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› CHINS 48V 102Ah Lithium Golf Cart Battery User Manual

CHINS LAF48100

CHINS 48V 102Ah Lithium Golf Cart Battery User Manual

Model: LAF48100

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and efficient use of your CHINS 48V 102Ah Lithium Golf Cart Battery. This LiFePO₄ battery is designed for deep cycle applications, offering extended lifespan and reliable performance for golf carts, trolling motors, solar systems, RVs, marine applications, and off-grid setups. Please read this manual thoroughly before installation and operation to ensure proper usage and longevity of your battery.



Image 1.1: CHINS 48V 102Ah Lithium Golf Cart Battery with included accessories.

2. PRODUCT FEATURES

- **Automatic Voltage Equalization:** The internal equalizer automatically balances cell voltages during charging, minimizing capacity attenuation.
- **Integrated Monitoring:** Features a dedicated monitor and Bluetooth functionality for real-time battery information via a mobile application.
- **High Capacity:** 5.22 kWh electric capacity, capable of powering a 3kW golf motor for approximately 30 miles.
- **Upgraded 200A BMS:** Built-in Battery Management System provides 200A continuous discharge current, with peak discharge currents of 1000A (3-5 seconds), 300A (32 seconds), and 600A (32 seconds).
- **Deep Cycle Lifespan:** Offers 4000+ cycles, significantly longer than lead-acid batteries (300-500 cycles).
- **Lightweight Design:** Approximately 30% lighter than comparable lead-acid batteries.

- **Fast Charging:** Includes a 58.4V 18A lithium battery charger, enabling a full charge from 0% in approximately 6 hours.
- **0V Charger Function:** The charger can wake up batteries under low voltage protection.
- **Versatile Applications:** Suitable for golf carts, trolling motors, solar systems, RVs, marine, and off-grid power.



Image 2.1: Key features and performance metrics of the CHINS 48V 102Ah battery.

3. SAFETY INFORMATION

Adhering to safety guidelines is crucial when handling and operating lithium batteries. Failure to do so can result in personal injury or damage to property.

- **Read Manual:** Always read and understand this manual completely before installation or operation.
- **Proper Installation:** Ensure all connections are secure and correctly polarized. Incorrect wiring can cause damage or fire.
- **Ventilation:** While LiFePO4 batteries produce minimal gas, ensure adequate ventilation in the installation area.
- **Avoid Short Circuits:** Do not short-circuit the battery terminals. Use insulated tools.
- **Charging Environment:** Charge the battery in a well-ventilated area, away from flammable materials.
- **Use Approved Charger:** Only use the CHINS 58.4V 18A lithium battery charger provided with the product. Using unapproved chargers can damage the battery and void the warranty.
- **Temperature Range:** Operate and charge the battery within specified temperature ranges (refer to specifications).
- **No Series Connection:** This CHINS 48V Lithium Battery does not support series connection. It can only be connected in parallel.
- **Physical Damage:** Do not puncture, drop, or expose the battery to extreme physical shock.
- **Disposal:** Dispose of batteries according to local regulations. Do not dispose of in general waste.

4. PACKAGE CONTENTS

Upon opening the package, verify that all components are present and undamaged:

- CHINS 48V 102Ah LiFePO4 Battery
- 58.4V 18A Lithium Battery Charger
- Smart Battery LCD Monitor
- Retention Strap (as depicted in product images)



Image 4.1: The complete package contents including the battery, charger, monitor, and strap.

5. SETUP AND INSTALLATION

Proper installation is key to the battery's performance and safety. Ensure your golf cart or application is compatible with a 48V system.

5.1 Physical Installation

- **Dimensions:** The battery dimensions are approximately 10.59"D x 20.47"W x 8.66"H (269mm x 520mm x 220mm). Verify that your battery compartment can accommodate these dimensions.
- **Weight:** The battery weighs approximately 82.4 lbs (37.4 kg). Ensure the mounting surface can support this weight.
- **Secure Mounting:** Use the provided retention strap or other suitable means to secure the battery firmly in place to prevent movement during operation.
- **Terminal Connections:** Connect the battery to your system using appropriate M8 terminals. Ensure connections are clean, tight, and correctly polarized (positive to positive, negative to negative).

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Basic Information



Product Weight:

37.4kg/82.45lb

Product Dimensions:

20.47x10.59x8.66 inch
520x269x220 mm

Built-in Automatic Equalizer

With touch monitor and retention strap



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



Reply within 24 hours



US warehouse
(located in California)



Logistics cooperation
(UPS)

Image 5.1: Product dimensions and weight for installation planning.

5.2 Initial Charging

- Before first use, fully charge the battery using the included 58.4V 18A lithium battery charger.
- Connect the charger to the battery's charging port and then plug the charger into a suitable AC power outlet.
- The charging process from 0% to 100% typically takes approximately 6 hours.
- The charger features a 0V activation function, allowing it to initiate charging even if the battery is in a low voltage protection state.

