ROGER®
TECHNOLOGY



Preliminary Checks

To ensure safety and an efficient automation make sure the following requirements are met:
1. The gate structure must be suitable for automation.
2. Make sure that the gate move properly and uniformly without any irregular friction during their entire travel.
3. The gates wheels and track must be in good condition with no bitting, no rust and must be well greased.
4. The gates should be able to be freely opened and closed before installing the gates automation system.
5. It is strongly suggested to have a gate stop installed for the open position for setup and emergency purposes.

Important Safety Information

Installer and owners should observe the following:

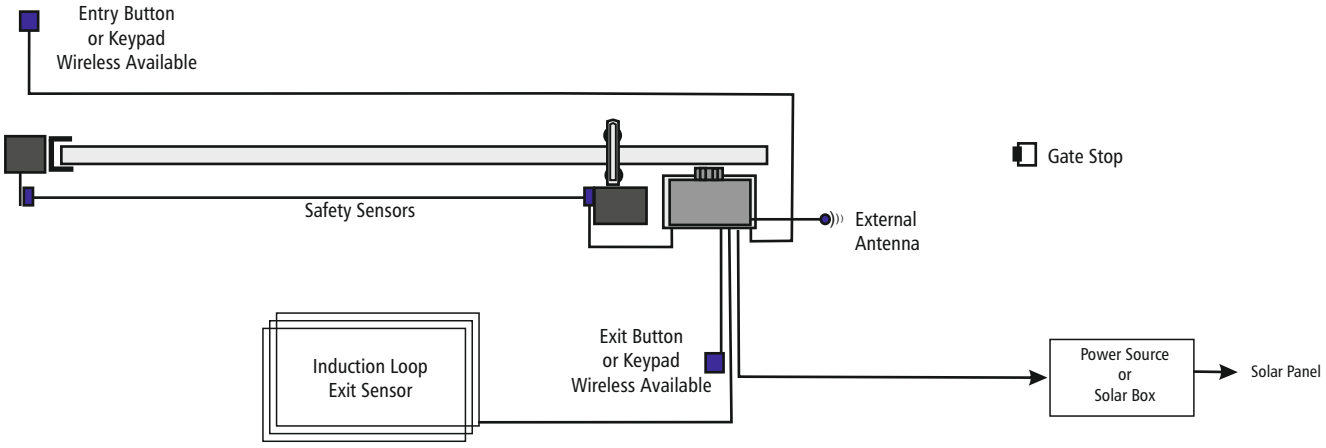
1. Make sure that there is sufficient space for the gate to slide open fully without interference.
2. The solar box must be installed in the area within 10 meters maximum cable distance from motor.
3. Do not change with parts or components not supplied by the manufacturer, this includes sensors, buttons, solar panels, transformers and any component not listed in the compatibility list.
4. Make sure all wiring works are correct and in good condition before connecting the battery, solar panel or transformer to the control panel.
5. Turn off the power and disconnect the battery when doing any maintenance.
6. Ensure the control panel box is free from water leakage to avoid short circuiting of the control panel.
7. Do not supply mains power directly to the motor, control box or any accessories.
8. Do not install the operating system if in doubt. Contact the manufacturer.
9. Do not cross the gate while it is operating, Safety sensors are only to prevent accidents or injuries.
10. Keep the remote controls in safe place and away from children.

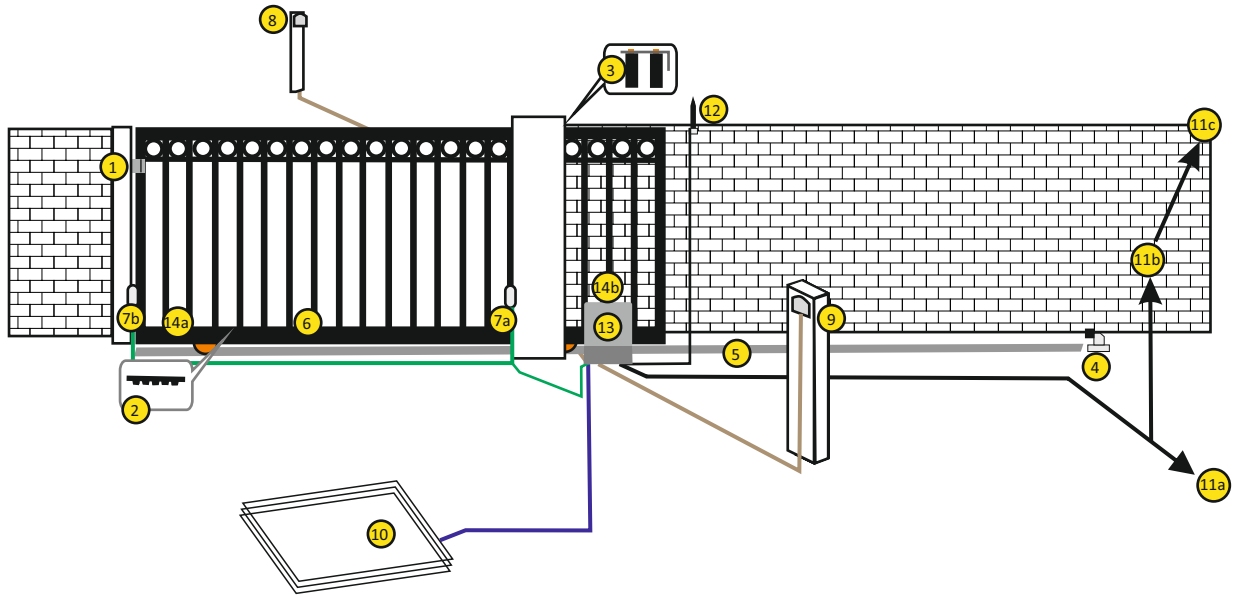
Before beginning installation the manual should be read thoroughly concerning all aspects of the installation including all precautions and safety information.
Proper steps should be taken to ensure efficient and safe installation for vehicles, property and persons within the operators working radius.
The system is fitted with an over current sensing feature to assist in preventing damages, injuries and death. All precautions must be taken by the installer that adjustments are set correct based on the gates weight, height and length. The system sensitivity should be set to allow consistent operation of the gates under normal operating conditions. This does not include operating against wind. The system may not detect against light loads such as small object, young children and animals. It is the operators duty to ensure that the area is clear prior to operation. Photo sensors or Reflective sensors should always be installed to assist in accident or death prevention. Rubber

Motor Specifications

	BM30/30X/HS	**BH30/60X/HS**	**BH30/80X**
Gate Max. Weight	400kg	600kg	1000kg
Motor Power	320W	350W	200W
Max. Speed	40 cm/s	40 cm/s	20 cm/s
Max. Thrust	350 N	500 N	800 N
Operating Temprature	-20°C - + 55°C	-20°C - + 55°C	-20°C - + 55°C
Protection	Ip44	Ip44	Ip44
Max. Accessories Load	10 W	10 W	10 W
Protection fuses	F1=15A Motor power circuit protection F2=2A Accessories power supply protection F3=T.1A Primary transformer protection		

Installation Layout





Requiring Wiring:

- Keypad - 4 Core (Wireless available)
- PBD-K - 4 Core (Wireless available)
- PBS-K - 2 Core (Wireless available)
- PE Sensor
  - Receiver - 4 Core
  - Transmitter - 2 Core
- Induction Loop 1 Core Teflon Cable

1. U Guide/Keep
2. Wheels
3. Rollers and Bracket
4. Gate Stop
5. Floor Track
6. Gear Rack
7a. PE Sensor Transmitter
7b. PE Sensor Receiver (Not required for Retro Reflective Sensor)
8. Entry Keypad/Push Button
9. Exit Keypad/Push Button
10. Induction Loop Exit Sensor
11a. Power Source (Mains/Low Voltage)
11b. Solar Box
11c. Solar Panel
12. External Antenna
13. Gate Motor
14a. Open Magnet
14b. Close Magnet

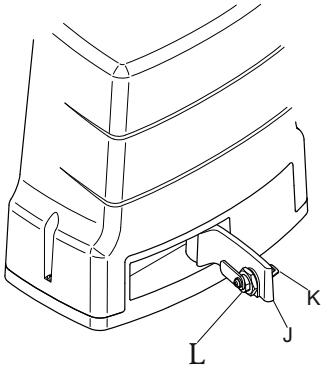
Emergency Override/Clutch Override

Unlocking

1. Operate the manual release moving back the key hole cover (J).
2. Insert the key in the cylinder lock (K) and turn it of 90° clockwise direction.
3. Pull the lever (L) till it is perpendicular to the gear-motor.

