

Sliding Gate Opener User Manual

SV1000AS/SV1500AS/SV2000AS





WARNING:

Always read this manual before installation, it contains important information concerning installation, use, maintenance and safety.

Any operation not described in this manual is not permitted; incorrect use may damage the product and even injure people and property.

Considering the possible dangers that may arise during the installation and use of the gate opener, the installation must be carried out in strict compliance with building construction standards and electrical operating procedures, in particular:

- Before starting the installation, check whether additional equipment or materials are required to meet specific needs.
 - Packaging materials must be handled in compliance with local regulations.
- Do not alter any parts except as described in this manual. Unexplained alterations may cause malfunction. We are not responsible for any damage caused.
- Do not leak water or any liquid into the controller or other open devices. In such a case, disconnect the power supply immediately. Continued use under such conditions is very dangerous.
- When installing and positioning the motor, make sure that the power cord is unplugged and the cover is removed before installing the motor on the mounting plate.
 - The motor's operation involving electricity must be installed by a licensed professional.
- Do not install the product in an environment where there is an explosive atmosphere or any risk of flooding.
- Use only original parts for all maintenance or repairs. If you use parts made by other suppliers, we refuse to be responsible for the safety of the automatic control of this product.
- Do not modify the components of the control section of the product without the express authorization of our company.

Keep this manual for future use.

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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)



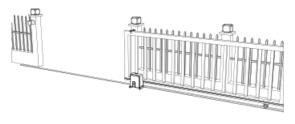


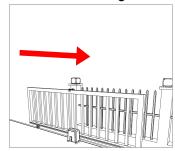
Figure 1

Gate in closed position

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 to 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: 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.

Parts List

Parts List (standard configuration)

No.	Picture	Name	Quantity	Note	
1		Motor	1		
2		Mounting Plate	1		
3		Expansion Bolt M10×120	4		
4		Manual Release Keys	2		
5		Remote Control	2		
6		Spring Limit Switch Accessories Box/ Magnetic Limit Switch Accessories Box	1		
6-1-1		Spring Limit Switch Bracket	1	For use when installing	
0-1-1		Spring Stop Mounting Screw M6X10	4	spring switch limit.	
		Magnet Bracket	2		
	00	Magnets (S/N)	2	For use when installing	
6-1-2	9999	Magnetic Limit Switch Stop Mounting Screws M6X18	4	magnet switch	
	9999	Nuts M8	4	limit	
		Flat Washers φ8	2		

SV1000AS/SV1500AS/SV2000AS Sliding Gate Opener User Manual

No.	Picture	Name	Quantity	Note
		Spring Washers φ8	2	
6-2	9999	Nuts M10	4	
6-3		Flat Washers φ10	4	
6-4		Spring Washers φ10	4	
6-5		Hexagon Head Bolt M10×35	4	

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

Parts List (optional)

No.	Picture	Name	Quantity
1	hamman hamman	Galvanized Gear Rack	1m/pc
2		Nylon Gear Rack	1m/pc
3		Infrared Photocell	1 set
4	0 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Wireless Keypad	1
5		Alarm Lamp	1
6	Done Parties November 1	WIFI Adapter	1 set

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	SV1000AS	SV1500AS	SV2000AS
Power Supply	220VAC/50Hz		
Motor Power	400W	550W	750W
Gate Moving Speed		12m/min	
Maximum Loading Weight	1000KG	1500KG	2000KG
Remote Control Distance		≥30m	
Remote Control Mode	Single button mode / Three button mode		
Limit Switch	Spring limit switch / Magnetic limit switch		
Working Noise	≤56dB		
Working Duty		S2, 20min	
Recording of up Remote Controls	25		
Remote Frequency	433.92 MHz		
Working Temperature	-20°C ~ +70°C		
Overlook Size	293x247x300mm		
Package Weight	14.3KGS	14.8KGS	15.5KGS

Installation

Before You Start

- SV1000AS/SV1500AS/SV2000AS Sliding Gate Automation Kit is suitable for powering the opening and closing motion of gates up to 1000kg/1500kg/2000kg 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 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

