
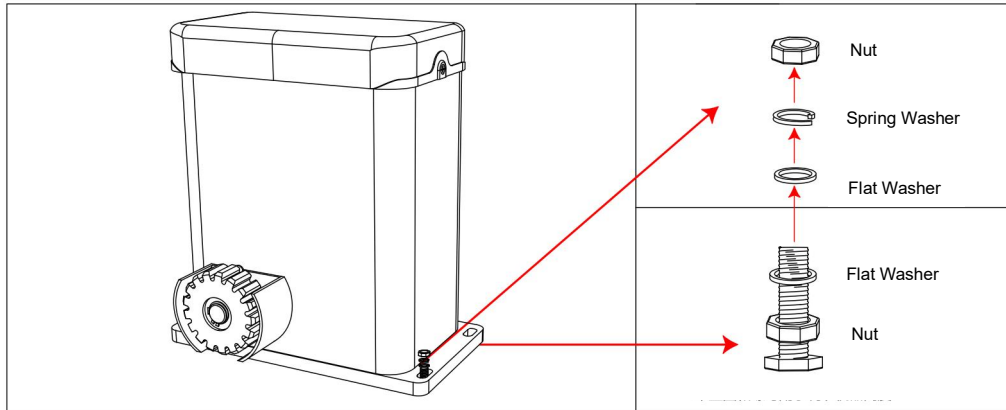


Figure 9



The bolts and flat washer between mounting plate and motor base are used for adjusting the height of the motor.

Figure 10

With Mounting Plate

- Pre-embed the anchor bolts as per $\Phi 10$ holes in Figure 8 before concreting, after hardening, place the mounting plate, fit and tighten anchor bolts.(as per figure 11).
- Bolt motor to the mounting plate using the M8 x 40mm bolts with spring and flat washers provided and tighten as required (as per figure 12).

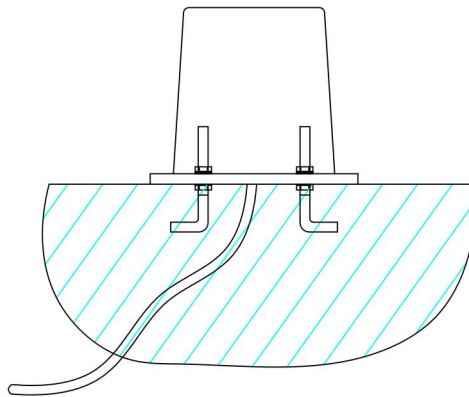
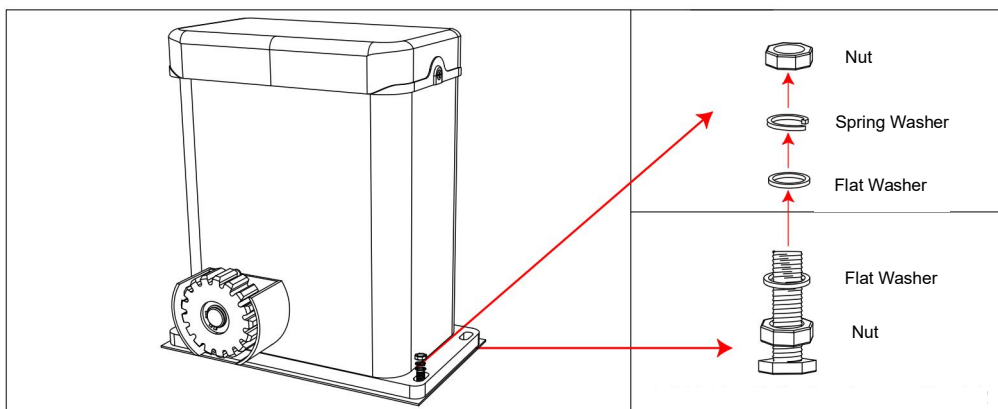


Figure 11



The bolts and flat washer between mounting plate and motor base are used for adjusting the height of the motor.

Figure 12

Fitting Motor

- Fit motor and mounting plate(if with) on the concrete footing.
- Ensure the motor output gear and gear rack are correctly aligned. Gear and gear rack should be centered as much as possible.
- Take the motor away from mounting plate.

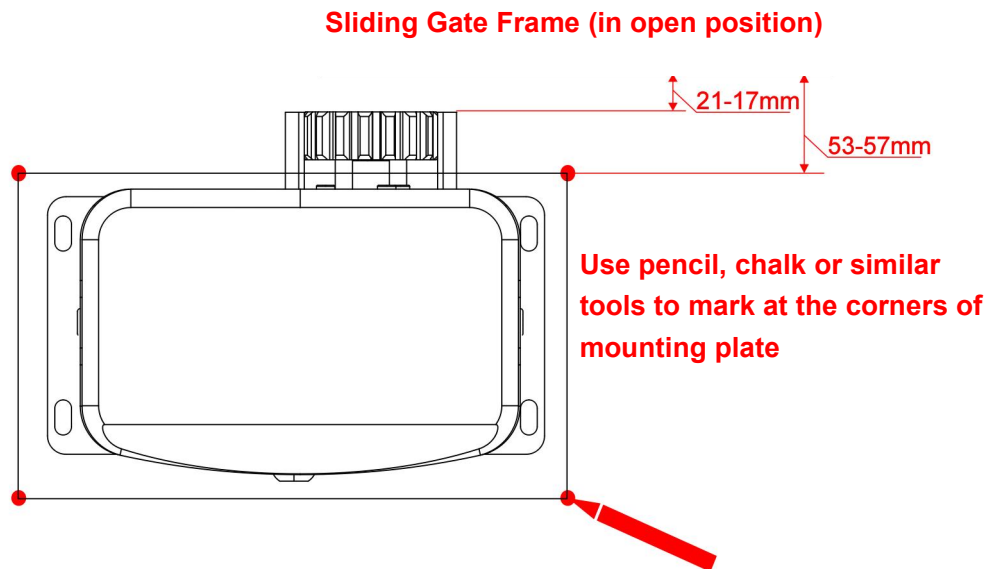


Figure 13

Step 6 - Gear Rack & Motor Alignment

- See Figure 15 for recommended gear rack mounting height.
- Ensure that the output gear has a minimum clearance of 1-2mm along the entire length of gear rack fitted to the gate (as per Figure 14)
- Ensure output gear and gear rack are correctly aligned. Under no circumstances should the gate opener output gear carry any weight of the gate. It is the task of the gate castors or wheels to carry the weight of the gate (as per Figure 14).
- If the gate doesn't slide freely by hand, adjust the height of the gear rack accordingly until the full length of gate slides freely by hand.

