

ASSEMBLY INSTRUCTIONS

PHOTOVOLTAIC ISLAND KIT

Before carrying out any of the assembly operations, carefully read the instructions manual.

This instructions manual is intended for expert and qualified personnel.

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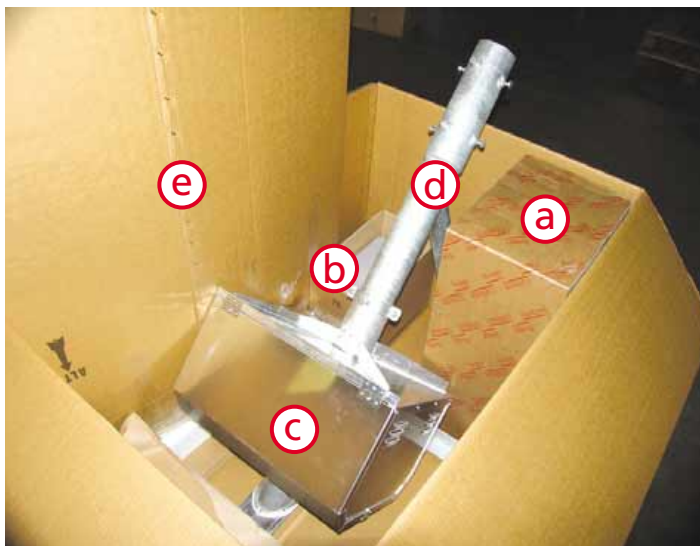


List of components included with the pre-assembled Kit.

- a) Street lighting.
- b) AGM battery.
- c) Aluminium box.
- d) Self-supporting structure.
- e) Photovoltaic structure.

Supplied accessories:

- nr. 4 pcs. Terminals for fastening PV module.
- nr. 4 screws with washer and M 8 x 60 mm stainless steel nut.
- nr. 2 screws and washers for battery.



Tools required for assembly:

- 13 mm Allen wrench.
- 17 mm Allen wrench.
- 5 mm Allen wrench.
- Phillips screwdriver.
- Sleeve.



Mechanical parts assembly.

To assemble the mechanical parts, carefully follow the instructions in sequence.

Attention: Mounting the self-supporting structure on the street pole:

- Before lifting the self-supporting structure, ensure that the two bolts on the collars that secure the aluminium box to it are properly tightened.
- Using a working machine, lift the assembled self-supporting structure and place it on the previously installed street pole.
- Place the straddle in the desired direction where the street lighting will be fixed.

Note: The street lighting does not require electrical wiring as it has been assembled and tested at the factory.



- Open the street lighting and remove the wrapping protecting the lamps.



- Dispose of the protective wrapping in the specific container.
- Close the street lighting again.



- Loosen the bolts and fixing nuts found on the head-pole fixing system.

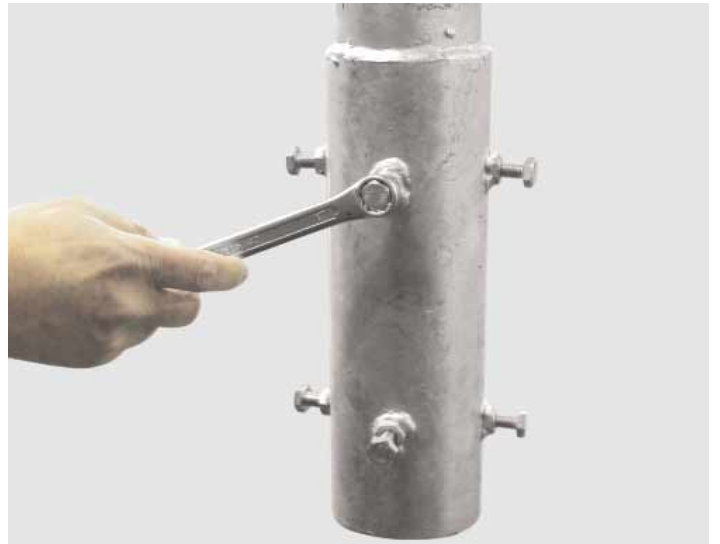


- Connect the electrical plug located on the straddle with the street lighting plug.

