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› [DATOUBOSS](#) /

› [DATOUBOSS 24V 100Ah LiFePO4 Battery User Manual](#)

## DATOUBOSS 24V 100AH

# DATOUBOSS 24V 100Ah LiFePO4 Battery User Manual

Model: 24V 100AH

## 1. INTRODUCTION

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Thank you for choosing the DATOUBOSS 24V 100Ah LiFePO4 Battery. This manual provides essential information for the safe and efficient operation, installation, and maintenance of your battery. Please read this manual thoroughly before use and keep it for future reference.

This high-performance lithium iron phosphate battery is designed for deep cycle applications, featuring an integrated 100A Battery Management System (BMS) for optimal protection and longevity. It is an ideal power solution for various applications including RVs, solar home systems, boats, and emergency power setups.

## 2. SAFETY INSTRUCTIONS

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**WARNING: Failure to follow these safety instructions may result in serious injury, property damage, or death.**

- Do not short-circuit the positive and negative poles of the battery.
- Do not modify or disassemble the battery without authorization. Unauthorized modifications can lead to dangerous situations and void the warranty.
- Do not throw the battery into fire or water.
- Always use the standard charger that matches the output voltage of the lithium battery.
- Ensure proper ventilation when charging or discharging the battery.
- Keep the battery away from children and pets.
- In case of battery leakage, avoid contact with skin and eyes. If contact occurs, rinse immediately with plenty of water and seek medical attention.



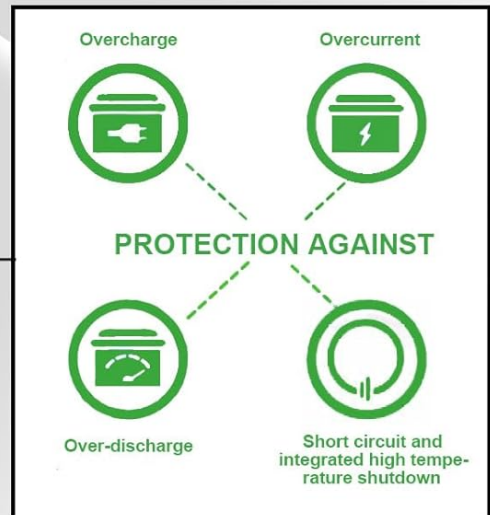
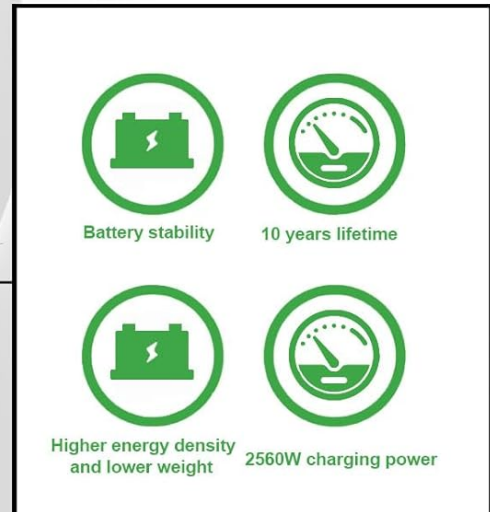
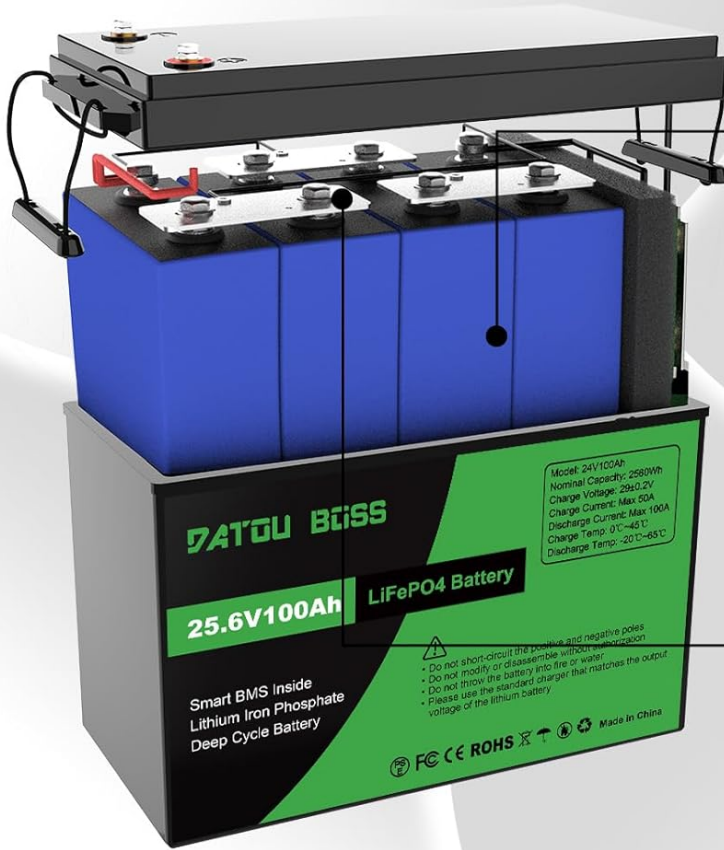
Image: Front view of the DATOUBOSS 24V 100Ah LiFePO4 battery, showing the product label with important safety warnings regarding short-circuiting, disassembly, and disposal.

