DATOUBOSS 12V100Ah

DATOUBOSS 12V 100Ah LiFePO4 Battery User Manual

Model: 12V100Ah | Brand: DATOUBOSS

1. Product Overview

The DATOUBOSS 12V 100Ah LiFePO4 battery is a high-performance, deep cycle lithium iron phosphate battery designed for various applications including RVs, solar home systems, and marine use. It features a built-in Battery Management System (BMS) for enhanced safety and longevity.

Figure 1: DATOUBOSS 12V 100Ah LiFePO4 Battery with handles.

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Video 1: Overview of the manufacturing process and product features for DATOUBOSS LiFePO4 batteries.

2. Safety Information

Read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always wear appropriate personal protective equipment (PPE) including safety glasses and insulated gloves when handling batteries.

- Do not short-circuit the battery terminals.
- Do not expose the battery to fire or extreme heat.
- Do not disassemble, puncture, or modify the battery.
- Keep the battery away from children and pets.
- Ensure proper ventilation during charging and operation.
- Use only compatible chargers designed for LiFePO4 batteries.
- Avoid connecting batteries with different capacities or brands in series or parallel.

3. Setup and Installation

3.1 Initial Inspection

Upon receiving your battery, inspect it for any visible damage. Verify that all components are included. If any damage is found or components are missing, contact customer support immediately.

3.2 Connecting Batteries (Series/Parallel)

The DATOUBOSS 12V 100Ah LiFePO4 battery supports both series and parallel connections to achieve higher voltage or capacity. It is recommended to use batteries of the same type and manufacturer for optimal performance and safety.

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase capacity while maintaining 12V. Up to 4 batteries can be connected in parallel for a total of 12V 400Ah (5120Wh).
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase voltage. Up to 4 batteries can be connected in series to achieve 48V 100Ah (5120Wh).
- Ensure all cables are properly sized for the expected current and connections are secure.

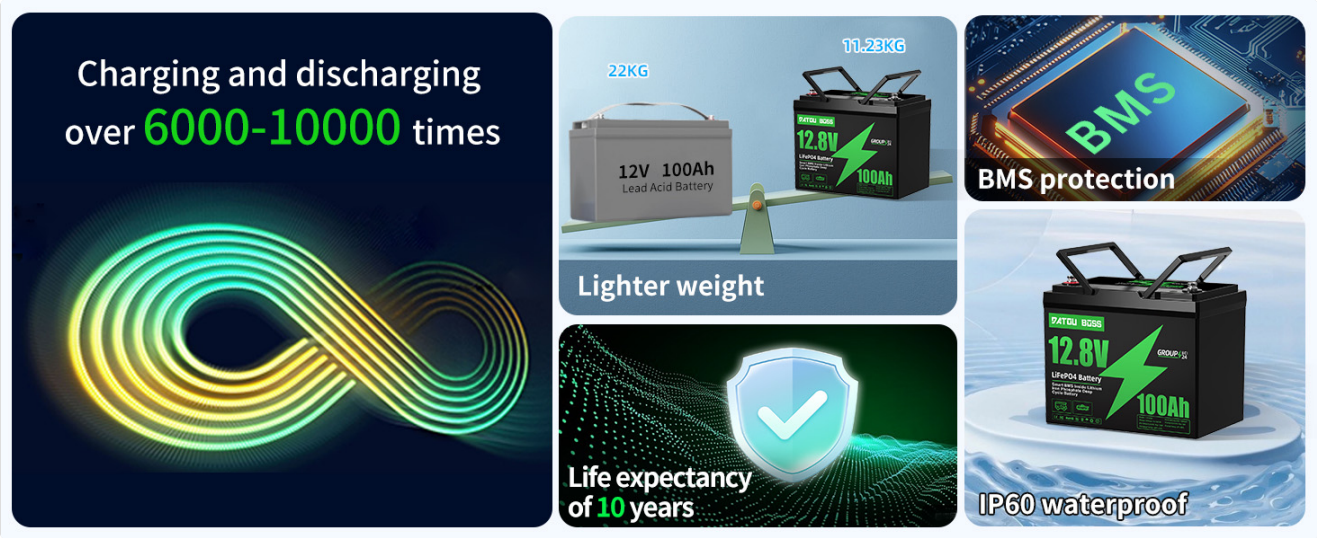

Figure 2: Diagram illustrating series and parallel connection options for multiple batteries.