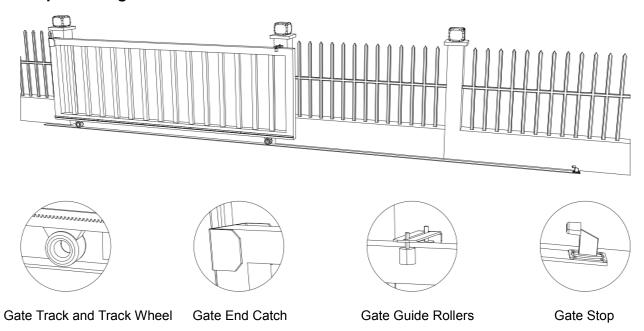


Figure 4

Please ensure that the gate opener power cable is not plugged in at any stage before Step 9.

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.

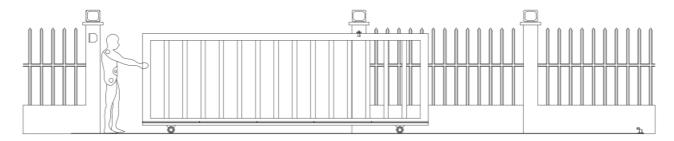


Figure 5

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

Step 2 - Checking Manual Release

• Insert the key and 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).







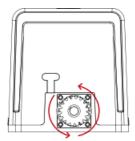


Figure 6

To make the motor into manual mode, remove the slide cover, insert the key and open the manual release bar.

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

Step 3 - Removing / Installing Motor Cover

- Unscrew the two cover screws located at each side of the motor cover.
- Remove the rubber grommet below the limit switch (Figure 7).

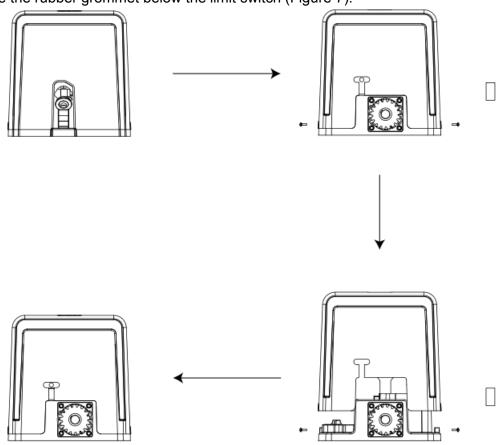
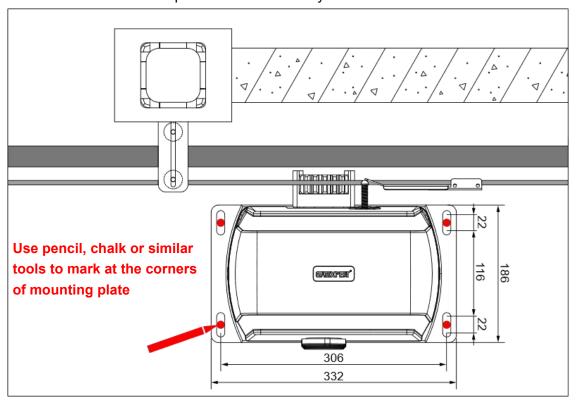


Figure 7

Please 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.

Step 4 - Motor Pad Footing

- The motor pad concrete footing requires an area of no less than 450mm long x300mm wide and a minimum depth of 200mm (Standard requirement).
- · Ensure surface is level and parallel to the driveway.