### 3. PRODUCT OVERVIEW

The DATOUBOSS 24V 100Ah LiFePO4 battery is engineered for superior performance and durability. Key features include:

- **Integrated 100A BMS:** Protects against overcharge, over-discharge, overcurrent, and short circuit. It also features high-temperature shutdown and low-temperature protection.
- **Lightweight and Compact:** Weighing only 18.1kg, it is significantly lighter than traditional lead-acid batteries, making it easier to handle and install.
- **Extended Lifespan:** Offers 8000+ cycles, providing a lifespan of over 10 years, which is four times longer than typical lead-acid batteries.
- **High Energy Density:** Utilizes Grade A cells for stable performance and higher power output.
- **100% Depth of Discharge (DoD):** Allows for full utilization of the battery's capacity without damaging it, unlike lead-acid batteries which are limited to 50% DoD.
- **Environmentally Friendly:** Contains no heavy metals or rare metals, making it non-toxic and safe for the environment.

# More professional & safer BMS



The BMS will shut down all units and automatically turn them back on once the problem is corrected.

Image: An exploded view diagram illustrating the internal components of the DATOUBOSS LiFePO4 battery, highlighting the integrated 100A BMS and its protective functions against overcharge, overcurrent, over-discharge, and short circuit.

# DATOUBOSS LiFePO4-Batterie

# TRADITIONAL lead-acid battery

24V 100Ah



VS



8000-10000	Number of cycles	300-500
10-year	Useful life	3-year
18.1kg	Weight	35 kg
100%	Depth of drain	50%
None	Memorise	Yes
Yes	Environmentally friendly	No

Image: A comparative chart detailing the advantages of DATOUBOSS LiFePO4 batteries over traditional lead-acid batteries, including differences in cycle life, useful life, weight, depth of discharge, memory effect, and environmental friendliness.

## 4. SETUP AND INSTALLATION

The DATOUBOSS 24V 100Ah LiFePO4 battery offers flexibility for various power needs, supporting both series and parallel connections to achieve higher voltage or capacity.

### 4.1 Connection Configurations

- **Parallel Connection (Up to 4P):** Connect batteries in parallel to increase total capacity while maintaining the same voltage (e.g., 24V 400Ah, 10240Wh).
- **Series Connection (Up to 2P):** Connect batteries in series to increase total voltage while maintaining the same capacity (e.g., 48V 100Ah, 5120Wh).
- **Parallel and Series (Up to 4P2S):** Combine both configurations for higher voltage and capacity (e.g., 48V 400Ah,

20480Wh).

**IMPORTANT:** When connecting batteries in series or parallel, ensure all batteries are of the same voltage, capacity, and brand. Always follow proper wiring diagrams and safety precautions. Consult a qualified electrician if unsure.

# UP TO 4P2S MAX OUTPUT POWER 20.48KWH



Image: A visual guide demonstrating how to connect multiple DATOU BOSS LiFePO4 batteries in parallel, series, or a combination of both to achieve desired voltage and capacity configurations, with examples of total power output.

