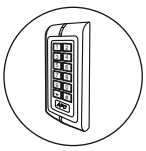
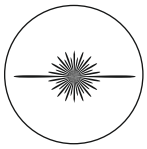
21/04/2023 V02.01

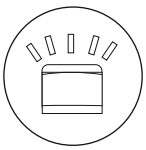
APC-DC BOOM GATE
24 Volts System
Installation Guide

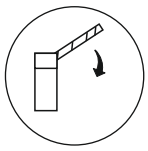

Keypad Input

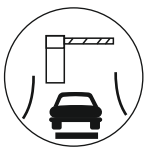

Push Button Input


Safety Beam Ready


Smart Sensitivity


Courtesy Light Output


Auto Close + Party Mode


Exit Wand + Loop Input

When running any wiring you MUST always switch off the system power.

Before beginning your installation please read this manual thoroughly and observe the wiring for the connection of any and all accessories related to your installation

Table of Contents

Warning to Installers and Users

⚠ Automatic Boom Gates are not for Pedestrians!

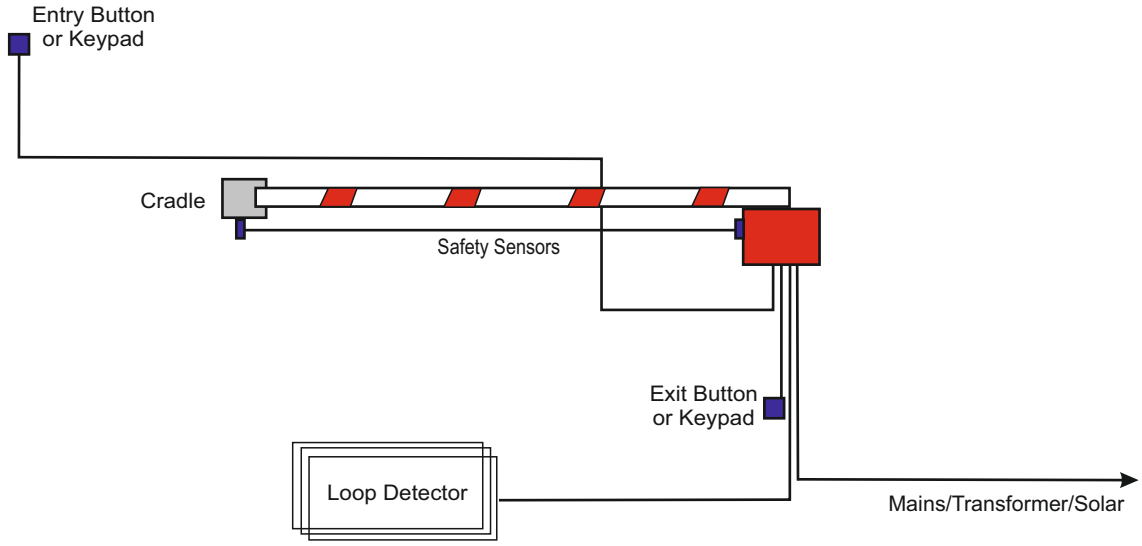
Automatic gate openers are designed for vehicular traffic. They are powerful and can cause serious bodily injury or death. Accordingly, direct all pedestrian traffic to separate walk through gate.

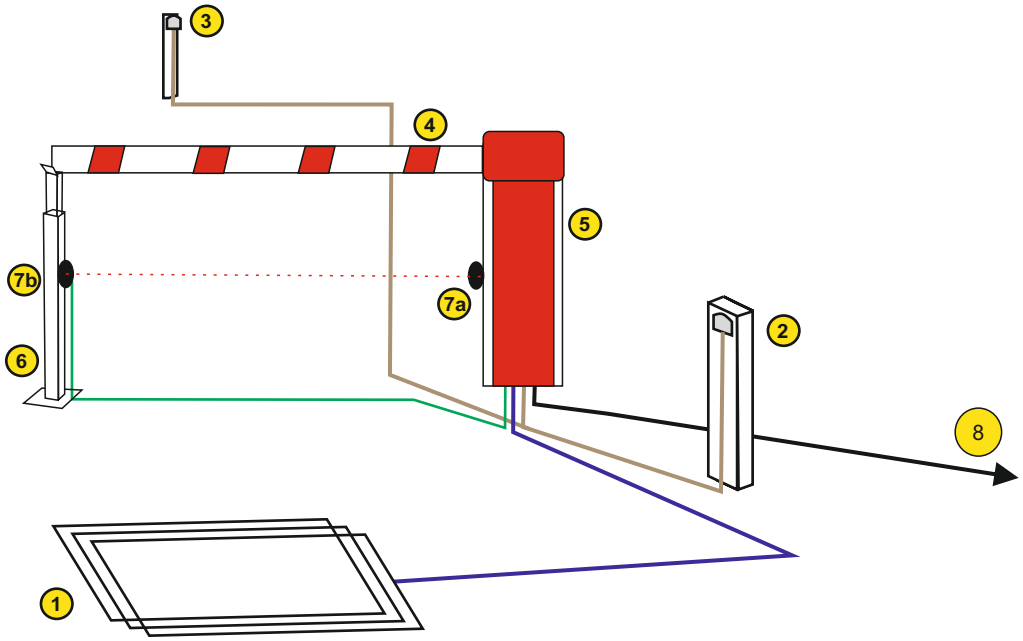
1. Before starting installation and maintenance, please read this manual carefully.
2. Before installation and maintenance disconnect the power.
3. If mains power is connected then product must be earthed, and earth leakage breaker is necessary on the power supply.
4. As for electric cable type and section, we suggest to use the cable type with minimum section of 2.0mm².
5. Do not change the original inside wiring.
6. For loss and damage due to unauthorised changes to the original design of the product, the original manufacturer will assume no liability or responsibility.
7. If power failure, please switch off the power supply first, then open the door and rotate the handle on the motor manually to open the boom completely.
8. Keep the automatic control (Push button, remote control, etc.) out of the reach of children.
9. Use transmitters or button only where you can see the gate clearly.
10. Never open the door or the cover of the cabinet when the machine is working.
11. Do not permit children to play on or around the gate.
12. Make sure that the path is not obstructed when the barrier is running.
13. Safety devices like photocells are highly recommended. Check and test them periodically to ensure that they are effective.
14. Please store this manual properly for reference.

