

User Manual

Sliding Gate Opener Series

Applicable Models: ZK-SL800AC, ZK-SL1500AC

Date: April 2022

Doc Version: 1.0

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.



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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **Sliding Gate Opener Series**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Features and parameters with ★ are not available on all devices.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	Description
Bold font	Used to identify software interface names e.g., OK , Confirm , Cancel .
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	Description
<>	Button or key names for devices. For example, press <OK>.
[]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols






Convention	Description
	This represents a note that needs to pay more attention to.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care is taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

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1 **WARNING**

1. Instructions must be read before installation. Please follow these instructions carefully, incorrect installation could affect gate operation.
2. 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 is only powered by AC110V/220V power supply; DC backup battery or solar power is not compatible.

2 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)

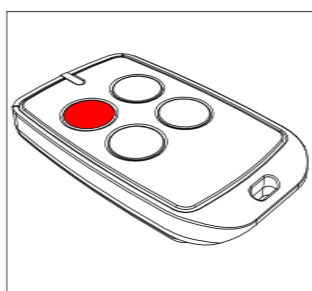


Gate in closed position

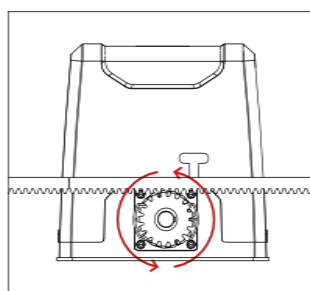
Figure 1

Gate in open position

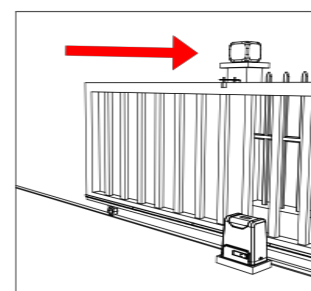
Before installation: Test the gate opener by plugging it into a power source and pressing the remote. Press the opening button, the output gear rotates, then press the stop button, the output gear stops rotating. Finally, press the closing button, the output gear rotates in the opposite direction. This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



Press the first/top button on the remote



Rotating output gear will drive the gate frame



Then the gate will move in the set direction

Figure 2

Note: Before starting the installation, make sure the gate opener is unplugged. While the motor output gear is turning, please keep your fingers away from it.

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, and a qualified electrician will need to swap over the MOT1 and MOT2 wires on J4 terminal and swap over wires of 11 & 13 on J5 terminal. (Factory default setting is for right-hand opening: opener mounted on the right-hand side).

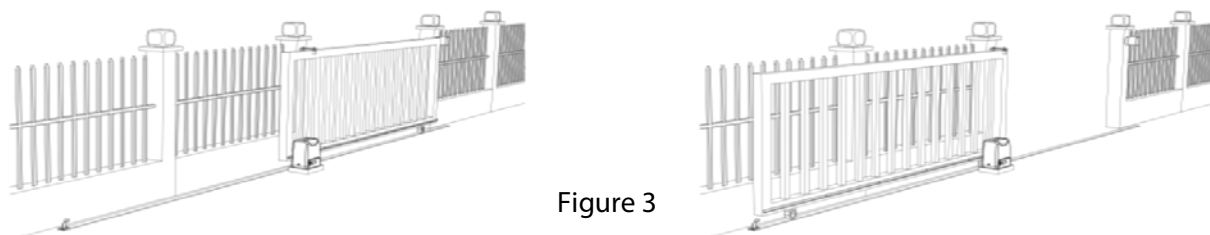


Figure 3

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

3 Safety Instruction

Warning: Incorrect or improper use of this product can cause harm to persons, animals, or properties.

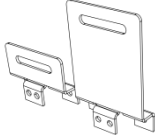






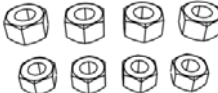


- Please ensure that the input voltage used matches with the supply voltage of the gate opener.
- All modifications to wiring or electrics, and any adjustment or maintenance to input voltage must be done by a qualified electrician.
- All potential hazards and exposed pinch points of the gate must be eliminated or guarded before the installation of this gate opener.
- Never install any device that activates the gate opener where the user can reach the controls by reaching over (under, around, or through) the gate. These must be situated out from the way of the moveable gate's movement range.
- Ensure the 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 from traveling off the track.
- Install an infrared photocell if necessary to detect obstructions and prevent personal injury or property damage.
- Instruct all users on how to operate the control systems and how to manually open the doors in the event of an emergency.
- Ensure that the power cable is connected to an 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 designed and manufactured specifically for the use described in the accompanying documentation. Any usage not specified in this documentation may cause harm to the product and may be hazardous.
- For any maintenance or repair work, only use original parts. When other suppliers' components are utilized, our firm disclaims all the responsibility for automation's safety and proper operation.
- 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 the 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.

4 Parts List


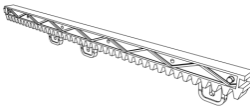

4.1 Parts List (Standard Configuration)



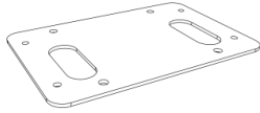
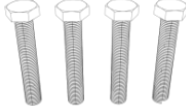
No.1	Picture	Name	Quantity
1		Motor	1
2		Manual Release Keys	2
3		Remote Controls	2
4		Spring Limit Switch Accessories Box/ Magnetic Limit Switch Accessories Box	1
5		Spring Limit Switch Stop	1
6		Spring Limit Switch Stop Mounting Screw M6X10	4

7		Magnetic Limit Switch Stop	1
8		Magnet Components	2
9		Magnetic Limit Switch Stop Mounting Screws M6X16	4
10		Nuts M8	4
11		Flat Washers φ8	2
12		Spring Washers φ8	2
13		Foundation Bolts	4
14		Nuts M10	8
15		Flat Washers φ10	8
16		Spring Washers φ10	8

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

4.2 Parts List (Optional)

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

4		Wireless Keypad	1
5		Alarm Lamp	1
6		Mounting Plate	1
7		Hexagon Head Bolt M10X50	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 prevent the gate from closing.

Wireless keypad: This allows secure access through the gate used with a user-set code.

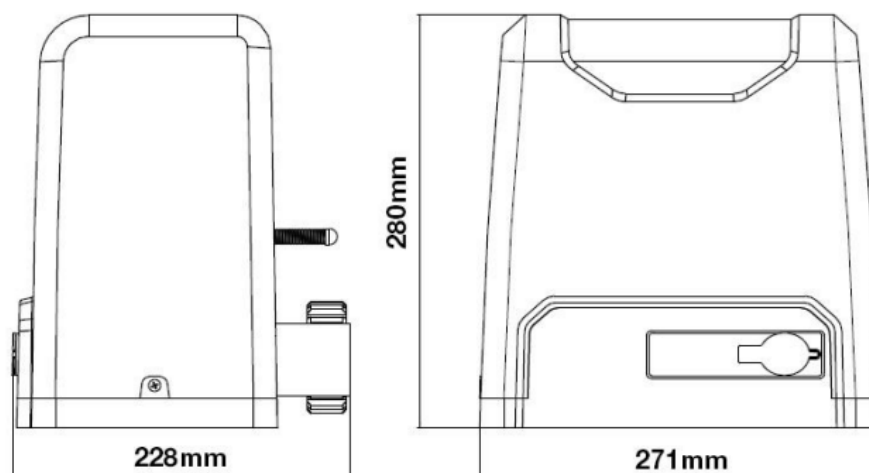
Wired control: Allow users to control the opening and closing of the door through an external push-button.

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

5 Technical Parameters

Model	ZK-SL800AC	ZK-SL1500AC
Power Supply	110VAC/60Hz 220VAC/50Hz	
Motor Power	370W	550W
Gate Moving Speed	11 to 13m/min	
Maximum Loading Weight	800Kg	1500Kg
Remote Control Distance	≥30 m	
Remote Control Mode	Single-button mode / Three-button mode	
Limit Switch	Spring limit switch / Magnetic limit switch	
Working Noise	≤60dB	
Working Duty	S2, 20min	
Recording of up Remote Controls	Standard control board: 20; Intelligent control board: 40	
Remote Frequency	433.92 MHz	
Working Temperature	-20°C to +70°C	
Package Weight	15Kg	17Kg

Drawing and Measurements:



6 Installation

Before You Start

- ZK-SL800AC/ZK-SL1500AC Sliding Gate Automation Kit is suitable for powering the opening and closing motion of gates up to 800, 1500kg in weight, up to a length of 12m.
- 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 gate opener itself must be fitted within private property, never externally to a property's boundary.

Any work 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
- 12 mm concrete drill and hammer (when uses expansion screws)
- Phillips head screwdriver
- Straight screwdriver

Example Sliding Gate

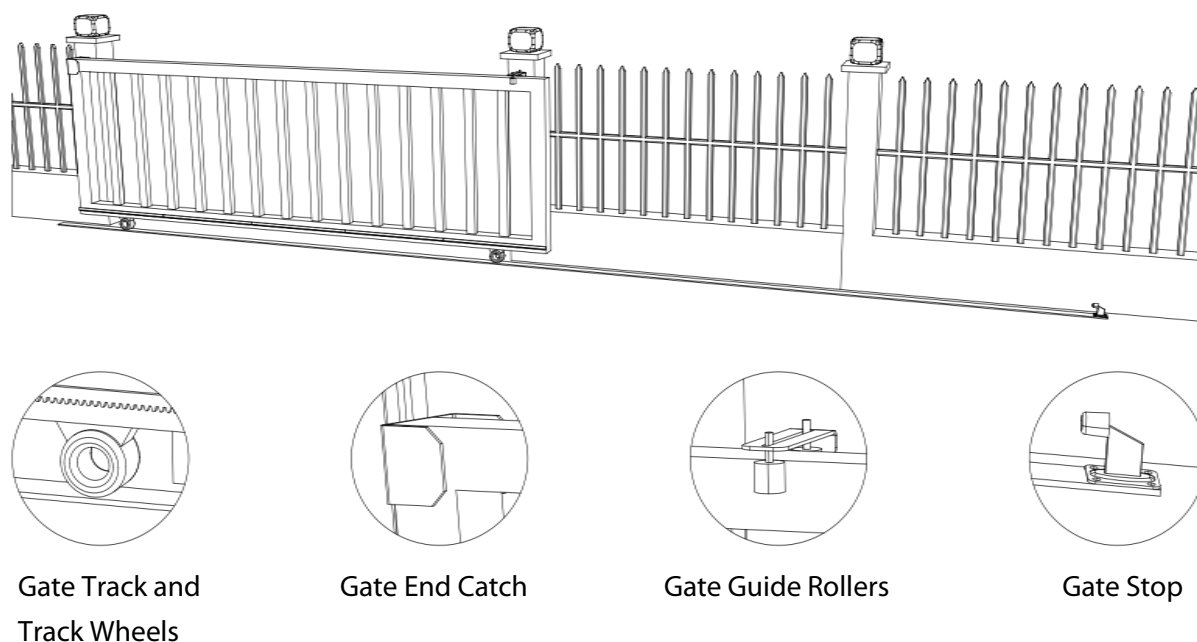


Figure 4

Please ensure that the gate opener power cable is not plugged in at any stage before Step 8.

