MOSEWORTH M36100

MOSEWORTH 36V 100Ah LiFePO4 Lithium Battery User Manual

Model: M36100

1. Introduction

Thank you for choosing the MOSEWORTH 36V 100Ah LiFePO4 Lithium Battery. This manual provides essential information for the safe and efficient use of your battery. Please read it thoroughly before installation and operation.

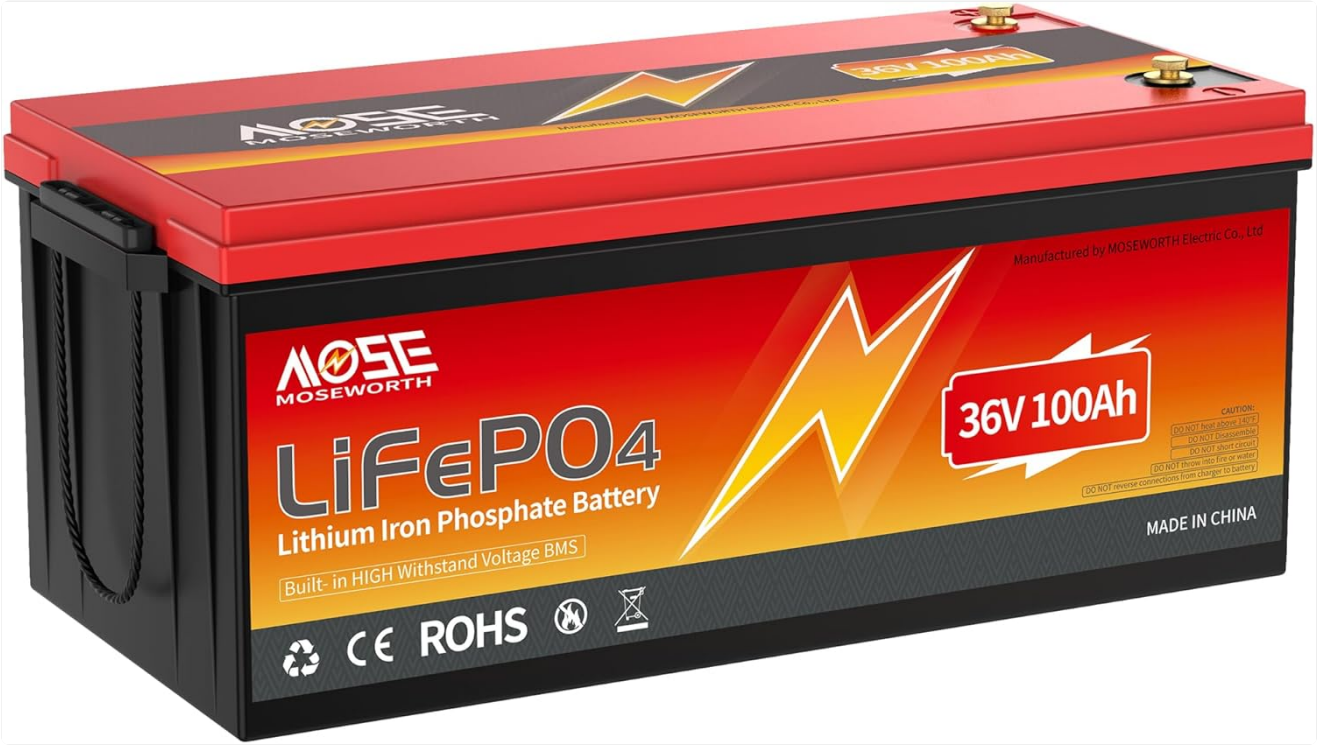

Figure 1: MOSEWORTH 36V 100Ah LiFePO4 Lithium Battery

The MOSEWORTH 36V 100Ah LiFePO4 battery is designed for deep cycle applications, offering high performance and a long lifespan. It features a built-in 200A Battery Management System (BMS) for comprehensive protection and Grade A LiFePO4 cells for reliability.

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 battery terminals.
- Do not immerse the battery in water or expose it to excessive moisture.
- Do not puncture, drop, crush, or disassemble the battery.
- Use only compatible LiFePO4 chargers.
- Ensure proper ventilation during charging and operation.
- Keep the battery away from heat sources and open flames.
- Wear appropriate personal protective equipment (PPE) such as gloves and eye protection during installation.

