**HumsiENK HS12V100AH100BT-US-1PCS**

# HumsiENK 12V 100Ah LiFePO4 Lithium Battery Bluetooth User Manual

Model: HS12V100AH100BT-US-1PCS

## 1. Introduction

This manual provides essential information for the safe and efficient operation of your HumsiENK 12V 100Ah LiFePO4 Lithium Battery with Bluetooth. Please read this manual thoroughly before installation and use to ensure optimal performance and longevity of the battery.

The HumsiENK 12V 100Ah LiFePO4 battery is designed as an ideal replacement for traditional lead-acid batteries, offering superior energy density, lighter weight, and a significantly longer lifespan. It features an intelligent Battery Management System (BMS) and Bluetooth connectivity for real-time monitoring.




Image: The HumsiENK 12V 100Ah LiFePO4 battery unit alongside a smartphone showing its Bluetooth monitoring application.

## 2. Key Features

- **Advanced LiFePO4 Technology:** Offers a lifespan of up to 10 years and 15000+ cycles, providing 3-5 times higher energy density compared to lead-acid batteries.
- **Integrated Smart BMS:** Provides comprehensive protection against overcharge, overdischarge, over-current, and short-circuit, ensuring safe and efficient operation.
- **Bluetooth Connectivity:** Monitor battery information (voltage, temperature, state of charge) in real-time via the HumsiENK Smart APP (iOS/Android) within a 15-meter range.
- **Lightweight and Compact:** Weighs only 23 lbs, significantly lighter and smaller than conventional lead-acid batteries, facilitating easier installation.
- **Low Temperature Cut-off Protection:** Automatically shuts down at low temperatures (-4°F / -20°C) to protect the battery and maintain performance.
- **High Compatibility:** BCI Group 24 size, compatible with standard battery boxes (8.2"H x 6.6"W x 10.2"L).
- **Scalable System:** Supports 4S4P configuration, allowing for a massive 48V, 20.48kWh energy system.




Image: Visual comparison illustrating the benefits of the HumsiENK LiFePO4 battery over lead-acid alternatives, including longer lifespan and lighter weight.

## 3. What's Included

Upon unpacking your HumsiENK 12V 100Ah LiFePO4 battery, please verify that all components listed below are present and undamaged:

- 1 x HumsiENK 12V 100Ah LiFePO4 Battery
- 1 x Product Manual (this document)
- 2 x Insulating Caps (Red and Black)
- 2 x M8 5/8" Post Bolts
- 2 x M8 35/64" Post Bolts




Image: An illustration of the HumsiENK 12V 100Ah battery package contents, showing the battery, user manual, and terminal hardware.

## 4. Setup and Installation

### 4.1 Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including safety glasses and insulated gloves, when handling batteries.
- Ensure the battery is installed in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials.
- Do not short-circuit the battery terminals.
- Use only a lithium battery charger specifically designed for LiFePO4 batteries.
- Do not disassemble, puncture, or modify the battery.

## 4.2 Physical Installation

The HumsiENK 12V 100Ah battery is designed to fit standard BCI Group 24 battery boxes. Its compact size (8.2"H x 6.6"W x 10.2"L) and light weight (23 lbs) simplify installation.

1. Position the battery securely in its intended location, ensuring it is stable and protected from physical damage.
2. Connect the positive (+) terminal of the battery to the positive lead of your system using the provided M8 bolts. Ensure a tight connection.
3. Connect the negative (-) terminal of the battery to the negative lead of your system using the provided M8 bolts. Ensure a tight connection.
4. Apply the insulating caps to the terminals to prevent accidental short circuits.




Image: Detailed dimensions of the HumsiENK 12V 100Ah battery, indicating its Group 24 size and 23 lbs weight.

## 4.3 Bluetooth APP Connection

1. Download the "HumsiENK Smart APP" from your device's app store (iOS/Android).
2. Ensure Bluetooth is enabled on your smartphone.
3. Open the HumsiENK Smart APP and search for available devices.

4. Select your battery from the list to connect. The connection range is approximately 15 meters.
5. Once connected, you can monitor real-time battery data such as voltage, temperature, and state of charge.

