

Humsienk US12V314AHMINIBT

Humsienk 12V 314Ah LiFePO4 Battery User Manual

Model: US12V314AHMINIBT | Brand: Humsienk

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Humsienk 12V 314Ah LiFePO4 Battery. Please read this manual thoroughly before installation and operation.

Key features of your battery include:

- **4.19kWh Energy Capacity:** Provides substantial power for various applications.
- **Long Lifespan:** Designed for 15,000+ deep cycles (60% DOD) and a 10-year lifespan.
- **Compact & Lightweight:** Measures 15.24×9.72×7.6 inches and weighs 61.73 pounds, offering high energy density in a smaller form factor.
- **Integrated Smart BMS:** Features a 100A Battery Management System for protection against overcharging, over-discharging, over-current, short circuits, and low-temperature cut-off.
- **Bluetooth 5.0 Monitoring:** Real-time battery status monitoring via a dedicated mobile application.
- **Expandable System:** Supports 4S4P configuration for up to 64.3 kWh energy storage.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in fire, electric shock, explosion, or other hazards, which could cause serious injury, death, or property damage.

- Always wear appropriate personal protective equipment (PPE) when handling batteries.
- Do not short-circuit the battery terminals.
- Do not expose the battery to fire or extreme heat.
- Do not immerse the battery in water or other liquids.
- Use only compatible LiFePO4 chargers.
- Ensure proper ventilation during charging and discharging.
- Keep out of reach of children.
- Do not disassemble, crush, puncture, or modify the battery.
- Avoid dropping or subjecting the battery to severe impacts.
- The battery is not recommended for starting cars.

3. PRODUCT OVERVIEW

5. PRODUCT OVERVIEW

The HumsienK 12V 314Ah LiFePO4 battery is designed for deep cycle applications, offering a reliable and long-lasting power solution. It features a robust construction and advanced internal components.



Figure 3.1: Front view of the HumsienK 12V 314Ah LiFePO4 Battery. This image displays the battery's branding, voltage, capacity, energy rating, and BMS current rating.



Figure 3.2: Dimensions of the Humsienk 12V 314Ah LiFePO4 Battery. The battery measures 15.24 inches in length, 9.72 inches in width, and 7.6 inches in height, weighing 61.73 lbs (28 kg).

Components:

- Positive Terminal (Red)
- Negative Terminal (Black)
- Integrated BMS (Battery Management System)
- Bluetooth Module
- Carrying Handles

4. SETUP & INSTALLATION

Before installation, ensure all components are present and undamaged. Refer to the unboxing video for visual guidance.

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Video 4.1: Humsienk 12V 314Ah LiFePO4 battery Unboxing. This video demonstrates the unboxing process, showing the battery, user manual, battery bolt caps, and M8 terminals.

4.1. Terminal Connections

Use the provided M8 terminals and battery bolt caps for secure connections. Ensure polarity is correct (red for positive, black for negative) to prevent damage.

4.2. Parallel and Series Configuration

The HumsiENK 12V 314Ah battery supports a 4S4P configuration, allowing for a maximum voltage of 51.2V and a maximum capacity of 1256Ah, resulting in a 64.3 kWh energy system. When connecting multiple batteries:

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase capacity (Ah) while maintaining voltage (V).
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase voltage (V) while maintaining capacity (Ah).
- Always use cables of appropriate gauge for your current requirements.



Figure 4.1: Illustration of expandable energy storage. This image shows multiple batteries configured to achieve up to 64.3 kWh of energy storage, highlighting the scalability of the system.

4.3. Bluetooth App Setup

The battery features Bluetooth 5.0 technology for real-time monitoring via a mobile application. To connect:

1. Download the HumsiENK app from your device's app store.
2. Ensure Bluetooth is enabled on your mobile device.
3. Open the app and scan for available batteries.
4. Select your battery (identified by its unique ID) to connect and monitor its status.



Figure 4.2: Real-time monitoring with Bluetooth 5.0. This image illustrates the process of downloading, connecting, and monitoring the battery status using the mobile application.

