



SOLAR AND WIND ENERGY INSTALLATION KIT



Photovoltaic solar energy and wind energy kit for the generation of electrical energy.

DL SOLAR-WIND KIT

TRAINING OBJECTIVES

- To investigate how the solar irradiation influences the solar panel output voltage
- To calculate the inner resistance of the solar panels
- To obtain a daily irradiation curve
- To cover the solar panel with different materials
- To investigate how the wind speed influences the wind turbine output voltage
- To test the braking mode of the wind turbine
- To charge the battery using solar energy
- To charge the battery using wind energy
- To use both solar power and energy stored in the battery to power the DC load
- To test the complete system

TECHNICAL SPECIFICATIONS

- Two photovoltaic inclinable **panels**, 90W, 12V.
- A supporting **frame** for the panel.
- An electronic **current regulation** module, with LCD screen, output 12 V, 30 A.
- A **wind turbine**, 160W, 12V with an embedded current regulation.
- An **inverter**, with output at mains voltage, 12 V, 30 A, 300 W.
- A **battery control** switch, 0-600 V, 32A with **battery**, 100 Ah.
- Two **mains voltage lamps**, dichroic 35W and LED 3W, with independent switches.
- Two **12V lamps**, dichroic 20 W and LED 3W, with independent switches.
- **Cables, connectors** and **accessories**.
- A frame for supporting the electrical components of the system: lamps, switches, protections, etc.

Average training hours: 10h.

The trainer is complete with installation manual.