SOK Battery 12V206PH_2PC

SOK Battery 206Ah 12V LiFePO4 Lithium Iron Phosphate Deep Cycle Battery User Manual

Model: 12V206PH_2PC

A pair of SOK 206Ah 12V LiFePO4 batteries, showcasing their robust black casing and terminal connections, ready for installation.

Introduction

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your SOK Battery 206Ah 12V LiFePO4 Lithium Iron Phosphate Deep Cycle Battery. Designed for reliability and longevity, this battery is ideal for various applications including RVs, marine vessels, and off-grid solar systems. Please read this manual thoroughly before using the product.

Product Features

- **Advanced LiFePO4 Technology:** Offers 4000-8000 cycles, significantly outperforming lead-acid batteries (10x longer cycle life) while being less than 40% of their weight. Features no memory effect, ensuring consistent capacity retention.
- **Integrated Intelligent BMS:** Built-in Battery Management System provides comprehensive protection including low temperature charging cut-off, high temperature charging/discharging cut-off, overcharge/discharge protection, overcurrent protection, and short circuit protection. It also features automatic cell balancing for enhanced battery life.
- **Bluetooth APP Monitoring:** Allows real-time monitoring of battery data (voltage, charge/discharge voltage, current) via a mobile application (ABC-BMS APP). This feature aids in long-term battery health management. Connection distance is up to 10 meters.
- **Low Temperature Charging Capability:** Designed to charge in temperatures as low as -4°F (-20°C). When ambient temperature is below 32°F (0°C), the charging current (>10A) activates an internal heating film. Once the internal battery temperature reaches 41°F (5°C), the heating function deactivates, and charging commences. The heating function activates only when charging begins.
- **Versatile Application:** Suitable for a wide range of uses including solar home systems, RVs, campers, solar/wind energy storage, marine applications (ships, boats, trolling motors), and travel trailers.

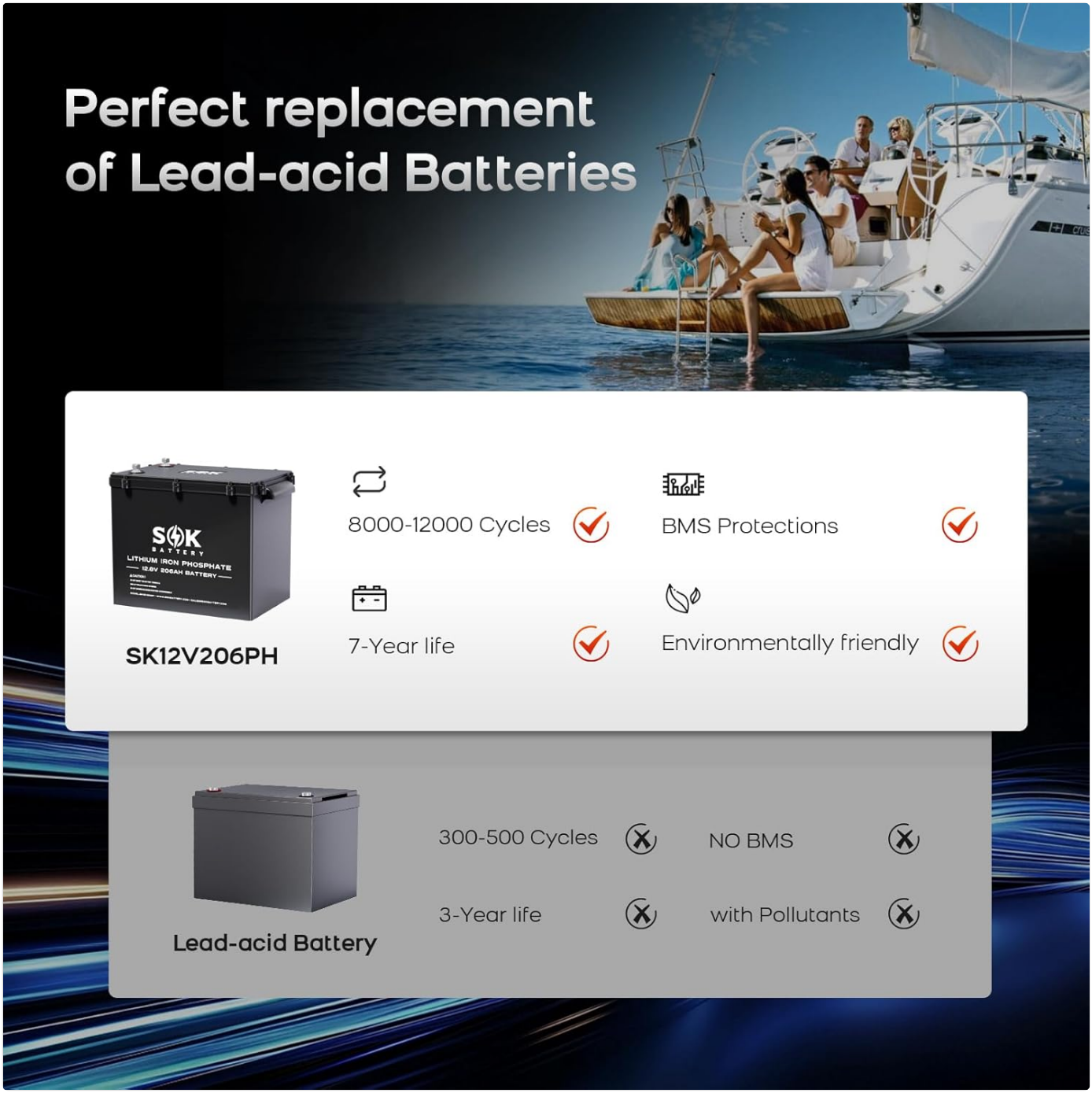

Image: Comparison illustrating the advantages of SOK LiFePO4 batteries over traditional lead-acid batteries, including 8000-12000 cycles vs. 300-500 cycles, BMS protections, 7-year life, and environmental friendliness.