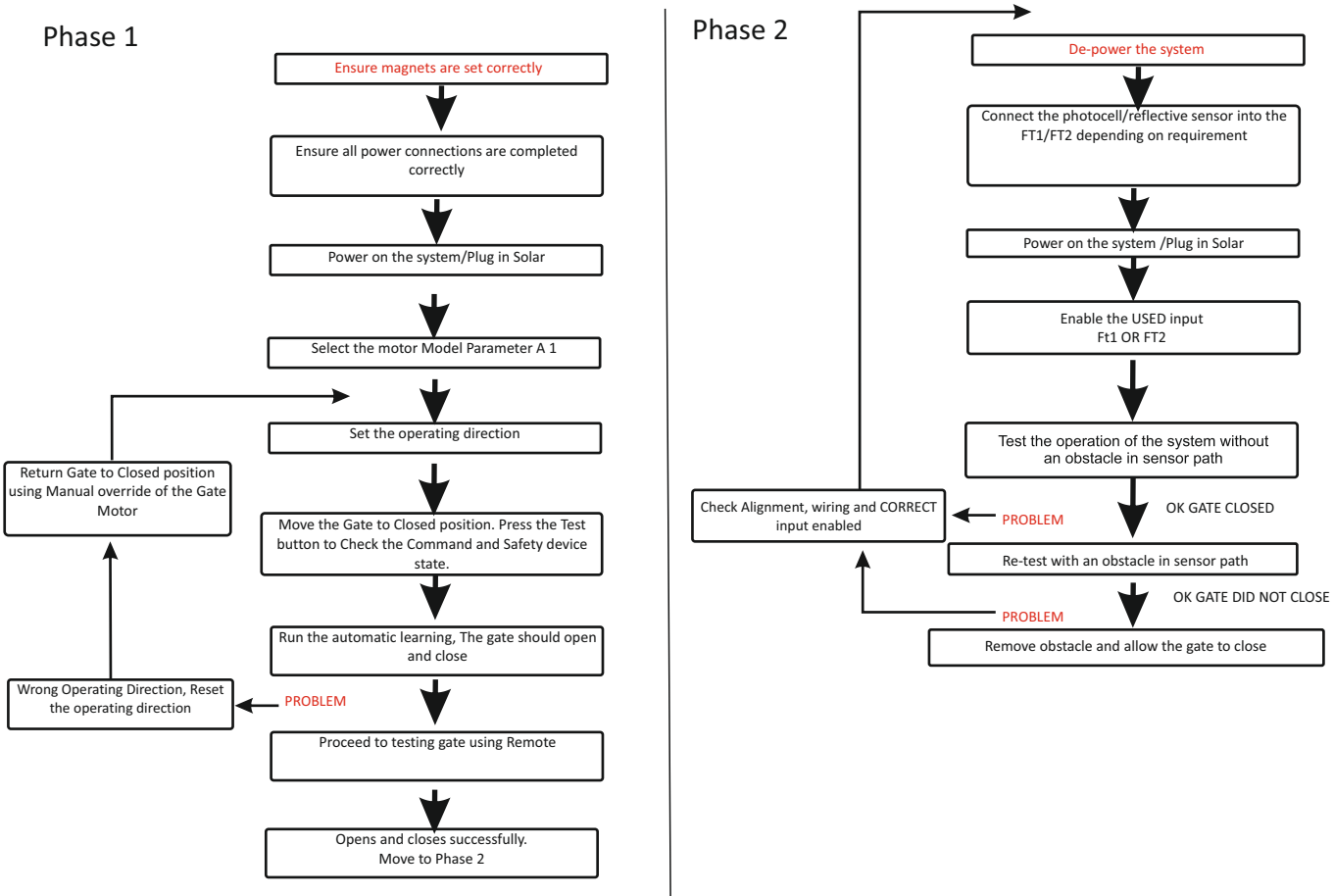
Locking

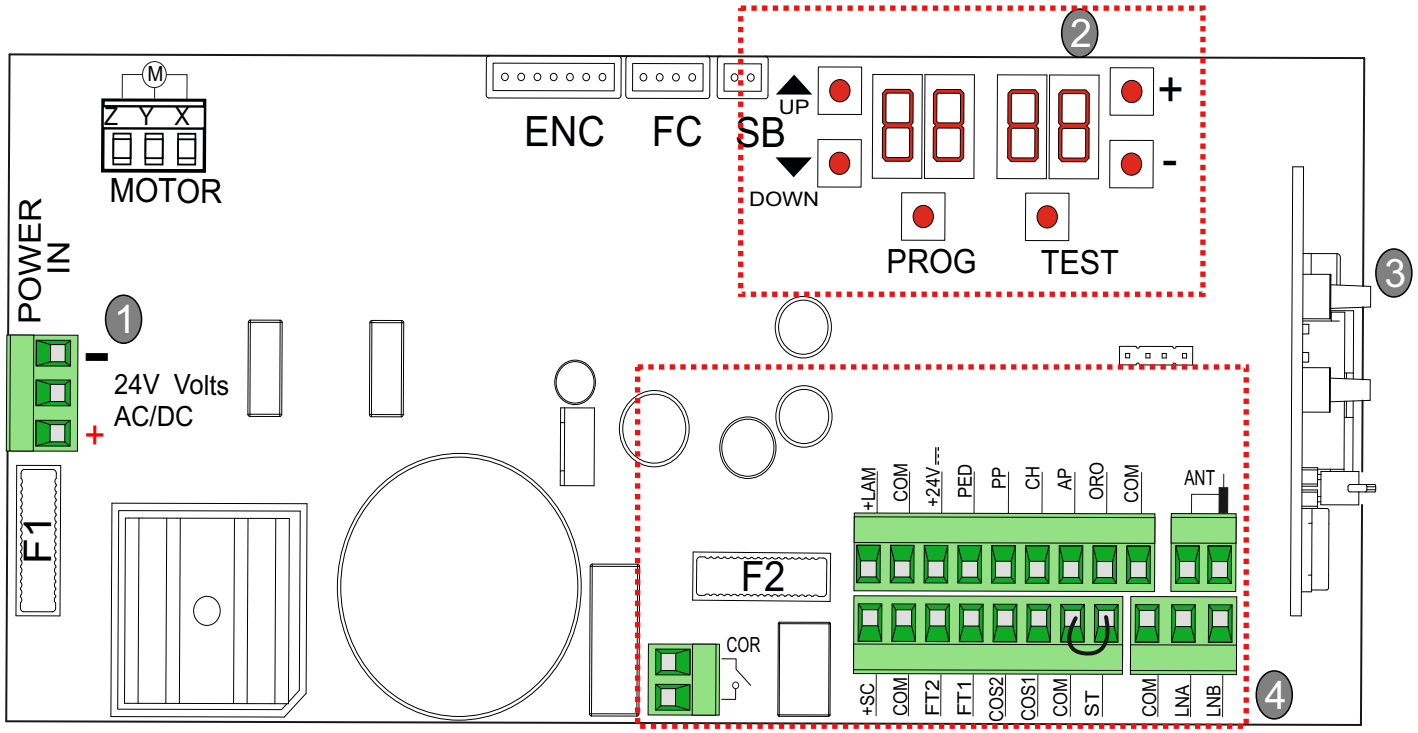
1. Bring back the lever (L) in the original position.
2. Insert the key in the cylinder lock (K) and turn it of 90° anticlockwise direction
3. Slide the cover (J) back to the original position.



Successful Installation flowchart

The below should be followed after the physical installation of the motor as per the Motor installation.



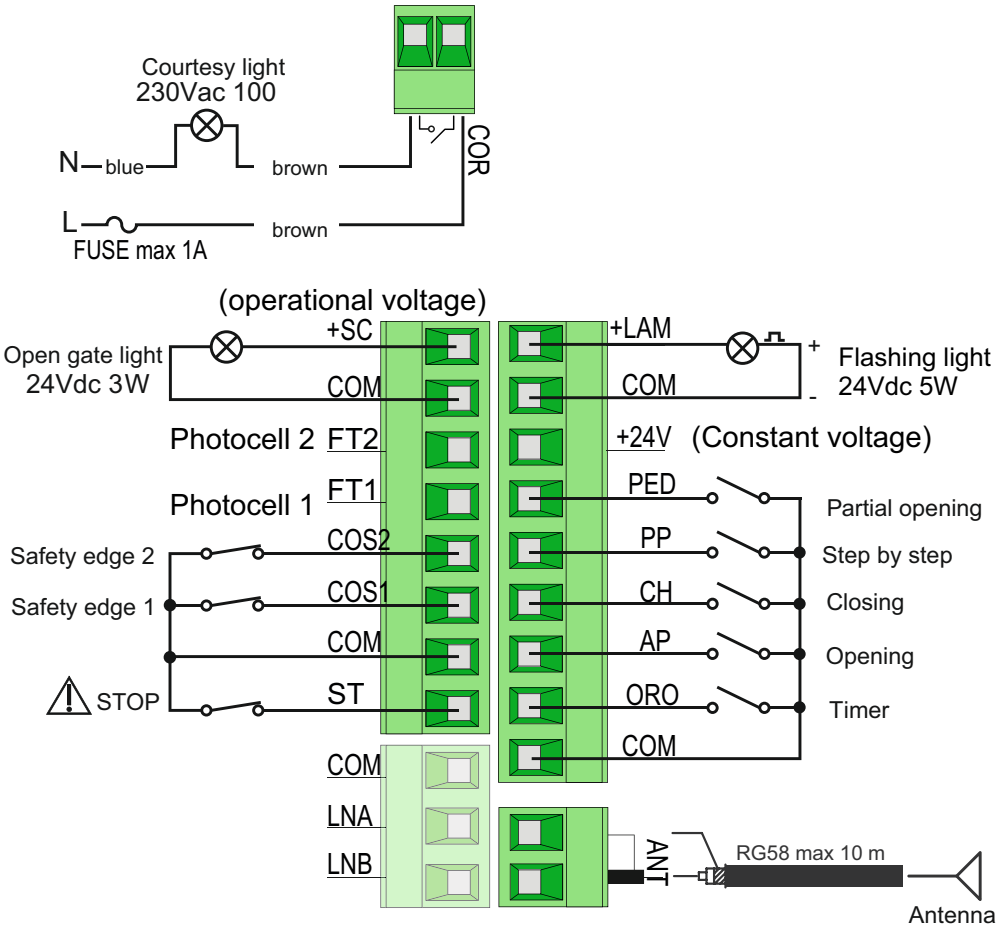


1.Power Input (24V AC/DC)

