Mehrpow MP-12V200Ah-ACELL

Mehrpow 12V 200Ah LiFePO4 Lithium Battery Instruction Manual

Model: MP-12V200Ah-ACELL | Brand: Mehrpow

Introduction

This manual provides essential information for the safe and efficient use of your Mehrpow 12V 200Ah LiFePO4 Lithium Battery. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your battery. This battery is designed for various applications including RVs, marine vessels, solar energy storage, UPS backup, trolling motors, and other off-grid systems.



Image: Mehrpow 12V 200Ah LiFePO4 Lithium Battery shown with a smartphone displaying its monitoring app.

Key Features

- **Compact Design:** Measuring 13.58 × 7.48 × 9.65 inches, this battery offers a space-saving solution.
- **High Capacity:** Utilizes Grade A LiFePO4 cells to deliver a true 200Ah capacity with 100% Depth of Discharge (DoD).
- **Lightweight:** Weighs approximately 46 lbs, making it significantly lighter than traditional lead-acid batteries.
- **Long Cycle Life:** Provides over 8,000 cycles at 80% DoD, offering extended durability.
- **Advanced BMS:** Integrated 200A industrial-grade Battery Management System (BMS) with triple-layer protection against overcharge, over-discharge, overcurrent, short circuits, and temperature extremes.
- **Temperature Protection:** Features temperature-adaptive charging with auto-cutoff at 32°F (0°C) and 158°F (70°C).
- **Low Self-Discharge:** Maintains charge with ultra-low self-discharge rates of less than 3% monthly.
- **Scalability:** Supports connection in series (up to 4) and parallel (up to 4) for 24V/48V systems.
- **Versatile Applications:** Ideal for RV, marine, solar, UPS backup, trolling motors, and off-grid power needs.

Safety Information

Your Mehrpow LiFePO4 battery is equipped with an advanced Battery Management System (BMS) to ensure safe operation. However, it is crucial to follow all safety guidelines to prevent damage to the battery or injury.

- Do not short circuit, disassemble, crush, heat, or incinerate the battery.
- Avoid immersing the battery in any liquid.
- Ensure all screws and connections are properly tightened when connecting batteries.
- Use a LiFePO4 battery charger with an activation function to charge the battery, especially if its voltage is low.
- Always use a LiFePO4 battery charger within the rated voltage and current range.
- The BMS provides temperature-adaptive charging, automatically cutting off charging at 32°F (0°C) to prevent freezing damage and at 158°F (70°C) to prevent overheating.
- For long-term storage, it is recommended to charge the battery to 50% every 3 months if it is left unused.

Product Overview

The Mehrpow 12V 200Ah LiFePO4 battery is designed for durability and ease of use, featuring a robust casing and integrated handles for portability.



Image: Mehrpow 12V 200Ah LiFePO4 Lithium Battery with key dimensions (13.58in x 7.48in x 9.65in) and examples of power duration for various appliances.

The battery features clearly marked positive (+) and negative (-) terminals for easy and correct connection. Its compact size and lightweight design (46 lbs) make it suitable for installations where space and weight are critical considerations.



Image: Mehrpow 12V 200Ah LiFePO4 Lithium Battery with a diagram illustrating its 200A BMS and 5 protection features: overcurrent, overdischarge, high-temp, overcharge, and short circuit protection.

Setup

Initial Inspection

Upon receiving your Mehrpow battery, inspect it for any visible damage. Ensure all terminals are clean and free from debris. The battery may be in a powered-off state for shipping; it will activate upon initial charging.

Connecting Terminals

Use appropriate M8 terminals and ensure all connections are secure. Tighten terminal screws to the recommended torque to prevent loose connections, which can lead to overheating and performance issues.

Series and Parallel Connections

The Mehrpow 12V 200Ah battery supports connecting up to 4 batteries in series and up to 4 batteries in parallel. This allows for creating 24V or 48V systems, or increasing overall capacity. Always ensure that batteries connected in series or parallel are of the

same model and capacity. Consult a qualified technician if you are unsure about complex wiring configurations.