6.1 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 the performance of the automatic gate opener.

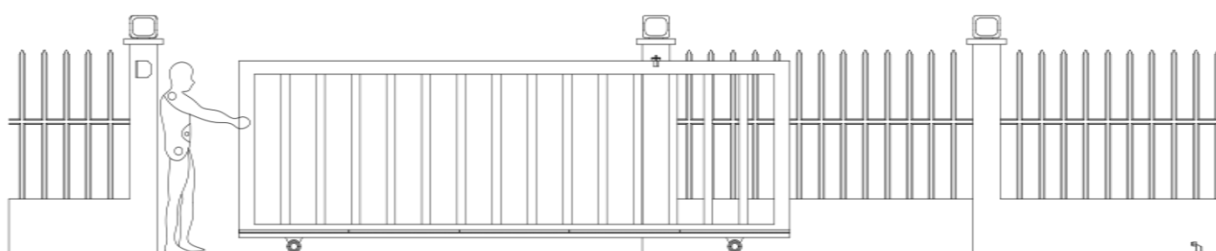


Figure 5

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

6.2 Checking Manual Release

Insert the key and open the manual release bar to enable the motor to 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 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

6.3 Removing/Installing Motor Cover

- Unscrew the two cover screws on the motor cover, one on each side.
- Remove the rubber grommet below the limit switch (Figure 7).

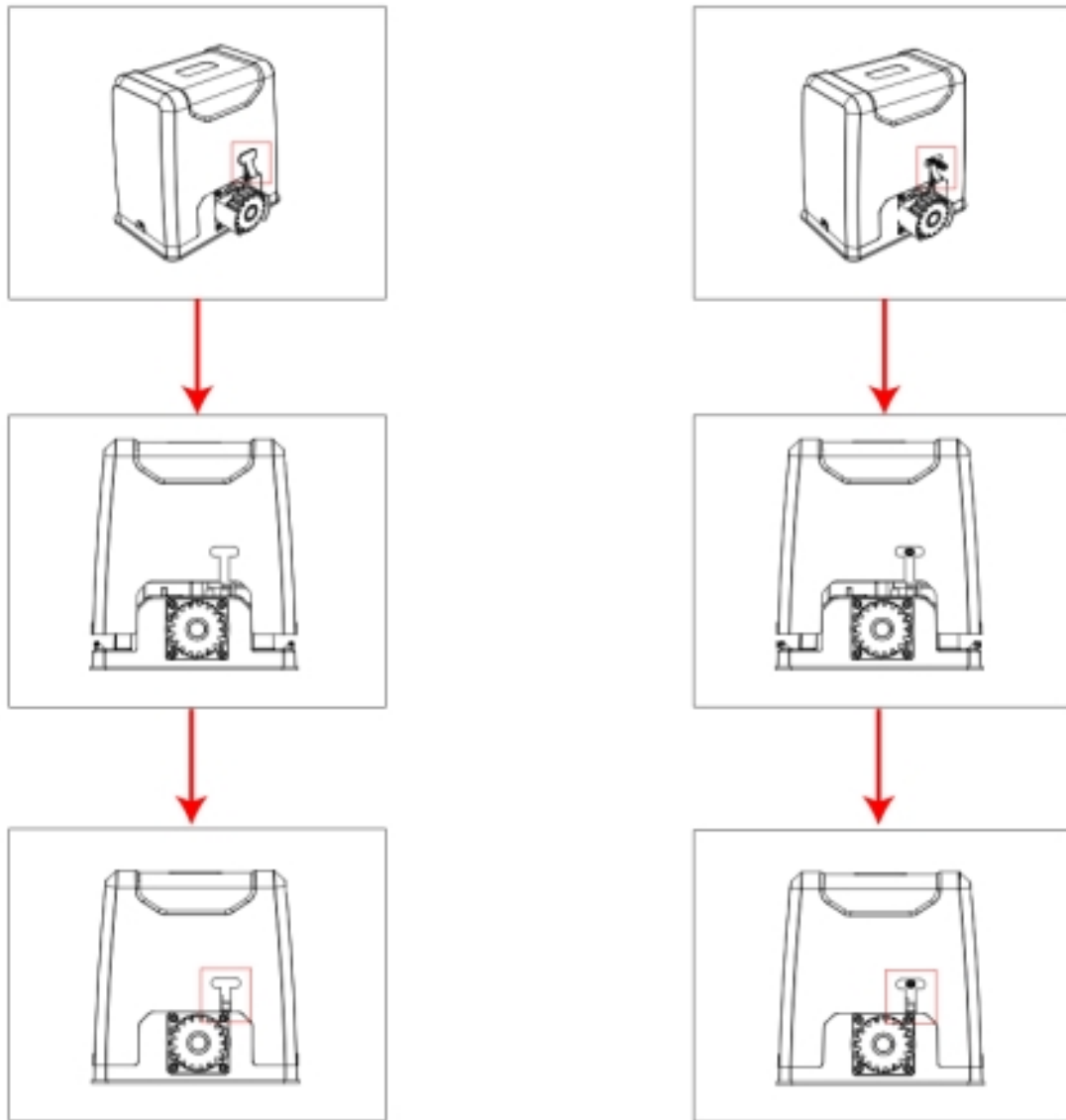
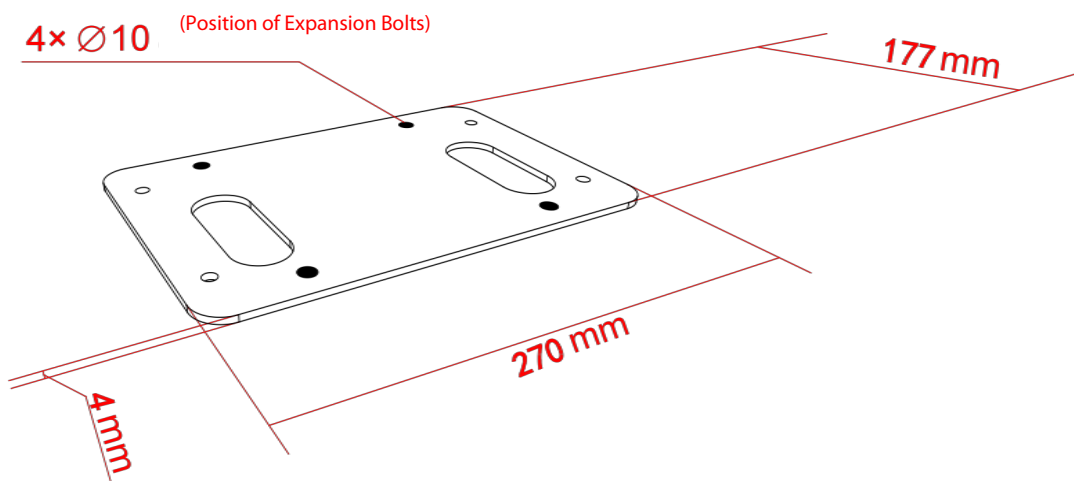


Figure 7

Note: The rubber grommet must be fitted back onto the motor cover once the cover has been re-fitted/replaced onto the base of the motor.

6.4 Motor Pad Footing

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



Mounting Plate Dimensions

Figure 8

6.5 Fitting Mounting Plate and Motor

Without Mounting Plate

- Fit anchor bolts according to holes in the motor base (as per Figure 9).
- Tighten the M10 bolts with the spring and flat washers provided to the motor's base as required. (The height can be slightly adjusted by bottom bolts as per Figure 10).

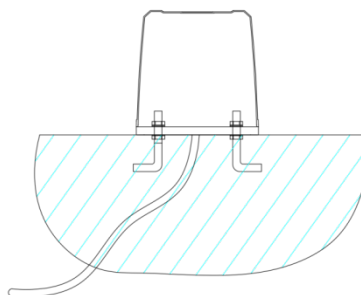


Figure 9

Damage that occurs during the normal use of the product is covered by the warranty and enjoys warranty service.

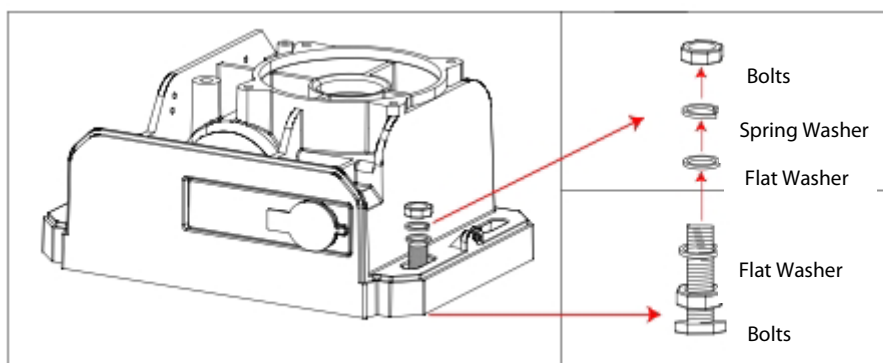


Figure 10

With Mounting Plate

- Drill holes as per Figure 8 for anchor bolts (or expansion bolts) and fit anchor bolts (or expansion bolts). (Expansion bolts need to be prepared by customers).
- Fit and tighten anchor bolts (as per figure 11).
- Using the M10 * 50 mm bolts with spring and flat washers provided, bolt the motor to the mounting plate and tighten as required. (as per figure 12).