Motor Specifications

Power supply: 220V 50Hz
Motor's power: 80W/24VDC
Motor's rotation: 1400r/min
Time for up/down: 2S (for1-3M)
6S (for4-6M)
Max Boom's length: 6M

Installation Layout



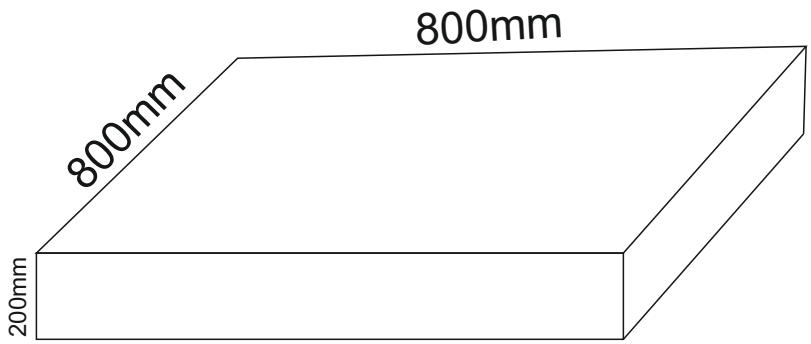


1	Loop Detector
2	Exit Button/Keypad
3	Entry Button/Keypad
4	Boom Arm
5	Boom Operator
6	Cradle
7a	PE Sensor Transmitter
7b	PE Sensor Receiver (Not required for Retro Reflective Sensor)
8	Main, Transformer, Solar

Accessories Requiring Wiring:

Keypad - 4 Core
PBS-K - 2 Core
PE Sensor
Receiver - 4 Core
Transmitter - 2 Core
Loop Detector - 1 Core Teflon insulated Cable

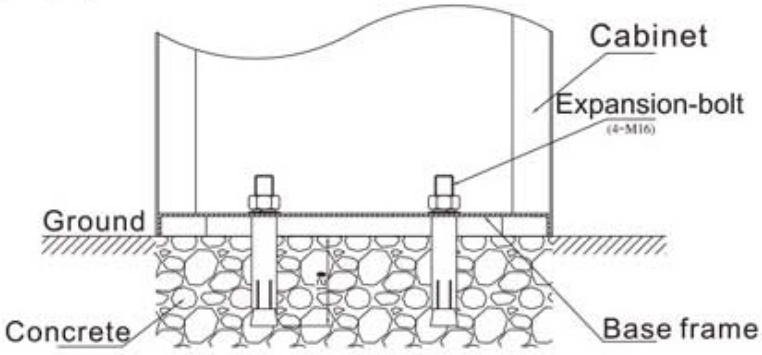
Footing Size

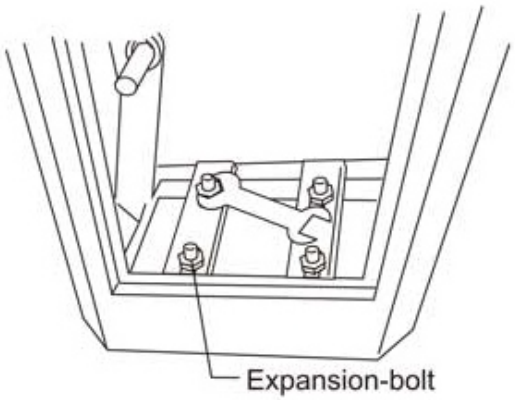


Installing and Adjusting

1. Install the machine on the ground (Fig.1)

(Fig.1)





2. Install boom(Fig.2)

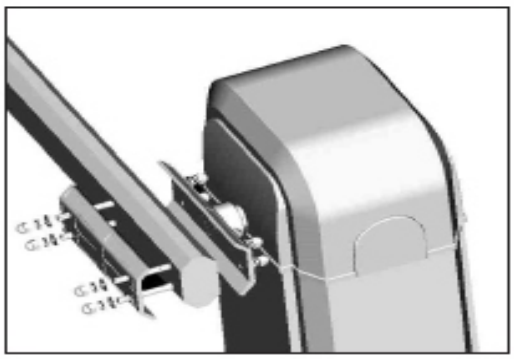


Fig.2

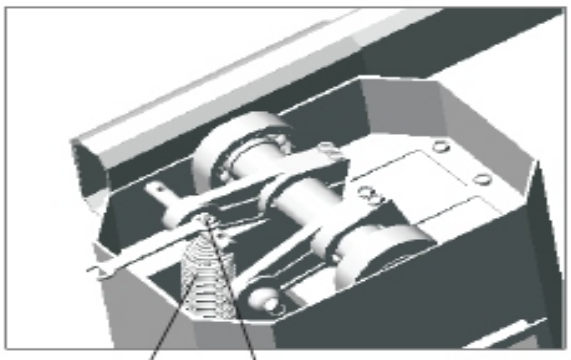
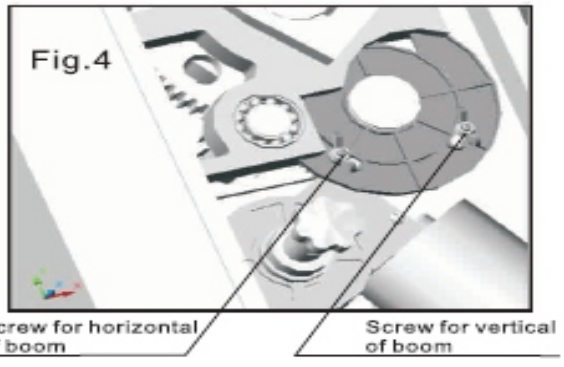
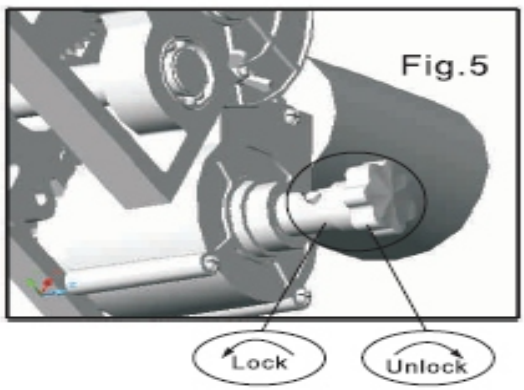


