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## Litime 12V 100Ah Trolling Motor

# Litime 12V 100Ah TM LiFePO4 Battery User Manual

MODEL: 12V 100AH TROLLING MOTOR

Brand: Litime

## 1. INTRODUCTION AND OVERVIEW

The Litime 12V 100Ah TM LiFePO4 battery is engineered for robust performance in various applications, particularly trolling motors, marine vessels, RVs, and home energy storage systems. It features advanced safety and efficiency enhancements over traditional lead-acid batteries.

### Key Features:

- Extra Triple Protection BMS & Low Temp Cut-off:** Optimized for trolling motor users, the built-in Battery Management System (BMS) provides comprehensive protection against overcharging, over-discharging, over-current, overheating, and short circuits. It also includes a low-temperature cut-off function for safe operation in cold environments. The BMS is designed with triple protection against dust, water, and salt spray, making it suitable for harsh conditions.
- Marine Batteries Specially Designed for Trolling Motor:** As an official ABYC member, Litime integrates an advanced built-in TVS for superior protection against voltage spikes and surges, ensuring stability and protection for both the battery and motor in rough waters. Ideal for trolling motors (30-70 lb thrust), yachts, marine applications, boats, RVs, vans, motorhomes, home energy, solar power storage, and off-grid systems.
- Perfect Replacement for Lead-acid Batteries:** Utilizing Grade A LiFePO4 cells, this battery offers exceptional quality, higher energy density, and greater power. UL testing certifies its high safety standards. With an impressive 10-year lifespan and 4000+ cycles at 100% Depth of Discharge (DOD), it significantly outperforms lead-acid batteries (typically 3 years, 200-500 cycles).
- Auto Overload Protection & Recovery:** The battery features automatic overload recognition, protection, and recovery, eliminating the need for manual intervention in case of an overload. It self-protects and resumes normal operation.
- Expandable for Wide Applications:** The 12V 100Ah TM LiFePO4 battery can be expanded up to 4 in series and 4 in parallel (Max 4S4P), allowing for systems up to 48V 400Ah, providing a maximum of 20.48kWh energy and 20.48kW load power.

## 2. SETUP AND INSTALLATION

### What's in the Box:

- 1 \* 12V 100Ah TM LiFePO4 Battery
- 2 \* M8 - 5/8" (16MM) Terminal Bolts
- 2 \* Insulating Caps for Bolts
- 1 \* Product Manual



Image: Contents of the LiTime 12V 100Ah TM LiFePO4 Battery box.

### Physical Dimensions:

The LiTime 12V 100Ah TM battery is a Group 31 size, with dimensions of approximately 13 inches (L) x 6.77 inches (W) x 8.43 inches (H). It weighs approximately 22 pounds.

# DIMENSIONS



## Size

L13\*W6.77\*H8.43 in

## M8 bolts

16mm(5/8 inch)\*8mm(5/16 inch)

Image: Detailed dimensions of the LiTime 12V 100Ah TM LiFePO4 Battery.

## Connection Guidelines:

The battery supports connections up to 4 in series and 4 in parallel (Max 4S4P) to achieve higher voltage or capacity systems. Ensure all connections are secure and use appropriate gauge wiring for your application. When connecting multiple batteries, it is crucial to balance them. For parallel connections, wiring all positives to a positive busbar and all negatives to a negative busbar using identical length wires is recommended to maintain balance during charging and discharging.

Video: Guideline Notes on Battery Series and Battery Parallel connections. This video provides visual instructions for proper battery configuration.

## 3. OPERATING INSTRUCTIONS

### Charging and Discharging:

Always use a LiFePO4 compatible charger. The battery is designed for deep cycle applications and can be

discharged down to 20% of its capacity without damage, unlike lead-acid batteries which are typically limited to 50% discharge. The battery maintains a very flat voltage curve, staying around 13V until it reaches approximately 25% capacity, then dropping rapidly. Monitor voltage carefully; a reading of 12.8V at rest indicates the battery is near depletion and requires immediate charging.

### Low-Temperature Protection:

The integrated low-temperature cut-off function prevents charging when the battery temperature is below 32°F (0°C) and prevents discharging when the temperature is below -4°F (-20°C). Charging automatically resumes above 41°F (5°C).

