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WEIZE BAC-0103

WEIZE 48V 100Ah LiFePO4 Lithium Battery User Manual

Model: BAC-0103 | Brand: WEIZE

1. PRODUCT OVERVIEW

The WEIZE 48V 100Ah LiFePO4 Lithium Battery is a high-performance, deep cycle rechargeable battery designed for various applications including RVs, solar systems, marine use, and off-grid power solutions. Featuring a built-in 100A Battery Management System (BMS), this battery offers exceptional longevity with up to 8000 cycles at 50% depth of discharge, superior safety, and a lightweight design compared to traditional lead-acid batteries.



Figure 1.1: WEIZE 48V 100Ah LiFePO4 Lithium Battery. This image shows the overall appearance of the battery unit, highlighting its compact and robust design.

2. SAFETY INFORMATION AND PRECAUTIONS

Please read and understand all safety instructions before installing or operating the battery. Failure to follow these instructions may result in electric shock, fire, serious injury, or death.

- **Do not short circuit:** Ensure proper wiring and connections to prevent short circuits.

- **Do not crush:** Avoid applying excessive force or pressure to the battery.
- **Do not heat or incinerate:** Keep the battery away from heat sources and open flames.
- **Do not immerse in any liquid:** Protect the battery from water and other liquids.
- **Do not disassemble:** The battery contains no user-serviceable parts. Disassembly voids warranty and can be dangerous.
- **Only use approved LiFePO4 charger:** Using an incompatible charger can damage the battery and pose safety risks.
- **Store at 50% capacity:** For long-term storage, maintain the battery at approximately 50% charge.
- **Recharge every 3 months:** If stored, recharge the battery every three months to prevent deep discharge.
- **Environmental Safety:** This LiFePO4 battery is made from 100% safe, non-toxic, non-hazardous energy. It is not prone to thermal runaway and will not overheat or catch fire even if punctured.

SMART BMS PROVIDE 5 PROTECTION



**OVER CHARGE
PROTECTION**



**OVER DISCHARGE
PROTECTION**



**OVER CURRENT
PROTECTION**



**SHORT CIRCUIT
PROTECTION**



**OVER TEMPERATURE
PROTECTION**

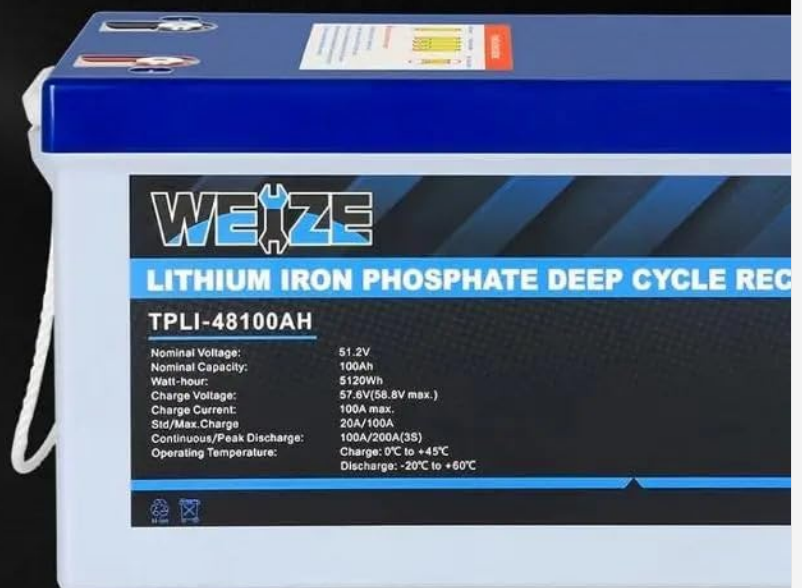


Figure 2.1: Smart BMS Protection Features. The integrated Battery Management System (BMS) provides critical protections including over-charge, over-discharge, over-current, short circuit, and over-temperature protection, ensuring safe operation and extended battery life.

3. PRODUCT FEATURES

- **Long Cycle Life:** Over 2000 cycles at 100% Depth of Discharge (DOD) and up to 8000 cycles at 50% DOD, significantly outlasting lead-acid batteries.
- **Built-in 100A BMS:** Automatically protects against over-charge, over-discharge, over-current, short circuit, and extreme temperatures. The BMS will automatically reactivate after 1 second if cut off.
- **Lightweight Design:** Approximately 1/3 the weight of comparable lead-acid batteries, making it ideal for portable and weight-sensitive applications.
- **Maintenance-Free:** Requires no regular maintenance, unlike lead-acid batteries.
- **High Energy Density:** Provides greater energy density for efficient power storage.
- **Cold Weather Protection:** Critical feature for performance in varying climates.

