DATOUBOSS 12V200Ah

DATOUBOSS 12V 200Ah LiFePO4 Battery User Manual

Model: 12V200Ah

1. Introduction

This manual provides comprehensive instructions for the safe and efficient operation, installation, and maintenance of your DATOUBOSS 12V 200Ah LiFePO4 Deep Cycle Battery. Please read this manual thoroughly before using the battery to ensure proper function and longevity.

Image 1.1: The DATOUBOSS 12V 200Ah LiFePO4 Battery, showcasing its compact design and terminal posts.

2. Safety Instructions

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

- **Do not short-circuit:** Avoid connecting the positive and negative terminals directly. This can cause

severe damage to the battery and pose a fire hazard.

- **No modification or disassembly:** Do not attempt to modify, disassemble, or open the battery casing without authorization. Unauthorized alterations void the warranty and can lead to dangerous situations.
- **Avoid extreme conditions:** Do not expose the battery to fire, water, or extreme temperatures outside the specified operating range.
- **Use appropriate charger:** Always use a standard charger that is compatible with the output voltage and chemistry of a lithium iron phosphate battery.
- **BMS Protection:** The integrated Battery Management System (BMS) provides protection against overcharge, deep discharge, overcurrent, overvoltage, and extreme temperatures. However, proper handling is still required.

Image 2.1: Illustration of the built-in BMS (Battery Management System) providing multiple security protections, including overcharge, over-discharge, overvoltage, overcurrent, overload, short circuit, and temperature protection.

3. Product Features

The DATOUBOSS 12V 200Ah LiFePO4 battery offers advanced performance and reliability:

- **Premium LiFePO4 Cells:** Constructed with automotive-grade lithium iron phosphate cells for high

energy density, stable performance, and increased power output.

- **Integrated 200A BMS:** Features a robust Battery Management System that ensures optimal charging and discharging, automatic balancing, and comprehensive protection against various electrical faults.
- **Extended Cycle Life:** Designed for deep cycling with over 5000 cycles and an expected lifespan exceeding 10 years, significantly outperforming lead-acid batteries.
- **Flexible Configuration:** Supports both series and parallel connections, allowing for system customization up to 4P4S (51.2V 800Ah) to meet diverse voltage and capacity requirements.
- **Wide Temperature Range:** Operates effectively in a broad range of temperatures, from -20°C to 65°C (-4°F to 150°F) for discharge and 0°C to 45°C (32°F to 113°F) for charge.
- **Lightweight Design:** Weighs approximately 18 kg (40.2 lbs), making it considerably lighter than comparable lead-acid batteries.

Image 3.1: An exploded view illustrating the internal components of the 12V 200Ah LiFePO4 battery, highlighting the BMS and indicating a lifespan of up to 15,000 cycles and over 10 years.

Image 3.2: Overview of key features including advanced BMS, long life over 10 years, serial and parallel connection capability, large capacity, wide application range, and environmental friendliness.

4. Setup

Proper setup is essential for the battery's performance and safety.

4.1 Physical Installation

- Ensure the battery is placed on a stable, flat surface in a well-ventilated area.
- Keep the battery away from direct sunlight, heat sources, and flammable materials.
- The battery terminals are M8 size. Use appropriate M8 connectors for secure connections.

Image 4.1: Detailed dimensions of the battery (52.6cm x 22cm x 23.5cm or 20.7in x 8.7in x 9.3in) and its weight (18.25 kg), along with an M8 terminal illustration.

4.2 Series and Parallel Connections

The DATOUBOSS LiFePO4 battery supports both series and parallel connections to achieve desired voltage and capacity. Always ensure all batteries are of the same model and state of charge before connecting.

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase total capacity (Ah) while maintaining the same voltage (V).
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next battery to increase total voltage (V) while maintaining the same capacity (Ah).
- The system can be configured up to 4 batteries in series and 4 batteries in parallel (4P4S) for a maximum power of 4.096 kWh (51.2V 800Ah).

5. Operating Instructions

Follow these guidelines for optimal performance and longevity of your battery.

5.1 Charging

- Ensure the charger is specifically designed for LiFePO4 batteries and matches the battery's voltage.
- The recommended charging temperature range is 0°C to 45°C (32°F to 113°F).
- The maximum continuous charging current is 100A. Do not exceed this limit.

5.2 Discharging

- The recommended discharging temperature range is -20°C to 65°C (-4°F to 150°F).
- The maximum continuous discharging current is 200A. Avoid exceeding this limit to prevent damage.
- The BMS will automatically cut off power if the battery is discharged below its safe voltage limit.

Image 5.1: Illustration demonstrating the battery's ability to cope with extreme temperature variations, with excellent continuous discharge performance from -4°F to 150°F.

5.3 Applications

This battery is suitable for a wide range of applications:

- **Recreational Vehicles (RVs):** Provides reliable power for onboard appliances and systems.
- **Solar Power Systems:** Ideal for off-grid solar energy storage, compatible with MPPT controllers and inverters.