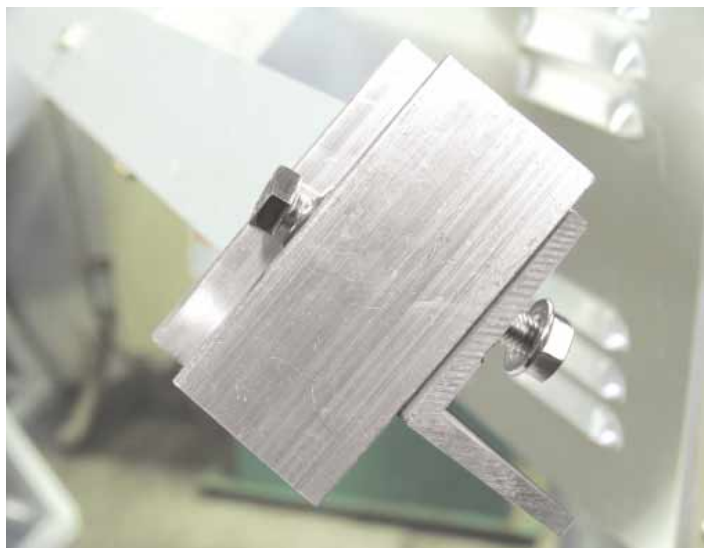
- Mechanically fix the street lighting terminal to the self-supporting structure straddle, securely tightening the 2 bolts using the Allen wrench and then tighten the safety nuts.



- Tighten all the M10 screws located on the base of the self-supporting structure to mechanically join it with the pole below.



- Position the photovoltaic module on the aluminium structure located on the aluminium box and fix it using the clamps and provided stainless steel bolts (M8x60).



- Loosen the two M10 stainless steel bolts of the collars and using a sleeve, position the photovoltaic module structure facing **SOUTH** by pivoting it on the self-supporting structure, carefully avoiding shadowing.



- Tighten the two M10 stainless steel bolts located on the two collars.

This completes the mechanical fixing procedure.



Electrical assembly.

- Place the AGM battery inside the box.

Connect, in sequence:

- **Red** wire (+) to the corresponding terminal marked on the battery;
- **Black** wire (-) to the corresponding terminal marked on the battery.

N.B. Be careful not to invert the poles and cause short circuits.

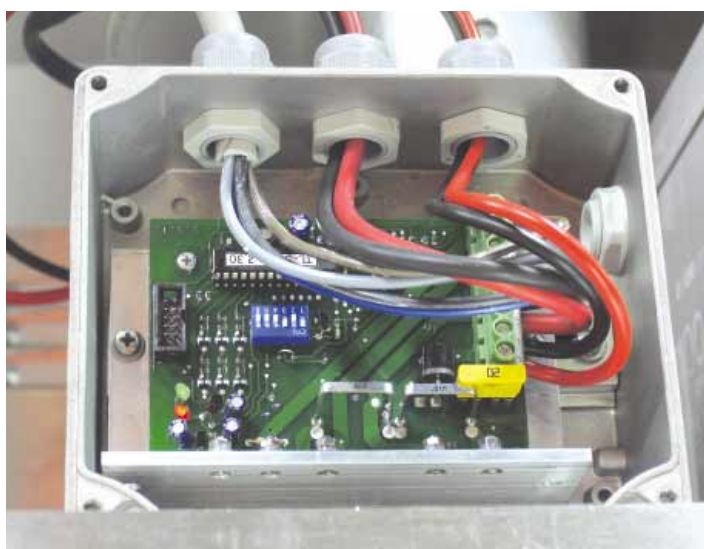
Pole inversion or short circuits cause the 20A fuse to break on the electronic board.



- In sequence, connect the male/female suspended plugs of the photovoltaic module with the **red (+)** and **black (-)** cables located on the self-supporting structure without latching the stay hooks.



