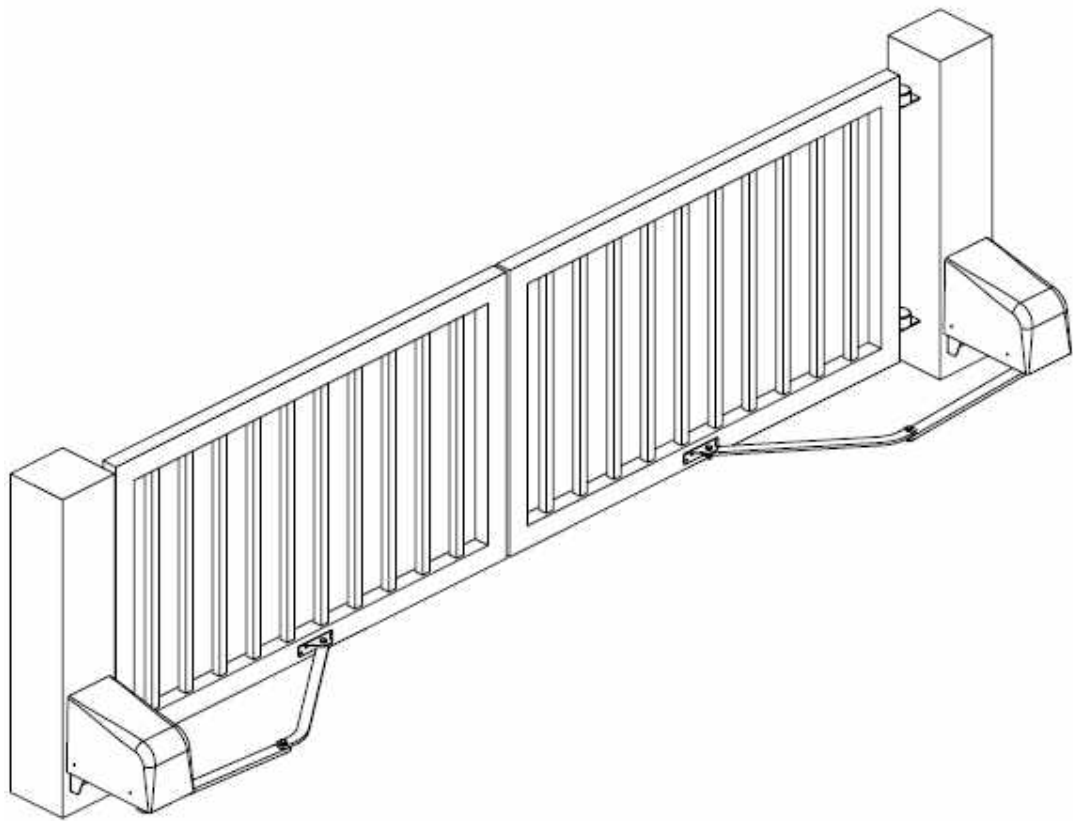




SW810 Swing Motor

Installation Manual



 N21430

Contents

Warranty	3
IMPORTANT SAFETY WARNINGS	4
FEATURES	5
Check Gate and Hinge	6
Gate Stops	6
Master / Slave Motors	6
Mounting the operators to the gate posts	7
Arm Assembling	7
Manual Release	8
Install Arm	8
Cams Setting (Left Hand Motor Installation)	9
Cams Setting (Right Hand Motor Installation)	11
Slave motor (Left Hand Motor Installation)	13
Slave motor (Right Hand Motor Installation)	13
Confirm CAMS Setting	14
Engage the Opener	14
Battery Connection	14
Program Remote control and receiver	14
Confirm the Close and Open LED	15
Force Adjustment (sensitivity)	15
Auto Close	16
Leaf Delay	16
Motor 1 and Motor 2 setup	16
Electric Lock	16
Wiring Diagram	17
Reduced Side Room and Outwards Opening	18
Electrical and Mechanical Specifications	19
Trouble Shooting	19
Standard Kit Contents	21
Motor Dimension	21

Warranty

- A one-year back to base warranty covers Letron Auto Gates openers if defect is covered in warranty.
- Costs of return are the purchaser's responsibility.
- The Warranty commences on date of sale and invoice must be retained for warranty to be honoured. The warranty covers defects of materials in the unit under normal and correct use.
- Batteries carry a Six Month Warranty
- Remote controls carry a Three Month Warranty
- The unit must be correctly installed. If the gate is not opening freely in a manual mode, damages occurred will void the warranty.
- When problems arise within the warranty period, the customer must contact the supplier to rectify the problems.
- Periodic maintenance is **mandatory**.
- It is customers' responsibility to engage in periodic maintenances and checks the opener every three months for insects, loose wiring, check battery, gate movement in manual mode, greasing hinges, solar panel surface keep clean, loose bolts etc.
- Failure to maintain the opener result the warranty null and void.
- Warranty does not cover insects, water, fuses, storm damage, improper use or undue force.

Warranty may be voidable under the following circumstances:.

- Unit has corrosion of metal parts, insect infestation, water damage, sand/dirt or vegetation in unit.
- Unit has been repaired or modified not authorised by Letron.
- Unit has been subject to misuse and / or undue force.

Please Note.

The fitting and use of accessories or components other than Letron supplied or authorized may affect the performance of Letron motors and void the Warranty.



