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Mehrpow 48V 100Ah Lithium Battery Golf Cart

Mehrpow 48V 100Ah Lithium Battery Golf Cart Kit User Manual

Model: 48V 100Ah Lithium Battery Golf Cart

1. Introduction

This manual provides essential information for the safe and efficient use of your Mehrpow 48V 100Ah Lithium Iron Phosphate (LiFePO4) Battery Golf Cart Kit. This kit is designed for various 48V applications, including golf carts, RVs, solar systems, and off-grid equipment, offering a long cycle life and robust performance.

Image: Overview of the Mehrpow 48V 100Ah LiFePO4 battery highlighting its 10,000+ deep cycles, 5.12 kWh usable energy, 200A built-in BMS, 2C rate Grade A cells, and 10.24kW maximum continuous load power.

The Mehrpow 48V 100Ah LiFePO4 battery offers over 10,000 deep cycles at 80% Depth of Discharge (DOD), significantly outlasting traditional AGM batteries. It features 16 EVE Grade A cells with UL certification and a smart 200A Battery Management System (BMS) for comprehensive protection.

Your browser does not support the video tag.

Video: An overview of the Mehrpow 48V Lithium Battery Golf Cart Kit, showcasing its components and features.

2. Package Contents

Verify that all items listed below are included in your package:

- 1 x 48V 100Ah LiFePO4 Battery
- 1 x 58.4V 18A LiFePO4 Battery Charger & Cable
- 1 x 3.94-inch Bluetooth LCD Touch Screen & Cable
- 2 x Battery Mounting Straps (606-foot each)
- 1 x Product Manual (User Guide)
- Other accessories: Charger AC IN cable, Charger AC OUT cable, Screws



Image: A visual representation of all components included in the Mehrpow 48V 100Ah Lithium Battery Golf Cart Kit, such as the battery, charger, LCD display, mounting straps, and cables.

3. Safety Guidelines

The Mehrpow 48V 100Ah LiFePO4 battery is equipped with a smart 200A Battery Management System (BMS) to ensure safe operation. Adhere to the following safety guidelines:

- **Overcharge Protection:** The BMS prevents the battery from being charged beyond its safe voltage limit.
- **Over-discharge Protection:** The BMS protects the battery from discharging below its minimum safe voltage, preserving battery life.
- **Overcurrent Protection:** Safeguards against excessive current draw during operation.
- **Short Circuit Protection:** Automatically disconnects the battery in case of a short circuit.
- **High/Low Temperature Protection:** Operates safely within a temperature range of -4°F to 158°F (-20°C to 70°C) for discharge and 32°F to 113°F (0°C to 45°C) for charging.
- Do not connect LiFePO4 batteries in series, as this can cause irreversible damage.
- Ensure proper ventilation during charging and operation.
- Always use the provided Mehrpow charger or a compatible LiFePO4 charger with the correct voltage and current specifications.



Image: A detailed diagram of the built-in 200A BMS, highlighting its comprehensive protection features including overcharge, overcurrent,

short circuit, over-discharge, and temperature management.

4. Installation

The Mehrpow 48V 100Ah LiFePO4 battery is designed for easy, plug-and-play installation. Before installation, ensure your golf cart's voltage is compatible and verify the battery compartment dimensions.

4.1 Battery Placement

- The compact size (20.47 × 10.51 × 8.6 inches) and lighter weight (82.89 lbs) allow for flexible installation, even in small spaces.
- Secure the battery using the provided mounting straps to prevent movement during operation.



Image: Illustration of the Mehrpow LiFePO4 battery as a drop-in replacement for golf carts, emphasizing its smaller size, lighter weight, and ease of installation compared to traditional lead-acid batteries.

4.2 Wiring Connections

- Connect the battery terminals to your golf cart's electrical system. Ensure correct polarity (positive to positive, negative to negative).
- When connecting multiple cables to a single terminal, stack them from largest to smallest, with the largest cable closest to the battery terminal.
- Tighten all connections securely to prevent loose contacts and potential arcing.

