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1. PRODUCT OVERVIEW

The DATOUBOSS 12V 100Ah LiFePO4 battery is a deep-cycle lithium iron phosphate battery designed for reliable energy storage. It is suitable for solar power systems, recreational vehicles (RVs), off-grid installations, and auxiliary power needs. This battery offers a long cycle life and stable power output, making it an efficient and durable alternative to traditional lead-acid batteries.

Key features include:

- **High Energy Density:** Provides more usable energy in a lighter, more compact form factor compared to lead-acid batteries.
- **Extended Cycle Life:** Boasts a cycle life of 4,000 to 15,000 cycles, significantly outperforming lead-acid batteries.
- **Integrated BMS Protection:** Features a smart Battery Management System (BMS) that protects against overcharge, over-discharge, overcurrent, short circuits, and temperature fluctuations.
- **Scalable System:** Supports configurations up to 4P4S (4 parallel, 4 series) for increased capacity or voltage requirements.
- **Durable Construction:** Built with automotive-grade LiFePO4 cells and a sealed housing rated IP65 for protection during normal use.

Note: This battery is designed for deep-cycle energy storage applications and **is not** intended for engine starting or cranking applications.



Image 1.1: DATOUBOSS 12V 100Ah LiFePO4 Battery with dimensions (21.5cm/8.46in H, 33cm/13in L, 17cm/6.69in W) and specifications like 1280Wh usable energy, 100A max continuous discharging current, 1280W max load power, and IP65 waterproof rating.



Image 1.2: Visual representation of the battery's features: compact size, Grade A cells, superior BMS, 4000+ deep cycles, low

temperature protection, and IP65 waterproof rating.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before installing or operating the DATOUBOSS LiFePO4 battery. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- Do not short-circuit the positive and negative terminals.
- Do not modify or disassemble the battery without authorization.
- Do not throw the battery into fire or water.
- Use only a standard charger that matches the output voltage of the lithium battery.
- Ensure proper ventilation during charging and operation.
- Keep the battery away from children and pets.
- Wear appropriate personal protective equipment (PPE) when handling the battery.
- Avoid exposing the battery to extreme temperatures or direct sunlight.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1x DATOUBOSS 12.8V 100Ah Deep-Cycle Lithium Iron Phosphate Battery (Core Series)
- 1x User Manual
- 2x Insulating Sleeves
- 2x M8 Long Terminal Bolts

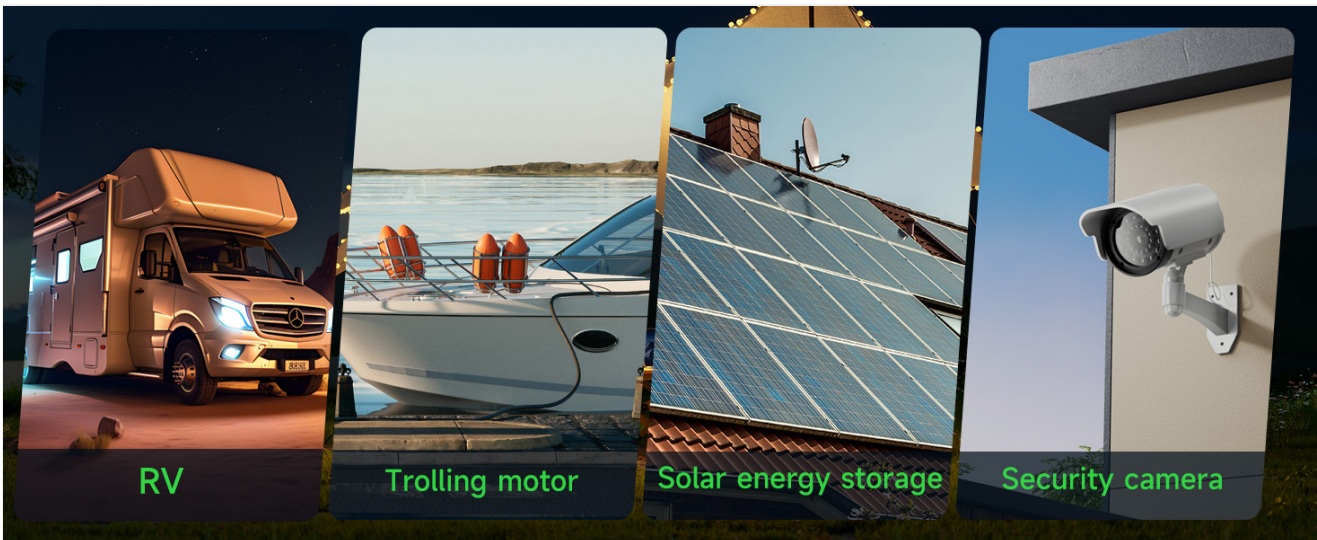


Image 3.1: Illustration of the battery and included accessories: user manual, insulating sleeves, and M8 terminal bolts.