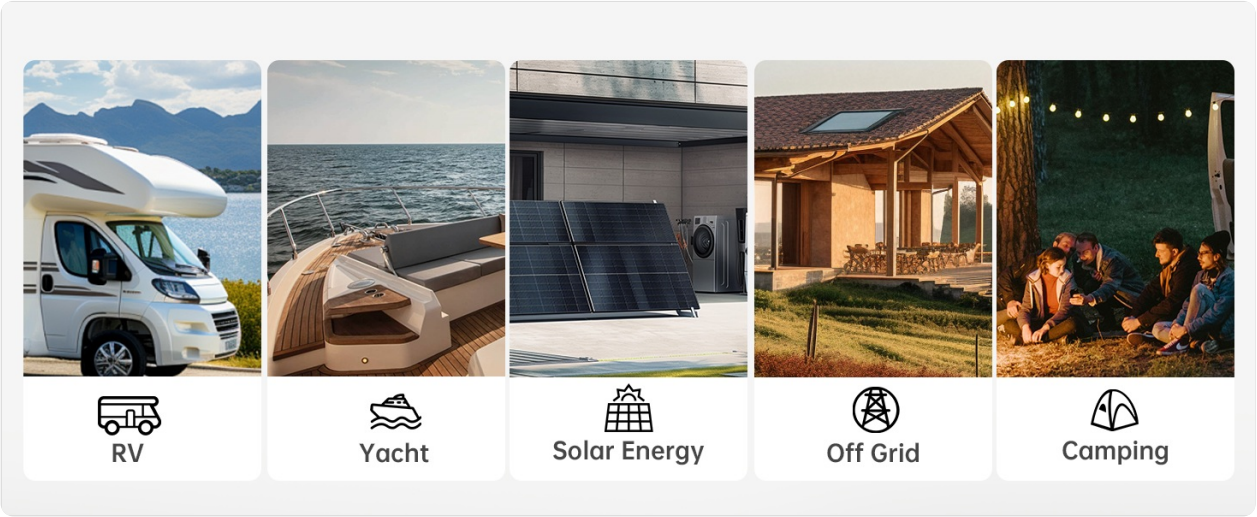



Image: A visual guide demonstrating the steps to download, connect, and monitor the battery using the HumsiENK Smart App.

## 5. Operating Instructions

### 5.1 Charging the Battery

Always use a dedicated LiFePO4 battery charger. The battery supports a wide operating temperature range for discharge (-4°F to 158°F / -20°C to 70°C). For charging, the temperature range is 32°F to 149°F (0°C to 65°C).

- Connect the LiFePO4 charger to the battery terminals (positive to positive, negative to negative).
- Plug the charger into a suitable power source.
- Monitor the charging process via the Bluetooth APP. The BMS will manage the charging parameters to prevent overcharge.

### 5.2 Discharging the Battery

The battery is designed for deep cycle applications and can be discharged to 100% Depth of Discharge (DOD). The intelligent BMS provides protection during discharge.

- Ensure your connected devices are within the battery's capacity limits.
- The battery's low-temperature cut-off protection will automatically stop discharge if the temperature drops below -4°F (-20°C) to prevent damage.

