Fte®
maximal

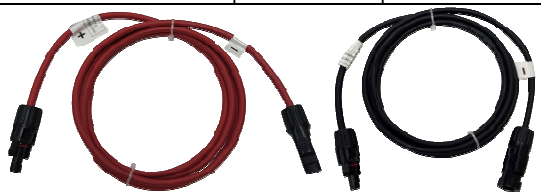
# SOLTyB kit
# Quick guide

V1.1

INDEX

## Content

When unpacking the kit boxes check that your kit has the following items:

| | |
|---|---|
|  |  |
| 2 x 415 W photovoltaic panels | 1x 800 W micro inverter |
|  |  |
| 2 set of 4 $mm^2$ red and black solar cables with a section length of 2 meters with MC4 connectors | Micro Inverter Wi-Fi antenna |
|  |  |
| Power cord to connect the micro inverter to your electrical installation. length 5m | Weatherproof cap, for inverter cascade AC cable connector |
|  |  |
| 4 supports for photovoltaic panels with adjustable length from 50-85 cm | 4 small supports for photovoltaic panels |
|  |  |
| 1 Philips type screw + Nut for the inverter | 4 screws and nuts for the small supports |
|  |  |
| 16 anchor bolts for floor or wall installation | 16 screws wood installation |

## Safety Rules

1. Before connecting and disconnecting the inverter from the panels, make sure that there is no voltage at the output of the panels, if necessary, cover the photovoltaic panels.
2. Never connect or disconnect photovoltaic panels with AC voltage connected.
3. Respect the ventilation of the inverter equipment.
4. Do not place the inverter near any heat source or expose it directly to the sun.
5. Avoid getting snow on top of the inverter.
6. Do not subject kit components to temperatures that exceed their operating range.
7. Avoid locations with the possibility of spilling liquids inside the inverter.
8. Never open the panels yourself. In case of problems, always refer to qualified technicians.
9. Never open the inverter by yourself for risk of electrocution. In case of problems, always refer to qualified technicians.
10. Do not open under any circumstances with the inverter connected to the electrical network.
11. During the connection it is preferable that the inverter is disconnected of the mains.
12. Respect safety regulations during assembly and avoid any situation that puts your security at risk. Follow the safety regulations at each step of the installation.
13. Observe electrical safety regulations during assembly. Use materials that comply with current regulations.
14. Never touch the plug with wet hands. Likewise, always disconnect the inverter from the electrical network before manipulating the connections.
15. Do not put any heavy object on the panels and inverter as it could be damaged.
16. Avoid exposing electrical connectors to sun, rain, and snow.
17. Protect cables from being exposed to sun, rain or snow.