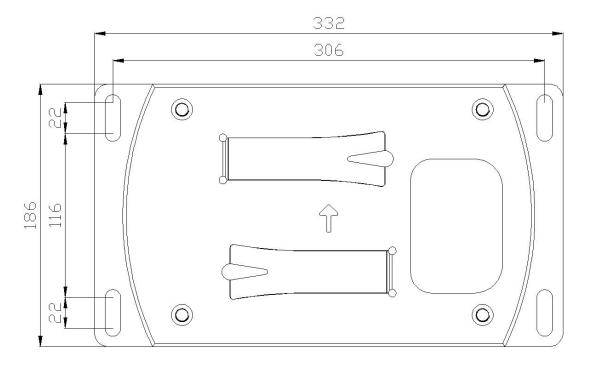


Figure 8

Mounting Plate Dimensions

Step 5 - Fitting Mounting Plate and Motor

- Place the mounting plate and pre-fix it, tighten the nuts making sure to add spring and flat washers (see Figure 9).
- Pre-position the machine according to (Figure 10) to ensure that the machine output gears and racks are aligned and that the gears and racks are centered as far as possible (see Figure 11).
 Tighten the expansion bolts and nuts on the mounting plate (ground screws are available).
- Secure the motor to the mounting plate by pre-tightening the bolts using M10x35 mm bolts with spring and flat washers.

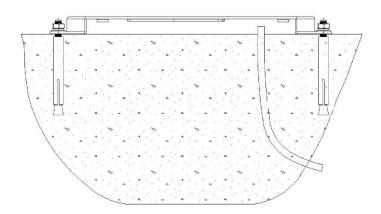


Figure 9

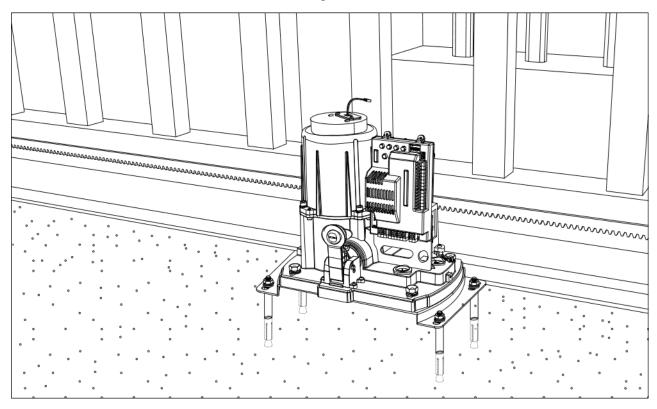


Figure 10

Step 6 - Motor Position Adjustment

- · Place the motor and mounting plate on the concrete base.
- · After placing, the motor can be fine-tuned back and forth, and tighten the fixing bolts after putting it in the right position.

Step 7 - Gear Rack & Motor Alignment

- Ensure that the output gear has a minimum clearance of 1.5-2.5mm along the entire length of gear rack fitted to the gate (as per Figure 11).
- 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.
- 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.

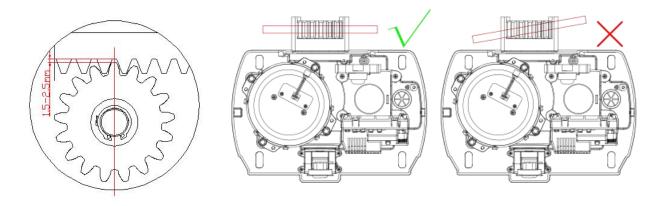
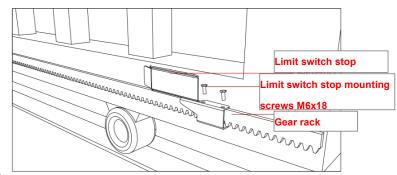


Figure 11

Step 8 - Limit Switch Stops

A. Spring Limit Switch (6-1-1Accessories)

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.



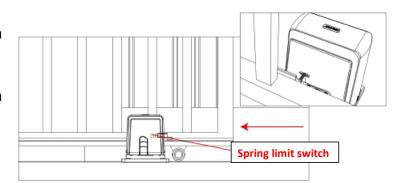
The limit switch stops are designed to set the desired opening and closing position of your gate. These limit switch stops are designed to come into contact with the spring/magnetic limit switch.

It is extremely dangerous that without or incorrect installation of the limit switch stops can cause crash of gate, damage of internal structure of the motor, moreover, the gate may slide off the guide rail.

Setting the Limit Switch Stops

Closed Position

 Position gate 150-200mm back from the gate end catch closed position. This will help in making sure you do not slam the gate into the end stop/catch when setting the closed position under power.