2.Parameter display mode

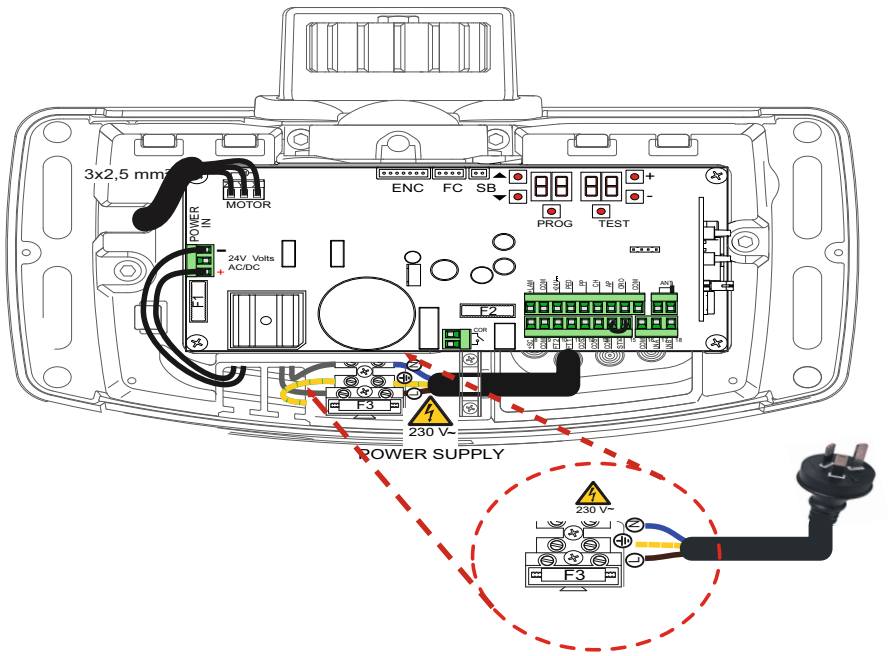
3.Receiver Chip

4.Command and safety terminal block



Internal Transformer,Wiring

HIGH VOLTAGE

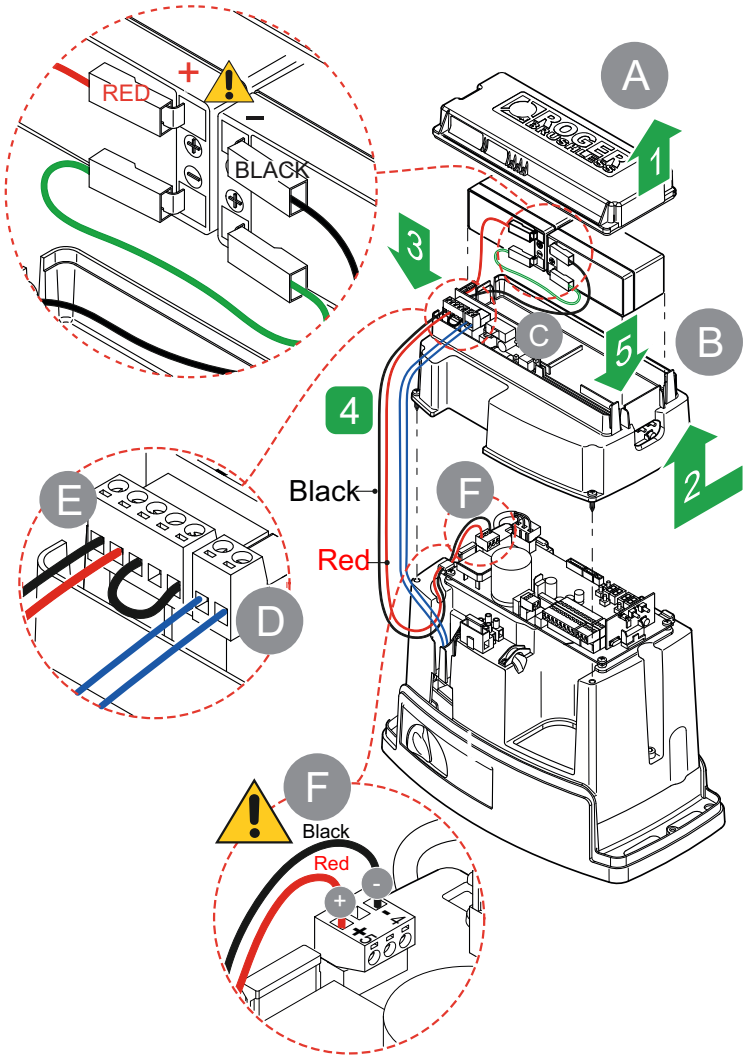


ANY High voltage Connections MUST be carried out by a QUALIFIED Electrician.

Battery Backup connections

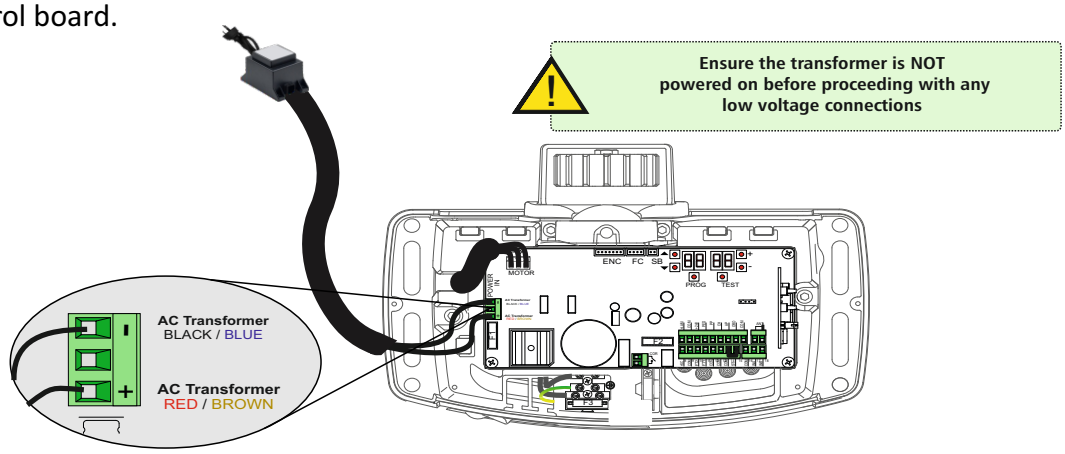
To Install the battery charger and 2x12V 1.2 Ah battery backup follow this procedure.

- Remove the Upper cover **A**.
- Remove the Cover **B**.
- Install the Battery charger Board in its relative place **C**.
- Disconnect the wires from POWER IN terminal (Transformer),and connect them to the terminal **D** on the Battery charger.
- Connect the pre-connected **Red** and **Black** wires from **E** on the battery charger terminal to the POWER IN terminal **F** on the Control unit.
- Close the Cover **B** and fasten the screws.
- Fit the 2x12V DC 1.2 ah batteries as show in the figure, Ensure the Polarity is correct.
- Close the Upper Cover **A**.

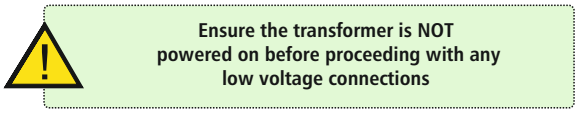


APC External AC Transformer (Low Voltage Systems)

The diagram below will illustrate the low voltage transformer connection to the control board. The Low Voltage transformer should be connected to the power input as shown in the picture below.
The ac transformer wires **Red/Brown** should go to the + Ve and **Black/Blue** to -Ve on the power supply input on the control board.

