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› DATOU BOSS LiFePO4 Battery 12V 100Ah User Manual

DATOU BOSS DT-12V-100Ah

DATOU BOSS LiFePO4 Battery 12V 100Ah User Manual

Model: DT-12V-100Ah

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your DATOU BOSS LiFePO4 Battery 12V 100Ah. Please read this manual thoroughly before installation and operation. Retain this manual for future reference.



Image 1.1: DATOU BOSS 12V 100Ah LiFePO4 Battery. This image shows the overall appearance of the battery unit.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the battery and connected equipment.

- Do not short-circuit the positive and negative terminals.
- Do not modify or disassemble the battery.
- Avoid exposing the battery to fire or water.
- Ensure proper ventilation during charging and discharging.
- Use only chargers compatible with LiFePO4 batteries.
- Do not connect batteries with different chemistries or voltages.
- Keep out of reach of children.

Safety guarantee

Battery Management System

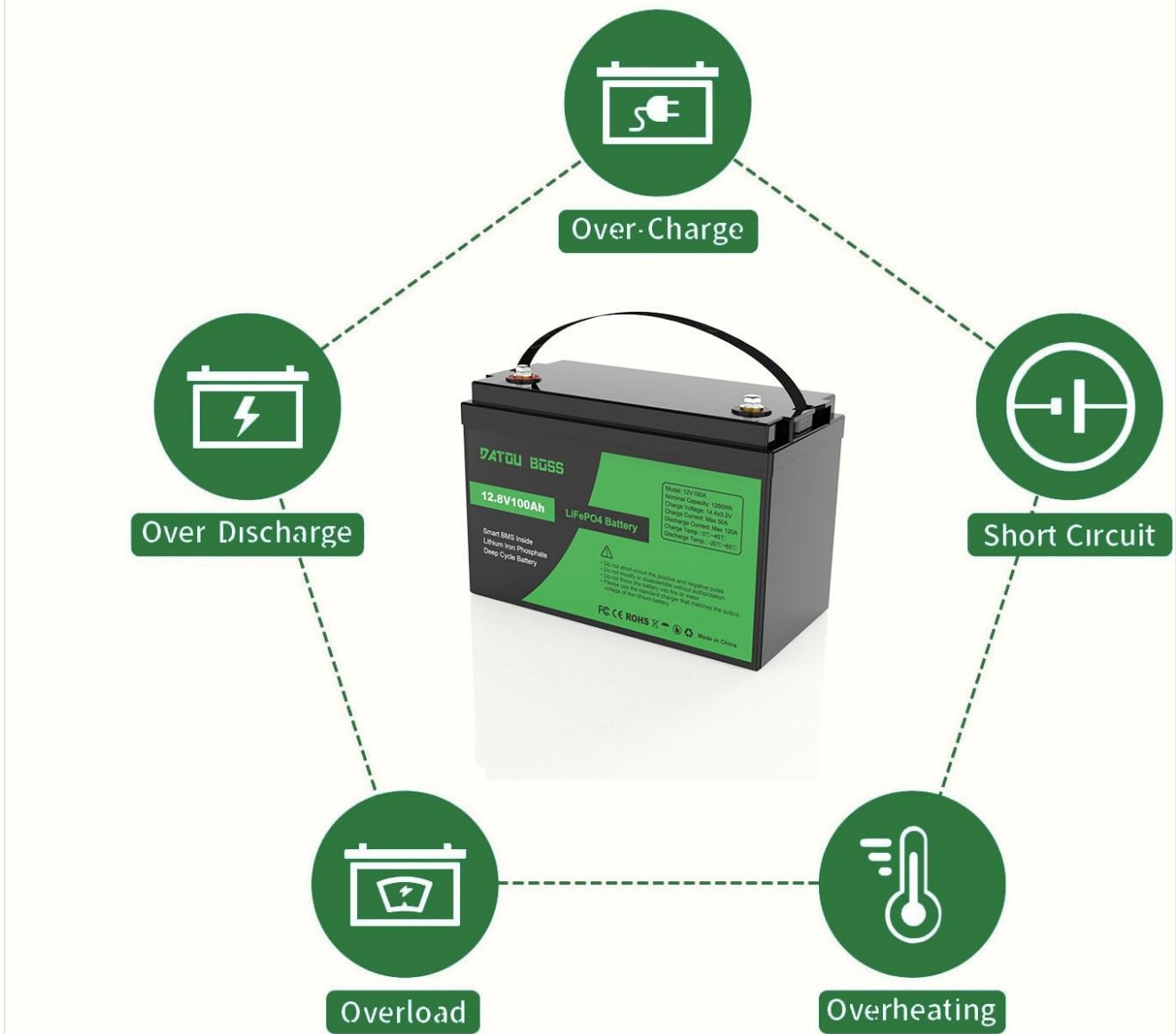


Image 2.1: Battery Management System (BMS) Protection. This diagram illustrates the built-in protections against over-charge, over-discharge, short circuit, overload, and overheating.