· Fit limit switch stop onto the top of

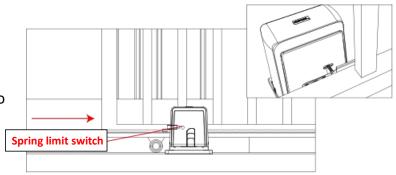
gear rack at the point where it meets the Spring limit switch on the motor.

Tighten locking screws of limit switch stop.

Open Position

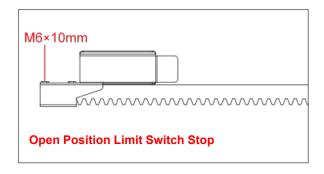
Position gate 150-200mm back from the gate stop open position.

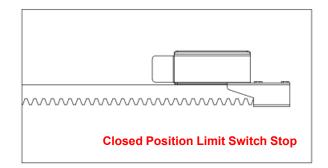
This will help in making sure you do not slam the gate into the end stop/catch when setting the open position under power.



- Fit limit switch stop onto the top of gear rack at the point where it meets the Spring limit switch on the motor.
- Tighten locking screws of limit switch stop.

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



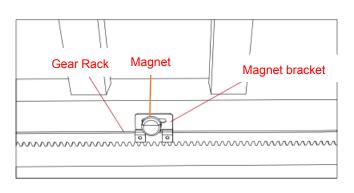


The installation of spring limit switch stops is shown in figure above.

B. Magnetic Limit Switch (6-1-2Accessories)

Included in your gate opener kit are two magnet limit switch stops with two different polarities: stop in black color(N), stop in blue color(S). Before installing the magnet bracket, please fix the magnet on the magnet bracket, and then install the magnet bracket on the proper position of the door gear bar (refer to Figure 12).

To change the gate opener from right-hand installed to left-hand installed, you should only set it on the control board, no need to switch over the two magnet limit switch stops. So it's extremely important to decide the limit switch



stops position and make sure the polarities are 100% correct.

Installation drawing of limit switch stop polarities for right-hand and left-hand:

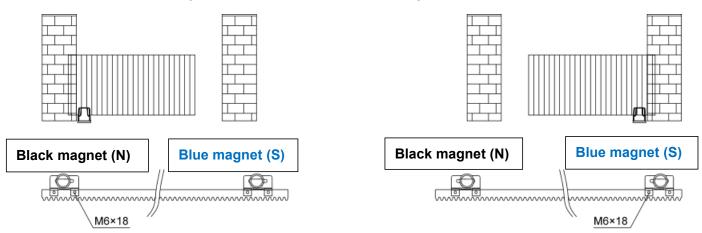


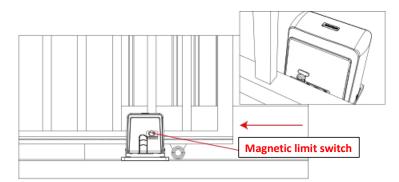
Figure 12

The magnet holder is mounted as shown

Setting the Limit Switch Stops

Closed Position

 Position gate 150-200mm back from the magnet bracket closed position. This will help in making sure you do not slam the gate into the end stop/catch when setting the closed position under power.

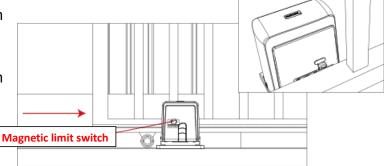


- · Fit magnet bracket onto the top of gear
- rack at the point where it meets the Magnetic limit switch on the motor.
 - · Tighten locking screws of limit switch stop.

Open Position

Position gate 150-200mm back from
the magnet bracket open position. This
will help in making sure you do not slam
the gate into the end stop/catch when
setting the open position under power.

Magnetic limit switch



- · Fit magnet bracket onto the top of
- gear rack at the point where it meets the Magnetic limit switch on the motor.
- · Tighten locking screws of limit switch stop.

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

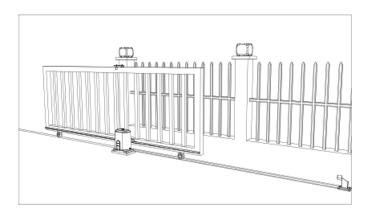
To Reset: Turning the power off will reset the limit switch stop memory. Power on the gate opener again, pressing remote control or external push button switch to open and then close the gate once, then new limit switch stop setting is completed.

