

Solar PCU

Make - STEMROBO

Model - STEM 5051



FEATURES & SPECIFICATIONS

- Solar PCU (Working System)
- It is manage the flow of electricity between solar panels, batteries, and the load (appliances) to ensuring stable and efficient power supply. A Hybrid Solar PCU is advanced type of solar inverter that is work with multiple power sources at the same time—typically solar panels, batteries, and the grid (or even a generator).
- Hybrid Solar Home System consist of hybrid inverter as the central component of the system. It

has dual input source to charge the battery and can simultaneously charge the battery from solar panels as well as conventional grid. Solar panels connected in series and parallel is generate power during the day. In the event of grid failure / absence of grid, the hybrid inverter charges the battery from solar panel and DC power from battery is used to power AC appliances.

- For understanding of its working the system is supplied loose with a self-standing 3 sided perforated mesh structure, along with the solar panels, the panel mounting structure, the inverters, batteries, so as to allow the students to learn the installation of the wall chargers, the associated power switchgears. The learner is able to install the solar panels, wire a residential installation, install the inverter, and make connections with the solar inverter and thereby run the installation on the solar power and test the complete functionality of the solar inverter.

It is designed to achieve learning objectives:

- Understand the concept, working principle and overall functionality of the system
- Understand sizing of the system based on customer requirement
- Install, operate, and maintain the system
- Diagnose and troubleshoot the problems during and after the installation
- Learn battery maintenance and perform maintenance of solar lead acid battery
- Detailed Product description: Solar Panel, 12 V, 170 Wp – 4 Nos
- Module Mounting Structure – 2 Set
- Solar Hybrid Inverter, 850 VA, 12 V – 1 Nos
- AC Loads - CFL Lamp, 230 V, 11 W – 1 Nos
- AC Loads - LED Bulb, 230 V, 9 W – 1 Nos
- AC Loads - AC LED Television, 230 V, 55 W – 1 No
- AC DB with MCB, 230 V,
- 16 A, AC 2-Pole, C-Curve – 1 Nos
- Switchboard, 3-Module, 16 A – 1 Nos
- Switchboard, 6-Module, 6 A – 1 Nos
- AC Plug top, 3 Pin, 6 A – 1 Nos
- Connecting wires – 1 Set

Accessories –

- PVC Pipe Fitting-1set
- Nuts, bolts, etc. – 1 Set
- Rubber mat – 1 set
- Metal perforated trolley – 1 Nos

Electrical Characteristics:

- Voltage: 230 V Frequency: 50/60 Hz ± 5%

Mechanical Parameters:

- Minimum Dimensions: 1500W x 865D x 1600H mm Self-standing structure

The system is supplied with relevant technical and practical manuals.

Indicative Product Image

DC Table Fan

Make - STEMROBO

Model - STEM 5030



SPECIFICATIONS

- Operated at 12 V DC ,
- It is energy-efficient performance, making it suitable for long hours of use.
- High Speed Motor for strong air flow
- Adjustable Speed control knob

Indicative Product Image

MPPT Charge Controller

Make - STEMROBO

Model - STEM 5049



FEATURES & SPECIFICATIONS

- Control Panel to understand working of MPPT Charge Controller: Enclosure consists of any high-grade insulating material for better user safety and in compliance with IS302- 1/IEC60335-1, tested from any Govt approved lab.
- Required Switches to be provided
- Connectors: BS10 Safety Terminals
- Solar PV module: Poly crystalline Technology
- Wattage-40 watts
- Charge controller: MPPT – type with reverse polarity protection for battery as well as load.
- Connectors: BS 10 terminals and patch cords to be provided to protect from danger. BS10 safety terminals are in compliance with IS302- 1/IEC60335-1, tested from any Govt approved Lab.
- An embedded DPM to be provided for voltage & Current measurement at both i.e. Input and output sides
- Battery:12V,7.5Ah
- Load: DC lamp
- MPPT Charge Controller (in range of 5 A) in loose form are provided (1 no) to enable students to independently build and understand the circuit.

Indicative Product Image

PWM Controller

Make - STEMROBO

Model - STEM 5048



FEATURES & SPECIFICATIONS

- Control Panel to understand working of PWM Controller: Enclosure consists of any high-grade insulating material for better user safety and in compliance with IS302-1/IEC60335- 1, tested from any Govt approved lab. Connectors: BS 10 terminals and patch cords to be provided to protect from danger. BS10 safety terminals are in compliance with IS302- 1/IEC60335-1, tested from any Govt approved Lab.
- Required Switches to be provided
- Solar PV Module: Poly Crystalline Technology
- Wattage: 40 watts
- Charge controller: PWM type with reverse polarity protection for battery as well as load.
- An embedded DPM to be provided for voltage & Current measurement at both i.e. Input and output sides.
- Battery: 12V, 7.5Ah
- Load: DC lamp
- PWM controller (in range of 5 A) in loose form provided (1 no) to enable students to independently build and understand the circuit.

Indicative Product Image

Used Water Treatment Solar Plant Demonstrator Kit

Make - STEMROBO

Model - STEM 5056



FEATURES

- Microcontroller based Constant Current Power Supply with LCD
- Transparent Tank for better visibility of process
- Discharge outlet for easy removal of sludge
- Aluminum and Stainless-Steel Electrodes for comparative study

SPECIFICATIONS	
Electro coagulation Tank Volume	1L
Material	Acrylic
Settlement Tank Volume	500ml
Material	Acrylic
Filters	Sand and Charcoal Electrodes
Material	Aluminum and Stainless-Steel Rod
Dimensions (mm)	8 x 310
Solar Panel Power	75 Watt
CC Power supply	3A
Meters	PH meter, TDS meter (handy is provided for measurements)

Indicative Product Image