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ExpertPower 12V 35Ah LiFePO4 Battery (B0DM45MBYB)

ExpertPower 12V 35Ah Lithium LiFePO4 Deep Cycle Rechargeable Battery User Manual

INTRODUCTION

This manual provides essential information for the safe and efficient use of your ExpertPower 12V 35Ah Lithium LiFePO4 Deep Cycle Rechargeable Battery. Please read this document thoroughly before installation, operation, and maintenance to ensure proper usage and longevity of the product.

SAFETY INFORMATION

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

- This battery is **not** designed for use as a starting or jump-starting battery for vehicles or generators.
- It is **not compatible** with golf carts and ATVs.
- A dedicated LiFePO4 battery charger is required for charging. Do not use chargers designed for Sealed Lead Acid (SLA) batteries.
- The battery's built-in Battery Management System (BMS) protects against overcharge, deep discharge, overloading, overheating, low temperatures, and short circuits.
- Observe the specified operating temperatures: discharge between -4°F to 140°F (-20°C to 60°C) and charge between 32°F to 140°F (0°C to 60°C).
- For storage, maintain temperatures between 32°F to 86°F (0°C to 30°C).

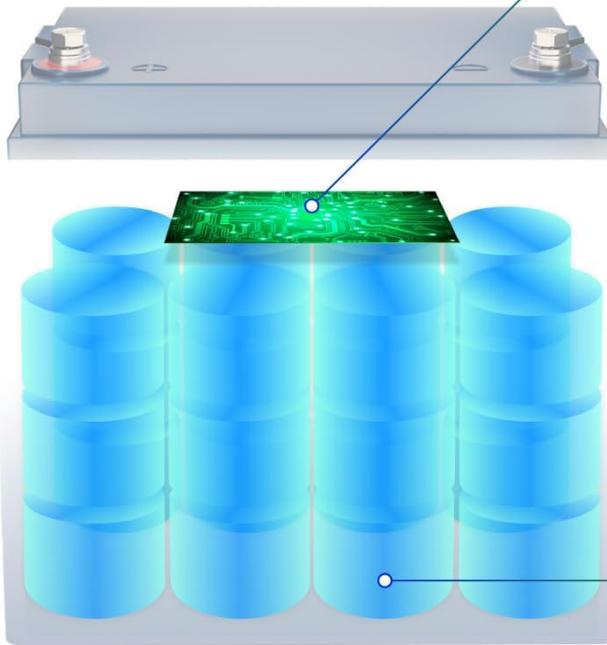
PRODUCT OVERVIEW

The ExpertPower 12V 35Ah Lithium LiFePO4 Deep Cycle Rechargeable Battery is engineered for reliability and performance in various applications.

Intelligent Battery Design

This battery features an advanced design for enhanced safety and performance.

Industry Leading BMS



- Enhanced safety with over 20 protection parameters:
 - Over Charge & Discharge
 - High & Low Temperature
 - Short Circuit
- Increased lifespan
- Improved performance

A+ Grade Cylindrical Cells

- High discharge rate
- Long lifespan
- High energy density

Image: A cutaway diagram illustrating the internal structure of the ExpertPower LiFePO4 battery, showcasing the Battery Management System (BMS) and the A+ Grade Cylindrical Cells. The BMS provides over 20 protection parameters, including safeguards against overcharge, deep discharge, high and low temperatures, and short circuits, contributing to increased lifespan and improved performance. The cylindrical cells are noted for their high discharge rate, long lifespan, and high energy density.

Multipurpose Applications

The ExpertPower 12V 35Ah LiFePO4 battery is suitable for a range of deep cycle applications.

MULTIPURPOSE

EP1235 | 12V 35Ah
Lithium LiFePO4

Know that regardless of your purpose, you can trust our experts



KIDS' RIDE ON



TROLLING MOTOR



SCOOTER



DIY SOLAR PROJECT

* Use not restricted to above applications; compatible with more applications

* Not compatible with golf carts, ATVs or a jump-starting battery for vehicles or generators

Image: A visual representation of the battery's versatility, depicting its use in Kids' Ride On vehicles, Trolling Motors, Scooters, and DIY Solar Projects. It is important to remember that this battery is not compatible with golf carts, ATVs, or for jump-starting vehicles or generators.