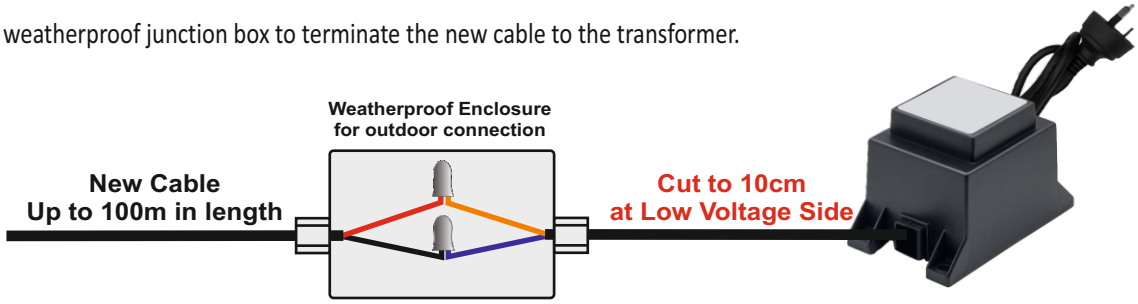


Extending the APC External AC Transformer (low Voltage)



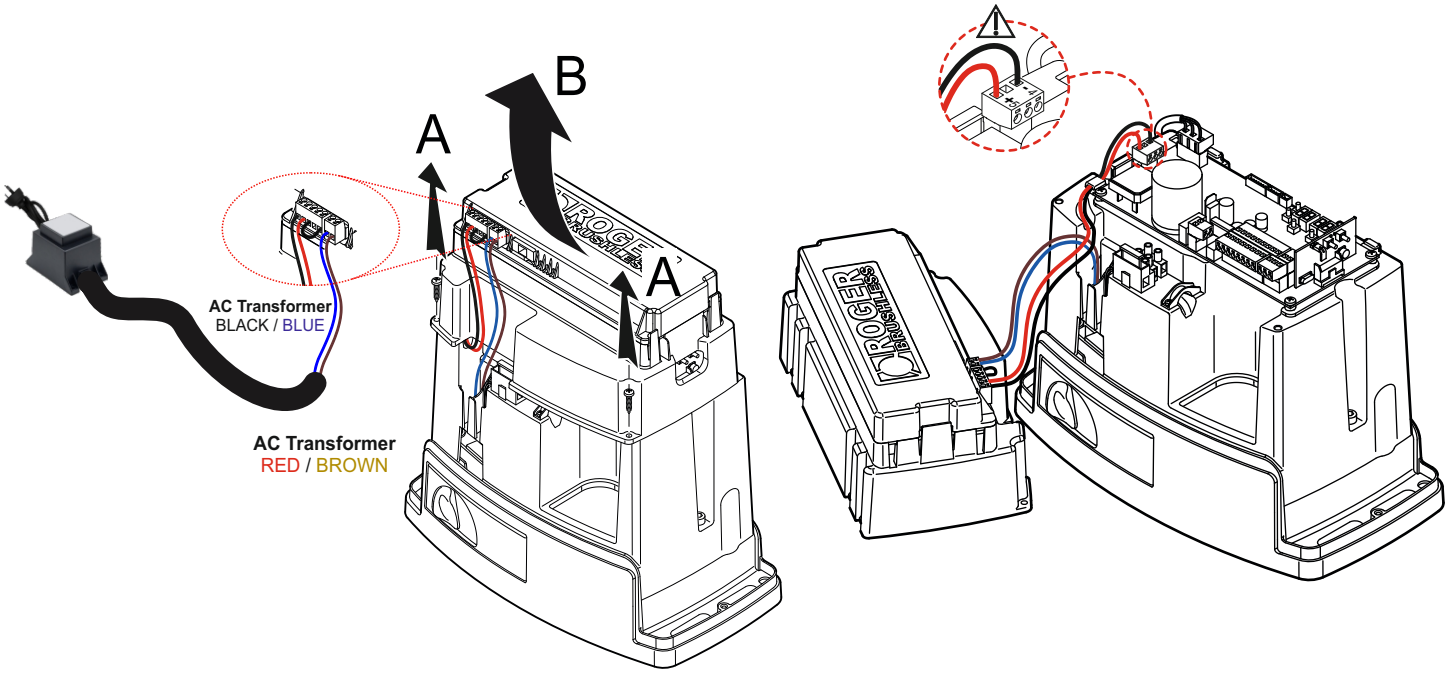
Maximum cable distance: The low voltage transformer can be run up to 100m in cable distance when using a 2mm pair conductor or greater. To run the transformer to maximum capacity the cable must be cut at the LOW VOLTAGE SIDE within 10cm from the output.

Note: Use a weatherproof junction box to terminate the new cable to the transformer.



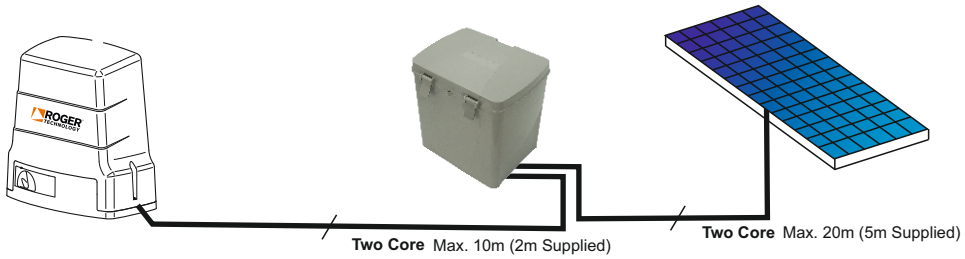
APC External AC Transformer (Low Voltage Systems) For Battery backup System

The diagram below will illustrate the low voltage transformer connection for battery backup System.



Solar System Installation

Taking into account that the solar panels maximum cable distance is 20 metres and the maximum distance between the solar box and the gate controller is 10 metres find a suitable location for the mounting of the box accordingly. Both the solar box and the solar panel are completely weatherproof and can be mounted in complete exposure to the elements.



Step 1: Installing the Solar Panel

LOOSLEY assemble the two clamps to the base plate.



Insert the post into the clamps and tighten. USE the rubber cutouts around the post for best grip



Assemble the base plate to the solar panel using the supplied bolts

1.The solar panel should be installed at 45º facing mid-day to afternoon sun.

2. Assemble and install the solar panel in a place that is exposed to the sun most of the day and as far as possible from any walls or trees.

3. Make sure that the two wires of the solar panel do not touch each other at any time during installation.

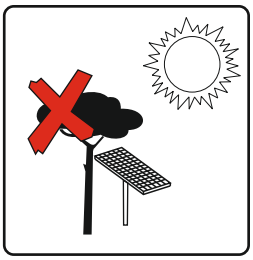
4. Install the solar panel at least 2m above the ground to protect it from dust and small stones.

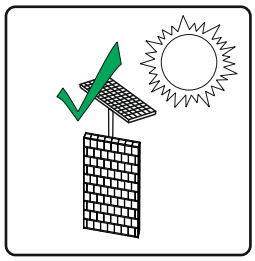
Solar Panel Placement

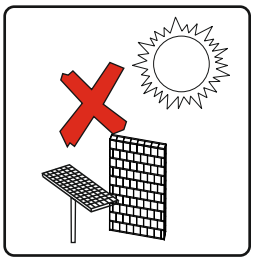
1. A solar panel CANNOT be installed under a tree, it requires sun to charge and maintain the batteries.

2. A solar system is often maintenance free BUT the batteries may require an occasional external charge in the winter months due to lack of sun.

3. Constantly powered accessories such as wired keypads will increase the standby current draw, solar panel or battery upgrades may be required if insufficient sun collection is not achieved.

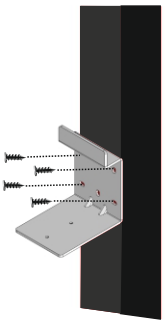




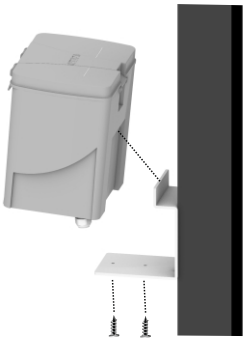


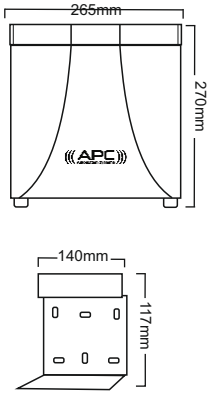
Step 2: Mounting the APC UNO Solar Box

1. Install the bracket to the wall or post using the appropriate fixings whilst adhering to the maximum cable distance of 10m (note that the system is supplied with 6m).



