



PHOTOVOLTAIC SOLAR ENERGY TRAINER



DL SOLAR-C

Trainer for the theoretical and practical study of the applications of the photovoltaic solar energy in a house.

Complete with connecting cables and experiment manual.

TRAINING OBJECTIVES

- Identification of all the operational components and controls, and association with their functions. Placing the equipment into operation and testing the lighting bridge.
- Measurement of solar irradiation
- Connection of the photovoltaic modules and measurement of their voltage and short-circuit current, with the light in the classroom and from the lighting bridge.
- Lighting for homes. Interconnect the six photovoltaic modules and apply the obtained voltage to the house in which a charge regulator and its corresponding battery are assumed to be installed.
- Measurement of battery voltage.
- Irrigation system. Experiment with the operation of the motor used to extract water from a well.
- Calculation of electrical consumption.

TECHNICAL SPECIFICATIONS

Composed of:

- A simulation panel with the graphical representation of a house, complete with lamps, switches, motor for the extraction of water, etc.
- Six photovoltaic modules with 2 mm. terminals for experiencing series, parallel and mixed configurations and for measuring voltage and current as a function of the solar irradiation.
- A battery for experimenting energy accumulation.
- A digital multimeter for performing the measurements.
- A lighting bridge over the photovoltaic modules with two 50 W dichroic lamps and an electronic light regulator. It is possible to change the inclination of the bridge from 0 to 90° as well as the intensity of the light in order to simulate in the classroom the effect of the solar irradiation in the different hours of the day.

Dimensions of the trainer: 486 x 289 x 70 mm.
Dimensions of the case: 520 x 370 x 120 mm.
Net weight: 10 kg.