Rvpozwer RXA1-1

Rvpozwer 12.8V 300Ah LiFePO4 Battery User Manual

Model: RXA1-1

1. Introduction

This manual provides essential information for the safe and efficient operation of your Rvpozwer 12.8V 300Ah LiFePO4 Battery. This battery features a built-in 200A Battery Management System (BMS), offering deep cycle capabilities and reliable performance for various applications. Please read this manual thoroughly before installation and use.

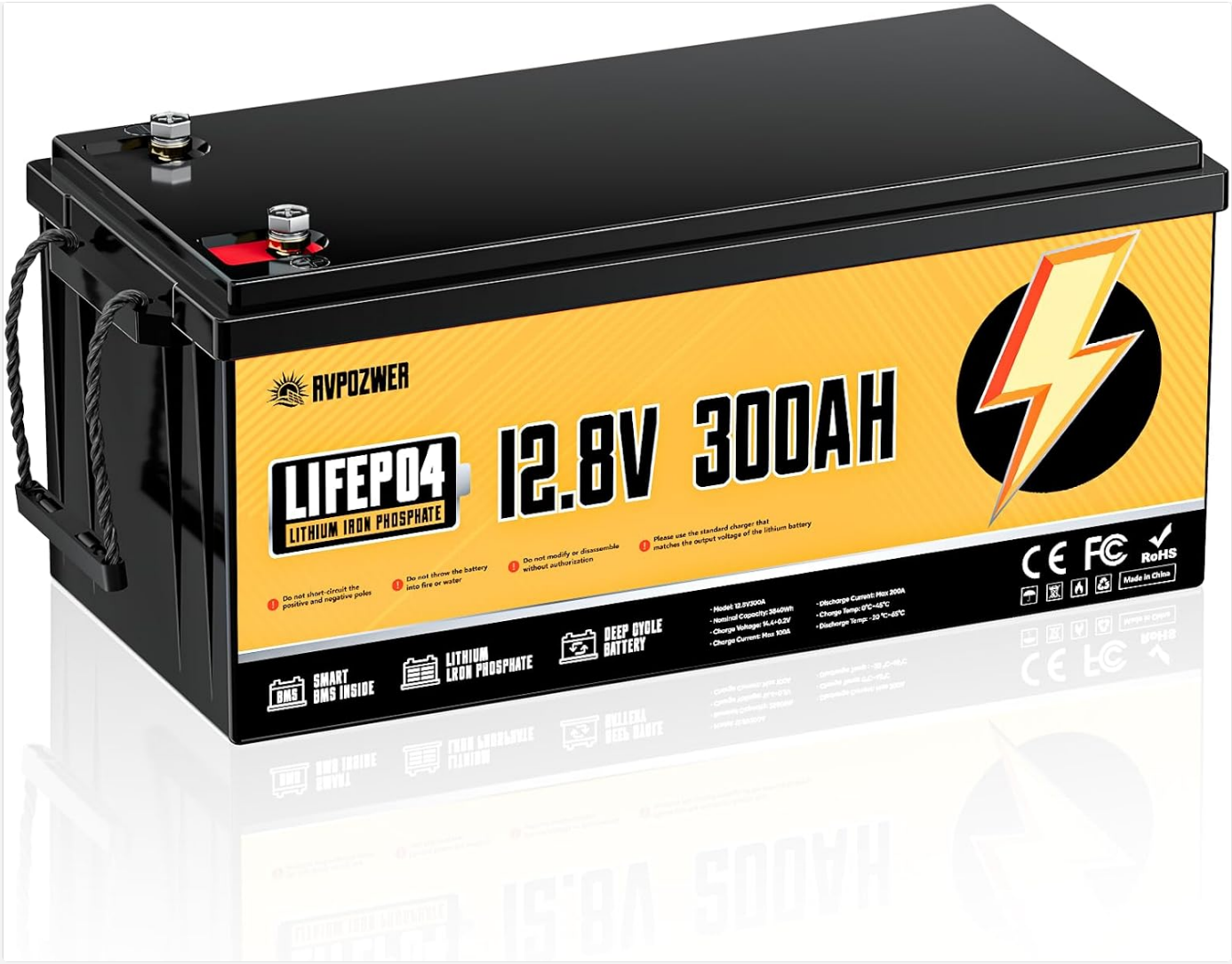


Figure 1: Rvpozwer 12.8V 300Ah LiFePO4 Battery unit.

2. Safety Instructions

Adhering to these safety guidelines is crucial for preventing damage to the battery and ensuring user safety.