Image: Illustration demonstrating the robust protection features of the SOK battery, including overcharge, IP65 water and dust resistance, and short circuit protection, suitable for marine environments.

Image: A visual collage showcasing the diverse applications of the SOK battery, including use in RVs, marine vessels, solar power systems, and powering various appliances, highlighting its versatility.

Setup

1. Initial Inspection and Charging

Upon receiving your SOK battery, inspect it for any physical damage. While batteries are often partially charged upon delivery, it is recommended to fully charge them before first use to ensure cell balancing and optimal performance. Use a compatible LiFePO4 charger.

2. Connecting Batteries in Series

If connecting multiple batteries in series for higher voltage applications, ensure all batteries are at the same state-of-charge (SOC) before making connections. This is crucial for balanced operation and longevity of the battery bank.

Image: Visual guide for connecting SOK batteries in series, emphasizing the importance of matching the state-of-charge (SOC) for all batteries prior to connection.

3. Bluetooth APP Setup (ABC-BMS)

1. Download the "ABC-BMS" application from your mobile device's app store.
2. Ensure your battery is powered on and within 10 meters of your mobile device.
3. Open the ABC-BMS app and connect to your SOK battery via Bluetooth.
4. Once connected, you can monitor various battery parameters in real-time.

Operating Instructions

General Operation

The SOK LiFePO4 battery is designed for deep cycle applications. It can be discharged significantly without damage, unlike lead-acid batteries. The built-in BMS manages charging and discharging parameters to protect the battery cells.

Low Temperature Charging

The battery features an internal heating system for cold weather charging. If the ambient temperature is below 32°F (0°C) and a charging current greater than 10A is applied, the internal heater will activate. Charging of the cells will only begin once the internal temperature reaches 41°F (5°C). This ensures safe charging in cold conditions.

Image: Explanation of the self-heating feature, showing how the battery manages charging below -4°F (-20°C), below 32°F (0°C), and above 41°F (5°C) to ensure safe operation.

Maintenance

SOK LiFePO4 batteries require minimal maintenance compared to lead-acid batteries. However, regular checks can prolong their lifespan.

- **Terminal Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean and tighten as necessary.
- **Physical Inspection:** Ensure the battery casing is free from damage. The ABS shell provides robust protection.

- **BMS Monitoring:** Utilize the Bluetooth APP to regularly monitor battery health, cell voltage balance, and overall performance.
- **Storage:** If storing the battery for extended periods, ensure it is charged to approximately 50% State of Charge (SOC) and stored in a cool, dry place.
- **Repairability:** SOK batteries are designed with repairability in mind. Components such as individual cells and the BMS board can be replaced if necessary, extending the overall service life of the battery.

Troubleshooting

Battery Enters Sleep Mode

The battery may enter a "sleep mode" after several hours of no charge or discharge activity to conserve power. If the battery appears unresponsive:

- **Solution:** Wake the battery up by applying a charging current. Connect a compatible charger, and the battery should exit sleep mode and resume normal operation.

Bluetooth Connectivity Issues

- **Check Distance:** Ensure your mobile device is within 10 meters of the battery.
- **App Restart:** Close and reopen the ABC-BMS app.
- **Battery Power:** Confirm the battery is powered on.

Battery Not Charging in Cold Temperatures

- **Check Current:** Ensure the charging current is greater than 10A to activate the internal heater.
- **Wait for Heating:** The battery will not charge until its internal temperature reaches 41°F (5°C). Allow time for the heating function to warm the cells.

Specifications

Attribute	Detail
Brand	SOK Battery
Model Number	12V206PH_2PC
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Voltage	12V
Capacity	206Ah
Cycle Life	4000-8000 cycles
Low Temperature Disconnect	Yes
Built-in Heater	Yes (for charging down to -4°F / -20°C)
Shell Material	ABS
Weight (per battery)	Approximately 43.4 pounds (19.68 kg)

Attribute	Detail
Product Dimensions (L x W x H)	13.31 x 9.06 x 10.26 inches
Manufacturer	SOK

Image: Detailed dimensions and weight of the SOK battery, indicating its compact size and manageable weight for various installations.

Warranty and Support

SOK Battery is committed to providing high-quality products and excellent customer service.

- **Warranty Registration:** It is recommended to register your product for warranty purposes. Refer to the SOK Battery official website or included documentation for registration details.
- **Customer Support:** For any technical assistance, troubleshooting, or warranty claims, please contact SOK Battery customer support. Many users have reported responsive and helpful support via text messages and other channels.

- **Protection Plans:** Additional protection plans may be available for purchase, offering extended coverage beyond the standard warranty. Check product listings or contact your retailer for details on available plans.