

Dyness 12V 100Ah Mini TM

Dyness 12V 100Ah LiFePO4 Battery Mini TM User Manual

Model: 12V 100Ah Mini TM

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Dyness 12V 100Ah LiFePO4 Battery Mini TM. Please read all instructions carefully before installation and operation. This battery is designed for deep cycle applications, offering a compact and lightweight power solution for various scenarios.

2. IMPORTANT SAFETY INSTRUCTIONS

- Do not short circuit the positive (+) and negative (-) terminals with any metals.
- Do not immerse, throw, and wet the battery in water.
- Do not heat above 60°C or throw the battery into fire.
- Do not disassemble, crush, or modify the battery.
- Do not reverse the positive (+) and negative (-) terminals.
- Stop using the battery under conditions of abnormal heat, odor, or deformation.
- Ensure proper ventilation during operation.
- Always use a LiFePO4-specific charger for optimal battery health and safety.

3. PRODUCT FEATURES

- **Ultra-Compact Design:** Measuring 10.2 x 6.6 x 8.2 inches (0.32ft³) and weighing 20.9 lbs, this battery is approximately 25% smaller than Group 31 batteries, optimizing space.
- **IP65-Rated Protection:** The waterproof and dustproof casing provides protection against splashes, rain, and corrosion.
- **Advanced Battery Management System (BMS):** Includes safeguards against overcharging, over-discharging, overcurrent, overheating, and short circuits.
- **Low-Temperature Charging Protection:** Charging automatically cuts off below 32°F (0°C), resumes above 41°F (5°C), and the battery shuts down entirely at -4°F (-20°C) to prevent damage in cold environments.
- **Premium A+ Grade LiFePO4 Cells:** Engineered for exceptional longevity, higher power density, and inherent safety.
- **Extended Lifespan:** Offers 6000+ deep cycles at 80% Depth of Discharge (DOD), resulting in a 10-year lifespan, which is up to 6 times longer than standard lead-acid batteries.
- **Superior Energy Density:** Packs 3-5 times more power in the same space compared to traditional batteries.
- **Certifications:** Independently tested and certified to global standards including FCC, CE, RoHS, and UN38.3 for reliable operation.

4. SETUP

4.1 Unboxing and Inspection

Upon receiving your Dyness 12V 100Ah LiFePO4 Battery, carefully unbox it and inspect for any signs of damage. Ensure all components are present.

Video: Dyness 12V 100Ah Mini LiFePO4 Battery Group 24 Unboxing and Overview. This video demonstrates the unboxing process and highlights key features of the Dyness 12V 100Ah Mini LiFePO4 Battery.

4.2 Physical Dimensions and Terminals

The battery features M8*16mm terminal bolts for secure connections. Refer to the diagram below for detailed dimensions.