- Do not short circuit the battery terminals.
- Do not disassemble, puncture, or modify the battery.
- Use only chargers specifically designed for LiFePO4 batteries with compatible voltage and current ratings.
- Avoid exposing the battery to extreme temperatures outside its specified operating range.
- Keep the battery away from water, fire, and highly flammable materials.
- Ensure proper ventilation during charging and discharging.
- Handle with care to prevent physical damage.

3. Product Overview and Features

The Rvpozwer 12.8V 300Ah LiFePO4 battery is engineered for durability and performance.

- **Extended Lifespan:** Offers 4000 cycles at 100% Depth of Discharge (DOD), 6000 cycles at 80% DOD, and up to 15000 cycles at 60% DOD, providing a significantly longer operational life compared to lead-acid batteries.
- **Grade-A LiFePO4 Cells:** Utilizes high-quality LiFePO4 cells for superior energy density and consistent performance.
- **Advanced 200A Smart BMS:** Integrated Battery Management System protects against overcharge, over-discharge,

over-current, over-voltage, short circuits, and includes low temperature protection.

- **Expandable Power:** Supports connections of up to 4 batteries in series (for up to 51.2V) or in parallel (for up to 1200Ah) to meet diverse power requirements.
- **Versatile Applications:** Suitable for RV appliances, trolling motors, solar systems, marine use, campers, and off-grid setups.
- **Wide Operating Temperature:** Functions reliably from -20°C to 65°C (discharge).

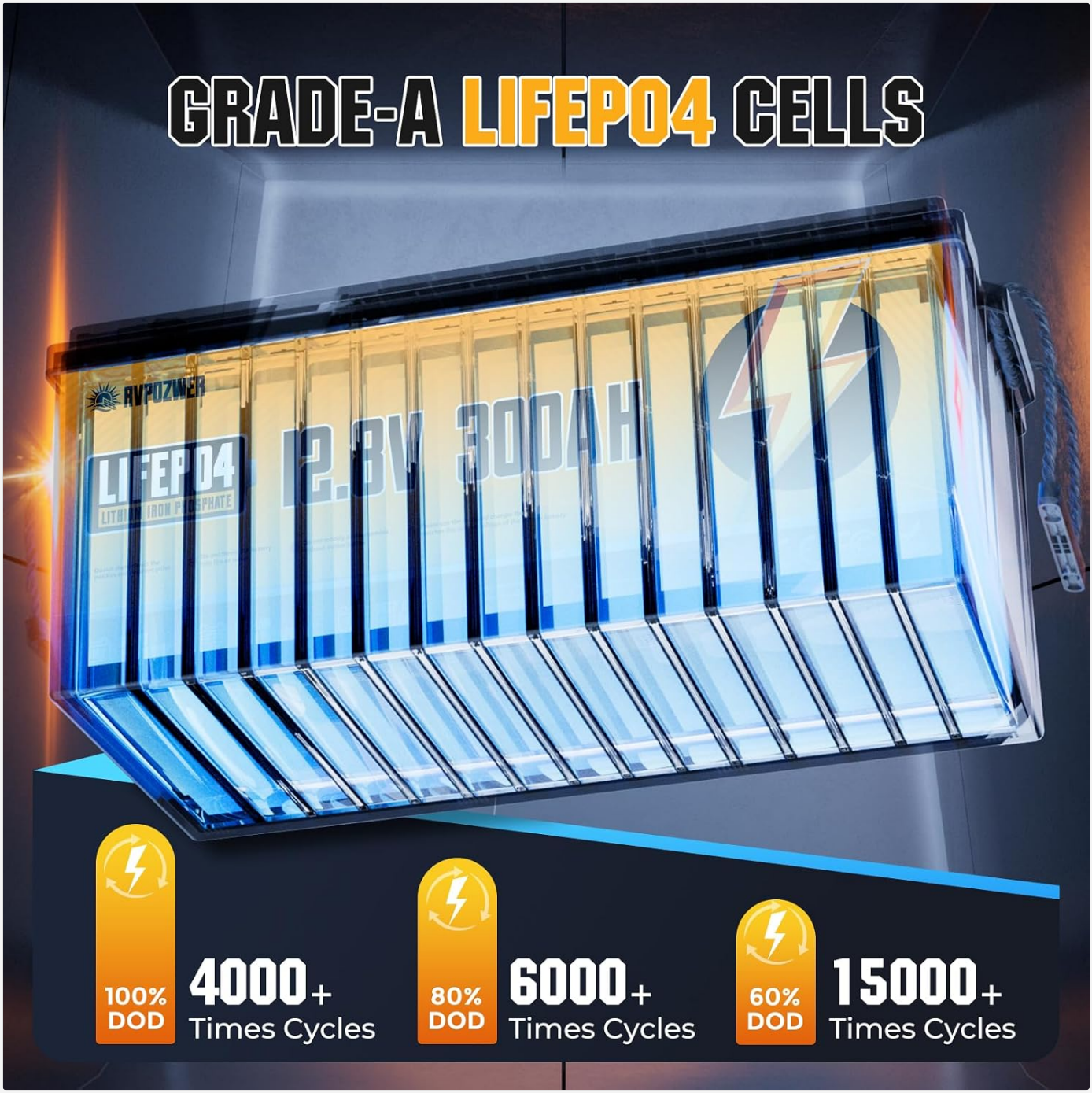


Figure 2: Illustration of Grade-A LiFePO4 cells and their deep cycle performance at various depths of discharge.