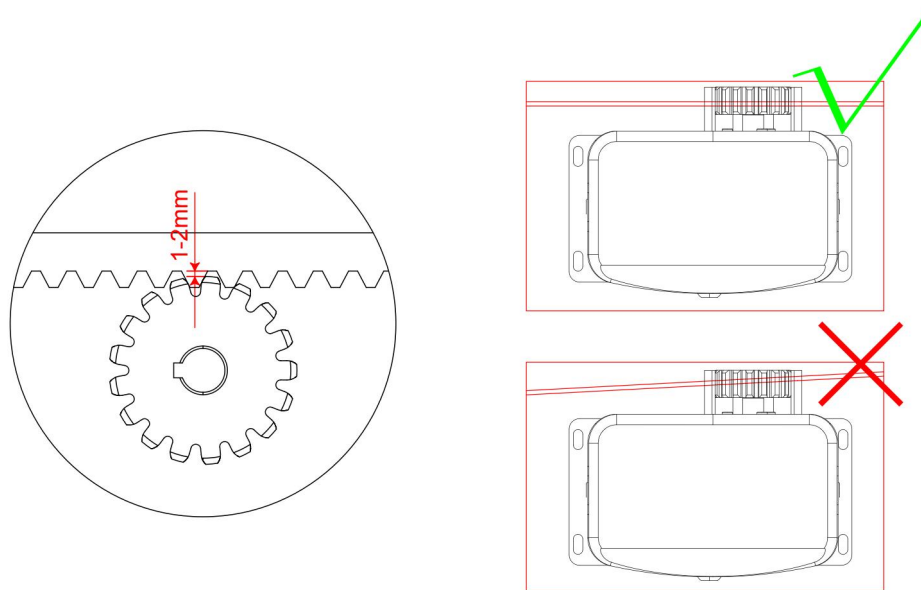


Figure 14

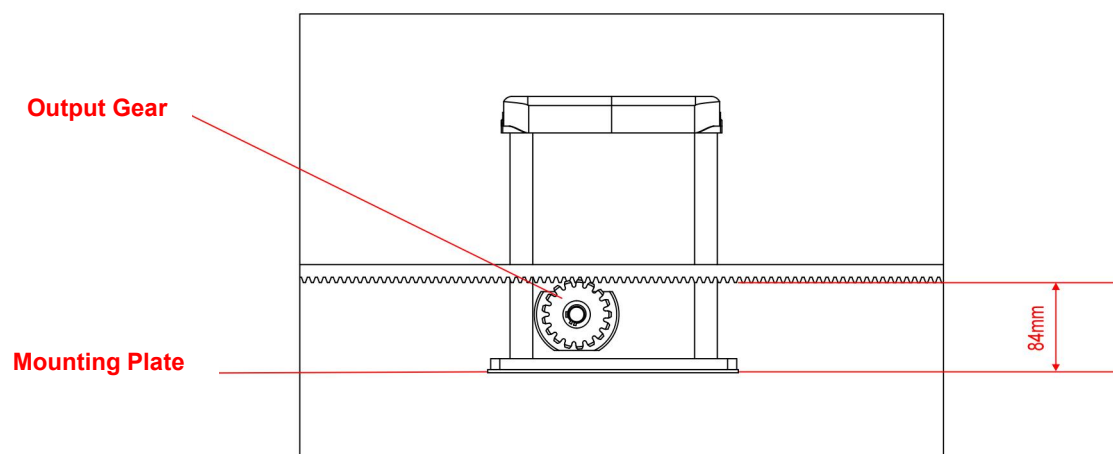
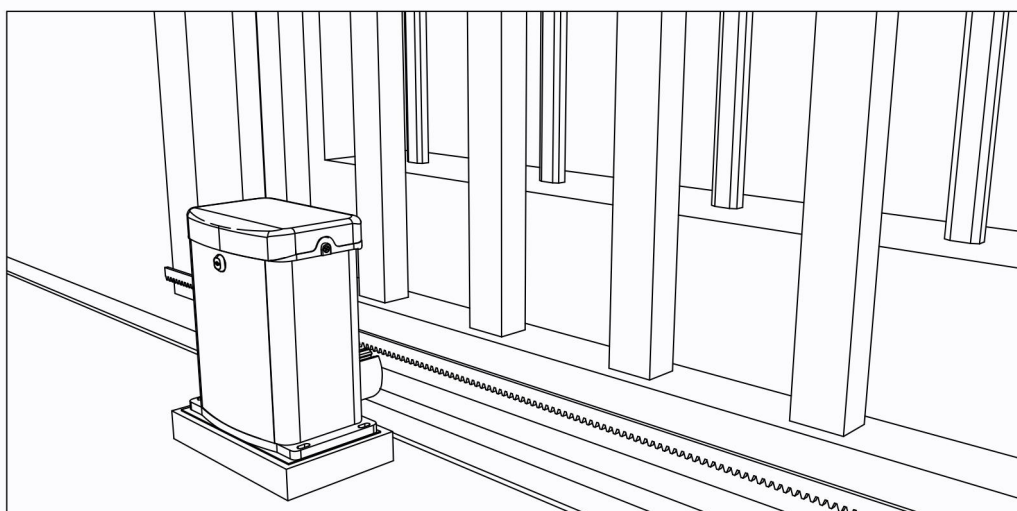


Figure 15



Open Position

Step 7 - Powering on

- Ensure that the outer cover has been fitted and fastened back onto the motor base.
- Before powering up the gate opener make sure the gate can travel by hand in manual mode (key unlocked).
- Slide the gate to between the middle of the posts, approximately (see below diagrams).
- Lock the manual release spanner (key locked) in readiness for automatic mode.
- Plug the power cord into an approved RCD protected weatherproof outlet.
- Remote controls included in this kit are factory paired ready for use.

