

LiTime 12V200Ah

LiTime 12V 200Ah LiFePO4 Lithium Battery User Manual

Model: 12V200Ah

Brand: LiTime

INTRODUCTION

This manual provides essential information for the safe and efficient use of your LiTime 12V 200Ah LiFePO4 Lithium Battery. This battery is designed for energy storage purposes in applications such as RVs, solar energy systems, marine vessels, and off-grid setups. It is not intended for use as starting batteries, golf cart batteries, or jacks.

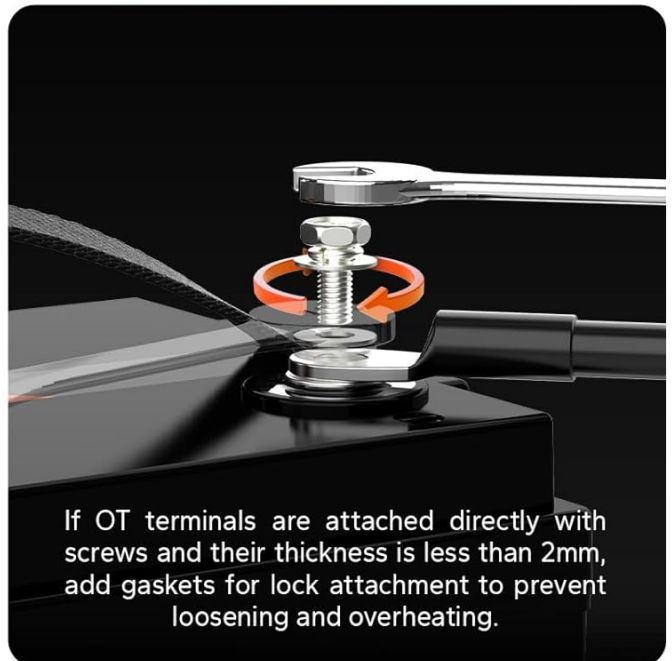


A black LiTime 12V 200Ah LiFePO4 battery with red and orange branding, featuring positive and negative terminals on top.

SAFETY INFORMATION

WARNING: Risk of Fire, Explosion or Burns.

- DO NOT Short circuit.
- DO NOT Reverse connections from charger to battery.
- DO NOT Disassemble.
- DO NOT Throw into fire or incinerate.
- DO NOT Heat above 70°C (158°F).
- Always wear insulating gloves when handling batteries and making connections.



This image illustrates critical safety warnings: Do not use the battery for golf carts, and do not use it as a starting battery for vehicles. It also shows the importance of proper terminal connection and adding gaskets if terminals are attached directly with screws and their thickness is less than 2mm to prevent loosening and overheating.

PRODUCT OVERVIEW

Key Features

- **Automotive Grade LiFePO4 Cells:** Higher energy density, stable performance, and greater power.
- **Built-in 100A BMS (Battery Management System):** Protects against overcharge, over-discharge, over-current, short circuit, and high-temp cut-off (above 75°C / 167°F).
- **Long Lifespan:** 4000+ cycles at 100% Depth of Discharge (DOD), up to 15000 cycles at 60% DOD. Expected 10-year service life.
- **Lightweight:** Approximately 45.85 lbs, about 1/3 the weight of comparable lead-acid batteries.
- **High Efficiency:** Flat discharge curve holds above 12.8V for up to 95% of its capacity usage.
- **IP65 Waterproof Rating:** Suitable for indoor or outdoor installation.

Protected By **Versatile BMS**
4000 to 15000 cycles (100% DOD)



over-charge



over
-discharge



short-
circuits



high-temp
cut-off



over
-current

A visual representation of the battery's internal Battery Management System (BMS), highlighting its protective functions against common electrical issues like over-charging, over-discharging, short circuits, high temperature cut-off, and over-current.

LiTime LiFePO4 Battery



12V 200Ah AGM



48.28lbs



137 lbs



100A BMS

No BMS



100% @DOD

50~60% @DOD 1C



4000+ Cycles

300~500 Cycles



10 Years Lifespan

3 Years Lifespan



Eco-friendly

Toxic

This image provides a direct comparison between LiTime LiFePO4 batteries and traditional AGM batteries, showcasing the superior performance of LiFePO4 in terms of weight, integrated BMS, depth of discharge, cycle life, overall lifespan, and environmental impact.

SETUP

Pre-Connection Requirements

Before connecting batteries in series or parallel, ensure all batteries meet the following conditions:

- **Identical Battery Specifications:** All batteries must be of the same battery type, capacity (Ah), voltage (V), and have the same BMS.
- **Identical Brand:** All batteries must be from the same brand (e.g., LiTime).
- **Recent Purchase:** Batteries should be purchased within one month of each other.
- **Fully Charged & Balanced:** Each battery must be fully charged separately and balanced before being used in a system to maintain constant voltage.