2. Position the solar box onto the installed bracket and secure in place using the two 4mm allen screws at the bottom.





3. Wiring the System to the APC Sun Power

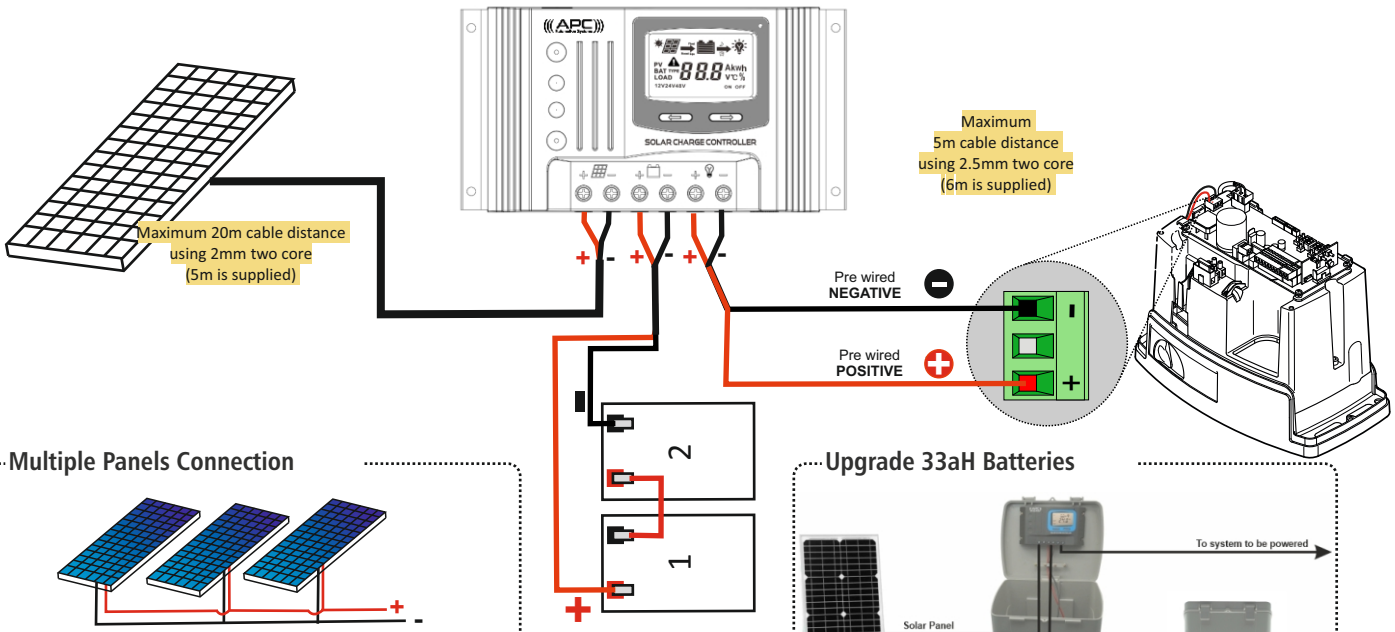
Taking into account that the solar panels maximum cable distance is 20 metres and the maximum distance between the solar box and the gate controller is 10 metres find a suitable location for the mounting of the box accordingly. Both the solar box and the solar panel are completely weatherproof and can be mounted in complete exposure to the elements.

1. Wire the positive and negative of the solar panel to there corresponding terminals.

2. Wire the batteries in series to create a 24V arrangement into the system and wire into the corresponding terminals. Regulator positive direct to battery 1,Regulator negative direct to battery 2,link the remaining terminal of each battery together

3. Wire the regulators load outputs to the control boards green to the 24V DC INPUT moulded connector

4. Plug the 24V DC Input Connector into the control board once ALL wiring works are completed



Multiple Panels Connection

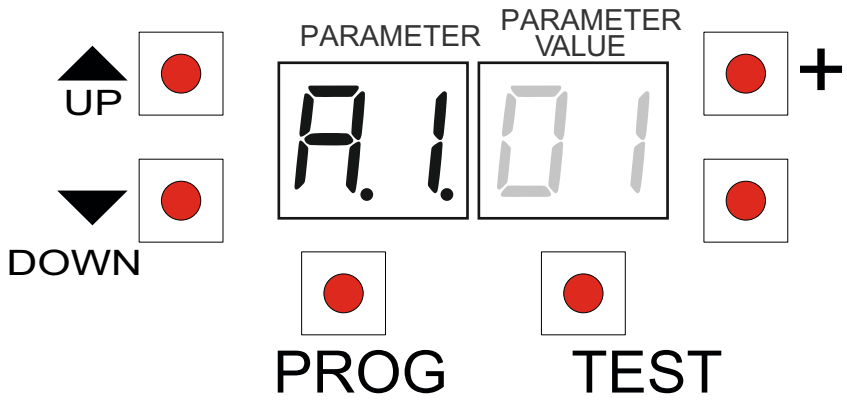
All panels are wired in parallel

MAXIMUM 240W Total Input

When installing multiple collectors consider installing facing in different directions to gather morning and afternoon sun.

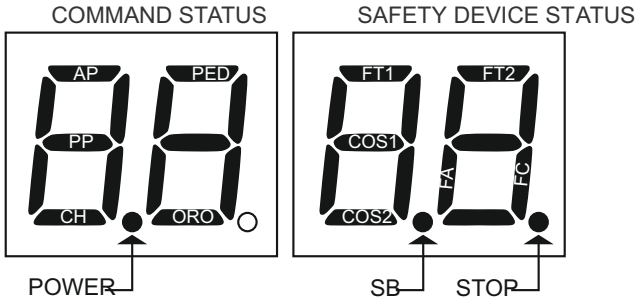
Upgrade 33aH Batteries

Parameter Display Mode



-Press the UP or Down buttons to view the Parameter you intend to modify.
-Use the + and - buttons to modify the values of the Parameter. The value starts to Flash.
-To save the new value, wait for few seconds or move onto the another parameter using UP or Down button. the display flashes rapidly to indicate the new value has been saved.
(Press and hold the UP or DOWN button to scroll quickly through the parameter and same + OR - to scroll through the values more Quicker)

Parameter Display Mode

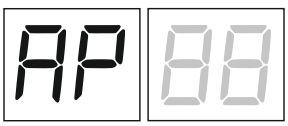


Command status: AP - Open, PP - Step Mode ,CH - Close, PED - Partial opening, ORO - Clock are normally OFF. They will illuminate when command is received.

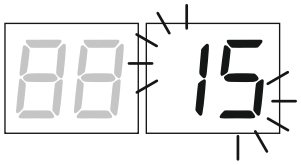
Safety Device Status:FT1 and FT2 - Photocell, COS1 and COS2- sensing edge, FA- gate open limit, FC-gate closing limit and SB- release handle open are normally ON. if the indicator is off, the relative device is in alarm state or it is not connected.

Test Mode

Test mode is used to test activation of commands and safety devices with Visual confirmation. To activate the mode, press the test button with automatic door system at rest. if the gate is moving, pressing test button stops the gate. Pressing the button again enables Test mode.



Command signal Status is shown on the left hand side of the display for 5 sec, Only with respective command signal is activated(AP,CH,PP,PED,ORO) For example if the open command is activated, the letter AP on the display.



Status of the safety devices/inputs is shown on the right hand side of the display.

Example: STOP contact in alarm state

00	No safety device in alarm state and no limit switch activated.
56 (Sb)	Release handle or lock open.
15	STOP contact (N.C.) open. If there is no STOP switch, jumper the contact.
13	Sensing edge contact COS1 (N.C.) is open. Check connection. If sensing edge is not installed, disable with 73 00.
12	Sensing edge contact COS2 (N.C.) is open. Check connection. If sensing edge is not installed, disable with 74 00.
11	Photocell contact FT1 (N.C.) is open. Check connection. If photocell is not installed, disable with 50 00.
10	Photocell contact FT2 (N.C.) is open. Check connection. If photocell is not installed, disable with 53 00.
FE	Both limit switches in error state. Check connections and settings of limit switches.
FA	If gate is open, gate open limit switch is detected.
FC	If gate is closed, gate closed limit switch is detected.

NOTE: IF one or more contacts are open, it will not operate the gate to Open or close. This does not apply to the Limit switch signal state. Press the Test button again to Exist the Test mode.