Electrical connections to the electronic board located in the metal container inside the box are not required as the electrical cabling has been completed and tested at the factory, before shipping.



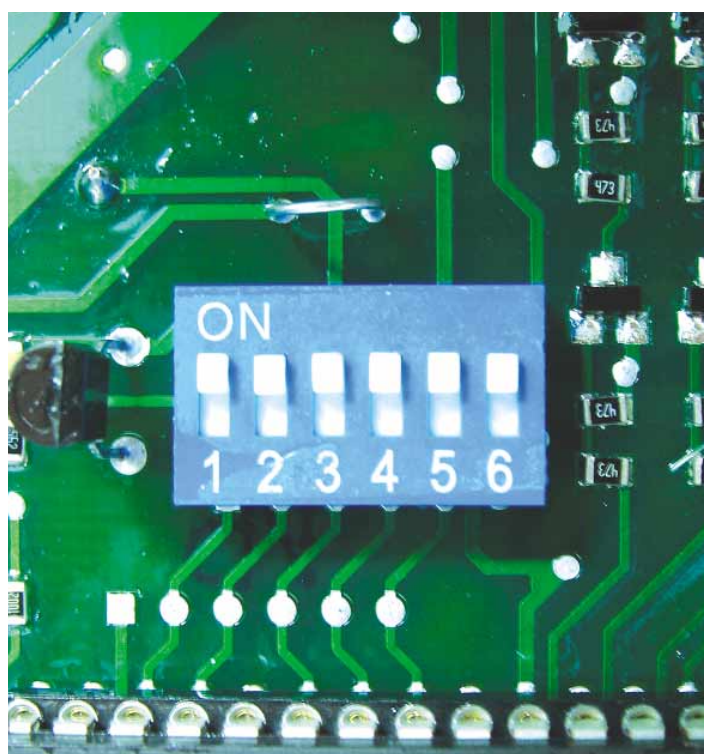
Operation tests.

- 1) Disconnect the negative connector (black cable) of the photovoltaic module.
- 2) Using a screwdriver, set dip switch n° 5 on the electronic board "ON".
- 3) The street lighting lamp will go on (both will go on only in case of overlapping operation, i.e. dip switch n° 6 "OFF").
- 4) Set dip switch n° 5 on the electronic board "OFF" again.
- 5) Connect the previously disconnected plug and latch the stay hooks on both rubber connectors of the photovoltaic module.

At this point the system is ready for normal operation.

Note: the electronic CPU is programmed for the "dawn/sunset" combination, with operation of the two lamps in non-overlapping mode (dip switch n° 6 ON). To change the program, use the dip switches located in the cabinet.

	1	2	3	4	5	6
Battery Type:						
AGM	ON					
Other versions	OFF					
Operating time:						
dawn / sunset		OFF	ON	OFF		
6 hours		ON	ON	ON		
8 hours		ON	ON	OFF		
10 hours		ON	OFF	ON		
12 hours		ON	OFF	OFF		
24 hours		OFF	ON	ON		
8 hours		OFF	OFF	ON		
10 hours		OFF	OFF	OFF		
Test:						
Enabled					ON	
Disabled					OFF	
Double lamp:						
Overlapping						ON
Non-overlapping						OFF



Led operation

Green Led on solid:
PV module active (battery charger function).

Red Led blinking:
Lamp A on (36 Watt).

Red Led on solid:
Lamp B on (18 Watt).



Default threshold settings on control board:

