
Product Name : Wind Energy Generation Trainer	Product Code : Antenna0001
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Description :

Wind Energy Generation Trainer

Technical Specification :

Wind Energy Generation Trainer

- Designed to allow indoor experiments for the principle of Wind Power Generation
- The system is composed of blower, blade, load module, wind speed meter, DC/AC inverter, battery & quick charger
- Load & inverter modules are contained in a steel enclosure for safety purpose
- Blade support frame is provided to endure the wind pressure when wind is applied to the blade by the blower
- Real time wind speed measurement using a wind speed meter
- The load module is equipped with an LCD for real-time checking of blade RPM
- The DC/AC inverter module is equipped with an LCD to check voltage and current
- Practice facility for power conversion and measurement of circuit characteristics

Contents :

- Introduction to wind power generation
- Configuration & structure of wind power generation

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- Understanding wind power generator
 - Measuring power generation vs. wind speed
 - Measuring power generation vs. number of blades
 - Measuring power generation vs. blade angle
 - Measuring rpm vs. load
 - Measuring energy generation and energy conversion
 - Power conversion experiment using DC/AC converter
 - PWM generator manufacturing practice
 - Boost (Set Up) type manufacturing practice
 - Buck (Step Down) type manufacturing practice
 - Buck-Boost (Step Up /Down) type manufacturing practice
 - CUK (Step Down) type manufacturing practice
 - Trends & forecast of wind power generation

Functions :

- Measuring energy vs. number of blades
- Measuring energy vs. blade angle
- Measuring energy vs. the speed of blower
- Measuring blade rpm vs. load
- Power conversion circuit

Specifications :

- Blower : Rated voltage : 220V,
- Power consumption : 1060 W
- Diameter : 0.5m
- Voltage regulator : 220V AC, single phase
- Blade : Rotation diameter : 0.7m,
- Blade : 12 ea, support frame

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- Generator : AFPM generator,
 - Output : 500W, 500 rpm
 - Load module : 200V / 50W halogen lamp 5 ea,
 - LCD (rpm display)
 - DC/AC converter : Input : 80V~150V,
 - Output voltage : 220V AC, LCD
 - AC load : AC lamp,
 - Fan 220V AC / 12 W
 - Battery : Rated output voltage : 12V / 12AH

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