Performance and Durability

This battery utilizes unmatched cell technology, offering 4000 to 7000 cycles and an expected lifespan of 10 years. Its prismatic cells undergo rigorous testing for resilience against puncturing, fire, short circuits, and high impact damage.

Cycles (50% DOD):



Weight:



Cost Per Cycle:



Life time

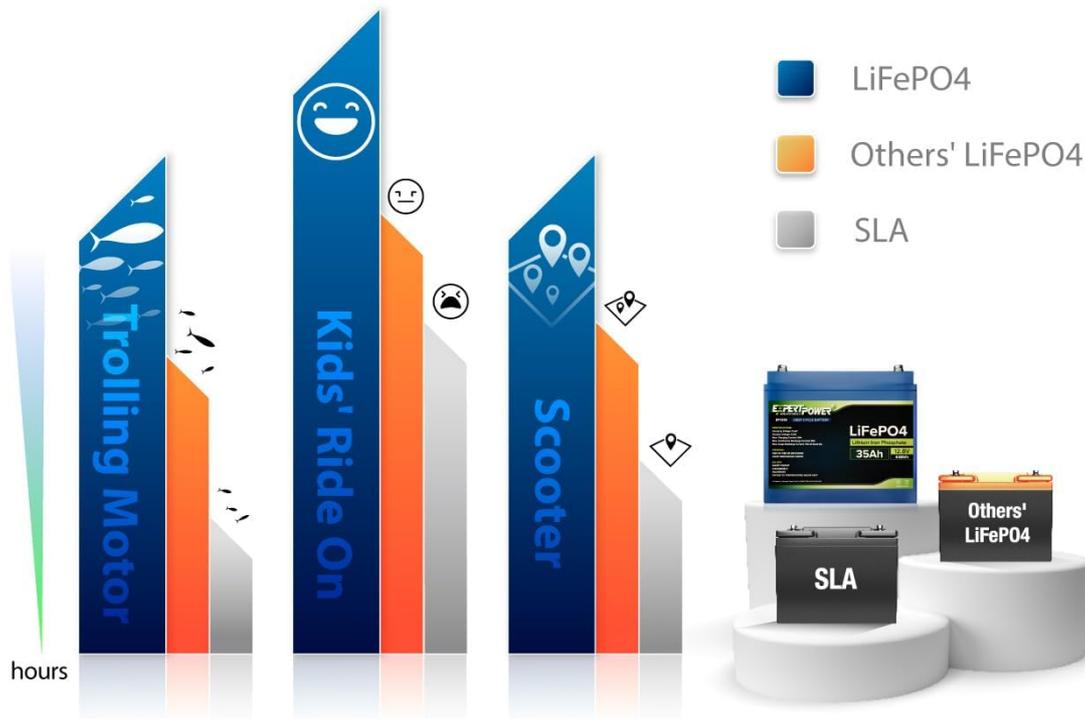


Image: A chart comparing the ExpertPower LiFePO4 battery's performance with other LiFePO4 and SLA (Sealed Lead Acid) batteries. Metrics include cycles at 50% Depth of Discharge (DOD), cost per cycle, weight, and overall lifetime. The ExpertPower LiFePO4 battery demonstrates superior performance across these categories, offering significantly more cycles, lower cost per cycle, reduced weight, and a longer lifespan compared to alternatives.

SETUP

Series and Parallel Connection

The ExpertPower 12V 35Ah LiFePO4 battery supports expansion through series and parallel connections.

