

MFUZOP MFU12V100AH

MFUZOP 12V 100Ah LiFePO4 Battery Instruction Manual

Model: MFU12V100AH

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your MFUZOP 12V 100Ah LiFePO4 Deep Cycle Lithium Battery. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your battery.

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE) including safety glasses and gloves when handling batteries.
- Do not short-circuit the battery terminals. This can cause severe damage to the battery and pose a fire hazard.
- Ensure proper ventilation during charging and discharging to prevent heat buildup.
- Do not expose the battery to fire, extreme heat, or corrosive substances.
- Keep the battery away from children and pets.
- Use only compatible chargers designed for LiFePO4 batteries.
- Do not attempt to open or modify the battery casing. Tampering with the battery voids the warranty and can be dangerous.
- Store the battery in a cool, dry place, away from direct sunlight and moisture.

3. PRODUCT FEATURES

- **Built-in 100A BMS:** The MFUZOP LiFePO4 100Ah battery features an integrated 100A Battery Management System (BMS) for comprehensive protection against overcharge, overdischarge, overcurrent, and short circuits. It also includes high temperature shutdown and low temperature protection.
- **Lightweight and Compact:** Weighing approximately 11kg (24.25 lbs), this battery is significantly lighter than traditional lead-acid batteries, making it easier to handle and install in various applications.
- **Extended Lifespan:** Offers a lifespan of up to 10 years, providing 8000+ cycles at 100% Depth of Discharge (DOD), which is substantially longer than lead-acid alternatives.
- **Advanced Lithium Iron Technology:** Utilizes Class A cells for higher energy density, stable performance, fast charge/discharge capabilities, and no memory effect.
- **Wide Application Range:** Ideal for RVs, boats, home energy storage, off-grid solar systems, trolling motors, fish finders, electric scooters, lawn mowers, golf carts, and backup UPS systems.



Figure 1: Built-in BMS Protection Features

MORE EFFECTIVELY COPE WITH EXTREME TEMPERATURE VARIATIONS

Excellent continuous discharge Work from **-4°F to 150°F**



Figure 2: Operating Temperature Range

4. WHAT'S IN THE BOX

- MFUZOP 12V 100Ah LiFePO4 Battery (x2)

Your browser does not support the video tag.

Video 1: Unboxing and physical overview of the MFUZOP 100Ah LiFePO4 battery.

Your browser does not support the video tag.

Video 2: Features and various applications of a 12V 100Ah LiFePO4 battery.

5. SETUP

Before connecting the battery, ensure all components are present and undamaged. The battery is equipped with M8 terminal bolts for secure connections.

5.1. Initial Inspection

Upon receiving your battery, inspect it for any signs of physical damage. If any damage is found, contact customer support immediately.

5.2. Terminal Connections

Connect the positive (+) terminal of the battery to the positive lead of your system and the negative (-) terminal to the negative lead. Ensure connections are tight and secure to prevent arcing and overheating. Use appropriate M8 connectors.

5.3. Series and Parallel Connections

The MFUZOP 12V 100Ah LiFePO4 battery supports series and parallel connections for increased voltage or capacity. When connecting batteries in series or parallel, use batteries of the same model and brand. Always ensure all batteries are at a similar state of charge before making connections.

- **Parallel Connection:** Connect positive to positive and negative to negative terminals to increase capacity (Ah) while maintaining 12V.
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase voltage (V). For example, two 12V batteries in series will provide 24V.



Figure 3: Example of battery expansion with solar panels (up to 4P4S configuration).

6. OPERATING INSTRUCTIONS

6.1. Charging

Use a LiFePO4 compatible charger with the correct voltage and current settings. The recommended charge voltage is 14.4V-14.6V. The maximum charge current is 50A. Avoid overcharging or using chargers not specifically designed for LiFePO4 batteries.

6.2. Discharging

The battery supports a maximum continuous discharge current of 100A and a peak discharge current of 120A (for 5 seconds). The BMS will protect the battery from over-discharge. The maximum power support is 1280W.

6.3. Operating Temperature

The battery is designed to operate effectively in a wide temperature range. For optimal performance, avoid prolonged operation at extreme temperatures. The BMS includes high and low temperature protection to prevent damage.

7. MAINTENANCE

- **Regular Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean terminals as needed.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% State of Charge (SOC) and stored in a cool, dry place. Batteries must be stored upright.
- **Cleaning:** Clean the battery casing with a dry, soft cloth. Do not use solvents or abrasive cleaners.

8. TROUBLESHOOTING

- **Battery Not Charging:** Verify the charger is compatible with LiFePO4 batteries and properly connected. Check for blown fuses or tripped circuit breakers in your system.
- **No Power Output:** Ensure terminals are securely connected. Check if the BMS has activated a protection mode (e.g., due to over-discharge, overcurrent, or temperature). Disconnect the load and allow the battery to rest or charge to reset the BMS.
- **Unusual Heat:** Disconnect the battery immediately and allow it to cool. Check for short circuits or excessive load. Contact customer support if the issue persists.

9. SPECIFICATIONS

Specification	Value
Brand	MFUZOP
Model	MFU12V100AH
Nominal Voltage	12.8 Volts (DC)
Capacity	100Ah
Battery Cell Composition	Lithium-Phosphate (LiFePO4)
Built-in BMS	100A
Max Continuous Discharge Current	100A
Peak Discharge Current	120A (5 seconds)
Max Charge Current	50A
Recommended Charge Voltage	14.4V-14.6V
Cycle Life	8000+ cycles (100% DOD)
Lifespan	10 years
Item Weight	50 pounds (approx. 22.68 kg)
Product Dimensions	19.29 x 8.66 x 10.24 inches (approx. 49 x 22 x 26 cm)
Terminal Type	M8 Terminal Bolts

Terminal Specifications: **M8** Terminal Bolts

PRODUCT SIZE

L*H*W: 33*17*21.5cm
13*6.69*8.46in



Figure 4: MFUZOP 12V 100Ah LiFePO4 Battery Dimensions

10. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding your MFUZOP 12V 100Ah LiFePO4 battery, please refer to the contact information provided with your purchase or visit the official MFUZOP website. Keep your purchase receipt as proof of purchase for warranty claims.