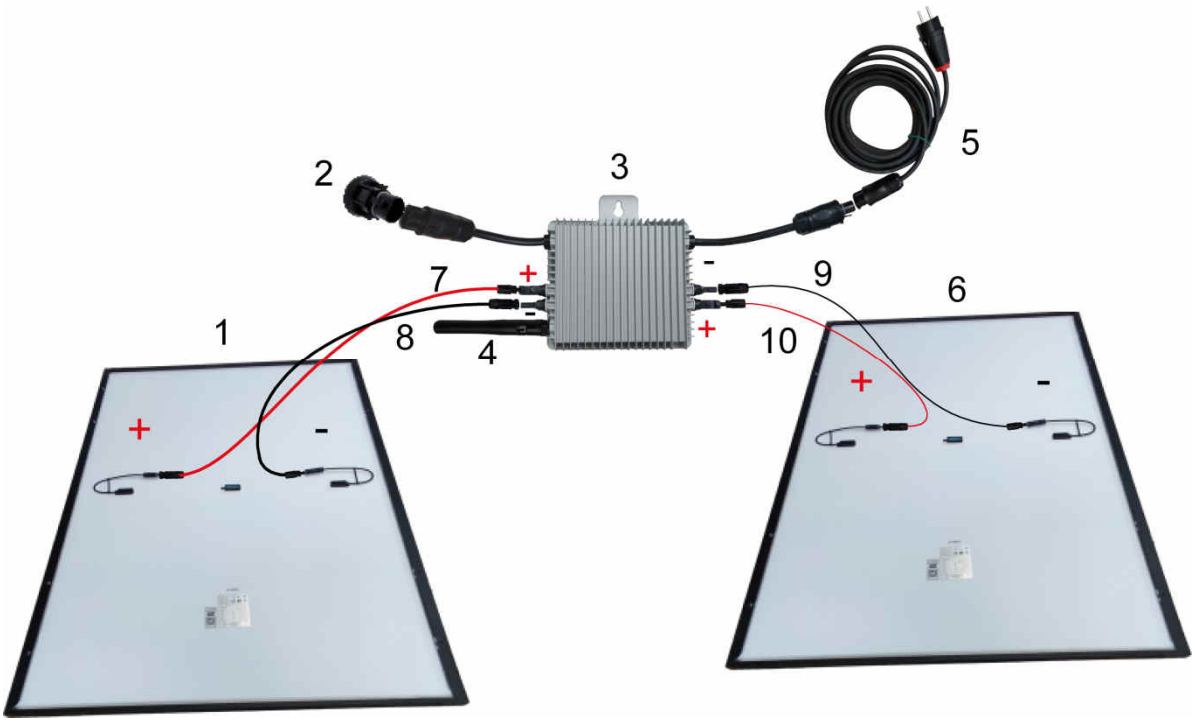
Cleaning of the photovoltaic panels: To maintain the maximum production of the panels, the PV panel must be clean every 3 or 4 months, unless you live near the sea, which should be done more frequently. To clean the panels with water using a hose with low pressure to wash the surface of the panel. Dry it with a glass cleaner. If necessary, you can use a soft, damp sponge to remove more embedded dirt from the panel. In the event of accumulated snow on the photovoltaic panels, it must be carefully removed.

Accessories: Do not use accessories that are not specifically approved by the manufacturer. Unapproved accessories may increase the risk of fire, electric shock, and other damages.

Mains connection: Choose a plug that is easily accessible, so that if you need to unplug it, you can do it quickly and comfortably. Check that the cable and plug are in good condition. Don't pull on the cable, always pull on the plug.

Maintenance and repair: All repairs must be done by authorized personnel. Otherwise, the warranty is void.

## Connection of the inverter and panels and their elements




1) Photovoltaic panel.

2) Cascade AC voltage connector protection cap. You must insert it to protect this connector with voltage of the mains from the weather.

3) Micro inverter.

4) Wi-Fi antenna. You must remove the red cap to be able to screw the Wi-Fi antenna.

5) Mains cable must be connected to the right side of the inverter and the other end must be connected to a mains socket when everything is assembled.

6) Photovoltaic panel.

7) Red cable of the first set of 2m cables that connects to the positive input of the male connector of the solar panel and to the positive input of the female connector of the inverter.

8) Black cable of the first set of 2m cables that connects to the negative input of the solar panel female connector and to the negative input of the inverter male connector.

9) Black cable of the second set of 2m cables that connects to the negative input of the solar panel female connector and to the negative input of the inverter male connector.

10) Red cable from the second set of 2m that is connected to the positive input of the male connector of the solar panel and to the positive input of the female connector of the inverter.

# Installation

For the installation of the photovoltaic panels, more than one person is necessary, due to the weight, dimensions and the care that must be taken with the panels.

## Prior steps

Your electrical installation must be verified if you have adequate protections in your electrical panel in accordance with local regulations. Verify that the socket where the inverter is connected is in a correct state. Check with a local electrician.

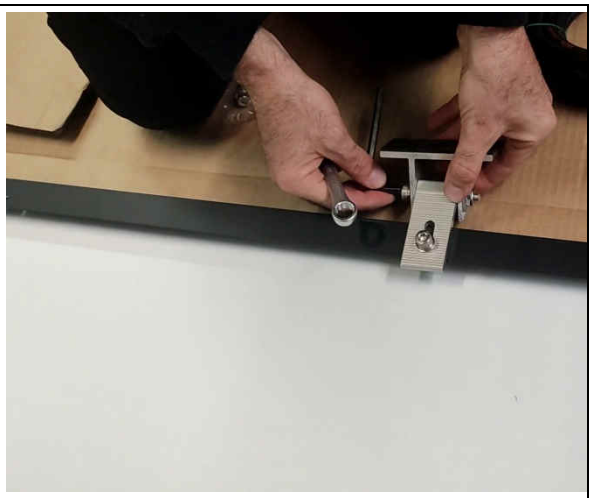
Check that the mains voltage is within the operating range of the included inverter and that the plug cable corresponds to your type of electrical outlet.

