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HumsiENK HS12V320AH250BT

HumsiENK 12V 320Ah LiFePO4 Lithium Battery Instruction Manual

Model: HS12V320AH250BT

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your HumsiENK 12V 320Ah LiFePO4 Lithium Battery. Please read it thoroughly before installation and use.

2. KEY FEATURES

- **Long Cycle Life:** Over 6000 deep cycles at 80% DOD, equivalent to 10+ years of service.
- **Bluetooth 5.0 Smart Monitoring:** Real-time monitoring of voltage, current, capacity, and temperature via the HumsiENK App (iOS/Android) within an 8-meter range.
- **Upgraded 250A BMS:** Protects against overcharging, over-discharging, overload, short circuits, and extreme temperatures. Features 300A peak discharge current.
- **Low Temperature Protection:** Discharges normally down to -4°F (-20°C). Automatically cuts off charging below 32°F (0°C) to prevent cell damage.
- **High Capacity & Easy Installation:** 320Ah capacity, 4096Wh energy. Weighs 59.75 lbs with standard M8 terminals.
- **Fast Charge & Expandability:** Supports 1C charge rate (6.4 hours for full charge). 4S4P design allows expansion up to 51.2V 1280Ah (65.5kWh).
- **IP65 Rating:** Ensures reliable protection against dust and water ingress.

3. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in fire, electric shock, injury, or damage to the battery and other property.

- Do not short-circuit the positive and negative terminals.
- Do not throw the battery into fire or water.
- Do not modify or disassemble the battery without authorization.

- Use only a LiFePO4 battery charger with an activation function that matches the output voltage of the lithium battery.
- Ensure all screws are properly tightened when connecting batteries.
- Avoid immersing the battery in any liquid.
- Keep out of reach of children.
- Do not touch uninsulated terminals or connectors.
- No sparks, no flames, no smoking near the battery.

4. WHAT'S IN THE BOX

- HumsiENK 12V 320Ah LiFePO4 Lithium Battery (2 Pack)
- User Manual
- Battery Bolt Caps
- M8 Terminals

Video: HumsiENK 12V 320Ah LiFePO4 Lithium Battery with Bluetooth

This video provides an overview of the HumsiENK 12V 320Ah LiFePO4 Lithium Battery, showcasing its features and components, including the battery itself, user manual, and connection accessories.

