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## Mighty Max Battery ML18-12

# Mighty Max Battery ML18-12 12V 18AH SLA Battery User Manual

## 1. PRODUCT OVERVIEW

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The Mighty Max Battery ML18-12 is a 12 Volt, 18 Amp Hour (AH) Sealed Lead Acid (SLA) rechargeable battery. This maintenance-free battery is designed for various applications requiring reliable power, including security alarm systems, UPS units, and other devices. It features a spill-proof design and can be mounted in any position.



Image 1: Mighty Max Battery ML18-12 12V 18AH SLA Battery. This image displays the front and top view of two ML18-12 batteries, showing the branding, model number, voltage, amperage, and safety warnings.

## 2. SAFETY INFORMATION

Please read and understand the following safety precautions before handling or installing the battery:

- **Risk of fire, explosion, or burns:** Do not disassemble, heat above 40°C (104°F), or incinerate the battery.
- **Do not short the battery terminals:** Accidental shorting can cause severe damage to the battery and connected equipment, and pose a fire hazard.
- **Do not disassemble:** The battery contains corrosive materials. Do not attempt to open or modify the battery.
- **Storage temperature:** The average storage temperature should not exceed 50°C (122°F).
- **Recycling:** Batteries must be recycled or disposed of properly. Consult local regulations for proper disposal.

## 3. PRODUCT FEATURES

The ML18-12 battery incorporates several design features for optimal performance and safety:

- **Sealed Lead Acid (SLA) / Absorbent Glass Mat (AGM) Technology:** This spill-proof design allows for mounting in any position and ensures efficient gas recombination for maintenance-free operation.
- **High Discharge Rate:** Capable of delivering high current when needed.
- **Wide Operating Temperatures:** Designed to perform reliably across a range of temperatures.
- **Long Service Life:** Optimized for extended use in both float and cyclic applications.
- **Deep Discharge Recovery:** Ability to recover from deep discharge cycles.
- **Robust Construction:** Features a high-impact case and container for durability and resistance to shocks and vibration.