IMPORTANT SAFETY WARNINGS -

Please read these important safety warnings before installing or using this product

- Never let children operate or play with the controls.
- Keep the remote control away from the children.
- Do not operate the swing gate unless the gate is in full view and free from objects such as cars, children or people.
- Always keep the moving gate in sight and away from any objects until it's completely opened/closed.
- No one should cross a moving gate.
- Do not disengage the swing gate motors to manual operation with anyone or any other objects, including motor vehicles, within the doorway.
- The swing gate must be well balanced. Sticking or binding gates can falsely trigger the obstruction sensing of the unit.
- All maintenance should be carried out by qualified personnel.
- Regularly test the swing gate motor to ensure that the obstruction sensor unit is operating properly.
- The swing gate motor has an electronic obstruction system that provides safe and reliable operation. It's however a legal requirement in some countries to also install a photo-electric sensor across the door way, please check this requirement with your local distributor. However, it's recommended to install this photo-electric sensor for all units.

FEATURES

Your automatic swing gate motor has many features which you will appreciate. The components and materials used in its control board are the latest technology and highest quality.

The motor is use to drive the swing gates with a moving speed of 90 degree in 15 seconds. This gate opener is powered by 12 Volt DC, or solar power. It is featured with powerful starting speed.

OPERATION

To operate the swing gate simply press the remote control handset or the wall mounted switch for one seconds and the door will automatically open/close.

The gate can be stopped during opening or closing cycle by pressing the remote control handset or wall switch. The next actuation will move the gate in the opposite direction.

SAFETY OBSTRUCTION REVERSE

While the gate is performing closing cycle and it should hit an obstacle or be restricted in some manner, it will automatically reverse.

The amount of force the gate should encounter before reversing is adjustable.

The gate will automatically stop if restricted while opening. The safety Obstruction forces should be checked at least once a month.

SENSITIVITY = FORCE SETING

Force Settings Must Be Adjusted Before Running The Gate Opener

SECURITY CODE STORE

The swing gate motor uses state of the art Microchip technology in storing your swing code transmitter security code.

Up to 20 different transmitters can be stored in the non-volatile memory device.

To store any code simply press the LEARN button on the Receiver and press the transmitter(remote control) button once. The codes can be deleted any time.

Security is enhanced because the fixed and encrypted sections combined increase the number of combinations to 7.38×10^9 . There is no Dip switch on the motor which can be visually seen and copied.

AUTO CLOSE MODE

The swing gate motor can be set to automatically close at a selected period (e.g. Thirty seconds) after the gate has opened.

A photo-electric beam must be installed if this mode is selected. The circuit board also has input for push buttons, key pads and intercom.

PHOTO-ELECTRIC BEAM

The swing gate motor has input for a Photo-Electric Beam to be connected for extra safety protection.

POWER SUPPLY

The swing gate motors are powered by 15VDC plug pack or solar panel.

POWER FAILURE

Gates can be moved manually by inserting the Allen key into motor

1: Check Gate and Hinge

Before install check the gate and hinge in good working condition, and the gate must be free swinging without binding.

2: Gate Stops

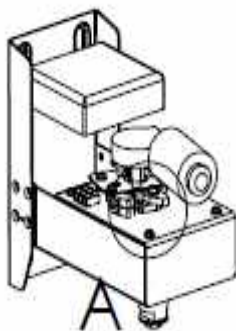
It is recommended that any of the following are used:

- * A tag on one gate
- * Overlapping gate leaves
- * Gate-stops at the limit of each leaf's travel

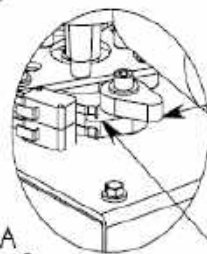
3: Master / Slave Motors.

- * The drive unit with the circuit board is the master Motor
- * The drive unit without the circuit board is the Slave Motor

