

## DATOUBOSS DT-12V100AH

# DATOUBOSS 12V 100Ah LiFePO4 Battery Group 24 User Manual

Model: DT-12V100AH

## 1. INTRODUCTION

Thank you for choosing the DATOUBOSS 12V 100Ah LiFePO4 Battery. This manual provides essential information for the safe and efficient use of your battery. Please read it thoroughly before installation and operation to ensure optimal performance and longevity.

This lithium iron phosphate (LiFePO4) battery is designed for deep cycle applications, offering high energy density, extended lifespan, and enhanced safety compared to traditional lead-acid batteries. It is ideal for various applications including RVs, camping, solar energy systems, off-grid setups, and marine use.

## 2. SAFETY INFORMATION AND WARNINGS

**Please observe the following safety precautions to prevent injury or damage to the battery and connected equipment:**

- **Do not reverse the positive and negative terminals of the battery.** Incorrect polarity can cause severe damage.
- **Do not hit or throw objects at the battery, or step on it.** Physical damage can compromise safety.
- **Do not use metal to connect the positive and negative terminals of the battery directly.** This can cause a short circuit.
- **Do not weld the battery directly and do not pierce the battery with nails or other sharp objects.** This can lead to fire or explosion.
- **Do not immerse the battery in seawater or water.** Water ingress can cause internal damage and short circuits.
- **Do not use as a car starter battery, trip starter battery, or engine starter battery.** This battery is designed for deep cycle applications, not high-current engine starting.
- **Do not use the battery at high temperatures.** Exceeding recommended temperature limits may cause overheating, fire, or permanent damage, shortening its service life.



Image: Important safety warnings for the DATOUBOSS LiFePO4 battery, illustrating actions to avoid.

### 3. PRODUCT OVERVIEW

The DATOUBOSS 12V 100Ah LiFePO4 Battery is engineered for superior performance and durability. It features a high energy density design, providing significant power in a compact and lightweight form factor. The integrated 100A Battery Management System (BMS) ensures comprehensive protection and reliable operation.

#### Key Features:

- **High Energy Density:** Offers twice the capacity of traditional lead-acid batteries at approximately half the weight.
- **Intelligent 100A BMS:** Provides protection against short-circuit, over-voltage, over-temperature, and overcharge.
- **Ultra-Long Lifespan:** Premium LiFePO4 cells deliver 4,000 to 15,000 cycles, lasting over 10 years.
- **Wide Temperature Range:** Excellent discharge performance from -4°F to 150°F (-20°C to 65°C).
- **Flexible Expansion:** Supports series and parallel connections for increased voltage and capacity.



Image: The DATOUBOSS 12V 100Ah LiFePO4 battery, showcasing its design with integrated handles and terminals.



Image: Visual representation of the battery's compact dimensions, lighter weight, and the various protections offered by its 100A BMS, including overcharge, overdischarge, overcurrent, overheating, short-circuit, and rectification protection.

# DROP-IN REPLACEMENT FOR GROUP 24

## 12V 100AH LEAD ACID BATTERY

- 504Wh Usable Energy
- 63Lb Weight
- 60% Deep of Discharge
- <33% Self Discharge Rate (Per Month)
- 500 Cycles (60% DOD)
- 3-5 Year Service Life



## 12V 100AH

## LIFEPO4 BATTERY

- 1280Wh Usable Energy
- 24.75 Lb Weight
- 100% Deep of Discharge
- <3% Self Discharge Rate (Per Month)
- 4000-15000 Cycles
- 10 Year Service Life



Image: A comparison highlighting the DATOU BOSS LiFePO4 battery as a superior drop-in replacement for Group 24 lead-acid batteries, detailing benefits like higher usable energy, lighter weight, 100% depth of discharge, lower self-discharge rate, and

significantly longer cycle life.

## 4. SETUP

### 4.1 Unpacking

Carefully remove the battery from its packaging. Inspect the battery for any signs of damage during transit. If damage is found, contact customer support immediately.

### 4.2 Initial Charge

It is recommended to fully charge the battery before its first use. Use a compatible LiFePO4 battery charger. Ensure the charger voltage and current settings are appropriate for a 12V LiFePO4 battery.

### 4.3 Connection Options (Series and Parallel)

The DATOUBOSS 12V 100Ah LiFePO4 battery supports flexible expansion through series and parallel connections to meet various power requirements. Up to 16 batteries can be configured into a 4S4P system, providing an output range of 12.8V to 51.2V and power from 1.28kW to 20.48kW.

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase total capacity (Ah) while maintaining the same voltage (12V).
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase total voltage (e.g., two 12V batteries in series create a 24V system).