4 In Series

48V 35Ah

4 In Parallel

12V 140Ah

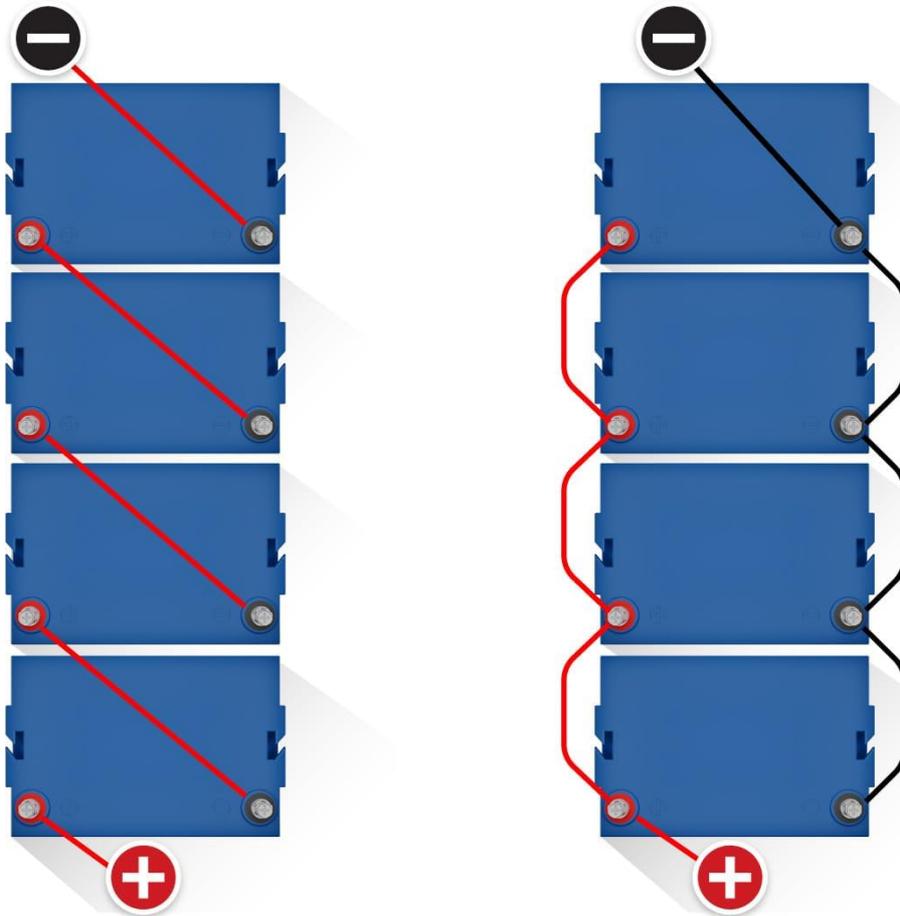
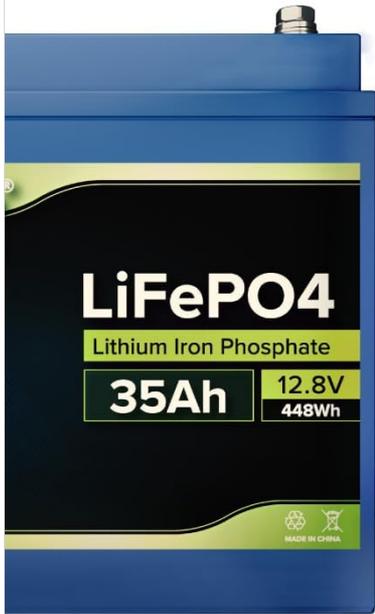


Image: A diagram demonstrating connection methods for multiple batteries. Up to four batteries can be connected in series to achieve 48V 35Ah, or up to four batteries can be connected in parallel to achieve 12V 140Ah. Ensure proper polarity and use appropriate cabling for safe and effective connections. The battery terminals are M6 type.

Charging

Proper charging is essential for the battery's performance and lifespan.



Solar Charging

- Renewable energy source
- Cost-effective
- Resistant to high
- Temperatures



AC Adapter

- Convenience
- Fast charging
- Versatility



***Only use with LiFePO4 compatible chargers and controllers. Do not use with SLA chargers**

Image: This image illustrates two adaptable charging methods for the LiFePO4 battery. The first is Solar Charging, utilizing a solar panel, which is a renewable, cost-effective, and temperature-resistant option. The second is AC Adapter charging, using a standard wall outlet, offering convenience, fast charging, and versatility. Always use LiFePO4 compatible chargers and controllers; never use SLA chargers.

OPERATING

The ExpertPower LiFePO4 battery can be discharged significantly deeper than traditional lead-acid batteries without incurring damage, allowing for a greater usable capacity.