Please note: Warning signs provided must be displayed facing the street side.



Step 9 - 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.



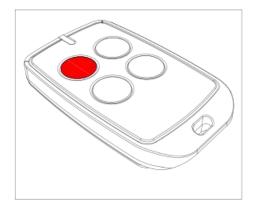


Figure 13

Step 10 - Testing Travel and Limit Stops

Testing the Closed Position

- Ensure gate opener is installed as per step 5, 6 and 7 and the sliding gate is in the middle position.
- Press remote (remotes included in 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 10-15mm from 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 10-15mm from the gate stop.

Now the basic open and closed positions are set, for further setting functions and adjusting parameters, please refer to pages 15-22 in this manual.

Control Board

Programming and Wiring

Any works to the 220V AC must only be performed by a licensed electrician. Ensure power is off before any modifications are made.

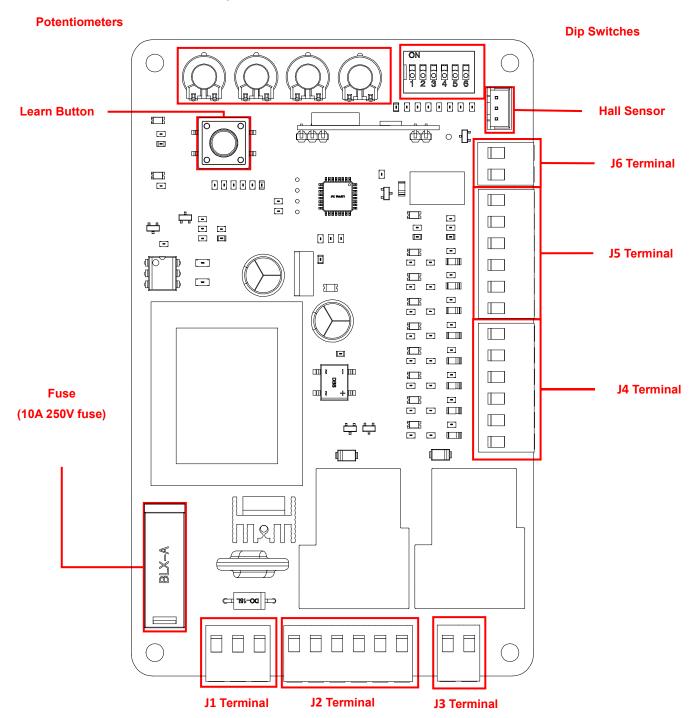


Figure 14

DIP Switch Adjustment

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

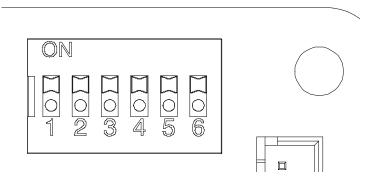


Figure 15

Number	Function	Description	
1	Slow Start Function	OFF-enable; ON-disable. Default OFF	
2	Limit Mode Switching	OFF-normally open limit; ON-normally closed limit. Default ON, used with motor limit status, not recommended to be modified by the user	
3		Automatic close time setting: the gate is operated to open by remote control operation and will close automatically after a few seconds delay. 3 OFF 4 ON: automatic close delay time is 12s.	
4	Automatic Close Time	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 Default position is OFF, this should align with the opener status and is not recommended to be modified by the users.	
6	Remote Channel	OFF - Single channel ON - Three channels	

Potentiometer Adjustment

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

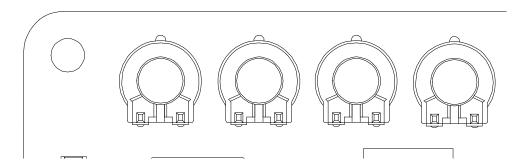


Figure 16

VR1: Stall Force Mode

Maximum = More Force = Less sensitive

Minimum = Less Force = More sensitive

When Stall Force Mode is enabled (Dip switch 5 is at OFF position), the gate opener will detect obstacles and impacts to the gate. If this is during opening, the gate will stop, if this is during closing the gate will stop, and then re-open. Rotate VR1 clockwise to increase the stall force, anti-clockwise to decrease.