## CONFIGURATION

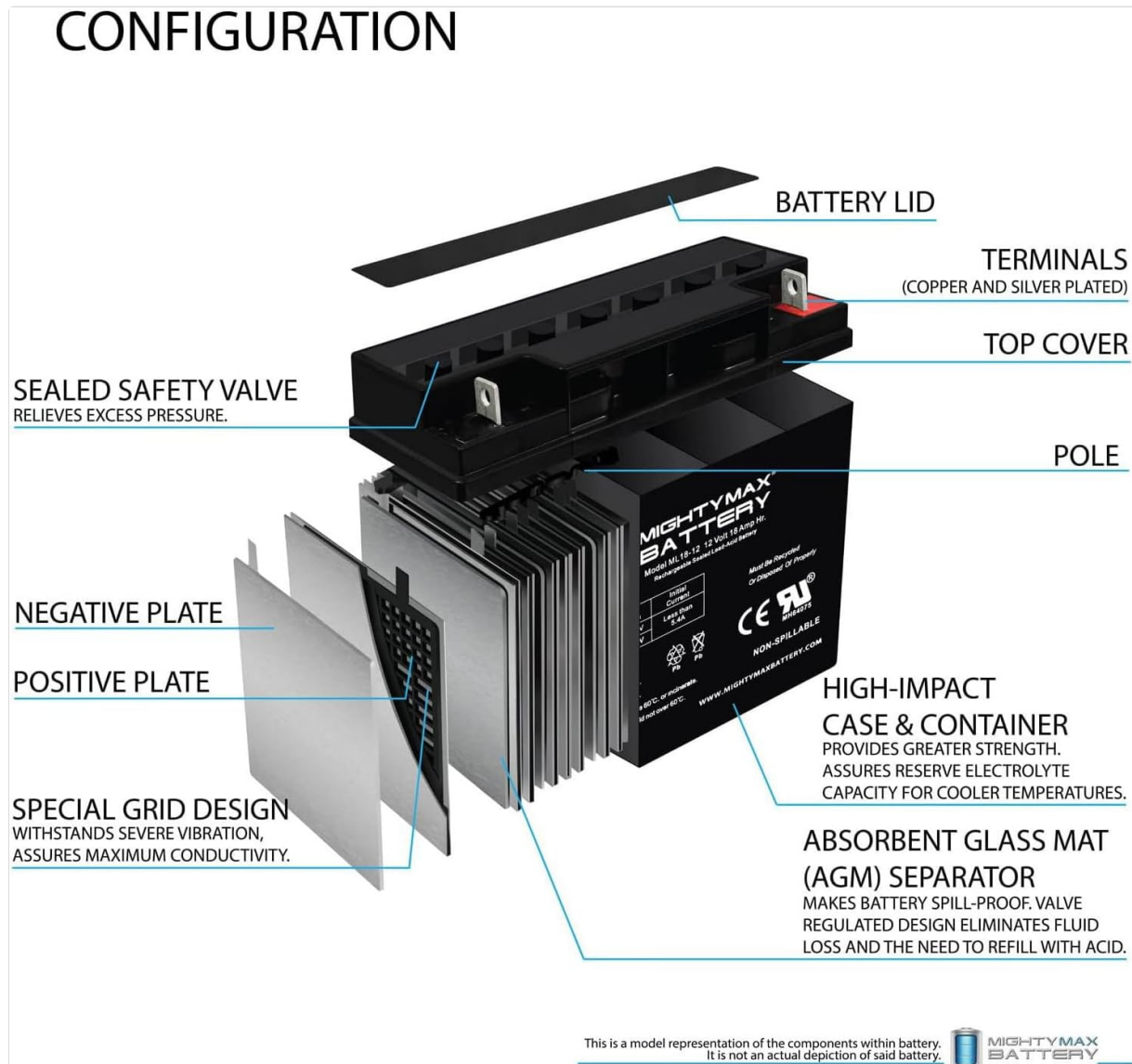


Image 2: Internal Configuration of ML18-12 Battery. This diagram illustrates the internal components including the battery lid, top cover, terminals (copper and silver plated), pole, negative plate, positive plate, sealed safety valve, special grid design, high-impact case, and absorbent glass mat (AGM) separator.

## 4. SETUP AND INSTALLATION

Follow these guidelines for proper setup and installation:

1. **Inspection:** Before installation, visually inspect the battery for any signs of damage.
2. **Terminal Connection:** The ML18-12 battery uses Nut and Bolt terminals. Ensure connections are clean, tight, and secure to prevent resistance and overheating. Connect the positive (+) terminal to the

positive lead of your device and the negative (-) terminal to the negative lead.

3. **Mounting Position:** Due to its sealed, spill-proof design, the battery can be mounted in any orientation (upright, on its side, or on its back). However, mounting with terminals facing upwards is generally recommended for optimal performance and accessibility.
4. **Ventilation:** Although sealed, ensure adequate ventilation around the battery to dissipate any heat generated during charging or discharge.
5. **Compatibility:** Verify that the voltage and capacity of the ML18-12 battery are compatible with the requirements of your application.

