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dumfume 2*DFBattery-12V100AM

dumfume 12V 100Ah Mini LiFePO4 Lithium Battery User Manual

Model: 2*DFBattery-12V100AM

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your dumfume 12V 100Ah Mini LiFePO4 Lithium Battery. Please read this manual thoroughly before installation and operation to ensure proper handling and to maximize the battery's lifespan and performance. This battery is designed for energy storage applications such as RVs, solar systems, and home energy storage.



Figure 1: Two dumfume 12V 100Ah Mini LiFePO4 Lithium Batteries.

2. SAFETY INFORMATION

Adhering to safety guidelines is crucial when handling lithium batteries. Failure to follow these instructions can result in serious injury, property damage, or reduced battery performance.

- **Do not use as a starting battery:** This LiFePO4 battery is designed for deep cycle energy storage, not for engine starting applications.
- **Avoid extreme temperatures:** Do not incinerate the battery or immerse it in water. Operate within the specified temperature range.
- **Proper ventilation:** Ensure adequate ventilation during charging and discharging.
- **Short circuit prevention:** Avoid short-circuiting the battery terminals. Use insulated tools.
- **Overcharge/Over-discharge protection:** The built-in Battery Management System (BMS) provides protection against these conditions. However, always use a compatible LiFePO4 charger.
- **Professional installation:** If you are unsure about installation or wiring, consult a qualified professional.
- **Identical batteries for series/parallel:** When connecting multiple batteries, ensure they are of the same brand, type, voltage, capacity, and BMS, and were purchased within 1 month.



Figure 2: Important usage restrictions and safety warnings for the battery.

3. PRODUCT OVERVIEW AND FEATURES

The dumfume 12V 100Ah Mini LiFePO4 Lithium Battery offers a reliable and efficient power solution with advanced features.

Key Features:

- **High Energy Density:** Weighing approximately 19-20 lbs, it is significantly lighter than traditional lead-acid batteries while offering 1280Wh capacity.
- **Extended Lifespan:** Provides up to 10 years of service life, with 4000 cycles at 100% Depth of Discharge (DOD) and up to 15,000 cycles at 60% DOD.
- **Integrated 100A BMS:** The Battery Management System protects against overcharge, over-discharge, overcurrent, short circuits, and extreme temperatures (-4°F to 158°F), ensuring stable performance and cell balancing.
- **Expandable Design:** Supports series and parallel connections up to 4S4P, allowing for a maximum capacity of 20.48kWh for various power needs.

Smart BMS Protection

Protect Battery from damage



Low/high temp



Overcharge



Over-discharge



Over-current



Short circuit

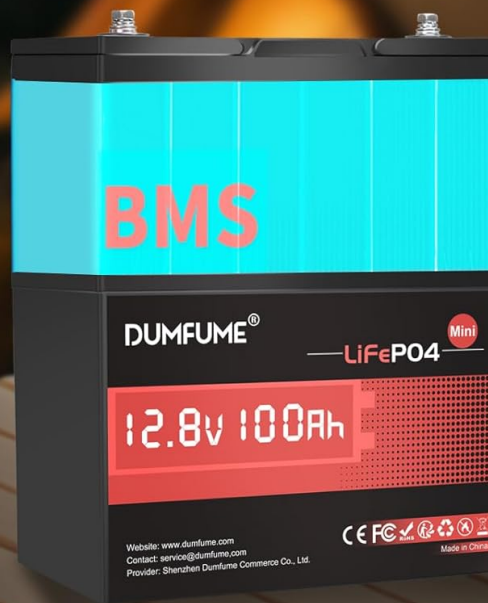


Figure 3: Smart BMS protection features.

Product Dimensions:

The battery features a compact design for versatile installation.