The integrated Battery Management System (BMS) provides protection against over-charge, over-discharge, over-current, short circuit, and over-temperature conditions, enhancing safety during use.

3. PRODUCT OVERVIEW AND FEATURES

The DATOU BOSS 12V 100Ah LiFePO4 battery is designed for various applications, offering high performance and durability.

3.1 Key Features

- **High Cycle Life:** Offers 8000+ deep cycles, providing a long operational lifespan.
- **Lightweight Design:** Approximately 1/3 the weight of comparable lead-acid batteries, featuring a non-metallic belt handle for easy portability.

- **Integrated BMS:** Built-in 120A Battery Management System protects against common electrical faults.
- **Wide Operating Temperature:** Designed for charging temperatures from -20°C to 55°C and discharging temperatures from 0°C to 60°C.
- **IP65 Waterproof:** Provides protection against dust and water ingress.



Image 3.1: Battery Specifications and Dimensions. This image details the battery's capacity (12.8V 100Ah, 1280Wh), maximum charging current (50A), maximum discharge current (120A), and physical dimensions (33cm x 17cm x 21cm).

3.2 Capacity Expansion

The battery supports both series and parallel connections, allowing for system expansion up to a maximum of 4S4P (51.2V 400Ah) to achieve higher voltage and capacity configurations.



Image 3.2: Expandable Capacity. This illustration demonstrates how multiple batteries can be connected in series and parallel to create a larger battery system, such as a 4S4P 51.2V 400Ah system with 20.48kW output power.

3.3 Advantages Over Lead-Acid Batteries

LiFePO4 batteries offer significant advantages compared to traditional lead-acid batteries, including longer lifespan, lighter weight, and higher depth of discharge.

PERFECT REPLACEMENT OF LEAD-ACID BATTERIES



Replace It Perfectly

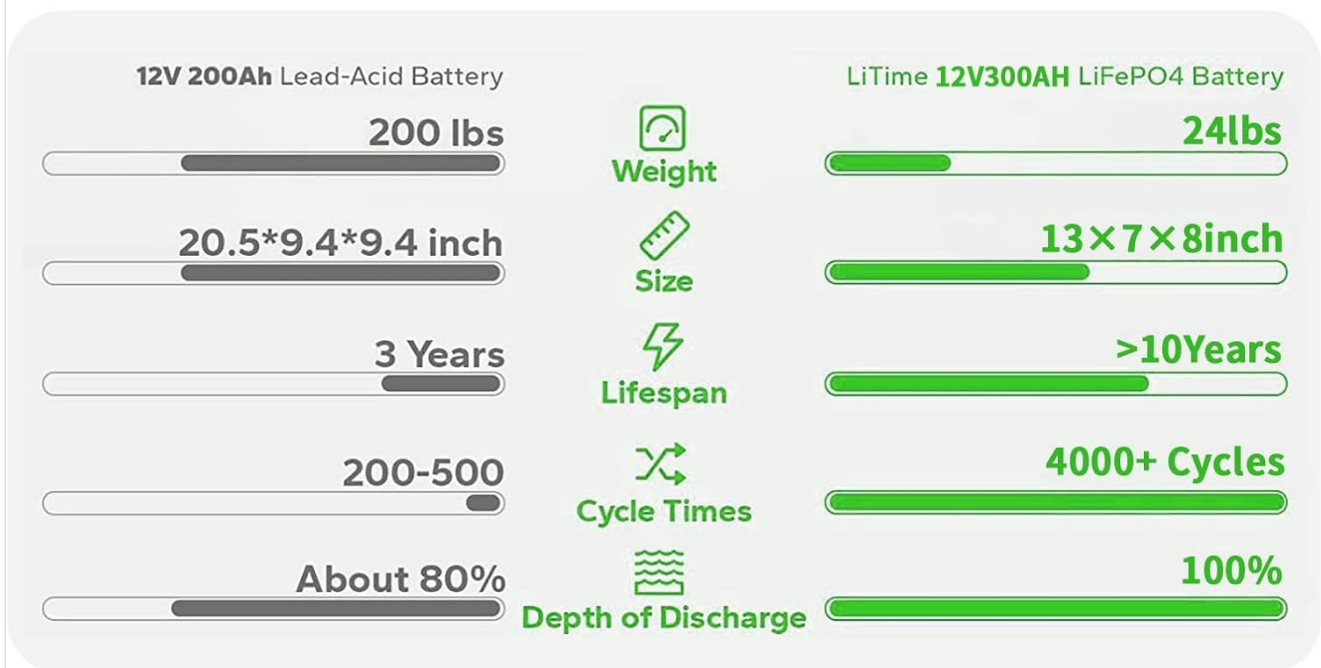


Image 3.3: Comparison with Lead-Acid Batteries. This image highlights the differences in weight, size, lifespan, and cycle times between LiFePO4 and lead-acid batteries.