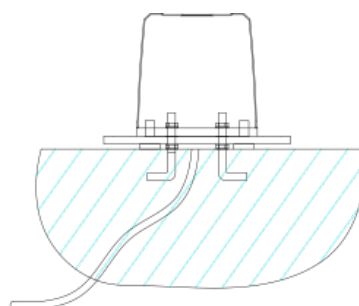
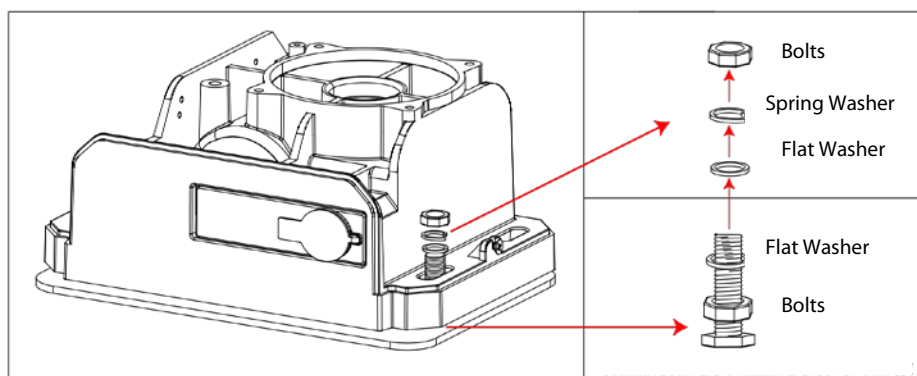


Figure 11

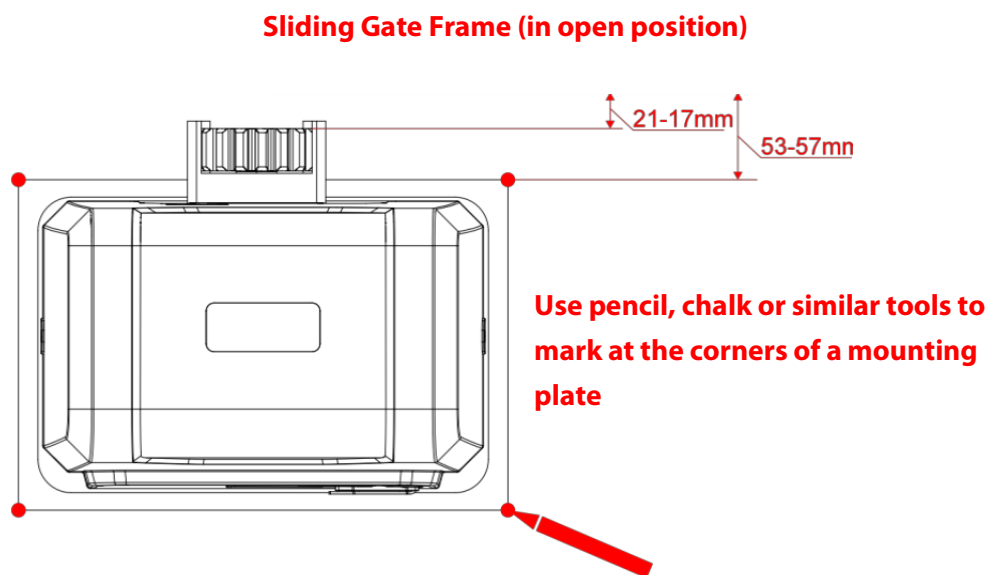


The bolts and flat washer between mounting plate and motor base are used for adjusting the height of the motor.

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. The gear and gear rack should be centered as much as possible.
- Take the motor away from the mounting plate.



6.6 Gear Rack & Motor Alignment

- See Figure 15 for recommended gear rack mounting height.
- Ensure that the output gear has a minimum clearance of 1 to 2 mm 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 the gate slides freely by hand.

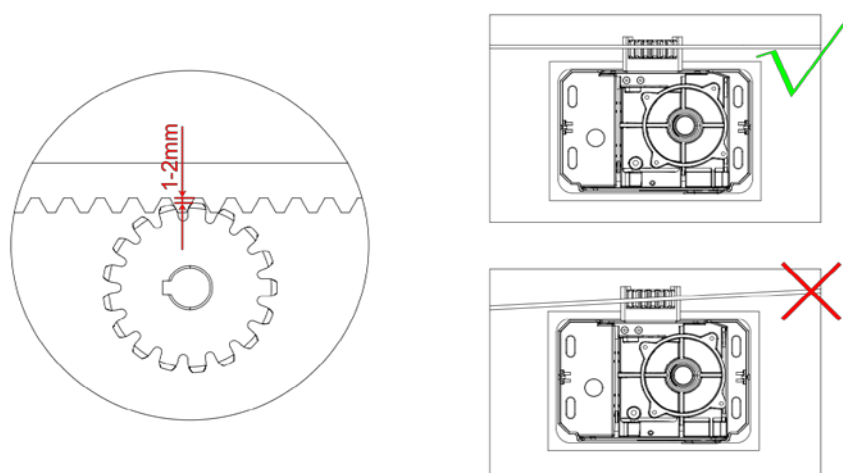


Figure 14

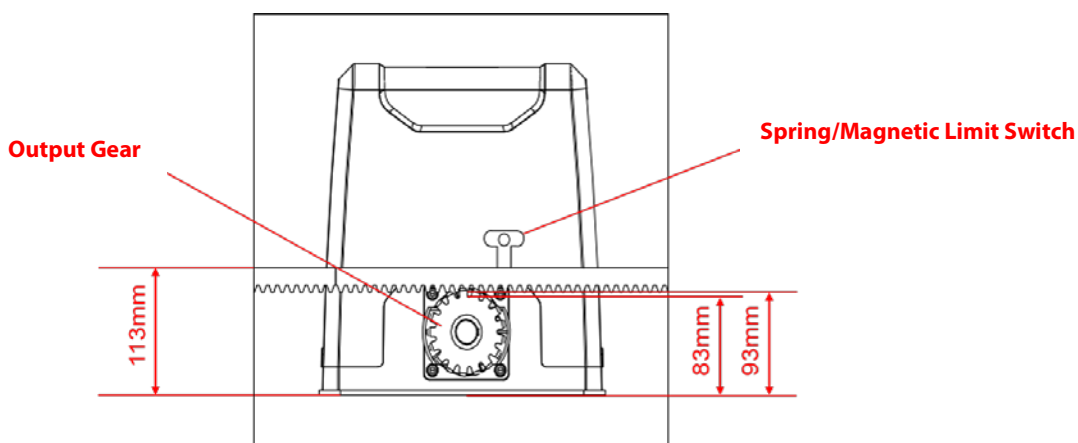
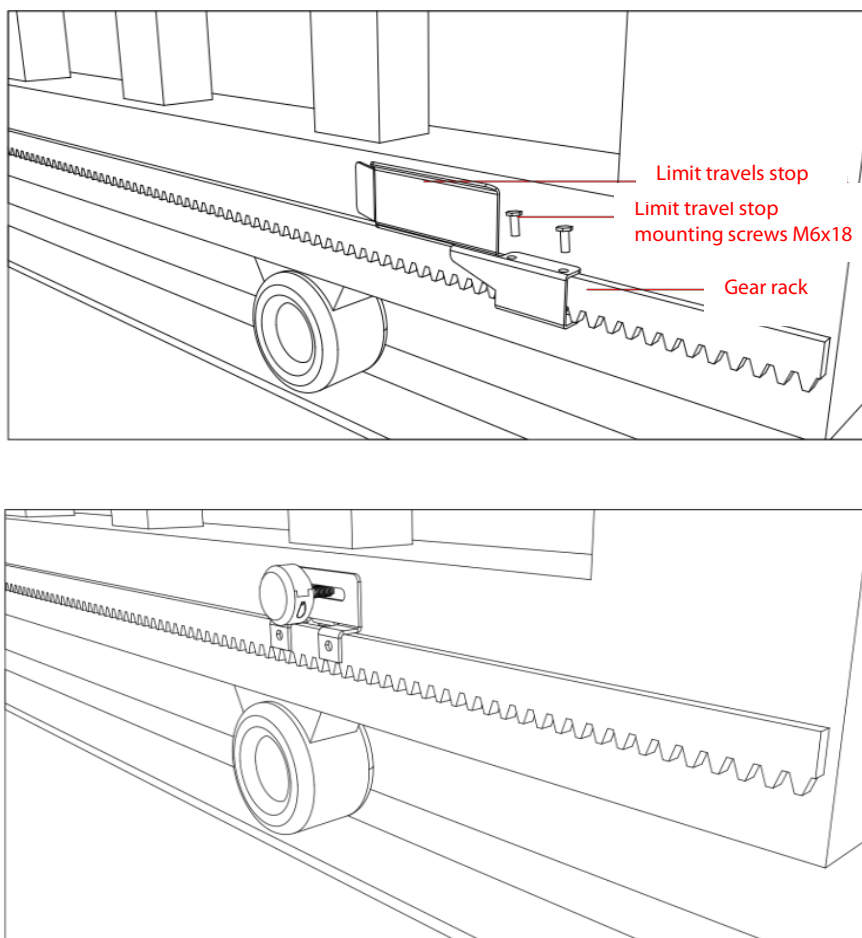


Figure 15

6.7 Limit Switch Stops

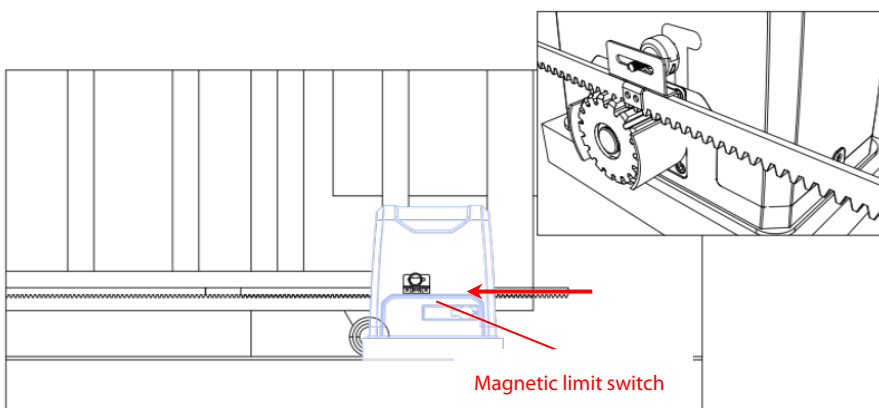
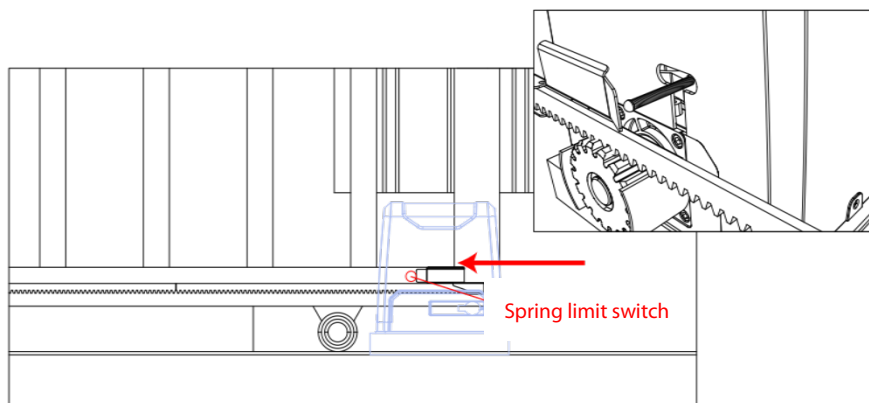
- Included in your gate opener kit are two limit switch stops which must be fitted to the gear racks on your gate to ensure safe operation.
- The limit switch stops are designed to set the desired opening and closing position of your gate. These limit switch stops are designed to come into contact with the spring/magnetic limit switch.
- It is extremely dangerous that without or incorrect installation of the limit switch stops can cause a crash of gate, damage of the internal structure of the motor, moreover, the gate may slide off the guide rail.