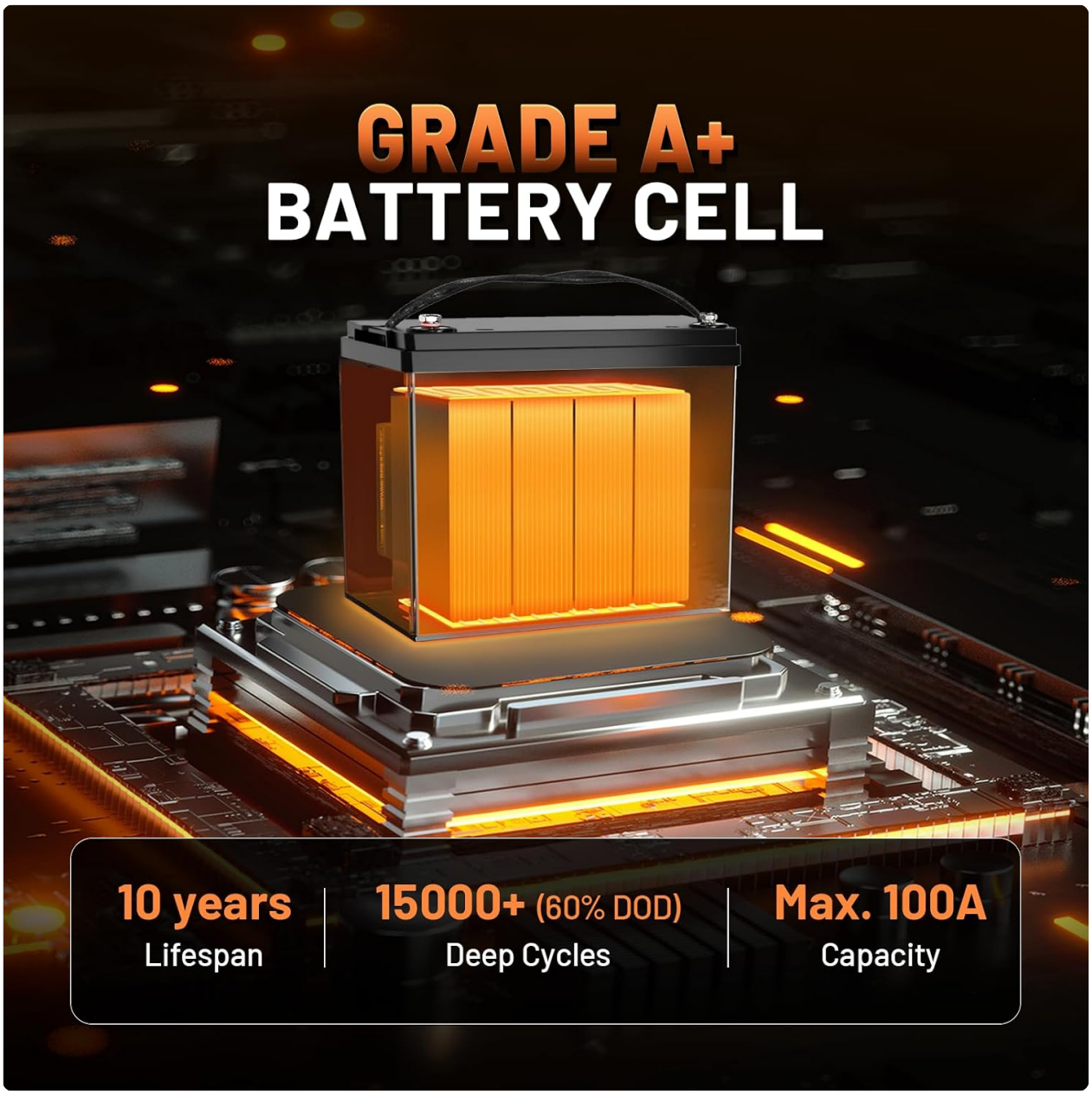



Image: The HumsiENK LiFePO4 battery installed in a boat, highlighting its suitability for trolling motors and its low-temperature protection feature.

## 6. Maintenance

- **Regular Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean as necessary.
- **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.
- **Cleaning:** Use a dry cloth to wipe down the battery casing. Do not use harsh chemicals or abrasive cleaners.
- **Firmware Updates:** Check the HumsiENK Smart APP periodically for any available firmware updates for the battery's BMS.

## 7. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Battery not charging. | Incorrect charger type; loose connections; BMS protection activated. | Ensure a LiFePO4 compatible charger is used. Check all cable connections. If BMS protection is active (check APP), disconnect load/charger and allow battery to reset. |
| Battery not discharging/no power output. | Low temperature cut-off; overdischarge protection; short-circuit protection. | Check ambient temperature (must be above -4°F / -20°C). Check battery voltage via APP. Disconnect load and allow battery to reset if protection is active. |
| Bluetooth APP not connecting. | Out of range; Bluetooth off; APP issue. | Move closer to the battery (within 15m). Ensure Bluetooth is enabled on your device. Restart the APP or your device. |
| Unusual heat from battery. | Overload; internal fault. | Immediately disconnect all loads and charger. Allow battery to cool. If problem persists, contact HumsiENK support. |

## 8. Specifications

| Parameter | Value |
|---|---|
| Model | HS12V100AH100BT-US-1PCS |
| Nominal Voltage | 12V |
| Nominal Capacity | 100Ah |
| Energy | 1280Wh |
| Battery Type | LiFePO4 (Lithium Iron Phosphate) |
| Lifespan | Up to 10 years / 15000+ cycles |
| Weight | 23 lbs |
| Dimensions (L x W x H) | 10.2" x 6.6" x 8.2" (BCI Group 24) |
| Operating Temperature (Discharge) | -4°F to 158°F (-20°C to 70°C) |
| Operating Temperature (Charge) | 32°F to 149°F (0°C to 65°C) |
| BMS Protection | Overcharge, Overdischarge, Over-current, Short-circuit, Low-temp cut-off |

| Parameter | Value |
| --- | --- |
| Bluetooth Range | Up to 15 meters |
| Configuration Support | Up to 4S4P (48V, 20.48kWh) |

## 9. Warranty and Support

HumsiENK LiFePO4 lithium batteries come with a 5-year solutions promise. For any product-related problems or questions, please do not hesitate to reach out to the HumsiENK support team.