Fig.3

3.Adjust the limit position

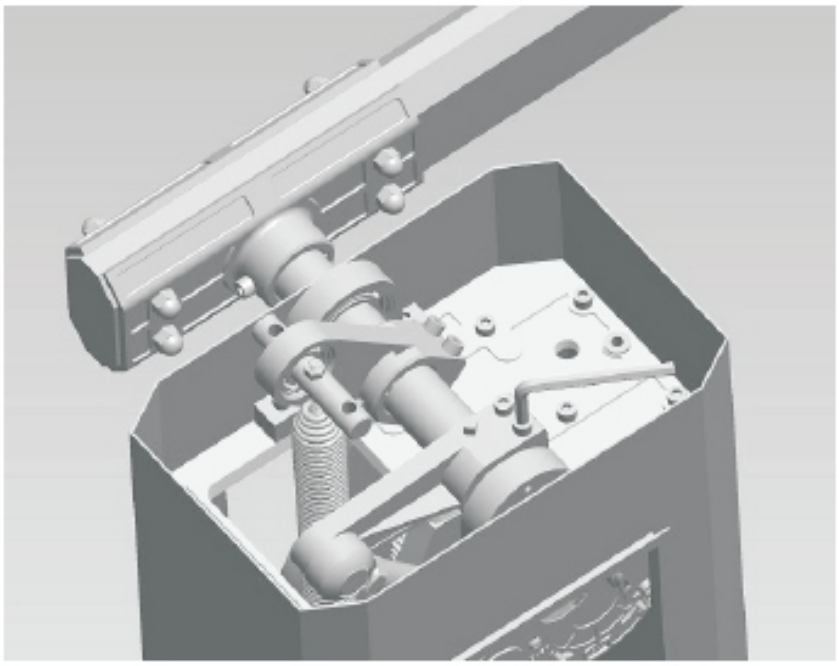
BARRIER is supplied to you with the mechanical limit switch that are already set to allow optimum boom movement.
Do not change the limit position.

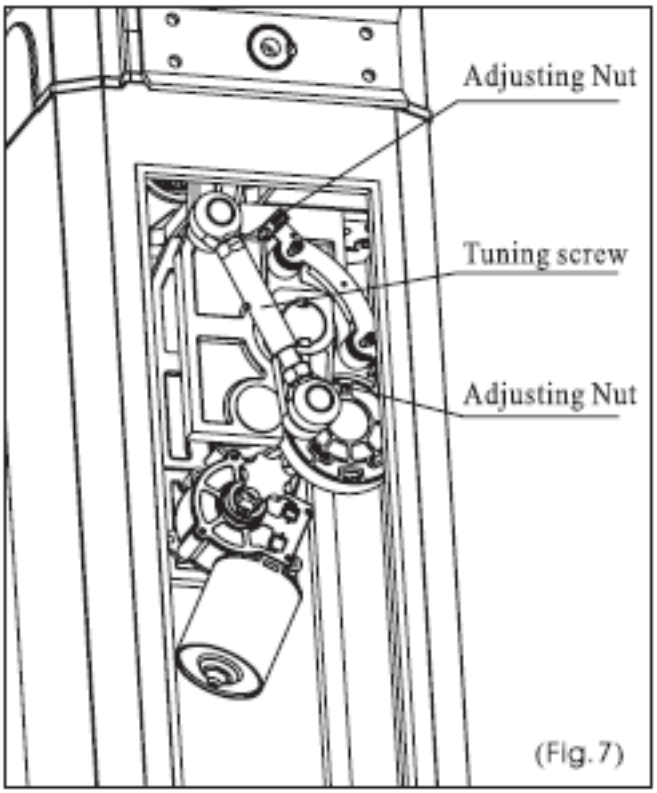




C.Quick release function(Fig.5)

D. Adjust the vertical and horizontal line of the Boom.





(Fig.7)

1.Loosen the Adjusting Nuts.

2.Adjust the Tuning Screw and see the Boom, if the Boom is parallel to the ground when it is closed, tighten the Adjusting Nuts.

Adjust the balance of the spring with boom.

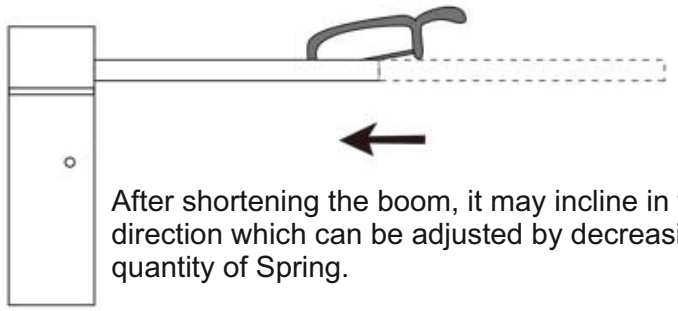
The springs have been already adjusted to balance with the boom. If the length of boom need to be changed, the springs should be re-adjusted.

See the Appendix

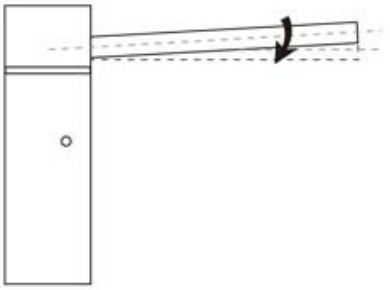
Adjust the Vertical and Horizontal Line of the Boom