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 limit switch is detected.

Rotate VR2 clockwise to increase, counter-clockwise to decrease. Default setting is at minimum.

VR3: Slow 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 reduce.

When VR3 switches to minimum, slow start/stop function is disable.

VR4: Motor Output Force Adjustment

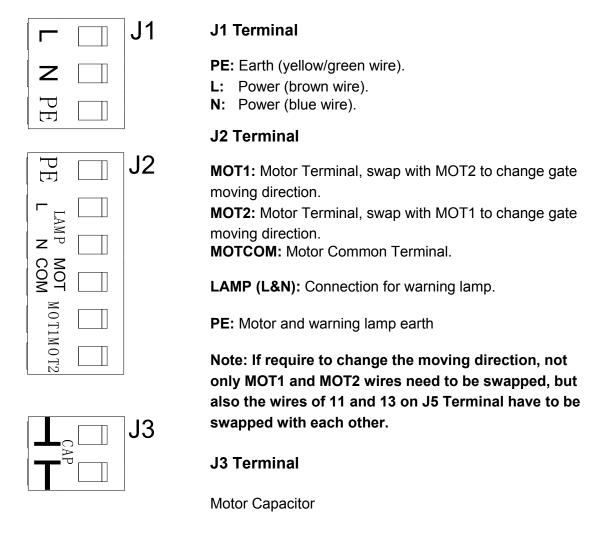
For best performance, set the torque at the lowest setting for secure use.

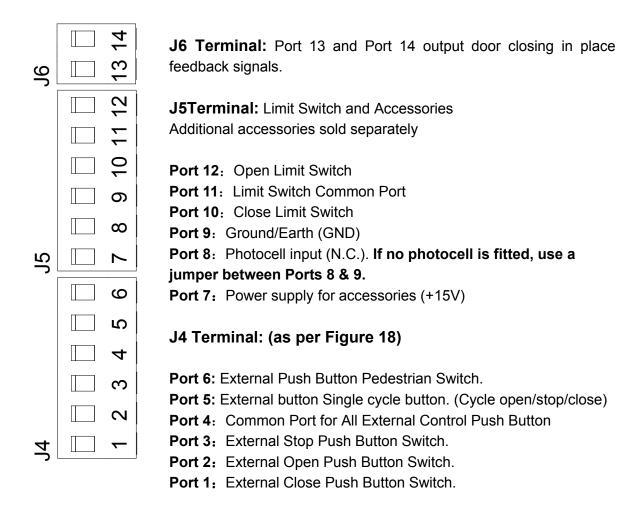
Rotate clockwise to increase, counter-clockwise to decrease.

Default setting is at maximum.

Terminal Instructions

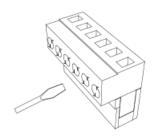
All changes to these settings below must be completed by licensed electrician.



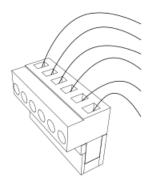


Note: If require to change the moving direction, the wires of 11 and 13 on J5 Terminal have to be swapped with each other.

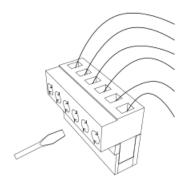
Wiring to the Terminal



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. Refer to Page 19.



Tighten with a screwdriver to secure the wire in place.

Connecting Infrared Photocells

The below steps must be completed by 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 user and property security. To install photocells, connect wiring as per Figure 17. You must remove the wire jumper between terminal 8 and terminal 9 on J5 (ref to Figure 18).

