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PowerMax PM3-100

PowerMax PM3-100LK 100 Amp Power Supply Converter Charger

Model: PM3-100 | Brand: PowerMax

INTRODUCTION

The PowerMax PM3-100LK is a robust 110V to 12V DC power supply converter charger designed for recreational vehicles (RVs) and other 12V systems. This 100 Amp unit provides a reliable and efficient power source, ensuring your batteries are charged and maintained optimally. It features a 3-stage charging system, quiet operation, and built-in safety protections.



Figure 1: PowerMax PM3-100LK 100 Amp Power Supply Converter Charger.

SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the PowerMax PM3-100LK. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **Risk of Electric Shock:** Do not remove the cover. There are no user-serviceable parts inside. Refer all servicing to qualified service personnel.
- **Proper Ventilation:** Ensure adequate clearance around the unit for proper ventilation to prevent overheating.
- **Overload Protection:** Avoid overloading the unit beyond its rated capacity to prevent damage.
- **Reverse Battery Protection:** The unit includes built-in reverse battery protection. However, always ensure correct polarity during connection to prevent potential damage.

- **Professional Installation Recommended:** For optimal safety and performance, it is highly recommended that a trained, licensed technician performs the installation process.

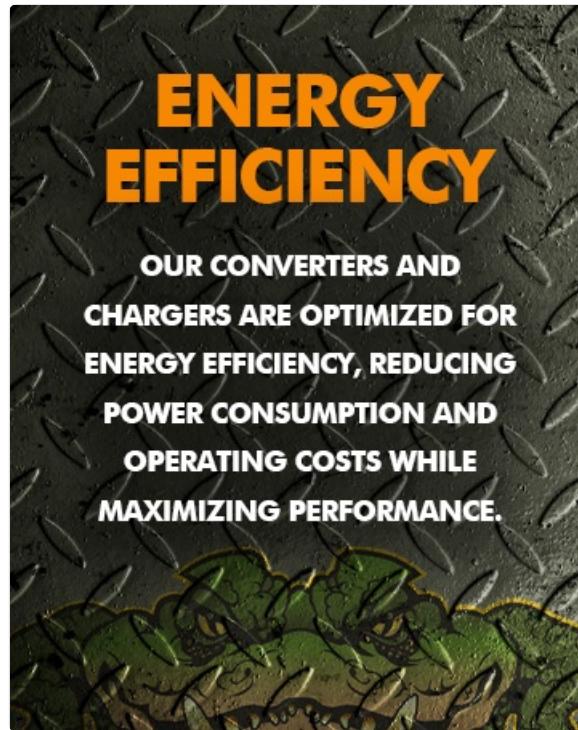
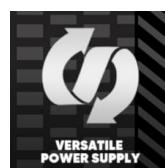


Figure 2: Rear view of the PowerMax PM3-100LK, highlighting connection points and fuse.

PRODUCT FEATURES

- **Controlled, Quiet, Cool Operation:** Operates quietly and reliably with a temperature control system that keeps the fan quiet while maintaining ideal temperature. An LED indicator light shows the converter's status.
- **Wide Voltage Range:** Compatible with various electrical systems, offering a wide voltage range of 13.6Vdc to 14.4Vdc.
- **Certified Safety:** ETL and cETL certifications ensure compliance with stringent safety standards.
- **Reverse Battery Protection:** Built-in protection safeguards devices and the converter from damage due to reverse polarity.
- **Replacement for WF-9800 Series:** Designed as a reliable replacement for WF-9800 series and fully compatible with WFCO WF-9855.
- **3-Stage Charging System:** Features a built-in 3-stage charging system and fixed single output modes, allowing output voltage adjustment between 13.0 Vdc and 16.5 Vdc.



Versatile Power Supply



Convenient Charging



Automatic Thermal Protection



Quick Installation

SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your PowerMax converter. Always disconnect all power sources (shore power, battery banks) before beginning installation.

1. Mounting the Unit

Select a dry, well-ventilated location for mounting the converter. Ensure there is sufficient space around the unit for airflow, especially near the fan and vents. Mount the unit securely using appropriate fasteners.

2. Electrical Connections

- **AC Input (110V):** Connect the 110V AC input cord to a grounded 110V AC outlet. Ensure the circuit is adequately protected by a circuit breaker.
- **DC Output (12V):** Connect the positive (+) and negative (-) DC output terminals to your 12V DC distribution panel or battery bank. Use appropriately sized wiring for the 100 Amp output. Ensure correct polarity: positive to positive, negative to negative.
- **Grounding:** Connect the chassis ground terminal to a reliable chassis ground point in your RV or system.

3. Setting Output Voltage (Optional)

The PM3-100LK features adjustable output voltage. Locate the small switches on the side of the unit. You can set the output voltage between 13.0 Vdc and 16.5 Vdc using a flat-head screwdriver. Refer to your battery manufacturer's specifications for optimal charging voltage. The default setting is typically suitable for most lead-acid batteries.



Figure 3: Side view of the converter, indicating the location of voltage adjustment switches.

OPERATING INSTRUCTIONS

Once properly installed, operating the PowerMax PM3-100LK is straightforward.

1. Powering On

After all connections are secure, apply 110V AC power to the unit. The LED indicator light on the converter will illuminate, indicating that the unit is operational and providing 12V DC power.

2. Charging Modes (3-Stage Charging)

The PowerMax PM3-100LK features an intelligent 3-stage charging system to optimize battery life and performance:

- **Bulk Mode:** Delivers maximum current to rapidly charge a depleted battery.
- **Absorption Mode:** Once the battery reaches approximately 80-90% charge, the voltage is held constant while the current gradually decreases, ensuring a full charge without overcharging.
- **Float Mode:** Maintains the battery at a safe, lower voltage to prevent self-discharge and keep it fully charged without boiling the electrolyte.