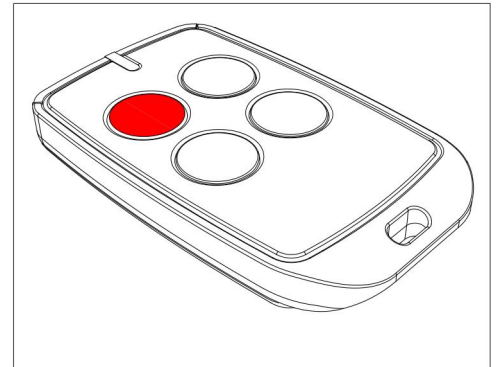
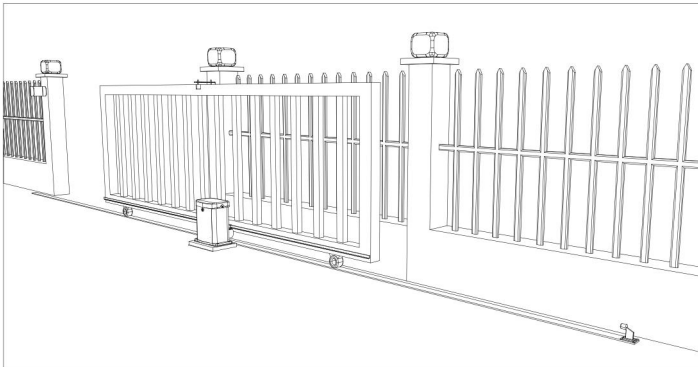
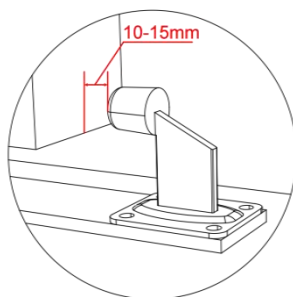


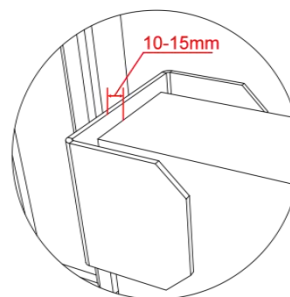
Figure 16

Step 8 - Testing Travel and Limit Stops

- Ensure gate opener is installed as per step 5, 6 and the sliding gate is in the middle position.
- Please refer to control board setting (page 15) to set the open limit stop position and closed limit stop position. The ideal closed final position for the gate frame is 10-15mm from closed gate end catch.
- After setting up the limit stop positions, the sliding gate will automatically run to open limit stop position and then to the closed limit stop position, do not cut off the power supply or stop the gate during its Auto-running.
- Press remote (remotes included in kit are factory paired to the motor) or external push button, the sliding gate will begin to move. When it arrives at the limit stop position the sliding gate will stop.



Open Limit Stop Position



Closed Limit Stop Position

Now the basic open and closed positions are set, for further setting functions and adjusting parameters, please refer to pages 12-20 in this manual.

Programming and Wiring

Any works to the 110V/220V AC must only be performed by a licensed electrician.

Ensure power is off before any modifications are made.

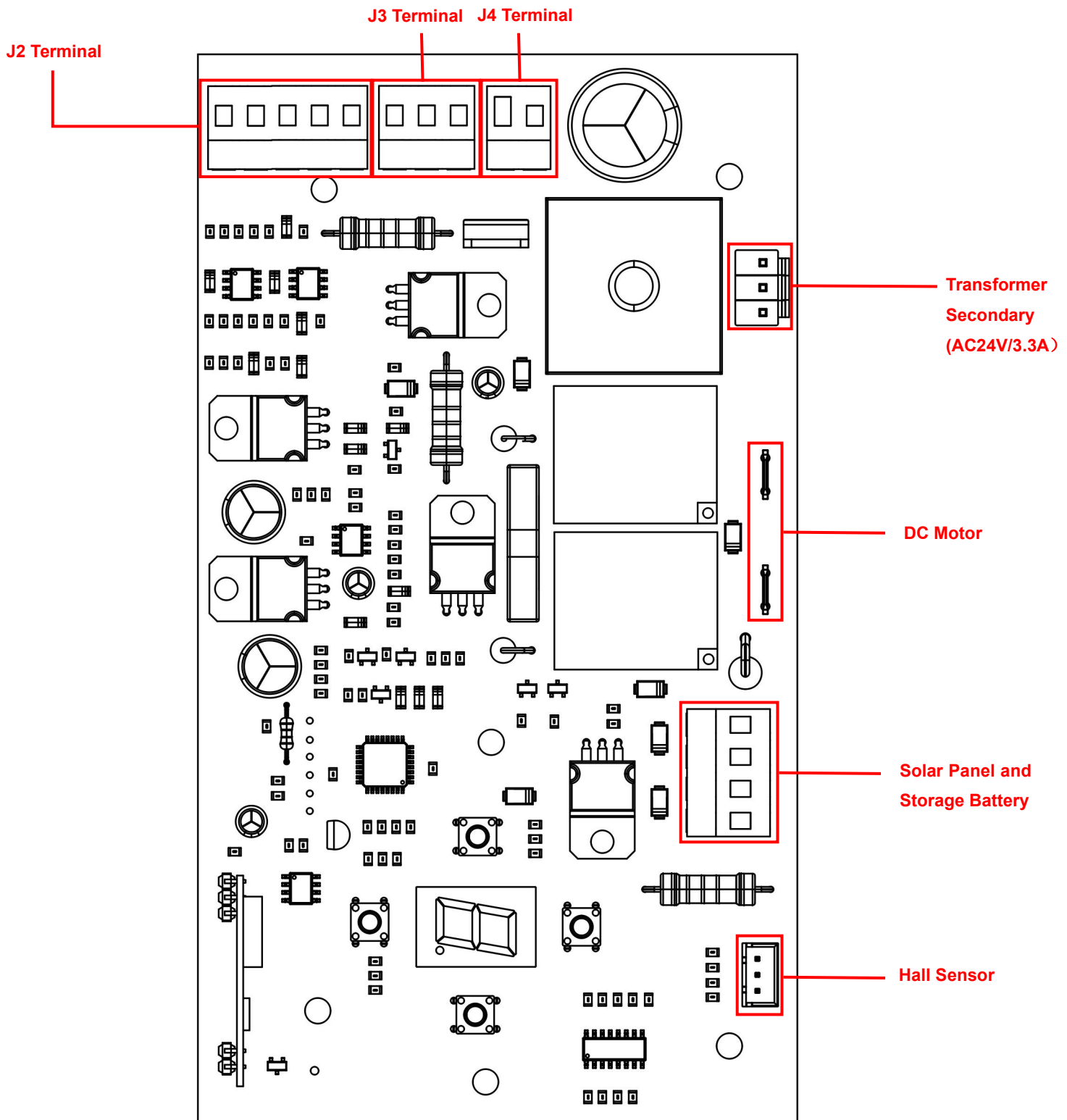
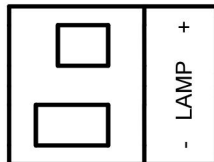


Figure 17

Terminal Instructions

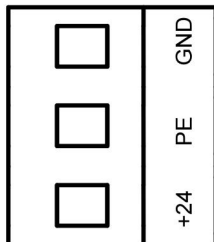
All changes to these settings below must be completed by licensed electrician.