Length: 10.23 inches

Width: 6.61 inches

Height: 8.46 inches

Terminal Type: M8

DIMENSIONS

product Size

L10.23*W6.61*H8.46in

Terminal:M8

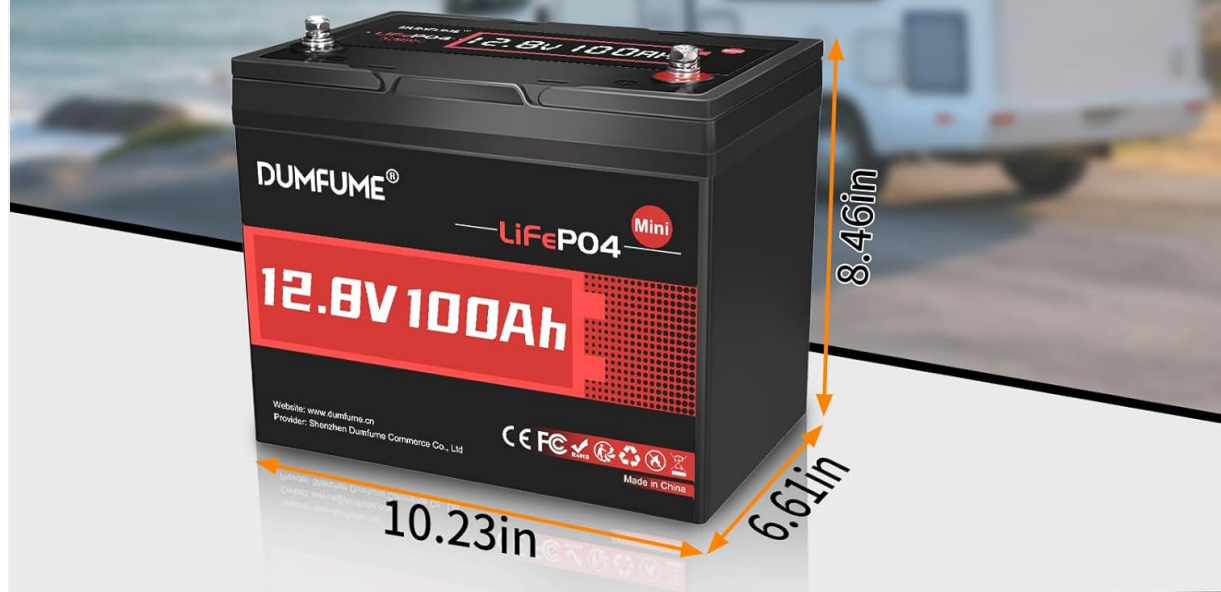


Figure 4: Battery dimensions and M8 terminal type.

4. INSTALLATION AND SETUP

Proper installation is critical for the safety and performance of your battery system.

4.1 Pre-Installation Checks

1. Inspect the battery for any physical damage.
2. Ensure all connections and cables are clean and free of corrosion.
3. Verify that your charging system (charger, solar charge controller, inverter) is compatible with LiFePO4 batteries and can provide the correct charging voltage and current.

4.2 Connecting Multiple Batteries (Series/Parallel)

The dumfume 12V 100Ah Mini LiFePO4 battery supports connections up to 4S4P (4 in series, 4 in parallel) for increased voltage or capacity.

- **Important:** When connecting multiple batteries, they must be identical (same brand, type, voltage, capacity, and BMS) and ideally purchased within the same month to ensure balanced performance.
- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase

capacity (Ah) while maintaining the same voltage (V).

- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase voltage (V) while maintaining the same capacity (Ah).
- Always use appropriate gauge cables and fuses for your system's current requirements.

4.3 Initial Charging

It is recommended to fully charge the battery before its first use. Use a dedicated LiFePO4 charger with the correct voltage settings.

5. OPERATING INSTRUCTIONS

Follow these guidelines for optimal operation of your dumfume LiFePO4 battery.

- **Charging:** Use a LiFePO4 compatible charger. The BMS will protect against overcharge.
- **Discharging:** The battery can be discharged within its specified temperature range of -4°F to 158°F. The BMS will prevent over-discharge.
- **Temperature Considerations:** While the battery can discharge in cold temperatures, charging below 32°F (0°C) is generally not recommended for LiFePO4 batteries without specific low-temperature charging features, as it can damage the cells. Refer to the BMS specifications for exact charging temperature cut-offs.
- **Load Management:** Avoid exceeding the maximum continuous discharge current specified in the technical specifications to prevent BMS shutdown.



Figure 5: Battery discharge temperature range.

6. MAINTENANCE

Minimal maintenance is required for LiFePO4 batteries, but following these steps will ensure longevity.

