Elefast 12V330AH RVs

Elefast 12V 330AH LiFePO4 Battery Instruction Manual

Model: 12V330AH RVs

Brand: Elefast

1. Introduction and Overview

The Elefast 12V 330AH LiFePO4 Battery is an extra-large capacity lithium battery designed for demanding applications such as RVs, solar energy systems, and off-grid setups. It features a built-in 200A Battery Management System (BMS) with Bluetooth connectivity for real-time monitoring. This manual provides essential information for safe and efficient use of your battery.



Image 1.1: Elefast 12V 330AH LiFePO4 Battery integrated into an RV system.

2. Safety Information

Please read and understand all safety instructions before operating the battery. Failure to follow these instructions may result in serious injury or damage to the battery.

- **Charger Compatibility:** Use only a 14.6V (20-80A) lithium battery charger. Using an incompatible charger may damage the battery and void the warranty.

- **Temperature Protection:** The built-in BMS includes low-temperature protection. The battery will automatically cut off charging if the temperature drops below 32°F (0°C) and will stop discharging if the temperature drops below -4°F (-20°C). It will resume automatically when temperatures return to safe operating ranges.
- **High Temperature Protection:** The BMS will also cut off the battery if the temperature exceeds 132°F (55°C) to prevent damage.
- **Physical Handling:** Do not short circuit, disassemble, crush, puncture, or incinerate the battery. Avoid exposing the battery to temperatures above 140°F (60°C).
- **Installation:** Ensure all connections are secure and correct polarity is observed (positive to positive, negative to negative).

3. Product Features

- **Extra-Large Capacity:** 12V 330AH LiFePO4 battery with an energy density of 78Wh/lbs, providing ample power for RVs and off-grid systems.
- **EV A+ Grade Safe Cells:** Utilizes high-end EVE Grade A+ Cells for stable performance, enhanced security, and excellent voltage balancing.
- **200A BMS & Multi-Protection:** Integrated intelligent Battery Management System prevents overcharging, over-discharging, overloading, high temperature, and short-circuiting. Includes low-temperature cut-off.
- **Deep Cycle 8000+ & Bluetooth APP:** Offers over 8000 deep discharge cycles, extending battery life to 10+ years. Bluetooth app allows real-time monitoring of battery capacity and status.
- **Robust Construction:** Stable chemical structure ensures high safety. Packaging has undergone extensive simulated tests for durability.



Image 3.1: Overview of the battery's internal structure and BMS protection features.

4. Package Contents

Verify that all items are present in the package:

- Elefast 12V 330AH LiFePO4 Battery
- Instruction Manual

5. Setup

5.1 Terminal Connection

Connect your system cables to the battery terminals. Ensure correct polarity (red for positive, black for negative) and tighten connections securely to prevent arcing and ensure optimal performance.



Image 5.1: Top view of the battery showing positive and negative terminals.

5.2 Bluetooth App Connection

Download the Elefast Bluetooth app from your device's app store. Follow the in-app instructions to connect to your battery for real-time monitoring of its status, including capacity, voltage, current, and temperature.



Image 5.2: Mobile app interface displaying real-time battery data.

6. Operating Instructions

6.1 Charging

The battery can be charged using various methods. Always ensure the charging voltage is 14.6V and the current is between 20-80A.

- **Battery Charger:** A 50A battery charger can fully charge the battery in approximately 6.6 hours.
- **Solar Panels:** An 800W solar panel system can fully charge the battery in approximately 5 hours.
- **Generator:** A generator can fully charge the battery in approximately 4 hours.

If the battery voltage drops below 12V, fully charge it immediately.