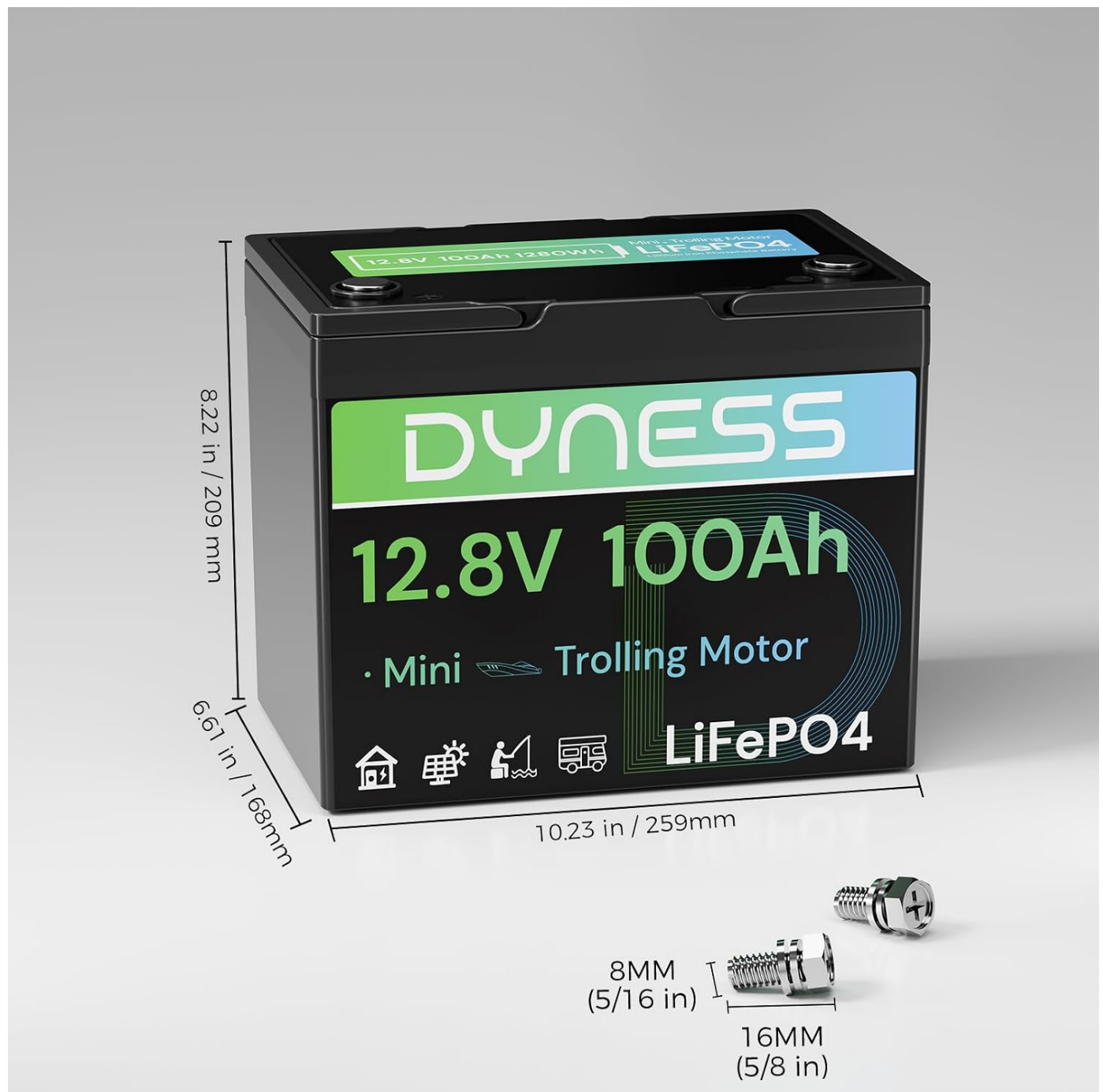


Image: Dyness 12V 100Ah LiFePO4 Battery Mini TM with dimensions. This image displays the physical dimensions of the battery, including its length (10.23 inches / 259mm), width (6.61 inches / 168mm), and height (8.22 inches / 209mm), along with the M8 (5/16 inch) by 16mm (5/8 inch) terminal bolt specifications.

5. OPERATING INSTRUCTIONS

5.1 General Use

The Dyness 12V 100Ah LiFePO4 Battery is versatile and suitable for a wide range of applications. Its compact size and robust design make it ideal for:

- Trolling motors (recommended for 30-68 lbs thrust)
- RVs and camping vehicles
- Solar energy systems
- Home backup power
- Off-grid living
- Boats and marine applications