3. Product Overview

This MOSEWORTH LiFePO4 battery incorporates advanced technology for optimal performance and safety.

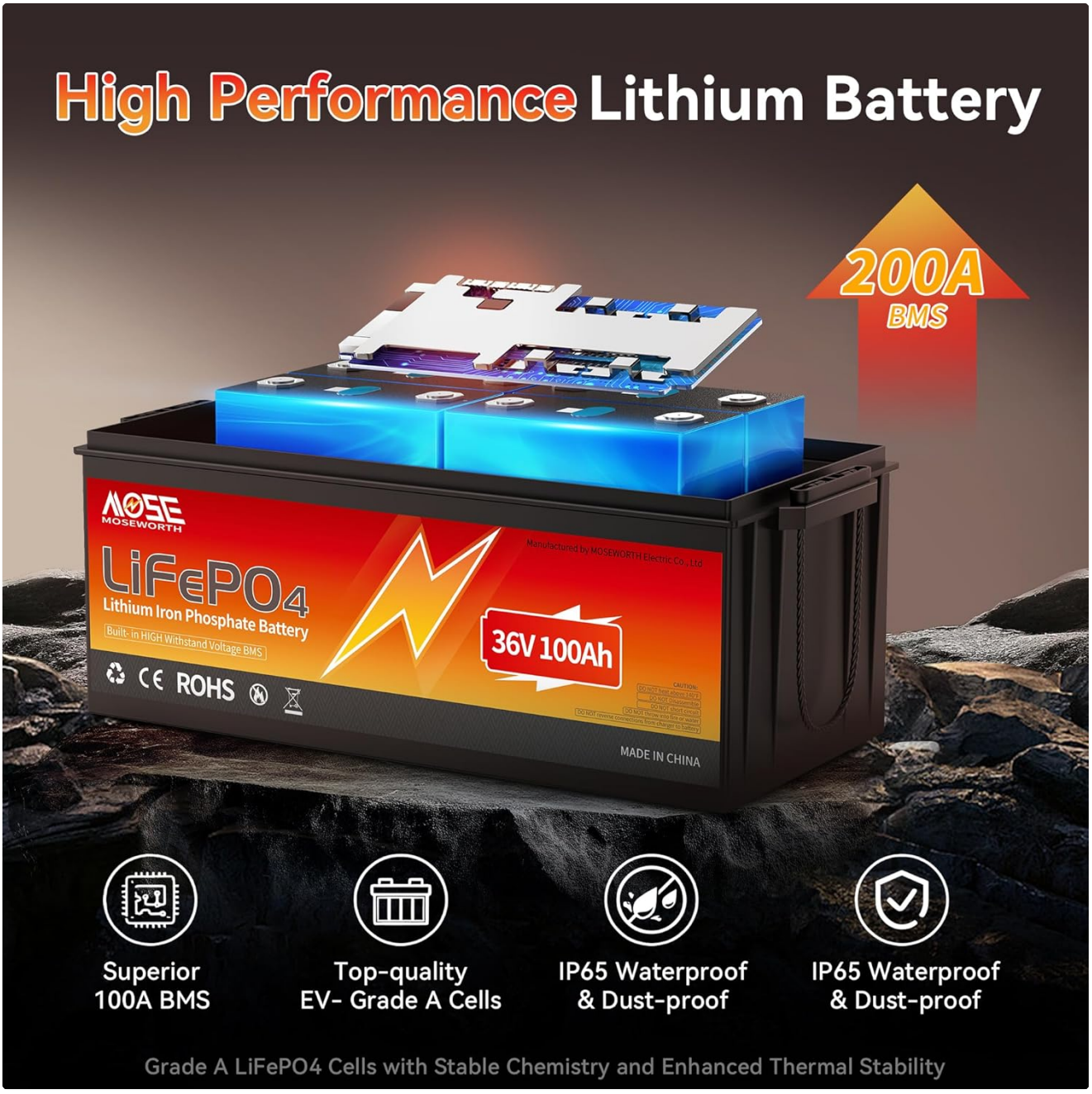

Figure 2: Internal components highlighting the 200A BMS and Grade A cells

3.1. Built-in 200A Battery Management System (BMS)

The integrated 200A BMS provides critical protection features to ensure the battery's longevity and safe operation:

- **Overcharge Protection:** Prevents charging beyond the safe voltage limit.
- **Over-discharge Protection:** Stops discharge before the battery voltage drops too low.
- **Overcurrent Protection:** Safeguards against excessive current draw.
- **Short Circuit Protection:** Automatically disconnects in case of a short circuit.
- **High/Low Temperature Protection:** Manages operation within safe temperature ranges.