- **Marine Applications:** Powers trolling motors, fishfinders, and electric outboard motors.
- **Household Backup:** Can be integrated into home backup power systems to run essential appliances.
- **Other Uses:** Suitable for ATVs, golf carts, camping setups, and various outdoor power needs.

Image 5.2: Examples of common applications for the battery, including trolling motors, fishfinders, electric outboard motors, ATVs, and golf carts.

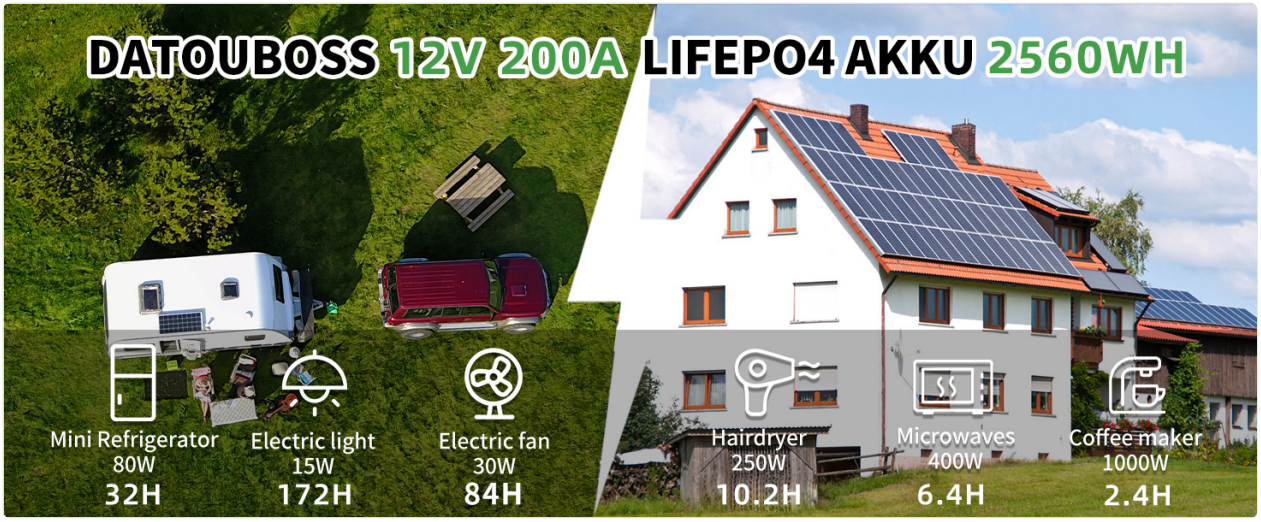


Image 5.3: An illustration of a home backup power supply system utilizing multiple DATOUBOSS batteries (e.g., 51.2V 800Ah system) connected to solar panels and an inverter to power various household appliances.

6. Maintenance

DATOUBOSS LiFePO4 batteries are designed for minimal maintenance due to their robust chemistry and integrated BMS.

- **Regular Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean as necessary.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% state of charge and stored in a cool, dry place.
- **No Watering:** Unlike lead-acid batteries, LiFePO4 batteries do not require watering or electrolyte checks.

Image 6.1: A comparison highlighting the advantages of the DATOUBOSS LiFePO4 battery over traditional lead-acid batteries, including lighter weight, 200A BMS, 100% Depth of Discharge (DOD), 10,000+ cycles, 10+ years expected lifespan, and environmental protection.

7. Troubleshooting

The integrated BMS handles most common issues. If you encounter problems, consider the following:

- **No Power Output:** Check all cable connections to ensure they are secure and correctly polarized. Verify the battery's state of charge. The BMS may have activated a protection mode (e.g., over-discharge).
- **Charging Issues:** Ensure the charger is compatible with LiFePO4 batteries and functioning correctly. Check the charging temperature is within the specified range (0°C to 45°C).
- **Overcurrent Protection:** If the battery suddenly stops providing power during high load, the BMS may have activated overcurrent protection. Reduce the load and restart the system.
- **Temperature Protection:** If the battery is operating in extremely hot or cold conditions, the BMS may temporarily disable charging or discharging to protect the cells. Allow the battery to return to its optimal temperature range.
- **Unusual Behavior:** If the battery exhibits any unusual behavior not covered here, disconnect it from all loads and chargers and contact customer support.