Master



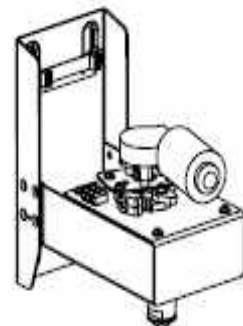
DETAIL A
SCALE 1 : 2



Top cam

Bottom cam

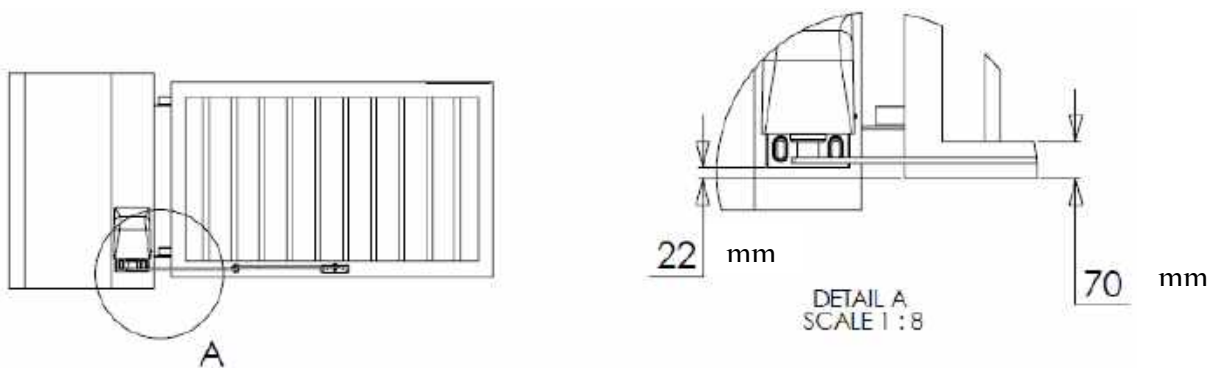
slave



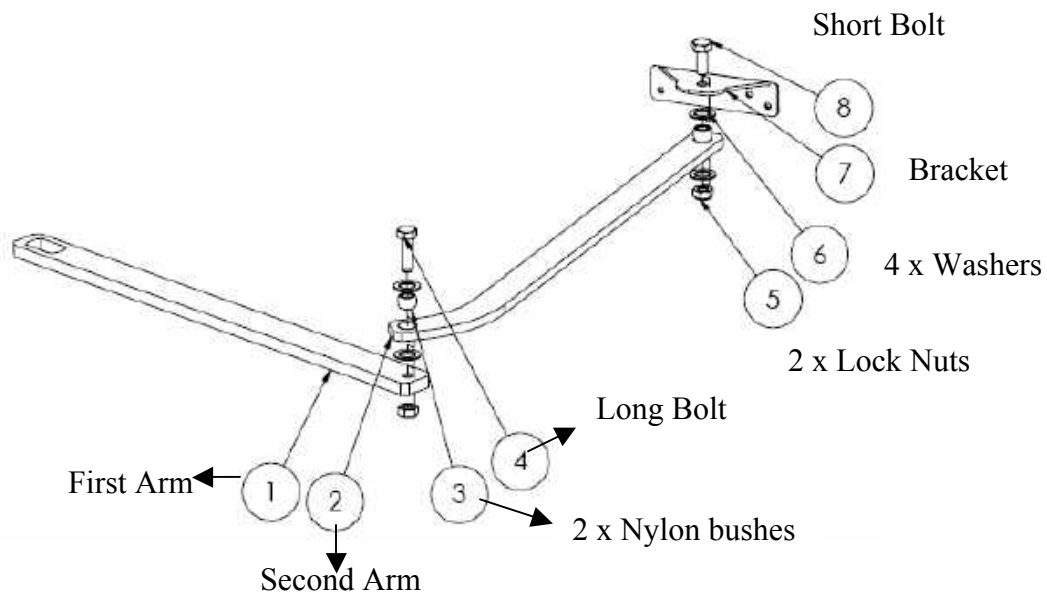
4: Mounting the operators to the gate posts

Important: do not modify this equipment, and do not power up, until all the Setting is finish.

Install master motor first. (The one with the circuit board is the master motor.)
Mount the opener 50 mm from the inside edge of the gate Post. Use fasteners of at least 10 mm diameter x 75 mm Length. Use the template provide on top of the Box. Drill 4 holes and mount it on.



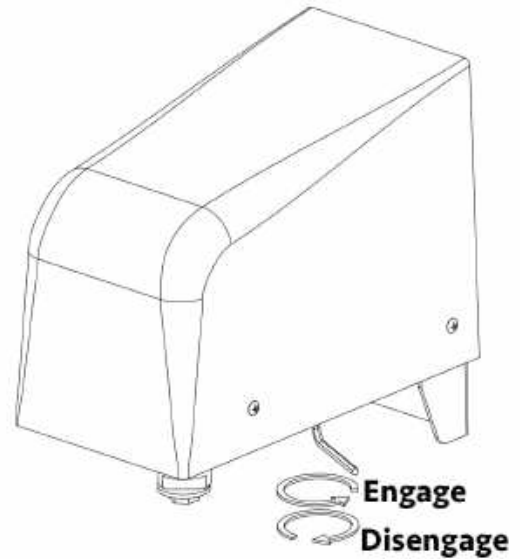
5: Arm Assembling



6: Manual Release

A: Disengage opener

You can disengage the gate from the opener. Using the provided Allen key, turning the Brass knob On the underside of the opener and follow the arrows on diagram



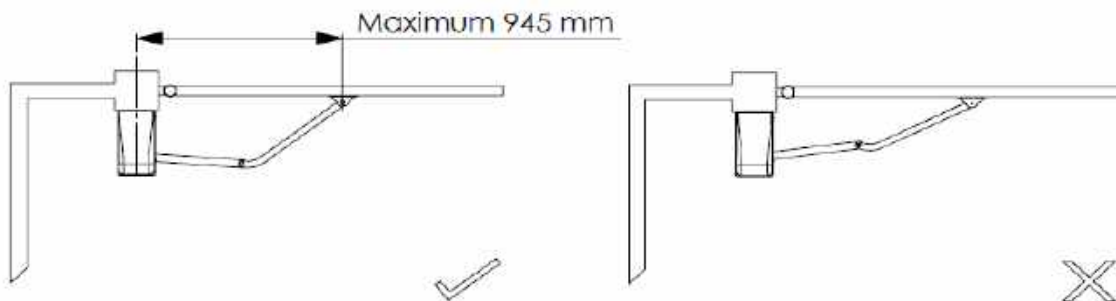
B: Engage opener

Put the opener back into gear. Using the Allen key turn back the Brass knob, follow the directions of the above diagram. And swing the gate until you feel the opener lock into gear.

To avoid possible damage to property or personal injury, please disengage the opener before making limit switch adjustments. And do not connect any power. (See Section 6A)

7: Install Arm. Refer to the drawing below.

Dis-engage the opener, Move the gate into close position manually. You may turn the shaft by hand when in manual, making it easier to mount the arms. Refer to the Drawing below. Do not mount the arm to the gate dead straight.



8: Cams Setting (Left Hand Motor Installation)

Master Motor (Inside the property –looking out)

8A: Adjust Gate open limit (Top Cam) Left Hand Motor



When in Manual Mode, open the gate by hand to the position you want it to stop at, as you do this, you will see the cams move in that direction, you turn the cam around until it clicks on the limit switch.

Top Cam (Open Limit)
It should look like this photo

8B: Adjust Gate Close Limit (Bottom Cam) Left Hand Motor.