- Ensure the battery operates within the specified discharge temperature range of -4°F to 140°F (-20°C to 60°C).
- Monitor the battery's voltage and current to stay within safe operating parameters, especially when connecting multiple batteries.
- Avoid exceeding the maximum continuous discharge current specified for the battery to prevent BMS activation and potential shutdown.

MAINTENANCE

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

Storage

For extended storage, follow these guidelines:

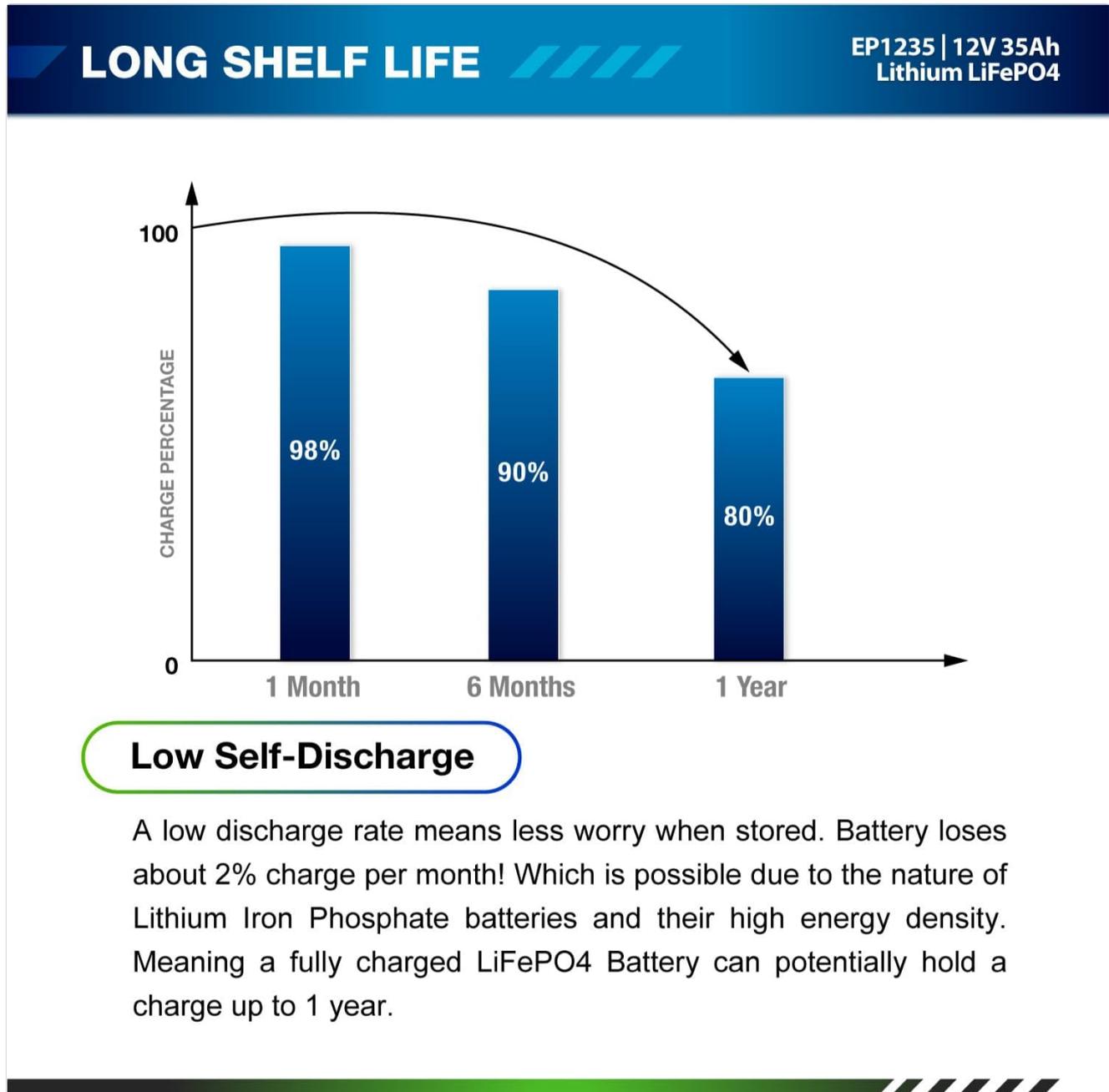


Image: A bar graph illustrating the low self-discharge characteristic of the ExpertPower LiFePO4 battery. It shows that the battery retains approximately 98% of its charge after 1 month, 90% after 6 months, and 80% after 1 year. This low self-discharge rate, attributed to the nature of Lithium Iron Phosphate batteries and their high energy density, allows a fully charged battery to potentially hold a charge for up to one year.

- Store the battery in a cool, dry place with temperatures between 32°F to 86°F (0°C to 30°C).
- Due to its low self-discharge rate (approximately 3% per month), a fully charged LiFePO4 battery can maintain a significant charge for up to one year.
- It is recommended to periodically check the battery's state of charge during long-term storage and recharge if necessary to prevent deep discharge.

If you encounter issues with your ExpertPower LiFePO4 battery, consider the following:

- **Battery Not Charging:** Ensure you are using a dedicated LiFePO4 compatible charger. Check all connections for proper contact and polarity. Verify the charger is functioning correctly.
- **Battery Shutting Off:** The built-in BMS may have activated due to an unsafe condition such as overcharge, deep discharge, overloading, overheating, or low temperature. Allow the battery to return to a safe operating temperature or remove the load.
