

## PowMr 45A 100V MPPT Solar Charge Controller

# PowMr 45A 100V MPPT Solar Charge Controller Instruction Manual

Brand: PowMr | Model: 45A 100V MPPT Solar Charge Controller

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your PowMr 45A 100V MPPT Solar Charge Controller. Please read it thoroughly before installation and use to ensure optimal performance and longevity of the device.

The PowMr 45A 100V MPPT Solar Charge Controller is designed to maximize power harvest from your solar panels and efficiently charge various battery types, including Sealed, LiFePO4, Gel, and Flooded batteries. It features an LCD display for parameter monitoring and adjustment, along with a USB port for convenience.

## 2. SAFETY INFORMATION

- Ensure all wiring is performed by qualified personnel.
- Always connect the battery to the controller first, then the solar panels. Disconnect in reverse order.
- Do not exceed the maximum input voltage of 100V from the solar panels.
- Install the controller in a well-ventilated area to prevent overheating.
- Avoid direct sunlight exposure to the controller.
- Use appropriate wire gauges for all connections to prevent overheating and ensure safety.

## 3. PRODUCT OVERVIEW

The PowMr 45A 100V MPPT Solar Charge Controller features a robust design with an intuitive interface for easy monitoring and control.



**Figure 1:** Front view of the PowMr 45A 100V MPPT Solar Charge Controller. It features an LCD display and control buttons for easy operation. The bottom section includes terminals for solar panel, battery, and load connections, along with a temperature sensor port and a communication port.

### 3.1. Components and Interface

- **LCD Display:** Shows real-time system data such as voltage, current, power, and battery status.
- **Control Buttons:** Used for navigating menus, adjusting parameters, and switching load output.
- **Solar Input Terminals:** Connect to solar panels (PV).
- **Battery Terminals:** Connect to the battery bank.
- **Load Output Terminals:** Connect to DC loads.
- **Temperature Sensor Port:** For connecting the external temperature sensor (included).
- **Communication Port:** For data monitoring and control via external devices (e.g., PC, mobile app).

## 4. SETUP AND INSTALLATION

Follow these steps for proper installation of your MPPT solar charge controller:

1. **Mounting:** Choose a suitable, well-ventilated location away from direct sunlight and moisture. Ensure adequate clearance around the unit for heat dissipation.
2. **Wiring Preparation:** Loosen the screws on the controller's wiring ports counterclockwise to accommodate the cables. Ensure the cable trough is sufficiently open.
3. **Battery Connection:** Connect the battery cables to the controller's battery terminals. Always connect the positive pole first, then the negative pole.
4. **Solar Panel Connection:** Connect the solar panel cables to the controller's solar input terminals. Ensure correct polarity (positive to positive, negative to negative).
5. **Load Connection:** Connect your DC loads to the controller's load output terminals.
6. **Temperature Sensor:** Plug the temperature sensor into its dedicated port and attach the sensor to the battery to ensure accurate temperature compensation.
7. **Secure Connections:** After all connections are made, tighten all terminal screws securely. Gently tug on the wires to ensure they are firmly seated.

**Video 1:** Instructions for Using MPPT Controllers. This video provides a visual guide on how to connect and set up MPPT controllers, including wiring steps and initial configuration.

## 5. OPERATING INSTRUCTIONS

### 5.1. Display Interface

The LCD display provides real-time information about your solar system. Short press the up/down scroll keys on the main interface to cycle through various parameter values. The system automatically switches parameter pages every 5 seconds if no button is pressed.

- **Main Interface:** Shows solar panel input voltage, battery input voltage, and load output voltage.
- **Cumulative Power Generation:** Displays the total energy generated by the solar panels.
- **Cumulative Discharge Capacity:** Shows the total energy discharged to loads.
- **Load Indication:** Indicates if a load is connected and active.

