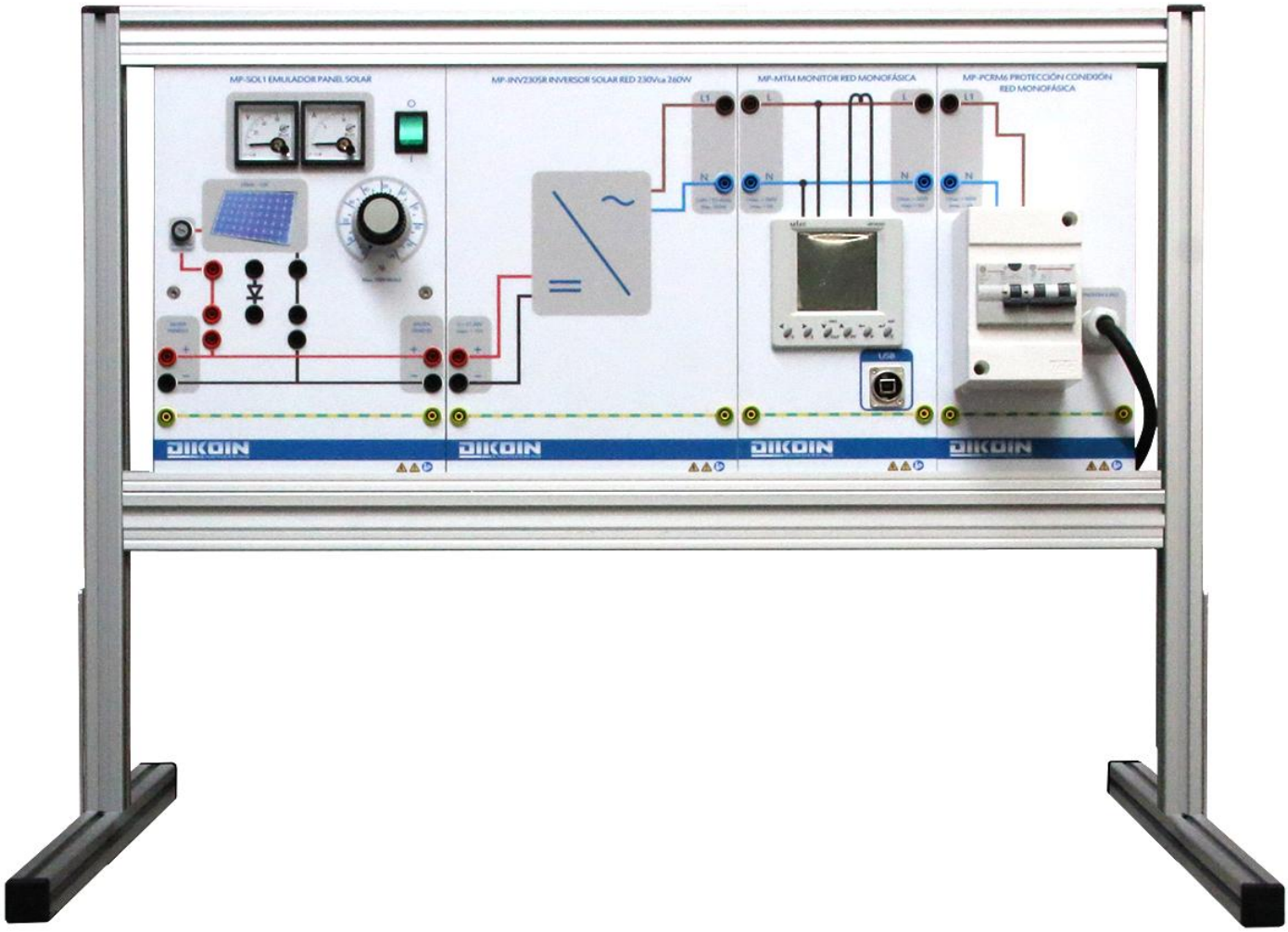
EN 01.7 - GRID PHOTOVOLTAIC TRAINER



The EN 01.7 unit is a scaled model of a photovoltaic solar installation, specifically designed for educational purposes. It enables clear visualization of all components in a photovoltaic system and their configuration.

Instead of a real solar panel, the unit includes an emulator that allows manual control of the generated energy. This emulator is equipped with an ammeter and a voltmeter to display the generated current, along with a measuring instrument that provides the characteristics of the alternating current output from the inverter.

The unit features connection bridges that enable the user to connect and disconnect the different components of the system, facilitating observation and analysis of each component`s operation.

Additionally, it includes measuring instruments to monitor the variables necessary for analyzing the overall behavior of the installation.

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LEARNING OBJECTIVES

- Study of a photovoltaic generation system with grid connection
- Conversion of direct current into alternating current
- Analysis of the inverter`s performance and efficiency
- Influence of solar irradiance on power generation
- Effect of solar irradiance on inverter connection and disconnection
- Study of the operation of bypass or blocking diodes in solar panels

TECHNICAL DATA

FEATURES:

- Single-phase grid-tied sine wave inverter with a rated power of 260W
- 48V solar panel emulator module with adjustable current output
- Single-phase power analyzer displaying active, reactive and apparent power, current, voltage, frequency and power factor
- Analog voltmeter
- Analog ammeter
- Protection module for grid connection
- The equipment is supplied with a comprehensive practice manual for educational use

REQUIREMENTS

Input: 230V/50Hz.