

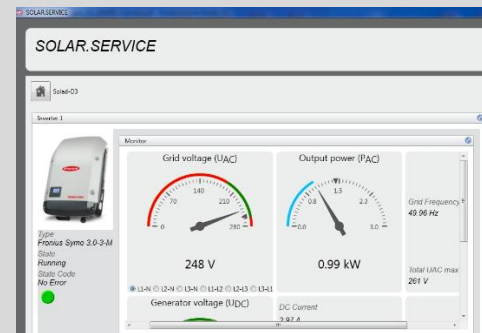


## SOLAR POWER PLANT



**DL SPP**

Modular didactic system for the study of a photovoltaic power system and the operation of a three-phase solar inverter connected to the power grid.



Monitoring and control of the trainer via software.

Complete with connecting cables, experiment manual and software for data acquisition and processing.

### TRAINING OBJECTIVES

- Introduction to solar photovoltaic energy.
- Introduction to three-phase PV systems:
  - Main components description
  - Solar Plant installation.
  - Connection to the power grid.
- Three-phase inverter operation:
  - Measuring generated power.
  - MPP (Maximum Power Point) tracking.
  - Grid-tied efficiency.
- Grid operation:
  - Inverter response to voltage variation.
  - Grid fault simulation.

### TECHNICAL SPECIFICATIONS

- PV panel arrays emulator for powering the three-phase inverter:
  - V<sub>dc</sub> min 200V.
  - Power 600W
  - Short circuit current 10 A
- Solar three-phase inverter:
  - MPP tracking
  - V<sub>dc</sub> input voltage 200 ÷ 800V.
  - Power: 1000VA
- Three-phase power circuit breaker with normally closed auxiliary contact.
- Three-phase network monitoring device.
- Bipolar magneto-thermic switch.
- Three-phase residual Current Circuit Breaker.
- Variable resistive load.
- Variable three-phase transformer to simulate different grid conditions.
- Fixed three-phase power distribution module for connection to the mains.
- Data acquisition module to observe the voltage and current waveforms of the 3 phases simultaneously with isolated inputs.