Figure 3: Overview of the integrated 200A Battery Management System (BMS) and its protective functions.

4. Setup

Before initial use, ensure the battery is fully charged and properly connected.

1. **Initial Charge:** Connect the battery to a compatible LiFePO4 charger. Ensure the charger's voltage and current settings match the battery's requirements. Charge until the battery is full.
2. **Single Battery Connection:** Connect your load or inverter directly to the battery terminals, ensuring correct polarity (positive to positive, negative to negative).
3. **Series Connection (for higher voltage):** To increase voltage, connect up to 4 batteries in series. Connect the positive terminal of one battery to the negative terminal of the next. Ensure all batteries have similar charge levels before connecting.
4. **Parallel Connection (for higher capacity):** To increase capacity, connect batteries in parallel. Connect all positive terminals together and all negative terminals together. Ensure all batteries have similar charge levels before connecting.



Figure 4: Example of connecting multiple batteries in series and parallel configurations.

5. Operating Instructions

Follow these guidelines for optimal battery performance.

- **Charging:** Always use a dedicated LiFePO4 battery charger. The BMS will manage overcharge protection. Charging is inhibited below 0°C (32°F) due to low temperature protection.
- **Discharging:** The battery can be discharged within its specified current limits. The 200A BMS will protect against over-discharge and over-current. The operating discharge temperature range is -20°C to 65°C (-4°F to 149°F).
- **Monitoring:** Regularly monitor battery voltage and current, especially in multi-battery setups, to ensure balanced operation.



Figure 5: The Rvpozwer LiFePO4 battery powering various applications such as RVs, camping setups, and marine vessels.

6. Maintenance

Proper maintenance ensures the longevity and performance of your battery.

- **Cleaning:** Keep the battery terminals clean and free from corrosion. Use a dry cloth to wipe the battery casing.
- **Storage:** If storing the battery for an extended period, charge it to approximately 50-70% capacity. Store in a cool, dry place, away from direct sunlight and extreme temperatures. Recharge every 3-6 months to prevent deep discharge.
- **Inspection:** Periodically check for any signs of damage, swelling, or loose connections.

7. Troubleshooting

Refer to this section for common issues and their solutions.

- **Battery Not Charging:**
  - Verify charger compatibility and proper connection.
  - Check if the ambient temperature is below 0°C (32°F), as the BMS will prevent charging in cold conditions.
  - Ensure the charger is functioning correctly.
- **Battery Not Discharging/No Power Output:**
  - Check all connections for looseness or corrosion.
  - Confirm the load is within the battery's maximum continuous discharge current (200A).
  - The BMS may have activated a protection mode (e.g., over-discharge, over-current, over-voltage). Disconnect the load and allow the battery to rest or recharge if over-discharged.
- **Reduced Capacity:**

- Ensure the battery is being fully charged.
- Verify that the load is not exceeding the battery's specifications.
- Consider the number of cycles the battery has undergone; capacity naturally degrades over many cycles.

8. Specifications

Technical specifications for the Rvpozwer 12.8V 300Ah LiFePO4 Battery.



Figure 6: Physical dimensions and energy capacity of the Rvpozwer 12.8V 300Ah LiFePO4 Battery.

Feature	Specification
Model	RXA1-1
Nominal Voltage	12.8V

Feature	Specification
Nominal Capacity	300Ah
Energy	3840Wh
Built-in BMS	200A
Cycle Life (100% DOD)	4000+ cycles
Cycle Life (80% DOD)	6000+ cycles
Cycle Life (60% DOD)	15000+ cycles
Discharge Temperature	-20°C to 65°C (-4°F to 149°F)
Charge Temperature	0°C to 45°C (32°F to 113°F)
Product Dimensions	22.05 x 10.43 x 10.43 inches
Item Weight	56.2 pounds (25.54 kg)
Manufacturer	Rvpozwer

9. Warranty and Support

Rvpozwer provides an extensive warranty and lifetime technical support for this product. For any questions, technical assistance, or warranty claims, please contact Rvpozwer customer support through the official channels where you purchased the product. Our dedicated team is available to assist you from purchase to installation and beyond.

© 2025 Rvpozwer. All rights reserved.

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