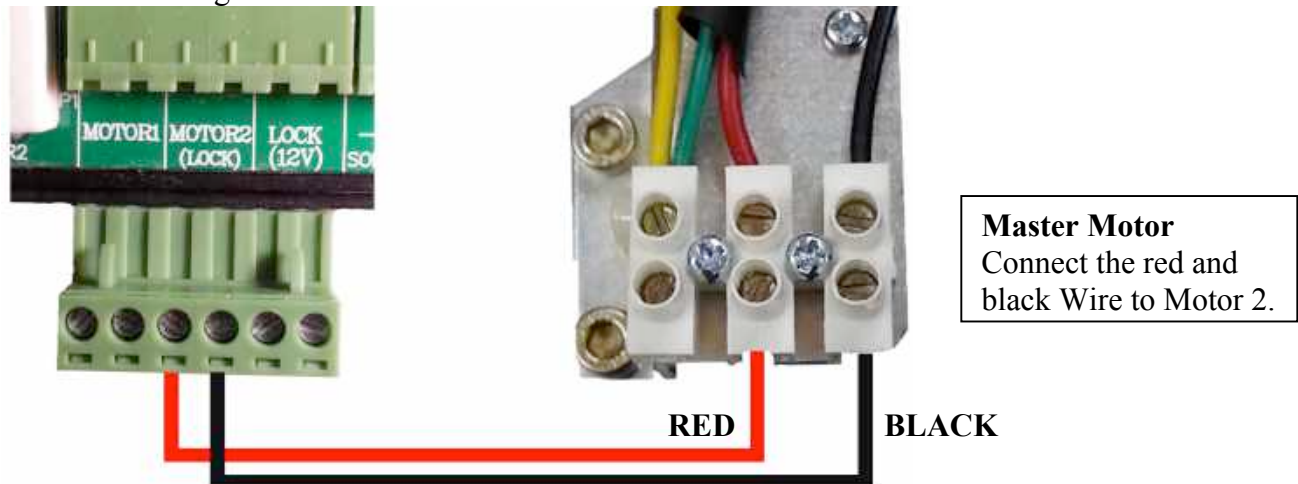


Close the gate to close position. Rotate the bottom cam until it actuates the switch. These can be done by moving a small increment at a time.

Bottom Cam (close limit)
It should look like this photo

8C: Wiring Installation (Left Hand Motor Installation).

Follow the wiring as shown below.



9: Cams Setting

Left hand Fine Tune Cam Setting

Please locate the fine tune cam setting. Refer to the photo below



A. Top Cam = OPEN

The gate may not OPEN all the way. Turn the top cam adjustment screw slightly in an anti clockwise direction. Using a screwdriver. Test the operations of the gate and repeat the steps above till the gate OPEN all the way.

IF THE GATE OPENS PASS THE LIMIT. PLEASE ADJUST IN A CLOCKWISE DIRECTION

B. Bottom Cam = CLOSE

The gate may not CLOSE all the way. Turn the bottom cam adjustment screw slightly in an anti clockwise direction. Using a screwdriver. Test the operations of the gate and repeat the steps above till the gate CLOSES all the way.

IF THE GATE CLOSES PAST THE LIMIT. PLEASE ADJUST IN A CLOCKWISE DIRECTION

9: Cams Setting (Right Hand Motor Installation)

Master Motor (Inside the property –looking out)

9A: Adjust Gate Close limit (Top Cam) Right Hand Motor



When in Manual Mode, Close the gate by hand to the position you want it to stop at, as you do this, you will see the cams move in that direction, you turn the cam around until it clicks on the limit switch.

Top Cam (Close Limit)
It should look like this photo

9B: Adjust Gate Open Limit. (Bottom Cam) Right Hand Motor

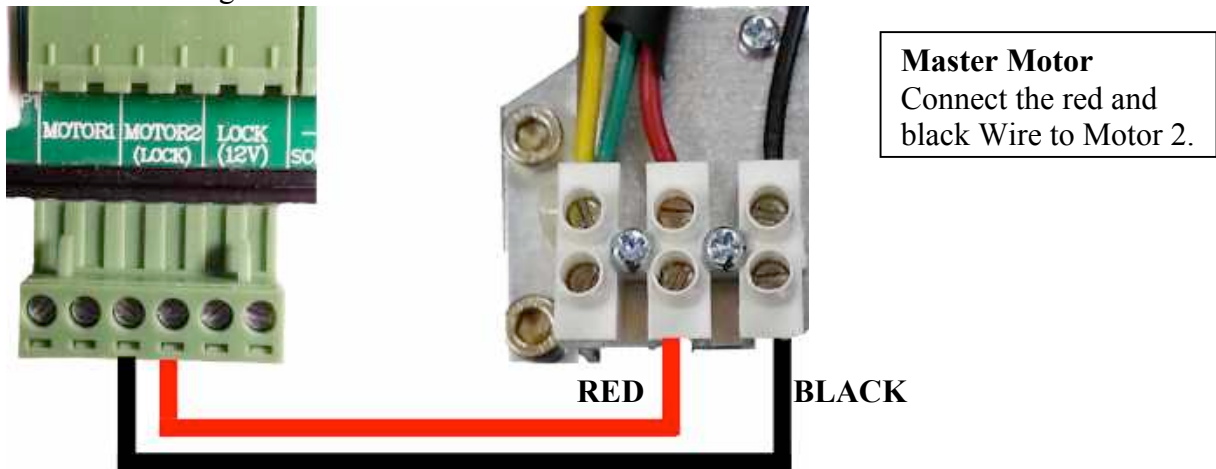


Open the gate to the Open position. Rotate the bottom cam until it actuates the switch. These can be done by moving a small increment at a time.

Bottom Cam (Open limit)
It should look like this photo

9C: Wiring Installation (Right Hand Motor Installation).

Follow the wiring as shown below.



Right hand Fine Tune Cam Setting

Please locate the fine tune cam setting. Refer to the photo below



A. Top Cam = CLOSE

The gate may not CLOSE all the way. Turn the top cam adjustment screw slightly in an anti clockwise direction. Using a screwdriver. Test the operations of the gate and repeat the steps above till the gate CLOSE all the way.