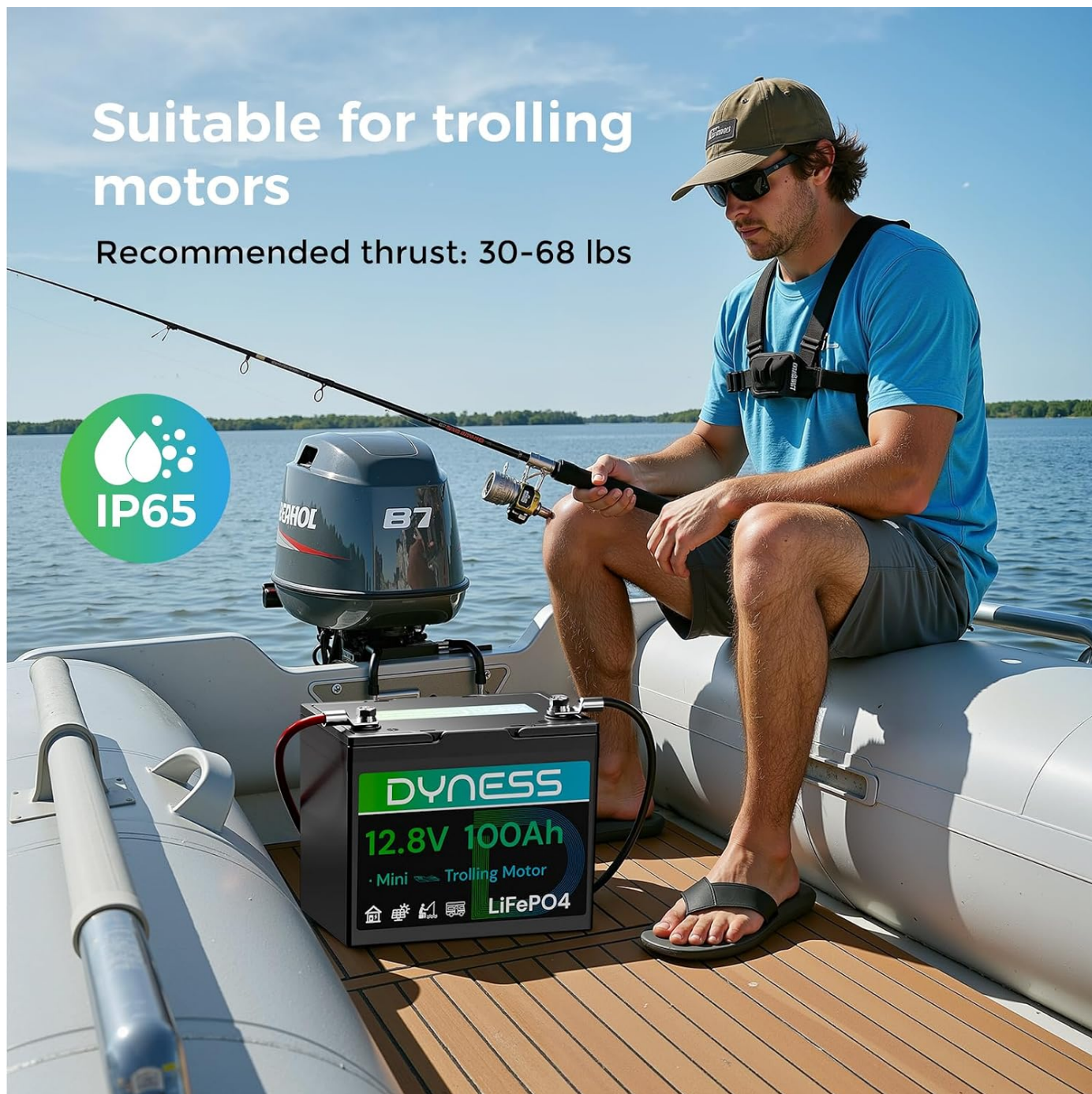


Image: Dyness 12V 100Ah LiFePO4 Battery Mini TM used with a trolling motor. A person is shown fishing from a small boat, with the Dyness battery connected to a trolling motor, highlighting its suitability for marine applications and its IP65 waterproof rating.

LOW-TEMPERATURE CUT-OFF PROTECTION

Intelligently Cut Off Charging And Discharging



Image: Dyness 12V 100Ah LiFePO4 Battery Mini TM suitable for various scenarios. This image illustrates the battery's versatility across different applications, including RV camping, off-grid cabins, solar systems, and powering trolling motors.