J4 Terminal:

Terminal LAMP+: Alarm Lamp +24VDC

Terminal LAMP-: Alarm Lamp -24VDC



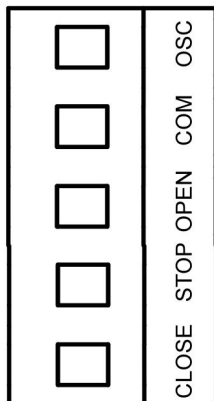
J3 Terminal:

Terminal GND: Common Terminal for Photocell

Terminal PE: Photocell Input (N.C.).

Terminal +24: Additional Accessories +24VDC

Additional accessories sold separately.



J2 Terminal:

Terminal OSC: Single Cycle for External Push Button (open/stop/close)

Terminal COM: Common Terminal for External Push Button.

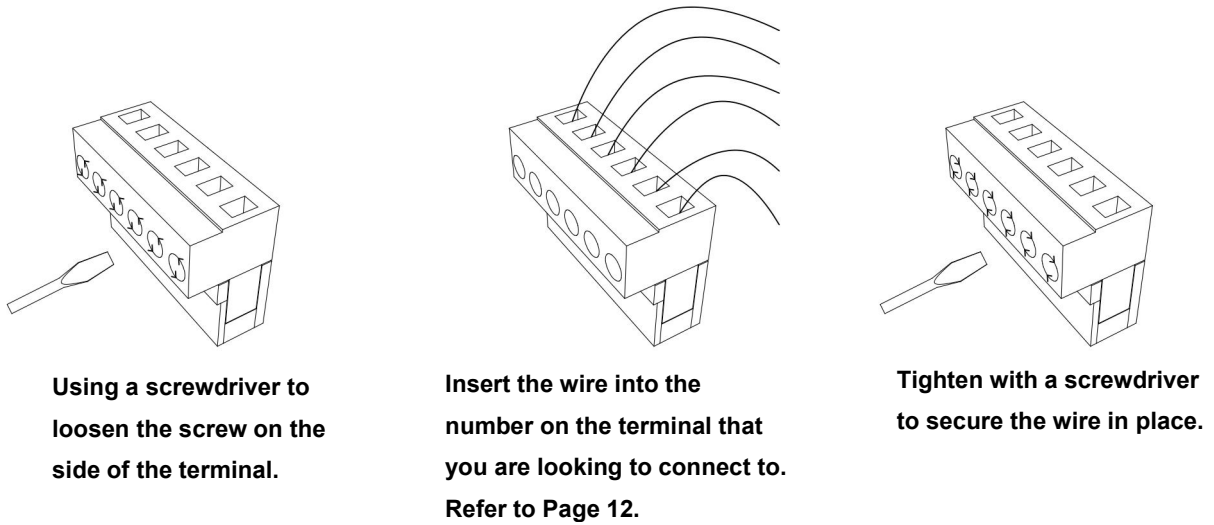
Terminal OPEN: External Open Push Button Switch.

Terminal STOP: External Stop Push Button Switch.

Terminal CLOSE: External Close Push Button Switch.

Terminal DC Motor: Black connect to “T1”, red connect to “T2”, if the running direction is opposite, please exchange “T1” and “T2”.

Wiring to the Terminal



Wiring to the Transformer

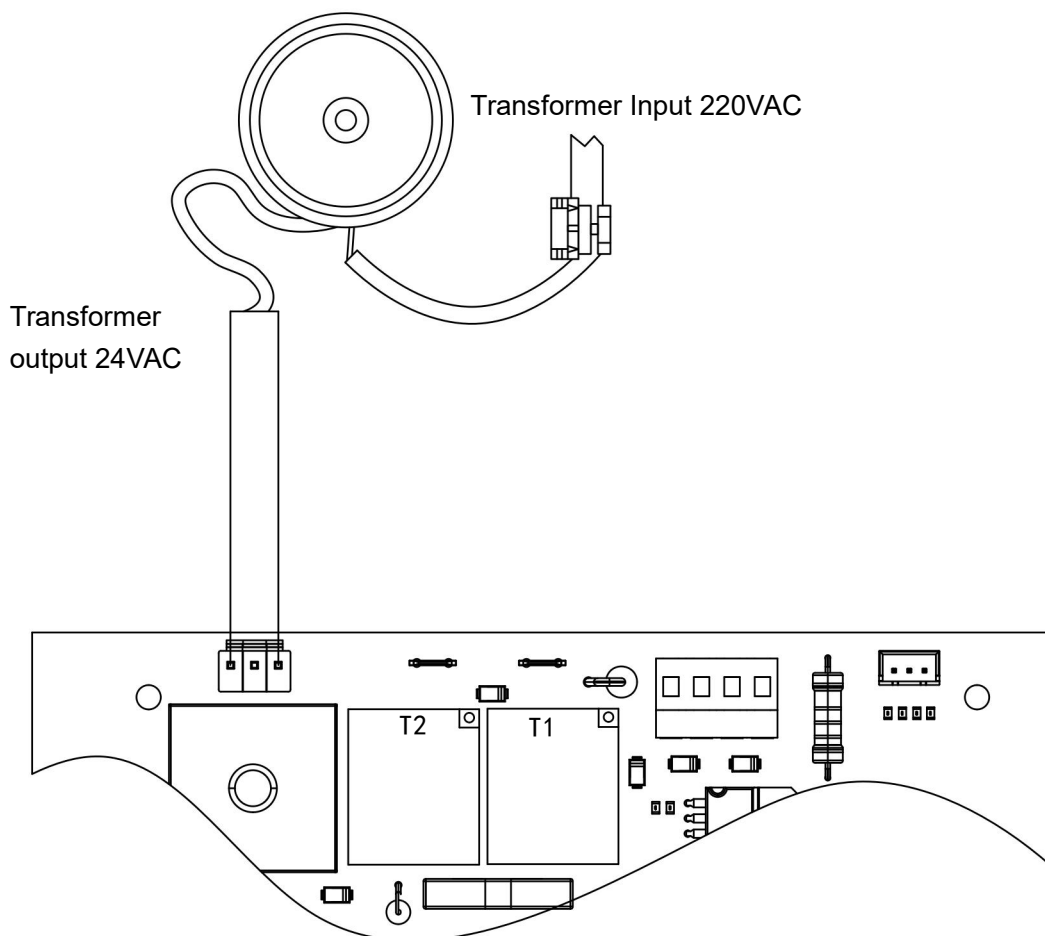


Figure 18

Setting the Open and Closed Position

1. Press and hold SET until digital display "1".
2. Press and hold OPEN until gate opens to a proper open position(The open position will be determined by customer themselves. Note: Press OPEN, the gate will open, if it's not opening, please change the motor wire "T1" and "T2")
3. Press SET to confirm the open position, the digital will display "2".
4. Press and hold CLOSE until gate closes to a proper closed position.(The closed position will be determined by customer themselves.)
5. Press SET to confirm the closed position.
6. After these steps, the gate will automatically run a complete opening and closing cycle.