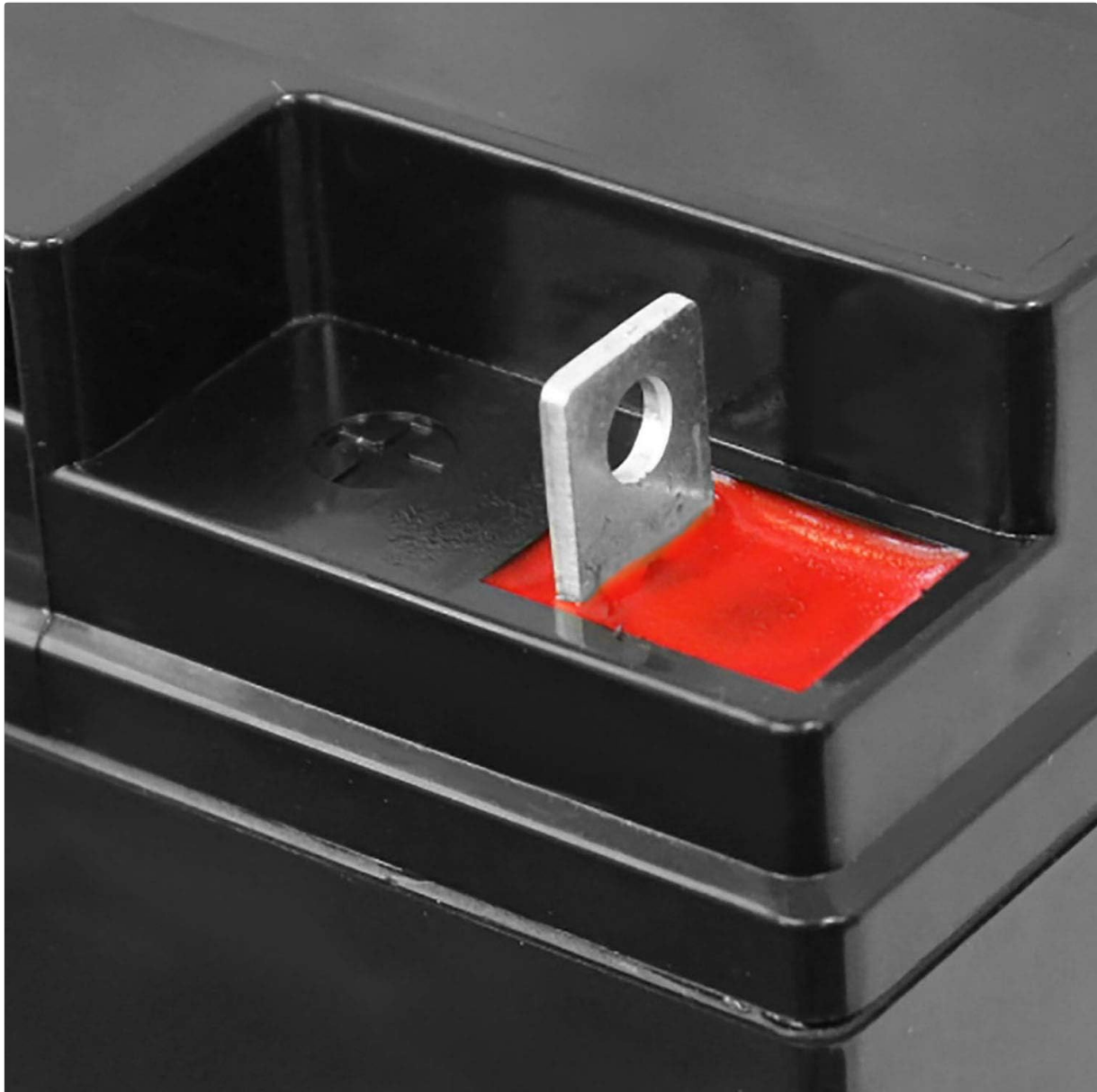


Image 3: Close-up of ML18-12 Nut and Bolt Terminal. This image shows a detailed view of the battery's terminal, designed for secure nut and bolt connections.

## 5. OPERATING INSTRUCTIONS

The ML18-12 battery is designed for reliable operation. Proper charging is crucial for maximizing its lifespan.

- **Charging Voltage Regulation:**
  - **Floating Use:** For standby applications where the battery is continuously connected to a charger, maintain a voltage between 13.6V and 13.8V.

- **Cycle Use:** For applications involving regular discharge and recharge cycles, maintain a voltage between 14.5V and 14.9V.
- **Initial Current:** The initial charging current should be less than 5.4A.
- **Discharge:** Avoid excessively deep discharges to prolong battery life. While the battery has good deep discharge recovery, consistent deep cycling can reduce overall lifespan.

## 6. MAINTENANCE

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The ML18-12 is a maintenance-free battery, meaning it does not require water additions. However, some general care practices will help ensure its longevity:

- **Keep Clean:** Periodically clean the battery terminals and case to remove any dirt or corrosion. Use a dry cloth.
- **Temperature Control:** Operate and store the battery within recommended temperature ranges to prevent performance degradation. Avoid extreme heat or cold.
- **Regular Charging:** If the battery is not in regular use, ensure it is charged periodically to prevent self-discharge from reducing its capacity.

## 7. TROUBLESHOOTING

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If you encounter issues with your ML18-12 battery, consider the following common troubleshooting steps:

- **Battery Not Holding Charge:**
  - Verify the charger is functioning correctly and providing the appropriate voltage and current.
  - Check for loose or corroded terminal connections.
  - Ensure the battery is not being over-discharged regularly.
- **Low Voltage Output:**
  - Confirm the battery is fully charged according to the operating instructions.
  - Inspect connections for any resistance.
- **Battery Overheating:**
  - Ensure the charging current is not exceeding the recommended initial current (less than 5.4A).
  - Check for proper ventilation around the battery.
  - If overheating persists, discontinue use and consult support.

For persistent issues, refer to the warranty and support section.

## 8. SPECIFICATIONS

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Detailed technical specifications for the Mighty Max Battery ML18-12:



Image 4: Detailed Specifications and Performance Data for ML18-12. This image provides comprehensive technical data including battery construction, general features, performance characteristics (capacity, internal resistance, temperature effects), and detailed specifications with dimensions and terminal type.

Specification	Value
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Specification	Value
Model	ML18-12
Nominal Voltage	12V
Nominal Capacity	18AH (20hr rate)
Dimensions (Length x Width x Height)	7.12 in x 3.00 in x 6.50 in (18.08 cm x 7.62 cm x 16.51 cm)
Weight	24 lbs (10.89 kg) for 2-pack, approx. 12 lbs (5.44 kg) per battery
Terminal Type	Nut and Bolt (F3)
Battery Type	Sealed Lead Acid (SLA) / Absorbent Glass Mat (AGM)
Charging Voltage (Float Use)	13.6V - 13.8V
Charging Voltage (Cycle Use)	14.5V - 14.9V
Max Initial Charging Current	Less than 5.4A
Operating Temperature Range	Wide operating temperatures

## 9. WARRANTY AND SUPPORT

The Mighty Max Battery ML18-12 comes with a Full One Year Warranty. This warranty covers defects in materials and workmanship under normal use.

For warranty claims, technical support, or any questions regarding your battery, please contact Mighty Max Battery customer service. Keep your purchase receipt as proof of purchase.

For further assistance, please visit the official Mighty Max Battery website or contact their support channels.