

Solar based Automatic Battery Charger Demonstrator

Model : SE-1107DM



SINCOM SE-1107DM Solar based Automatic Battery Charger Demonstrator is an impressive, self-contained trainer that allows for the thorough examination of the operation, characteristics, and parameters of a solar based automatic Battery Charger circuit. The utilization of solar energy for battery charging has seen a substantial increase across numerous applications aimed at generating the essential power required for battery charging. This trainer also includes the capability to apply an artificial variable intensity light source, Vary the Battery Voltage level, DC LED Load, LED Indicators, as well as Digital Voltmeter and Digital Milliammeter.

Features

- ❖ Very Easy for operation
- ❖ High Power Solar Cell panel with mount
- ❖ Stable PWM Charge Controller with Voltage sensors
- ❖ Three LED Indicators for PV Panel, Battery and Load
- ❖ Over Load Indication
- ❖ Battery with Fixed and Variable voltage level
- ❖ DC LED Lamp Load
- ❖ Selector Switch for PV Panel, Battery and DC Load
- ❖ Square Front
- ❖ Fast response time
- ❖ High photo sensitivity
- ❖ Artificial light radiation source 100W Lamp with intensity control
- ❖ $3^{1/2}$ Digit Digital DC Volt and Current Indicator



An ISO 9001:2015 Co.

- ❖ In-Built Variable regulated DC Power Supply
- ❖ Presents a multi-color Circuit Diagram printed on the front panel of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Interconnections by 2mm high quality banana sockets and pins.

Technical Specifications

- AC Mains Power Supply : 230V \pm 10%, 50Hz
- Fixed Regulated DC Power Supply : +12V /500mA
- Solar Panel : One number with mount
- Solar PV Panel Ratings : 21.8 V, 40 W
- Power : 40W
- Battery Voltage : 12V, 7AH
- Battery Voltage level : Fixed and Variable mode
- Charge Controller : PWM Charge Controller
- LED Indicators : Solar ON, Battery High/Low, Load ON/Overload
- Light Source : 100W Lamp with Variable Intensity control
- Front : Square/Rectangle
- DC Load : LED Lamp Load 5mm
- Maximum Output Voltage : 12V
- Total Digital Meters : 02 (1 Voltmeter and 1 Milliammeter)
- Digital Voltmeter : DC 0-20V, Red Color 3^{1/2} Digit LED Display
- Digital Milliammeter : DC 0-200mA, Red Color 3^{1/2} Digit LED Display
- Weight : 5.0 kg (approx.)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50°C, 80% RH

Learning Scope

- To study the operation of Solar Cell.
- To study the Operation of Solar based PWM type Automatic Battery charger.
- To observe and note the change in the charging voltage and Solar PV Panel voltage and current for the different levels of Battery Voltages.
- To Observe & Note Battery Charging Voltage, Charging Current for the applied Solar energy.
- To observe and note the DC Load Voltage VL for the different levels of Battery voltages.

Other Instruments Required : Nil

Accessories Included : Solar modules with stand, Light source 100W with intensity control, Set of Patch Cord and Details Instruction Manual.