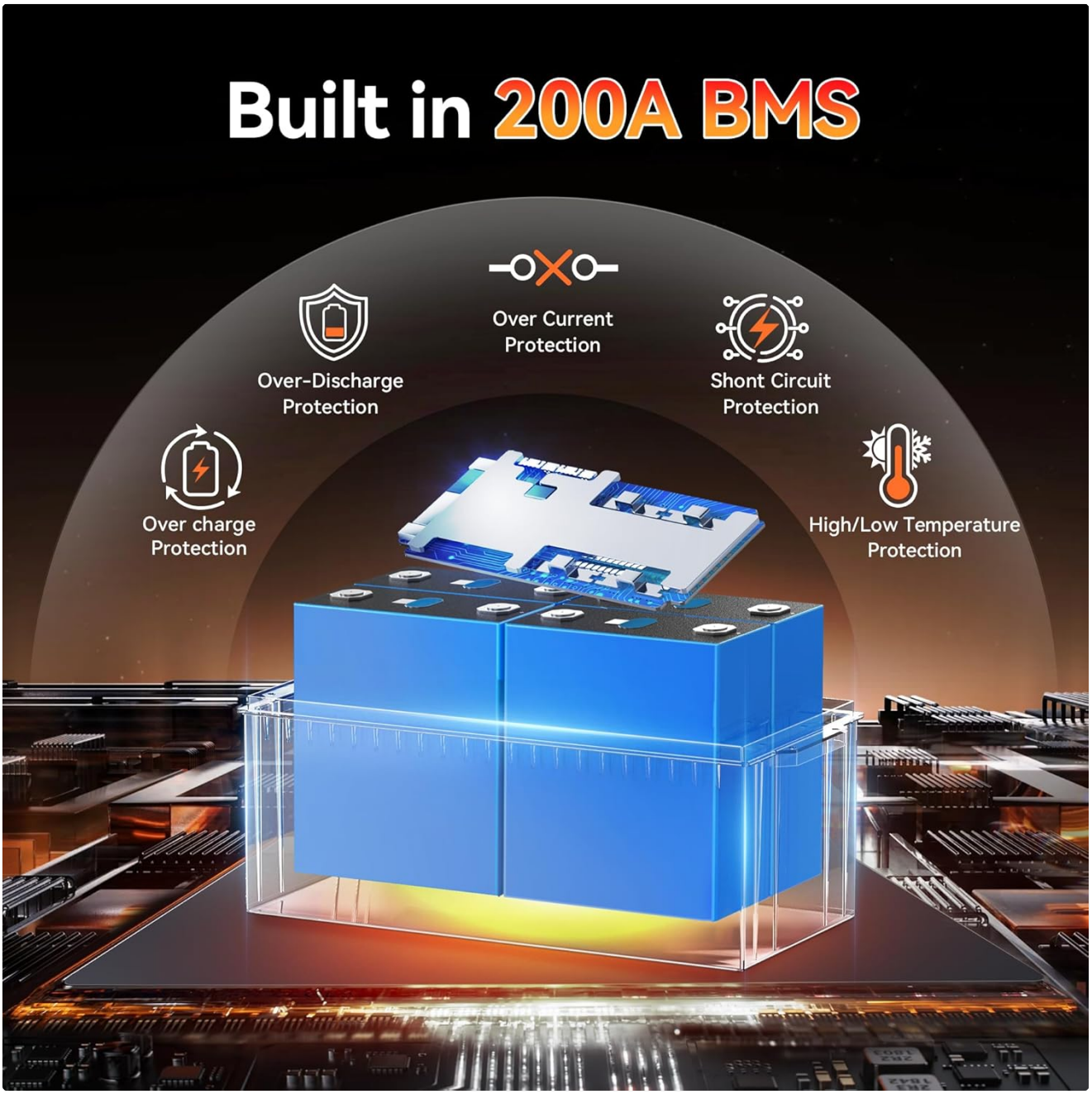

Figure 3: Detailed view of BMS protection mechanisms

4. Setup and Installation

4.1. Unpacking and Initial Inspection

Upon receiving your battery, carefully inspect the packaging for any signs of damage. Remove the battery and check for physical damage, loose terminals, or leaks. If any issues are found, contact customer support immediately.

