

E-LekTech 12V 660Ah

E-LekTech 12V 660Ah LiFePO4 Lithium Battery Instruction Manual

Model: 12V 660Ah

1. INTRODUCTION

Thank you for choosing the E-LekTech 12V 660Ah LiFePO4 Lithium Battery. This battery is designed for high-performance energy storage, offering exceptional cycle life and reliability for various applications. It features advanced Grade A cells and an intelligent Battery Management System (BMS) to ensure safe and efficient operation.

This manual provides essential information for the safe and effective use, installation, and maintenance of your E-LekTech LiFePO4 battery. Please read it thoroughly before operation.

2. SAFETY INFORMATION

Always prioritize safety when handling batteries. Failure to follow these instructions may result in serious injury or damage to the battery and connected equipment.

- Do not short-circuit the battery terminals.
- Do not expose the battery to fire, extreme heat, or direct sunlight for prolonged periods.
- Do not immerse the battery in water or other liquids.
- Do not disassemble, puncture, or modify the battery.
- Use only compatible chargers designed for LiFePO4 batteries.
- Ensure proper ventilation during charging and discharging.
- Keep out of reach of children.
- Wear appropriate personal protective equipment (PPE) such as gloves and eye protection when

handling.

The built-in 300A BMS provides protection against overcharge, over-discharge, over-current, and over-temperature. However, it is crucial to operate the battery within its specified limits.

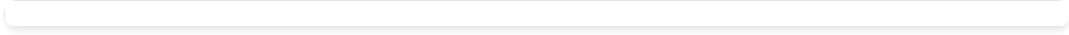


Figure 2.1: E-LekTech 12V 660Ah LiFePO4 Battery highlighting Grade A cells and 300A BMS protection features including over current, over-discharge, over voltage, short circuit, overcharge, overheating, and low temperature cutoff protection.

3. PRODUCT FEATURES

- **Upgraded Cells & 300A BMS:** Utilizes Grade A cells and a 300A Intelligent Battery Management System (BMS) for comprehensive protection against overcharge, over-discharge, over-current, and over-temperature. Maximum continuous discharge current is 300A, and maximum load power is 3840W.
- **Lightweight and Portable:** Weighs 104-110 pounds, approximately 1/3 the weight of a lead-acid battery of similar capacity, facilitating easier handling and installation. Dimensions: 24.03"D x 9.66"W x 8.7"H.
- **Large Capacity and Long Life:** Offers 8.44kWh of energy with a low self-discharge rate. Provides over 8,000 cycles and a lifespan of up to 10 years, outperforming traditional lead-acid batteries.
- **Easy Capacity Expansion:** Supports up to 6 series and 6 parallel connections for increased capacity and higher voltage, suitable for off-grid solar systems, RVs, golf carts, camping, and home backup power.




Figure 3.1: Terminal specifications for the E-LekTech 12V 660Ah LiFePO4 Battery, showing M8 terminals and overall dimensions.

4. SETUP AND INSTALLATION

4.1 Unpacking

Carefully remove the battery from its packaging. Inspect for any signs of damage during transit. The package includes one 12V 660Ah LiFePO4 Battery.

4.2 Connection

Connect the battery to your system using appropriate M8 terminals and cables. Ensure all connections are secure and correctly polarized (positive to positive, negative to negative).

4.3 Capacity Expansion (Series/Parallel)

The battery supports expansion up to 6 units in series and 6 units in parallel. When connecting batteries in series or parallel, ensure all batteries are fully charged separately to achieve a voltage balance state before making connections. Use batteries of the same model and capacity, purchased around the same time (within one month) for optimal performance and longevity.

Figure 4.1: Illustration of series and parallel connection configurations for expanding battery capacity and voltage.

5. OPERATING INSTRUCTIONS

5.1 Charging

Use a dedicated LiFePO4 battery charger with appropriate voltage and current settings. Avoid overcharging or undercharging the battery, as this can reduce its lifespan.

5.2 Discharging

The battery can deliver a maximum continuous discharge current of 300A and a maximum load power of 3840W. Ensure your connected loads do not exceed these limits to prevent damage to the battery and BMS.

5.3 Smart App Monitoring

Monitor your battery's status, including voltage, current, temperature, and state of charge, using the dedicated smart app. Refer to the app's instructions for pairing and usage.

Figure 5.1: The E-LekTech smart app allows for real-time monitoring and control of battery parameters.

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Video 5.1: An overview of the E-LekTech LiFePO4 Lithium Battery, showcasing its features and applications.

6. 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 away from direct sunlight.
- **Temperature:** Operate the battery within its recommended temperature range to maximize lifespan and performance.

7. TROUBLESHOOTING

If you encounter issues with your E-LekTech LiFePO4 battery, consider the following common troubleshooting steps:

- **No Power Output:** Check all connections for tightness and proper polarity. Verify the battery's state of charge using the smart app or a voltmeter. The BMS may have activated a protection mode (e.g., over-discharge); try connecting to a charger.
- **Battery Not Charging:** Ensure the charger is compatible with LiFePO4 batteries and is functioning correctly. Check charger connections. The BMS may prevent charging if the temperature is too low or high, or if there's an over-voltage condition.
- **Reduced Performance:** This could indicate an aging battery, improper charging/discharging habits, or operation outside recommended temperature ranges. Review your usage patterns and ensure optimal conditions.

For persistent issues, refer to the warranty and support section for contact information.

8. SPECIFICATIONS

Specification	Value
Brand	E-LekTech
Model	12V 660Ah
Battery Capacity	660 Amp Hours
Voltage	12 Volts
Battery Cell Composition	Lithium Ion (LiFePO4)
Usable Energy	8.44 kWh
Built-in BMS	300A
Max. Continuous Discharge Current	300A
Max. Load Power	3840W
Product Dimensions (D x W x H)	24.03" x 9.66" x 8.7"
Item Weight	104 pounds
Number Of Cells	4
Terminal Type	M8 Terminal
Cycle Life	Up to 8,000 cycles
Lifespan	Up to 10 years
Automotive Fit Type	Universal Fit
Vehicle Service Type	RV

9. WARRANTY AND SUPPORT

E-LekTech offers a **five-year warranty** on this battery. If you encounter any problems during use, please contact our customer support team. We are committed to helping you analyze and resolve issues within 24 hours and provide guidance on optimal usage.

For quality-related problems, we offer free return and exchange services.

Contact Information: Please refer to your purchase documentation or the official E-LekTech website for the most current support contact details.