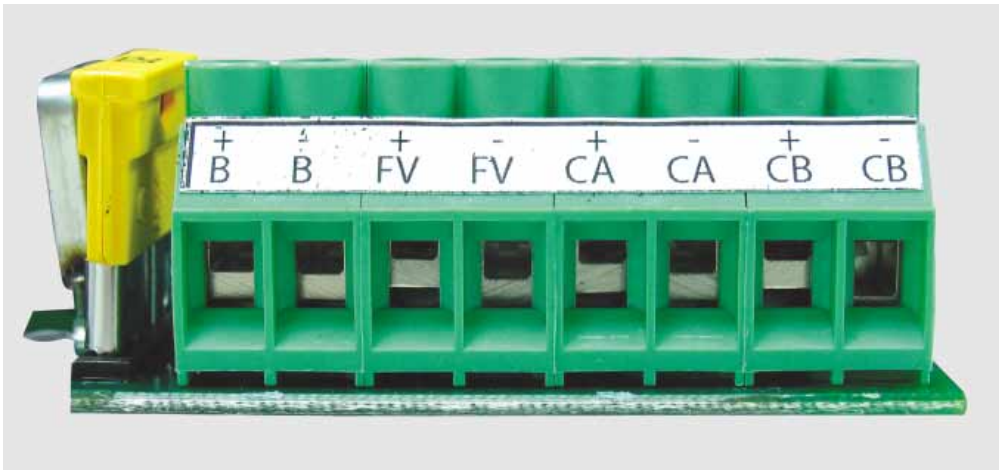
Max charge battery voltage	14.9 Vdc
Normal charge battery voltage	14 Vdc
Lamp "A" threshold voltage (ON)	12,6 Vdc
Lamp "A" min threshold voltage (OFF)	12,1Vdc
Lamp "B" threshold voltage (ON)	12,2 Vdc
Lamp "B" min threshold voltage (ON)	10,6 Vdc
Hysteresis time (tripping delay)	60 seconds

Type of lamp installed:

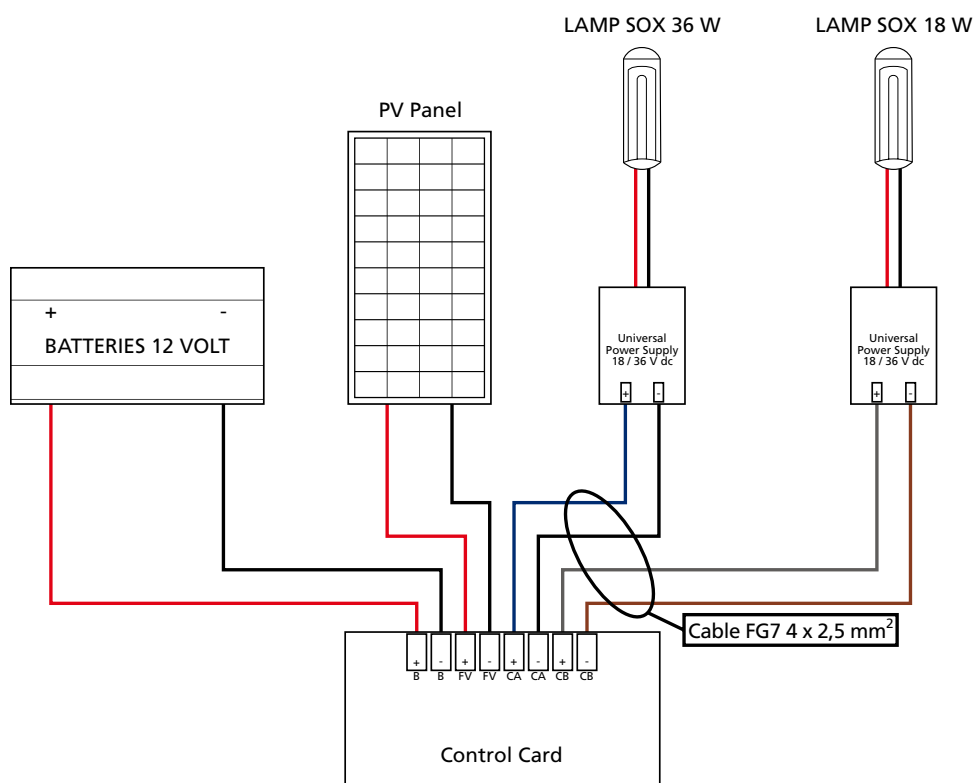
A: 36 watt SOX lamp (on request 26W or 18W).

B: 18 watt SOX lamp (on request 26W or 36W).

Terminal strip.



Electrical diagram.



Examples of special applications on request.



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