## 4.2 Application Scenarios

This versatile battery is suitable for a wide range of applications:

- **Recreational Vehicles (RVs) & Caravans:** Provides reliable power for extended trips.
- **Solar Home Systems:** Efficient energy storage for off-grid or grid-tied solar installations.
- **Boats & Marine Applications:** Durable and safe for marine environments.
- **Camping:** Portable and long-lasting power for outdoor adventures.

- **Emergency Power & Backup UPS:** Ensures power availability during outages.
- Other uses include trolling motors, fish finders, electric scooters, lawnmowers, and golf carts.



Image: A collage showcasing diverse applications of the DATOUBOSS LiFePO4 battery, such as powering caravans, solar cell systems, boats, camping setups, and providing emergency power during outages.

## 5. OPERATING INSTRUCTIONS

The DATOUBOSS LiFePO4 battery is designed for ease of use and high performance. Its advanced technology ensures efficient charging and discharging.

- **Charging:** Use a compatible LiFePO4 charger with the correct voltage and current specifications. The integrated BMS will manage the charging process to prevent overcharging.
- **Discharging:** The battery can be discharged up to 100% Depth of Discharge (DoD) without affecting its lifespan. The BMS will protect against over-discharge.
- **Temperature Range:** Operate the battery within its specified temperature ranges for charging (0°C to 45°C) and

discharging (-20°C to 65°C) to ensure optimal performance and longevity. The BMS includes temperature protection.

- **No Memory Effect:** The battery can be charged or discharged at any state of charge without developing a memory effect, meaning it's always ready for use.

## 6. MAINTENANCE

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One of the significant advantages of the DATOUBOSS LiFePO4 battery is its minimal maintenance requirements.

- **Maintenance-Free:** Unlike lead-acid batteries, LiFePO4 batteries do not require regular watering or terminal cleaning.
- **Long-Term Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% State of Charge (SoC) and stored in a cool, dry place. Periodically check the charge level and recharge if necessary.
- **Terminal Inspection:** Occasionally inspect the battery terminals for secure connections and ensure they are free from corrosion.

## 7. TROUBLESHOOTING

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The integrated Battery Management System (BMS) is designed to prevent most common issues by protecting the battery from adverse conditions. If you encounter any problems, consider the following:

- **Battery Not Charging:**
  - Check if the charger is properly connected and functioning.
  - Verify that the charger's voltage and current match the battery's requirements.
  - The BMS might have activated over-discharge protection. Try connecting to a compatible charger to reset the BMS.
  - Ensure the ambient temperature is within the charging range (0°C to 45°C).
- **Battery Not Discharging/No Power Output:**
  - Check all connections to the load for looseness or corrosion.
  - The BMS might have activated overcurrent or short-circuit protection. Disconnect the load, wait a few minutes, and reconnect. Reduce the load if it exceeds the battery's maximum continuous discharge current.
  - Ensure the ambient temperature is within the discharging range (-20°C to 65°C).
- **Unusual Odor or Swelling:** Immediately disconnect the battery from all loads and chargers. This indicates a serious issue. Do not attempt to use or repair the battery. Contact customer support immediately.

For persistent issues or concerns not covered here, please contact DATOUBOSS customer support.

## 8. SPECIFICATIONS

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Attribute	Value
Model	24V 100AH
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Nominal Voltage	25.6V
Nominal Capacity	100Ah
Energy	2560Wh

Attribute	Value
Built-in BMS	100A
Max Continuous Charge Current	50A
Max Continuous Discharge Current	100A
Max Power Output	2560W
Cycle Life	8000+ cycles (at 100% DoD)
Lifespan	>10 years
Weight	18.1 kg
Operating Temperature (Charge)	0°C to 45°C
Operating Temperature (Discharge)	-20°C to 65°C
Parallel/Series Support	Up to 4P / Up to 2S (or 4P2S)

## 9. WARRANTY AND SUPPORT

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DATOUBOSS stands behind the quality of its products. This battery comes with a **3-year warranty** from the date of purchase.

The warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, abuse, unauthorized modification, improper installation, or natural disasters.

For any product-related issues, technical assistance, or warranty claims, please do not hesitate to contact our professional 24-hour customer service team. We are committed to providing gentle and patient after-sales support. You can reach us via the contact information provided on the DATOUBOSS official website or through your purchase platform.