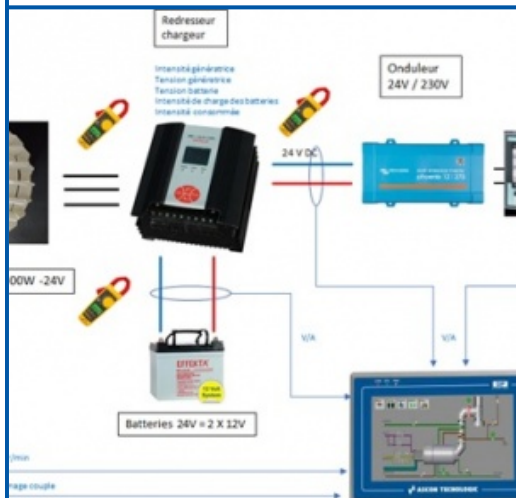


MICRO WIND POWER PLANT

REFERENCE : MP5500-EOLIEN



Non contractual photo

**SERVICE : AN AMMETER / VOLTMETER
CLAMP (SUPPLIED) POWER SUPPLY: 400 V
THREE-PHASE, 3 KW
DIMENSIONS : 1100 X 600 X 1750 MM**

WEIGHT : 250 KG

A micro-wind power plant is a power plant that uses the energy of the wind to generate electricity on a small scale. This electricity can be used to supply isolated sites or be returned to a public distribution network.

Educational Objectives :

- Analysis and study of industrial components (generator, geared motor, inverter, converter, variator, ...)
- Study the performance of chain components.
- Make the energy balance ; ;
- Measurement of voltages and currents at various points in the circuit
- Highlighting of electrical laws

Technical specifications :

Its operating principle consists of transforming the kinetic energy of the wind into electrical energy thanks to a permanent magnet alternator, the electrical power produced depending on the speed of the wind. This is simulated on the bench by an electric motor. In the MP5500 micro wind power plant, the generator from an industrial wind turbine is driven by a geared motor to simulate the wind. A reduced model propeller is attached to the generator shaft. An opaque cache ; hides the gear motor.

- A permanent magnet alternator (neodymium / iron / boron) specific for wind power applications capable of producing a power of 500 W at 1200 rpm.
- A geared motor with electric motor of 1.1 KW, 400V, speed from 150 to 1500 rpm.
- A stainless steel tube frame mounted on casters, two of which are braked.
- An IP55 electrical cabinet containing the electronic components: ;
- A frequency converter for adjusting the speed of the gear motor. This dimmer is configurable.
- A rotational speed display.
- A rectifier / battery charger with integrated display of parameters.
- An inverter
- A network analyzer
- Three charging lamps of 60W each
- Three measurement points accessible on the front panel: Voltage and current after the generator; Voltage and current after rectifier; Current voltage after the inverter
- Two 12V 24Ah AGM type batteries
- A touch screen to display the operating parameters
- RCD, fuses
- On / off button
- Emergency stop button
- A user socket

- A USB socket