IF THE GATE CLOSING EXCEEDS THE LIMIT. PLEASE ADJUST IN A CLOCKWISE DIRECTION

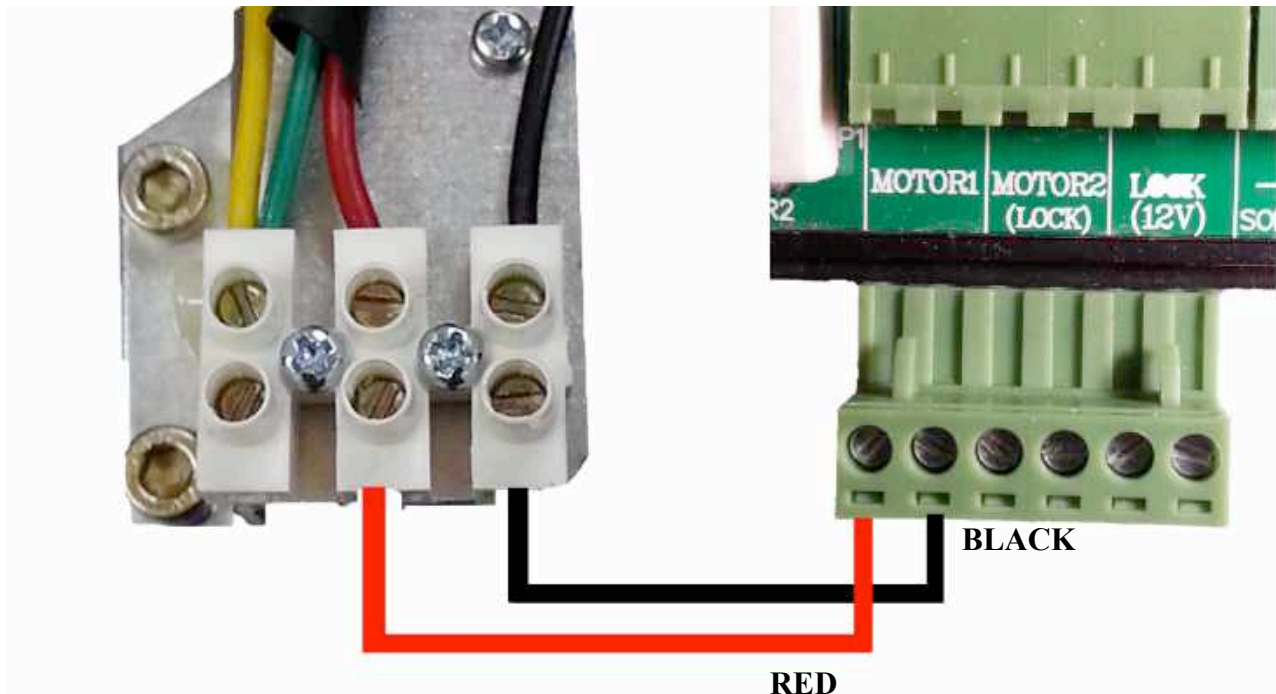
B. Bottom Cam = OPEN

The gate may not OPEN all the way. Turn the bottom cam adjustment screw slightly in an anti clockwise direction. Using a screwdriver. Test the operations of the gate and repeat the steps above till the gate OPEN all the way.

IF THE GATE OPENING EXCEEDS THE LIMIT. PLEASE ADJUST IN A CLOCKWISE DIRECTION

10: Slave motor (Left Hand Motor Installation) (inside the property –looking out),

Slave Motor (Left Hand) **Master motor (Right Hand)**

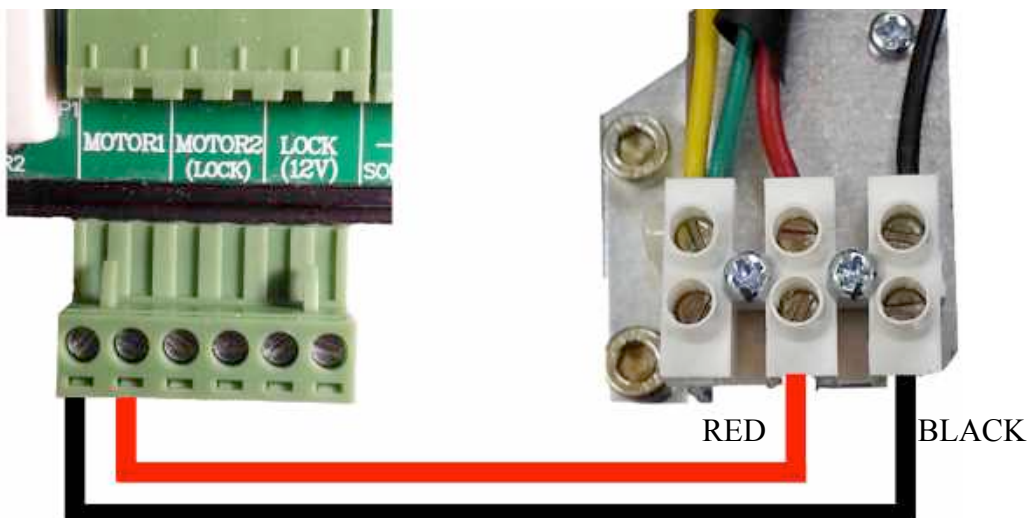


A: Follow the Connection red and back wire to the master motor Circuit board (Motor 1).

B: Follow the instruction of **8A** and **8B**.

11: Slave motor (Right Hand Motor Installation) (inside the property –looking out),

Master motor (Left Hand) **Slave Motor (Right Hand)**



11A: Follow the Connection of the red and back wire to the Master Motor Circuit board (Motor 1).

