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> CHINS LiFePO4 Battery 12V 200AH Lithium Battery User Manual

CHINS LAF12200

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Model: LAF12200

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your CHINS LiFePO4 12V 200AH Lithium Battery. Please read it thoroughly before installation and operation.

1.1 What's in the Box

- 1 x CHINS LiFePO4 12V 200AH Battery



Image 1.1: The CHINS LiFePO4 12V 200AH Lithium Battery, featuring an orange top and black body with clear branding and specifications.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the battery and connected equipment:

- Do not short-circuit the battery terminals.
- Do not expose the battery to fire or extreme heat.
- Do not immerse the battery in water.
- Use only compatible chargers designed for LiFePO4 batteries.
- Ensure proper ventilation during charging and discharging.
- Wear appropriate personal protective equipment (PPE) when handling batteries.
- Keep out of reach of children.

3. PRODUCT FEATURES

- **Extended Lifespan:** LiFePO4 batteries offer 8 to 10 times longer cycle life (2000~5000 cycles) compared to typical lead-acid batteries (300-500 cycles).
- **High Energy Density:** Provides double the usable capacity of a lead-acid battery at approximately 30% less weight.
- **No Memory Effect:** Maintains charge effectively when not in use and does not lose capacity due to previous discharge states.
- **Integrated Battery Management System (BMS):** Protects against overcharge, over-discharge, over-current, and short circuits. Includes a built-in high-temperature cut-off to prevent charging above 122 °F (50 °C).
- **Maintenance-Free Operation:** The integrated BMS eliminates the need for active maintenance.

4. SETUP AND INSTALLATION

4.1 Terminal Connections

The battery is equipped with M8 terminals for secure connections. Ensure all connections are tight to prevent resistance and overheating.

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Basic Information



M8 terminal-16mm

Good anti-rust performance,
low internal resistance



Professional online customer
service
(one-to-one service)



Reply within 24 hours



US warehouse
(located in California)



Logistics cooperation
(UPS)

Image 4.1: Diagram showing the M8 terminal with dimensions (8mm diameter, 16mm length) and highlighting its anti-rust performance and low internal resistance.

4.2 Capacity Expansion (Series and Parallel Connections)

CHINS LiFePO4 batteries can be connected in series and/or parallel to achieve higher voltage or capacity. Observe the following guidelines:

- **Series Connection:** Up to four identical batteries can be connected in series to achieve up to 48V.
- **Parallel Connection:** Up to four identical batteries can be connected in parallel to achieve up to 800AH.
- **Combined Series and Parallel:** Batteries can be connected in both series and parallel simultaneously for configurations up to 48V 800AH.
- **Important:** Only connect batteries with the exact same voltage and capacity, purchased within a six-month window, for series or parallel configurations.

5. OPERATING INSTRUCTIONS

5.1 Charging

Use a charger specifically designed for LiFePO₄ batteries. The integrated BMS will protect against overcharging. Ensure the charging temperature is within the recommended range (typically above 32°F / 0°C and below 122°F / 50°C).

5.2 Discharging

The battery's built-in BMS will automatically disconnect the battery if it detects over-discharge, over-current, or short-circuit conditions to protect the battery cells. Once the condition is resolved, the battery may resume normal operation.

5.3 Applications

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

- Home energy storage systems
- UPS backup power
- Lighting systems
- Digital/CCTV cameras
- Portable TVs and e-Robots
- Electric vehicles (e.g., golf carts, trolling motors)
- DIY speakers and 12V routers
- Air pumps and fish finders
- Motorhomes/RVs, campers, houseboats, travel trailers, and dump trailers



Image 5.1: The CHINS LiFePO4 battery integrated into a residential solar power system, demonstrating its use for home energy storage.



Image 5.2: The CHINS LiFePO4 battery positioned near an RV in an outdoor setting, illustrating its suitability for recreational vehicle power.

6. MAINTENANCE

The CHINS LiFePO4 battery is designed to be largely maintenance-free due to its advanced BMS. However, consider the following for optimal performance and longevity:

- **Regular Inspection:** Periodically check terminals for corrosion and ensure connections remain tight.
- **Cleaning:** Keep the battery clean and free of dust and debris.
- **Storage:** For long-term storage, disconnect the battery and store it in a cool, dry place. LiFePO4 batteries have a low self-discharge rate, maintaining charge well over extended periods.

7. TROUBLESHOOTING

If you encounter issues with your CHINS LiFePO4 battery, consider the following:

- **Battery Not Charging:** Verify that the charger is compatible with LiFePO4 batteries and properly connected. Check for high-temperature cut-off if the battery is above 122 °F (50 °C).
- **Battery Not Discharging/Powering Devices:** The BMS may have activated protection due to over-discharge, over-current, or a short circuit. Disconnect the load, allow the battery to rest, and then attempt to reconnect. Ensure the load does not exceed the battery's continuous discharge current (100A for this model).
- **Reduced Performance:** Ensure all connections are secure and clean. If using multiple batteries, confirm they are identical and connected correctly as per Section 4.2.

For persistent issues, contact CHINS customer support.

8. SPECIFICATIONS



Image 8.1: Product dimensions of the CHINS LiFePO4 12.8V 200AH battery, showing measurements of 522mm (20.55 inches) length, 240mm (9.44 inches) width, and 218mm (8.58 inches) height. The weight is 48.94 lbs (22.2 kg).

Specification	Value
Brand	CHINS

Specification	Value
Model	LAF12200
Voltage	12V (Nominal 12.8V)
Capacity	200AH
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Built-in BMS	Yes (100A)
Low-Temp Protection	Yes (Prevents charging below 32°F / 0°C)
High-Temp Cut-off	Yes (Prevents charging above 122 °F / 50 °C)
Cycle Life	2000~5000 cycles
Product Dimensions	9.45"D x 20.55"W x 8.58"H (240mm x 522mm x 218mm)
Item Weight	48.4 pounds (22.2 kg)
Terminal Type	M8
Resistance	13 Milliohms
UPC	727597812297

9. WARRANTY AND SUPPORT

For specific warranty details and to register your product, please refer to the documentation provided with your purchase or visit the official CHINS website. CHINS offers professional online customer service for support and inquiries.

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