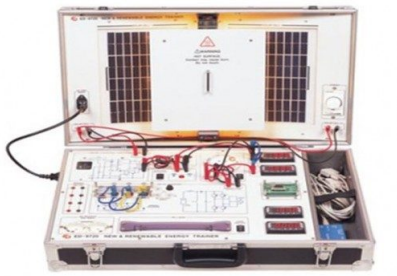
New & Renewable Energy Trainer

Category: New & Renewable Energy · Model reference: MZM-5004



SPECIFICATIONS

Experiments:
- Understanding of the solar cell energy
- Photo electricity simulation
- Ohm's Law and voltmeter/ammeter
- Characteristics of solar cell (Isc, Voc)
- Light source's intensity and shadow
- Charge using the solar cell
- AC/DC Inverter

Configuration:
Basic Module
1. Energy Production Module (in upper body)
2. Solar Cell Panel
3. Rheostat, Reflection Panel
4. Energy Processing Module (in lower body)
- AC/DC Inverter
- Charge Controller
- Battery
- AC/DC Tester

5.Communication Module
- Multi RS-485 Converter
- RS-485 Communication Board

6. Integrated System (Optional)
- 300W Wind Generator Trainer

Features:
- Conversion experiments on the produced energy (power production/processing)
- Characteristics of Solar Cell module's voltage and current.
- Alarm beep for wrong wire placement
- Voltmeter and ammeter as included for measuring AC and DC.
- Control by PC and waveform and graph output.

Specifications
1. Solar Cell (Energy Production Part)
- Serial/parallel wiring
- Max. Operating Power: 5W
- Open Voltage: 20.5V
- Short Current: 0.3A
- Operating Voltage: 17.64V
- Operating Current: 0.284A
- Dimmer Switch : 1KW
- Halogen Lamp: 150W

2. Charge Controller
- System Voltage: 12V
- Max. Charge Current: 10A/15A/20A
- Max. Load Current: 10A/15A/20A
- Self-Power Consumption: 6~9mA
- Charge Voltage (Float) : 13.8V
- Discharge Blocking Voltage: 11.4V
- Load Reconnecting Voltage: 12.4V
- Temperature Compensation: 20mV

3. AC/DC Inverter
- Rated Continuous Output: 350W
- Max. Instant Output: 700W
- Input Voltage: 10~15VDC
- Output Voltage: 220VAC
- Low Voltage Alarm: 10.5V±0.5V
- Power : 5V

4. Energy Storage Module
- MF Battery
- Voltage: 12V
- Capacity: 2.0AH,
- Battery Charger
- Rated Input Voltage: 220V/60Hz
- Rated Input Current: 170mA
- Rated Output Voltage: 12VDC
- Rated Output Current: 1.6A

5. Buzzer for Input Polarity
- Operating Voltage: 5~12V
- Function: Alarm for wrong wire placement

6. AC Voltage Meter(2ea), AC Ampere Meter (2ea)
- Voltage: 100~240VAC 50/60Hz
- Power Consumption: 5VA
- Max. Indication Range: -1999~9999 (4 lines)
- RA-485 Communication Output: 1200/2400/4800/9600bps
- Protocol: Modbus

7. AC Load
- Fluorescent Lamp
- Operating Voltage: 220VAC
- Rated Input Current: 0.09A
- Lighting Frequency: 42KHz
- 220V Power Outlet
- Allowable Voltage: 220V/15A

8. DC Load
- DC Motor
- Operating Voltage: 12V,
- Power Consumption: 0.63W
- Speed: 6,100rpm
- DC Lamp
- Operating Voltage: 3~12VDC

9. DC Voltage Meter, DC Ampere Meter
- Voltage: 100~240VAC 50/60Hz
- Power Consumption: 5VA
- Max. Indication Range: -1999~9999(4)
- RS-485 Communication Output:
- 1200/2400/4800/9600bps

10. Multi RS-485 Converters (ED9710-73)
- Processor : Atmega128, 8bit RISC
- Memory : 128k Program Flash, 64k SRAM
- Program Downloader : ISP
- Interface : RS-485, RS-232, USB
- 485 Driver Chip : ADM1485

Accessories
- Cable (Power, Serial, Circuit Connection): 1 set
- User Manual: 1 ea.

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