EARNMee MPPT-M-60A-R

EARNMee 60A MPPT Solar Charge Controller User Manual

Model: MPPT-M-60A-R | Brand: EARNMee

1. Introduction

Thank you for choosing the EARNMee 60A MPPT Solar Charge Controller. This device is designed to efficiently manage power flow from your solar panels to your battery bank, ensuring optimal charging and system protection. This manual provides essential information for safe installation, operation, and maintenance of your solar charge controller. Please read it thoroughly before installation and use.

2. Product Features

- **Automatic System Voltage Detection:** Automatically detects 12V/24V/48V system voltage.
- **High PV Input Voltage:** Supports PV input voltage (VOC) up to 150V.
- **Adjustable Output:** Manually select 12V/24V/48V output DC voltage to match various battery types.
- **Broad Battery Compatibility:** Compatible with lead-acid, colloidal, and lithium batteries.
- **Multiple Protection Features:** Includes overcharge protection, overcurrent protection, overheating protection, and short circuit protection.
- **Lithium Battery Activation:** Effectively activates low-activity lithium batteries to restore and extend their service life.
- **Robust Compatibility:** Works with all common solar panel types.
- **LCD Display:** Provides real-time system information and settings.

3. Product Overview

The EARNMee 60A MPPT Solar Charge Controller is designed for efficient power management in various solar applications. Below are key visual components and their descriptions.

Image Description: This image displays the front and bottom views of the EARNMee 60A MPPT Solar Charge Controller. The front features an LCD display screen, battery voltage adjustment button, and battery type switching button. The bottom panel shows clearly labeled connection points for the negative pole of the battery, positive pole of the battery, solar positive electrode, and solar negative electrode. An intelligent controlled fan is also visible on the side for cooling.

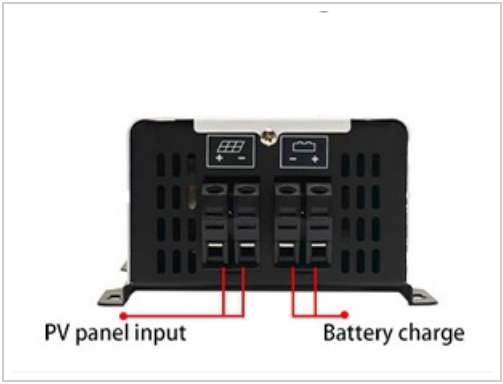

Image Description: A close-up diagram illustrating the PV panel input terminals and battery charge terminals on the solar charge controller. This visual aid helps in correctly identifying where to connect the solar panels and battery bank.

Image Description: A detailed view of the LCD display screen of the MPPT solar charge controller, showing various parameters such as photovoltaic voltage, charging current, charging voltage, power, battery SOC, battery type, and controller temperature. This display is crucial for monitoring system performance.

4. Specifications

Specification	Value
Model	MPPT-M-60A-R
Charging Current	60A
PV Input Voltage (VOC)	Up to 150V
System Voltage	12V/24V/48V (Auto-detect)
Max PV Power (12V Battery)	700W
Max PV Power (24V Battery)	1400W
Max PV Power (48V Battery)	2800W
Display Type	LCD
Product Dimensions	8.27 x 3.54 x 6.5 inches
Item Weight	3.64 pounds
Material	Metal
Color	Red

5. Setup & Installation

Proper installation is crucial for the safe and efficient operation of your solar charge controller. Follow these steps carefully:

1. **Mounting:** Securely mount the controller in a well-ventilated area, away from direct sunlight, high temperatures, and moisture. Ensure there is sufficient space around the unit for heat dissipation.
2. **Wiring Order:** Always connect the battery first, then the solar panels. Disconnect in the reverse order (solar panels first, then battery).
3. **Battery Connection:** Connect the battery cables to the controller's battery terminals (+ and -). Ensure correct polarity.
4. **Solar Panel Connection:** Connect the solar panel cables to the controller's PV terminals (+ and -). Ensure correct polarity.
5. **Load Connection (Optional):** If using a DC load directly from the controller, connect the load cables to the load terminals (+ and -).

Video Description: This video provides a visual guide on the basic setup and wiring of the 60A MPPT Solar Charge Controller, demonstrating the connection of PV panels and battery to the controller. It highlights the correct sequence for safe installation.

Video Description: A detailed video demonstrating the manual setup process for the 60A MPPT Solar Charge Controller, including how to access settings and configure battery types and charging parameters.

6. Operating Instructions

The controller features an intuitive LCD display and buttons for easy operation and monitoring.

- **Display Navigation:** Use the 'Up' and 'Down' buttons to scroll through different display screens, showing real-time data such as PV voltage, battery voltage, charging current, and system status.
- **Setting Adjustment:** Press and hold the 'Enter' button to access the settings menu. Use 'Up' and 'Down' to navigate and 'Enter' to select or confirm changes.
- **Battery Type Selection:** In the settings menu, select the appropriate battery type (Lead-Acid, Gel, LiFePo4, Li-ion, or User-defined) to ensure correct charging algorithms.
- **DC Output Control:** Adjust DC output voltage or enable/disable the load output as needed.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your solar charge controller.

- **Cleaning:** Periodically clean the controller's casing and display with a dry cloth. Ensure ventilation openings are free from dust and debris.
- **Connection Check:** Regularly inspect all wiring connections for tightness and corrosion. Loose connections can lead to power loss or overheating.
- **Environmental Conditions:** Ensure the controller remains within its specified operating temperature range and is protected from extreme weather conditions.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates to ensure optimal performance and access to new features.

8. Troubleshooting

If you encounter issues with your solar charge controller, refer to the following common problems and solutions:

- **No Display/No Power:**
  - Check battery connections and ensure they are secure and correctly polarized.
  - Verify battery voltage is within the controller's operating range.
- **No Charging:**
  - Ensure solar panels are connected correctly and receiving sufficient sunlight.
  - Check PV input voltage on the display; it should be higher than battery voltage for charging to occur.
  - Verify battery type settings are correct for your battery.
- **Overcharge/Overcurrent Protection:**
  - The controller will automatically reduce charging current or stop charging to protect the battery. Check battery health and capacity.
  - Ensure total PV power does not exceed the controller's maximum input power.
- **Overheating:**
  - Ensure adequate ventilation around the controller. Clear any obstructions from the fan or heat sinks.
  - Reduce load or PV input if operating in high ambient temperatures.

9. Warranty & Support

The EARNMee 60A MPPT Solar Charge Controller comes with a 12-month maintenance service. We conduct quality checks on all

units before shipment to ensure you receive the product in good condition. If you have any questions or require assistance, please feel free to contact us. We aim to reply within 24 hours.