Your browser does not support the video tag.

Video: A step-by-step guide on installing the Mehrpow 48V lithium battery in a golf cart, including terminal connections and securing the battery.

5. Operation

5.1 Charging the Battery

Use the included 58.4V 18A LiFePO4 battery charger. A full charge typically takes about 5 hours.

- Connect the charger to the battery's charging port.
- Plug the charger into a suitable AC power outlet.
- Monitor the charger's indicator lights:
    - **Always on Green:** Battery fully charged.
    - **Slow Green Flashing:** Constant Current within limited voltage.
    - **Fast Red Flashing:** Pre-charge stage.
    - **Slow Red Flashing:** Fasting Charge stage.
- Disconnect the charger once the battery is fully charged.



Image: The Mehrpow 58.4V 18A charger connected to the battery in a golf cart, illustrating the charging process.



Image: Details of the charger, showing its built-in fan cooling function and the meaning of its battery indication lights (green for full, flashing green for constant current, red for pre-charge, flashing red for fast charge).

5.2 Monitoring Battery Status (LCD & Mobile App)

The kit includes a 3.94-inch Bluetooth LCD Touch Screen and a mobile app for real-time battery monitoring. Note that the LCD monitor and mobile app cannot be used simultaneously as both connect via Bluetooth.

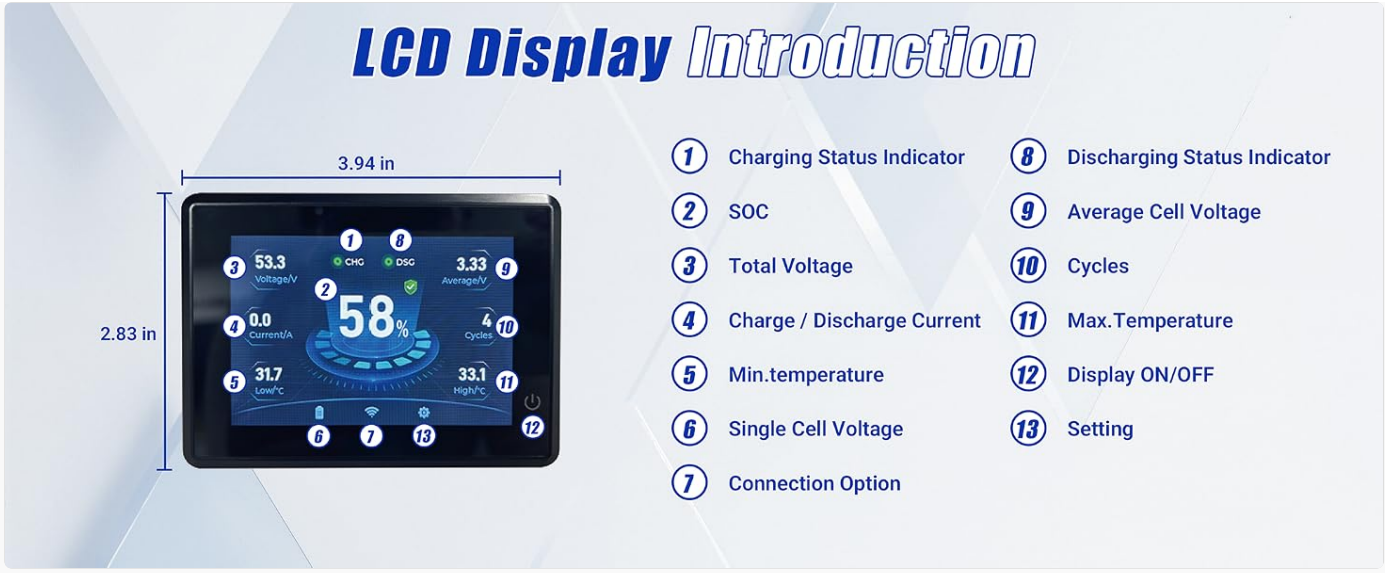


Image: Demonstrates the two methods for monitoring battery status: via the included LCD touchscreen display and through the dedicated mobile application, both providing real-time data.