6.7.1 Setting the Limit Switch Stops

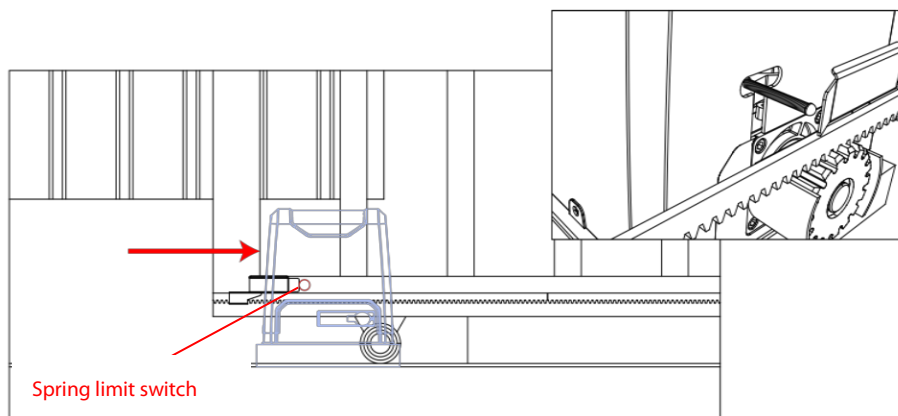
Closed Position

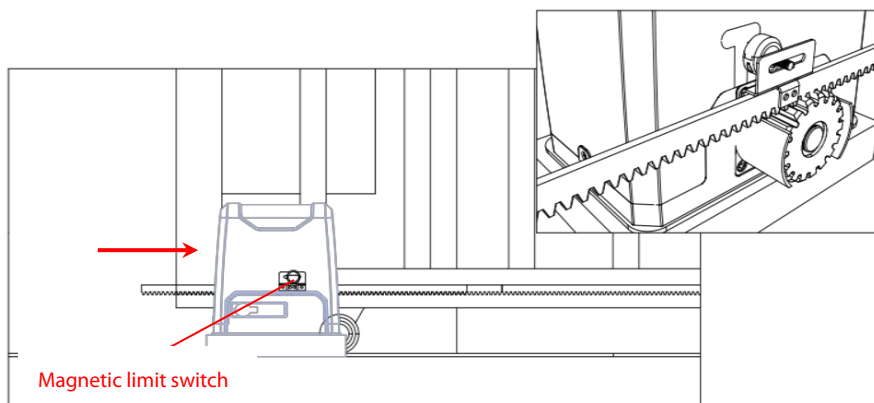
- Position the gate 150 to 200 mm back from the closed position of the gate end catch. When adjusting the closed position under power, will ensure that you do not crash the gate into the end stop/catch.
- Fit limit switch stops onto the top of gear rack at the point where it meets the Spring/Magnetic limit switch on the motor.
- Tighten locking screws of limit switch stop.



Open Position

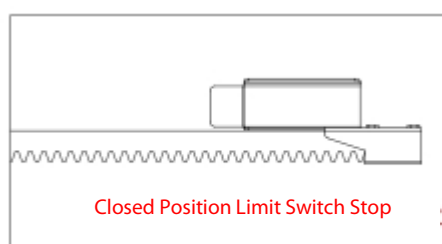
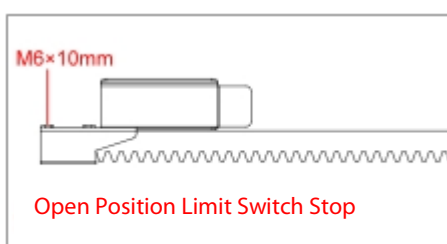
- Position the gate 150 to 200 mm back from the open position of the gate stop. When establishing the open position under power, will ensure that you do not crash the gate into the end stop/catch.
- Fit limit switch stops onto the top of gear rack at the point where it meets the Spring/Magnetic limit switch on the motor.
- Tighten locking screws of limit switch stop.



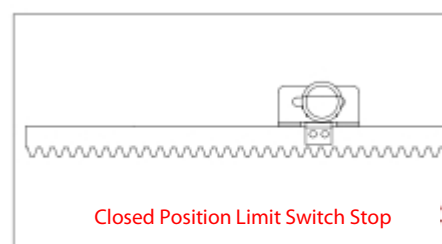
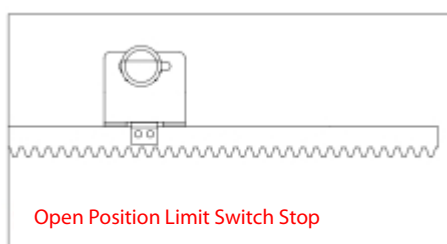


Test the spring/magnetic limit switch stops by moving the gate manually until you hear a click, making sure contact is made with the spring/magnetic limit switch on the motor.

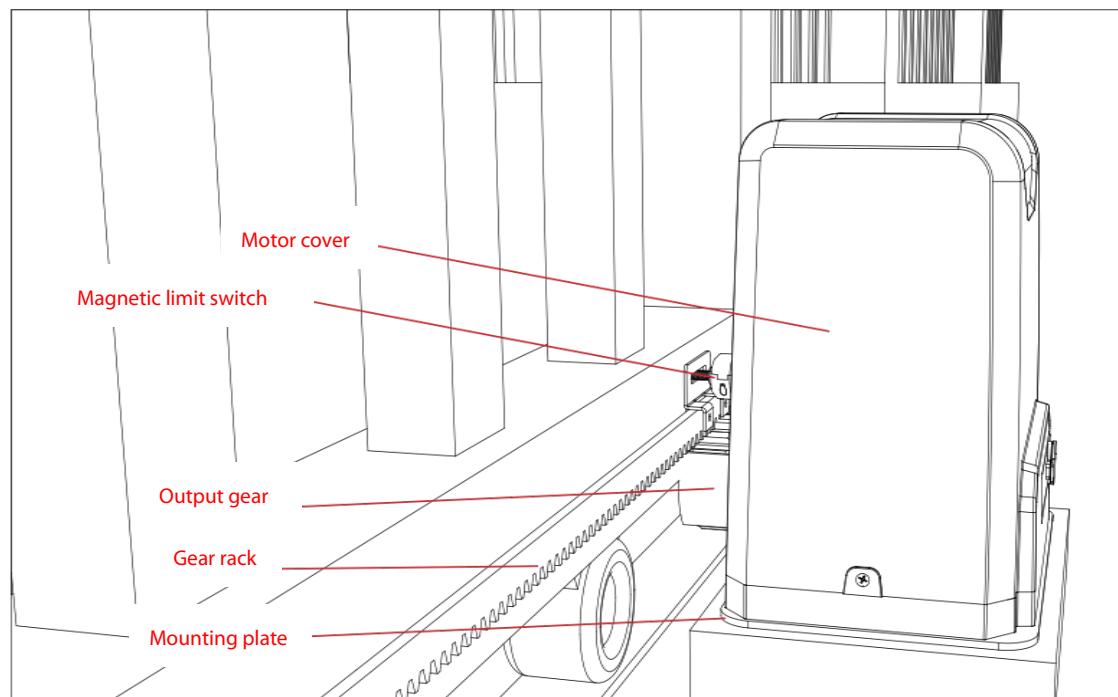
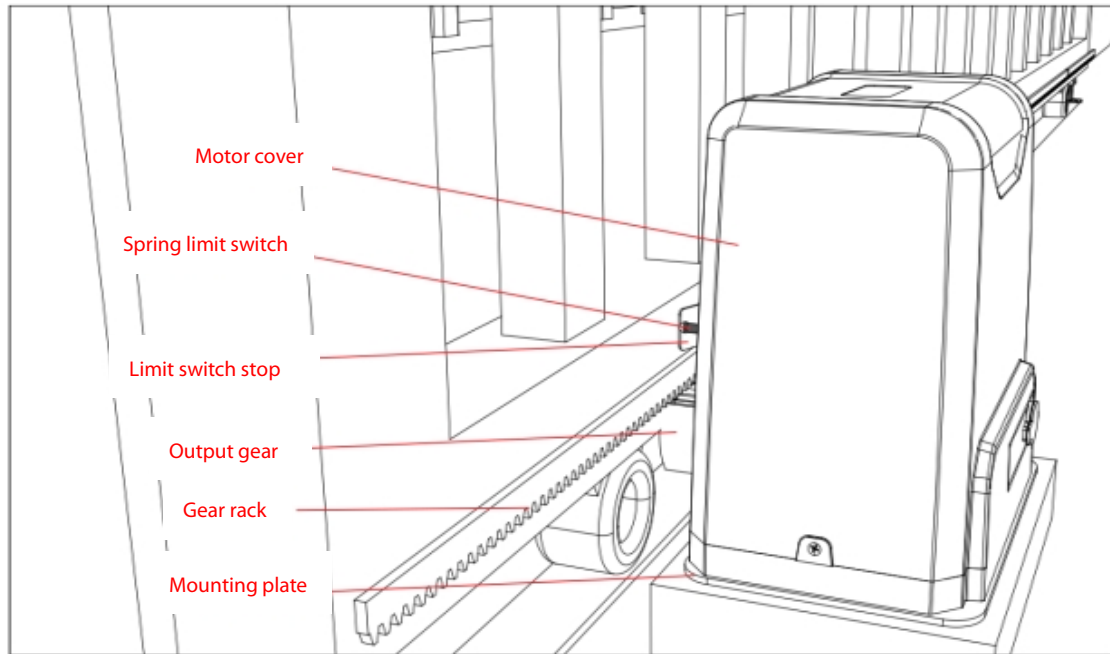
Reset: Turning the power off will reset the limit switch stop memory. Power on the gate opener again, pressing remote control or external push button switch to open and then close the gate once, then new limit switch stop setting is completed.



The installation of spring limit switch stops is shown in the figure above.



The installation of magnetic limit switch stops is shown in the figure above.



Open Position

6.8 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.

