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LOSSIGY 12V200AH

LOSSIGY 12V 200AH LiFePO4 Lithium Battery User Manual

Model: 12V200AH

1. Introduction

This manual provides essential information for the safe and efficient operation of your LOSSIGY 12V 200AH LiFePO4 Lithium Battery. This deep cycle battery is designed for various applications, including solar systems, recreational vehicles (RVs), and off-grid power solutions. Please read this manual thoroughly before installation and use.

2. Safety Information

Adherence to safety guidelines is crucial for preventing damage to the battery and ensuring user safety. The LOSSIGY LiFePO4 battery incorporates a Battery Management System (BMS) for enhanced safety.

- **Do Not Disassemble:** Attempting to disassemble the battery can lead to severe injury or damage.
- **Avoid Short Circuits:** Ensure proper terminal connections to prevent short circuits.
- **Temperature Control:** Do not expose the battery to temperatures above 60°C (140°F) or throw it into fire.
- **Series/Parallel Connections:** This battery can be connected in series (up to 4 units) and in parallel. Always follow the specific instructions provided in the 'Setup and Installation' section for series connections to ensure proper function and safety.
- **Charging Voltage:** Ensure charging voltage is between 14.2V and 14.6V.
- **Physical Damage:** While designed for safety, avoid external injury to the battery.



Image: LOSSIGY 12V 200AH LiFePO4 Lithium Battery. This image displays the battery unit, highlighting its specifications and a warning label regarding safe handling and usage.

3. Product Overview and Features

The LOSSIGY 12V 200AH LiFePO4 Lithium Battery is engineered for reliable and long-lasting power delivery.

Key Features:

- **Grade-A LiFePO4 Cells:** Manufactured with automotive-grade LiFePO4 cells, offering higher energy density, stable performance, and greater power.
- **Integrated BMS:** Features an intelligent Battery Management System (BMS) with low voltage, high voltage, high temperature, overcharge, and over-discharge cut-off functions. The BMS also automatically balances cells in series or parallel configurations.
- **Extended Lifespan:** Designed for a 10-year lifespan with over 4000 cycles, significantly outperforming traditional lead-acid batteries.
- **Enhanced Safety:** The LiFePO4 chemistry ensures the battery will not overheat, burn, or explode under high temperature or overcharge conditions. It maintains safety even if externally damaged.
- **Wide Application:** Suitable for marine use, trolling motors, RVs, campers, golf carts, medical devices, electric mobility scooters, off-road vehicles, household energy storage, and off-grid applications.
- **Durable Construction:** Battery case made of ABS plastic, offering high temperature resistance and IP65 waterproof rating. It is non-toxic, harmless, and pollution-free.

PRODUCT STRUCTURE



Battery Case:

Made of ABS plastic, high temperature resistant, waterproof grade IP65, non-toxic, harmless and pollution-free



***BMS**:Intelligent battery control system, with low voltage, high voltage, high temperature, overcharge and over discharge cut-off function, can automatically balance in series or parallel.*



***Cells**:Automotive LiFePO4 cell, high energy density, highest safety level, super long service life.*

Image: Product Structure. This diagram illustrates the components of the LOSSIGY battery, including the robust ABS plastic case, the intelligent Battery Management System (BMS), and the high-quality automotive-grade LiFePO4 cells.