11B: Follow the instruction of **9A** and **9B**.

12: Confirm CAMS Setting

Confirm the open & close cam setting. Open & close the gate by hand to see the cam has stop at the right position.

13: Engage the Opener

After you have set the limit switches, Use the Allen key to put the opener back into Gear by turning the Brass release Knob anti-clock wise to the full lock position.

14: Battery Connection

Red wire connect to (+) and Back wire connect to (-)

15: Program Remote control and receiver

Receiver and REMOTE CONTROL (APRX017)

NOTE: Remote Control are supplied PRE-CODED to operate your Opener.



Remote programming

Press learn button on the Receiver for 1 second
Press required button on the Remote control for 1 second
LED on the receiver will flash.

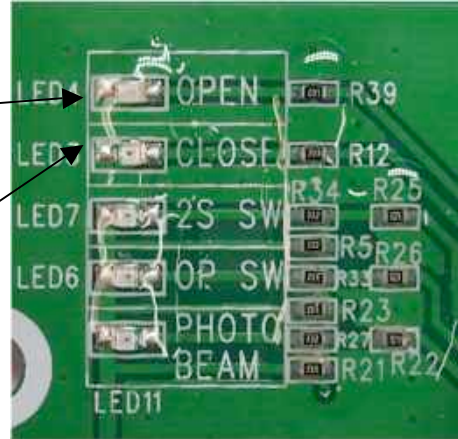
Remote Control is now ready for use

Repeat for all required Remote Control that need to be programmed

16: Confirm the Close and Open LED

When the door
Open the Green
light should be on

When the door
Close the Red
light should be on



NOTE: If any light is not in the correct order, swap the motor wire from left to right.

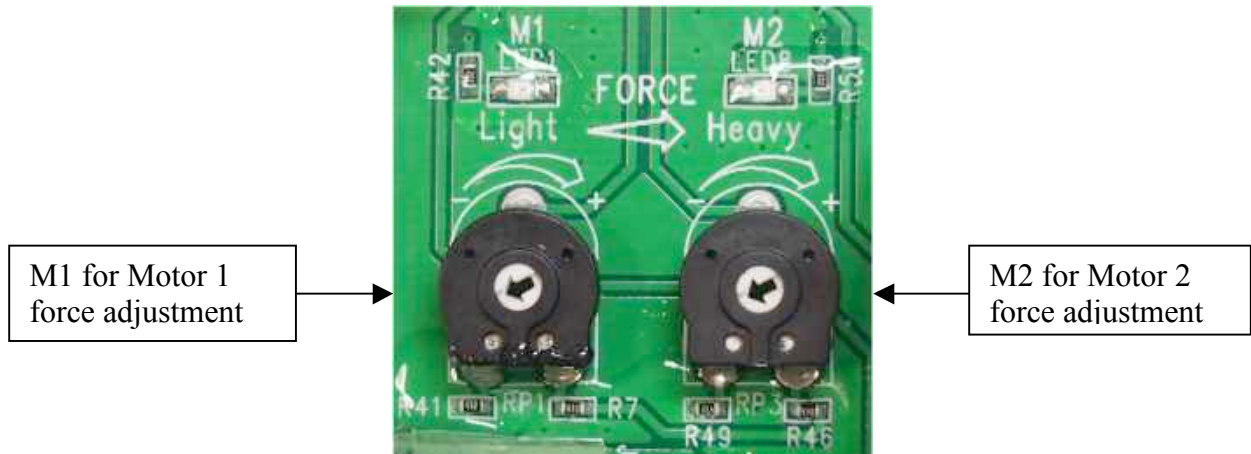
17: Force Adjustment (sensitivity)

Because of the obstruction sensing function of this Gate Opener, sensitivity adjustment may be required to allow for the effect of weather conditions (such as windy locations). Increasing TORQUE will decrease the sensitivity of the system. The torque supplied to each motor can be adjusted independently (for situations where gate sizes or conditions vary). Turn dials anti clockwise to increase sensitivity. Turn dials clockwise to increase motor torque if the gates reverse due to weather variables.

When an obstruction is detected, the Gate Openers will reverse (when closing) or stop (when opening).

Please note – Heavy Gates may not open or close fully when the Torque dial is in the minimum position.

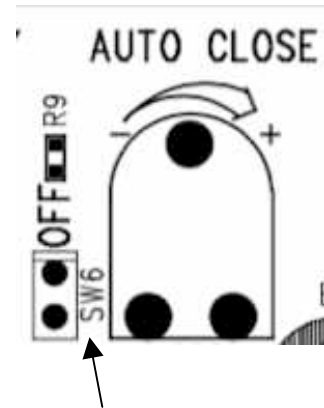
If the gates close and open itself, the force adjustment is not right. Increase the force adjustment.



18: Auto Close

Factory default is set to 0 sec. This can be increased up to approx 60sec by turning the dial clockwise.

When using the auto-close function, it is recommended that a photoelectric beam (PE Cells) be installed to avoid accidental damage to property and personal injury.