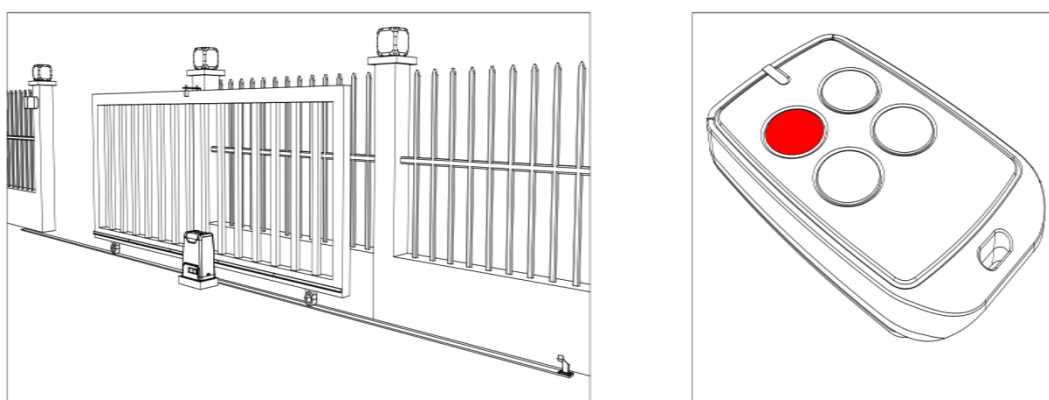


Figure 16

6.9 Testing Travel and Limit Stops

Testing the Closed Position

- Ensure gate opener is installed as per steps 5, 6 and 7 and the sliding gate is in the middle position.
- Press remote (remotes included in the kit are factory paired to the motor). The sliding gate will begin to close.
- The limit switch stop will hit the limit switch and the sliding gate will stop.
- When the gate stops, measure the distance remaining between the sliding gate and the desired closed position.
- You have now determined the closed position of the sliding gate when the limit switch stop hits the limit switch.

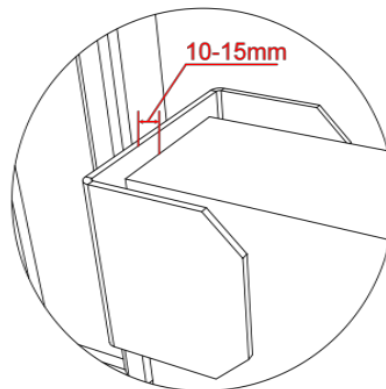
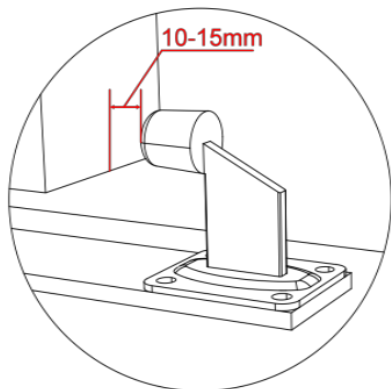
- Adjust the limit switch stop from the measurement you have taken to get your final gate closed position. The ideal closed final position for the gate frame is 10 to 15 mm from the closed gate end catch.

Testing the Open Position

- Press remote, the sliding gate will begin to open.
- The limit switch stop will hit the limit switch and the sliding gate will stop.
- When the gate stops, measure the distance remaining between the sliding gate and the desired open position.
- You have now determined the open position of the sliding gate when the limit switch stop hits the limit switch
- Adjust the limit switch stops from the measurement you have taken to get your final gate open position. The ideal open final position for the gate frame is 10 to 15 mm from the gate stop.

Reset:

When setting new limit stop positions, please ensure that you turn the power off and then on again. Turning the power off will reset the limit stop memory, allowing for new limit switch stop positions to be recognized by the motor.



Now the basic open and closed positions are set, for further setting functions and adjusting parameters, please refer to pages 17 to 29 in this manual.

7 Intelligent Control Board

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.

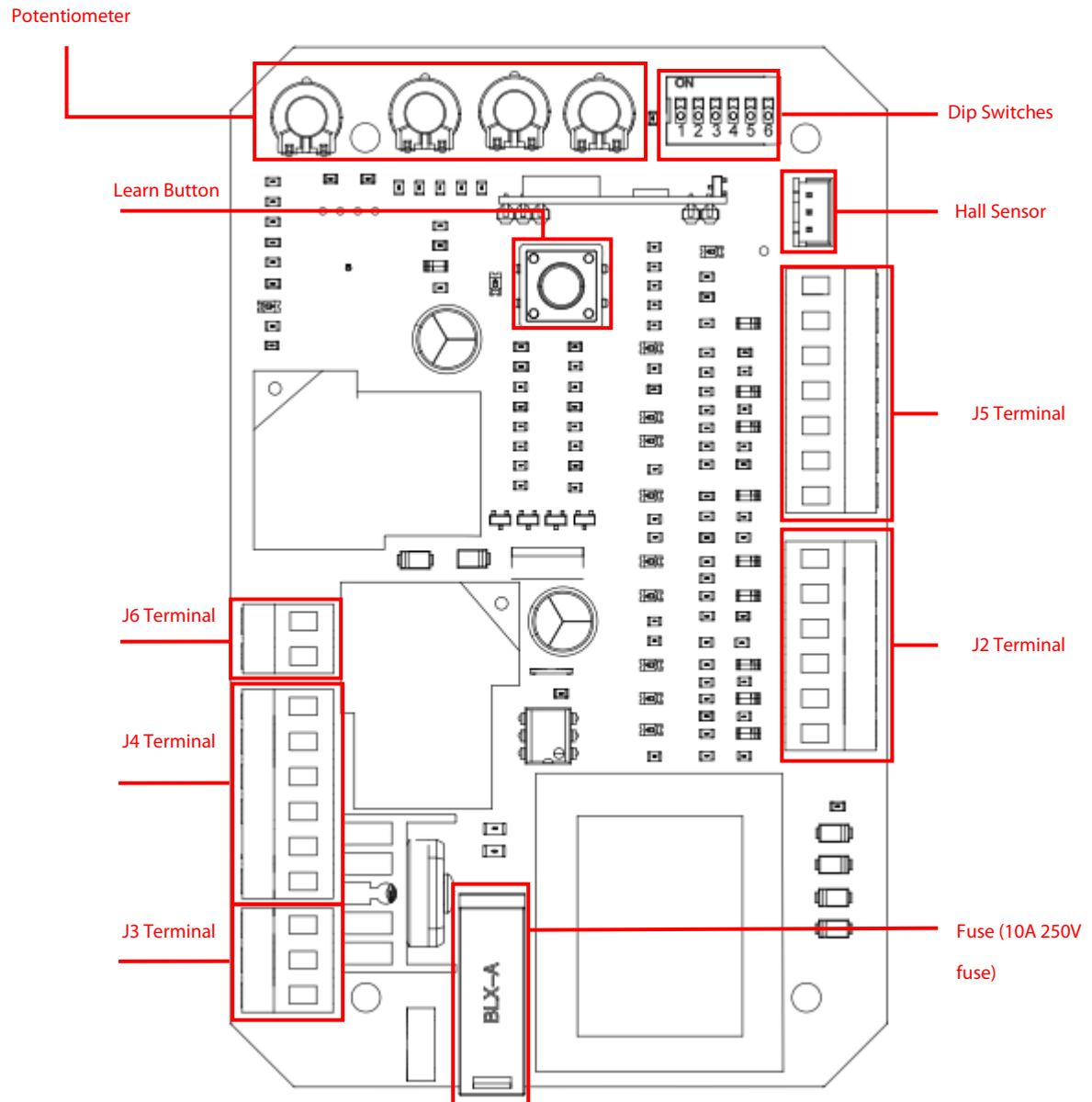


Figure 17

7.1 DIP Switch Adjustment

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

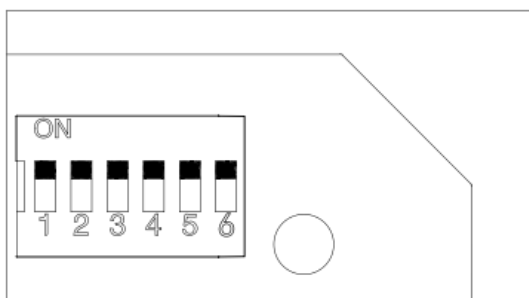


Figure 18

Number	Function	Description
1	Soft Start/Close Function	OFF–enabled (Default) ON–disabled
2	Limit Switch Setting	OFF–Normal Open ON–Normal Close The default position is ON, this should align with the limit switch and is not recommended to be modified by the users.
3	Automatic Close Time Setting	Automatic close time setting: the gate is operated opened using a remote control and then automatically closes after a few seconds. 3 OFF 4 ON: automatic close delay time is 12s.
4		3 ON 4 OFF: automatic close delay time is 24s. 3 ON 4 ON: automatic close delay time is 36s. 3 OFF 4 OFF: no automatic close function. Default setting: 3 OFF 4 OFF Disable the automatic close function.
5	Auto-reverse Function	OFF-enable ON-disable The default position is OFF, this should align with the opener status and is not recommended to be modified by the users.
6	Remote Control Mode Switch	OFF-four channel mode ON-single channel mode

7.2 Potentiometer Adjustment

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

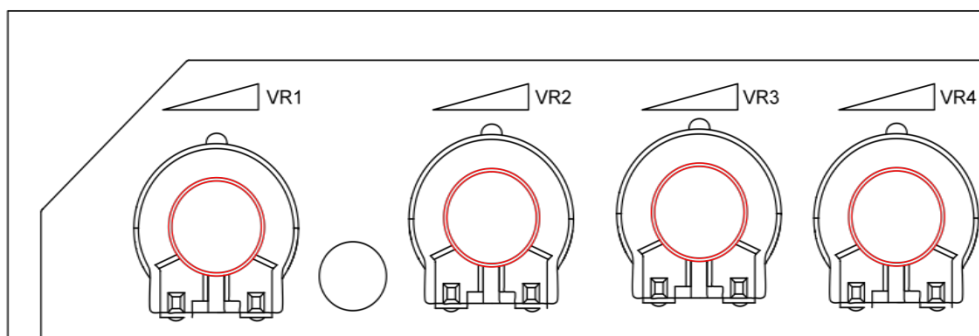


Figure 19

VR1: Stall Force Mode

Maximum = More Force = Less sensitive

Minimum = Less Force = More sensitive

The gate opener will detect obstacles and impacts to the gate when Stall Force Mode is activated (Dip switch 5 is in the OFF position). If this occurs during the opening process, the gate will stop; if this occurs during the closing process, the gate will come to a stop and then reopen. VR1 should be rotated clockwise to increase stall force and anti-clockwise to decrease it.

For safety, we strongly recommend that Stall Force Mode is left enabled (Dip switch 5 is at the OFF position). Do not turn Dip switch 5 to the ON position.

VR2: Brake Force Adjustment

For adjusting brake force at the limit position during gate opening and closing. This should only be adjusted for heavy gates that need additional force to brake when the limit switch is detected.

Rotate VR2 clockwise to increase, counter-clockwise to decrease. The default setting is at a minimum.

VR3: Slow Start/Stop Width Adjustment

This switch controls how many seconds the gate opener operates at maximum speed. Rotate VR3 clockwise to increase, rotate counter-clockwise to decrease.

When VR3 switches to a minimum, the slow start/stop function is disabled.