WHY CHOOSE US ?

WEIZE LiFePO4



100% DISCHARGE



2000+ CHARGE CYCLES



CONSTANT POWER



EFFICIENT AND FAST CHARGING



LIGHTWEIGHT



BMS



10 YEAR



Lead Acid



50% DISCHARGE

500 CHARGE CYCLES

STEADY POWER DROP

SLOW MULTI-STAGE CHARGING

HEAVY

NO

3 YEAR

Figure 3.1: Comparison of WEIZE LiFePO4 Battery with Lead-Acid Battery. This graphic illustrates the superior performance of LiFePO4 batteries in terms of discharge depth, cycle life, power consistency, charging efficiency, weight, and integrated BMS.

What Make US Unique?



Light Weight

75% lighter than most lead-acid batteries.



Ultra Safe

Smart BMS provides 100% safety.



Long Cycles

With zero-maintenance and an incredible service life of 2,000 to 8,000 cycles.



Long Lifetime

3 times longer lifetime than lead-acid batteries.

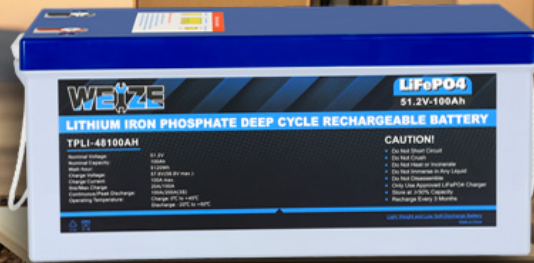


Figure 3.2: Key Advantages of WEIZE LiFePO₄ Batteries. Highlights include lightweight design (75% lighter than most lead-acid batteries), ultra-safe operation due to smart BMS, long cycles (2,000 to 8,000), and a significantly longer lifetime (3 times longer than lead-acid batteries).

4. DIMENSIONS AND PHYSICAL CHARACTERISTICS

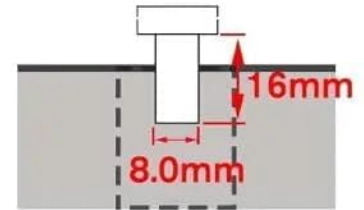
- **Product Dimensions (L*W*H):** 20.51 x 10.59 x 8.66 inches (52.1 x 26.9 x 22 cm)
- **Item Weight:** 83.6 pounds (37.9 kg)
- **Terminal Specifications:** F12 Terminal - M8

DIMENSIONS

Product View:

L*H*W: 20.6x8.58x9.37 inch

Weight: 83.6 lbs



Terminal Specifications F12 Terminal-M8

Figure 4.1: Detailed Dimensions of the WEIZE 48V 100Ah LiFePO4 Battery. This image provides precise measurements of the battery's length, width, and height, along with terminal specifications for installation planning.

5. SETUP AND INSTALLATION

5.1 Unpacking and Inspection

Upon receiving your WEIZE LiFePO4 battery, carefully unpack it and inspect for any signs of damage during transit. If any damage is found, contact customer support immediately.

5.2 Initial Charging

Before first use, it is recommended to fully charge the battery with a dedicated LiFePO4 battery charger. Ensure the charger's voltage and current settings are compatible with a 48V LiFePO4 battery.

- Connect the charger's positive (+) terminal to the battery's positive (+) terminal.
- Connect the charger's negative (-) terminal to the battery's negative (-) terminal.
- Plug in the charger and allow the battery to charge until full.

5.3 Connection (Series/Parallel)

This 48V battery is designed for single-unit use or parallel connections. **Do not connect in series.** You can connect up to 10 batteries in parallel to increase capacity.

- For parallel connection, ensure all batteries are at a similar state of charge before connecting.
- Connect positive terminals together and negative terminals together.
- Use appropriate gauge cables for your application to minimize voltage drop and ensure safety.

6. OPERATING INSTRUCTIONS

The WEIZE LiFePO4 battery is designed for deep cycle applications, providing stable and consistent power output throughout its discharge cycle.

- **Discharge:** The battery can be discharged up to 100% Depth of Discharge (DOD) without significant impact on its lifespan, though 50% DOD is suggested for maximum cycles.
- **Charging:** Always use a charger specifically designed for LiFePO4 batteries. The BMS will protect against overcharging.
- **Operating Temperature:** The battery can operate in a wide range of temperatures. Refer to the specifications section for precise ranges.