- **Warranty Period:** 5 Years
- **Technical Support:** Professional technical support available.
- **Customer Service:** 24-hour fast customer support.
- **Contact Information:** For support, please visit the official HumsiENK website or use the contact details provided on the product packaging.
- **Warranty Registration:** You can register your product warranty at https://www.humsienk.com/pages/warranty-registration.

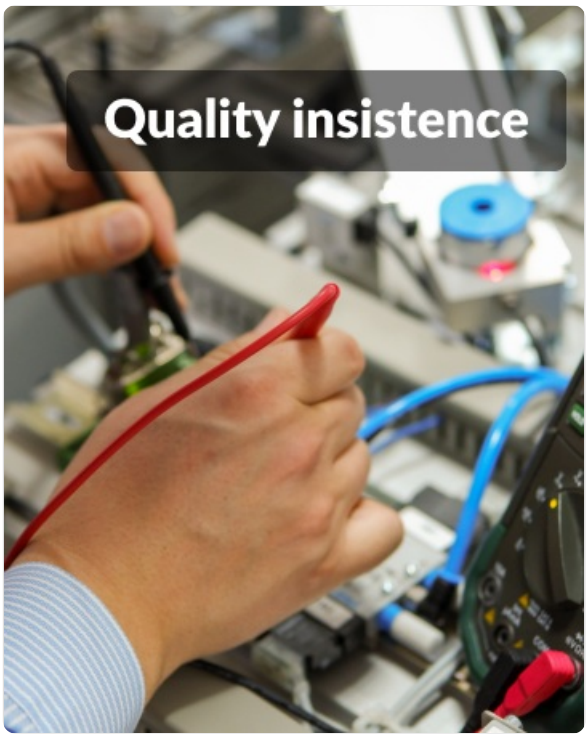



Image: HumsiENK customer support team, representing the brand's commitment to support and warranty.

## 10. Applications

The HumsiENK 12V 100Ah LiFePO4 battery is versatile and suitable for a wide range of applications, including:

- RV and Camper Power Systems
- Marine and Yacht Applications
- Trolling Motors
- Off-Grid Solar Energy Storage Systems
- Home Backup Power (UPS)
- Golf Carts
- Digital/CCTV Camera Systems
- DIY Projects requiring reliable 12V power

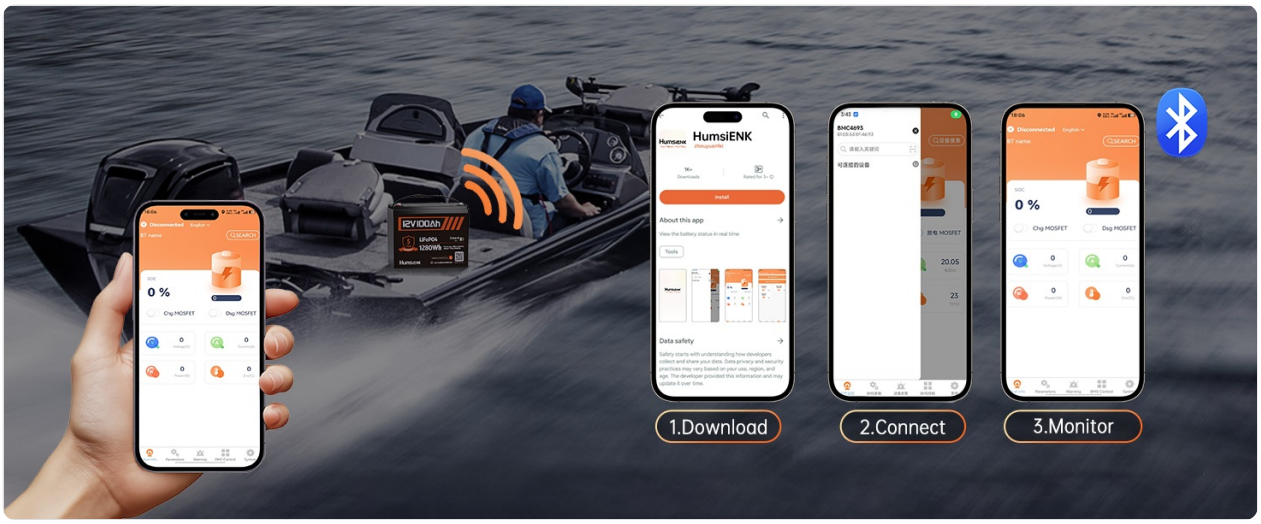



Image: A collage of images depicting the diverse applications of the HumsiENK battery, such as in RVs, yachts, solar setups, and camping.

© 2025 HumsiENK. All rights reserved.