- **Low Voltage Output:** Check the battery's state of charge. If multiple batteries are in series or parallel, ensure all connections are secure and that individual batteries are balanced.
- **Reduced Performance:** Confirm the battery is being used within its specified operating temperature range. Ensure the charging parameters are correct and the battery is fully charged before use.

If problems persist, refer to the warranty and support section for further assistance.

SPECIFICATIONS

Key technical specifications for the ExpertPower 12V 35Ah Lithium LiFePO4 Deep Cycle Rechargeable Battery:

| Specification | Value |
|-----------------------------|-------------------------------|
| Model Number | B0DM45MBYB |
| UPC | 840140951417 |
| Nominal Voltage | 12.8 Volts (DC) |
| Capacity | 35Ah |
| Battery Cell Composition | Lithium-Phosphate (LiFePO4) |
| Item Weight | 10.6 pounds |
| Terminal Type | M6 |
| Expected Life Cycles | 2500-7000 cycles |
| Expected Lifespan | 10 years |
| Discharge Temperature Range | -4°F to 140°F (-20°C to 60°C) |
| Charge Temperature Range | 32°F to 140°F (0°C to 60°C) |
| Storage Temperature Range | 32°F to 86°F (0°C to 30°C) |

Dimensions

Top View



Terminal Specifications:

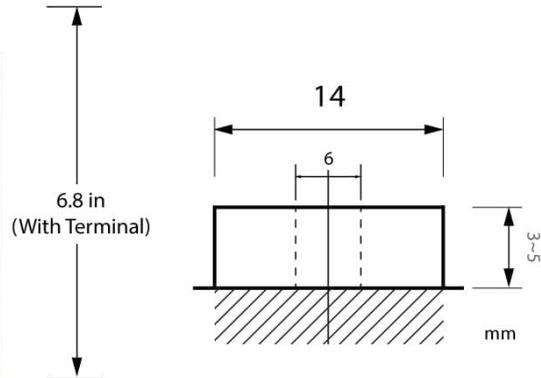
M6 Terminal



Front View



M6 Diagram



Weight: 10.6 Lbs

Image: A detailed diagram providing the physical dimensions of the ExpertPower 12V 35Ah LiFePO4 battery. The top view shows a width of 5.19 inches. The front view indicates a height of 6.56 inches and a length of 7.75 inches. With the terminal, the height is approximately 6.8 inches. The terminal specifications are M6.

WARRANTY AND SUPPORT

ExpertPower offers a warranty and dedicated technical support for this product. For specific details regarding warranty coverage, claims, or technical assistance, please contact ExpertPower customer service directly. Information can typically be found on the official ExpertPower website or through your purchase documentation.