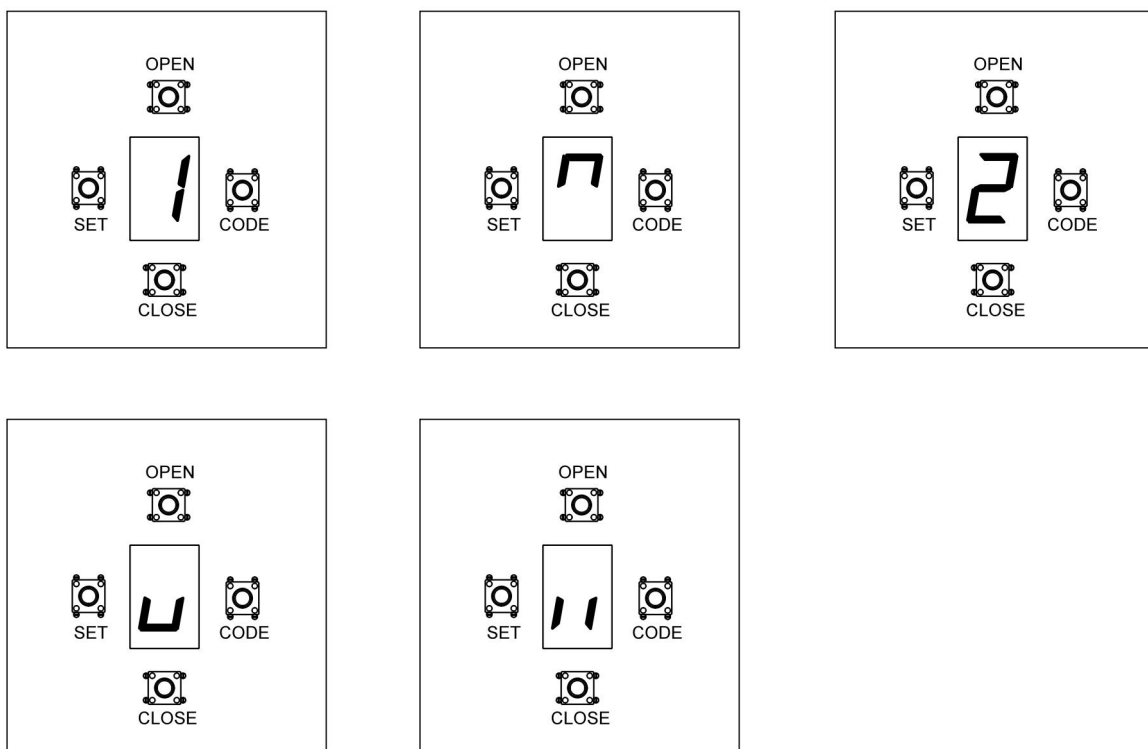


Figure 19

Adjusting the Auto-close Time:

1. Press and hold OPEN until digital display "—".
2. Press OPEN to add the time for Auto-close, press CLOSE to reduce the time.
3. If the time setting is 0, there will be no Auto-close function.
4. Press SET to confirm.
5. The number increase by 1, the time will add by 10 seconds.

Note: The Auto-close function will work only after the sliding gate runs to open position.

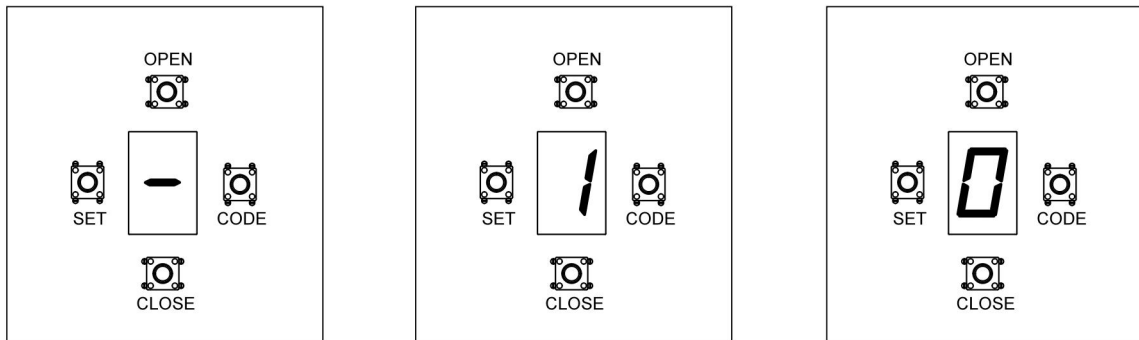


Figure 20

Setting the Reverse Function After Meeting Obstacles

If the sliding gate meets an obstacle during closing, it will stop and reverse 15-20cm.

1. Press and hold SET until digital display "3".
2. Press OPEN to increase the sensitivity of meeting obstacles, the strongest level is 9, press CLOSE to decrease the sensitivity, 1 is the lowest level.
3. Press SET to confirm the setting.

Note: The sensitivity should be set according to the gate weight to ensure the reverse function is workable, or it may have potential safety concerns.