Gate System Setup Cycle

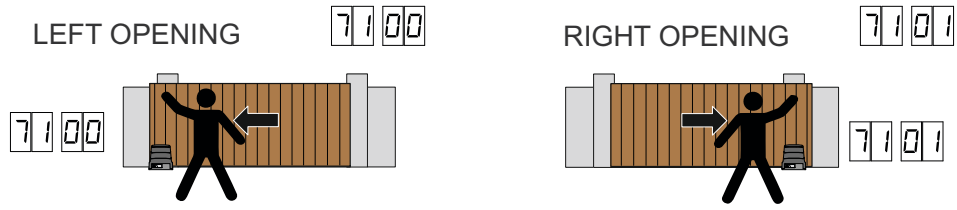
Step 1: **Selecting the Motor type**

KEY: **HIGH SPEED Motors**

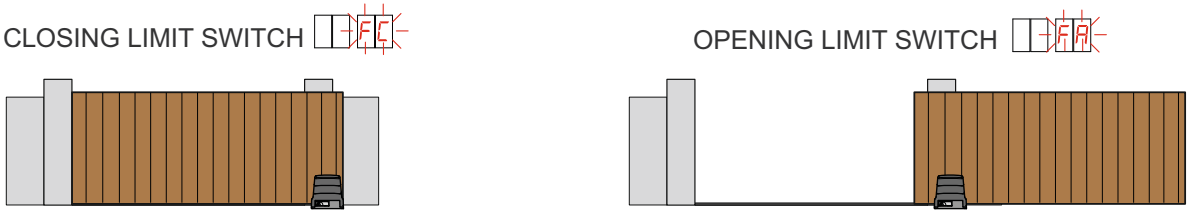
SELECTION	MODEL	MOTOR TYPE	CONFIGURATION
A1 02	**BH30/804**	/	**1000kg IRREVERSIBLE**
A1 03	**BH30/604/HS**		**600kg IRREVERSIBLE HIGH SPEED** see chapter 14 "Special Parameters for High Speed Motor"
A1 05	**BM30/300/HS**		**400kg IRREVERSIBLE HIGH SPEED** see chapter 14 "Special Parameters for High Speed Motor"

Step 2: **Selecting the Motor Direction**

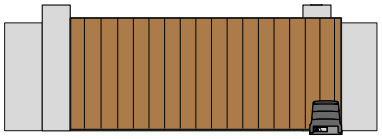
Select the position of the gate related to the gate parameter. the default parameter is for Right hand side opening looking from inside the property



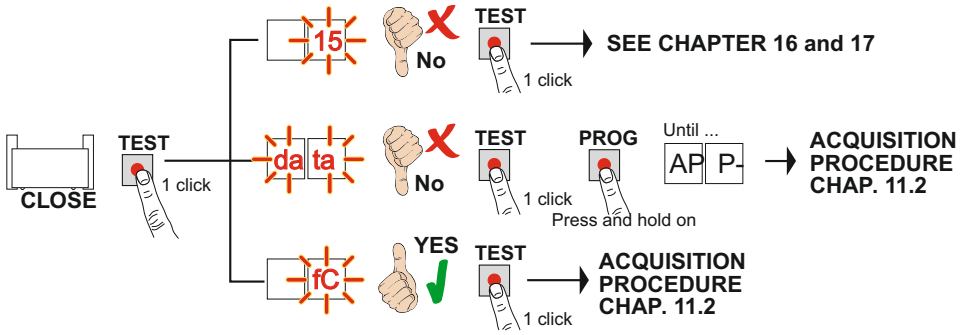
Note: Adjust the magnetic limits as per the motor manual, the gate should stop slightly before it reaches the mechanical stop.



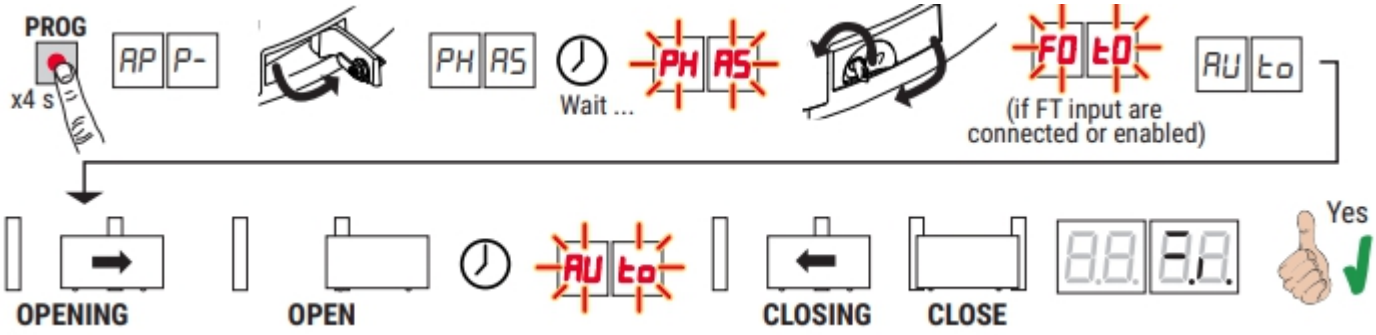
Step 3 : Move the Gate into closed position



Step 4 : Press the TEST button and Check the command signal and safety device states.



Step 5 : Now start the learning phase



- Press and hold the **PROG** for 4 sec until the AP P- is shown on the display.
-Open the release handle. The message PH AS Appears on the display after few seconds. Controller unit launches a calibration procedure. operation parameters of the motor are determined during calibration.
-If the motor calibration procedure is successful, the message PH AS flashes on the display.
-Close the release handle.
-FOTO is shown on the display(only if the parameters 50,51,53,54 are not disabled).
keep away the photocell beam to prevent the interruption.
-AUTO is shown on the display and the gate starts opening at low speed.
-Now the gate opens to the full open position. Auto flashes on the display.
-Then gate will close to Full closing position.
-Now the Gate learning cycle is completed and display enters the command and safety device state is display mode.

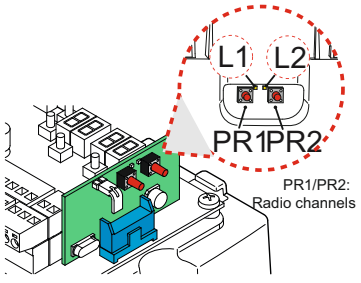
If any error messages are shown on the display, Please see Chapter 14 “Alarm and faults”.

Pairing & Deleting Wireless equipment

Pairing wireless Equipment

- Press the P1 or P2 once (Depending on the function to be enabled) on the receiver.
- The LED on the receiver flashes slowly, Now press the desired button on the Remote.
- Then LED remains ON for a 1 Second and the remote is stored.
- Now LED Flashes slowly again, another remote can be stored during this time.
- LED turns off automatically after 10 sec.

If no activity the receiver will return to standby.



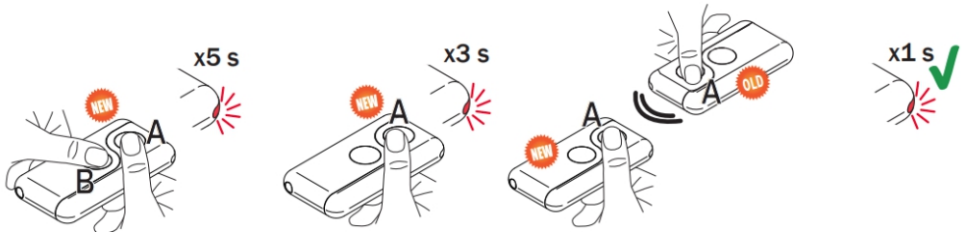
Clearing an individual Wireless item

- Press and Hold P1 or P2 button on the receiver you wish to delete for 4 Seconds, Now the LED L1 or L2 turns ON and then flashes rapidly.
- Release the button, LED flashes rapidly for 4 s.
- Press the button on the remote you wish to delete.
- The LED lights turns ON for 1 s and then remote is deleted from the receiver.
- To cancel another remote, repeat the above procedure.

Clearing ALL Wireless equipment

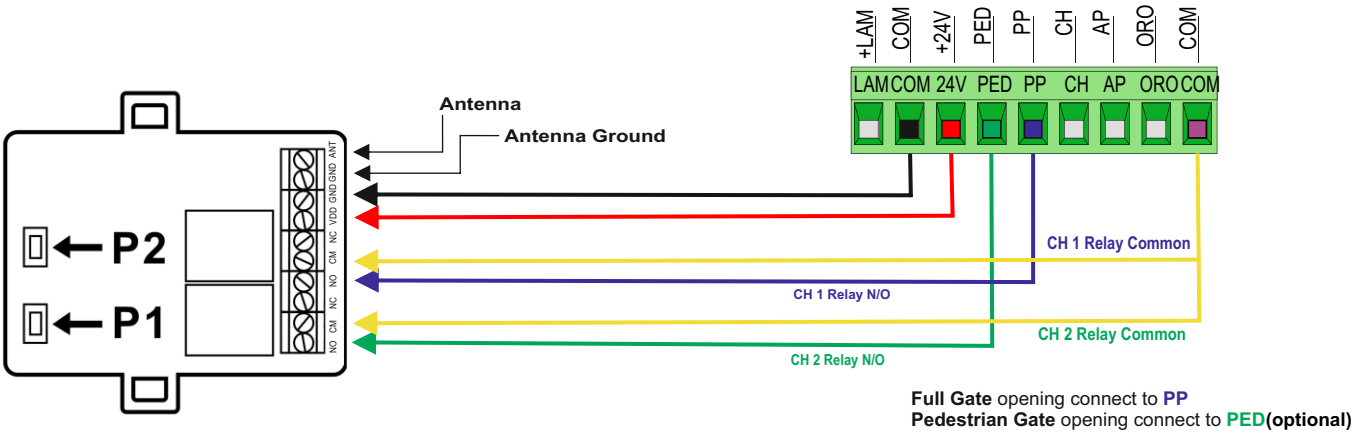
- Press and Hold P1 and P2 Simultaneously for 4 Seconds on the receiver.
- LED L1 and L2 flash Simultaneously (5 flashes).
- Now the memory is erased.