## Tools needed for the installation

- 13 spanner for the bolt nuts.
- 5.5 Allen key used for the screws of the supports
- 4 Allen key in the case of using the included wooden floor screws.
- Drill to make the holes in the floor or wall.
- Philips screwdriver
- Protractor to know the inclination of the panels

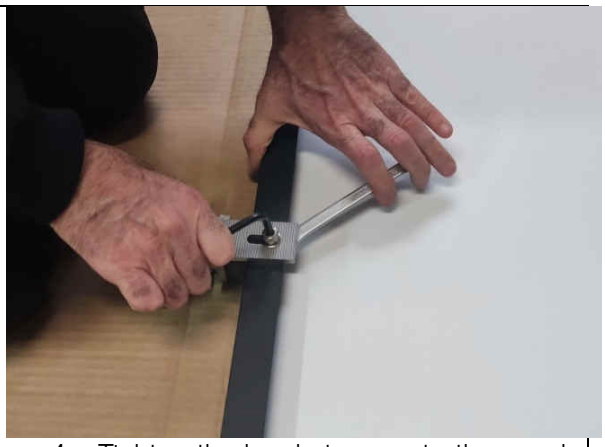
## Installation steps

1. Carefully place the PV panel upside down on a clean surface.



2. Place the two small brackets in the panel holes. Use the ones on one of the long sides of the panel.

3. Tighten the hinge screws with the wrenches



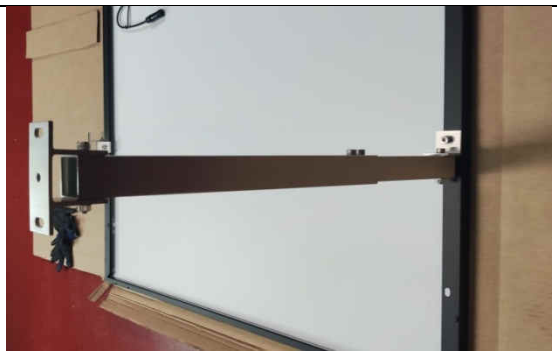
4. Tighten the bracket screw to the panel. Repeat steps 3 and 4 for the other small bracket

5. Tighten the screw of the long support to the photovoltaic panel

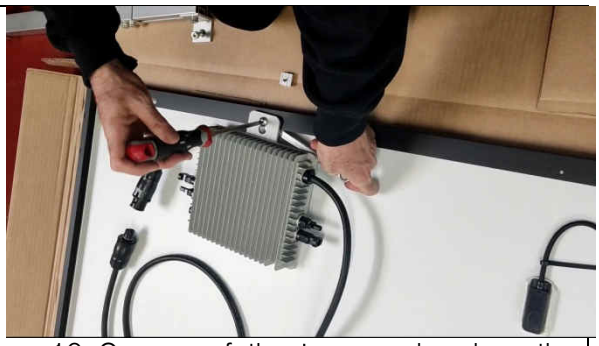
6. Tighten the screw on the hinge near the panel

7. Adjust the height of the long bracket. Both long supports should be the same height.

8. Tighten the base hinge screw and nut.



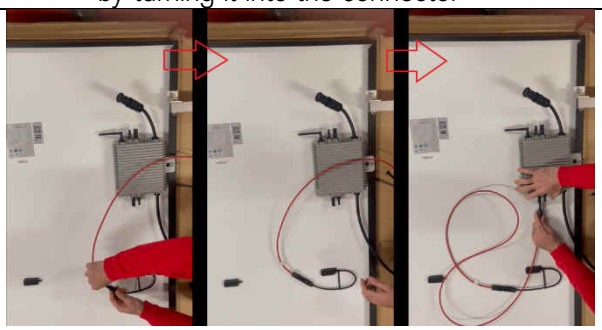
9. Mounted long bracket and repeat steps 5-9 for the other long bracket