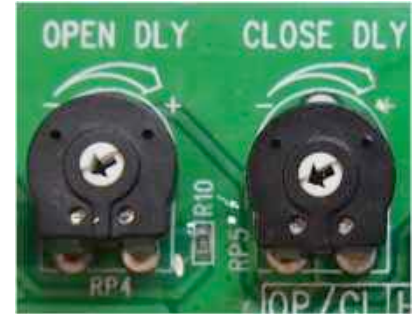


To enable auto close
Remove this Jumper SW6

19: Leaf Delay

Leaf delay only apply to double swing gate, due to the gate may have a lip or tag on one side of the gate. To avoid the gates clashing or binging, adjustment needs to be done as follow:

- 1: Open Delay & Close delay can be set independently.
- 2: If no Delay is required, set both these adjustment to minimum.
- 3: Leaf Delay is only possible on the Gate connected to Motor 2



20: Motor 1 and Motor 2 setup

Motor 1 is the one which closing first and last opening the gate

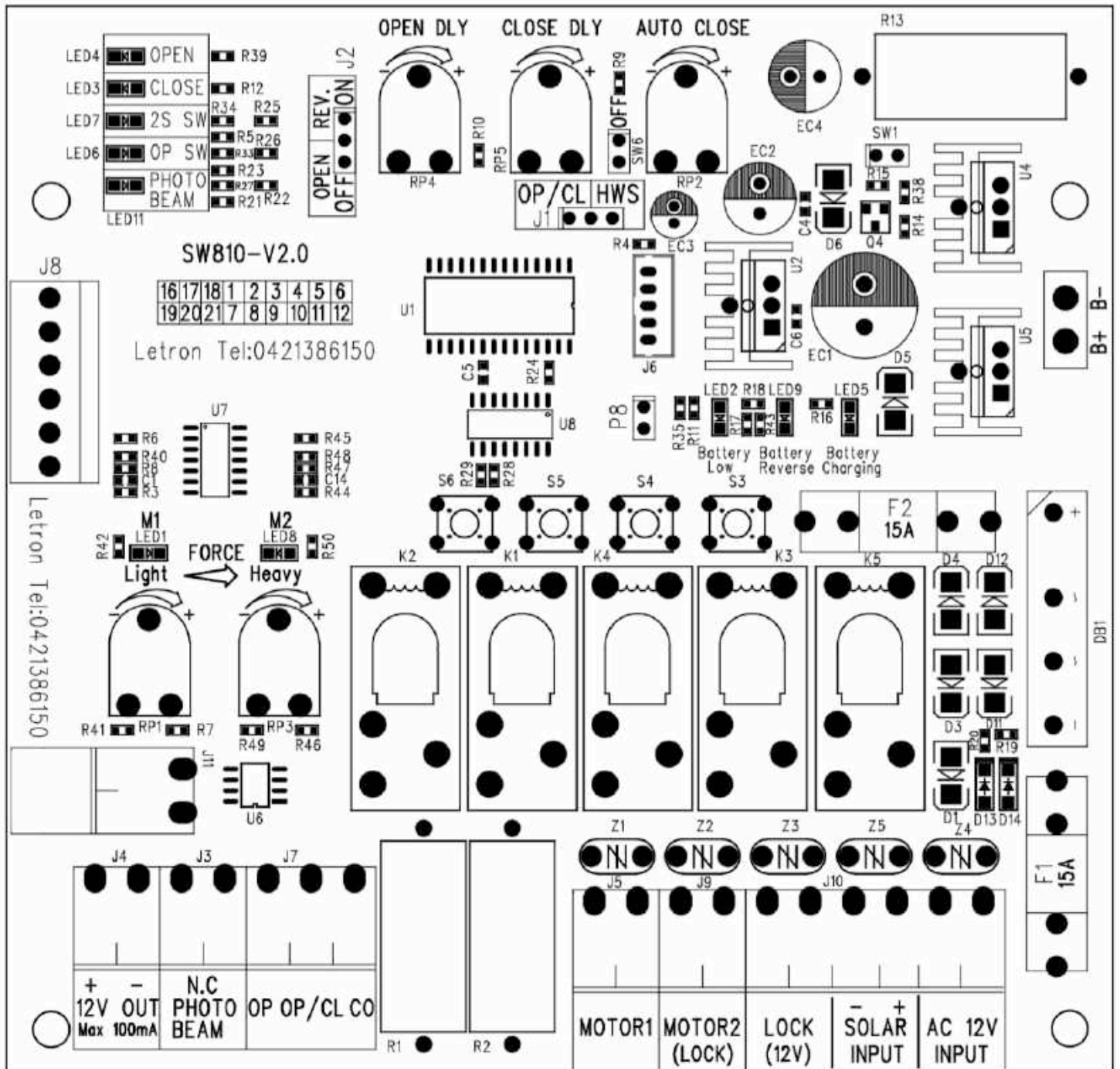
Motor 2 is the one which opening first and last closing the gate

21: Electric Lock

*** Important: The gate fitted with the lock must connect to Motor 2.**

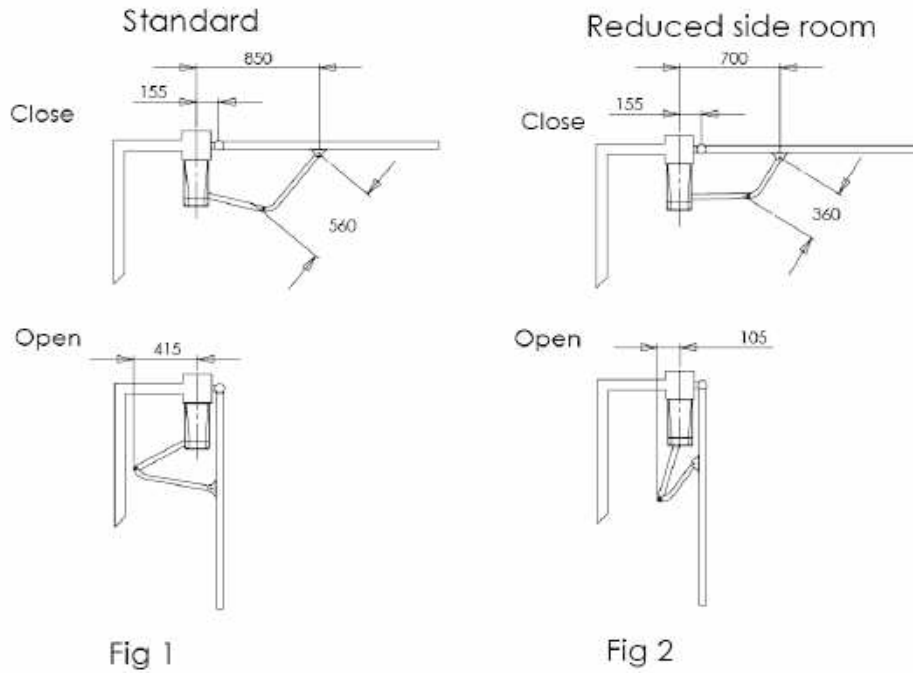
This enables a short delay before opening, to allow the lock to release before the gate leaf moves.

