Email : sales@engineeringlabequipments.com

Product Name : Renewable Energy Training System	**Product Code :** ENGLABINGCAG4900001

Description :

Renewable Energy Training System

Technical Specification :

This trainer use aluminum column structure, with inner integrated measurement meters, there is universal wheels at the bottom, it's easy to move.
It can do many experiment circuit and components, students can combine them to different circuit, do different experiments and training content.
Training workbench with safety protection system.

Capacity
Wind power generation: fan unit takes aluminum structure, fan can be adjusted
In horizontal 90 degree, dimension 1500*1000*1500mm(L*W*H)
Solar energy generation set: whole set takes aluminum structure, photovoltaic panel can be adjusted, simulator light source can be adjusted for 120 degree in vertical direction, dimension 1500*1000*1500mm(L*W*H)
Training workbench: aluminum structure, aluminum hanging box unit, with universal wheels at bottom, dimension: 1400mm×700mm×1500mm(L*W*H)
Single solar energy cell plate:
Rated peak value work power: 30Wp
Short circuit current:1.9A
Peak value current:1.7A
Open circuit voltage:18.5V
Fan technical specifications:

Fan type: horizontal direction toward
Start speed: 2.5 meters/second
Rated fan speed:10 meters/second
Maximum anti wind speed:40meter/second
Rated work power: 200-500W
Wind direction adjust: auto adjust
Battery technical specification:
Voltage:12V
Volume:40Ah
Battery lost electricity:10V±1V
Executive standard: GB/T 9535
Relative humidity: 35~85%RH(Non-condensate)
Work condition:
Temperature-10~+40ºC Temperature?80ºC
Environment air: no corrosivity air, no fuel air, no large quantity of conductive dust

Power:
Consumption: ?5000W,
Work power: AC220±5%, DC24V
Supply power: single phase three wires AC220±5%, 50HZ
Work mode: continuous

System introduction
This system can be divided to four part: wind generating electricity system, photovoltaic power generation system, control system, inverter system . Wind generating electricity system consist of fan, generator, battery. Photovoltaic power generation system consist of light source, photovoltaic cell plate, battery. Control system consist of wind and solarcomplementary controller. Inverter system is made of frequency inverter and load unit.
Simulate wind generating electricity set: this system select horizontal axis magnet synchronous generator, use fan to simulate wind, through adjust fan position to change wind strength and direction, to test generator effect in the same condition.
Simulator photovoltaic power generation system: this system use 4 pieces of 30W solar energy board, You can connect in series or in parallel according to different system pressure. Simulate solar light set consist of two metal halide, it can adjust the relative position with photovoltaic plate, to simulate solar light position, and demonstration.
Battery group: it consist of 4 pieces 12V/40AH seal battery group, you can parallel connect use as 12V200AH system, you can also connect in series as 24V/100AH system, and deep understand battery.
Controller hanging box: this hanging box use industrial type charger controller, it can control wind generator and photovoltaic generator to charge on battery. With LCD display board, you can check system technical parameter and can set by yourselves. It is with prevent overcharge, over current
Inverter hanging box: adopt 12V/24V voltage intelligent recognize frequency inverter, output voltageis AC220V, continuously work power is 600W, peak work power is 1000W. Rotary efficiency>90%, low voltage automatic alarm.
Meter box: it display generator voltage, generator current, charge voltage, charge current, inverter voltage, inverter current in real time.
Terminal load hanging box: it contains incandescent light bulb, energy saving and axle fan, for load test 220V AC current from inverter.

Training workbench
Training workbench use aluminum column structure hold, with universal wheels at bottom, two wheels are with brake, you can move and fix as your like. Desktop thickness is 25mm high density board, surface with anti high temperature treatment, equip with three door, with two drawers, the structure is beautiful.

Power control panel
Voltage, current output indicator
Equip with power indicator, safety power output terminal.
Inner with AC power source, with short circuit protection function.