LARGE CAPACITY AND HIGH OUTPUT LiFePO4 BATTERY



200W
appliance

25.6 hrs



500W
appliance

10.24 hrs



1,000W
appliance

5.12 hrs



2,000W
appliance

2.56 hrs

5120Wh
Energy



Figure 6.1: Power Output and Duration. This graphic illustrates the battery's capacity (5120Wh) and estimated run times for various appliance wattages, demonstrating its high output capability for extended periods.

7. MAINTENANCE

One of the key advantages of LiFePO4 batteries is their minimal maintenance requirements. However, following these guidelines will ensure optimal performance and longevity:

- **Regular Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean terminals if necessary.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% of its capacity. Recharge every 3 months to prevent self-discharge and maintain cell health.
- **Cleaning:** Keep the battery clean and dry. Use a damp cloth to wipe down the casing; avoid using harsh chemicals.
- **Temperature Control:** While the battery has cold weather protection, avoid prolonged exposure to extreme temperatures outside its operating range.

8. TROUBLESHOOTING

If you encounter issues with your WEIZE LiFePO4 battery, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Battery not charging	Incorrect charger type; loose connections; BMS protection activated.	Ensure you are using a dedicated LiFePO4 charger. Check all cable connections. If BMS cut off, it should reactivate automatically after 1 second.
No power output	Battery discharged; BMS protection activated (over-discharge, short circuit); loose connections.	Charge the battery. Check for short circuits or overloads on the connected device. Verify all connections are secure.
Reduced capacity/runtime	Battery not fully charged; aging (after many cycles); extreme operating temperatures.	Ensure battery is fully charged before use. While designed for long life, capacity will gradually decrease over thousands of cycles. Operate within specified temperature ranges.

If the problem persists after following these steps, please contact WEIZE customer support for further assistance.

9. TECHNICAL SPECIFICATIONS

Specification	Value
Nominal Voltage	48V (51.2V)
Nominal Capacity	100Ah
Energy	5120Wh
Max Charge Voltage	57.6V (58.4V max.)
Standard Charge Current	20A
Max Charge Current	100A
Standard Discharge Current	20A
Continuous/Peak Discharge Current	100A / 200A (3s)
Charge Operating Temperature	0°C to +45°C (32°F to 113°F)
Discharge Operating Temperature	-20°C to +60°C (-4°F to 140°F)
Product Dimensions (L x W x H)	20.51 x 10.59 x 8.66 inches
Item Weight	83.6 pounds
BMS	Built-in 100A BMS
Cycle Life	>2000 cycles @ 100% DOD, >8000 cycles @ 50% DOD

51.2V 100Ah

Lithium Iron phosphate Battery



- Waterproof
- Built BMS
- 100% SOC
- 100% DOD
- Nominal voltage: 51.2V
- Standard charge voltage: 58.4V
- Standard charge/ discharge current: 20A
- Allowed Max. Charge/ discharge current: 100A
- Operation temperature:
Discharge -20°C~60°C, Charge 0°C~45°C

Figure 9.1: Key Specifications of the WEIZE 51.2V 100Ah Battery. This image provides a quick reference for important electrical and physical parameters of the battery.

10. APPLICATIONS

The WEIZE 48V 100Ah LiFePO4 battery is a versatile power solution suitable for a wide range of deep cycle applications, including but not limited to:

- RV and Camper Power Systems
- Solar Energy Storage Systems
- Marine Applications (Boats, Trolling Motors)
- Off-Grid Power Solutions
- Home Alarm Systems
- Golf Carts
- Electric Vehicles (e.g., ATVs)

WIDE APPLICATION

Camping, RV, Solar System, Trolling Motor, Boat



Figure 10.1: Common Applications. This image showcases various environments where the WEIZE LiFePO₄ battery can be effectively utilized, such as RVs, solar homes, boats, and golf carts.



Figure 10.2: Expanded View of Applications. This image further illustrates the versatility of the battery across different uses, including camping, solar, marine, ATV, golf cart, and off-road vehicle setups.

11. WARRANTY AND SUPPORT

WEIZE offers a **10-year warranty** on its LiFePO4 Lithium Batteries, demonstrating confidence in product quality and durability. This warranty covers defects in materials and workmanship under normal use and service.

For warranty claims, technical assistance, or any questions regarding your battery, please contact WEIZE customer support directly. Do not return battery-related products to Amazon without prior authorization.

Contact Information: Please refer to the official WEIZE website or your purchase documentation for the most current customer support contact details.

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For more information, visit [the WEIZE 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