Service Free Pairing(Remote Controls Only)



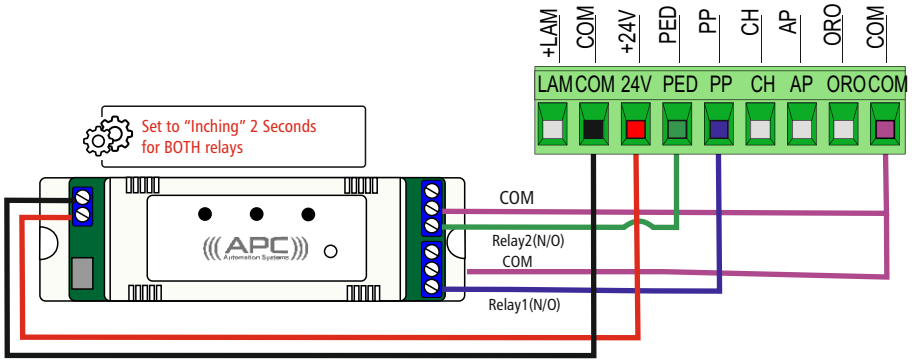
-Simultaneously, Press and Hold button A and button B on the New remote.
-The LED Flashes for 5s.
-Hold Button A only on the new Remote you want to store.
-the LED Flashes for 3s.
-Hold the Previously stored remote as close as possible to the New Remote.
-Press button A On the OLD Remote.
-The LED Lights For 1s to Confirm that the Service free pairing is done successful.

RX-2 Connections



Full Gate opening connect to **PP**
Pedestrian Gate opening connect to **PED(optional)**

• LINK 2 wiring connections



Full Gate opening connect to **PP**
Pedestrian Gate opening connect to **PED(optional)**

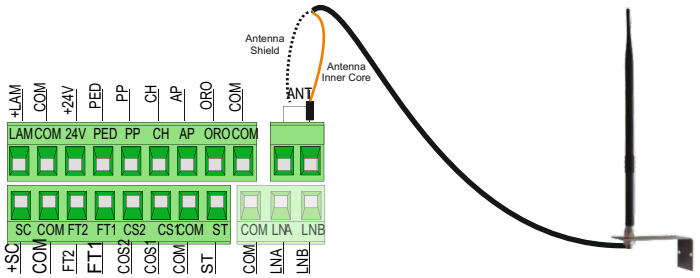
Connecting an APC-ANT1 External Antenna

The ANT-1 external antenna can boost the remote range drastically in most installations.

- APC-RC450S remote can be boosted UP TO 800m distance
- APC-RC4-SV remote can be boosted UP TO 100m distance
- APC-RC4-S remote can be boosted UP TO 80m distance

Inner core of the antenna cable to ANT (A2) on the control board.

Outer core/shield of the antenna to ANT Shield (A1) on the control board.



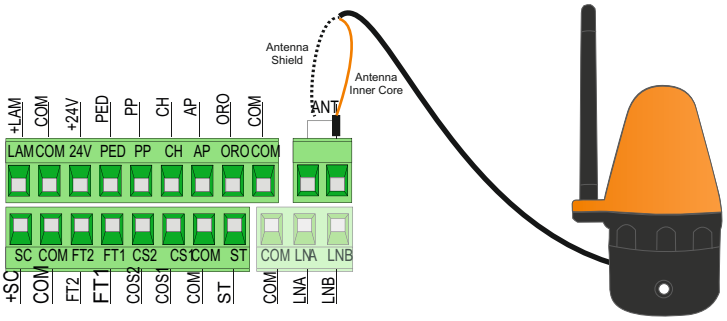
Connecting an APC-ULA Light with External Antenna

The APC-ULA external antenna can boost the remote range substantially with the added feature of a safety light.

- APC-RC450S remote can be boosted UP TO 600m distance
- APC-RC4-SV remote can be boosted UP TO 80m distance
- APC-RC4-S remote can be boosted UP TO 60m distance

Inner core of the antenna cable to ANT (A2) on the control board.

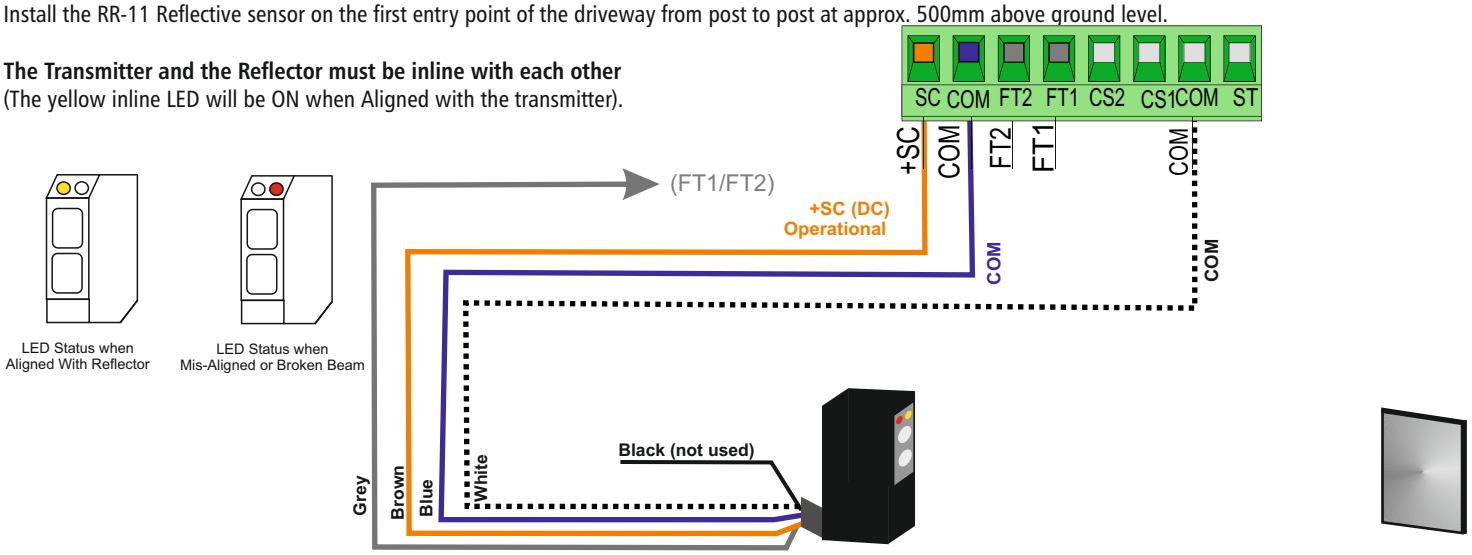
Outer core/shield of the antenna to ANT Shield (A1) on the control board.



Connecting a Retro Reflective Sensor (APC-RR-11)

APC-RR-11 Reflective sensor (Transmitter only) **must be connected back to the control board** (see wiring diagram).
Install the RR-11 Reflective sensor on the first entry point of the driveway from post to post at approx. 500mm above ground level.

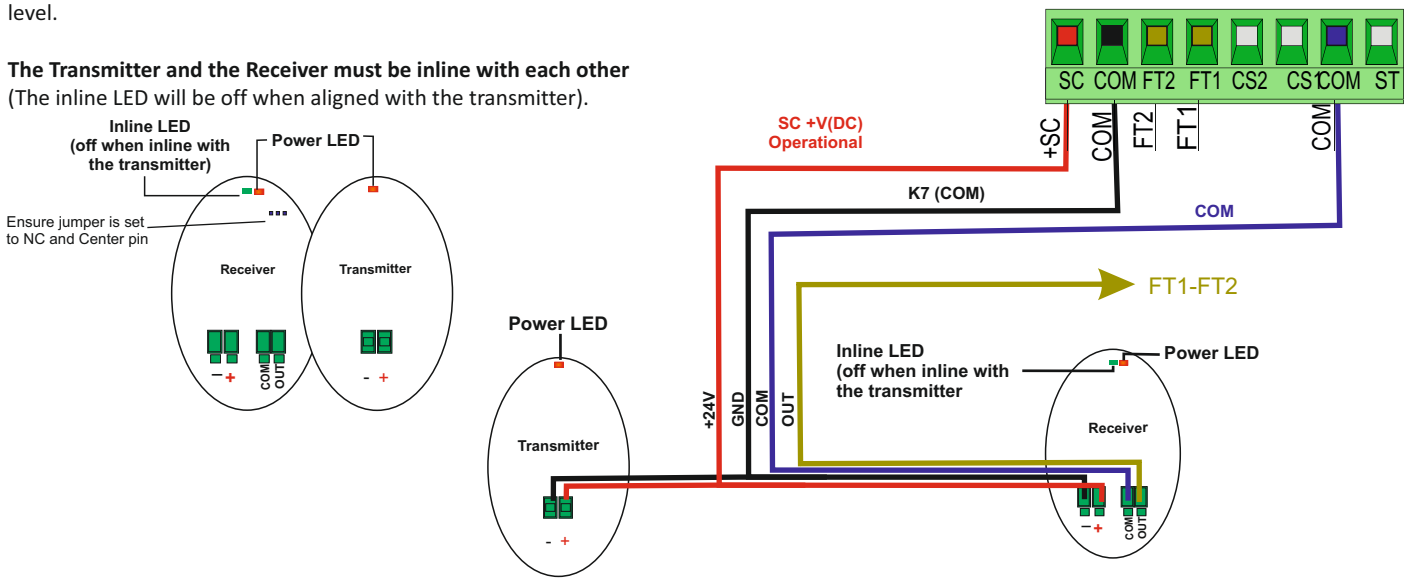
The Transmitter and the Reflector must be inline with each other
(The yellow inline LED will be ON when Aligned with the transmitter).