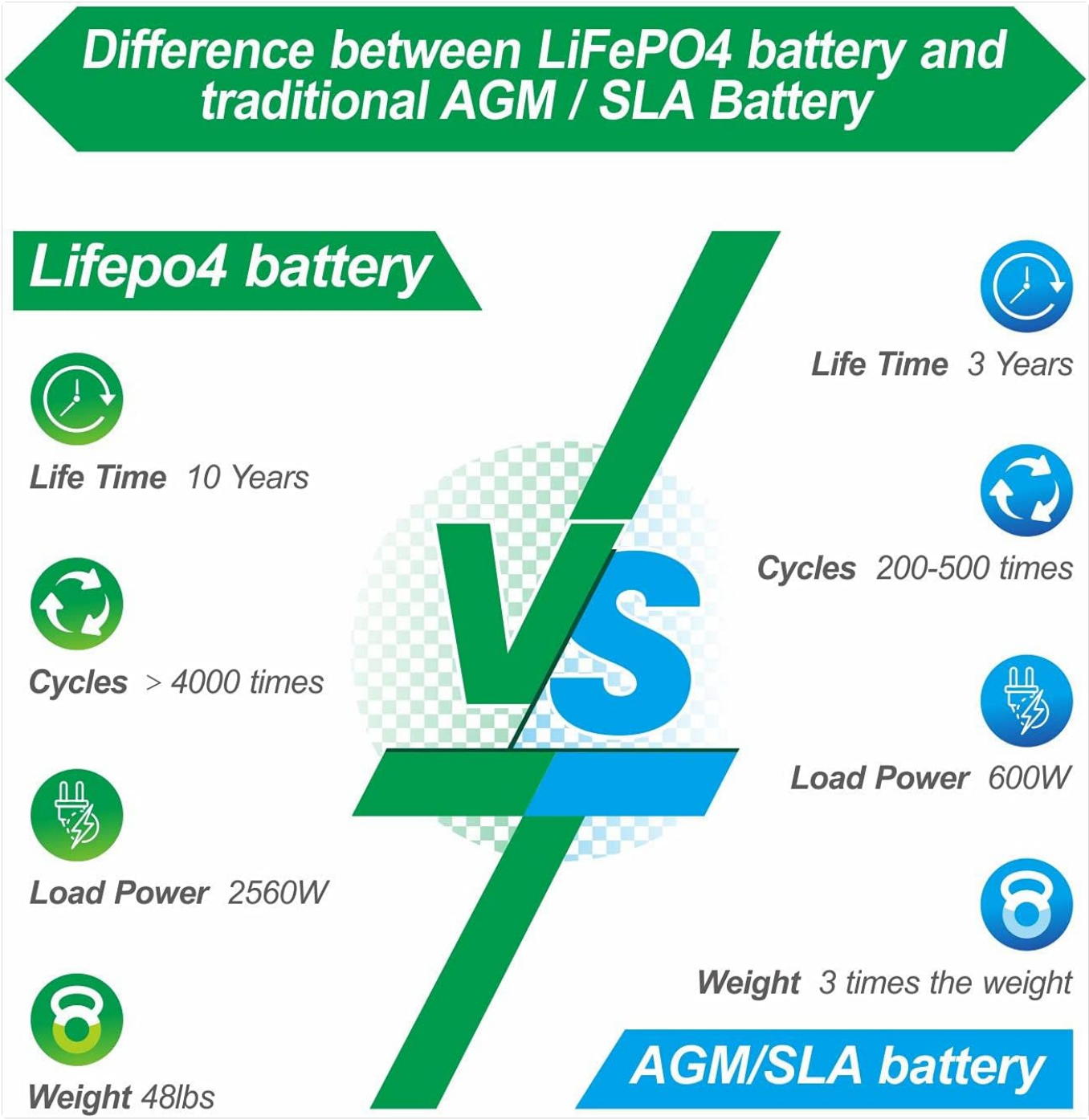


Image: LiFePO4 vs. AGM/SLA Battery Comparison. This chart visually compares the advantages of LiFePO4 batteries over traditional AGM/SLA batteries in terms of lifespan (10 years vs. 3 years), cycle life (>4000 cycles vs. 200-500 cycles), load power (2560W vs. 600W), and weight (48lbs vs. 3 times the weight).



Image: Superior Performance. This graphic highlights key performance indicators such as 100A maximum continuous charge/discharge current, support for 1280W load power systems, 280A maximum discharge current for 5 seconds, and a wide operation temperature range from -20°C to 60°C.

4. Specifications

Parameter	Value
Nominal Voltage	12.8V
Total Capacity	200Ah
Energy	2560Wh
Max. Continuous Discharge Current	100A
Max. Continuous Load Power	1280W

Max. Inverter Recommend	2000W
Charging Current Recommend	20A-40A
Waterproof Rate	IP65
Charging Temperature Range	0°C to 45°C (32°F to 113°F)
Discharging Temperature Range	-20°C to 60°C (-4°F to 140°F)
Storage Temperature Range	-10°C to 50°C (14°F to 122°F)
Product Dimensions (L x W x H)	19.05 x 6.69 x 9.45 inches
Item Weight	50 pounds
Number of Cells	4
Terminal Type	M8 Terminal
Manufacturer Part Number	12200-1
UPC	736809137707



Image: Product Appearance. This image shows the LOSSIGY battery with its physical dimensions clearly marked, indicating a length of 19.02 inches, a width of 6.69 inches, and a height of 9.45 inches.