### 5.2. Parameter Settings

To enter the setting interface, press and hold the SET key on the main interface. In the setting interface, use the up/down page keys to select the desired battery type (e.g., Sealed, Gel, Flooded, Lithium, or custom). Short press the SET key to select input/output parameter values for adjustment. Use the up/down keys to modify the value, then press SET again to confirm and move to the next item.

The operating system automatically saves parameters and returns to the main interface after 10 seconds of inactivity. You can also press the ESC key to quickly save parameters and return to the main interface.

If system parameters are adjusted unreasonably, a fault indication will appear when returning to the main interface. To restore factory settings, press and hold both the SET and ESC keys simultaneously for 5 seconds on the main interface.

**Video 2:** BougeRV APP Part 2 - Connection and Setup. This video demonstrates how to connect and set up the controller via a mobile application, including data display and parameter adjustments.

## 6. MAINTENANCE

- Regularly inspect all wiring connections for tightness and corrosion.
- Keep the controller clean and free from dust and debris.
- Ensure proper ventilation around the unit to prevent overheating.
- Check the battery terminals for any signs of wear or damage.

## 7. TROUBLESHOOTING

- **LCD Not Lighting Up:** Check battery voltage and ensure all cables are correctly connected.
- **Battery Voltage Not Displayed:** Verify battery connections and ensure the battery is not completely discharged.
- **Solar LED Indicator Not Lit:** Ensure solar panel cables are correctly connected and that there is sufficient sunlight.
- **Fault Indication:** If a fault icon appears, refer to the manual for specific error codes and solutions. Incorrect parameter settings can trigger faults.



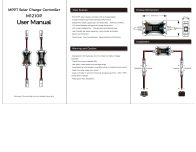


## 8. SPECIFICATIONS

Feature	Detail
Product Dimensions	5.31 x 2.55 x 7.67 inches
Item Weight	2.28 pounds (1035 Grams)
Brand	PowMr
Max Input Power	1080W
Voltage Compatibility	12V / 24V (Auto-sensing)
Max Input Voltage	100V
Battery Types Supported	Sealed, LiFePO4, Gel, Flooded, Lithium
Included Components	1 x MPPT Solar Charge Controller

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official PowMr website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Related Documents - 45A 100V MPPT Solar Charge Controller

	<p><a href="#">PowMr POW-M60-PRO MPPT Solar Charge Controller User Manual</a></p> <p>This user manual provides comprehensive instructions for the PowMr POW-M60-PRO MPPT Solar Charge Controller, covering safety guidelines, installation procedures, operational modes, charging characteristics, protection features, troubleshooting, and detailed technical specifications for optimal solar energy system management.</p>
<p>BSC Controller</p> <p>Installation Manual (PDF)</p>	<p><a href="#">BSC Controller Installation Manual</a></p> <p>This manual provides instructions for the installation of the BSC Controller, a solar charge controller designed for various battery types.</p>
	<p><a href="#">PowMr MPPT-60A Solar Charge Controller User Manual</a></p> <p>PowMr MPPT-60A Solar Charge Controller User Manual providing detailed instructions on installation, operation, safety precautions, troubleshooting, and technical specifications for efficient solar power management.</p>
	<p><a href="#">MPPT Solar Charge Controller M1210P User Manual - PowMr</a></p> <p>User manual for the PowMr M1210P MPPT Solar Charge Controller. Provides features, warnings, installation guidance, operation, and technical specifications for 12V GEL, AGM, and LiFePO4 batteries.</p>
	<p><a href="#">PowMr POW-M60-PRO MPPT Solar Charge Controller User Manual</a></p> <p>User manual for the PowMr POW-M60-PRO MPPT Solar Charge Controller, detailing safety instructions, installation, operation, charging modes, protection features, troubleshooting, and technical specifications.</p>
	<p><a href="#">PowMr Keeper Series MPPT Solar Charge Controller Manual</a></p> <p>User manual for the PowMr Keeper Series MPPT Solar Charge Controller, covering installation, operation, features, technical data, and fault management for models MPPT 20A-40A.</p>