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Video 4.2: 12V 314Ah LiFePO4 Battery 200A BMS with Bluetooth. This video demonstrates the Bluetooth connectivity and monitoring features of the battery.

5. OPERATING INSTRUCTIONS

5.1. Charging

Use a compatible LiFePO4 battery charger. The integrated BMS ensures safe charging by preventing overcharging and automatically cutting off charging in low temperatures (below 0°C / 32°F) to protect the battery.

The battery supports three charging modes:

- LiFePO4 Charger
- Solar Panel + MPPT (Maximum Power Point Tracking)
- Generator

5.2. Discharging

The battery can provide 4.19kWh of energy when fully charged. The 100A BMS protects against over-discharging and over-current conditions. The discharge temperature range is -20°C to 70°C (-4°F to 158°F).

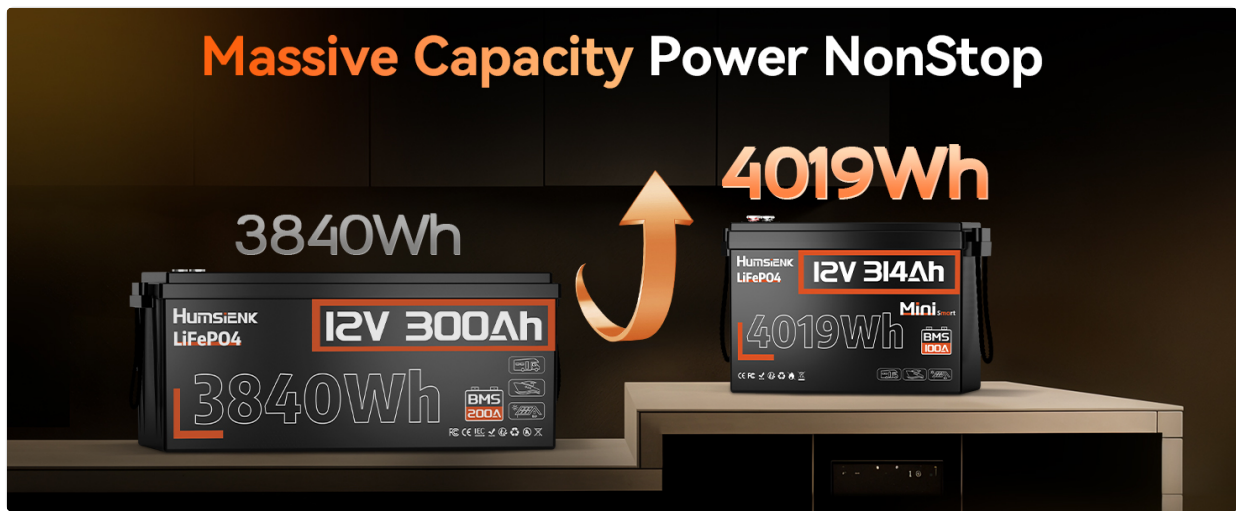


Figure 5.1: Examples of multiple loads supported by the battery. This image shows the battery powering various appliances like a TV (100W for 40H), Bread Maker (200W for 20H), Microwave (500W for 8H), and Air Conditioner (1000W for 4H).

5.3. Applications

This battery is suitable for a wide range of applications, including:

- Home energy storage
- UPS backup power
- RV and camper power systems
- Golf carts
- Trolling motors and yachts
- Solar systems and off-grid applications
- Digital/CCTV cameras and DIY projects



Figure 5.2: Visual representation of various applications. This image displays the battery being used in RVs, solar energy setups, yachts, and off-grid homes.

6. MAINTENANCE

- Keep the battery terminals clean and free from corrosion.
- Store the battery in a cool, dry place away from direct sunlight and extreme temperatures.
- For long-term storage, charge the battery to approximately 50% State of Charge (SOC) and check its voltage periodically.
- Avoid fully discharging the battery for extended periods.
- Regularly inspect the battery for any signs of damage or swelling.

