

HumsiENK HS24V200AH250PLUS

HumsiENK 24V 200AH LiFePO4 Battery Plus User Manual

Model: HS24V200AH250PLUS

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1. INTRODUCTION

Thank you for choosing the HumsiENK 24V 200AH LiFePO4 Battery Plus. This manual provides essential information for the safe and efficient use of your battery. Please read it thoroughly before installation and operation, and retain it for future reference.

1.1 Safety Information

- Always wear appropriate personal protective equipment (PPE), including safety glasses and insulated gloves, when handling batteries.
- Do not short-circuit the battery terminals. This can cause severe damage to the battery and pose a fire hazard.
- Do not expose the battery to fire, excessive heat, or direct sunlight for prolonged periods.
- Do not immerse the battery in water or other liquids.
- Ensure proper ventilation during charging and discharging to prevent heat buildup.
- Use only compatible chargers designed for LiFePO4 batteries.
- Keep the battery away from children and pets.
- In case of damage or leakage, avoid contact with the electrolyte and seek professional assistance.

2. PRODUCT OVERVIEW

The HumsiENK 24V 200AH LiFePO4 Battery Plus is a high-performance, deep-cycle lithium iron phosphate battery designed for various applications, including RVs, solar energy storage, and marine systems. It features an advanced

250A Battery Management System (BMS) for optimal safety and longevity.

2.1 Key Features

- **Long Cycle Life:** Provides extended operational life compared to traditional lead-acid batteries.
- **Integrated 250A BMS:** Protects against overcharge, over-discharge, over-current, short-circuit, and high/low temperature.
- **Lightweight Design:** Easier to handle and install.
- **High Energy Density:** Delivers consistent power output.
- **Wide Operating Temperature Range:** Suitable for diverse environmental conditions.

2.2 Package Contents

- 1 x HumsienK 24V 200AH LiFePO4 Battery Plus
- User Manual (this document)



Figure 1: HumsienK 24V 200AH LiFePO4 Battery Plus. This image shows the main product, a rectangular battery unit with terminals on top.

3. SETUP

3.1 Unpacking and Inspection

Carefully remove the battery from its packaging. Inspect the battery for any signs of physical damage, such as cracks, dents, or terminal corrosion. If any damage is observed, do not proceed with installation and contact customer support immediately.

3.2 Installation Location

Choose a clean, dry, and well-ventilated location for installation. Ensure the battery is protected from direct sunlight, extreme temperatures, and moisture. The battery should be secured to prevent movement during operation.

3.3 Connecting the Battery

1. Ensure all power sources are disconnected before making any connections.
2. Identify the positive (+) and negative (-) terminals. The battery uses M8 bolt terminals.
3. Connect the positive cable to the positive terminal and the negative cable to the negative terminal. Ensure connections are tight and secure to prevent arcing and overheating.
4. If connecting multiple batteries in parallel, ensure all batteries are at a similar state of charge before connecting. Consult a qualified technician for series connections, as this model is primarily designed for 24V systems.
5. Verify all connections are correct before applying power.

3.4 Initial Charging

It is recommended to fully charge the battery before its first use. Use a LiFePO4 compatible charger with a charging voltage appropriate for a 24V system. Refer to your charger's manual for specific instructions.

4. OPERATING INSTRUCTIONS

4.1 Normal Operation

The HumsiENK LiFePO4 battery is designed for deep-cycle applications. It can be discharged significantly without affecting its lifespan, unlike lead-acid batteries. The integrated BMS manages the battery's performance and protects it from various conditions.

4.2 Battery Management System (BMS)

The 250A BMS provides critical protection features:

- **Overcharge Protection:** Prevents the battery from being charged beyond its safe voltage limit.
- **Over-discharge Protection:** Stops discharge when the battery reaches its minimum safe voltage, preventing damage.
- **Over-current Protection:** Shuts off the battery if the discharge current exceeds the safe limit (250A).
- **Short-circuit Protection:** Automatically disconnects the battery in case of a short circuit.
- **Temperature Protection:** Monitors battery temperature and disconnects if it goes outside safe operating ranges.

If the BMS activates a protection mode, the battery may temporarily shut down. Disconnect the load or charger, wait

a few minutes, and then reconnect. If the issue persists, refer to the troubleshooting section.

5. MAINTENANCE

LiFePO₄ batteries require minimal maintenance compared to lead-acid batteries. However, following these guidelines will ensure optimal performance and longevity.

5.1 Cleaning

Keep the battery terminals and casing clean and free from dirt, dust, and corrosion. Use a dry cloth or a slightly damp cloth (ensure no moisture enters the terminals) to wipe the battery. Do not use harsh chemicals or abrasive cleaners.

5.2 Terminal Inspection

Periodically check the M8 bolt terminals for tightness and ensure there is no corrosion. Loose connections can lead to resistance, heat buildup, and reduced performance.

5.3 Storage

If storing the battery for an extended period:

- Charge the battery to approximately 50-70% of its capacity.
- Store in a cool, dry place, away from direct sunlight and extreme temperatures.
- Disconnect all loads and chargers.
- Periodically check the battery voltage during long-term storage (every 3-6 months) and recharge if necessary to prevent over-discharge.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your Humsienk LiFePO₄ battery. For problems not listed here, please contact customer support.

Problem	Possible Cause	Solution
Battery not charging	Charger not connected properly Charger incompatible with LiFePO ₄ BMS in protection mode (e.g., low temperature) Faulty charger or battery	Check all cable connections. Ensure charger is LiFePO ₄ compatible and set to correct voltage. Move battery to a warmer environment if ambient temperature is too low. Test charger with another battery or contact support.
No power output from battery	Battery fully discharged BMS in protection mode (e.g., over-discharge, over-current, short-circuit) Loose terminal connections	Recharge the battery. Disconnect load, wait a few minutes for BMS to reset, then reconnect. Reduce load if over-current was the cause. Tighten terminal connections.

Problem	Possible Cause	Solution
Battery gets unusually hot	Overloading the battery Poor ventilation Internal fault	Reduce the load on the battery. Ensure adequate airflow around the battery. Immediately disconnect the battery and contact support.

7. SPECIFICATIONS

Feature	Detail
Model Number	HS24V200AH250PLUS
Nominal Voltage	24V
Nominal Capacity	200AH
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Integrated BMS	250A
Terminal Type	M8 Bolt
Compatible Vehicle Type	RV (Universal Fit)
Manufacturer	HumsiENK

8. WARRANTY INFORMATION

The HumsiENK 24V 200AH LiFePO4 Battery Plus is covered by a **5-Year Manufacturer Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service conditions. The warranty does not cover damage resulting from:

- Improper installation or connection.
- Misuse, abuse, or neglect.
- Unauthorized modifications or repairs.
- Operating outside the specified environmental limits.
- Natural disasters or acts of God.

To make a warranty claim, please retain your proof of purchase and contact HumsiENK customer support with details of the issue.

9. CUSTOMER SUPPORT

If you have any questions, require technical assistance, or encounter issues not covered in this manual, please contact HumsiENK customer support. For the most up-to-date contact information, please visit the official HumsiENK website or refer to your purchase documentation.

When contacting support, please have your product model number (HS24V200AH250PLUS) and proof of purchase readily available.