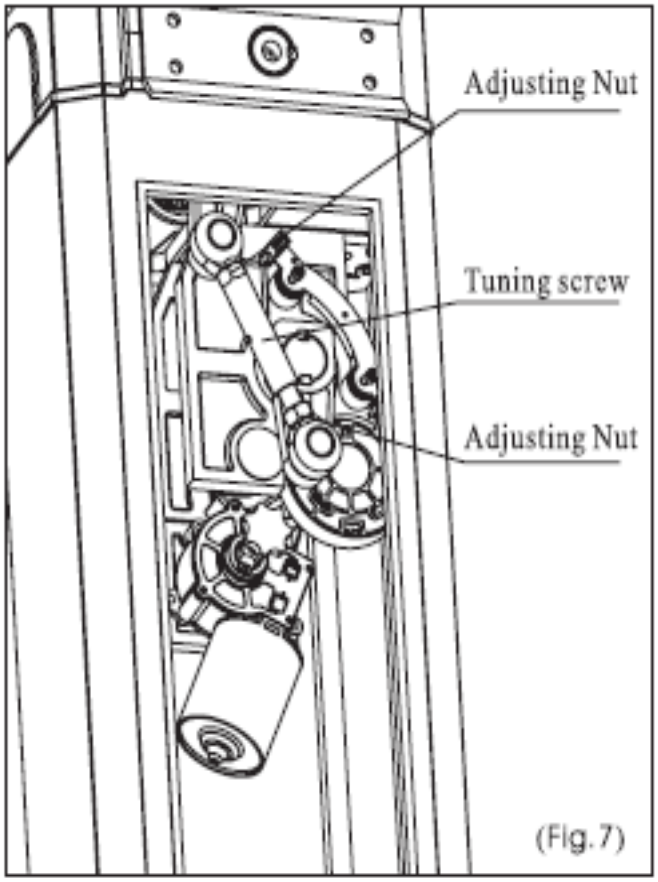
Boom need to be shorter (Fig.3) (Fig.4)

(Fig.3)



After shortening the boom, it may incline in the upward direction which can be adjusted by decreasing the quantity of Spring.



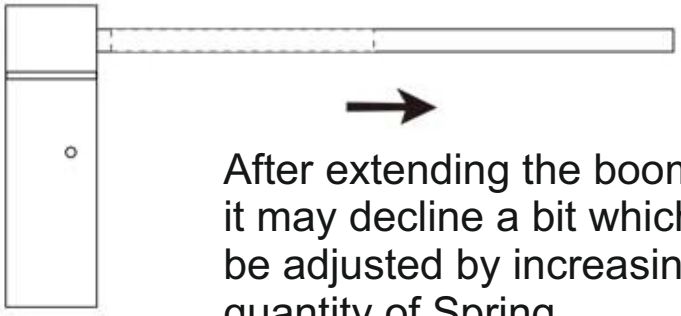


Setting up the boom in a perpendicular direction

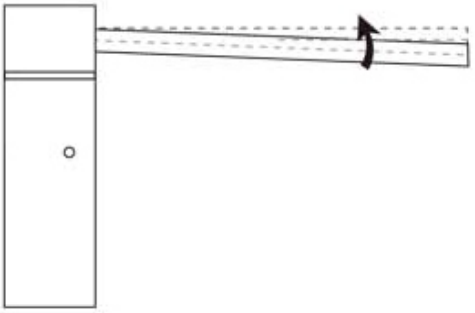
1. Loosen the adjusting nuts.
2. Adjust the turning screw to make the boom perpendicular to the ground when in open position.
3. Tighten the adjusting nuts, once the boom is perpendicular to the ground.

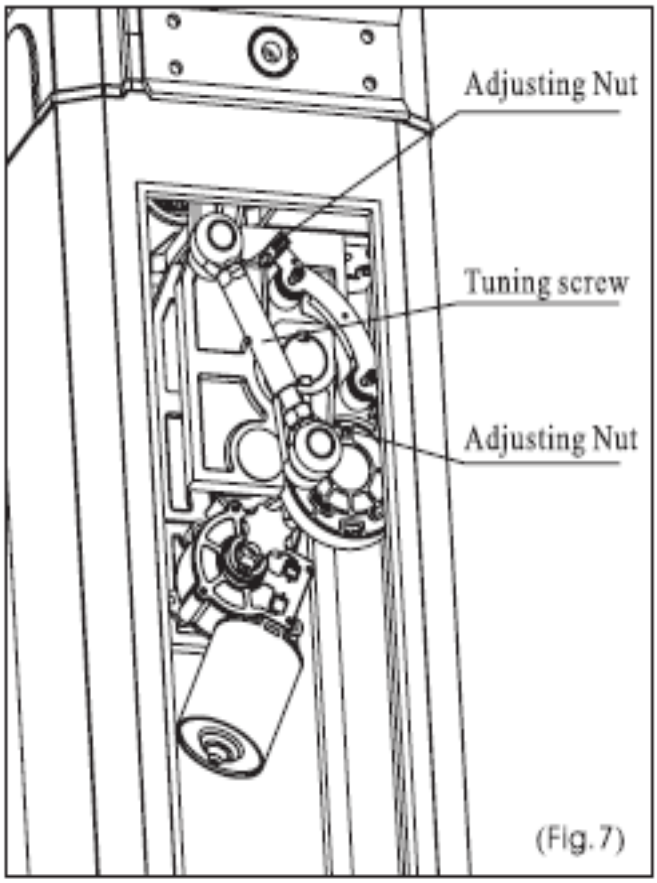
! Boom need to be longer (Fig.5) (Fig:6)

(Fig.5)



After extending the boom arm, it may decline a bit which can be adjusted by increasing the quantity of Spring