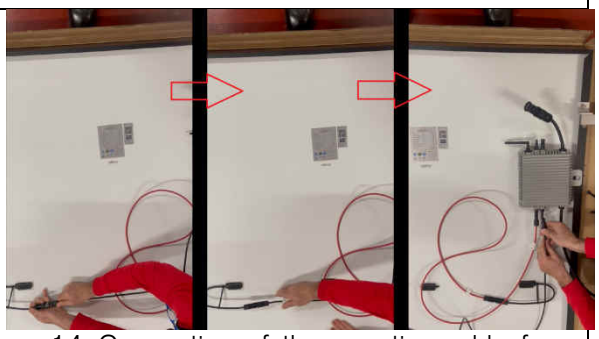
10. On one of the two panels, place the inverter. Use an available hole and screw and tighten the nut to fix the inverter to the panel

11. Remove the red protector from the Wi-Fi antenna connector and insert the antenna by turning it into the connector

12. The antenna can be adjusted the angle.



13. Connection of the positive cable from the photovoltaic panel to the inverter. Repeat for the other panel using the other input of the micro-inverter. Before connecting the cables, opaque the panels if necessary to avoid connecting them with voltage

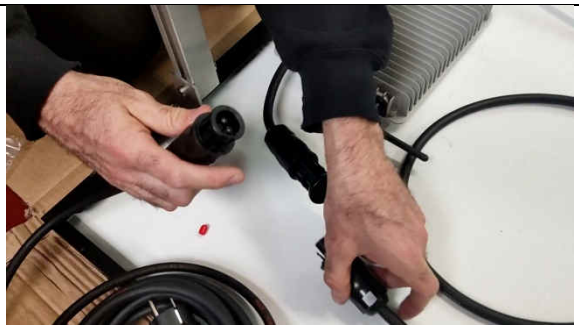


14. Connection of the negative cable from the photovoltaic panel to the inverter Repeat the connection with the other photovoltaic panel using the other input of the micro-inverter

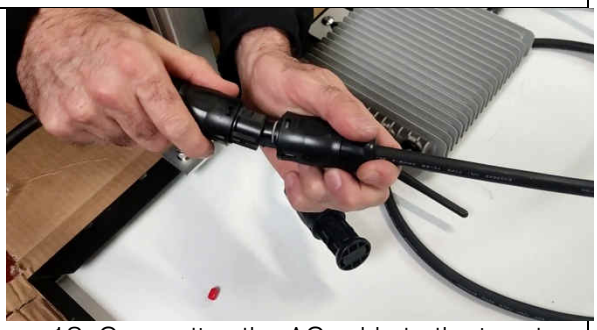
15. Insert the protective cap of the AC cable cascade. Make the adequate force to

16. Cap inserted in the connector.

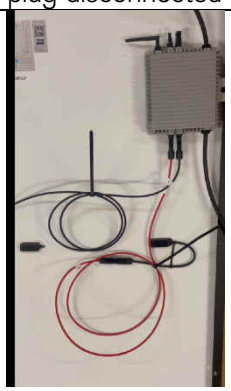
insert it.



17. Connect the AC power cord of the inverter. Always connect it with the schuco plug disconnected



18. Connecting the AC cable to the inverter



19. Use zip ties to collect excess cable

20. Carefully lift the panel up so that it rests on the brackets and fasten them. You can request help from another person if necessary

21. Screw the supports to the floor after adjusting the inclination.

22. Completion of the assembly of the Kit of the 2 panels

Clean panels if necessary.

Finally connect the plug to the socket of the micro inverter for its start-up

In the following link you can download the inverter manual and in it you can find the link to the Solarman application that will allow you to monitor the inverter.