The converter automatically transitions between these stages based on battery condition.

3. Fan Operation

The internal cooling fan operates automatically based on the unit's temperature and load. It is designed for quiet operation and will only activate when necessary to maintain optimal internal temperatures.

MAINTENANCE

The PowerMax PM3-100LK is designed for minimal maintenance. However, periodic checks can ensure long-term reliability.

- **Cleanliness:** Keep the unit clean and free from dust and debris, especially around the ventilation openings. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.

- Connections:** Periodically check all electrical connections to ensure they are tight and free from corrosion. Loose connections can lead to overheating and poor performance.
- Ventilation:** Ensure that the area around the converter remains unobstructed to allow for proper airflow.
- Fuse Replacement:** If the unit stops functioning, check the fuse located on the unit (refer to Figure 2). Always replace with a fuse of the same type and rating (e.g., 30 Amp).

TROUBLESHOOTING

Problem	Possible Cause	Solution
No power output / LED off	No AC input power, blown fuse, loose connections.	Check AC power source and circuit breaker. Inspect and replace fuse if necessary. Verify all electrical connections are secure.
Unit is hot / Fan is loud	Insufficient ventilation, excessive load, fan malfunction.	Ensure adequate airflow around the unit. Reduce the load on the 12V system. If fan noise is excessive and persistent without high load, contact support.
Battery not charging or charging slowly	Incorrect voltage setting, faulty battery, loose connections, undersized wiring.	Verify output voltage setting. Test battery condition. Check all DC connections. Ensure wiring gauge is appropriate for the current draw.
Unit makes unusual noises (buzzing, clicking)	Internal component issue, loose internal parts.	Disconnect power immediately. Do not attempt to open the unit. Contact qualified service personnel.

SPECIFICATIONS

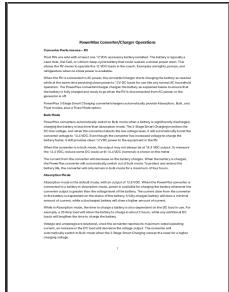
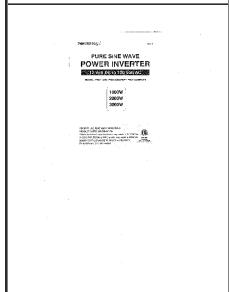
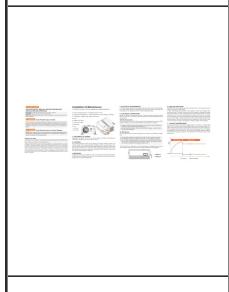
Feature	Detail
Model Name	PM3 Series
Input Voltage	110V AC
Output Voltage	12V DC (Adjustable 13.0 Vdc - 16.5 Vdc)
Output Current	100 Amp
Wattage	1800 watts
Battery Capacity	100 Amp Hours
Product Dimensions	11 x 8.5 x 4.2 inches
Item Weight	8 pounds
Certifications	ETL, cETL
Manufacturer	Fieldstone Products

WARRANTY AND SUPPORT

For specific warranty details and terms, please refer to the documentation included with your purchase or visit the official PowerMax website. PowerMax offers protection plans for extended coverage.

For technical support, troubleshooting assistance, or to inquire about service, please contact PowerMax customer service.

Related Documents - PM3-100

	<p>PowerMax Converter/Charger Operations Guide for RVs</p> <p>This document outlines the operations of the PowerMax Converter/Charger, detailing its 3-stage smart charging modes (Bulk, Absorption, Float) and the Fixed Output Mode for RV applications. It explains how the converter charges batteries and provides 12V DC power to RV accessories.</p>
	<p>PowerMax Pure Sine Wave Power Inverter User Manual - Models PMX-1000, PMX-2000PSPT, PMX-3000PSPT</p> <p>Comprehensive user manual for PowerMax Pure Sine Wave Power Inverters (PMX-1000, PMX-2000PSPT, PMX-3000PSPT). Covers safety, installation, operation, troubleshooting, and specifications for converting 12V DC to 120V AC power.</p>
	<p>PowerMax PMBC Series AC to DC Converter/Charger: Installation, Maintenance, and Warranty Guide</p> <p>This document provides installation, maintenance, troubleshooting, and warranty information for the PowerMax PMBC Series AC to DC Converter/Charger. It covers models ranging from 55 to 120 Amps, detailing electrical connections, charging modes, testing procedures, and safety warnings for safe and effective operation in vehicles and RVs.</p>
	<p>PowerMax PMBC-100-SE AC to DC Converter Charger User Manual Installation & Troubleshooting</p> <p>This user manual provides detailed instructions for the PowerMax AC to DC Converter Charger, model PMBC-100-SE. It covers installation, maintenance, electrical requirements, charging modes (Fixed, 2-Stage, 3-Stage), troubleshooting, battery connection, and a two-year limited warranty. Designed for RV and vehicle applications.</p>
	<p>PowerMax PM4 Series AC to DC Converter/Charger Installation and Maintenance Guide</p> <p>Installation, maintenance, and troubleshooting guide for PowerMax PM4 series AC to DC converter/chargers (15A-120A). Covers 4-stage smart charging, fixed voltage modes, safety, and warranty.</p>



[Powermax 4200W Inverter Generator Operating Manual](#)

Comprehensive operating manual for the Powermax 4200W Inverter Generator (Model XPG4200Ei), covering safety, setup, operation, maintenance, and troubleshooting.