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

DATOUBOSS DT-12V100AH

DATOUBOSS 12V 100Ah LiFePO4 Battery Group 24

Model: DT-12V100AH

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your DATOUBOSS 12V 100Ah LiFePO4 Battery Group 24. Please read this manual thoroughly before installation and operation to ensure proper handling and to maximize the battery's lifespan and performance.



Image 1.1: DATOUBOSS 12V 100Ah LiFePO4 Battery with integrated safety features, including 4000+ cycles, 10+ years lifespan, and 100A BMS protection.

2. SAFETY INFORMATION

Adherence to the following safety guidelines is crucial to prevent injury, damage to the battery, and ensure long-term performance.

- Do not reverse the positive and negative terminals of the battery.

- Avoid hitting or throwing objects at the battery, or stepping on it.
- Do not use metal to directly connect the positive and negative terminals of the battery.
- Do not weld the battery directly or pierce it with nails or other sharp objects.
- Do not immerse the battery in seawater or water.
- This battery is not designed for use as a car starter battery, trip starter battery, or engine starter battery.
- Avoid using the battery at high temperatures, as this may lead to overheating, fire, or premature failure, shortening its service life.

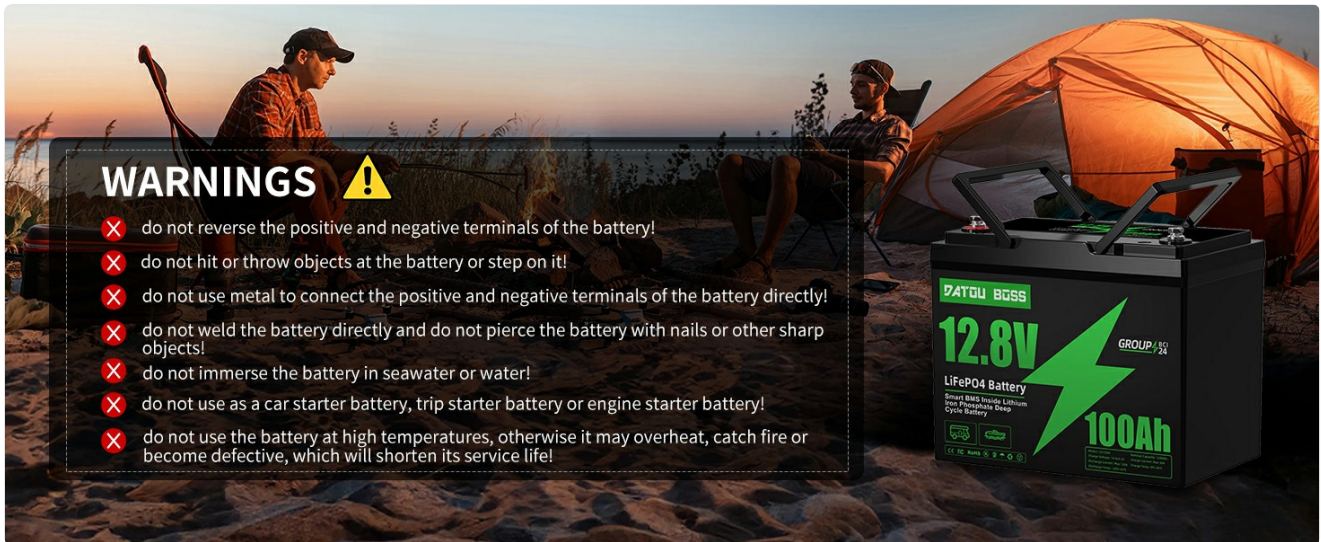


Image 2.1: Visual representation of critical safety warnings for the LiFePO4 battery.

3. PRODUCT FEATURES

The DATOUBOSS 12V 100Ah LiFePO4 Battery offers advanced features for reliable power solutions:

- **Integrated BMS Protection:** Features a built-in 100A Battery Management System (BMS) for protection against short-circuits, over-voltage, over-heating, and over-charging.
- **Extended Lifespan:** Designed for 4,000 to 15,000 deep cycles, providing a service life of up to 10 years.
- **Temperature Resilience:** Operates effectively across a wide temperature range, from -4°F to 150°F, ensuring performance in various environments.
- **High Energy Density:** Offers higher energy density compared to traditional lead-acid batteries.
- **Lightweight Design:** Significantly lighter than comparable lead-acid batteries, enhancing portability and ease of installation.

WHY CHOOSE US? COMPARED TO 12V 100AH LEAD ACID BATTERY

1280WH
ENERGY DENSITY


100%
DEPTH OF DISCHARGE

6×
SAFEGUARD

3×
LIGHTER WEIGHT


<3%
Self Discharge

10+
YEARS LIFESPAN



**12V 100AH
LIFEPO4 BATTERY**

VS



**12V 100AH
LEAD ACID BATTERY**


Image 3.1: The battery's ability to adapt to extreme temperatures, from -4°F (low) to 150°F (high).