6. CHARGING INSTRUCTIONS

To maximize the performance and lifespan of your Dyness 12V LiFePO4 battery, it is highly recommended to use a LiFePO4-specific charger. Recharging at 0.2C (20 Amps for a 100Ah battery) is recommended for optimal battery health.

6.1 Low-Temperature Charging Protection

The integrated BMS features advanced low-temperature charging protection:

- Charging automatically cuts off below 32°F (0°C).
- Charging resumes only above 41°F (5°C).
- The battery will shut down entirely at -4°F (-20°C) to prevent damage in extremely cold environments.

Class A battery cells

Longer life than lead-acid batteries

Over 4,000 cycles at 100% depth of discharge

Self-discharge $\leq 2\%$ /month

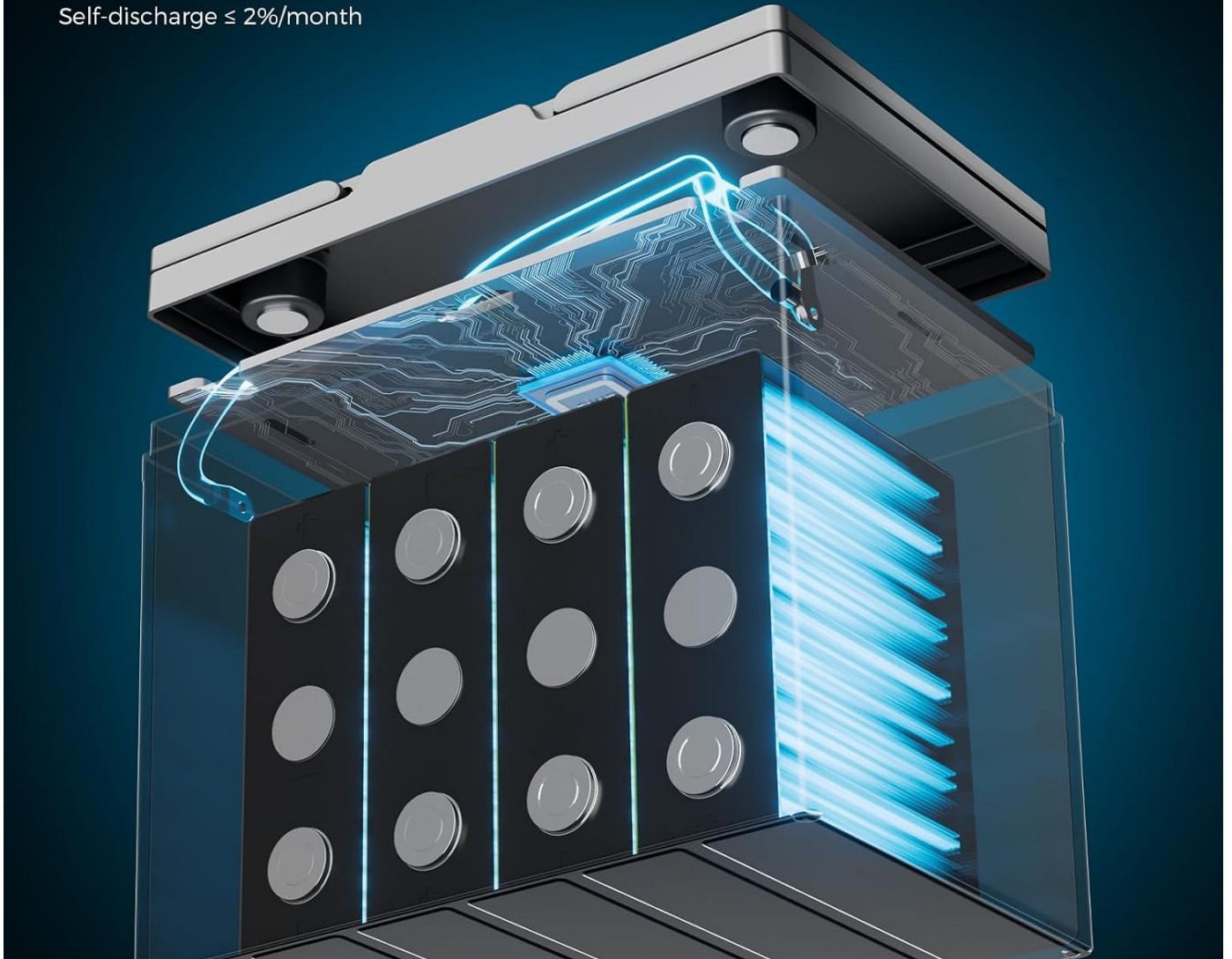


Image: Dyness 12V 100Ah LiFePO4 Battery Mini TM low-temperature protection. This graphic illustrates the battery's low-temperature cut-off points: discharging off below -4°F (-20°C), charging off below 32°F (0°C), and charging recovery above 41°F (5°C).

7. SERIES AND PARALLEL CONNECTION

The Dyness 12V 100Ah LiFePO4 battery supports flexible configurations to meet various energy demands. You can connect up to 4 batteries in series and 4 batteries in parallel, allowing for a maximum system of 16 batteries to build a substantial 20.48kWh storage system.

SUITABLE FOR VARIETY SCENARIOS



Image: Dyness 12V 100Ah LiFePO4 Battery Mini TM series-parallel combination examples. This image demonstrates various connection possibilities: 4P (Max 12.8V 400Ah, 5120Wh), 4S (Max 51.2V 100Ah, 5120Wh), and 4P4S (51.2V 400Ah, 20.48kWh total power).

8. MAINTENANCE AND STORAGE

The Dyness LiFePO4 battery is designed for minimal maintenance. However, adhering to the following guidelines will ensure optimal performance and longevity:

- Regularly check terminal connections for tightness and corrosion.
- Store the battery in a cool, dry place away from direct sunlight and extreme temperatures.