An instructional video from Li Time US demonstrating the prerequisites for connecting batteries in series or parallel, emphasizing the importance of identical specifications, brand, recent purchase, and full charge/balance.

Wire Thickness Guidance

The size of the PVC wire required must meet the requirements of the entire battery system. Refer to the user manual provided with your battery for recommended cable sizing charts.

A short video from Li Time US providing an overview of the 12V 200Ah LiFePO4 battery, including visual cues for wire thickness.

Parallel Connection

Parallel connections increase the battery capacity and amperage while maintaining the same voltage. For parallel connections, using copper bus bars is recommended to balance input and output currents and protect terminals from overheating.

Steps for Parallel Connection:

1. Wear insulating gloves throughout the process.
2. Connect the negative terminals of all batteries to a negative copper bus bar.
3. Connect the positive terminals of all batteries to a positive copper bus bar.
4. Use a torque wrench to tighten all bolts to between 12 to 14 N·m.
5. For systems with more than four batteries in parallel, contact LiTime customer service for specialized guidance.

SIMPLIFIED WIRING



✓ Lower internal resistance

✓ Reduced battery connections

✓ Smaller footprint

✓ More convenient and economical



This diagram illustrates a simplified parallel wiring setup for two LiTime 12V 100Ah batteries, emphasizing the use of bus bars for lower internal resistance, reduced battery connections, and a more convenient and economical setup.

Series Connection

Series connections increase the overall voltage of the battery system while maintaining the same amperage. It is recommended to use a battery balancer for series connections to ensure proper voltage distribution.

Steps for Series Connection:

1. Wear insulating gloves throughout the process.
2. Connect the negative terminal of one battery to the positive terminal of the next battery in the series.
3. Use a torque wrench to tighten all bolts to between 12 to 14 N·m.
4. Connect the negative cable of the balancer to the negative terminal of the first battery in the series.
5. Connect the positive cable of the balancer to the positive terminal of the last battery in the series.
6. The total voltage of the entire battery system should not exceed 51.2V.

OPERATING

General Usage

The LiTime 12V 200Ah LiFePO4 battery offers a flat discharge curve, maintaining voltage above 12.8V for up to 95% of its capacity. This provides consistent power for your appliances.



This image illustrates the significant energy capacity of the LiTime 12V 200Ah battery (2560Wh), demonstrating its ability to power common appliances like a TV, electric kettle, fan, and refrigerator for extended periods, making it suitable for outdoor camping and off-grid applications.

MAINTENANCE

Charging

Always use a compatible LiFePO4 charger. When connecting the charger, ensure the power indicator turns from green to red, indicating active charging.

Long-Term Storage

For long-term storage, it is recommended to store the battery between 10°C to 35°C (50°F to 95°F) at a 50% charge level. Recharge the battery every three months to maintain its health.

TROUBLESHOOTING

Common Issues

- **Battery in Sleep Mode:** If the battery arrives in sleep mode or enters it due to low voltage, it may require a lithium charger with a "wake" feature to reactivate.
- **Charging Below Freezing:** The built-in BMS includes a high-temp cut-off to prevent charging over 167°F (75°C). However, charging below 32°F (0°C) can damage LiFePO4 batteries without low-temperature protection. Ensure your battery has this feature or charge in warmer conditions.
- **Voltage Drop Under Load:** A slight voltage drop is normal under load. For accurate capacity readings, check the voltage with loads removed.
- **Wiring Issues:** Incorrect wiring (e.g., mixing different battery types/brands in series/parallel, loose connections) can lead to performance issues or damage. Always follow the connection guidelines carefully.

SPECIFICATIONS

LiTime 12V 200Ah LiFePO4 Battery

Attribute	Value
Brand	LiTime
Model	12V200Ah
Item Weight	45.8 pounds
Product Dimensions	21 x 8.2 x 8.5 inches
Amperage	100 Amps (BMS)
Number Of Cells	8
Terminal Type	M8
Energy Capacity	2560Wh
Max Load Power	1280W

Cycle Life	4000+ cycles (100% DOD)
Lifespan	10 Years
Waterproof Rating	IP65

WARRANTY & SUPPORT

Warranty Information

LiTime LiFePO4 batteries typically come with a 5-year service warranty. Please refer to your purchase documentation for specific warranty terms.

Customer Support

For professional technical support or any product-related issues, please contact LiTime support team directly. Fast feedback is typically provided within 24 hours.

Email: service@litime.com



24-Hour Prompt Response 5-Year Service