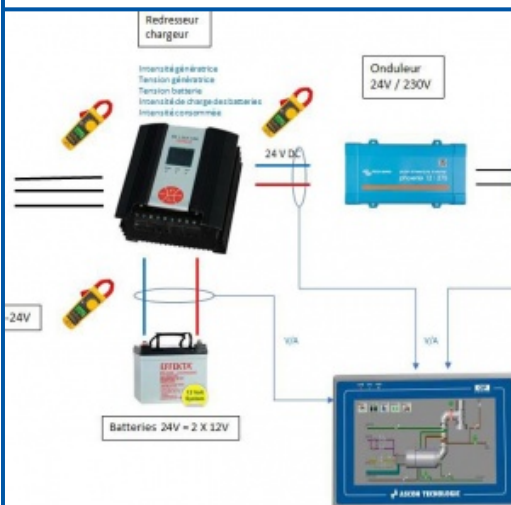


MICRO SOLAR POWER PLANT

REFERENCE : MP2100



Non contractual photo

SERVICE :

A micro-plant produces electrical energy using solar energy. This electricity can be used to supply isolated sites or be returned to a public distribution network. In the proposed bench, the energy produced will be stored in batteries and / or consumed.

Educational Objectives :

The bench is taught to allow students to make different measurements at the level of each component.

- Analysis and study of industrial components (solar panel, inverter, converter)
- Study the performance of chain components.
- Take the energy balance
- Measurement of voltages and currents at various points in the circuit
- Highlighting of electrical laws
- The information (curves, synoptic, curve as a function of time) is continuously visible on a touch screen.

Technical specifications :

The micro-plant is made of robust industrial components.

- A 300W -24V photovoltaic solar panel with monocrystalline cells.
- A stainless steel tube frame mounted on casters, two of which are braked.
- An IP55 electrical cabinet containing the electronic components:
 - A rectifier / battery charger with integrated display of parameters.
 - A 24V / 230 V inverter with Bluetooth connection
 - A network analyzer that provides Power, Intensity, voltage information to consumers.
 - Three charging lamps of 40W each.
 - Three measurement points accessible on the front panel:
 - Voltage and current after the panel.
 - Voltage and current after the rectifier.
 - Current voltage after the inverter
 - Two 12V 24Ah batteries
 - A touch screen to display and save operating parameters.
 - Differential circuit breakers, fuses
 - On / off button
 - Emergency stop button
 - A user socket
 - A USB socket