

## Humsienk HS12V320AH250BT

# Humsienk 12V 320Ah LiFePO4 Bluetooth Battery User Manual

Model: HS12V320AH250BT

## 1. PRODUCT OVERVIEW

The Humsienk 12V 320Ah LiFePO4 Bluetooth Battery is a high-capacity, long-lasting power solution designed for various applications including RVs, boats, solar energy storage, and off-grid systems. It features an advanced 250A Battery Management System (BMS) for comprehensive protection and Bluetooth 5.0 connectivity for real-time monitoring.

### Key Features:

- **High Capacity & Longevity:** 4096Wh energy, over 15,000 deep cycles, and a 10-year lifespan.
- **Smart Bluetooth Monitoring:** Real-time tracking of voltage, current, capacity, and temperature via the Humsienk app (iOS/Android) with a 15m range.
- **Integrated 250A BMS:** Protects against overcharge, over-discharge, short-circuit, overcurrent, and high temperature ( $>65^{\circ}\text{C}$ ).
- **Low Temperature Protection:** Automatic charge cut-off below freezing to prevent damage and extend battery life.
- **Lightweight & Compact:** Weighs only 27 kg, offering high energy density compared to lead-acid batteries.
- **Scalable Energy Storage:** Supports up to 4S4P configuration for a maximum of 51.2V 1280Ah (65.5 kWh).
- **Durable Construction:** IP65 rated for dust and water resistance, with a shock-resistant casing.

## 2. SAFETY INFORMATION

Read all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always wear appropriate personal protective equipment (PPE) including safety glasses and insulated gloves when handling batteries.
- Do not short-circuit the battery terminals.
- Do not disassemble, puncture, or modify the battery.
- Keep the battery away from open flames, heat sources, and flammable materials.
- Ensure proper ventilation during charging and discharging.
- Avoid exposing the battery to extreme temperatures outside its specified operating range.
- In case of fire, use a Class D fire extinguisher. Water may exacerbate a lithium battery fire.

- Dispose of batteries according to local regulations. Do not dispose of in household waste.
- The integrated BMS provides protection against overcharge, over-discharge, overcurrent, short-circuit, and high temperature. The low-temperature protection feature automatically stops charging below 0°C (32°F) to prevent damage.

### 3. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your HumsienK LiFePO4 battery. Refer to the following steps for guidance.

#### 3.1 Unpacking and Inspection

Upon receiving your battery, carefully unpack it and inspect for any signs of damage during transit. If any damage is found, contact your supplier immediately.



**Figure 1:** HumsienK 12V 320Ah LiFePO4 battery showing its dimensions (52.04cm x 23.73cm x 22.07cm) and weight (26.62 kg).

#### 3.2 Mounting Location

Choose a dry, cool, and well-ventilated location for mounting the battery. Ensure the location is free from direct sunlight, heat sources, and moisture. The battery is IP65 rated for dust and water resistance, but prolonged exposure to harsh conditions should be avoided.

#### 3.3 Wiring Connections

1. Ensure all power sources are disconnected before making any connections.

2. Use appropriate gauge cables for your application to handle the expected current.
3. Connect the positive (+) terminal of the battery to the positive (+) terminal of your load/charger.
4. Connect the negative (-) terminal of the battery to the negative (-) terminal of your load/charger.
5. Ensure all connections are tight and secure to prevent loose connections and potential arcing.
6. If connecting multiple batteries in series or parallel, refer to the "Advanced Configurations" section.



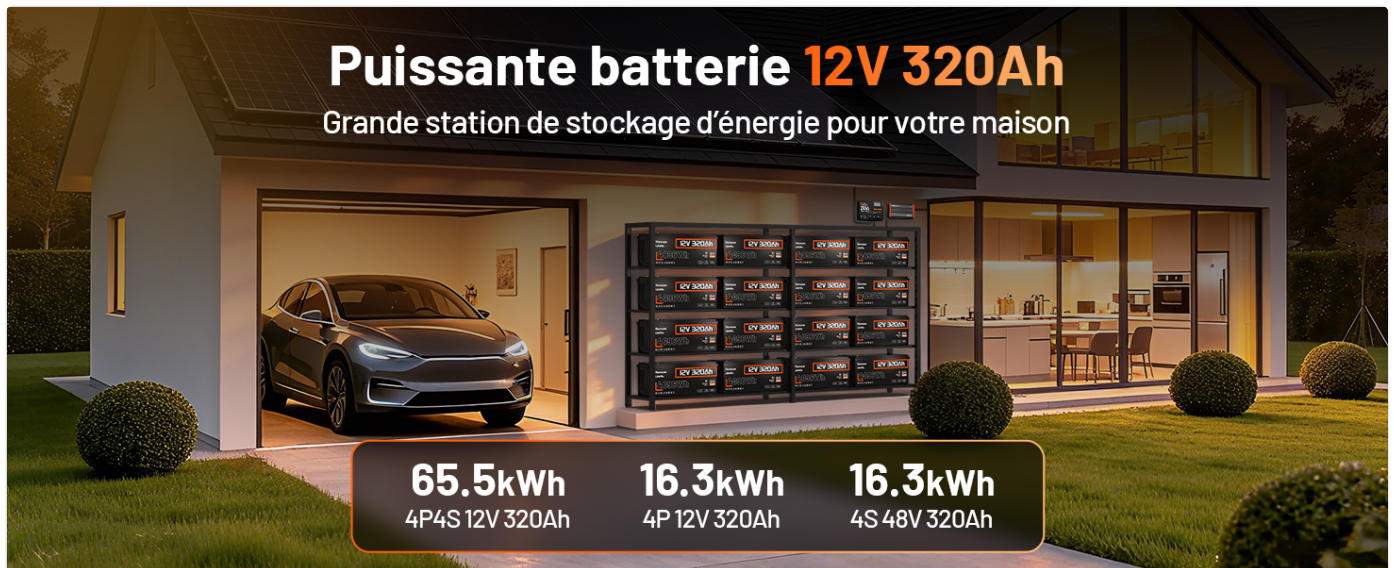
Figure 2: Close-up view of the HumsienK 12V 320Ah LiFePO4 battery terminals, showing the positive and negative connection points.