**Always ensure all batteries in a series or parallel bank are of the same type, capacity, and state of charge before connecting. Consult a qualified electrician for complex installations.**

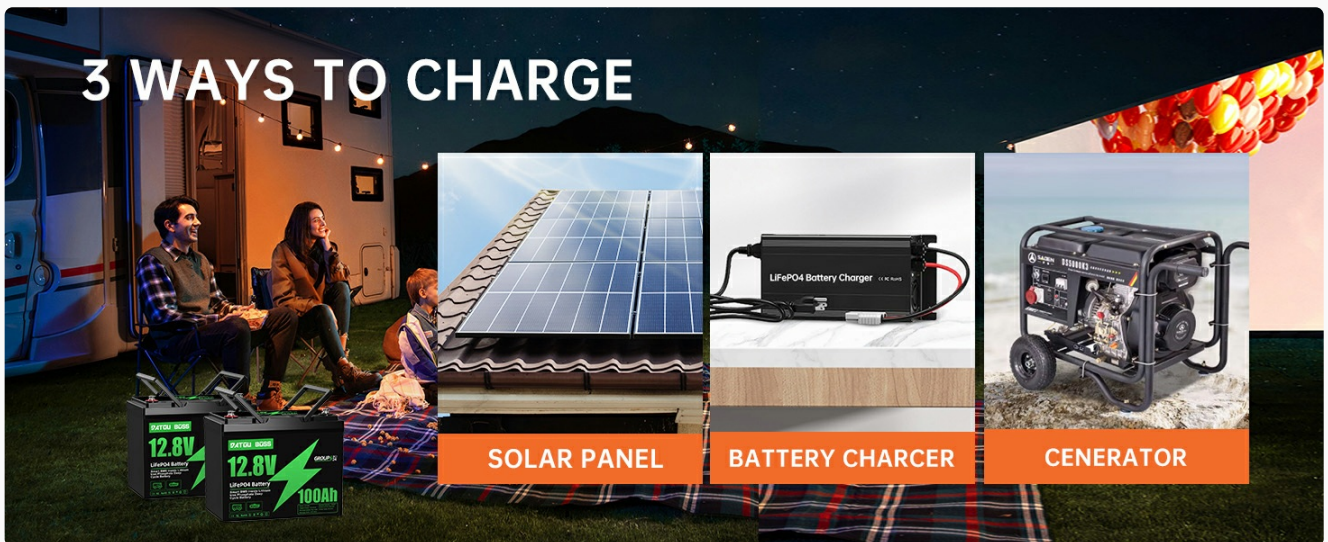


Image: An illustration demonstrating a 4S4P (4 series, 4 parallel) battery system connected to solar panels and an inverter, providing power to various household loads, highlighting the scalability for solar projects.

## 5. OPERATING INSTRUCTIONS

### 5.1 Charging Methods

Your DATOUBOSS LiFePO4 battery can be charged using several methods:

- **Solar Panel:** Connect to a compatible solar charge controller designed for LiFePO4 batteries.

- **Battery Charger:** Use a dedicated LiFePO4 battery charger.
- **Generator:** Connect via a suitable charger or inverter/charger system.

Ensure charging parameters (voltage, current) are within the battery's specifications to prevent damage.



**Camping**



**Trolling Motor**



**RV**



**Solar System**



**Fish Finder**

Image: A visual guide to the three primary ways to charge the DATOUBOSS LiFePO4 battery: using solar panels, a specialized battery charger, or a generator.

## 5.2 Applications

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

- **Recreational Vehicles (RVs) & Trailers:** Provides reliable power for onboard appliances and systems.
- **Camping & Outdoor Activities:** Powers portable devices, lighting, and small appliances.
- **Solar Energy Systems:** Efficient energy storage for residential or remote solar installations.
- **Off-Grid Power:** Essential for independent power solutions.
- **Marine Use:** Suitable for boats, kayaks, and trolling motors.
- **Backup Power:** Reliable energy source for critical systems.