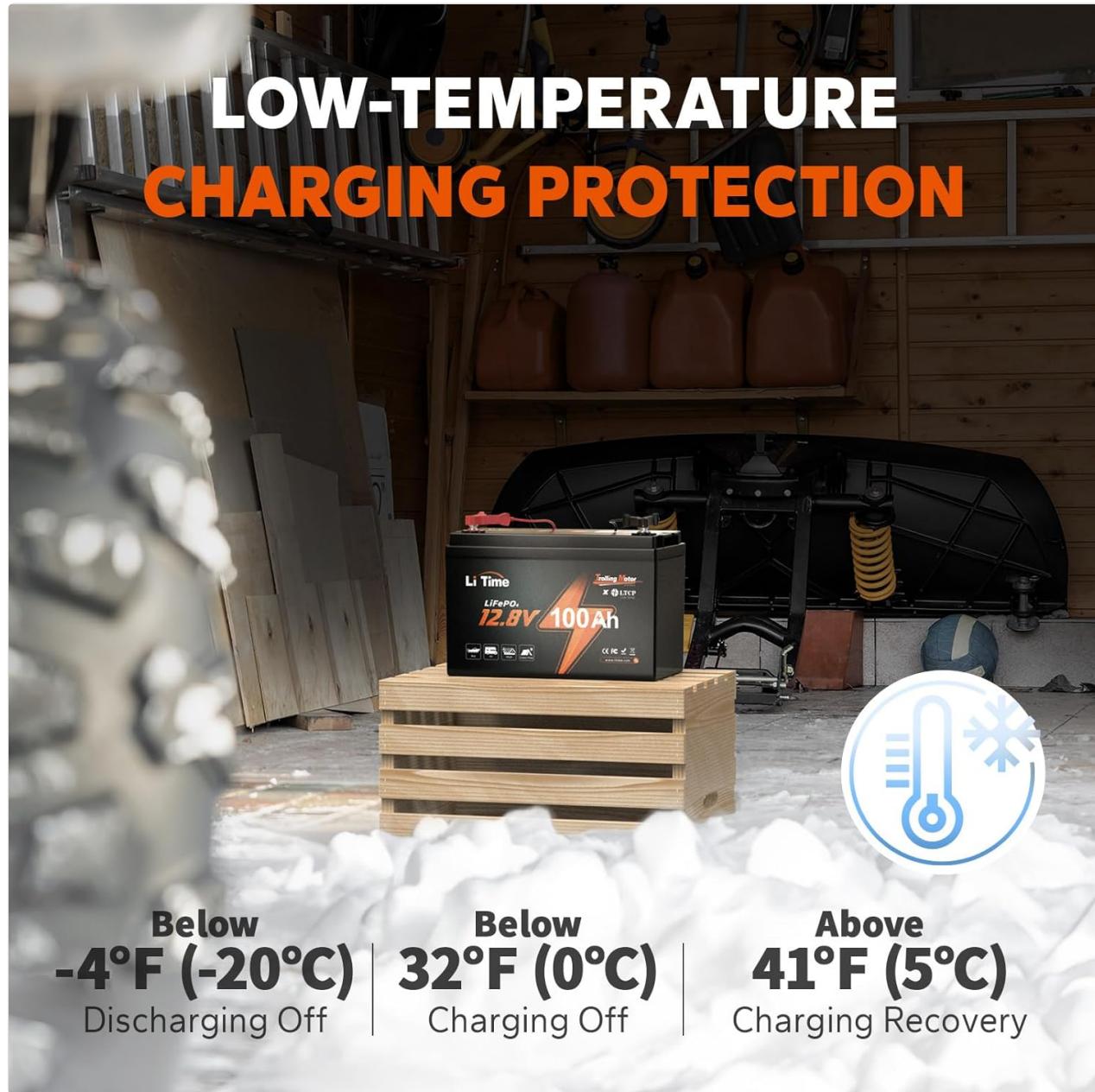


Image: Low-temperature charging and discharging protection details.

## 4. MAINTENANCE

LiFePO4 batteries require minimal maintenance compared to lead-acid batteries. Keep the battery terminals clean and free of corrosion. Ensure connections are tight. Store the battery in a cool, dry place away from direct sunlight and extreme temperatures. For long-term storage, it is recommended to store the battery at

approximately 50% State of Charge (SOC).