MINI SIZE
LIGHTER WEIGHT



-4°F
LOW TEMPERATURE

150°F
HIGH TEMPERATURE



4000+
CYCLES



Overcharge Protection

Overdischarge Protection

Overcurrent Protection

Overheating Protection

100A BMS



CHARGER

SUPPORT LITHIUM BATTERY
CHARGING MODE

Image 3.2: Illustration of the battery's capacity to power common RV appliances like fans, refrigerators, coffee makers, and microwaves for extended durations.

4. SETUP

4.1 Initial Inspection

Upon receiving your battery, inspect it for any visible damage. Ensure all terminals are secure. If any damage is found, contact customer support immediately.

4.2 Connection Guidelines

The DATOUBOSS 12V 100Ah LiFePO4 battery supports both series and parallel connections for increased capacity and voltage. Always ensure all batteries in a series or parallel bank are of the same model and capacity.

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase total amperage (Ah) while maintaining 12V.
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase total voltage (V). For example, two 12V batteries in series create a 24V system.
- **Maximum Configuration:** The battery supports configurations up to 4 series and 4 parallel (4S4P), allowing for a maximum continuous charge/discharge current of 400A and a maximum load power of 20.48 kW.



Image 4.1: Diagram illustrating how to connect multiple batteries in series and parallel for flexible capacity expansion in a solar power system.

5. OPERATING INSTRUCTIONS

5.1 Charging the Battery

The DATOUBOSS LiFePO4 battery can be charged using various methods:

- **Solar Panel:** Connect to a compatible solar charge controller (MPPT recommended) and solar panels.
- **LiFePO4 Battery Charger:** Use a dedicated LiFePO4 battery charger. Ensure the charger's voltage and current settings are appropriate for a 12V LiFePO4 battery.
- **Generator:** Connect to a generator with a suitable charging output.



Image 5.1: Visual guide to the three primary charging methods for the LiFePO4 battery.

5.2 Applications

This battery is suitable for a wide range of applications, including:

- Recreational Vehicles (RVs)
- Camping and Outdoor Power
- Solar Power Systems (Off-Grid and Home Storage)
- Marine Applications (Boats, Trolling Motors, Fish Finders)

- Backup Power Systems
- Power Carts and Kayaks



Image 5.2: Examples of diverse applications where the LiFePO4 battery can be utilized.

6. MAINTENANCE

LiFePO4 batteries require minimal maintenance compared to lead-acid batteries. Follow these guidelines for optimal performance:

- **Regular Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean terminals with a wire brush if necessary and ensure they are tightened.
- **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. Avoid storing in direct sunlight or extreme temperatures.
- **Cleaning:** Keep the battery casing clean and free of dust and debris. Use a dry cloth for cleaning. Do not use solvents or harsh chemicals.
- **Avoid Deep Discharge:** While LiFePO4 batteries tolerate deep discharge, it is recommended to avoid consistently discharging below 20% to prolong overall lifespan.

7. TROUBLESHOOTING

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

- **Battery Not Charging:**
 - Verify that the charger is compatible with LiFePO4 batteries and is properly connected.
 - Check all cable connections for looseness or corrosion.
 - Ensure the charging temperature is within the recommended range (typically above 32°F / 0°C). The built-in BMS includes low-temperature protection to prevent charging below 0°C.
- **No Power Output:**
 - Check if the battery is sufficiently charged.
 - Inspect all connections to the load for proper contact.
 - The BMS may have activated a protection mode (e.g., over-discharge, over-current). Disconnect the load, wait a few minutes, and attempt to reconnect.

- **Reduced Capacity:**

- Ensure the battery has been fully charged and discharged a few times to allow the BMS to balance the cells.
- Verify that the load is not exceeding the battery's continuous discharge current rating.

If these steps do not resolve the issue, please contact DATOUBOSS customer support.

8. SPECIFICATIONS

Specification	Value
Brand	DATOUBOSS
Model Number	DT-12V100AH
Voltage	12.8 Volts (DC)
Capacity	100Ah
Battery Type	LiFePO4 (Lithium Iron Phosphate)
BMS	Built-in 100A BMS with Low-Temp Protection
Cycle Life	4000-15000 cycles
Expected Lifespan	Up to 10 years
Series/Parallel Support	Up to 4S4P (4 series, 4 parallel)
Max. Continuous Charge/Discharge Current	400A (in 4S4P configuration)
Max. Load Power	20.48 kW (in 4S4P configuration)
Certifications	UL2054 Safety Certified
Included Components	12V 100Ah LiFePO4 Lithium Battery

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The DATOUBOSS 12V 100Ah LiFePO4 Battery comes with a **5-year warranty**. This warranty covers defects in materials and workmanship under normal use and service conditions.

9.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact our customer support team:

- **Online Service:** 24-hour online support is available to answer your inquiries promptly.
- **Technical Guidance:** Our professional technical support team provides timely and efficient guidance for problem resolution.

Even if an item is marked as 'not returnable' on the platform, please reach out to us directly for assistance with defects, damage, or usage concerns. We are committed to providing solutions, including free return and replacement services to ensure your satisfaction.

