

Product Name :
Wind, Solar Energy Trainers

Product Code :
RENY0003



Description :

Wind, Solar Energy Trainers

Technical Specification :

The Solar and Wind Trainer should be designed to provide comprehensive instruction with experiments about the generation of electrical power with photovoltaic solar energy and wind energy. It should provide a solid knowledge foundation in renewable energy by explaining the technology in solar and wind, battery storage techniques, and conversion from DC to AC power. The trainer features a powerful photovoltaic solar panel that is mounted in a special frame that enables the panel to be tilted at different angles so the student can see the effect of sun angle on power generation. The wind turbine is mounted separately on a sturdy steel stand that can be easily moved and bolted in place. In addition, the wind turbine blades can be removed and powered by an electric motor that allows experiments to be carried out easily when there's no wind.

The modular frame allows for various electrical modules to be inserted which allow various experiments to be conducted. The system features actual industrial components and for measuring and converting the energy generated. The modules are connected by 4mm stackable test leads. The modules include instrumentation for measurements of both AC & DC amperes and volts. Electrical load applications are with lamps, an electric motor, and a fan. The instruments and loads allow students to measure and see the renewable electrical generation in action. All modules can be stored in the supplied sturdy steel cabinet for safekeeping.

The comprehensive training system manual is fully illustrated and covers all aspects of set-up, and operation. The training manual covers aspects of renewable energy, theory, and student objectives and experiments

Specifications:

The trainer system comprises of all modules listed below:

- Solar Panel, 80 watt Energy
- o Rating : 60 to 80 Watt max
- o Power Current : 5.18 Amps
- o Operating Cell Temperature : -40°C to 90°C
- Wind Turbine
- Wind Turbine with Electric Motor
- o Energy Rating : 200 Watt max
- o Operating Cell Temperature : -10°C to 90°C
- Battery Charger Regulator
- Inverter for DC to AC Conversion
- DC Outlet to Inverter
- AC Load lamp 220 V / 60 Watt
- Load Lamp 220V / 18 Watt
- AC Load Electric Motor 220V / 120 Watt
- AC Load Fan 220V
- AC Measurement Ampere meter
- AC Measurement Voltmeter
- DC Measurement Ampere meter
- DC Measurement Voltmeter
- Frame for Solar Panel and Application Modules
- Accessories: Set of stackable 4 mm banana plug connecting cables and experiment manual

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