LCD Touch Screen

The LCD screen displays critical information such as voltage, temperature, and State of Charge (SOC%).



Image: An introduction to the LCD display, detailing its various indicators including charging/discharging status, SOC, total voltage, current, temperature, cell voltage, cycle count, and display controls.

Mobile App

Download the Bluetooth 5.0 mobile app to monitor battery status from your smartphone.

6. Maintenance and Storage

- **Regular Charging:** It is recommended to recharge the battery when its capacity reaches approximately 15-20% to maximize cycle life and prevent low voltage protection activation.
- **Charger Output:** Ensure your charger provides an output of 56.8V-58.4V DC.
- **Temperature Considerations:** When temperatures are low (below 32°F / 0°C), battery charging and discharging efficiency may decrease. Charging should ideally occur above 32°F (0°C).
- **Long-Term Storage:** If the battery will not be used for an extended period, turn off the LCD screen to prevent inaccurate SOC readings and conserve power. Store the battery in a cool, dry place.

- **Cleaning:** Keep battery terminals clean and free from corrosion.



Image: Important notes for LiFePO4 battery usage, including recommended recharge levels, charger specifications, peak discharge capabilities, and recovery from over-discharge.

7. Troubleshooting

- **Battery Not Charging:**
  - Check all cable connections between the charger and the battery, and the charger and the power outlet.
  - Ensure the charger's indicator lights are functioning as described in the Operation section.
  - Verify that the ambient temperature is above 32°F (0°C) for charging.
- **Battery Not Providing Power:**
  - Check battery terminals for secure connections.
  - Monitor the battery's SOC via the LCD or app; recharge if the capacity is low.

- If the battery has entered low voltage protection, recharge it immediately. Over-discharged batteries can often be restored to normal function with proper charging.

- **Inaccurate SOC Reading:** If the battery has been stored for a long time with the screen on, turn off the screen and restart to get an accurate reading.

8. Specifications

Feature	Specification
Brand	Mehrpow
Model Number	48V 100Ah Lithium Battery Golf Cart
Battery Cell Composition	Lithium Iron Phosphate (LiFePO4)
Battery Capacity	100 Ah
Nominal Voltage	48V (51.2V)
Usable Energy	5.12 kWh
Max. Continuous Load Power	10.24 kW
BMS	Built-in 200A Smart BMS
Peak Discharge Current	1000A (3-5 seconds), 600A (30 seconds), 300A (58 seconds)
Cycle Life	10,000+ cycles at 80% DOD
Operating Temperature Range (Discharge)	-4°F to 158°F (-20°C to 70°C)
Operating Temperature Range (Charge)	32°F to 113°F (0°C to 45°C)
Protection Level	IP65
Item Dimensions (L x W x H)	20.47 x 10.51 x 8.6 inches
Item Weight	82.89 pounds (approx. 37.6 kg)
Charger Output	58.4V 18A
Charging Time	Approx. 5 hours (to full charge)



Image: The Mehrpow 48V 100Ah LiFePO4 battery displaying its physical dimensions (20.47 x 10.58 x 8.66 inches) and weight (82.8 lbs), along with the size of the LCD touch screen and terminal bolts.

9. Warranty and Support

The Mehrpow 48V 100Ah Lithium Battery Golf Cart Kit comes with a**5-year warranty** covering non-human fault issues. Mehrpow is committed to providing excellent after-sales support.

- **Technical Support:** Professional technical assistance is available.
- **Customer Service:** Online customer service is available to respond quickly within 7 days x 16 hours.
- For any product-related issues or questions, please contact the Mehrpow support team directly.

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