VR4: Motor Output Force Adjustment

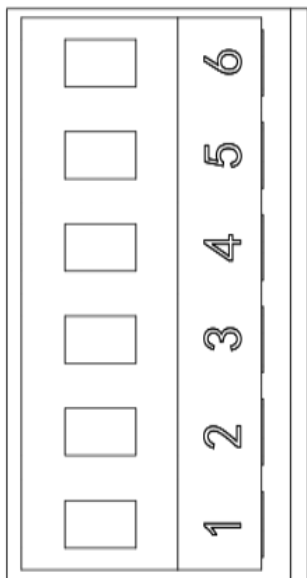
For best performance, set the torque at the lowest setting for secure use.

Rotate clockwise to increase, counter-clockwise to decrease.

The default setting is at maximum.

7.3 Terminal Instructions

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



J2 Terminal (as per Figure 17):

Terminal 6: External Push Button Pedestrian Switch

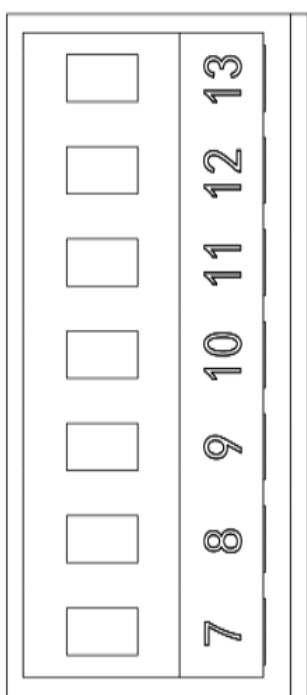
Terminal 5: External Open/Stop/Close/Stop Loop Control Push Button (Repeated Open/Stop/Close)

Terminal 4: Common Terminal for All External Control Push Button

Terminal 3: External Stop Push Button Switch.

Terminal 2: External Open Push Button Switch.

Terminal 1: External Close Push Button Switch.



J5 Terminal: Limit Switch and Accessories.

Additional accessories sold separately

Terminal 13: Open Limit Switch.

Terminal 12: Limit Switch Common Terminal.

Terminal 11: Close Limit Switch.

Terminal 10: Loop Detector Connector.

Terminal 9: Ground/Earth (GND).

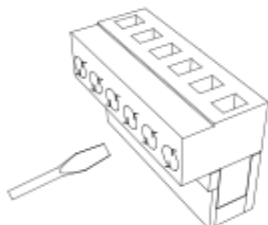
Terminal 8: Photocell input (N.C.). **If no photocell is fitted, use a jumper between terminals 8 & 9.**

Terminal 7: Power supply for accessories (+15V)

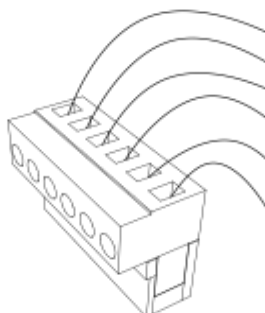
Note: If the moving direction needs to be changed, the wires 11 and 13 on the J5 Terminal have to be swapped with each other.

7.4 Wiring to the Terminal

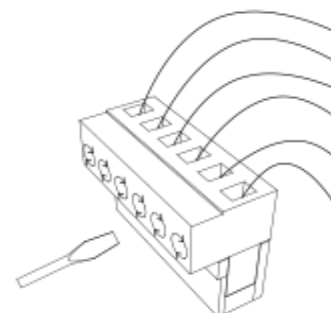
Note: If the moving direction needs to be changed, the wires 11 and 13 on the J5 Terminal have to be swapped with each other.



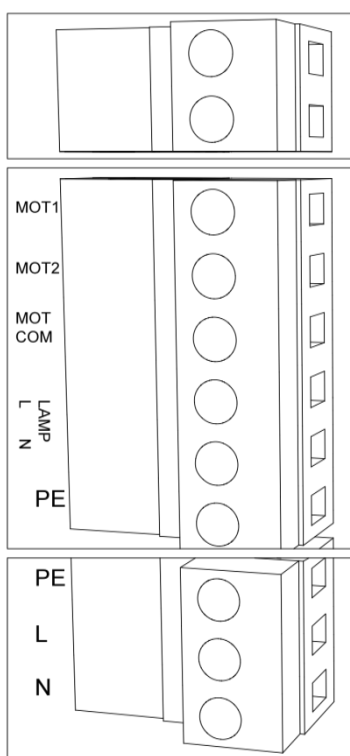
Using a screwdriver to loosen the screw on the side of the terminal.



Insert the wire into the number on the terminal that you are looking to connect to.



Tighten with a screwdriver to secure the wire in place.



J6 Terminal:
Motor Capacitor

J4 Terminal:
MOT1: Motor Terminal, swap with MOT2 to change gate moving direction.

MOT2: Motor Terminal, swap with MOT1 to change gate moving direction.

MOTCOM: Motor Common Terminal.

LAMP (L&N): Connection for warning lamp.

PE: Motor and warning lamp earth.

Note: If the moving direction needs to be changed, the wires 11 and 13 on the J5 Terminal have to be swapped with each other.

J3 Terminal:
PE: Earth (yellow/green wire).

L: Power (brown wire).

N: Power (blue wire).

7.5 Connecting Infrared Photocells

The below steps must be completed by a licensed electrician.

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

While closing, if the ray of the Infrared Photocell is blocked, the gate will stop and reverse immediately, to protect the user and property security. To install photocells, connect the wiring as per Figure 20. You must remove the wire jumper between terminal 8 and terminal 9 on J5 (refer to Figure 21).

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

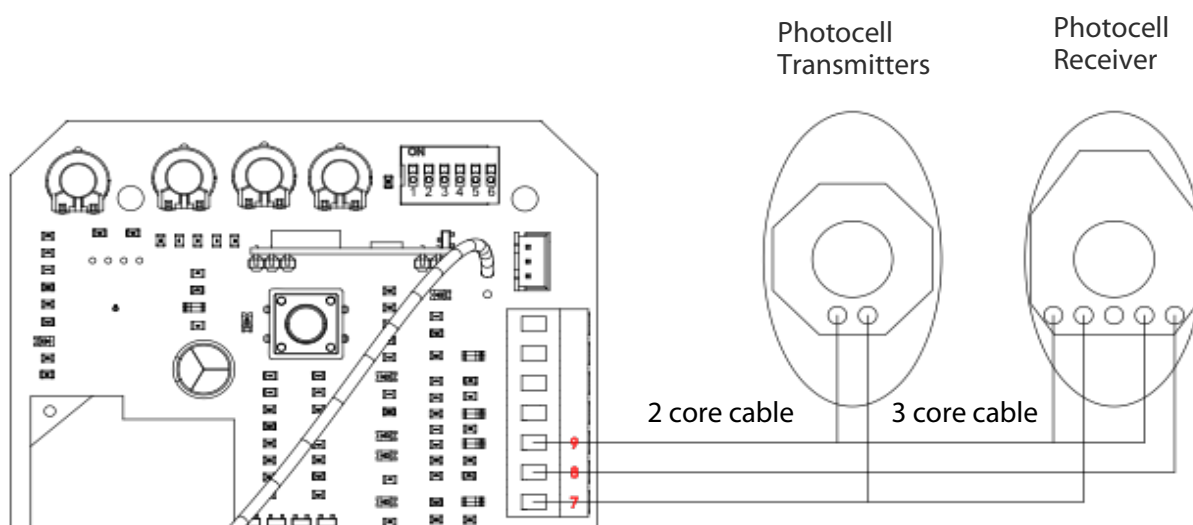
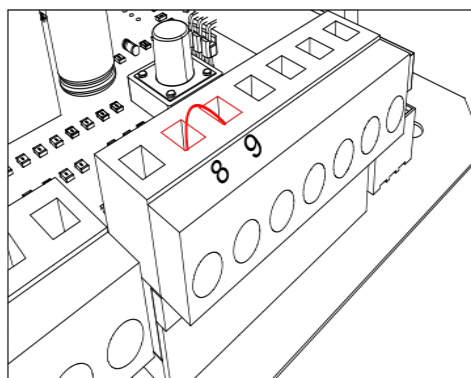
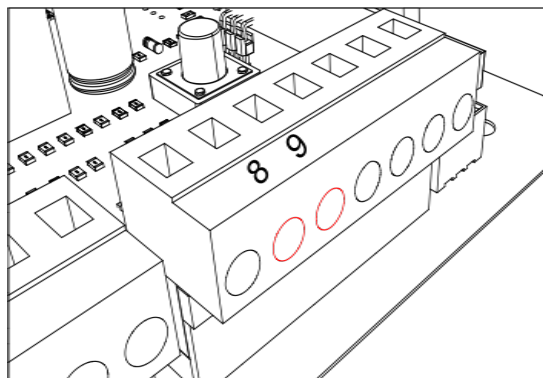


Figure 20

Before Installing Photocells



Loosen 8 and 9 ports on J5 Terminal with a screwdriver. Make sure the power is disconnected before doing so.



Remove the wire jumper Between ports 8 & 9 on J5 Terminal.

Figure 21

7.6 Remote Control Operation

Three-button mode remote control: OPEN/CLOSE/STOP of the motor is controlled by three buttons separately on the remote control.

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

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

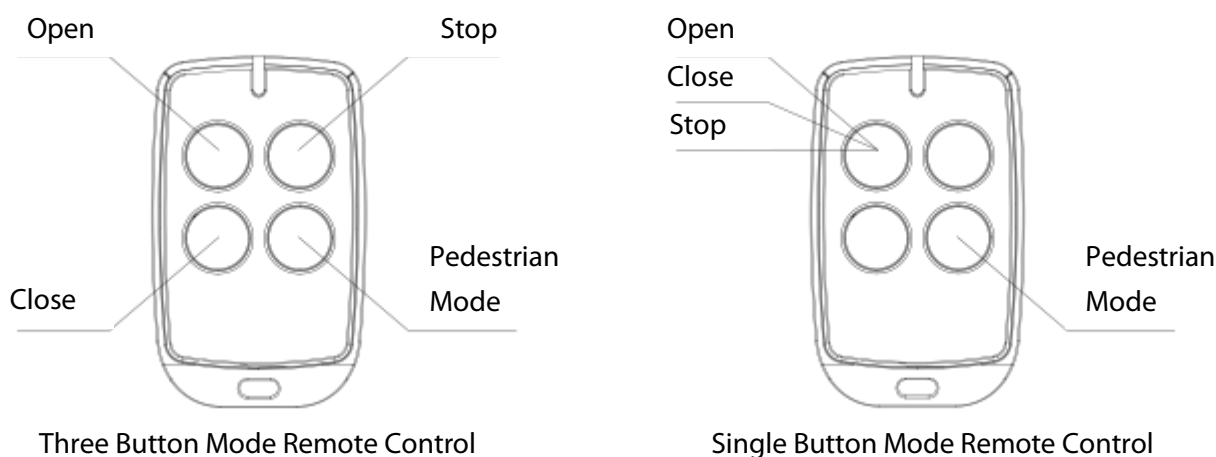
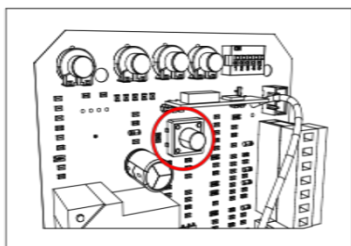


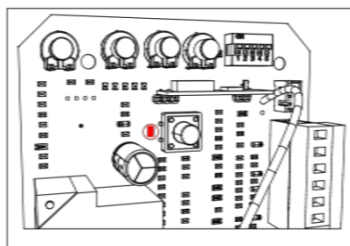
Figure 22

7.7 Remote Control Learning

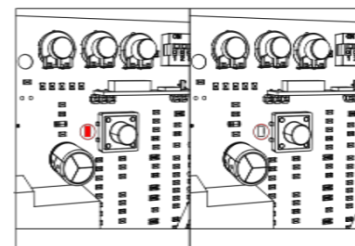
Remove the motor outer cover and continue to remove the transparent PCB cover, press the button 'S1' on the control board, until the 'LEARN' indicator light turns on, then release the button. When the light is on, press the button intended to be paired on the remote control twice, the 'LEARN' indicator light will flash repeatedly and then turn off when the remote control is paired. A maximum of 40 remote controls can be paired to one motor.