- Avoid prolonged storage in a fully discharged state. Recharge periodically if storing for extended periods.
- The IP65 rating protects against water splashes and dust, but avoid submerging the battery.

9. TROUBLESHOOTING

If you encounter any issues with your Dyness 12V 100Ah LiFePO4 Battery, please refer to the following common troubleshooting steps:

- **Battery Not Charging:** Ensure the charger is LiFePO4-specific and properly connected. Check for low-temperature cut-off if ambient

temperature is below 32°F (0°C).

- **No Power Output:** Verify all connections are secure. Check if the BMS has activated protection due to over-discharge, overcurrent, or short circuit.
- **Unusual Odor or Heat:** Immediately disconnect the battery from all loads and chargers. Contact customer support.

For persistent issues, please contact Dyness customer support.

10. SPECIFICATIONS

Specification	Value
Brand	Dyness
Item Model Number	12V 100Ah Mini TM
Voltage	12.8 Volts
Battery Cell Composition	Lithium Ion (LiFePO4)
Item Weight	20.9 pounds
Product Dimensions	6.61 x 10.23 x 8.22 inches
Number of Batteries Required	1 12V battery required

11. WARRANTY AND SUPPORT

Dyness provides a 5-year post-sales service for this product. The battery is designed for a 10-year lifespan under normal operating conditions.

For professional technical support, product-related issues, or questions, please do not hesitate to contact the Dyness support team. We aim to provide a fast response within 24 hours.

Contact information can be found on the product packaging or the official Dyness website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

Does the dryness 12.8 volt 100 ah lifepo4 have a low voltage shut off

Yes, the Dyness 12V 100Ah LiFePO4 Battery Mini TM features an integrated Battery Management System (BMS) that includes safeguards against over-discharging. This is why your battery quit when it reached 10.8V; the BMS automatically...

[Read full answer](#)