

SigmasTek SP12-12

SigmasTek SP12-12 (12V 12Ah) Sealed Lead-Acid Battery User Manual

Model: SP12-12

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your SigmasTek SP12-12 12 Volt 12 AmpH Sealed Lead-Acid (SLA) Battery. Please read these instructions carefully before installation, operation, or maintenance to ensure optimal performance and longevity of the battery.

2. SAFETY INFORMATION

Always observe the following safety precautions when handling batteries:

- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Do not short-circuit the battery terminals.
- Keep the battery away from open flames, sparks, and heat sources.
- Do not disassemble, puncture, or incinerate the battery.
- Charge the battery in a well-ventilated area.
- In case of accidental contact with electrolyte, flush with water immediately and seek medical attention.
- Dispose of batteries according to local regulations.

3. PRODUCT OVERVIEW

The SigmasTek SP12-12 is a 12 Volt, 12 AmpH Sealed Lead-Acid (SLA) battery featuring Absorbent Glass Mat (AGM) technology. It is designed for maintenance-free operation with a spill-proof construction, making it suitable for various applications such as UPS systems, emergency lighting, scooters, wheelchairs, and medical devices.



Figure 1: SigmasTek SP12-12 12V 12Ah SLA Battery. This image displays the battery unit, highlighting the SigmasTek branding, model number SP12-12 (12V12AH/T2), and key charging instructions printed on its side. The F2 terminals are visible on the top.

4. SETUP AND INSTALLATION

Follow these steps for proper installation:

1. **Inspection:** Before installation, visually inspect the battery for any signs of damage, such as cracks, leaks, or deformed terminals. Do not install a damaged battery.
2. **Compatibility:** Ensure the battery's voltage (12V) and capacity (12Ah) are compatible with your device's requirements. Verify that the F2 terminal type matches your existing connectors.
3. **Orientation:** Install the battery in an upright position. While SLA batteries are spill-proof, maintaining an upright position is recommended for optimal performance and safety.
4. **Connections:** Connect the positive (+) terminal of the battery to the positive lead of your device and the negative (-) terminal to the negative lead. Ensure connections are secure and tight to prevent arcing or poor performance.
5. **Ventilation:** Ensure adequate ventilation around the battery, especially during charging, to dissipate any heat.

5. OPERATING INSTRUCTIONS

5.1 Charging the Battery

Proper charging is crucial for the lifespan and performance of your SLA battery. Use a charger specifically designed for 12V Sealed Lead-Acid batteries.

- **Floating Use (Standby):** For applications where the battery is continuously connected to a power source and used as a backup, maintain a constant voltage between **13.5V and 13.8V**.
- **Cycle Use (Deep Discharge/Recharge):** For applications involving regular discharge and recharge cycles, charge the battery at a voltage between **14.4V and 15.0V**.
- **Initial Current:** The initial charging current should not exceed **0.3CA** (0.3 times the Amp-hour rating). For a 12Ah battery, this means a maximum initial current of 3.6 Amperes.
- Avoid overcharging or undercharging, as both can significantly reduce battery life.

6. MAINTENANCE

The SigmasTek SP12-12 battery is designed to be maintenance-free. However, following these guidelines will help ensure its longevity:

- **Keep Clean:** Periodically clean the battery terminals and casing with a dry cloth to remove dust and dirt. Ensure terminals are free of corrosion.
- **Temperature:** Store and operate the battery within recommended temperature ranges (typically 20°C to 25°C or 68°F to 77°F) for optimal performance. Extreme temperatures can affect battery life.
- **Storage:** If storing the battery for an extended period, ensure it is fully charged and recharge it every 3-6 months to prevent deep discharge, which can cause irreversible damage.
- **Avoid Deep Discharge:** Do not allow the battery to discharge completely for prolonged periods. Recharge promptly after use.