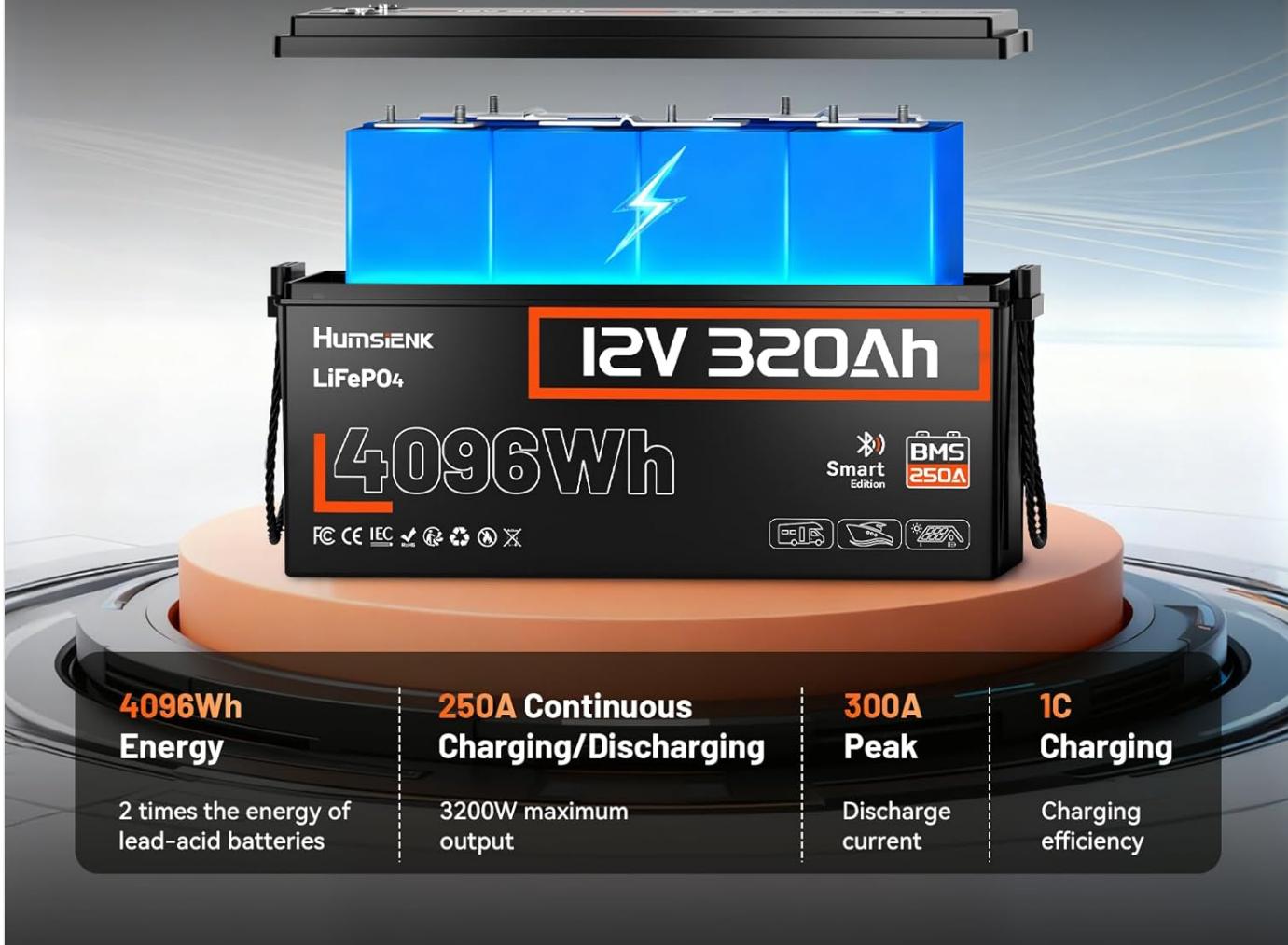
5. SETUP AND INSTALLATION

5.1 Physical Installation

- Ensure the installation area is clean, dry, and well-ventilated.
- The battery weighs 59.75 lbs. Use proper lifting techniques or assistance to avoid injury.
- Connect cables to the M8 terminals, ensuring correct polarity (red for positive, black for negative). Tighten all connections securely to prevent arcing and overheating.
- The battery's dimensions are approximately 20.49 x 9.34 x 8.69 inches (52.04 x 23.73 x 22.07 cm). Ensure adequate space for installation and ventilation.

Hardcore Performance

The data speaks



4096Wh Energy

2 times the energy of lead-acid batteries

250A Continuous Charging/Discharging

3200W maximum output

300A Peak

Discharge current

1C Charging

Charging efficiency

Image: Humsienk 12V 320Ah LiFePO4 Battery Dimensions

This image displays the Humsienk 12V 320Ah LiFePO4 battery with its key dimensions labeled: Length 20.49 inches (52.04 cm), Height 8.69 inches (22.07 cm), and Width 9.34 inches (23.73 cm). The battery weighs 59.75 lbs (26.62 kg).

5.2 Bluetooth App Setup

- Download the "Humsienk App" from your device's app store (available for iOS and Android).
- Enable Bluetooth on your smartphone or tablet.
- Open the Humsienk App and follow the on-screen instructions to connect to your battery. The app allows real-time monitoring of voltage, current, capacity, and temperature.

Field Tested Data Precision Installation



Image: Bluetooth 5.0 Smart Monitoring

A man is shown outdoors, monitoring the HumsiENK 12V 320Ah LiFePO4 battery using the Bluetooth app on his smartphone. The app displays battery vital signs like voltage, current, capacity, and temperature.

6. OPERATING INSTRUCTIONS

6.1 Charging

- The battery supports charging from battery chargers, solar panels, and generators.
- A 1C charge rate allows for a full recharge in approximately 6.4 hours.
- The BMS automatically cuts off charging if the battery temperature drops below 32°F (0°C) to prevent damage.