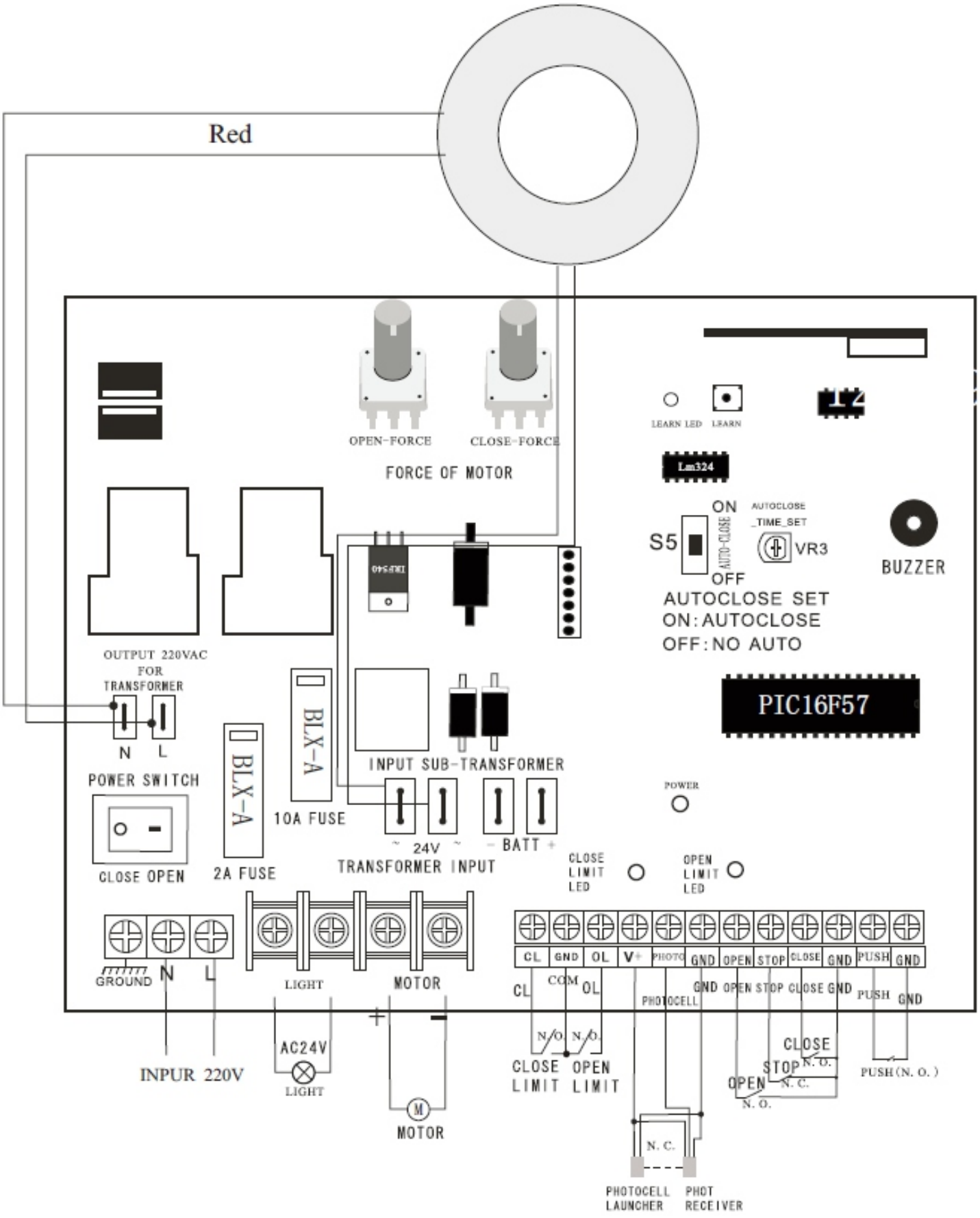




Setting up the boom in a perpendicular direction

1. Loosen the adjusting nuts.
2. Adjust the turning screw to make the boom perpendicular to the ground when in open position.
3. Tighten the adjusting nuts, once the boom is perpendicular to the ground.

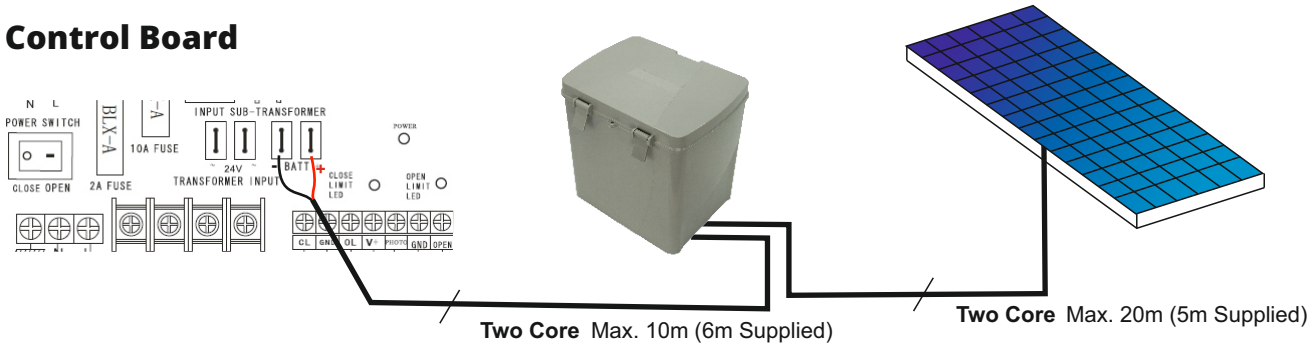
Electrical Connections:



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.

Control Board



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 45° 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.

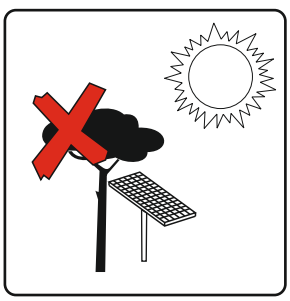
4. Install the solar panel at least 2m above the ground to protect it from dust and small stones.

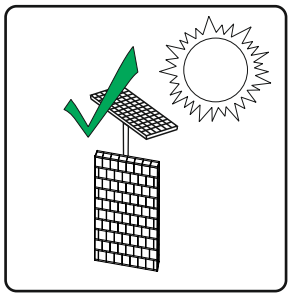
Solar Panel Placement

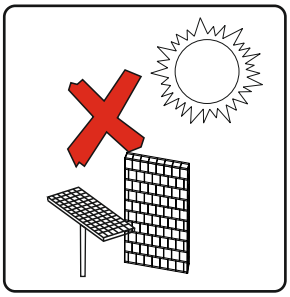
1. A solar panel CANNOT be installed under a tree, it requires sun to charge and maintain the batteries.

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.