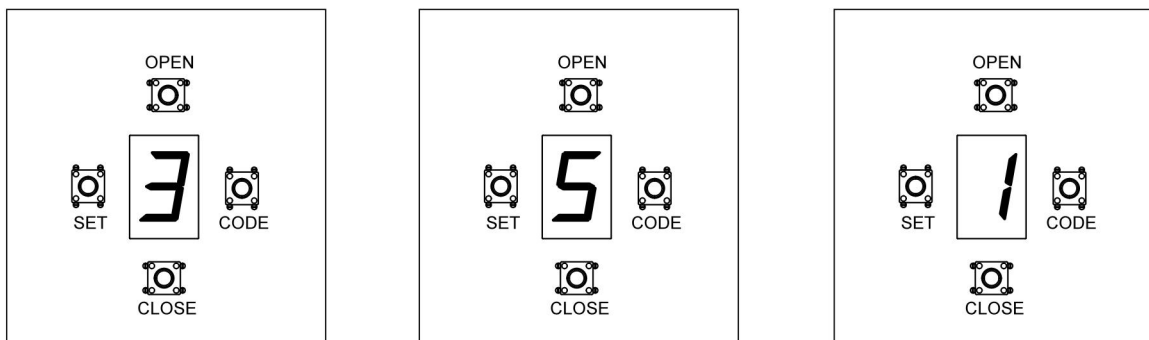


Figure 21

Connecting Infrared Photocells

Highly recommend the use of infrared photocells as an additional safety feature.

1. Press and hold CLOSE until digital display "—".
2. Press OPEN, digital display "H", the photocell function is enabled.
3. Press CLOSE, digital display "||", the photocell function is disabled.
4. Press SET to confirm your setting. (If there is no photocell connected, please set it as "||")

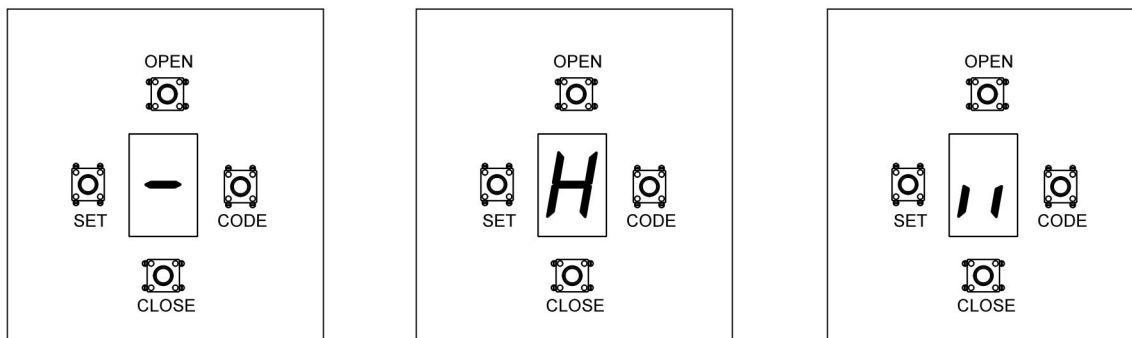


Figure 22

Photocell Function: While closing, if the ray of the Infrared Photocell is blocked, the gate will stop and reverse immediately, to protect user and property security. To install photocells, connect wiring as per Figure 23.

The distance between photocell receiver and photocell transmitter should not be less than 2 meters; otherwise, the induction effect of photocell may be affected.

Photocell type should be N.C.

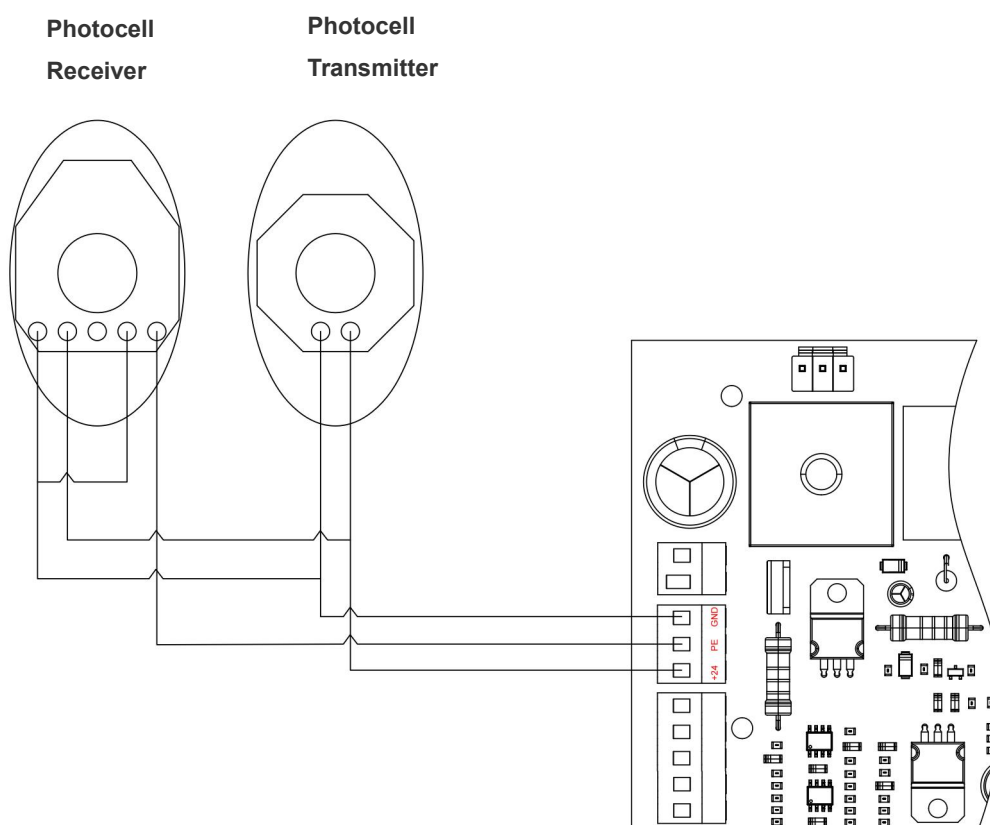
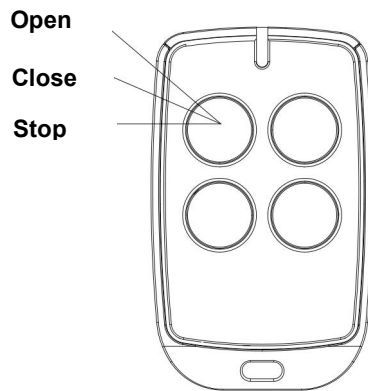


Figure 23

Remote Control Operation

Single button mode remote control: OPEN/CLOSE/STOP of motor are controlled by one button circularly on the remote control.

The forth button on remote control is Pedestrian Mode--press the forth button while the gate is closed, the gate will open 1m wide to allow pedestrian access.



Single Button Mode Remote Control

Figure 24

Remote Control Learning

1. Press CODE button once, the red light on digital tube will be on.
2. Press the button intended to be paired on the remote control once, and then press it again after 1 second.
3. The red light on digital tube will flash several times and be off.
4. The digital tube displays "||", pairing is complete. A maximum 20 remote controls can be paired to one motor.