Press and hold learning Button (S1) until the Learn LED flashed on.



When the light is on, press the first button on the remote control twice.



The Learn LED will flash repeatedly and then turn off, when the remotes is paired.

7.8 Clearing Remote Controls

To delete all paired remote controls, press and hold the button 'S1' till LEARN LED turns on. All previously paired remote controllers will be deleted when the LEARN LED turns off.

8 Standard Control Board

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.

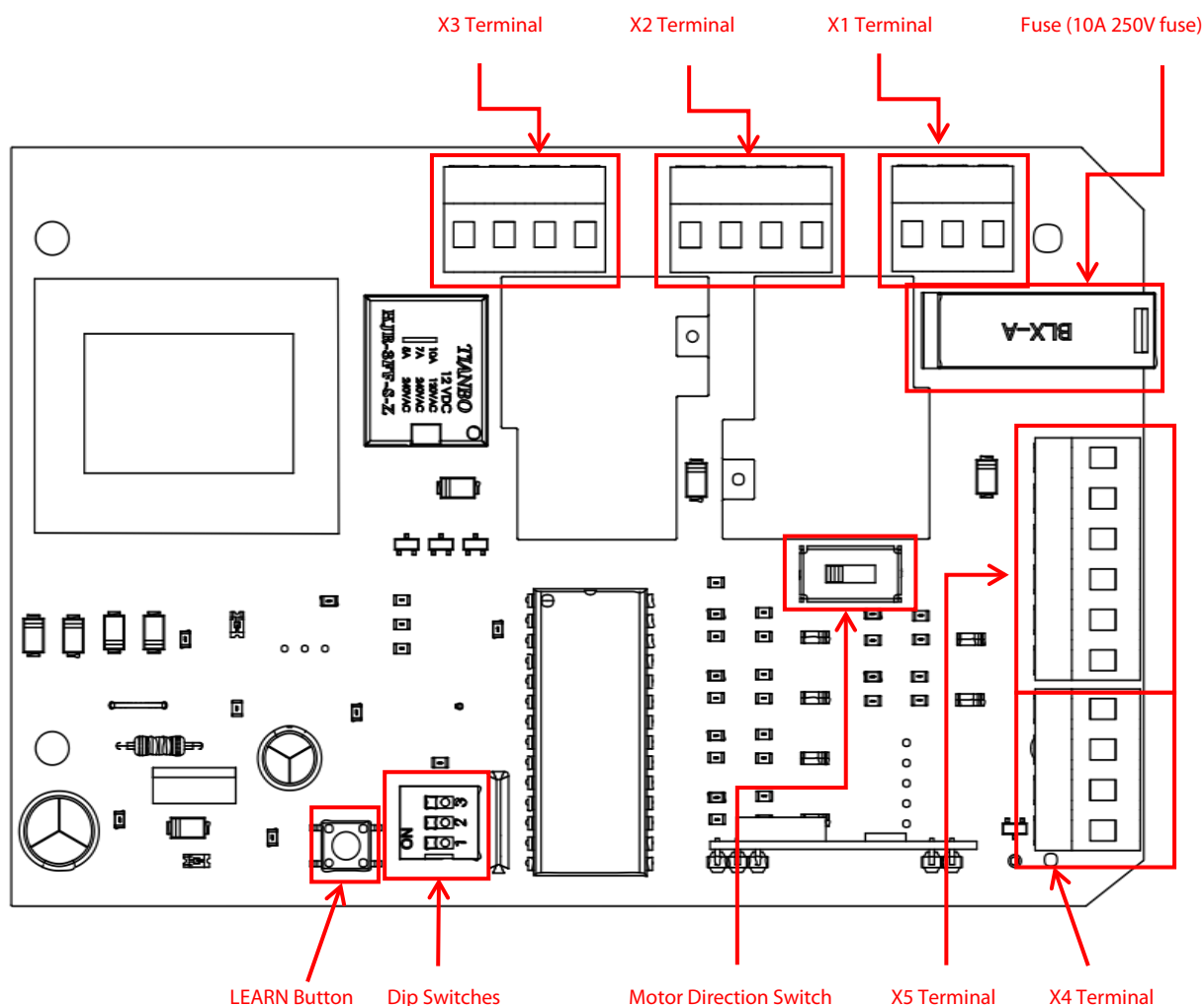


Figure 23

8.1 DIP Switch Adjustment

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

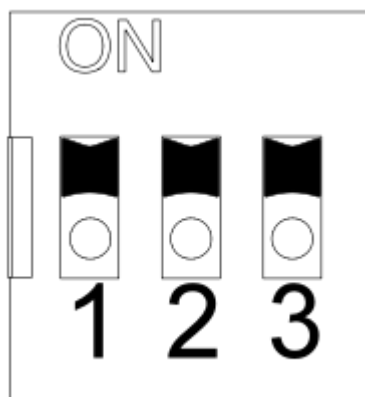
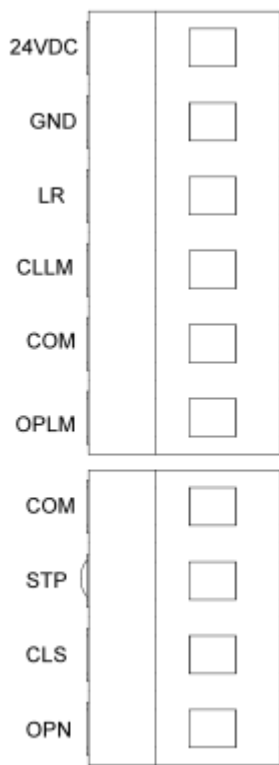


Figure 24

Number	Function	Description
1	External Push Button Switch	<p>ON-Three button switch: X4 Terminal OPN - Open, CLS - Close, STP - Stop, COM - Common Terminal</p> <p>OFF-Single button switch: CLS and COM on X4 Terminal can be used to circularly control the OPEN/STOP/CLOSE/STOP of the gate opener.</p>
2	Automatic Close Time	<p>Automatic close time setting: the gate is operated to open by remote control operation and will close automatically after a few seconds' delay.</p> <p>2 ON 3 OFF: automatic close delay time is 15s.</p> <p>2 OFF 3 ON: automatic close delay time is the 30s.</p> <p>2 OFF 3 OFF: automatic close delay time is 45s.</p> <p>2 ON 3 ON: No automatic close function.</p> <p>Default setting: 2 ON 3 ON</p> <p>Disable the automatic close function.</p>

8.2 Terminal Instructions

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



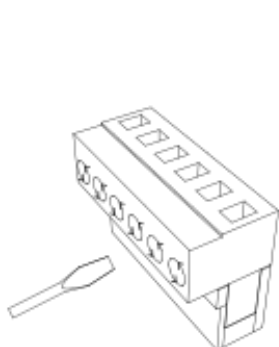
X5 Terminal: Limit Switch and Photocell Switch.
 Additional accessories sold separately
 24VDC: Positive Power Supply for Accessories +24VDC.
 GND: Negative Power Supply for Accessories -GND.
 LR: Photocell Input (N.C.).
If no photocell, connect LR and GND by a jumper.
 CLLM: Close Limit Switch.
 COM: Limit Switch Common Terminal.
 OPLM: Open Limit Switch.

X4 Terminal: External Push Button.
 COM: Common Terminal for External Push Button.
 STP: External Stop Push Button Switch.
 CLS: External Close Push Button Switch.
 OPN: External Open Push Button Switch.

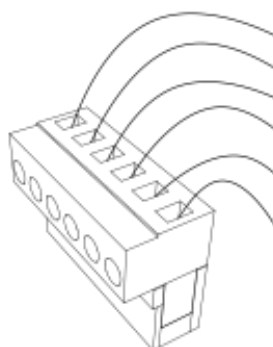
Note: If the moving direction needs to be changed, the CLLM and OPLM on the X5 terminal have to be swapped with each other.

8.3 Wiring to the Terminal

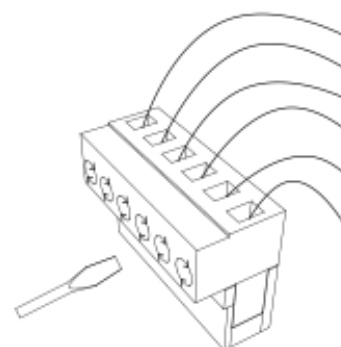
All changes to these settings must be completed by a licensed electrician.



Using a screwdriver to loosen the screw on the side of the terminal.



Insert the wire into the number on the terminal that you are looking to connect to.



Tighten with a screwdriver to secure the wire in place.

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



X1 Terminal:

L: Live Wire (brown wire).

N: Neural Wire (blue wire).

PE: Grounding Wire (yellow/green wire).



X2 Terminal:

PE: Earth

V: Common Terminal of Motor.

U: Motor Terminal. Switch SW1 will change gate moving direction.

W: Motor Terminal. Switch SW1 will change gate moving direction.

Note: If the moving direction needs to be changed, the CLLM and OPLM wires on the X5 Terminal have to be swapped with each other.



X3 Terminal:

C C: Motor Capacitor

D1 D2: Connection for warning lamp (AC220V).

8.4 Connecting Infrared Photocells

The below steps must be completed by a licensed electrician.

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

While closing, if the ray of the Infrared Photocell is blocked, the gate will stop and reverse immediately, to protect the user and property security. To install photocells, connect the wiring as per Figure 25. You must remove the wire jumper between GND and LR on the X5 terminal (refer to Figure 26).