3.3 Charging

Use a LiFePO4 compatible charger. The battery can be charged using a dedicated lithium iron phosphate special charger, solar panels, or a generator.

Figure 3: Various methods for charging the LiFePO4 battery, including a dedicated charger, solar panels, and a generator.

4. Operating Instructions

4.1 Built-in Battery Management System (BMS)

The integrated 100A BMS provides comprehensive protection for the battery, ensuring safe and reliable operation. This includes protection against:

- Overcharge protection
- Over-discharge protection
- Overcurrent protection
- Short circuit protection
- High temperature shutdown
- Low temperature protection (Discharge: -20°C to 75°C, Charge: 0°C to 65°C)

Figure 4: Visual representation of the various protection features provided by the integrated BMS.

4.2 Applications

This LiFePO4 battery is versatile and suitable for a wide range of deep cycle applications due to its robust design and high energy density. Common uses include:

- Recreational Vehicles (RVs) and Caravans

- Solar Home Systems and Off-Grid Energy Storage
- Marine applications (Yachts, Boats, Trolling Motors, Fish Finders)
- Emergency Power Supply and Backup UPS
- Electric Scooters, Lawn Mowers, Golf Carts
- 12V Router and other portable power needs

Figure 5: Examples of common applications for the DATOUBOSS LiFePO4 battery, including home power, RV, marine, and commercial uses.

Figure 6: Illustrative run times for common household appliances powered by the battery (e.g., Refrigerator 150W for 7 hours, Coffee maker 500W for 2 hours, Toaster 500W for 1.5 hours).

5. Maintenance

LiFePO4 batteries require minimal maintenance compared to lead-acid batteries, but proper care ensures maximum lifespan.

- **Regular Inspection:** Periodically check battery terminals for corrosion and ensure connections are tight.
- **Cleaning:** Keep the battery clean and free of dust and debris. Use a dry cloth for cleaning.
- **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 and extreme temperatures.
- **Temperature:** While the battery has temperature protection, avoid operating or storing it in environments outside its recommended temperature range for optimal performance and longevity.

6. Troubleshooting

This section addresses common issues you might encounter with your DATOUBOSS LiFePO4 battery.

Problem	Possible Cause	Solution
Battery not charging	Charger not connected, faulty charger, BMS protection activated (over-discharge, low temperature)	Ensure charger is properly connected and functional. Check battery voltage. If very low, a specialized charger might be needed to wake up the BMS. Allow battery to warm up if ambient temperature is too low.
No power output	BMS protection activated (over-discharge, overcurrent, short circuit), loose connections	Check all connections for tightness. Reduce load if overcurrent protection is triggered. If over-discharged, recharge the battery.
Battery overheating	Excessive load, poor ventilation, high ambient temperature	Reduce the load on the battery. Ensure adequate airflow around the battery. Move to a cooler environment if possible. The BMS will shut down the battery if it reaches critical temperature.

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

7. Specifications

Key technical specifications for the DATOUBOSS 12V 100Ah LiFePO4 battery:

Feature	Detail
Nominal Voltage	12V
Capacity	100Ah
Energy	1280Wh
Built-in BMS	100A
Max Continuous Charge Current	50A
Max Continuous Discharge Current	120A
Cycle Life	8000+ cycles (at 100% DoD)
Weight	11kg (24.25 lbs)
Dimensions (L x W x H)	25.5 x 16.5 x 21 cm (10 x 6.49 x 8.26 inches)
Operating Temperature (Discharge)	-20°C to 75°C
Operating Temperature (Charge)	0°C to 65°C
Waterproof Rating	IP60

Figure 7: Visual summary of key battery specifications including capacity, storage, and current ratings.