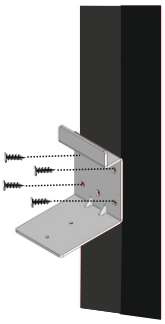




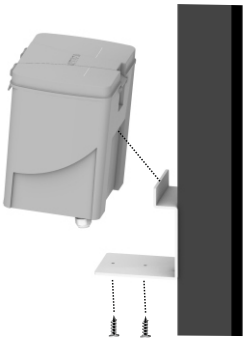


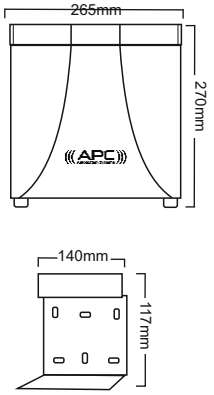
Step 2: Mounting the APC UNO Solar Box

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

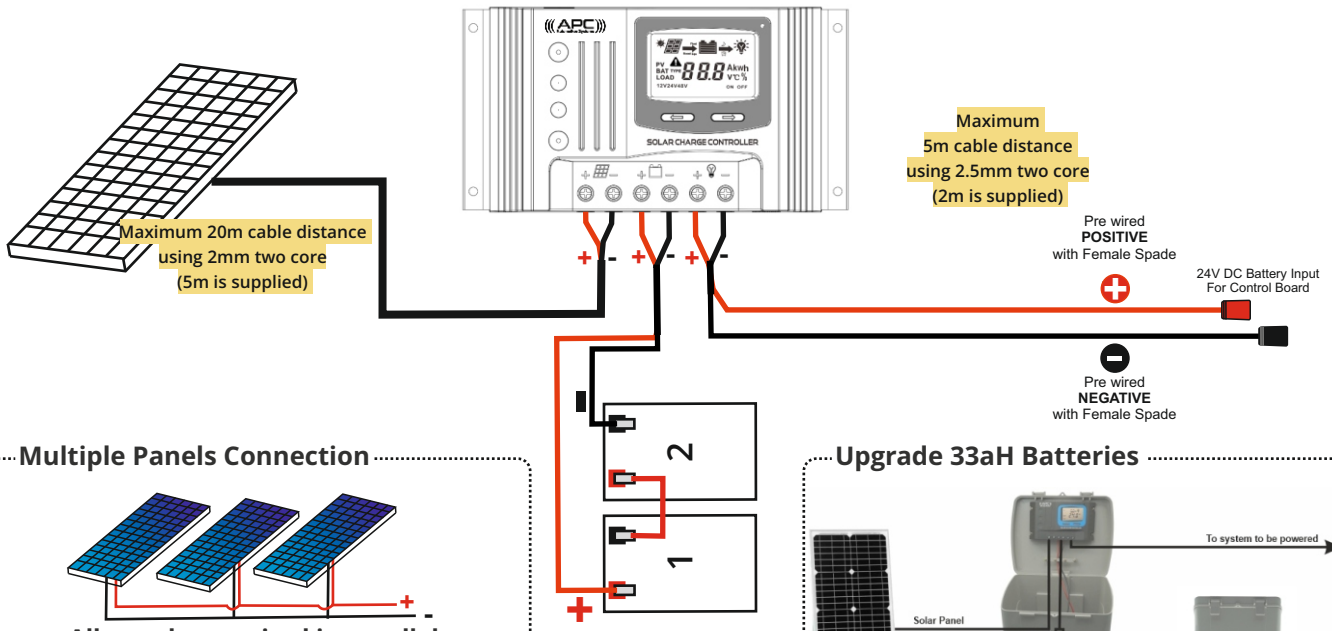
Taking into account that the solar panels maximum cable distance is 20 metres and the maximum distance between the solar box and the gate controller is 10 metres find a suitable location for the mounting of the box accordingly. Both the solar box and the solar panel are completely weatherproof and can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

Remote Controller Operation

a) Learning transmitter code

Press “LEARN” button on the main board for one second, the LED will illuminate, then press the button you desire on the remote for one second. the LED will flash. Repeat these steps for more transmitters.

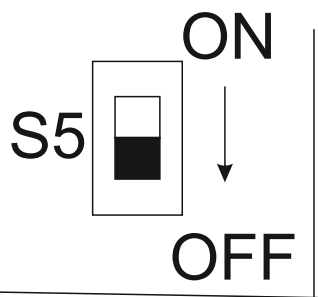
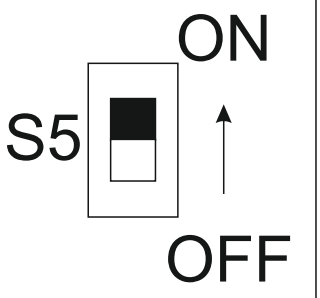
Note: 1. The original remotes are pre-programmed to do this.
2. New remotes need to be set the steps as above.

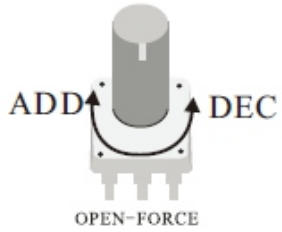
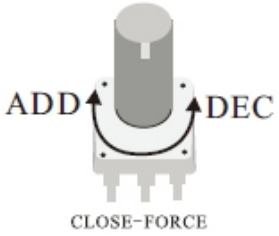
b) Erasing Transmitter Code

Press and hold the “LEARN” button for few seconds and it will delete all the stored transmitter codes.

Setting Auto-close Function:

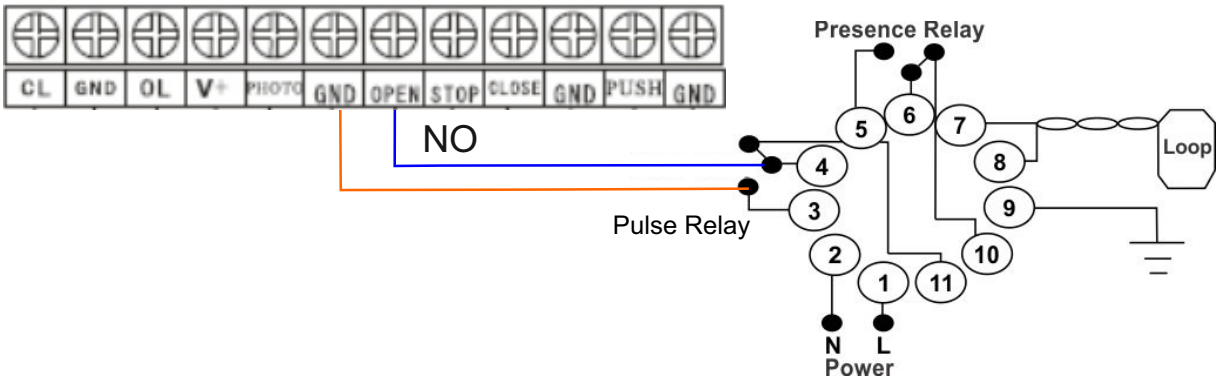
The Boom will automatically close after a set time.