22: Wiring Diagram

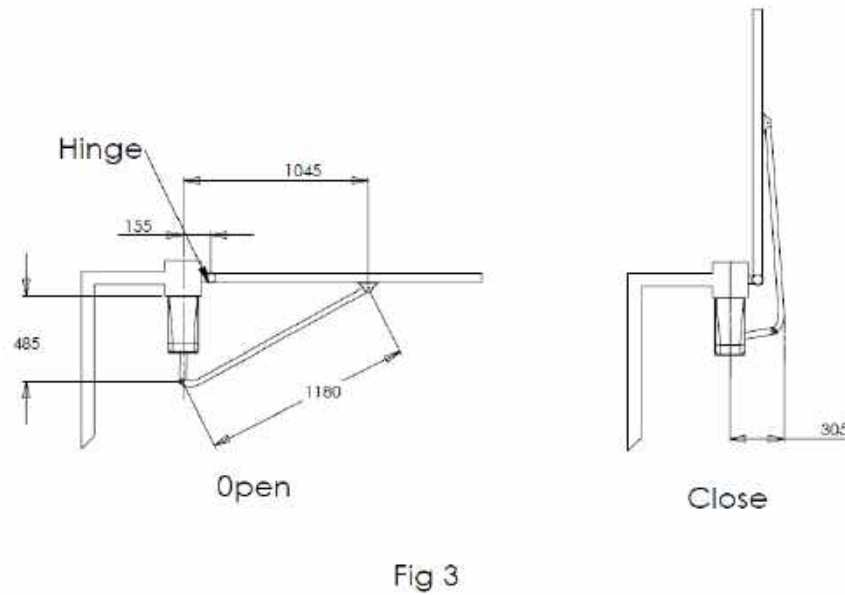


23: Reduced Side Room and Outwards Opening

23A: Inward opening (Fig1&2)



23B: Outwards opening. (Fig 3)



24: Electrical and Mechanical Specifications

Power supply:	15V Transformer
Low voltage supply:	12V DC at 4A/motor (max)
Solar power supply:	12V, 10W or 20W (optional)
Power consumption:	50W/motor (max) 0.5W (standby)
Battery backup:	12V DC, 7aH
Receiver power supply:	12V DC, 2W (max)
Power supply of electric lock:	12V DC, 15W (max)
Power supply of accessories	12V DC, 3W (max)
Operating time:	10 to 20 seconds (load dependent)
Gate weight:	250kg (max)
Gate length:	3.5m (max)
Opening angle:	90-110 degree (max)
Handset Frequency	433MHz

25: Trouble Shooting

Problem	Possible Cause	Solution
The Handset (Remote Control) doesn't work, or has too short-a-range	Handset battery may be flat Handset may not be coded to the Receiver Board Receiver antenna not be fully extended Radio interference may be affecting your Receiver	Replace Battery Code Handset (see Section 15) Extend Aerial Remove any possible external interference e.g. Baby Monitor
The Gate doesn't open or close	Power source may not be connected Back up battery may be exhausted after prolonged power failure	Ensure the transformer is connected to the circuit board Ensure the battery is connected to the circuit board
The Gate re-opens or stops during operation	Sensitivity may be set too light (Motor may need more torque) Gate may be obstructed Photoelectric cells - Safety Beam (where fitted) may be dirty	Increase motor Torque Check for obstructions Clean and check PE Cells
The Gate auto opens rather than auto closes Open Green LED is on, but gate is close. Close red LED is on, but gate is open.	Motor & Limit Switches may be wired in reverse	Change Motor on the circuit board & re-adjust Limit Switches
The motor spins but the gate doesn't open	The manual release may not be engaged	Ensure the manual release are properly engaged and tightened onto the gear

Solar Panels installation tips and maintenance

- The correct installation of Solar Panels is critical to the performance of the Letron solar powered gate openers.
- Solar Panels should be installed at least 180cm above the ground.
- Solar panels should be angled at approximately 45 degrees.
- They should be facing North to Northwest position.
- They must be clear of trees, power lines and any buildings that can cause shadows on the panel.
- Solar Panels should be kept clean, free of dust and bird droppings.
- Solar Panels for best performance should be exposed to 5-6 hours on sunlight each day. The panels still produce power even on cloudy days.
- By spending a few minutes looking for the best place for the panel will ensure a fully operate solar powered Letron automated gate.

26: Standard Kit Contents

Standard Kit Contents				
	Double Swing DC	Double Solar Swing	Single Swing DC	Single Solar Swing
Item	SW810DC	SW810SO	SW410DC	SW410SO
Motor	2	2	1	1
Swing Arm	2	2	1	1
Battery	1	1	1	1
Swing Circuit Board	1	1	1	1
Receiver	1	1	1	1
Remote Control	2	2	2	2
Allen Key	1	1	1	1
12V Power Supply	1		1	
Solar Panel		1		1
Photo Beam	OPTIONAL(RECOMMENDED)			
Key Pad	OPTIONAL			
Push Button	OPTIONAL			

27: Motor Dimension