4.2. Physical Dimensions and Terminals

The battery features M8 bolt terminals for secure connections. Ensure all connections are tight and properly insulated.

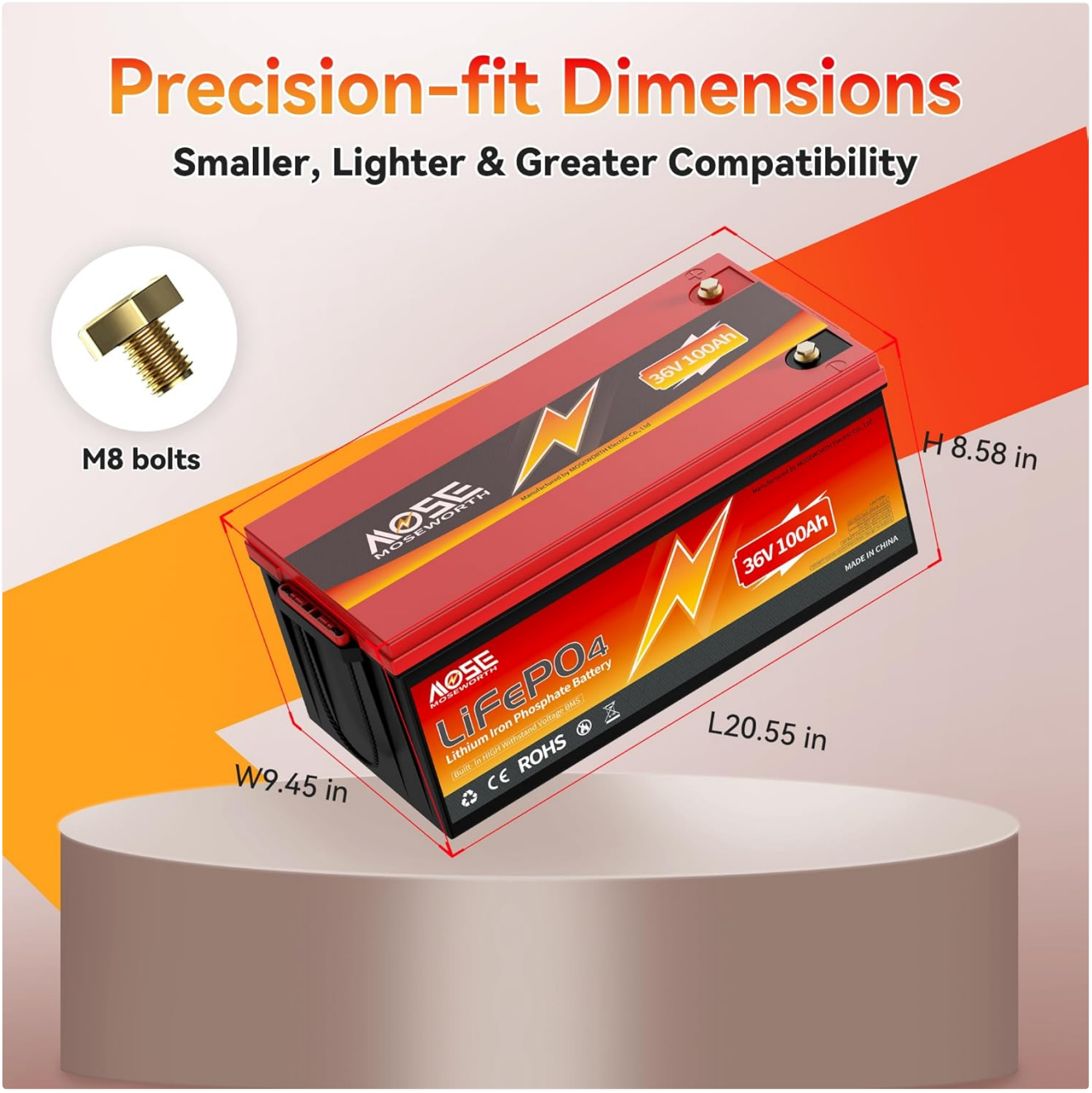

Figure 4: Battery dimensions (L20.55in x W9.45in x H8.58in) and M8 bolt terminals