6.2 Discharging

- The battery can discharge normally at temperatures as low as -4°F (-20°C).
- The 250A BMS supports a 300A peak discharge current.
- The 4096Wh energy capacity can power high-demand devices like RV air conditioners and boat motors.

Far More than Lead-acid Batteries

Lasts long time



Humsienk
12V 320Ah
6000 cycles @80%DOD
320Ah/4096Wh
Self-discharge ≤3%/month



Lead-acid Batteries
200-500 times
Approx. 160Ah
15-20%/month



Image: 4096Wh Energy Output

This image illustrates the 4096Wh energy capacity of the Humsienk 12V 320Ah LiFePO4 battery, demonstrating its ability to power an RV air conditioner (1100W for 3.7 hours), an LED camping light (10W for 400 hours), and a car refrigerator (80W for 51 hours).

6.3 Series and Parallel Connections

- The 4S4P design allows the system to be expanded up to 51.2V 1280Ah, creating a massive 65.5kWh energy system.
- Consult a qualified electrician or the Humsienk support team for complex series/parallel configurations to ensure safety and optimal performance.

7. MAINTENANCE

- It is recommended to charge the battery to 50% every 3 months if it is to be left unused for a long time.
- Keep the battery clean and free from dust and debris.
- Regularly check terminal connections for tightness.

8. TROUBLESHOOTING

The integrated 250A BMS provides multiple protections. If you experience issues, check the following:

- **Overcharging/Over-discharging:** The BMS will prevent these conditions. Ensure your charger is compatible with LiFePO4 batteries.
- **Overload/Short Circuit:** The BMS will activate protection. Disconnect the load, identify and resolve the issue, then reconnect.
- **High/Low Temperature:** The BMS protects against extreme temperatures. Charging is cut off below 32°F (0°C), and discharge is possible down to -4°F (-20°C). Ensure the battery operates within its specified temperature range.
- **Bluetooth Connectivity:** Ensure your device is within 8 meters of the battery. Restart the app or your device if connection issues persist.



Image: 250A BMS Protection Features

This image highlights the multiple protections offered by the 250A BMS in the Humsienk 12V 320Ah LiFePO4 battery, including safeguards against over-voltage, over-load, over-discharge, over-charge, over-current, and high/low temperatures.

9. SPECIFICATIONS

Attribute	Value
Brand	HumsiENK
Model	HS12V320AH250BT
Size	320Ah
Voltage	12 Volts
Item Weight	59 Pounds
Number Of Cells	4
Terminal	M8 Bolt
Automotive Fit Type	Universal Fit
Energy	4096Wh
BMS Peak Discharge Current	300A
Cycle Life	15000+ Cycles (6000+ at 80% DOD)
Operating Temperature (Discharge)	-4°F to 149°F (-20°C to 65°C)
Operating Temperature (Charge)	32°F to 113°F (0°C to 45°C)
IP Rating	IP65

4096Wh Energy

Meet all-day outdoor needs

4096Wh



RV Air Conditioner



LED Camping Light



Car Refrigerator

1100W 3.7hrs

10W 400hrs

80W 51hrs

Image: Wide Temperature Adaptation

This image illustrates the wide operating temperature range of the HumsiENK 12V 320Ah LiFePO4 battery, showing it can withstand severe cold and heat. Charging temperature is 32°F to 113°F (0°C to 45°C), discharge temperature is -4°F to 149°F (-20°C to 65°C), and storage temperature is 32°F to 140°F (0°C to 60°C).

10. APPLICATIONS

The HumsiENK 12V 320Ah LiFePO4 battery is a versatile solution 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 Energy Systems
- Digital/CCTV Camera Systems

- DIY Projects



Adapt to 90% of Energy Storage Scenarios

Only 1 battery

Image: Wide Application Scenarios

This image showcases the versatility of the HumsiENK 12V 320Ah LiFePO4 battery, depicting its use in horticulture, off-grid homes, RVs, and vessels, adapting to 90% of energy storage scenarios.

11. WARRANTY AND SUPPORT

Your HumsiENK 12V 320Ah LiFePO4 Lithium Battery is backed by a 5-year warranty. For any questions or technical support, please contact our 24/7 customer service team.

Contact information can be found on the product packaging or the official HumsiENK website.