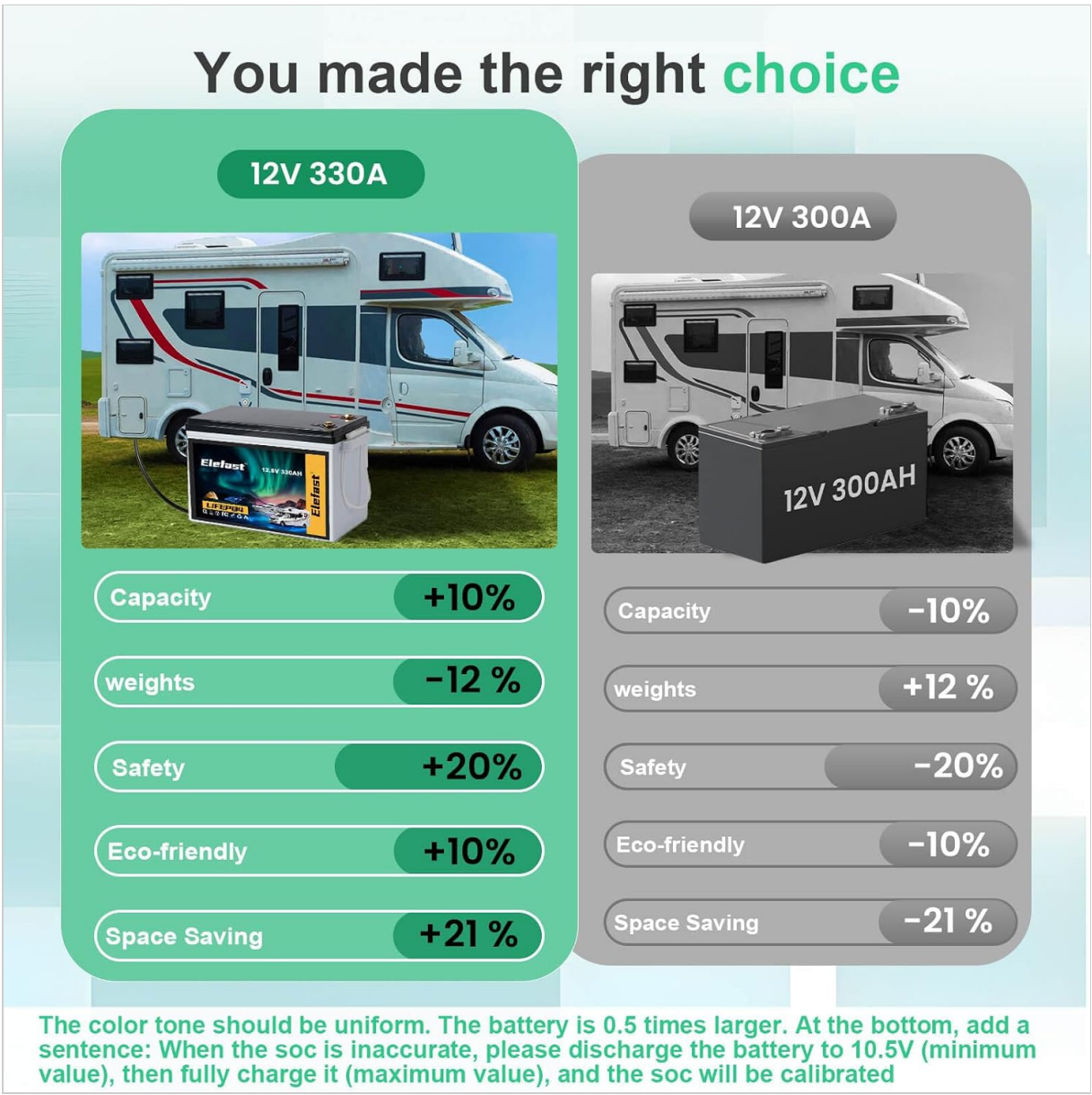


Image 6.1: Various charging methods and estimated times.

6.2 Discharging Capacity

The 12V 330AH battery provides 4224Wh capacity and 2560W output, capable of powering various appliances for extended periods.

- Air-conditioner (2000W): ~2 hours
- Coffee Machine (800W): ~5.12 hours
- Microwave oven (1000W): ~4 hours
- Toaster (600W): ~6.8 hours
- Fridge (150W): ~27 hours
- TV (130W): ~31.5 hours



Image 6.2: Estimated run times for common appliances.

7. Maintenance

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

- **Regular Charging:** It is recommended to charge the battery to 50% every 3 months if it is to be left unused for a long time.
- **Temperature Management:** Avoid prolonged exposure to extreme temperatures. The BMS provides protection, but optimal performance is achieved within recommended operating temperatures.
- **Clean Terminals:** Periodically inspect and clean battery terminals to ensure good conductivity and prevent corrosion.

8. Troubleshooting

The built-in BMS provides multi-protection features. If the battery stops functioning, check the following:

- **Overcharging/Over-discharging:** The BMS will prevent these conditions. If the battery is unresponsive, check the voltage.
- **Overloading/Short-circuit:** The BMS will cut off power to protect the battery from excessive current.

Remove the load and reconnect.

- **Temperature Issues:** If the battery temperature is below -4°F (-20°C) or above 132°F (55°C), the BMS will disable the battery. Allow the battery to return to a safe operating temperature range for automatic recovery.
- **Bluetooth App:** Use the Bluetooth app to diagnose specific fault indicators or check real-time status.



Image 8.1: Temperature ranges for safe charging and discharging.

9. Specifications

Detailed technical specifications for the Elefast 12V 330AH LiFePO4 Battery:

Specification	Value
Brand	Elefast
Model	12V330AH RVs
Product Dimensions (L x W x H)	13.58"D x 7.48"W x 9.64"H
Terminal Type	Bolt Terminal
Battery Capacity	330 Amp Hours

Specification	Value
Voltage	12 Volts
Battery Cell Composition	Lithium Iron Phosphate (LiFePO4)
Item Weight	56.9 pounds (25.85 Kilograms)
Max Charge Current	80A
Max Discharge Current	200A
Peak Point Current	600A
Max Charge Voltage	14.6V
Discharge Cut-off Voltage	10.6V
Charging Temperature	32°F ~ 122°F (0°C ~ 50°C)
Discharge Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Cycle Life	8000+ cycles



Image 9.1: Visual representation of battery specifications.

10. Warranty and Support

Elefast provides a 5-year extended after-sales service for this product. For any inquiries or support needs, please contact Elefast US customer service. You can expect fast feedback within 12 hours.

For further assistance, please visit the Elefast Store on Amazon.