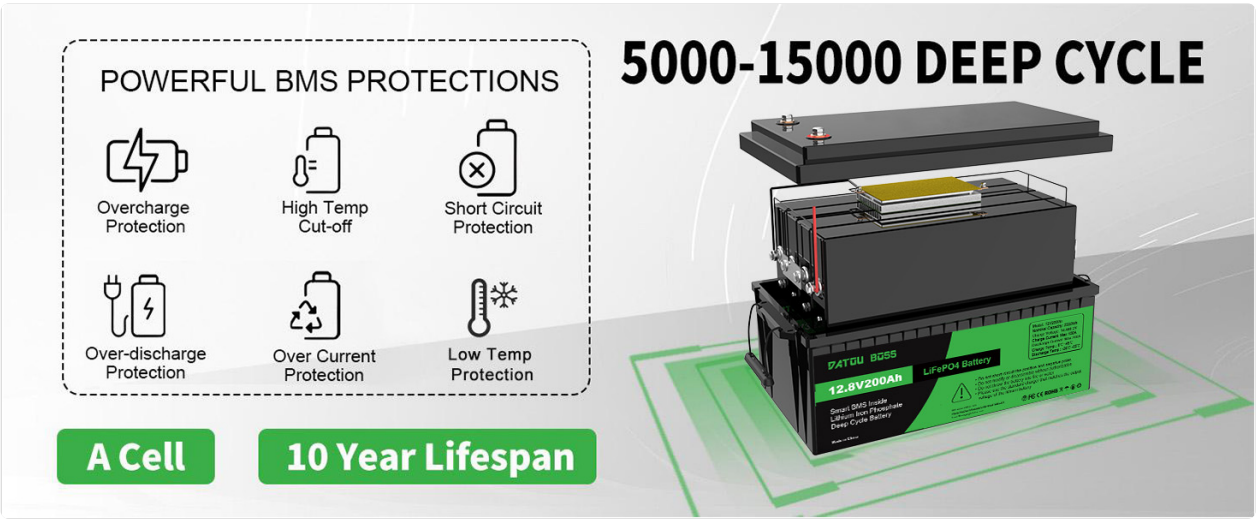


Image 7.1: Visual representation of the powerful BMS protections, including overcharge, high temperature cut-off, short circuit, over-discharge, overcurrent, and low temperature protection, ensuring 5000-15000 deep cycles and a 10-year lifespan.

8. Specifications

Specification	Value
Product Name	LiFePO4 Battery
Rated Capacity	200Ah / 2560Wh
Rated Voltage	12.8V
Voltage Range	10V - 14.6V
Maximum Continuous Charging Current	100A
Maximum Continuous Discharging Current	200A
Charging Voltage	14.4V ± 0.2V
Dimensions (LxWxH)	52.6 x 23.5 x 22 cm (20.7 x 9.3 x 8.7 inches)

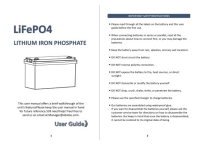
Specification	Value
Weight	18 kg (40.2 lbs)
Charging Temperature	0°C to 45°C (32°F to 113°F)
Discharging Temperature	-20°C to 65°C (-4°F to 150°F)
Cycle Life	5000+ cycles (up to 15,000)
BMS	Integrated 200A BMS

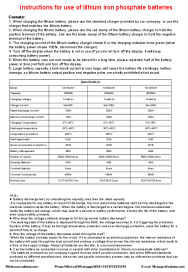
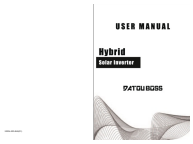
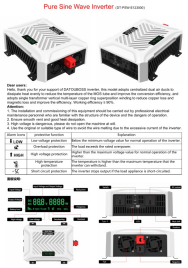
Image 8.1: A summary table of the DATOUBOSS LiFePO4 battery's key specifications, including rated capacity, voltage, current limits, dimensions, weight, and temperature ranges.

9. Warranty and Support

For warranty information, technical support, or any inquiries regarding your DATOUBOSS 12V 200Ah LiFePO4 Battery, please refer to the product packaging or contact DATOUBOSS customer service directly. Keep your purchase receipt for warranty claims.

Related Documents - 12V200Ah

	DATOUBOSS LiFePO4 Battery User Manual: Safety, Specs, and Usage Comprehensive user manual for DATOUBOSS LiFePO4 batteries. Find safety instructions, detailed specifications for models like 12V100Ah, connection guides, storage tips, and warranty information.

	[DATOUBOSS Lithium Iron Phosphate Battery User Guide & Specifications] Comprehensive instructions and specifications for DATOUBOSS 12V Lithium Iron Phosphate (LiFePO4) batteries, including models 100Ah, 200Ah, and 300Ah. Covers important caveats, operational details, and frequently asked questions.
	[DATOUBOSS Rechargeable LiFePO4 Batteries and Voltage Converters - User Manual] Comprehensive user manual for DATOUBOSS rechargeable LiFePO4 batteries and voltage converters, including model DT4811B. Covers features, specifications, and usage guidelines.
	[DATOUBOSS DT-PSW-E123000 Pure Sine Wave Inverter - Specifications and Manual] Detailed specifications, features, and troubleshooting guide for the DATOUBOSS DT-PSW-E123000 Pure Sine Wave Inverter. Learn about its power output, voltage range, protection functions, and common issues.
	[Pure Sine Wave Inverter Manual - DATOUBOSS Specifications and Guide] Comprehensive manual for the DATOUBOSS Pure Sine Wave Inverter, detailing specifications, protective functions, display states, remote control operation, and installation guidelines.
	[DATOUBOSS DT4862 Inverter/Charger User Manual - Installation & Operation Guide] Comprehensive user manual for the DATOUBOSS DT4862 inverter/charger. Learn about installation, operation, safety, parallel function, solar charging, and technical specifications for reliable power solutions.