7. TROUBLESHOOTING

The integrated BMS provides various protections. If the battery is not functioning as expected, check the following:

- **No Power Output:** Check terminal connections for tightness and corrosion. Verify the battery's State of Charge (SOC) via the Bluetooth app. The BMS might have triggered a protection (e.g., over-discharge, over-current).
- **Not Charging:** Ensure the charger is compatible and properly connected. Check the charging temperature; the BMS will prevent charging below 0°C (32°F). Verify the charger's output voltage and current.
- **Bluetooth Connectivity Issues:** Ensure your device is within 15 meters of the battery. Restart the app and your device.
- **Unusual Heat:** Disconnect the battery immediately and contact support.

For persistent issues, refer to the detailed specifications and contact HumsiENK customer support.

8. SPECIFICATIONS

Feature	Specification
Brand	HumsiENK
Model Number	US12V314AHMINIBT
Voltage	12.8 Volts





Feature	Specification
Capacity	314Ah
Energy	4019Wh (4.19kWh)
Cell Type	EV A Grade LiFePO4 Cells
BMS	100A Integrated Smart BMS
Deep Cycles	15,000+ (at 60% DOD)
Lifespan	Up to 10 years
Dimensions (LxWxH)	15.24 × 9.72 × 7.6 inches
Weight	61.73 pounds (28 kg)
Low-Temp Protection	Automatic cut-off for charging below 0°C (32°F)
Discharge Temperature	-20°C to 70°C (-4°F to 158°F)
Bluetooth	Bluetooth 5.0 (15m range)
Max Expandability	Up to 64.3 kWh (4S4P configuration)

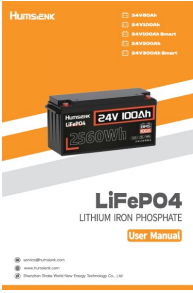
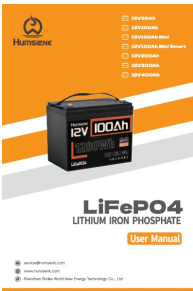
9. WARRANTY & SUPPORT

Humsienk LiFePO4 batteries come with a 5-year solutions promise. We provide professional technical support and 24-hour fast customer support. If you encounter any product-related problems or have questions, please do not hesitate to reach out to the Humsienk support team.

For further assistance, please visit the [Humsienk Store on Amazon](#).

Related Documents - US12V314AHMINIBT

	Humsienk 12V Series LiFePO4 Deep Cycle Battery User Manual This user manual from Humsienk details their 12V LiFePO4 Deep Cycle Battery series. It covers product specifications, key features, charging and installation guides, BMS functions, application examples, FAQs, and warranty information, providing users with comprehensive knowledge for reliable power solutions.
	Humsienk 12V LiFePO4 Deep Cycle Battery User Manual This user manual provides detailed information on Humsienk 12V LiFePO4 deep cycle batteries, including specifications, charging instructions, installation guides, BMS functions, application examples, FAQs, and warranty details.
	Humsienk 12V Series LiFePO4 Deep Cycle Battery User Manual User manual for Humsienk 12V Series LiFePO4 Deep Cycle Batteries, covering product overview, specifications, charging, installation, BMS functions, applications, FAQs, and warranty.
	Humsienk 48V Rack Series LiFePO4 Deep Cycle Battery User Manual Comprehensive user manual for the Humsienk 48V Rack Series LiFePO4 Deep Cycle Battery. Details specifications, function introduction, protection mechanisms, communication protocols, parallel operation, and warranty information for models like the 51.2V 100Ah.

	<p>Humsienk 24V LiFePO4 Lithium Iron Phosphate Battery User Manual</p> <p>Comprehensive user manual for Humsienk 24V LiFePO4 Lithium Iron Phosphate batteries, covering specifications, installation, charging, troubleshooting, and maintenance. Includes models 24V50Ah, 24V100Ah, 24V200Ah, and 24V300Ah.</p>
	<p>HUMSIENK LiFePO4 Lithium Iron Phosphate Battery User Manual - Specifications, Installation, and Maintenance</p> <p>Official user manual for HUMSIENK LiFePO4 Lithium Iron Phosphate batteries. Covers detailed specifications, installation guides, charging methods, troubleshooting, maintenance, and FAQs for models like 12V50Ah, 12V100Ah, and more.</p>