4.3. Connection Guidelines

Connect the battery to your system using appropriate cables and connectors. Always connect the positive (+) terminal to the positive (+) terminal of your load/charger and the negative (-) terminal to the negative (-) terminal. Ensure all connections are clean and tight to prevent resistance and overheating.
For this 36V 100Ah battery, it is typically used as a single unit. If connecting multiple batteries for higher capacity or voltage (e.g., for other MOSEWORTH models), consult a qualified electrician and refer to specific wiring diagrams for series or parallel configurations.

5. Charging Instructions

The MOSEWORTH LiFePO4 battery supports multiple charging methods:

- **Dedicated LiFePO4 Charger:** Recommended for optimal charging.

- **Solar Panel:** Can be charged using a solar panel setup (e.g., ≥400W for a sunny day).
- **Generator:** Compatible with generators using a 20A DC-DC charger.

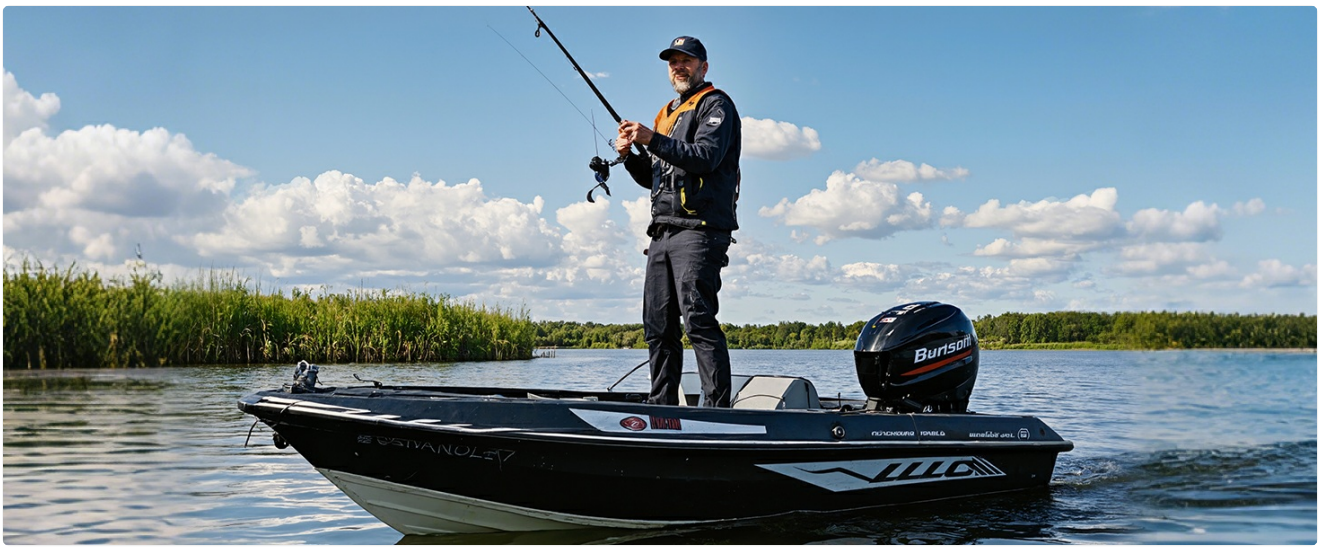

Figure 5: Various charging methods for the battery

With an efficient charging setup, the battery can reach full power significantly faster than traditional lead-acid batteries.

6. Operating Guidelines

6.1. Applications

The MOSEWORTH 36V 100Ah LiFePO4 battery is suitable for a wide range of deep cycle applications, including:

- Recreational Vehicles (RVs)
- Marine and Boat applications
- Trolling Motors
- Solar Energy Storage Systems
- Off-grid Power Systems