- **Regular Inspection:** Periodically check battery terminals for cleanliness and tightness.
- **Storage:** If storing the battery for an extended period, charge it to approximately 50-70% State of Charge (SOC) and store in a cool, dry place. Charge/discharge the battery once every 6 months to prevent damage from disuse.
- **Cleaning:** Use a dry cloth to clean the battery casing. Do not use solvents or immerse in water.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Battery not charging	Charger incompatibility, BMS protection activated (over-discharge, low temperature), loose connections.	Verify charger is LiFePO4 compatible. Check battery voltage; if very low, a specialized recovery charger may be needed. Ensure all connections are secure. Move battery to a warmer environment if charging in cold conditions.
Battery not discharging/no power output	BMS protection activated (over-discharge, overcurrent, short circuit), loose connections.	Check load for short circuits or excessive current draw. Disconnect load and reconnect after a few minutes to reset BMS. Ensure all connections are secure. Charge the battery if it is in an over-discharged state.
Reduced capacity or runtime	Aging battery, improper charging, extreme operating conditions.	Ensure battery is fully charged regularly. Avoid consistently operating at very high or low temperatures. If the battery is very old, its natural capacity may have diminished.

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

8. SPECIFICATIONS

Detailed technical specifications for the dumfume 12V 100Ah Mini LiFePO4 Lithium Battery.

Specification	Value
Brand	dumfume
Model Number	2*DFBattery-12V100AM
Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy	1280Wh
Battery Type	LiFePO4 (Lithium Iron Phosphate)
BMS	Built-in 100A
Cycle Life	4000 cycles @ 100% DOD, up to 15,000 cycles @ 60% DOD
Dimensions (L x W x H)	10.23 x 6.61 x 8.46 inches
Item Weight	Approx. 19-20 lbs (46.6 pounds for 2-pack)
Terminal Type	M8
Discharge Temperature Range	-4°F to 158°F (-20°C to 70°C)
Charging Temperature Range	32°F to 113°F (0°C to 45°C) (typical for LiFePO4, refer to BMS for exact cut-off)
Series/Parallel Capability	Up to 4S4P (max 20.48kWh)

9. WARRANTY AND SUPPORT

dumfume is committed to providing quality products and customer satisfaction.

Warranty Information:

For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official dumfume website. The warranty typically covers defects in materials and workmanship under normal use.





Customer Support:

If you have any questions, concerns, or require technical assistance, the dumfume Support Team is available 24/7. Please have your model number and purchase information ready when contacting support.

Website: www.dumfume.com

Contact Email: service@dumfume.com

Related Documents - 2*DFBattery-12V100AM

	<p>Renogy 12V 100Ah Smart Lithium Iron Phosphate Battery Manual</p> <p>User manual for the Renogy 12V 100Ah Smart Lithium Iron Phosphate Battery (RBT100LFP12S-G2). Provides detailed guidance on installation, operation, maintenance, safety precautions, troubleshooting, and technical specifications for this high-performance LFP battery.</p>
	<p>Eastman ES51.2-280LP Energy Storage LiFePO4 Battery User Manual</p> <p>User manual for the Eastman ES51.2-280LP Energy Storage LiFePO4 Battery, covering safety instructions, installation, operation, maintenance, and warranty information. Features include high performance, long life, intelligent cooling, and communication capabilities for household and RV energy storage applications.</p>
	<p>Projecta Intelli-Start PJ-IS1400-2 12V Lithium Jump Starter & Power Bank Owners Manual</p> <p>Comprehensive owners manual for the Projecta Intelli-Start PJ-IS1400-2, detailing its features, safety instructions, jump starting procedures, charging, and troubleshooting for this 12V lithium jump starter and portable power bank.</p>
	<p>BigBattery HUSKY 2 LiFePO4 Battery Specifications and Features</p> <p>Detailed specifications, features, and frequently asked questions for the BigBattery HUSKY 2 series of LiFePO4 batteries, including 12V, 24V, and 48V models. Covers system parameters, compatibility, and technical data.</p>



[Renogy Monitoring Screen for Smart Lithium Battery Series - Installation and Operation Manual](#)

This manual provides detailed installation, operation, and troubleshooting instructions for the Renogy Monitoring Screen designed for Smart Lithium Iron Phosphate Battery Series. Learn about its features, specifications, and how to connect and use it with your battery system.



[Dyness Stack100 User Manual](#)

User manual for the Dyness Stack100 High-Voltage Battery System, covering product specifications, installation, maintenance, and safety guidelines.