Video: This video demonstrates the physical connection of battery terminals and basic electrical testing, including voltage and resistance measurements, and connecting to an inverter.

Operating Instructions

Charging

Use a compatible LiFePO4 battery charger. The integrated BMS will manage the charging process, including temperature protection. The battery will automatically cut off charging if the temperature falls below 32°F (0°C) or exceeds 158°F (70°C).



Image: Mehrpow 12V 200Ah LiFePO4 Lithium Battery illustrating three convenient charging methods: via solar panel with charge controller, a LiFePO4 charger connected to a generator, or a standard battery charger.

Discharging

The battery supports a maximum continuous discharge current of 200A and a peak current of 200A. The BMS will protect against over-discharge and overcurrent situations. Ensure your load does not exceed the battery's rated capacity to prevent automatic shutdown.

Bluetooth App Usage

The Mehrpow battery features Bluetooth connectivity for real-time monitoring via a smartphone app. Download the dedicated app (refer to the product packaging or included documentation for QR code/download links). The app allows you to monitor battery status, voltage, current, temperature, and other parameters.

Video: This video provides a guide on how to connect to the battery via Bluetooth and troubleshoot common connection issues using the smartphone app.

Maintenance

The Mehrpow LiFePO4 battery is designed for zero maintenance, offering a hassle-free experience compared to lead-acid batteries. However, proper care and storage are essential for maximizing its lifespan.

- **Cleaning:** Keep the battery terminals and casing clean and dry. Use a dry cloth to wipe away any dust or dirt.
- **Storage:** For long-term storage (more than 3 months), charge the battery to approximately 50% of its capacity. Store in a cool, dry place away from direct sunlight and extreme temperatures. The ultra-low self-discharge rate (<3% monthly) ensures it remains ready for emergencies.
- **Temperature Considerations:** While the battery is engineered for -20°C~60°C operation, avoid prolonged exposure to temperatures outside this range. The BMS will provide protection against extreme temperatures during charging.

Troubleshooting

The integrated BMS provides comprehensive protection, but if you encounter issues, consider the following:

- **Battery Not Powering On:** If the battery is completely discharged or in under-voltage protection, it may appear off. Connect it to a compatible LiFePO4 charger to activate it.
- **Charging Cut-off:** If charging stops unexpectedly, check the battery temperature. The BMS will halt charging if the temperature is below 32°F (0°C) or above 158°F (70°C). Allow the battery to return to a safe operating temperature.
- **Discharge Cut-off:** If the battery stops providing power, it may be due to over-discharge, overcurrent, or short circuit protection activated by the BMS. Reduce the load or recharge the battery.
- **Bluetooth Connection Issues:** Ensure Bluetooth is enabled on your device and the battery is powered on. Refer to the app's troubleshooting guide or the provided video for detailed steps.

Video: This video demonstrates a high and low temperature cutoff test, showing how the battery's BMS protects against extreme temperatures.

Specifications

Specification	Value
Brand	Mehrpow
Model	MP-12V200Ah-ACELL LIFEPO4 lithium battery
Size (Product Dimensions)	7.48"D x 13.58"W x 9.65"H
Item Weight	45 pounds
Voltage	12V

Capacity	200Ah
Max. Load Power	2560W
Continuous Discharge Current	200A
Peak Discharge Current	200A
Cycle Life	8,000+ cycles at 80% DoD
Operating Temperature Range	-20°C to 60°C
Charging Temperature Cut-off	0°C (32°F) to 70°C (158°F)
Protection Rating	IP65
Terminal Type	M8 Terminal
UPC	797387977802

Warranty & Support

The Mehrpow 12V 200Ah LiFePO4 Lithium Battery is backed by a 5-year global warranty against non-human faults. Mehrpow is committed to providing lifetime support for its products.

- **Warranty Coverage:** 5 years for manufacturing defects, excluding damage caused by misuse or improper installation.
- **Customer Support:** For any technical assistance, troubleshooting, or warranty claims, please contact Mehrpow customer service. Refer to the product packaging or official website for contact details.

Video: This video provides a brief overview of the DC HOUSE factory, highlighting production processes and quality control measures.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question