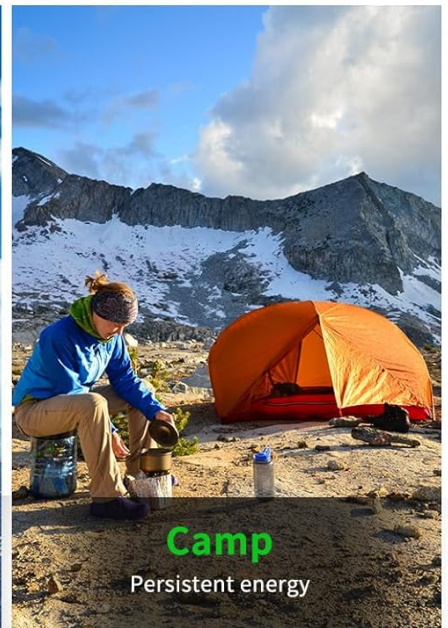
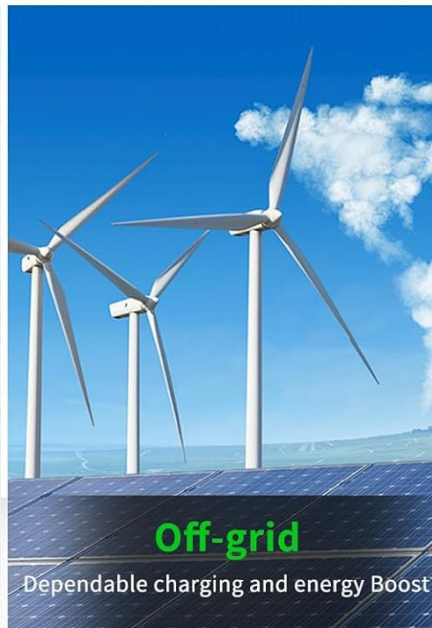


Image: A collage illustrating the diverse applications of the DATOUBOSS LiFePO4 battery, including home energy storage, RV travel, fishing, off-grid power, and camping.

**Max 4S4P 20.48kwh**

Up to 4 series and 4 parallel connections

**Outdoor power supply**

**Home energy storage power supply**



Camera(20Wh) 64 Times Drone(25Wh) 51.2 Times Projector(100wh) 12.8 Times

Desktop(200w) 6.4 Hrs Kettle(500w) 2.56 Hrs Coffee Maker(1000W) 6.4 Hrs Printer(300w) 4.26 Hrs

Image: An illustration detailing the power capabilities of a Max 4S4P (20.48kWh) battery system, providing examples of how it can power various devices for extended durations in both outdoor settings (e.g., camera, drone, projector) and home energy storage

## 6. MAINTENANCE

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DATOUBOSS LiFePO4 batteries are designed for minimal maintenance. However, following these guidelines will help ensure maximum lifespan:

- **Regular Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean terminals as needed.
- **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 away from direct sunlight.
- **Temperature:** Avoid operating or storing the battery in extreme temperatures outside the recommended range (-4°F to 150°F / -20°C to 65°C for discharge, 32°F to 113°F / 0°C to 45°C for charge). The built-in BMS includes low-temperature protection to prevent charging below 0°C (32°F).
- **Charging:** Always use a charger compatible with LiFePO4 batteries.

## 7. TROUBLESHOOTING

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If you encounter issues with your DATOUBOSS LiFePO4 battery, consider the following common troubleshooting steps:

- **No Power Output:** Check all connections for proper polarity and tightness. Ensure the battery is adequately charged. The BMS may have activated a protection mode (e.g., over-discharge, over-current); try disconnecting the load and recharging.
- **Battery Not Charging:** Verify the charger is compatible with LiFePO4 batteries and is functioning correctly. Check charging cables and connections. Ensure the ambient temperature is within the recommended charging range (above 0°C/32°F).
- **Reduced Performance:** Ensure the battery is fully charged. Check for excessive load or short circuits in the connected system.

For persistent issues or complex problems, please contact DATOUBOSS customer support for assistance.

## 8. SPECIFICATIONS

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Feature	Specification
Brand	DATOUBOSS
Model	DT-12V100AH
Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy	1280Wh
Battery Type	LiFePO4 (Lithium Iron Phosphate)
BMS	Built-in 100A BMS
Cycle Life	4,000–15,000 cycles
Lifespan	Up to 10 years
Discharge Temperature	-4°F to 150°F (-20°C to 65°C)
Charge Temperature	32°F to 113°F (0°C to 45°C)
Item Weight	24 pounds (approx. 10.9 kg)
Package Dimensions	10.2 x 8.5 x 6.6 inches (approx. 25.9 x 21.6 x 16.8 cm)
UPC	740684063402

## 9. WARRANTY AND SUPPORT

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### 9.1 Warranty Information

The DATOUBOSS 12V 100Ah LiFePO4 Battery comes with a **5-year warranty**, covering defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

### 9.2 Customer Support

For any questions, technical assistance, or warranty inquiries, please contact DATOUBOSS customer service. We offer 24/7 online customer support to ensure you receive prompt and helpful service.

Visit the official DATOUBOSS store for more information and contact details: [DATOUBOSS Store](#)