4. SETUP AND INSTALLATION

4.1 Initial Charging

Before first use, it is recommended to fully charge the battery using a compatible LiFePO4 battery charger. Ensure the charger's voltage matches the battery's specifications.

4.2 Connection Methods

The DATOUBOSS 12V 100Ah LiFePO4 battery supports flexible configurations up to 4P4S (4 batteries in parallel, 4

batteries in series) to meet various capacity and voltage requirements. Always ensure proper polarity when connecting batteries.

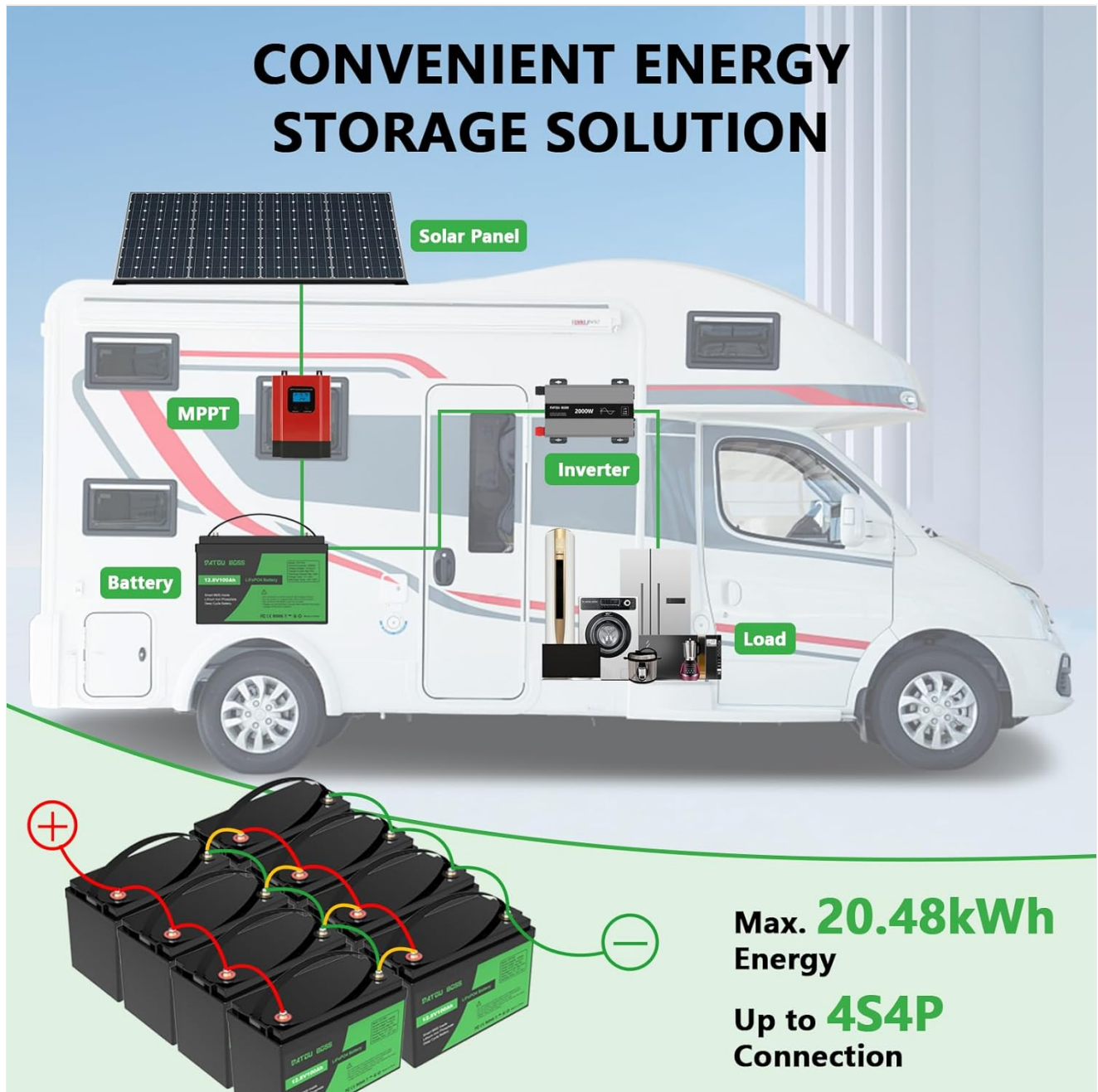


Image 4.1: Example setup of the battery in an RV solar system, illustrating connections between the solar panel, MPPT charge controller, battery, and inverter to power loads.