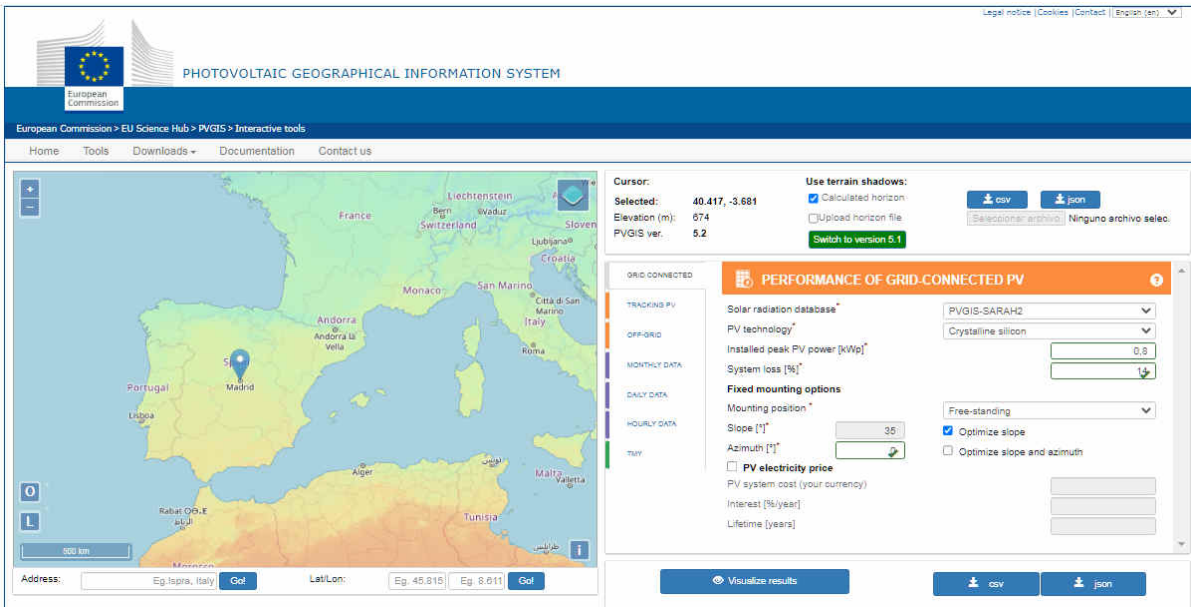
http://www.ftemaximal.com/en/

Note when following the instructions in the Solarman app, the default key of the inverter's built-in WiFi AP is 12345678.

# ANNEX I: Guide to know the angle of the solar panels.

Open your web browser and enter the following address of the PHOTOVOLTAIC GEOGRAPHICAL INFORMATION SYSTEM calculation tool

https://re.jrc.ec.europa.eu/pvg_tools/en/tools.html



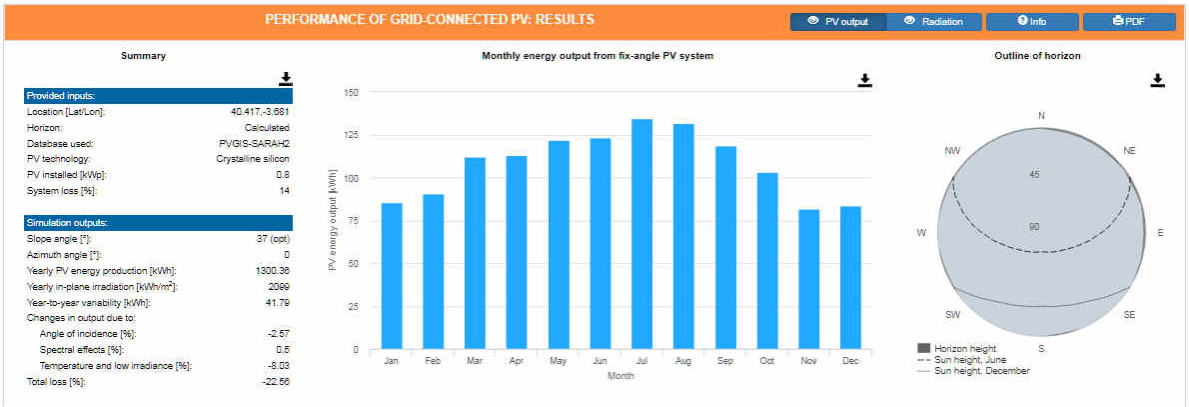

Steps:

1. Select your approximate location with the left mouse click on the map. You can zoom using the + and – signs at the top left of the map

2. Enter in the box **Installed peak PV power [kWp]*** the power of your panels in our case 800 W (0.8 Kw).

3. Check the box **optimize slope and azimuth**.

4. Press the **Visualize results** button. In **simulation output** check the value of the **Slope angle** to Know the angle of the PV panel. This angle is from the ground. It also gives you an estimate of the energy the kit will produce in kWh per month.



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