

HumsiENK HS12V100AH100-RV

HumsiENK 12V 100Ah LiFePO4 Battery User Manual

Model: HS12V100AH100-RV | Brand: HumsiENK

1. INTRODUCTION

Thank you for choosing the HumsiENK 12V 100Ah LiFePO4 Battery. This battery is designed for a wide range of applications, including RVs, solar energy systems, off-grid power solutions, and trolling motors. It offers an impressive 15,000+ deep cycles, providing a lifespan significantly longer than traditional lead-acid batteries. This manual provides essential information for the safe and efficient use of your battery.

2. IMPORTANT SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in serious injury or property damage.

- 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.
- Ensure proper ventilation when installing and operating the battery.
- Do not expose the battery to fire or extreme heat.
- Keep the battery away from children and pets.
- The built-in 100A Smart BMS (Battery Management System) provides multi-protection against over-discharge, over-charge, high temperature, short circuit, and overcurrent. It will automatically disconnect the battery if discharge current exceeds $300\pm 50A$ to ensure safety and prolong battery life.
- The battery features low temperature protection, automatically shutting down below $-4^{\circ}F$ ($-20^{\circ}C$) to prevent damage. Ensure charging occurs in environments above $32^{\circ}F$ ($0^{\circ}C$).
- Use only compatible lithium iron phosphate chargers for charging.

Built-in 100A BMS



Overcurrent
Protection



Overheat
Protection



Short Circuit
Protection



Overvoltage
Protection



Overcharge
Protection



Overdischarge
Protection

The integrated 100A Smart BMS offers comprehensive protection for the battery.

Low-Temp Cut-Off Protection

Intelligently cut off charging and discharging.



Min. Temperature

-4°F(-20°C)

Max. Temperature

158°F(70°C)

Please charge the battery in an environment **>0°C**

The battery is equipped with low-temperature cut-off protection, crucial for cold environments.

3. WHAT'S IN THE BOX

Upon opening your Humsienk 12V 100Ah LiFePO4 Battery package, you should find the following items:

- 1 x 100Ah LiFePO4 Battery (10.2*6.6*8.2 inches)
- 1 x Instruction Manual
- 4 x M8 Screws (2x 14mm, 2x 12mm)
- 2 x Insulated Caps (1 red, 1 black)



The HumsienK 12V 100Ah LiFePO4 Battery and its accessories as packaged.

This video demonstrates the unboxing process and shows the contents of the 12V 100Ah battery package, including the battery, user manual, M8 screws, and insulated caps.

4. SETUP AND INSTALLATION

4.1 Physical Installation

The HumsienK 12V 100Ah LiFePO4 battery is compact and lightweight, weighing only 23.2 lbs (10.5 kg) with dimensions of 10.2 x 6.6 x 8.2 inches. It meets BCI Group 24-31 standards, making it a perfect replacement for equivalent lead-acid batteries, reducing space and weight by over 30%. Its design allows for flexible installation without restriction on orientation.

UNIVERSAL & GROUP 24 FITTING

For All Types of RVs



Weight
23 lbs



6.6in / 17mm

10.2in / 26mm

8.2in / 21mm



M8 35/64"(14mm) x2



M8 5/8"(16mm) x2



Insulating Caps x2

The battery's compact dimensions and Group 24 size make it suitable for various installations.

4.2 System Configuration

The HumsiENK 12V lithium battery supports flexible system expansion. You can connect up to 4 batteries in series (for higher voltage up to 48V), 4 batteries in parallel (for higher capacity up to 400Ah), or a combination of both to create a custom power station up to 20.48kWh. This versatility makes it ideal for RVs, outdoor activities, boats, off-grid systems, and home backup power sources.



Easily build an energy system by connecting multiple batteries in series and/or parallel.

5. OPERATING INSTRUCTIONS

5.1 Discharge Operation

To use the battery for powering electrical appliances, lighting, and electronic equipment, connect it to a compatible inverter. Ensure all connections are secure and follow the inverter's instructions for safe operation. The battery is designed to meet the needs of various scenarios, including RV off-grid or driving power, marine applications (fish finders, yachts, trolling motors), garden equipment (lawn mowers, trimmers), and other portable uses (children's scooters, LED lights, phones, fans, alarm systems, security cameras, outdoor camping, laptops).

This video illustrates the discharge operation, showing how to connect the battery to an inverter and power various electrical appliances like a laptop and smartphone.



