ERS500

SOLAR PHOTOVOLTAIC TRAINER

Experimental capabilities

- **Identification of the components of a solar photovoltaic installation**
- **Display of the implementation of components**
- **Starting up, use and settings**
- **Measurement of various operating parameters (illumination, voltage and electric current)**
- **Analysis of energy efficiency of the system**

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version : FT-ERS500-STD-B

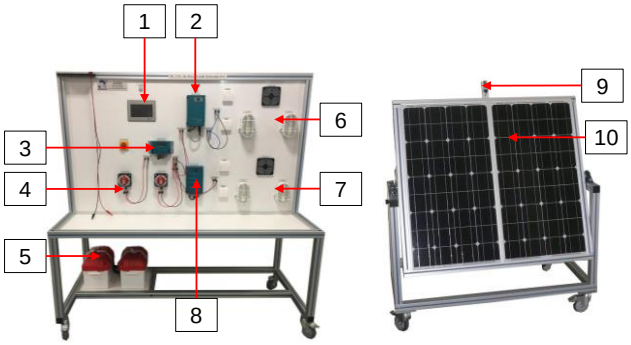
ERS500

Operating principle

The ERS500 bench allows the study of a system for producing electrical energy from solar energy (photovoltaic). Students will initially identify the different components of the production chain.
They will in a second time put the system into operation, adjust and provide an electrical production. They can then take up the various installation parameters (current, voltage, illumination ..) and analyze the produced powers and performance of various components.

The robust design of this equipment makes it perfectly suited for school use.
Its anodized aluminum structure on wheels makes it very robust as well as a great flexibility of integration into your premises. The manufacture of this equipment meets European machine directive

Illustrations



Technical details

1. Measurement display touch screen:
-230VAC network analyzer for the output of the inverter
-indicator of solar radiation power in W / m²
2. Inverter 24VDC-230VAC
3. Charge controller
4. Electrical disconnector for batteries and panels
5. Battery with protective tank
6. 230VAC dissipation elements (2 lamps and a fan)
7. 24VDC dissipation elements (2 lamps and a fan)
8. Battery Backup Charger
9. Measuring probe of solar radiation
10. Photovoltaic solar panels (panel power: 100W)

The bench includes all electrical protection elements: main disconnector, GFCI (230VAC), magneto-thermal circuit breaker (230VAC), fuses (24VDC).

Accessories included:
-multimeters with metric amp clamp for measuring currents and voltages
-Security connections for connection of elements
-connection cable between the panels and the main module (length 15m)

Services required

- Power supply: 230Vac - 50 Hz - 10 A
- Electrical supply type: 1 phase (s) + Neutral + Earth.
- Dimensions: (LxWxH mm):
  Main module : 1760 x 770 x 1800
  Solar panels : 1290X500X1450
- weight (Kg): 200

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Technical documentation of the components
- Wiring diagram
- Lab exercises
- Certificate of conformity CE

Options

- Data acquisition system for voltages and currents
- Ref : ERS501

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