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

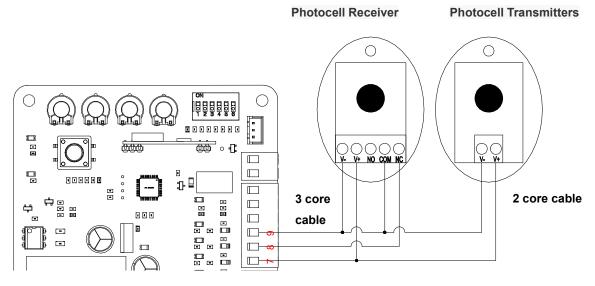
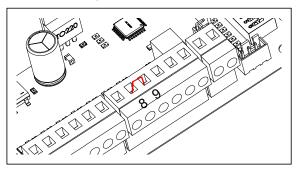


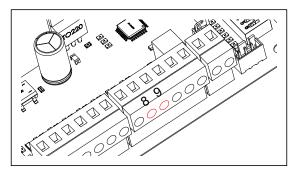
Figure 17

Figure 18

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.

Remote Control Operation

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

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.

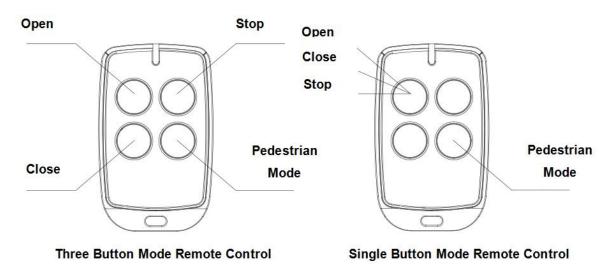
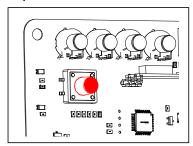


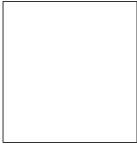
Figure 19

Remote Control Learning

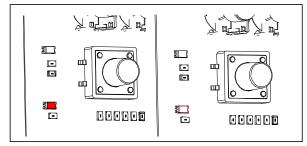
Remove motor outer cover and continue to remove the transparent PCB cover, press the button 'S1' on the control board, until the 'LEARN' indicator light turns on, then release the button. While the light is on, press the button intended to be paired on the remote control twice, the 'LEARN' indicator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



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



While 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.

Clearing Remote Controls

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

WIFI Controller (Optional)

I. Main parameters of the module:

- 1). Power Supply: AC220V
- 2). Output single channel signal
- 3). Can accept closed in place signal

II. Wiring Instruction

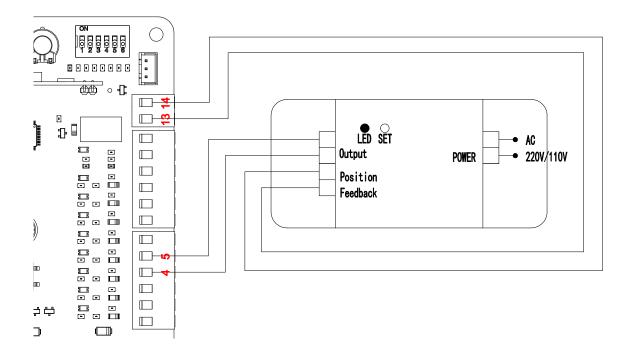


Figure 20

As shown above:

Output Terminal: Output signal, should connect to "O/S/C" and "COM" terminals on the motor control board.

Position Feedback Terminal: Open or Closed in place feedback signal. Should connect to open/closed in place terminal if the motor control board has a standalone terminal for it. If the control board doesn't have a standalone terminal, then should connect to the door magnetic alarm.

Power: Should connect to AC 220V mains power.

III. Connect to Equipment

Make sure your mobile phone has connected to the internet through 2.4G WIFI. This WIFI device only supports 2.4G WIFI. If you router supports both 5G and 2.4G WIFI, please select 2.4G WIFI.

Download the Tuya or Smart Life App from App Store or Google Play Store.

During paring, make sure your mobile phone and WIFI device is connected to the same WIFI router.

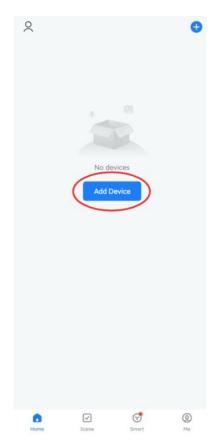
Make sure the Mac address of your router is open, if not, please close the Mac flittering.