	Disables the Auto-closing function
	Enables the Auto-closing function
	If the auto-closing function is enabled, then the delay time of auto-closing can be adjusted by this regulation-resistance. Clockwise- More Delay Time Anticlockwise- Less Delay Time

	Adjust the force of opening boom Clockwise is more, counter clockwise is less.
	Adjust the regulation resistance. Clockwise is more, counter clockwise is less.

APC Loop Detector for Auto Gate Opening

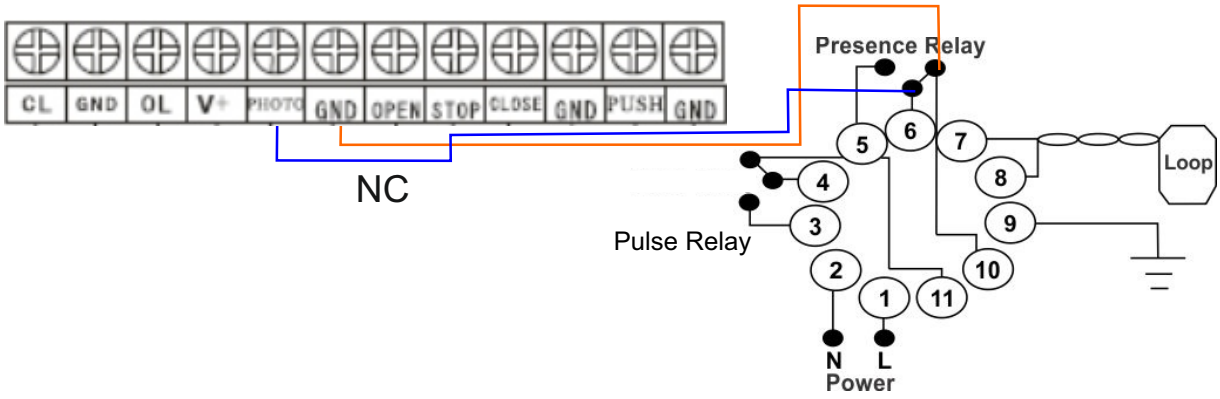
The APC-LD1 can be used for automatic opening when it senses a vehicle. It must be used in conjunction with the specific loop detector wire.



A PE sensor setup set MUST be used in this application.

APC Loop Detector as a safety device

The APC-LD1 can be used for for closing prevention whilst a vehicle is in the general gate are.
It must be used in conjunction with the specific loop detector wire.

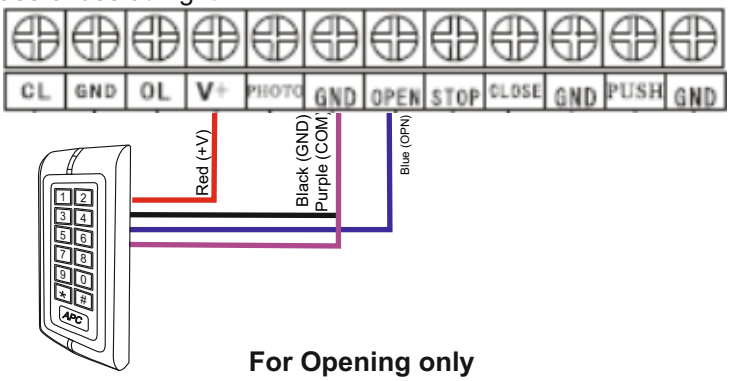


A PE sensor setup set MUST be used in this application.

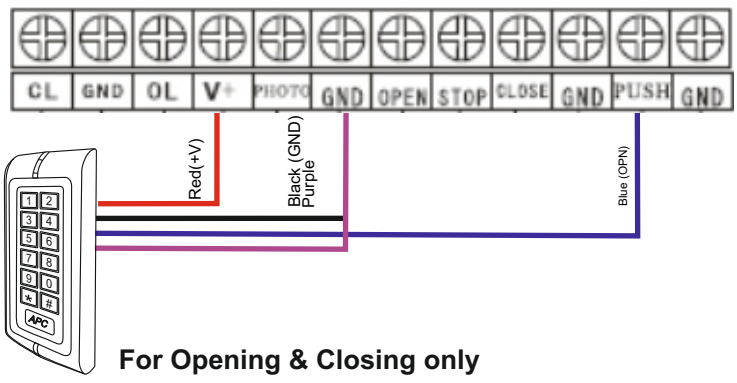
Connecting an APC Keypad (APC-KP1-C)

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.



