



SOLAR POWER PLANT



DL SPP

TRAINING OBJECTIVES

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

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.

SOLAR.SERVICE			
A 1440			
Doome 1			
	Modue Grid voltage (UAC)	Output power (PAC)	
Kina Sym 2020	N 20		Christ Franzency I 49:06 Hz
State Aunong State Contr No Exer	248 V	0.99 kW	Mitar CATC AND 261 V
•	Generator voltage (UDC)	DC Current 3.42.8	1

Monitoring and control of the trainer via software.

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

TECHNICAL SPECIFICATIONS

- PV panel arrays emulator for powering the three-phase inverter:
 - o Vdc min 200V.
 - o Power 600W
 - Short circuit current 10 A
- Solar three-phase inverter:
 - o MPP tracking
 - Vdc input voltage 200 ÷ 800V.
 - o 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.