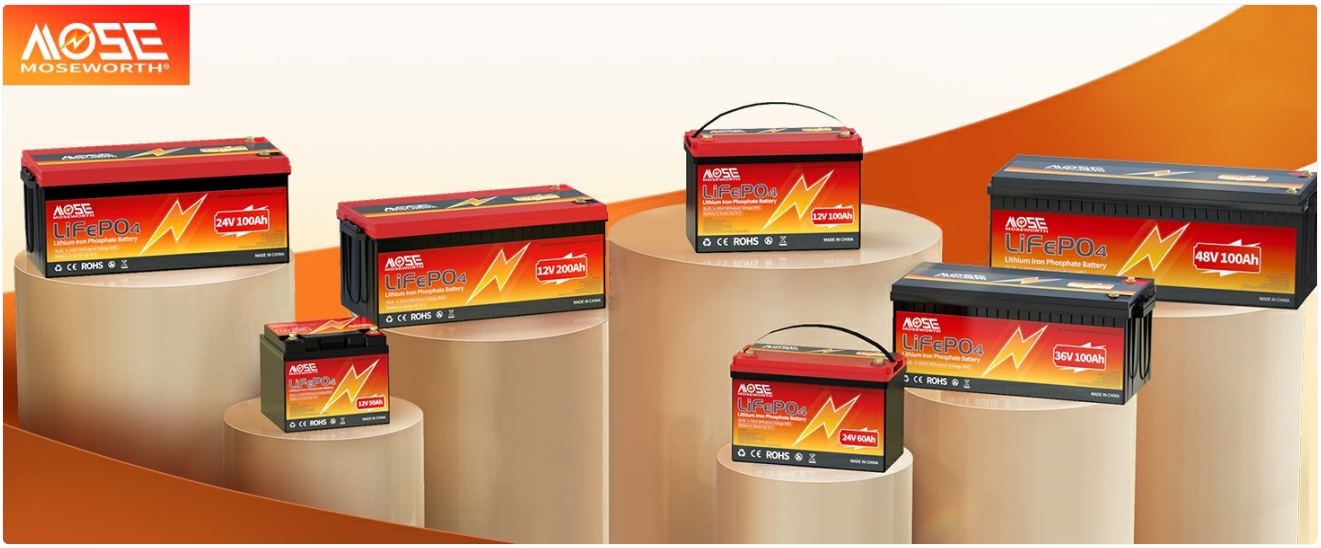

Figure 6: Common applications for the MOSEWORTH LiFePO4 battery

6.2. Temperature Considerations

The battery's BMS includes intelligent temperature protection:

- **Low-Temperature Cutoff:** Discharging stops at -4°F (-20°C).
- **Low-Temperature Charging Stop:** Charging stops below 32°F (0°C).
- **High-Temperature Protection:** Discharging and charging stop at 140°F (60°C).

Charging resumes when the temperature rises above 41°F (5°C).