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

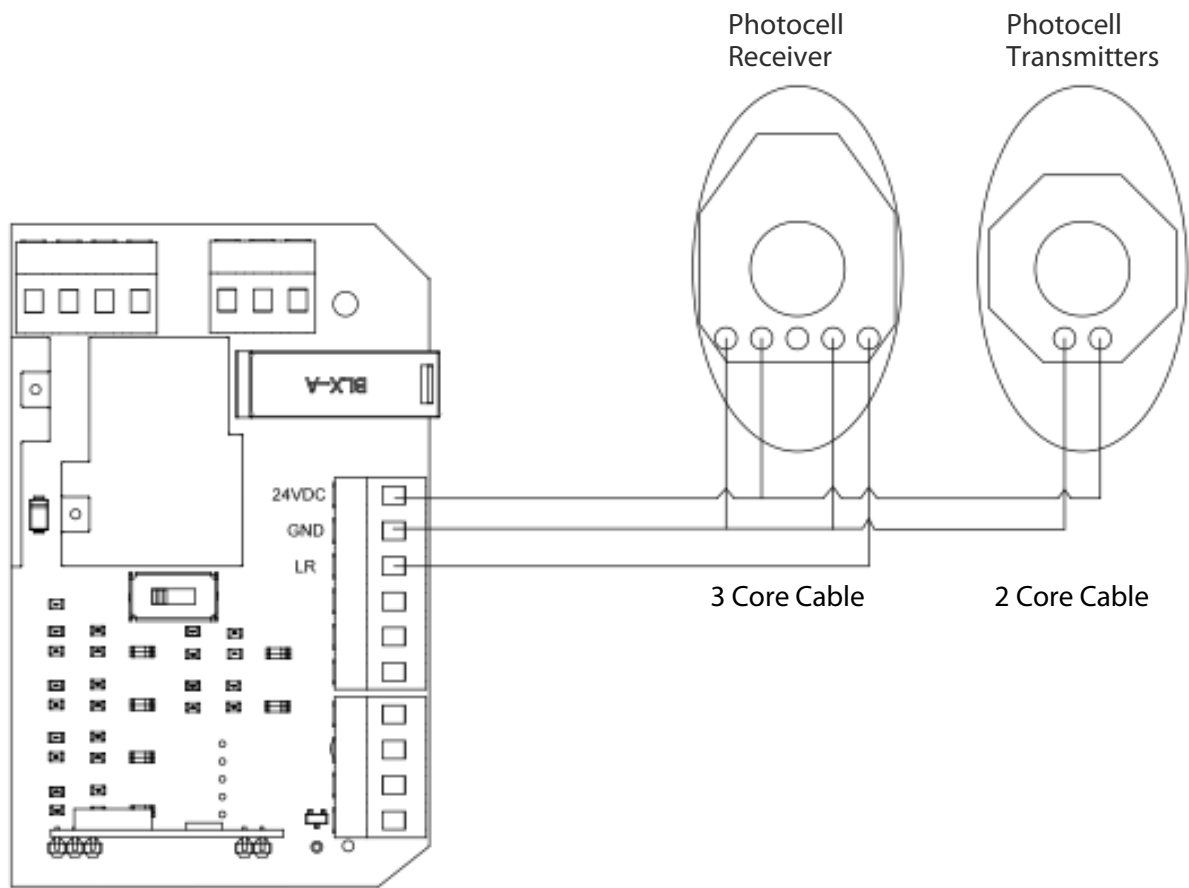
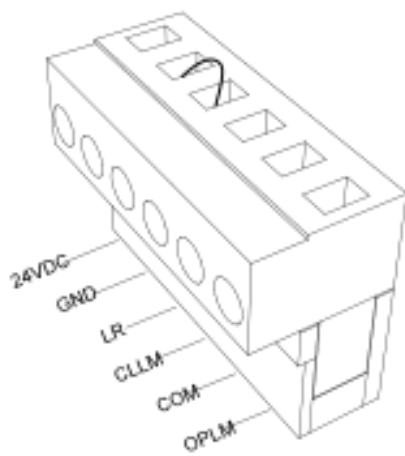
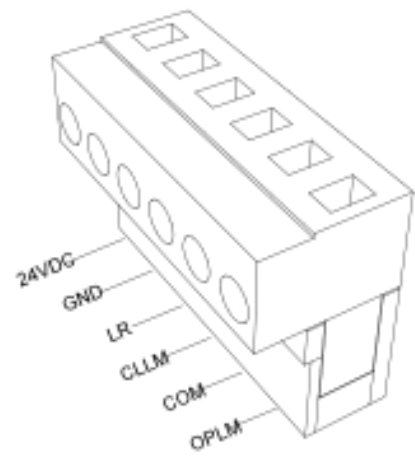


Figure 25



Loosen LR and GND on X5 Terminal with a screwdriver. Make sure the power is disconnected before doing so.



Remove the jumper wire between LR & GND on X5 Terminal.

Figure 26

8.5 Remote Control Operation

Three-button mode remote control: OPEN/CLOSE/STOP of the motor is controlled by three buttons separately on the remote control.

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

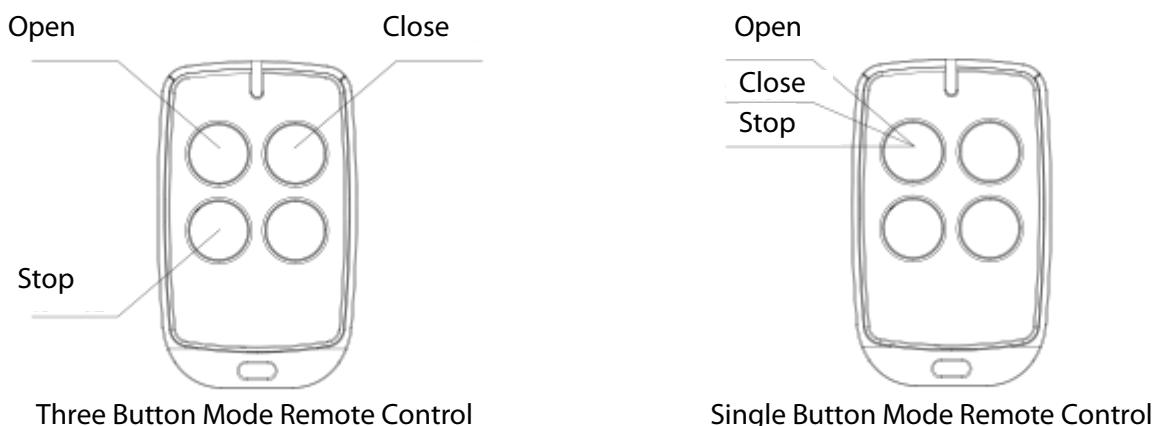
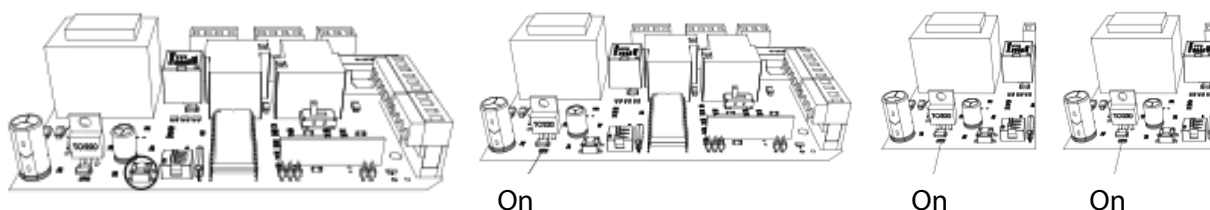


Figure 27

8.6 Remote Control Learning

Remove the motor outer cover and continue to remove the transparent PCB cover, press the button 'AN1' on the control board, until the 'LED2' indicator light turns on, then release the button. While the light is on, press the button intended to be paired on the remote control twice, the 'LED2' indicator light will flash repeatedly and then turn off when the remote control is paired. A maximum of 20 remote controls can be paired to one gate opener.



Press and hold the learn button (AN1) until 'LED2' flashes.

When the light is on, press the first button on the remote control twice.

The 'LED2' will flash repeatedly and then turn off. After which the remote is paired.

8.7 Clearing Remote Controls

To delete all paired remote controls, press and hold the button 'AN1', when the 'LED2' turns off, all previously paired remote controls will be deleted.

9 Maintenance

1. The gate should be checked every month to make sure it operates normally.
2. For the sake of safety, each gate is suggested to be equipped with an infrared protector, and regular inspection is required.
3. Before installation and operation of the gate opener, please read all instructions carefully.
4. Our company keeps the right to change the instruction without prior notice.

10 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!

Problem	Possible Reason	Solution
The gate cannot open or close normally, and LED does not light.	<ol style="list-style-type: none"> 1. The power supply is disconnected. 2. Fuse is blown. 3. Control board X1 terminal wrongly wired. 	<ol style="list-style-type: none"> 1. Connect the power supply. 2. Check the fuse (FU) and replace it if blown. 3. Re-wiring according to the user manual.
The gate can only open but cannot close.	<ol style="list-style-type: none"> 1. Photocell wrongly wired. 2. Photocell wrongly installed. 3. Photocell is blocked by objects. 4. Sensitivity of obstacles is too high (Intelligent type). 5. Hall sensor parts damaged (Intelligent type). 	<ol style="list-style-type: none"> 1. If not connect photocell, please ensure the infrared port and GND port has a jumper wire; if connect photocell, please ensure the wiring is correct and the photocell status is N.C. 2. Ensure that the photocell mounting position can be mutually aligned. 3. Remove the obstacle. 4. Reduce the sensitivity of obstacles. 5. Replace hall sensor parts.
The remote control doesn't work.	<ol style="list-style-type: none"> 1. Battery level is too low. 2. Remote control not paired. 	<ol style="list-style-type: none"> 1. Change the battery. 2. Pair the remote control to the gate opener.

<p>Press the OPEN, CLOSE button, the gate is not moving, the motor has noise.</p>	<ol style="list-style-type: none"> 1. Capacitor damaged. 2. Capacitor is poorly connected. 3. Gate moving is not smooth. 	<ol style="list-style-type: none"> 1. Change capacitor. 2. Check the capacitor wiring. 3. Adjust the motor or gate according to the actual situation.
<p>Not stop when running to opening or closing limit switch position.</p>	<ol style="list-style-type: none"> 1. The opening or closing limit switch is the opposite. 2. Magnetic limit switch badly installed. 	<ol style="list-style-type: none"> 1. Check whether the limit switch wiring is consistent with the motor running direction. 2. Check whether the distance and height between the magnetic limit switch and motor reach to the standard requirement.
<p>The leakage switch tripped.</p>	<p>Power supply cable short circuit or motor wire short circuit.</p>	<p>Check to wire.</p>

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