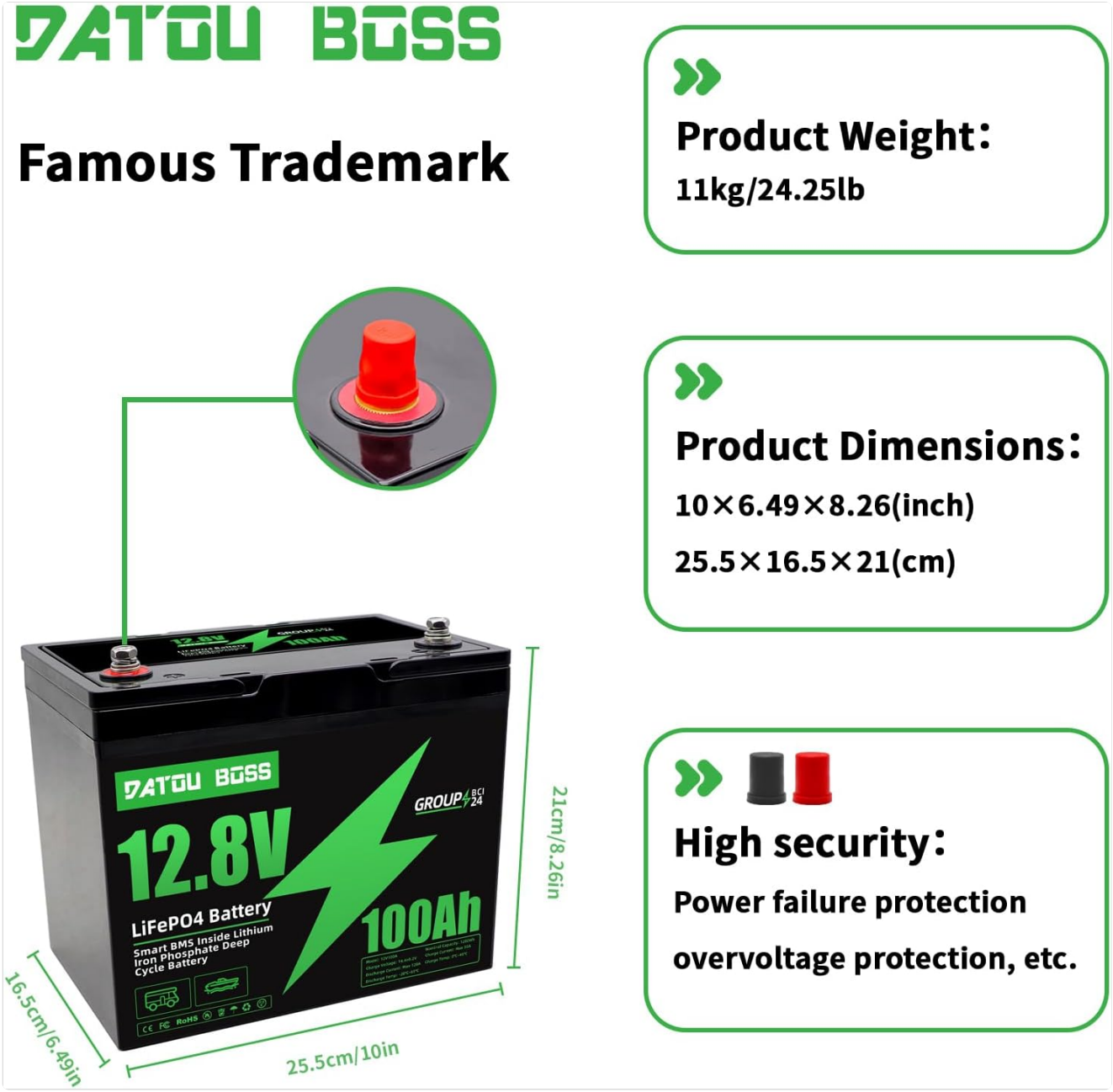

Figure 8: Product weight and dimensions for easy reference.

8. Warranty and Support

Specific warranty details are typically provided with your purchase documentation. For product support, technical assistance, or warranty claims, please refer to the contact information provided by your retailer or on the official DATOUBOSS website.