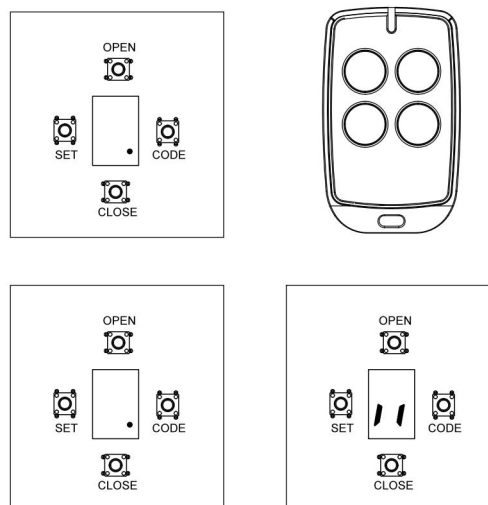


Figure 25

Clearing Remote Controls

To delete all paired remote controls, press and hold the button “CODE” till digital displays “C”, all previously paired remote controls will be deleted.

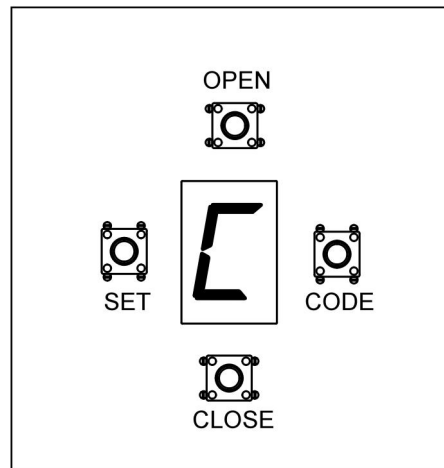


Figure 26

Connecting Storage Battery

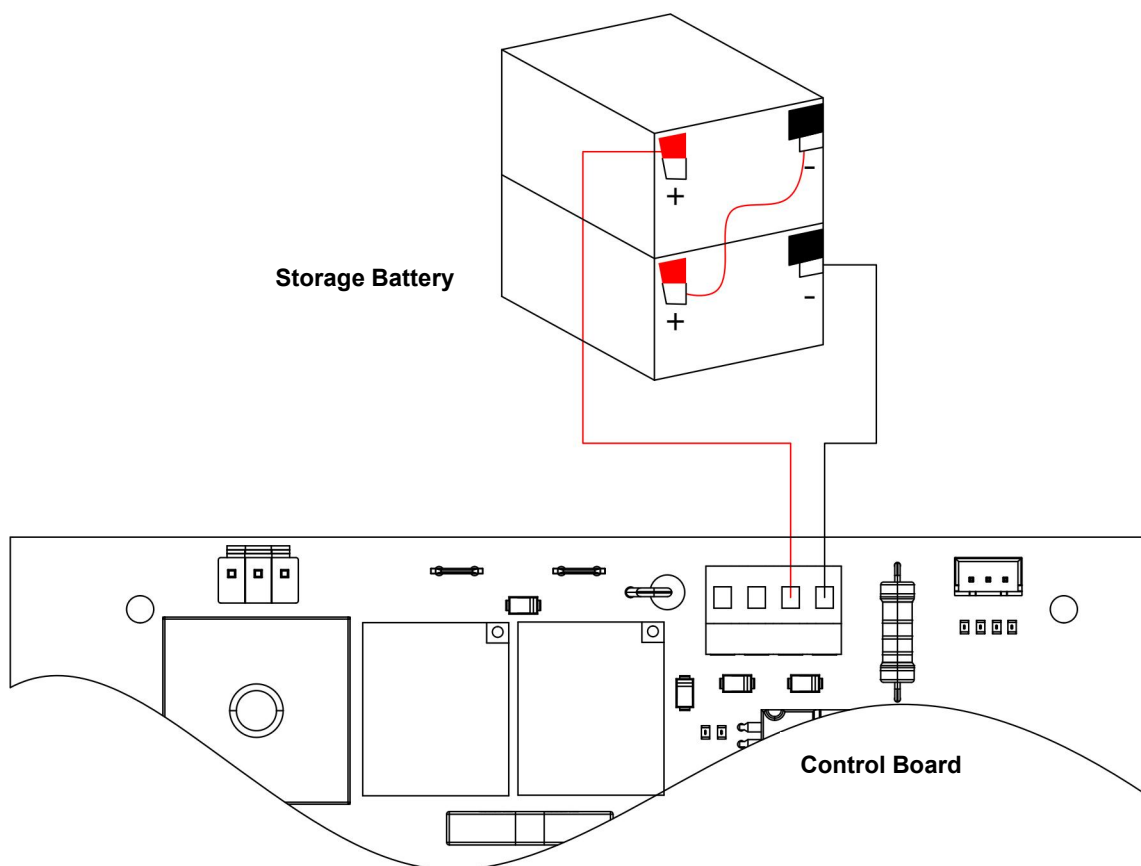


Figure 27

Connecting Solar Panel

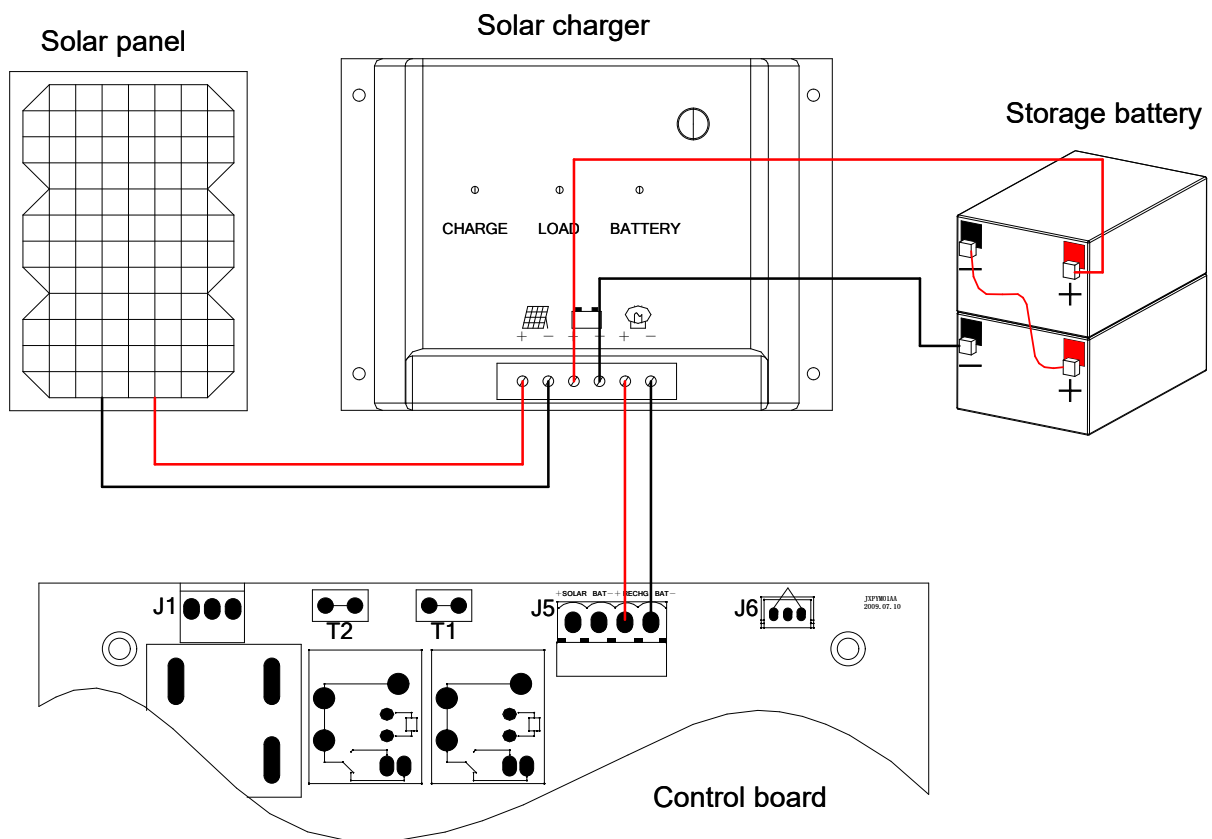


Figure 28

Maintenance

The gate should be checked every month to make sure it operates normally.

For the sake of safety, each gate is suggested to be equipped with infrared protector, and regular inspection is required.

Before installation and operation of the gate opener, please read all instructions carefully.

Our company keep the right to change the instruction without prior notice.

Troubleshooting

Any troubleshooting work below done to the motor must be completed by a licensed electrician and only whilst the power is off and the motor is unplugged!

Problems	Possible Reasons	Solutions
The gate cannot open or close normally, and LED does not light.	1.The power is off. 2.Fuse is burned. 3.Control board power supply terminal wrongly wired.	1.Switch on the power supply. 2.Check the transformer input interface fuse, change the fuse if burnt. 3.Re wiring according to instructions.
The gate can open but cannot close.	1.Infrared protection function is enabled, but not connect with a photocell. 2.Photocell wrongly wired. 3.Photocell wrongly installed. 4.Photocell is blocked by objects. 5.Sensitivity of obstacle is too high.	1.Connect photocell or disable infrared protection function. 2.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. 3.Make sure that the photocell mounting position can be mutually aligned. 4.Remove the obstacle. 5.Reduce the sensitivity of obstacle.