Image 4.2: A 4P4S connection diagram showing how multiple batteries can be linked to achieve a maximum energy storage capacity of 20.48kWh and 20.48kW continuous output power for a home system.

4.3 Charging Methods

The battery can be charged using several methods:

- **Lithium Battery Charger:** Use a dedicated LiFePO4 charger with appropriate voltage and current settings.
- **Solar Panel:** Connect to a solar panel system via an MPPT (Maximum Power Point Tracking) charge controller.
- **Generator:** Utilize a generator with a compatible charging output.



Image 4.3: Visual guide to the three primary charging methods for the battery: a dedicated lithium battery charger, solar panels, and a generator.

5. OPERATING INSTRUCTIONS

Once properly installed and charged, the DATOU BOSS LiFePO4 battery can power various devices and systems. Ensure that the total power consumption of connected devices does not exceed the battery's maximum load capacity (1280W) or the inverter's capacity if used.

5.1 Powering Devices

Connect your devices to an appropriate inverter or directly to the battery terminals if the device is 12V compatible. The battery's BMS will manage power output and protect against overloads.



Image 5.1: The battery providing power for common RV appliances such as an air conditioner (1000W for 1.3H), coffee maker (800W for 1.6H), refrigerator (150W for 8.5H), and fan (100W for 12.8H).

5.2 Video Demonstration: Battery and Inverter Usage

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Video 5.2: This video demonstrates the DATOUBOSS 12V 100Ah LiFePO4 battery connected to an inverter, powering various household appliances like a kettle, fan, and charging a mobile phone. It highlights the battery's capability to provide stable AC power for daily use.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your DATOUBOSS LiFePO4 battery.

- **Regular Inspection:** Periodically check battery terminals for corrosion or loose connections. Clean as necessary.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50-70% capacity and stored in a cool, dry place away from direct sunlight.
- **Charging:** Always use a charger specifically designed for LiFePO4 batteries. Avoid overcharging or deep

discharging the battery.

- **Temperature:** Operate the battery within its specified temperature range (Charge Temp: 0°C to 45°C; Discharge Temp: -20°C to 65°C).

7. TROUBLESHOOTING

If you encounter issues with your DATOUBOSS LiFePO4 battery, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Battery not charging	Incorrect charger, loose connections, BMS protection activated	Verify charger compatibility, check all connections, allow battery to reset if BMS tripped.
No power output	Battery discharged, loose connections, BMS protection activated, inverter fault	Charge battery, check connections, reset BMS (if applicable), inspect inverter.
Reduced capacity/runtime	Aging battery, extreme temperatures, excessive load	Ensure proper operating temperature, reduce load, consider battery replacement if significantly aged.
Overheating during operation/charging	Poor ventilation, excessive load, internal fault	Ensure adequate airflow, reduce load, discontinue use and contact support if overheating persists.

If the problem persists after attempting these solutions, please contact DATOUBOSS customer support.

8. SPECIFICATIONS

Specification	Value
Brand	DATOUBOSS
Model Number	DST456
Size (Nominal)	12v100Ah
Voltage	12.8 Volts
Nominal Capacity	100Ah
Usable Energy	1280Wh
Max. Continuous Discharging Current	100A
Max. Load Power	1280W
Item Weight	11 Kilograms
Charge Temperature	0°C to 45°C
Discharge Temperature	-20°C to 65°C
Waterproof Rating	IP65
Cycle Life	4000-15000 cycles

9. WARRANTY AND SUPPORT

The DATOUBOSS 12V 100Ah LiFePO4 Battery comes with a **5-year manufacturer's warranty**. For warranty claims, technical support, or any inquiries, please refer to the official DATOUBOSS store or contact their customer service directly.

Official DATOUBOSS Store: [Visit Store](#)