Connecting a PE Sensor (APC-PE2000)

APC-PE2000 PE sensor (Transmitter & Receiver) must be connected back to the control panel.
Install the PE2000 Photoelectric sensor on the first entry point of the driveway from post to post at approx. 500mm above ground level.

The Transmitter and the Receiver must be inline with each other
(The inline LED will be off when aligned with the transmitter).



Enabling the photocell and setting the parameters

Prior to enabling the Photocell you will first need to choose the logic system in which it will operate.
FT1 and FT2 can be programmed to specific use as per the required logic by changing the values of 50,51,52,53,54,55and56.
Default to usage
FT1 can be set to function the photocell in Closing. but this point can be programmed to other functions as well.
FT2 can be set to function opening and closing as well as per the change in the setting.

Advance change in the settings

For changing the Parameters value please refer to the Parameter index and check the relative page to do the advance settings

Chapter 12 Page number 73 on the manual For Index of parameter.

Chapter 13 Page number 75 on the manual For Parameter Menu.

Chapter 16 Page number 85 on the manual For Safety input and command status.

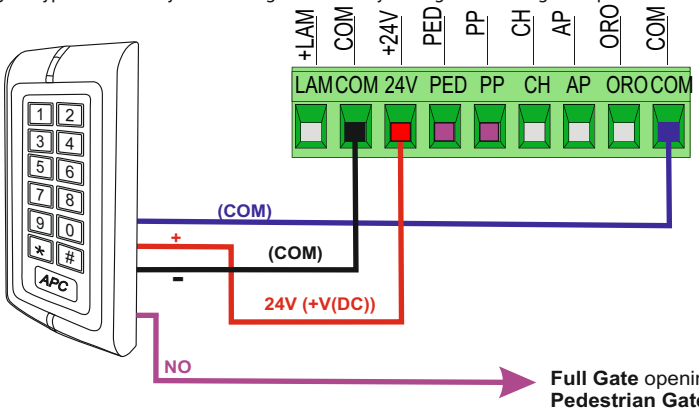
Chapter 17 Page number 86 On the manual For Alarms and faults.

Please refer this pages for advance setting and fault findings.

Connecting an APC Keypad (APC-KP1-C)

Unlike a push button entry switch using a keypad can provide a much higher security for access control for guests, workers, tenants etc.

Using a keypad will allow you to manage the users by adding and deleting as required. Its backlit illumination also allows for ease of use at night.



Relay time should be set to ONE seconds

Full Gate opening connect to **PP (Start)**
Pedestrian Gate opening connect to **PED (P.Start)**

Quick Programming Pin Code / Swipe Tag

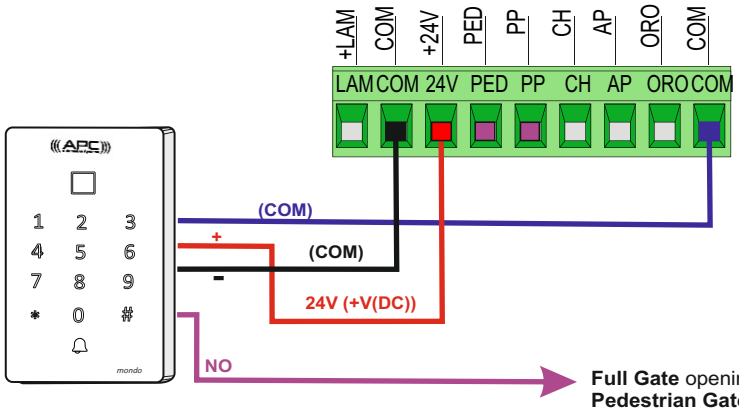
* 8 8 8 8 8 8 #	Master Code used to enter programming only
1	To enter Pin Code/Swipe Card Programming
User ID #	Any number between 1-999, this number is unique to each pin code/swipe tag and cannot be used twice
PIN/SWIPE #	The Pin code you would like to use to open the gate (4-6 Digits) OR Swipe the tag past the black window
*	To Exit programming and return to standby state
*	

Connecting an APC Mondo Wi-Fi Keypad (APC-WF-KP)

Unlike a push button entry switch using a keypad can provide a much higher security for access control for guests, workers, tenants etc.

Using a keypad will allow you to manage the users by adding and deleting as required. Its backlit illumination also allows for ease of use at night.

Furthermore the keypad can be connected to your Wi-Fi network and can be controlled anywhere in the world through the APP.



Relay time should be set to ONE seconds

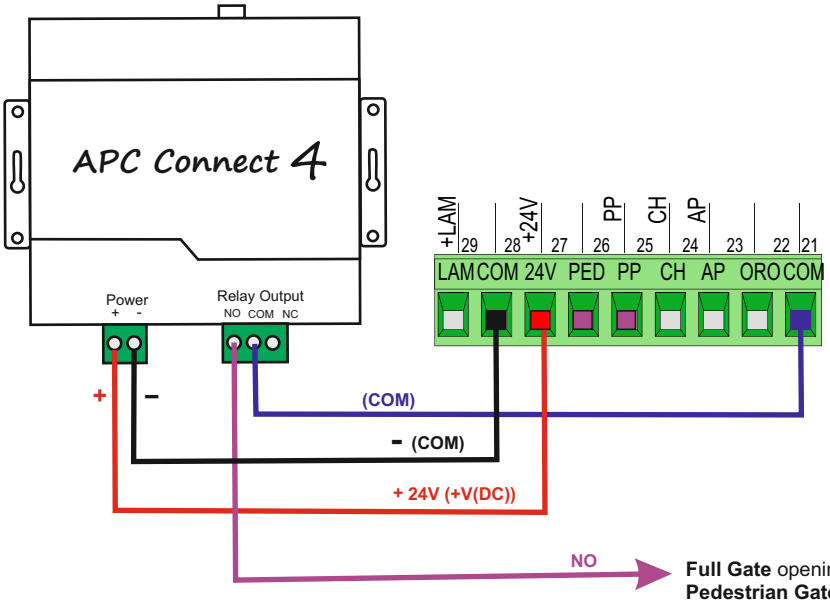
Full Gate opening connect to **PP (Start)**
Pedestrian Gate opening connect to **PED (P.Start)**

Quick Programming Pin Code / Swipe Tag

* 9 9 9 9 9 9 #	Master Code used to enter programming only
1	To enter Pin Code/Swipe Card Programming
User ID #	Any number between 1-999, this number is unique to each pin code/swipe tag and cannot be used twice
PIN/SWIPE #	The Pin code you would like to use to open the gate (4 Digits) OR Swipe the tag past the red square
*	To Exit programming and return to standby state
*	

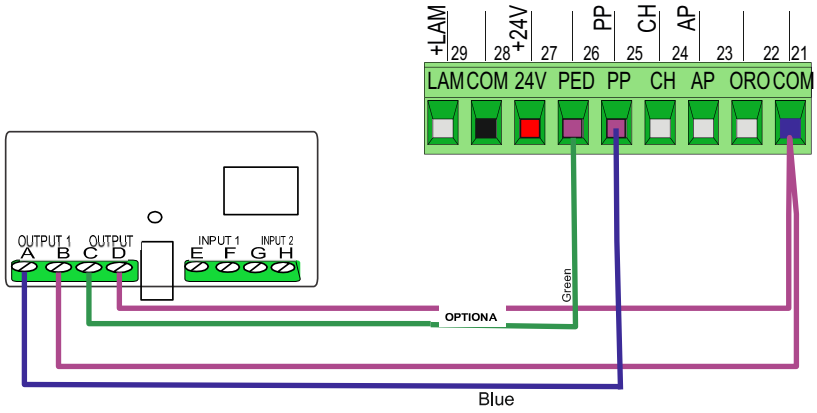
Connecting APC Connect4 GSM Receiver

A GSM Receiver is the absolute most flexible form of access control. Providing there is good mobile reception at the gate the GSM switch can operate the gate from anywhere in the world. When receiving a call it will automatically reject the call and open or close the gate. SIM CARD IS NOT SUPPLIED.



Relay time should be set to ONE seconds

Remootio3 Connection



Full Gate opening connect to **PP (Start)**
Pedestrian Gate opening connect to **PED (P.Start)**