3.4 Typical Applications

This LiFePO4 battery is suitable for a wide range of applications, including:

- Electric Vehicles and Recreational Vehicles (RVs)
- Home Energy Storage Systems
- Golf Carts and Boathouses
- Trolling Motors and E-Scooters
- Lighting and Fish Finders
- UPS Backup Power Supply
- Home Solar Equipment

Wide range of applications

DAIQU BOSS



Image 3.4: Diverse Applications. This image displays various scenarios where the battery can be used, such as solar-powered homes, RVs, boats, and general energy storage.

3.5 Power Output Examples

The battery can power various appliances for extended periods, making it suitable for off-grid and portable power needs.

Durable and Long Lasting

3840Wh Energy
2560W Load Power

	Blender 500W 7.6hrs
	Pressure Cooker 900W 4.2hrs
	Electric Grill 1150W 3.3hrs
	Air Condition 1500W 2.6hrs
	Microwave 1000W 3.8hrs



DATOU BGSS
12.8V100Ah LiFePO₄ Battery

Smart BMS Inside
Lithium Iron Phosphate
Deep Cycle Battery

Model: 12V100A
Nominal Capacity: 1280Wh
Charge Voltage: 14.4±0.2V
Charge Current: Max 50A
Discharge Current: Max 120A
Discharge Temp.: 0°C~45°C
Discharge Temp.: -20°C~65°C

Do not short circuit the positive and negative poles
Do not modify or disassemble without authorization
Do not throw the battery into fire or water
Please use the standard charger that matches the output voltage of the lithium battery

ROHS  Made in China

Image 3.5: Appliance Run Times. This image provides examples of how long the battery can power common household appliances, such as a blender (500W for 7.6 hours) or a microwave (1000W for 3.8 hours).

4. SETUP AND INSTALLATION

4.1 Initial Inspection

Upon receiving the battery, inspect it for any visible damage. If damage is found, contact your supplier immediately.

4.2 Connection Guidelines

- Ensure all connections are secure and properly insulated.
- Connect positive terminals to positive and negative to negative.
- For series or parallel connections, ensure all batteries are of the same type, capacity, and state of charge before connecting.
- Use appropriate gauge cables for your application to prevent overheating.



Image 4.1: Solar Panel Connection. This diagram illustrates a typical setup involving a solar panel, MPPT controller, and the LiFePO4 battery for charging.

4.3 Mounting

Mount the battery in a stable, well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Ensure the battery is secured to prevent movement.

5. OPERATING INSTRUCTIONS

5.1 Charging

- Use a dedicated LiFePO4 battery charger with appropriate voltage and current settings.
- Recommended charging voltage: 14.4V - 14.6V.
- Maximum charging current: 50A.
- Charging temperature range: -20°C to 55°C.
- Avoid charging below 0°C without a low-temperature charging function, as this can damage the battery.

5.2 Discharging

- Maximum continuous discharge current: 120A.
- Discharging temperature range: 0°C to 60°C.
- The BMS will automatically cut off power if the discharge current or temperature exceeds safe limits.

6. MAINTENANCE

- **Regular Charging:** If the battery is not in regular use, it is recommended to charge it every three months to prolong its lifespan.
- **Terminal Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean as necessary.
- **Storage:** Store the battery in a cool, dry place, ideally at a state of charge between 50% and 80%. Avoid extreme temperatures.
- **Cleaning:** Clean the battery casing with a dry cloth. Do not use solvents or abrasive cleaners.

7. TROUBLESHOOTING

If you encounter issues with your battery, refer to the following common problems and solutions. For complex issues, contact customer support.

Problem	Possible Cause	Solution
Battery not charging	Charger not connected, faulty charger, BMS protection activated (over-discharge)	Check charger connection and functionality. Ensure charger is compatible. If BMS is active, try a low-current charge to reactivate.
No power output	Loose connections, BMS protection activated (over-discharge, over-current, short circuit), battery fully discharged	Check all cable connections. Charge the battery. If BMS is active, remove load and allow it to reset.
Battery overheating	Excessive load, poor ventilation, high ambient temperature	Reduce load. Ensure adequate ventilation around the battery. Operate within specified temperature ranges. BMS will shut down if temperature is too high.

8. SPECIFICATIONS

Feature	Value
Model Number	DT-12V-100Ah
Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy	1280Wh
Max. Continuous Charge Current	50A
Max. Continuous Discharge Current	120A
Recommended Charge Voltage	14.4V - 14.6V
Charge Temperature Range	-20°C to 55°C

Feature	Value
Discharge Temperature Range	0°C to 60°C
Cycle Life	8000+ cycles (at 80% DoD)
Dimensions (L x W x H)	32.99 x 16.99 x 21.49 cm
Weight	Approximately 1/3 the weight of a comparable lead-acid battery
BMS	Built-in 120A BMS
Waterproof Rating	IP65

Note: The specific gram weight provided in some product data appears to be a typographical error for a 100Ah battery. LiFePO4 batteries are significantly lighter than lead-acid equivalents, typically around 1/3 the weight.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact your point of purchase or the manufacturer directly. Keep your purchase receipt as proof of purchase.