MICRO SOLAR POWER PLANT

REFERENCE : MP5500-SOLAIRE

Non contractual photo

SERVICE : AN AMMETER / VOLTMETER CLAMP WITH LEADS (SUPPLIED) A SOLARIMETER (SUPPLIED) A SET OF 20 SAFETY PLUG CABLES (SUPPLIED) TWO 10M X 4MM² CABLES WITH MC4 CONNECTORS FOR CONNECTION

A micro solar power plant is a power plant that uses solar energy to produce electricity on a small scale through photovoltaic solar panels. This electricity can be used, to be stored in batteries, to supply isolated sites or be returned to a public distribution network (option).

Educational Objectives :

Educational system intended for the training of students within the framework of BAC PRO MELEC, BTS fluids, energies.

It introduces students to the operation of a photovoltaic installation:

- Study of industrial components (photovoltaic panel, charger, inverter, electrical components)
- Wiring the elements.
- Commissioning and parameterization of components
- Study of the performance of the components of the chain and energy balance of the system & nbsp; by measuring the voltages and currents at various points in the circuit and by the data supplied by the available instruments (control screen, voltage and current measuring clamp).
- Calculation of the autonomy of energy storage in the batteries

Technical specifications :

The System is made up of industrial components. It is manufactured in compliance with CE standards and ...

- A 24V 250Wp 1.6m² mono-crystalline type photovoltaic solar panel. The panel is mounted on a frame with wheels, its inclination is adjustable
- An IP55 electrical cabinet mounted on a stainless steel tube frame equipped with castors.The cabinet contains the electronic components:
- A 24V battery charger.
- An inverter
- Three charging lamps of 60W -220V each.
- A network analyzer at the output of the inverter.
- Three voltage / current measurement points accessible on the front panel:
- Voltage and current after the panel
- Voltage and current after charger.
- Current voltage after the inverter
- Two 12V 24Ah AGM type batteries
- Safety socket for wiring the main components together
- A dialogue terminal: a touch screen with data acquisition, power calculation, data storage, it allows:
    - to view on the synoptic:

        - Data displayed: voltage / current at 4 points (see diagram)
        - Calculated data displayed: power at 4 points (see diagram)
    - to display in the form of a graph this data as a function of time
    - Differential circuit breakers, fuses
    - On / off button
    - Emergency stop button
    - A user socket
    - A USB socket

OPTIONS :

Option: Network reinjection module