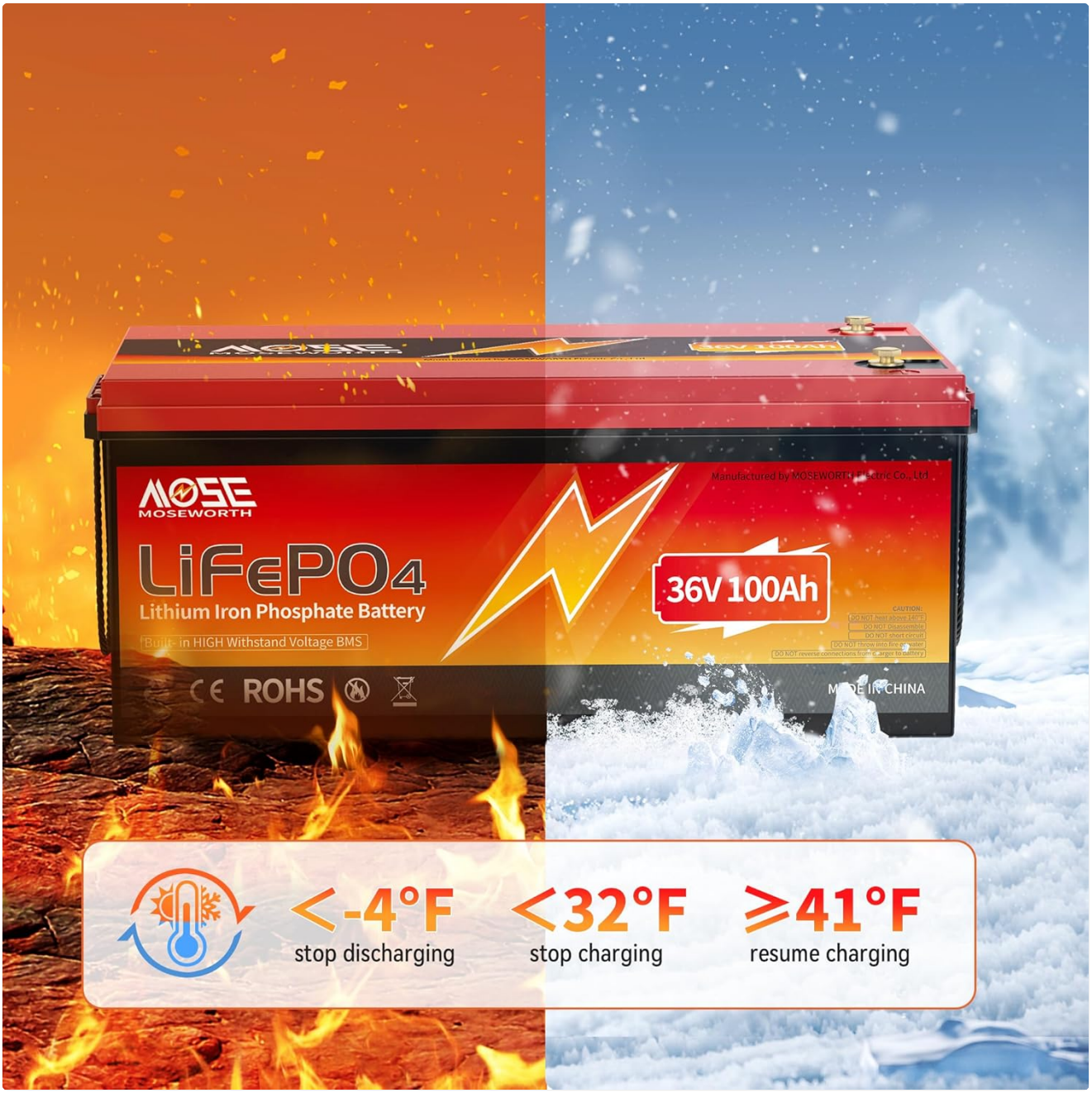

Figure 7: Temperature thresholds for battery operation

7. Maintenance and Storage

7.1. General Maintenance

LiFePO4 batteries require minimal maintenance. Periodically check terminal connections for tightness and cleanliness. Ensure the battery is kept in a dry, well-ventilated area.

7.2. Long Lifespan

This battery is designed for over 5000 deep cycles, providing more than 10 years of reliable service under normal operating conditions.

7.3. Storage

For long-term storage, charge the battery to approximately 50% State of Charge (SOC) and store it in a cool, dry place, ideally between 32°F (0°C) and 95°F (35°C). Avoid storing in direct sunlight or extreme temperatures.

8. Troubleshooting

If you encounter issues with your MOSEWORTH LiFePO4 battery, consider the following common checks:

- **Battery Not Charging:**
  - Verify charger compatibility and proper connection.
  - Check if the ambient temperature is below 32°F (0°C), which would prevent charging due to low-temperature protection.
  - Ensure the charger is functioning correctly.
- **Battery Not Discharging/No Power Output:**
  - Check all cable connections for tightness and correct polarity.
  - Verify if the battery is fully discharged (BMS will cut off power).
  - Check if the ambient temperature is below -4°F (-20°C) or above 140°F (60°C), triggering temperature protection.
  - Inspect for any short circuits in the load or wiring.
- **Unusual Odor or Swelling:** Immediately disconnect the battery and contact customer support. Do not attempt to use or charge the battery.

The built-in BMS is designed to prevent most common issues. If problems persist after these checks, please contact MOSEWORTH customer support.