5. Setup and Installation

The LOSSIGY 12V 200AH LiFePO4 battery can be connected in series (up to 4 units) or in parallel to meet your power requirements. Always ensure all connections are secure and correct before operation.

Series Connection Procedure (Up to 4 Batteries):

If you intend to connect multiple batteries in series, follow these steps carefully to optimize discharge performance and service life:

1. **Step 1: Fully Charge Each Battery Separately.** Ensure each individual battery is fully charged before attempting series connection.
2. **Step 2: Connect in Parallel and Balance.** Temporarily connect all fully charged batteries in parallel. Allow them to sit in this parallel configuration for at least 2 hours. This step helps to balance the voltage across all units.

3. **Step 3: Verify Voltage and Connect in Series.**Disconnect all batteries from the parallel setup. Measure the voltage of each battery separately. If all battery voltages are equal, you may proceed to connect them in series. If voltages are not equal, repeat Steps 1 and 2 until they are balanced.

Note: Parallel connection can be performed directly without the balancing operation required for series connections.

6. Operating Instructions

Once properly installed, your LOSSIGY LiFePO4 battery is ready for use. Ensure your charging system is compatible with LiFePO4 battery requirements.

- **Initial Charge:** Before first use, ensure the battery is fully charged.
- **Charging Voltage:** The charging voltage should be maintained between 14.2V and 14.6V.
- **Voltage Stabilization:** After a full charge, the battery voltage will temporarily be higher (13.4V-13.8V). This is normal for LiFePO4 batteries. After standing for approximately one day and one night, the voltage will stabilize between 13.4V-13.8V, indicating 100% capacity.
- **Application Examples:** This battery can power various devices. For example, a 80W TV for approximately 28 hours, a 150W fridge for 23 hours (66% duty cycle), or a 700W microwave for 3.5 hours. These times are based on 90% Depth of Discharge (DOD) and 90% efficiency. Actual working times may vary based on specific powering methods and environmental conditions.



Image: Off-Grid Living Examples. This image illustrates the battery's capability to power common household appliances like a TV, fridge, and microwave, providing estimated runtimes for each.



Image: RV and Camping Application. This image shows the LOSSIGY battery being used in an RV and camping environment, symbolizing its utility as a reliable power source for outdoor and mobile applications.

7. Maintenance

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

- **Operating Temperature:** Ensure the battery operates within the specified temperature ranges: Charging (0°C to 45°C), Discharging (-20°C to 60°C).
- **Storage:** For long-term storage, store the battery at greater than 50% capacity. Recharge the battery every 3 months to maintain its health. The ideal storage temperature range is -10°C to 50°C.
- **Terminal Inspection:** Periodically check battery terminals for cleanliness and secure connections.

8. Troubleshooting

This section addresses common inquiries and issues you might encounter.

- **Battery Voltage Drops After Full Charge:** This is a normal characteristic of LiFePO4 batteries. After being fully charged to 14.2V-14.6V, the voltage will naturally settle between 13.4V-13.8V (100% capacity) after approximately one day. This does not indicate a loss of capacity.
- **Issues with Series Connection:** If you experience poor discharge performance or reduced service life after series connection, it is likely due to unbalanced battery voltages. Refer to the 'Series Connection Procedure' in Section 5 and ensure each battery is fully charged and balanced before connecting in series.
- **Battery Not Charging:** Verify that your charger is compatible with LiFePO4 batteries and provides the correct charging voltage (14.2V-14.6V) and recommended current (20A-40A). Check all connections for security. The integrated BMS may also prevent charging if conditions are outside safe parameters (e.g., extreme temperatures, over-discharge).

9. Warranty and Support

The LOSSIGY 12V 200AH LiFePO4 Lithium Battery comes with an exclusive **5-year full device warranty**, ensuring a worry-free experience. For technical support, warranty claims, or any other inquiries, please contact LOSSIGY customer service through your purchase channel or visit the official LOSSIGY website.

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