Remote control doesn't work.	1.Battery level is too low. 2.Remote control not paired.	1.Change the remote control battery 2.Pair the remote control
Press OPEN, CLOSE button, the gate won't move, motor has noise.	Gate moving is not smoothly.	According to the actual situation to adjust the motor or the gate.
Leakage switch tripped.	Power supply wires short circuit.	Check wiring.
Remote control working distance is too short.	Signal is blocked.	Connect external receiver antenna, 1.5 meters above ground.
The gate moves to the middle position to stop or reverse.	1.Force of meeting onstacles is too small. 2.Gate meets obstacles.	1.According to the instruction to increase the force. 2.Remove the obstacle.
Gate opens automatically	Auto-close function has been activated but with incorrect opening direction.	Please refer to the page 13 change the opening direction.

Drawing and Measurements

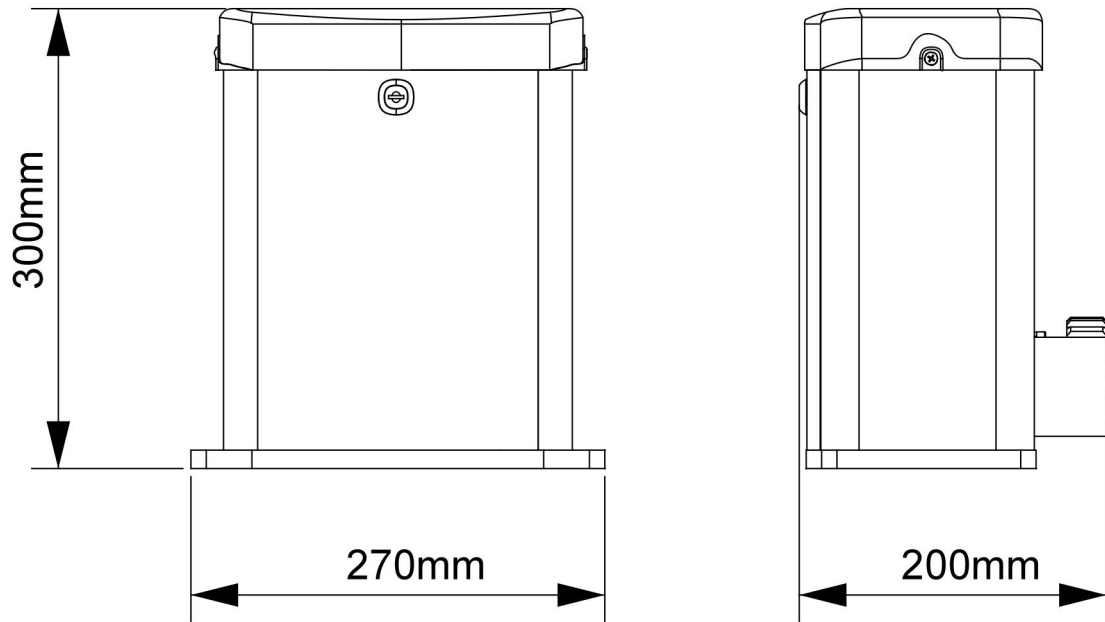


Figure 29

Warranty

Warranty Ordinance

1. To repair against this warranty card and invoice during the warranty period.
 2. Warranty period: 1 year after the date of invoice.
 3. Without unauthorized dismantling, any product broken or damage due to quality problem, we'll offer the repair service for free or replace for free.
 4. The malfunction and damaged caused by incorrect use or man fault is not covered by this warranty.
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Maintenance Record

Check Date	Check Content	Maintained by