For Opening only

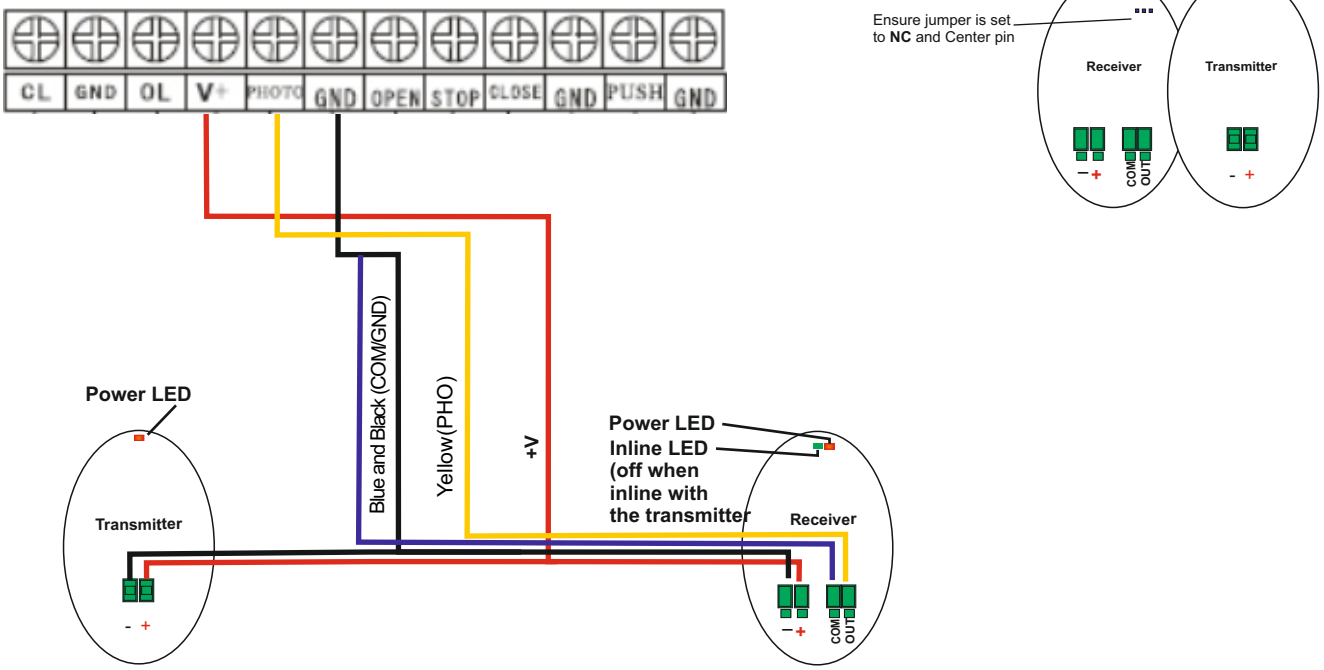


For Opening & Closing only

Connecting a Single PE Sensor (APC-PE-2000)

APC-PE-2000 PE sensor (Transmitter & Receiver) **must be connected back to the control board.**
Install the PE-2000 Photoelectric sensor on the first entry point of the driveway from post to post at approx. 500mm above ground level.

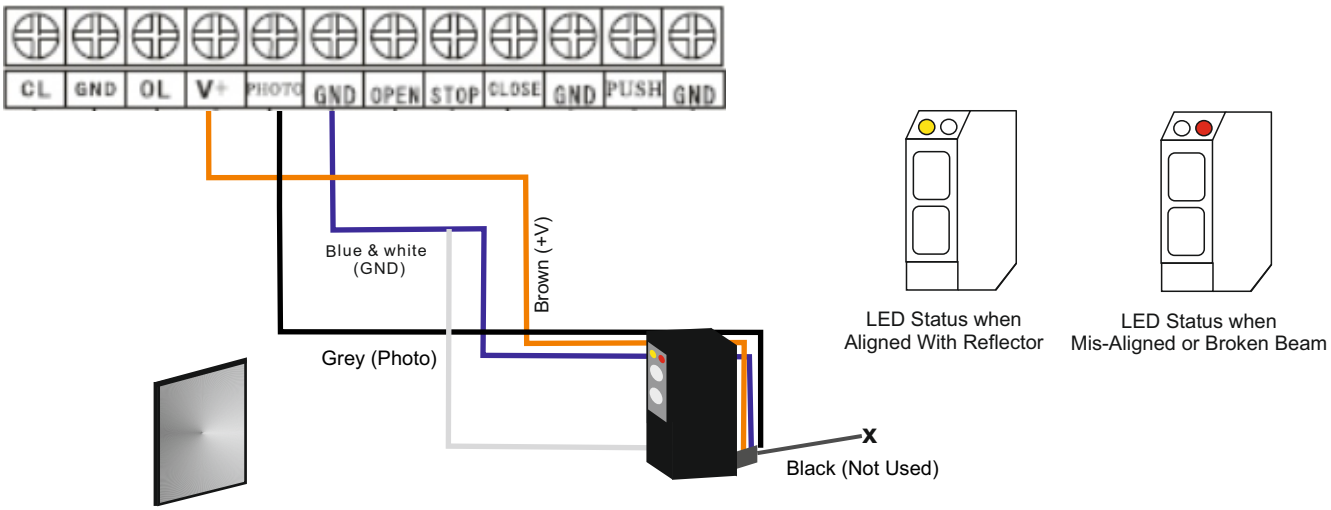
The Transmitter and the Receiver must be inline with each other
(The inline LED will be off when aligned with the transmitter).



Connecting a Single 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).



APC WARRANTY
APC warrants the original purchasers or the APC gate(s) opening system for a period of twelve months from the date of purchase (not installation), the product shall be free of defects in materials and workmanship under normal use.
During the warranty period, APC shall, as its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials.
Any replacement and/or repaired parts are warranted for the remainder of the original warranty,
The original owner must promptly notify APC in writing that there is defect in material or workmanship, such written notice must be received in all events prior to expiration of the warranty.

International Warranty
APC shall not be responsible for any freight fees, taxes or customs fees.

Warranty Procedure
To obtain service under this warranty, AND AFTER CONTACTING APC, please return the item(s) in question to the point of purchase.
All authorized distributors and dealers have a warranty program, anyone returning goods to APC must first obtain an authorization number. APC will not accept any shipment for which prior authorization has not been used.

Conditions to Void Warranty
This warranty applies only to defects in pairs and workmanship relating to normal use. It does not cover:
- Damage incurred in shipping or handling
- Damage caused by disaster such as fire, flood, wind, earthquake or lightning
- Damage due to causes beyond the control of APC such as excessive voltage, mechanical shock or water damage
- Damage caused by unauthorized attachment, alterations, modifications, or foreign objects.
- Damage caused by peripherals (unless such peripherals were supplied by APC)
- Defects caused by failure to provide a suitable installation environment for the products
- Damage caused by usage of the products for purpose other than those for which it was designed.
- Damage from improper maintenance
- Damage arising out of any other abuse, mishandling, and improper application of the products.

Under no circumstances shall APC be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

Disclaimer of Warranties
This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose). And of all other obligations or purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

Out of Warranty Repairs
APC will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to APC must first obtain an authorization number.
APC will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which APC determines to be repairable will be repaired and returned. A set fee which APC has been predetermined and which may be revised from time to time will be charged for each unit repaired. Products which APC determines not repairable will be replaced by the nearest equivalent product available at that time. The current market price for the replacement product will be charged for each replacement unit.