



POLYTROPIC

Pool Heating Solutions

POLYSOLAR ENERGY SYSTEM

The photovoltaic solution



**TECHNICAL
MANUAL**



EN

GENERAL INFORMATION

The PolySolar Energy System kit consists of an electrical connection box (supplied), photovoltaic modules (not supplied), micro-inverters (not supplied), and an integration system (not supplied) .

The PolySolar Energy System kit is designed to power the customer's swimming pool heat pump. This kit can be installed on the ground or on a flat roof using a system of ballast tanks or an inclined structure to be oriented by yourself.

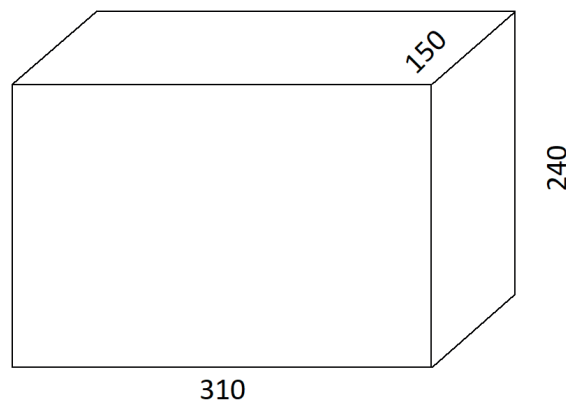
The photovoltaic kit can also be installed on the roof thanks to a structure made up of rails and hooks, on which the modules are fixed using clamps.

Whatever the type of installation, refer to the installation instructions of the manufacturer of the concerned system.

You can use any brand of photovoltaic modules, micro-inverters and integration system, the PolySolar Energy System kit is flexible and adaptable to any material.

Refer to the local legislation in force on the installation of photovoltaic systems, Polytropic declines all responsibility in the event of non-compliance with the installation instructions for the various elements, or in the event of non-compliance with the local legislation in force. It is the responsibility of the installer to be aware of these various administrative and technical points.

Size of the e-box is 310mm width, 280mm height (240mm without cable gland) and 150mm depth.



CABLE SECTION

Connect the head micro-inverter to the PolySolar box provided in your kit. Choose the right section of cable in relation to the distance between the E6BOX and the micro-inverter according to the selection table below :

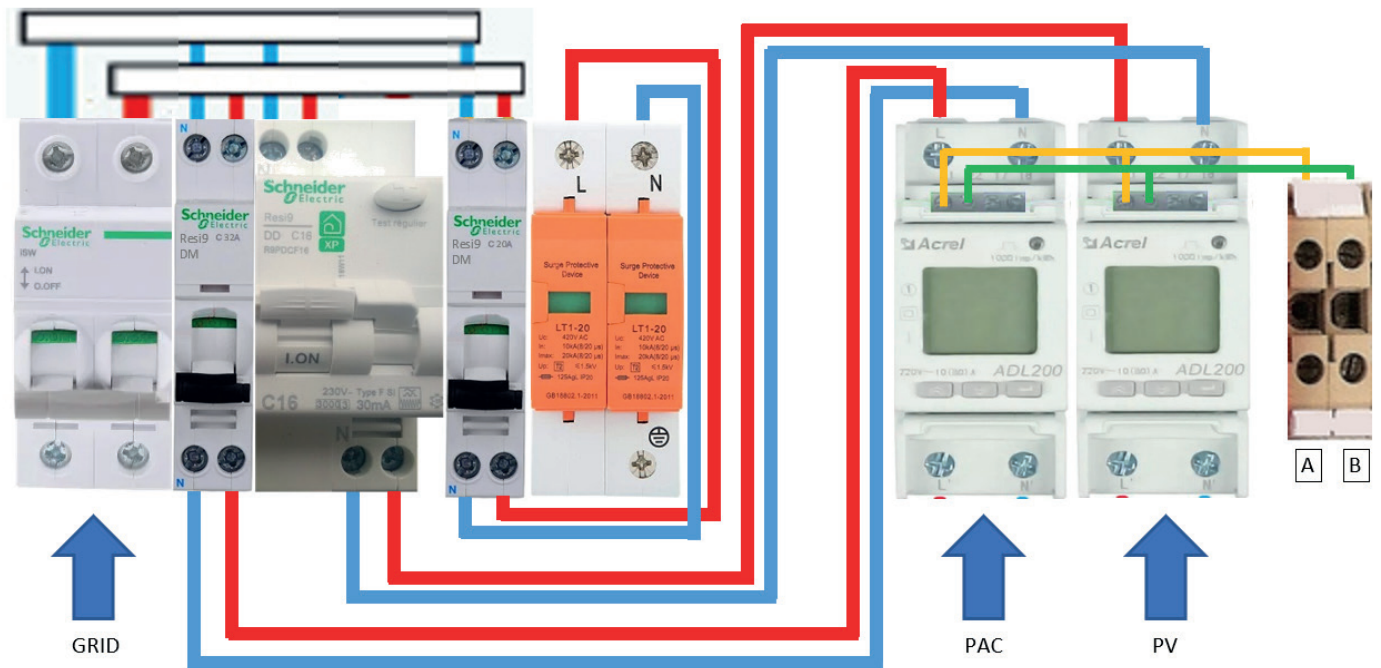
| Section | Distance | |
|------------------|----------|-------|
| | Cu | Al |
| 1,5 ² | 4,5m | 2,9m |
| 2,5 ² | 7,8m | 4,8m |
| 4 ² | 12,5m | 7,7m |
| 6 ² | 18,7m | 11,6m |
| 10 ² | 31,2m | 19,4m |
| 16 ² | 50m | 31m |

ELECTRICAL BOX CONNECTION

The PolySolar Energy System electrical box allows the connection of the domestic network, whether it comes from the general switchboard or from another source downstream of the delivery point. The connection of the Polytropic heat pump and the solar kit is also done in this box.

Pass the cables through the cable glands provided for this purpose on the bottom of the e-box. Connect the cables directly under the wattmeters and at the input of the main circuit breaker, after having stripped and fitted the ferrules at the end of the wire.

WARNING: the connection must be made with the power off to avoid any risk of contact with electrical voltage.



GRID : e-box powered by a source downstream of the delivery point (230V).

WARNING: this source must imperatively be protected by a differential switch from the source box.

PAC : connection of the heat pump directly to the energy meter (wattmeter).

PV : connection of the head micro-inverter directly to the energy meter (wattmeter).

A & B : connection of the heat pump's Modbus communication protocol. To connect these wires to the heat pump, refer to the specific installation instructions for the machine.

System startup

The system is started by switching the head circuit breaker (32 A). Also switch the differential switch and the PV system will be put into operation. Switch the 20A circuit breaker for the downstream heat pump supply and start it up.



www.polytropic.fr



4 Chemin des Eclapons
69390 VOURLES - FRANCE

+33 (0)4 78 56 93 90

polytropic@polytropic.fr