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› WattCycle 12V 100Ah LiFePO4 Lithium Battery Instruction Manual

Wattcycle WT12V100AH100

WattCycle 12V 100Ah LiFePO4 Lithium Battery Instruction Manual

MODEL: WT12V100AH100

BRAND: WATTCYCLE

INTRODUCTION

The WattCycle 12V 100Ah LiFePO4 Lithium Battery is engineered for superior performance and longevity. This manual provides essential information for the safe and efficient setup, operation, and maintenance of your new battery. Designed with advanced A+ grade cells and a robust 100A Battery Management System (BMS), it ensures reliable power and extensive protection for various applications.

Key features include a compact BCI Group 24 size, lightweight design, and exceptional temperature tolerance, making it a versatile power solution for RVs, golf carts, home energy storage, and marine systems. The integrated BMS safeguards against common issues such as overcurrent, high temperature, short circuits, overcharging, and over-discharging, ensuring optimal battery health and user safety.



Figure 1: WattCycle 12V 100Ah LiFePO4 Battery

WHAT'S IN THE BOX

- 1 x 100Ah LiFePO4 Battery (10.2*6.6*8.2 inches)
- 4 x M8 Screws
- 2 x Insulated Cap
- 1 x Instruction Manual

Video 1: Unboxing the WattCycle 100Ah LiFePO4 battery and reviewing its contents.

SETUP

Initial Charging

Before first use, ensure your battery is fully charged. Use a compatible LiFePO4 charger. Connect the positive (+) terminal

of the charger to the positive (+) terminal of the battery and the negative (-) terminal of the charger to the negative (-) terminal of the battery. Ensure all connections are secure and tightened to the recommended torque.

Video 2: Demonstrates how to connect the charger to the battery for initial charging.

Connecting Batteries in Series (for higher voltage)

To connect multiple batteries in series, connect the positive (+) terminal of one battery to the negative (-) terminal of the next battery. Ensure all connections are secure and tightened. Up to 4 batteries can be connected in series for a maximum voltage of 51.2V.

Video 3: Shows the process of connecting batteries in series.

Connecting Batteries in Parallel (for higher capacity)

To connect multiple batteries in parallel, connect the positive (+) terminals of all batteries together and the negative (-) terminals of all batteries together. Ensure all connections are secure and tightened. Up to 4 battery packs can be connected in parallel for a maximum capacity of 20.48kWh.

Video 4: Illustrates how to connect batteries in parallel.

Fits **BCI Group24** Battery Box Size

10.23X6.61X8.23 inches



24
BCI Group

23
lbs

Figure 2: The WattCycle battery is designed to fit BCI Group 24 battery boxes.

OPERATING

The WattCycle 12V 100Ah LiFePO4 battery is highly versatile and suitable for a wide range of applications due to its high performance and robust design.

Typical Applications:

- **RVs and Marine:** Provides reliable power for appliances, lighting, and electronics while off-grid or on the road/water.
- **Golf Carts:** Offers high capacity and long cycle life for extended use.
- **Home Energy Storage:** Can be integrated into solar systems for backup power or off-grid living.
- **Other Applications:** Suitable for battery-powered lawn mowers, trimmers, and various industrial or research applications requiring stable and long-lasting power.

4S4P Max. 20.48kWh

Apply to your power systems



Figure 3: Example of a 4S4P power system setup with WattCycle batteries, providing up to 20.48kWh.

More Energy for Your Golf Carts



200A discharge current for 2 minutes

Figure 4: WattCycle batteries provide ample power for golf carts, supporting up to 200A discharge current for 2 minutes.

MAINTENANCE

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

Temperature Considerations:

The battery is designed to operate in a wide temperature range. For discharge, it can function from -4°F (-20°C) to 158°F (70°C). For charging, the recommended temperature range is 32°F (0°C) to 122°F (50°C). The built-in BMS includes low-temperature protection to prevent charging below 32°F (0°C) and discharging below -4°F (-20°C), safeguarding the battery cells.

Low Temperature Protection



Min. Discharge Temperature

-4°F(-20°C)

Max. Discharge Temperature

158°F(70°C)

Figure 5: The battery features low-temperature protection for safe operation in various climates.

Battery Management System (BMS) Protection:

The integrated 100A BMS provides critical protection features:

- **Overcurrent Protection:** Automatically disconnects the battery if discharge current exceeds 300±50A.
- **High Temperature Protection:** Prevents operation outside safe temperature limits.
- **Short Circuit Protection:** Protects against damage from short circuits.
- **Overcharging Protection:** Prevents damage from excessive charging voltage.
- **Over-discharging Protection:** Prevents damage from excessive discharge.

Multiple Protection 100A BMS



Figure 6: The 100A BMS provides multiple layers of protection for enhanced safety and longevity.

Storage:

For long-term storage, ensure the battery is charged to approximately 50% State of Charge (SOC) and stored in a cool, dry place away from direct sunlight and extreme temperatures. Periodically check the battery voltage and recharge if necessary to prevent deep discharge.

TROUBLESHOOTING

If you encounter issues with your WattCycle battery, consider the following common troubleshooting steps:

- **No Power Output:** Check all cable connections for tightness and proper polarity. Ensure the battery is sufficiently charged. The BMS may have triggered a protection mode (e.g., over-discharge).
- **Battery Not Charging:** Verify the charger is compatible with LiFePO4 batteries and is functioning correctly. Check charging temperature (must be above 32°F/0°C). Ensure charger connections are secure.
- **Reduced Performance:** This could indicate a low state of charge, an issue with the connected load, or a triggered BMS protection (e.g., high temperature, overcurrent). Allow the battery to cool if it's hot.

- **Unusual Behavior:** If the battery is behaving unexpectedly, disconnect it from all loads and chargers, wait a few minutes, and then reconnect. If the issue persists, refer to the warranty and support section.



Item Weight	23.2 pounds
Number Of Cells	4
Terminal Type	Screw Terminal
Amperage	100 Amps
Max Continuous Discharge Current	100A
Overcurrent Protection Disconnect	300±50A
Discharge Temperature Range	-4°F (-20°C) to 158°F (70°C)
Charge Temperature Range	32°F (0°C) to 122°F (50°C)
Cycle Life	Up to 15,000 cycles

WARRANTY AND SUPPORT

WattCycle is committed to providing safer, smarter energy storage solutions. Your 12V 100Ah LiFePO4 battery comes with a **5-Year Worry-Free Warranty**, which includes free replacement for manufacturing defects. Every battery undergoes rigorous 72-hour stress testing (temperature, vibration, and load tests) before shipping to ensure quality and reliability.

For any questions, troubleshooting, or setup assistance, our Nevada-based customer support team is available **24/7**. You can reach out to WattCycle Shop for comprehensive technical support and service.

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