6. OPERATING INSTRUCTIONS

6.1 Battery Monitoring

The CHINS battery offers two methods for real-time monitoring of its status:

- **Smart Battery LCD Monitor:** Connect the provided LCD monitor to the battery. This display provides direct readings of voltage, current, state of charge, temperature, and individual cell voltages.
- **Bluetooth App:** Download the official CHINS battery monitoring application to your smartphone. Connect via Bluetooth to view detailed battery information, including charging status, remaining capacity, and historical data.



Image 6.1: Two methods for monitoring battery capacity: Bluetooth App and LCD Touch Screen Display.

6.2 Usage Scenarios

While primarily designed for golf carts, the CHINS 48V 102Ah LiFePO4 battery is suitable for various deep cycle applications:

- **Golf Carts:** Provides stable and reliable power for extended golf cart operation.
- **Trolling Motors:** Capable of powering trolling motors up to 70 lbs thrust.
- **Solar Systems:** Ideal for energy storage in residential or portable solar power setups.
- **RVs and Marine:** Suitable for recreational vehicles and marine applications requiring reliable deep cycle power.
- **Off-Grid Systems:** Can be integrated into off-grid power solutions.

Important Note: This battery does not support series connection. It can only be connected in parallel to increase capacity, if required.



Image 6.2: Diverse applications for the CHINS 48V 102Ah battery.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your CHINS LiFePO4 battery.

- **Regular Charging:** Charge the battery regularly, especially after significant discharge, to maintain its health.
- **Use Correct Charger:** Always use the provided 58.4V 18A lithium battery charger.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50-70% capacity and stored in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Terminal Inspection:** Periodically inspect battery terminals for corrosion or loose connections. Clean and tighten as necessary.
- **Deep Cycle Nature:** The battery is designed for deep cycling, meaning it can be discharged significantly without damage, unlike lead-acid batteries. However, avoiding excessively deep and frequent discharges can further extend its lifespan.

8. TROUBLESHOOTING

The built-in Battery Management System (BMS) protects the battery from various conditions. If the battery appears to be malfunctioning, check the following:

8.1 BMS Protections

The 200A BMS provides comprehensive protection:

- **Over Voltage Protection:** Prevents charging beyond safe voltage levels.
- **Overload Protection:** Shuts down if the current draw exceeds safe limits.
- **High-Temp Protection:** Disables operation if internal temperature becomes too high.
- **Over Discharge Protection:** Prevents discharging below a safe minimum voltage, protecting cell integrity.
- **Over Charge Protection:** Ensures the battery is not overcharged.
- **Short Circuit Protection:** Immediately cuts off power in case of a short circuit.



Image 8.1: Overview of the BMS protection mechanisms.

8.2 Common Issues and Solutions

Issue	Possible Cause	Solution
Battery not charging	Charger not connected, power outlet issue, battery in low voltage protection.	Ensure charger is properly connected and power outlet is active. The 0V charger function should activate the battery if it's in low voltage protection.
Battery not providing power	Over-discharge protection, short circuit, high temperature, loose connections.	Check battery state of charge via app/monitor. Inspect all connections. Allow battery to cool if overheated. If short circuit occurred, remove load and reconnect.
Bluetooth app not connecting	Bluetooth disabled on device, app not updated, battery too far.	Ensure Bluetooth is enabled and you are within range. Restart the app or your device. Check for app updates.

If issues persist after following these steps, please contact CHINS customer support.

9. SPECIFICATIONS

Attribute	Value
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Attribute	Value
Brand	CHINS
Model	LAF48100
Product Dimensions (D x W x H)	10.59" x 20.47" x 8.66" (269mm x 520mm x 220mm)
Item Weight	82.4 pounds (37.4 kg)
Nominal Voltage	48V
Capacity	102Ah
Rated Energy	5222.4 Wh
Max Load Power	5222.4 W
Continuous Discharge Current	200A
Peak Discharge Current	800~1000A (3-5 seconds)
Cycle Life	4000+ cycles
Internal Resistance	6 Milliohms
Terminal Type	M8
Charger Included	58.4V 18A Lithium Battery Charger
BMS	Built-in 200A Smart BMS with Automatic Equalizer
UPC	755496180858

10. WARRANTY AND SUPPORT

CHINS is committed to providing high-quality products and customer satisfaction.

- **Technical Support:** CHINS offers 5 years of technical support for this product.
- **Customer Service:** For any questions, concerns, or technical assistance, please contact CHINS customer support. Refer to the product packaging or the official CHINS website for contact information.
- **Returns:** This product is eligible for 30-day easy returns.

For more information, visit the official CHINS Store: [CHINS Store on Amazon](#)

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

Answered questions about this manual

What is the silver 2-pin connection that screws into the side of the CHINS 48V 102Ah battery, and does it hook to the top of the battery?

The silver 2-pin connection that screws into the side of your CHINS 48V 102Ah Lithium Golf Cart Battery is the communication port for the Smart Battery LCD Monitor. According to the manual, this port...

[Read full answer](#)