## 5. TROUBLESHOOTING

### Automatic Overload Protection and Recovery:

If the battery experiences an overload, the BMS will automatically shut down to protect the cells. The battery will self-recover and resume normal operation once the overload condition is removed. This feature prevents damage and ensures longevity.

### Battery Not Turning On/Waking Up:

Upon initial delivery or after prolonged storage, the battery may be in a sleep mode. It requires a sufficient voltage input from a compatible LiFePO4 charger to wake up. Ensure your charger provides adequate voltage to initiate the charging process.

### Voltage Readings and Capacity:

Due to the flat discharge curve of LiFePO4 batteries, a multimeter is essential for accurate capacity assessment. Check the voltage with loads removed (at rest) for the most accurate reading. The voltage drop is minimal until the battery is nearly depleted. For example, if your system reads 12.8V at rest, it's time to recharge.

## 6. SPECIFICATIONS

Specification	Value
Brand	Litime
Model Number	L12V100-100-TM
Item Weight	22 pounds
Product Dimensions	6.77 x 13 x 8.43 inches
Country of Origin	China
Batteries Required	4 Lithium Ion batteries (internal)
Amperage	100 Amps
Number Of Cells	4
First Available Date	August 14, 2023

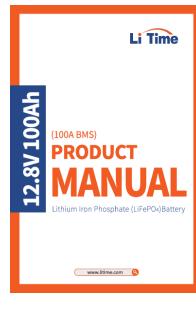
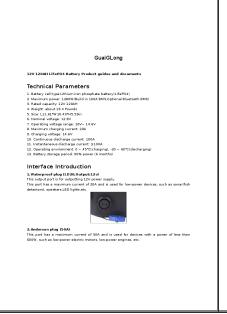
## 7. WARRANTY AND SUPPORT

LiTime LiFePO4 batteries come with a **5-year warranty**. We are committed to providing excellent customer service and technical support. If you encounter any product-related issues or have questions, please do not hesitate to contact us directly. Our support team aims to provide fast feedback within 24 hours.

Image: LiTime's commitment to 5-year warranty and prompt customer support.

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### Related Documents - 12V 100Ah Trolling Motor

	<p><a href="#">GuaiGLong 24V 100AH LiFePO4 Battery: Technical Specifications and Interface Guide</a></p> <p>Comprehensive guide to the GuaiGLong 24V 100AH LiFePO4 battery. Details technical specifications including cell type, power, capacity, voltage, and operating environment. Introduces various interface ports like LD20, Anderson, M8 terminals, GX20 charging port, USB/PD, and the display screen. Suitable for RVs, boats, solar systems, and more.</p>
	<p><a href="#">Li Time 12.8V 230Ah LiFePO4 Battery Manual with Low-Temperature Protection (LTCP)</a></p> <p>Comprehensive product manual for the Li Time 12.8V 230Ah LiFePO4 battery, detailing specifications, features like Low-Temperature Charge Protection (LTCP), connection guides, and troubleshooting steps.</p>
	<p><a href="#">Li Time 12.8V 100Ah LiFePO4 Battery Product Manual - Specifications and Usage</a></p> <p>Comprehensive product manual for the Li Time 12.8V 100Ah LiFePO4 battery. Includes specifications, operating parameters, capacity estimation, series/parallel connection guidelines, and troubleshooting tips.</p>
	<p><a href="#">GuaiGLong 12V 120AH LiFePO4 Battery Technical Specifications and Interface Guide</a></p> <p>Detailed technical parameters and interface introduction for the GuaiGLong 12V 120AH LiFePO4 Battery, including specifications on cell type, capacity, voltage, discharge current, operating environment, and port descriptions.</p>

	<p><a href="#"><u>Li Time 12.8V 100Ah Mini LiFePO4 Battery Manual</u></a></p> <p>Official product manual for the Li Time 12.8V 100Ah Mini LiFePO4 deep cycle battery with 100A BMS. Includes specifications, connection guides, and troubleshooting.</p>
	<p><a href="#"><u>Li Time 12.8V 100Ah Group 24 LiFePO4 Battery Product Manual   Specifications &amp; Guide</u></a></p> <p>Comprehensive product manual for the Li Time 12.8V 100Ah Group 24 Lithium Iron Phosphate (LiFePO4) battery. Includes specifications, operating parameters, connection guides, and troubleshooting steps.</p>