### 3.4 Advanced Configurations (Series/Parallel)

The HumsienK 12V 320Ah battery supports configurations up to 4S4P (4 series, 4 parallel) for increased voltage and capacity. This allows for a maximum system of 51.2V 1280Ah (65.5 kWh).

- **Parallel Connection:** Connect positive to positive and negative to negative terminals to increase capacity while maintaining the same voltage. Ensure all batteries are at a similar state of charge before connecting in parallel.
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next battery to increase voltage. Ensure all batteries have the same capacity and are fully charged before connecting in series.

- Always use a qualified electrician for complex wiring configurations.



**Figure 3:** Illustration of a home energy storage system utilizing multiple Humsienk 12V 320Ah batteries in a scalable configuration, demonstrating potential for up to 65.5 kWh.

## 4. OPERATING INSTRUCTIONS

This section details the general operation of your Humsienk LiFePO<sub>4</sub> battery, including charging, discharging, and using the Bluetooth monitoring feature.

### 4.1 Initial Charge

It is recommended to fully charge the battery before its first use. Use a LiFePO<sub>4</sub> compatible charger with appropriate voltage and current settings.

### 4.2 Charging and Discharging

- **Charging Voltage:** Typically 14.2V - 14.6V for a 12V system. Consult your charger's manual for optimal settings.
- **Charging Current:** The maximum continuous charging current is 250A. Avoid exceeding this limit.
- **Discharging Current:** The maximum continuous discharging current is 250A. Peak discharge current is 300A for 10 seconds, or 600A for 1 second.
- **Operating Temperature:**
  - Charge: 0°C to 45°C (32°F to 113°F)
  - Discharge: -20°C to 65°C (-4°F to 149°F)
  - Storage: 0°C to 60°C (32°F to 140°F)
- The BMS will automatically cut off charging if the temperature drops below 0°C (32°F) to protect the battery.



**Figure 4:** Visual representation of the Humsienk battery's wide operating temperature range, suitable for extreme cold and heat.

### 4.3 Bluetooth Monitoring

The integrated Bluetooth 5.0 module allows you to monitor your battery's status in real-time using the Humsienk application on your iOS or Android device.

1. Download the "Humsienk" app from your device's app store.
2. Ensure Bluetooth is enabled on your smartphone or tablet.
3. Open the app and search for available devices.
4. Select your Humsienk battery from the list to connect.
5. The app will display real-time data such as voltage, current, remaining capacity, and internal temperature. You can also control charge/discharge switches remotely.

# Cellule de batterie EV A+ exclusive & BMS intégré **250A**



Sous-décharge



Surcharge



Surintensité



Surcharge mécanique  
(Over-Load)



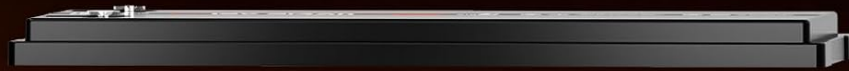
Surtension



Surchauffe



Basse température



**Durée de vie: > 10 ans**  
**8000+ cycles (à 80 % DOD)**  
**15000+ cycles (à 60 % DOD)**

**250A** courant continu  
**300A** pic 10 s  
**600A** pic 1 s

Figure 5: Screenshot of the HumsienK mobile application interface, demonstrating real-time battery monitoring features including charge/discharge status and various protections.

## 5. MAINTENANCE

HumsienK LiFePO4 batteries are designed for minimal maintenance. However, following these guidelines will ensure optimal performance and longevity.

