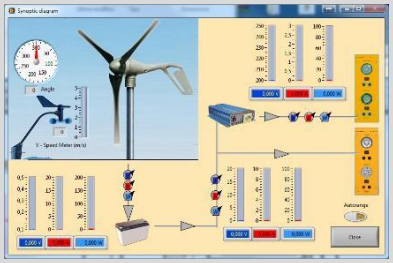
RENEWABLE ENERGIES

WIND ENERGY TRAINER WITH CONNECTION TO MAINS

DL WIND-GT

Modular trainer for the theoretical and practical study of the electrical installations with wind energy.
With the wind trainer it is possible to perform experiments to determine the characteristics of a wind generator and study their on-grid operation with the connection to the mains network.



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

TRAINING OBJECTIVES

STUDY OF WIND TURBINE

- Identification of wind turbine components
- Operating the Wind Turbine Breaker
- Calculating wind power
- Measuring Wind turbine electrical power
- Study of wind turbine with load.

ON GRID SYSTEM – WIND ENERGY

- Measuring the electricity produced by the wind generator, delivered/taken from the mains grid, and the loading of AC lamps.
- Calculating the efficiency of the complete on- grid wind energy system.
- Investigating the response of a wind system to a mains failure
- Energy balance

TECHINACL SPECIFICATIONS

- Network monitor module used to measure electrical parameters in a single-phase circuit.
- A circuit breaker module.
- Fixed single phase power source rated at mains voltage with auxiliary 12 Vdc fixed regulated voltage output to power measurement modules.
- Motor/generator group for the simulation of a wind turbine. Composed of a brushless motor and a three-phase permanent magnet generator.
- Control module for brushless motor drive.

- AC load module. It includes a dichroic lamp and LED lamps, with independent switches.
- Wind turbine charge controller with brake system.
- Multifunction measurement module for wind applications: It includes four separate instruments to measure all fundamental parameters for the study of a wind-system.
- Single or three-phase resistive step-variable load.
- Single phase transformer with full - wave rectifier and capacitive filter to power DC load from AC single phase supply.