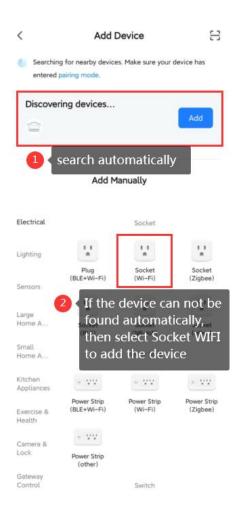
Figure 21 Figure 22

IV. APP Operation

Step 1: Open the App, click "add device".



Step 2: If your mobile has connected to WIFI(must be 2.4GHz), long press the "reset" button on the WIFI device, your mobile will search the device automatically(Mark ①); If the device can not be found automatically, please add it under "Add Manually"(Mark ②): select Socket WIFI and follow its instructions to go proceed.



Step 3: After added, the device will be shown in the list, you can re-name it to your required.



Step 4: Before using your mobile to control the motor, please operate your gate for a single(no matter open or close) travel and record the travel time, then go to the settings to set the run time, this run time should be decided according to your gate running travel. For example, the travel time of opening is 23 sec., you can set the run time to be 25s.(recommended to set it a little bit longer than travel time, default setting is 20 sec.) If you set the run time on the APP shorter than travel time, then after the time is up on the APP, but the travel still hasn't finished, there will be a reminder between this gap time:



Step 5: Now you can operate on your mobile, it will show "opening" while gate is opening, after reaching open limit switch, it will show opened. The same for closing.



Note: If your motor control board doesn't have open/closed in place feedback signal, the app will send a reminder:



You can still control the opening and closing, but there is no feedback on the app after opened or closed.

It is suggested to use this WIFI control under your visible sight of the gate to avoid damage to persons or properties.

For specific operation teaching, please refer to the video 1(overall operation), video 2(record the travel time) and video 3(operation after adjustment)

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!

Problem	Possible Reason	Solution
	1. The power supply is	Connect the power supply.
The gate cannot open	disconnected.	2. Check the fuse (FU) and replace if
or close normally, and	2. Fuse is blown.	blown.
LED does not light.	3. Control board X1 terminal	Re-wiring according to user
	wrongly wired.	manual.
	Photocell wrongly wired.	If not connect photocell, please
The gote can only	2. Photocell wrongly	ensure the infrared port and GND port
The gate can only	installed.	has a jumper wire; if connect photocell,
open, but cannot close.	3. Photocell is blocked by	please ensure the wiring is correct and
ciose.	objects.	the photocell status is N.C.
	4. Sensitivity of obstacle is	2. Ensure that the photocell mounting
	too high (Intelligent type).	position can be mutually aligned.

$\underline{SV1000AS/SV1500AS/SV2000AS\ Sliding\ Gate\ Opener\ User\ \underline{}Manual}$

Remote control doesn't work.	5. Hall sensor parts damaged (Intelligent type).1. Battery level is too low.2. Remote control not paired.	 Remove the obstacle. Reduce the sensitivity of obstacle. Replace hall sensor parts. Change the battery. Pair the remote control to the gate opener.
Press OPEN, CLOSE button, the gate is not moving, motor has noise.	 Capacitor damaged. Capacitor is poor connected. Gate moving is not smoothly 	 Change capacitor. Check the capacitor wiring. Adjust the motor or gate according to the actual situation.
Not stop when running to opening or closing limit switch position.	 The opening or closing limit switch is in opposite. Magnetic limit switch badly installed. 	 Check whether the limit switch wiring is consistent with the motor running direction. Check whether the distance and height between magnetic limit switch and motor reaches to standard requirement.
Leakage switch tripped.	Power supply cable short circuit or motor wire short circuit.	Check wiring.

Warranty

Warranty (Notes) Regulations

- (1) In the warranty period with this list and invoice repair;
- (2) The warranty period: one year from the date of sale;
- (3) Where the user has not been disassembled, the product is indeed bad failure or damage, are free of charge by the factory for repair or replacement parts;
- (4) Due to improper use, man-made mechanical damage, no warranty.

Maintenance Records

Date of Maintenance	Content of Maintenance	Repairman