- **Regular Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean terminals with a wire brush if necessary and ensure they are tightened.
- **Cleaning:** Keep the battery casing clean and free from dust and debris. Use a dry cloth for cleaning. Do not use solvents or abrasive cleaners.
- **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 within the recommended storage temperature range (0°C to 60°C / 32°F to 140°F). Recharge every 3-6 months to prevent deep discharge.
- **Temperature Monitoring:** Utilize the Bluetooth app to monitor battery temperature, especially during charging and

discharging in extreme environments. The BMS will protect against extreme temperatures, but awareness helps prevent issues.

## 6. TROUBLESHOOTING

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

| Problem                                 | Possible Cause                                                                                                                                                                                                                       | Solution                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Battery not charging                    | <ul style="list-style-type: none"><li>Charger not connected or faulty.</li><li>Charging temperature too low (below 0°C / 32°F).</li><li>BMS protection activated (over-discharge, overvoltage).</li><li>Loose connections.</li></ul> | <ul style="list-style-type: none"><li>Check charger connection and functionality.</li><li>Move battery to a warmer environment.</li><li>Check battery status via Bluetooth app; if BMS is active, address the cause (e.g., charge if over-discharged).</li><li>Inspect and tighten all cable connections.</li></ul> |
| Battery not discharging/no power output | <ul style="list-style-type: none"><li>Battery is deeply discharged.</li><li>BMS protection activated (over-discharge, overcurrent, short-circuit).</li><li>Load connected incorrectly or faulty.</li></ul>                           | <ul style="list-style-type: none"><li>Charge the battery.</li><li>Check battery status via Bluetooth app; if BMS is active, remove the load or reduce current.</li><li>Verify load connections and ensure the load is functioning correctly.</li></ul>                                                              |
| Bluetooth app not connecting            | <ul style="list-style-type: none"><li>Bluetooth on device is off.</li><li>Battery is out of range (15m).</li><li>App issue or battery in deep sleep mode.</li></ul>                                                                  | <ul style="list-style-type: none"><li>Ensure Bluetooth is enabled on your phone/tablet.</li><li>Move closer to the battery.</li><li>Restart the app or your device. If the battery is in deep sleep, connect a charger to wake it up.</li></ul>                                                                     |

## 7. SPECIFICATIONS

Detailed technical specifications for the Humsienk 12V 320Ah LiFePO4 Bluetooth Battery.

| Feature                                 | Specification   |
|-----------------------------------------|-----------------|
| Model Number                            | HS12V320AH250BT |
| Nominal Voltage                         | 12 Volts        |
| Nominal Capacity                        | 320 Ah          |
| Energy                                  | 4096 Wh         |
| BMS Continuous Charge/Discharge Current | 250 A           |

| Feature                        | Specification                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------|
| Peak Discharge Current (10s)   | 300 A                                                                                                          |
| Peak Discharge Current (1s)    | 600 A                                                                                                          |
| Cycle Life                     | >15,000 cycles (at 60% DOD)                                                                                    |
| Bluetooth Version              | 5.0                                                                                                            |
| Ingress Protection (IP) Rating | IP65                                                                                                           |
| Charge Temperature Range       | 0°C to 45°C (32°F to 113°F)                                                                                    |
| Discharge Temperature Range    | -20°C to 65°C (-4°F to 149°F)                                                                                  |
| Storage Temperature Range      | 0°C to 60°C (32°F to 140°F)                                                                                    |
| Dimensions (L x W x H)         | 52.4 x 23.8 x 21.8 cm (20.6 x 9.4 x 8.6 inches)                                                                |
| Weight                         | 26.62 kg (58.69 lbs)                                                                                           |
| Components Included            | 12V 320Ah Bluetooth Lithium Battery, Product Manual, Bluetooth Manual, M8 Screws (x4), M8 Insulating Caps (x2) |

# Ce que vous recevrez

Manuel du produit ×1

Manuel Bluetooth ×1

Vis M8 ×4 (14 mm×2 / 16 mm×2)

Capuchon isolant M8 ×2

Batterie LiFePO<sub>4</sub> Bluetooth 12V 320Ah ×1



**Figure 6:** Contents of the Humsienk 12V 320Ah LiFePO<sub>4</sub> battery package, including the battery, manuals, M8 screws, and insulating caps.

## 8. WARRANTY AND SUPPORT

Humsienk is committed to providing high-quality products and excellent customer service.

- **Warranty:** This product comes with a 5-year warranty. This warranty covers defects in materials and workmanship under normal use.
- **Spare Parts Availability:** Spare parts are available for 5 years.
- **Customer Support:** For any questions, technical assistance, or warranty claims, please contact Humsienk customer service. We offer 24/7 customer support. Refer to the product packaging or our official website for contact details.

## ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

### Name

Anonymous

### Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

### Question

Example: How do I reset this device or fix this error?

### Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question