Home Energy Storage

RVs

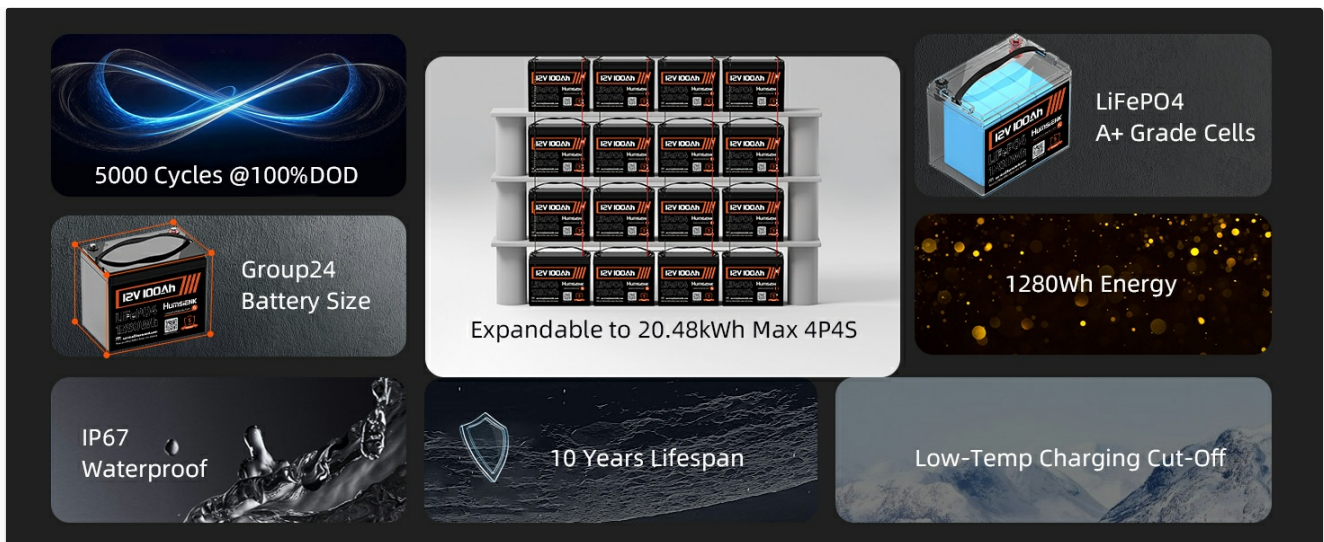
Marine

Off-Grid

The HumsiENK LiFePO4 battery is versatile for off-grid, home energy storage, RVs, and marine applications.

5.2 Charging Operation

The 100Ah LiFePO4 battery supports three charging methods for fast charging: solar, generator, and grid. It can be fully charged in just 2 hours, which is six times faster than traditional lead-acid batteries (which typically take 14 hours). This significantly improves the convenience of off-grid battery system management.



The battery supports fast charging via solar panels, generators, or grid power.

This video provides an overview of the Humsienk LiFePO4 battery, including its features and operational aspects.

6. MAINTENANCE

To ensure the longevity and optimal performance of your Humsienk LiFePO4 battery, follow these maintenance guidelines:

- **Regular Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean terminals as needed and ensure bolts are tightened securely.
- **Temperature Management:** Operate the battery within its specified temperature range of -4°F (-20°C) to 158°F (70°C). For charging, ensure the ambient temperature is above 32°F (0°C). Avoid prolonged exposure to extreme temperatures.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% state of charge and stored in a cool, dry place. Disconnect it from any loads.
- **Cleaning:** Keep the battery surface clean and dry. Use a soft, damp cloth to wipe away any dust or dirt. Do not use harsh chemicals or abrasive materials.
- **Waterproof Rating:** The battery is IP67 waterproof, designed to withstand temporary immersion in water. However, avoid prolonged submersion and ensure terminals are dry before making connections.

IP67 WATERPROOF

Designed for Trolling Motor LiFePO4 Battery



Moisture-proof



Anti-collision



The IP67 waterproof rating ensures durability in various environments, including marine applications.

7. TROUBLESHOOTING

If you encounter issues with your HumsiENK LiFePO4 battery, refer to the following common problems and solutions:

- **Battery Not Charging:**
 - Ensure the charger is specifically designed for LiFePO4 batteries and is properly connected.
 - Check for loose connections at the battery terminals or charger output.
 - Verify that the ambient temperature is above 32°F (0°C) for charging. The BMS will prevent charging below this temperature.
 - If the battery was deeply discharged, the BMS might have entered a protection mode. Try connecting it to a compatible charger for a few minutes to see if it resets.
- **Battery Not Discharging/No Power Output:**
 - Check if the battery is sufficiently charged.

- Inspect all connections to the inverter or load for looseness or corrosion.
- The BMS may have activated due to over-discharge, overcurrent, or high/low temperature. Disconnect the load, allow the battery to rest, and then attempt to reconnect.
- Ensure the load's power requirements do not exceed the battery's maximum continuous discharge current (100A) or peak discharge current (300±50A).

- **Unusual Odor or Swelling:**

- Immediately disconnect the battery from all loads and chargers.
- Contact customer support immediately. Do not attempt to use or repair the battery.

For persistent issues not covered here, please refer to the Warranty and Support section for assistance.

8. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	HS12V100AH100-RV
Nominal Voltage	12V
Nominal Capacity	100Ah
Energy	1280Wh
Battery Type	LiFePO4 (Lithium Iron Phosphate)
BMS	Built-in 100A Smart BMS
Max Continuous Discharge Current	100A
Peak Discharge Current	300±50A (automatic disconnect)
Cycle Life	15,000+ deep cycles
Lifespan	Up to 10 years
Dimensions (L x W x H)	10.2 x 6.6 x 8.2 inches (26 x 17 x 21 cm)
Weight	23.2 lbs (10.5 kg)
Operating Temperature	-4°F (-20°C) to 158°F (70°C)
Charging Temperature	Above 32°F (0°C)
Waterproof Rating	IP67
Certifications	SDS/UN38.3/FCC/CE/ROHS

PERFECT REPLACEMENT FOR LEAD-ACID BATTERY



3 Years	Lifespan	10 Years
300-500	Cycle Times	15000+
×	BMS	✓
80%	Depth of Discharge	100%
65lbs	Weight	23lbs
IP65	Waterproof	IP67

Key advantages of the Humsienk LiFePO4 battery compared to traditional lead-acid batteries.

9. WARRANTY AND SUPPORT

Humsienk stands behind the quality of its products. Your 12V 100Ah LiFePO4 Battery comes with **5-year warranty**, ensuring peace of mind and reliable performance.

9.1 Warranty Registration

To register your product for warranty and access additional benefits, please visit our official website:

[Humsienk Warranty Registration](#)

9.2 Customer Support

If you have any questions, require technical assistance, or need to report an issue, please do not hesitate to contact our dedicated customer support team:

- **Email:** service@humsienk.com

Our team is committed to providing prompt and helpful assistance.