7. TROUBLESHOOTING

If you encounter issues with your battery, consider the following:

- **Battery Not Holding Charge:**
 - Verify the charger is functioning correctly and is compatible with SLA batteries.
 - Check charging voltage and current settings against the specifications in Section 5.1.
 - Ensure connections are secure and free of corrosion.
 - The battery may have reached the end of its service life.
- **Reduced Run Time:**
 - This often indicates a decrease in battery capacity, which can occur over time or due to improper charging/discharging habits.
 - Ensure the battery is fully charged before each use.
- **Overheating During Charge:**
 - Check if the charging current exceeds the recommended 0.3CA.
 - Ensure adequate ventilation around the battery.
 - Disconnect immediately if the battery becomes excessively hot.

If troubleshooting steps do not resolve the issue, contact SigmasTek customer support or a qualified technician.

8. SPECIFICATIONS

Feature	Specification
Model Number	SP12-12
Voltage	12 Volts
Capacity	12 Ampere-hours (Ah)
Battery Type	Sealed Lead-Acid (SLA) with AGM Technology
Terminal Type	F2

Feature	Specification
Dimensions (L x W x H)	5.95 x 3.86 x 3.7 inches (15.11 x 9.80 x 9.40 cm)
Weight	8 pounds (3.63 kg)
Floating Use Voltage	13.5V ~ 13.8V
Cycle Use Voltage	14.4V ~ 15.0V
Max Initial Charging Current	0.3CA (3.6 Amperes for 12Ah)
Recommended Applications	UPS, Emergency Lighting, Scooters, Wheelchairs, Medical Devices

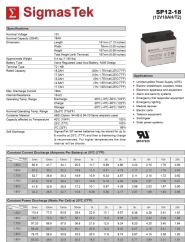

9. WARRANTY AND SUPPORT

The SigmasTek SP12-12 battery comes with a **1-year warranty** from the date of purchase, covering manufacturing defects. This warranty does not cover damage resulting from misuse, improper installation, overcharging, deep discharge, or normal wear and tear.

For technical support, warranty claims, or further assistance, please visit the official SigmasTek website or contact your retailer.

Official Website: www.sigmastek.com

Related Documents - SP12-12

	<p>SigmasTek SP12-18 (12V18AH/T2) Rechargeable Sealed Lead-Acid Battery Datasheet</p> <p>Detailed specifications, performance charts, and application information for the SigmasTek SP12-18 (12V18AH/T2) rechargeable sealed lead-acid battery. Includes dimensions, capacity, discharge rates, temperature effects, and self-discharge characteristics.</p>
	<p>Material Safety Data Sheet: FUJIAN MINHUA POWER SOURCE CO.,LTD. Maintenance-Free Sealed Lead Acid Battery MM200-12</p> <p>Comprehensive Material Safety Data Sheet (MSDS) for FUJIAN MINHUA POWER SOURCE CO.,LTD.'s Maintenance-Free Sealed Lead Acid Battery (Model MM200-12 and series). Provides detailed information on chemical composition, hazards, safe handling, emergency procedures, and regulatory compliance.</p>

	<p>Mighty Max AGM Battery for Wheelchairs, Motorcycles & More - User Guide</p> <p>Comprehensive guide for Mighty Max Absorbent Glass Mat (AGM) batteries, covering installation, maintenance, safety precautions, and specifications for wheelchairs, motorcycles, and other applications.</p>
<p>Welcome Guide</p> <p>RoyPow S1206</p>  <p>Bedienungsanleitung Manuel de l'utilisateur Manuale d'uso Manual de usuario 使用说明书 用户手册 用户手册</p>	<p>RoyPow S1206 LiFePO4 Battery Welcome Guide</p> <p>A comprehensive welcome guide for the RoyPow S1206 LiFePO4 Deep Cycle Battery, detailing its specifications, applications, wiring configurations, and essential safety and usage instructions.</p>
	<p>Li Time 12.8V 12Ah LiFePO4 Battery Product Manual</p> <p>Comprehensive product manual for the Li Time 12.8V 12Ah Lithium Iron Phosphate (LiFePO4) battery, covering specifications, safety instructions, storage, capacity estimation, and series/parallel connection guidelines.</p>
	<p>LeicesterCN EPA1020-12 Automatic Battery Charger User Manual</p> <p>Comprehensive user manual for the LeicesterCN EPA1020-12 automatic battery charger, detailing safety instructions, preparation, connection procedures, features, specifications, troubleshooting guide, and warranty information for 12V lead-acid batteries.</p>