9. Specifications

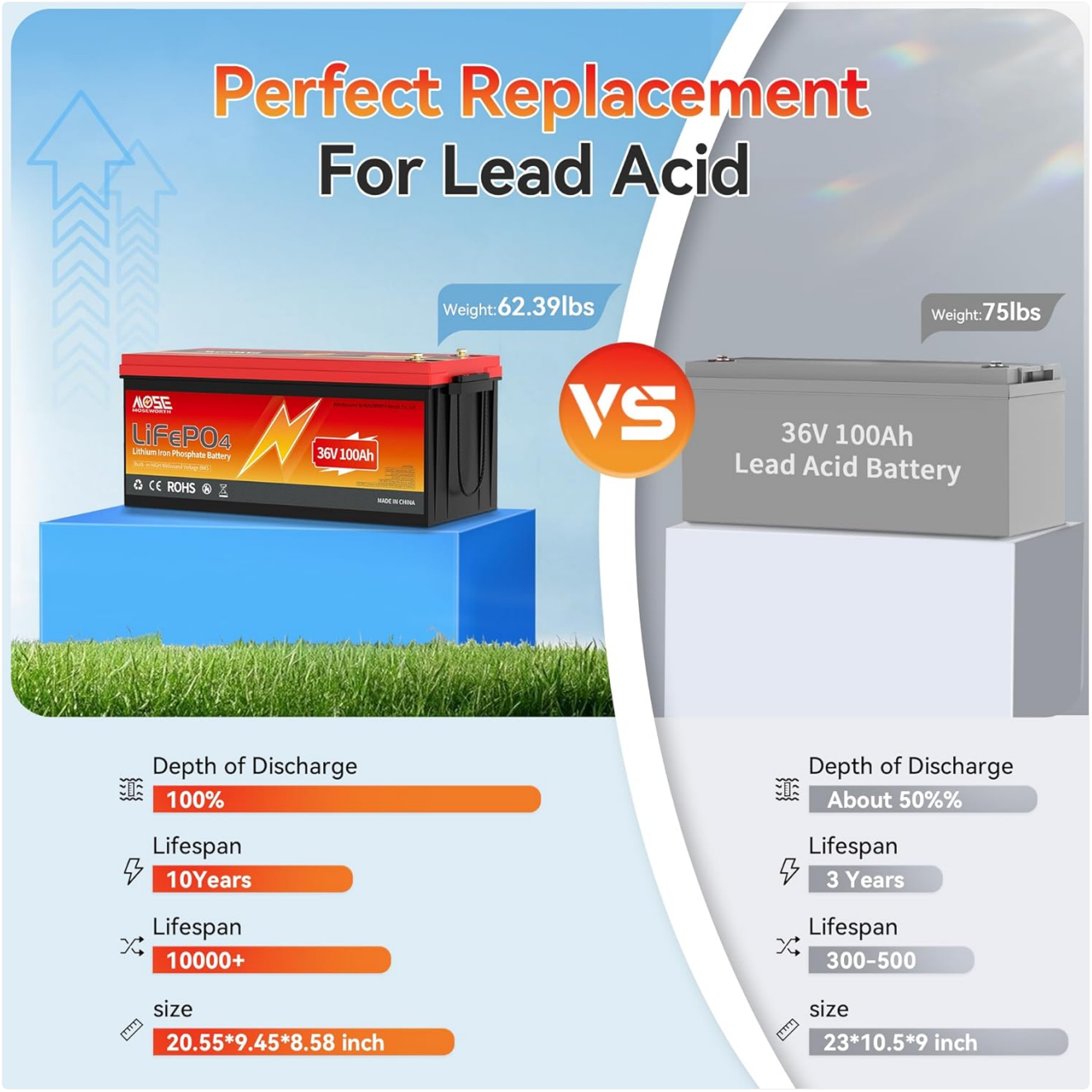

Figure 8: Key specifications and comparison

Feature	Specification
Model	M36100
Nominal Voltage	36V
Nominal Capacity	100Ah
Energy	3600Wh
Built-in BMS	200A
Cycle Life	5000+ cycles (at 100% DoD)
Dimensions (L x W x H)	20.55 x 9.45 x 8.58 inches
Weight	Approximately 62.39 lbs
Operating Temperature (Discharge)	-4°F to 140°F (-20°C to 60°C)
Operating Temperature (Charge)	32°F to 140°F (0°C to 60°C)
Terminal Type	M8 Bolts
Protection	Overcharge, Over-discharge, Overcurrent, Short Circuit, High/Low Temperature

10. Warranty and Support

MOSEWORTH is committed to customer satisfaction. Every LiFePO4 battery comes with lifetime technical support. Our dedicated customer service team is available 24/7 and aims to respond to inquiries within 24 hours.
For technical assistance, warranty claims, or any other questions, please contact MOSEWORTH customer support through the retailer's platform or the official MOSEWORTH website.