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AIMS Power PWRINV8KW12V

AIMS Power 8000 Watt 12 Volt Modified Sine Power Inverter User Manual

Brand: AIMS Power | Model: PWRINV8KW12V

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your AIMS Power PWRINV8KW12V 8000 Watt 12 Volt Modified Sine Power Inverter. This device is designed to convert 12 Volts DC (Direct Current) battery power into 120 Volts AC (Alternating Current) household power, suitable for a wide range of applications. Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

Warning: Improper installation or use of this inverter can result in serious injury, death, or equipment damage. Always follow these safety guidelines:

- **Electrical Hazard:** This inverter produces high voltage AC power. Treat the output terminals with the same caution as a standard AC wall outlet.
- **Battery Safety:** Work in a well-ventilated area when connecting batteries. Batteries can produce explosive gases. Do not smoke or allow sparks or flames near batteries.
- **Proper Ventilation:** Ensure the inverter is installed in an area with adequate airflow to prevent overheating. Do not block cooling vents.
- **Grounding:** The inverter must be properly grounded. Refer to local electrical codes for grounding requirements.
- **Cable Sizing:** Use appropriately sized DC input cables (e.g., 2 sets of 4/0 cable for 8000 watts) to minimize voltage drop and prevent overheating.
- **Moisture:** Do not expose the inverter to rain, moisture, or spray.
- **Qualified Personnel:** Installation and servicing should be performed by qualified personnel familiar with electrical systems.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

3. PRODUCT FEATURES

The AIMS Power PWRINV8KW12V inverter is equipped with several features for reliable and safe operation:

- **High Power Output:** Provides 8000 Watts of continuous output power and 16000 Watts of surge peak power.
- **Digital Meters:** Integrated volt meter on the front panel to monitor battery voltage and an amp meter to monitor current

usage.

- **AC Terminal Block:** Direct connect terminal block for hardwiring AC loads, in addition to standard AC output sockets.
- **Protection Features:** Includes Over Temperature, Over Load, High Voltage, Low Voltage, and Short Circuit protection.
- **LED Indicators:** Dedicated LEDs for Over Temperature and Over Load conditions.
- **Cooling System:** Thermally controlled single cooling fan for optimal temperature regulation.
- **Remote Capability:** Pre-wired for an optional remote on/off switch.
- **Durable Construction:** Aluminum case for optimal cooling and a pre-slotted mounting plate for easy installation.
- **Auto Reset:** Most fault conditions feature an auto-reset function.

4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and safety of your inverter. Follow these steps carefully:

1. **Mounting Location:** Choose a dry, well-ventilated area away from direct sunlight, heat sources, and flammable materials. The inverter should be mounted securely using its pre-slotted mounting plate. Ensure sufficient space around the unit for airflow, especially around the cooling fan and vents.
2. **DC Input Wiring:**
 - Connect the inverter directly to a 12 Volt battery bank. For 8000 Watts of power, **two sets of 4/0 gauge cables are required** for both positive and negative connections to minimize voltage drop and prevent overheating.
 - Connect the positive (+) terminal of the inverter to the positive (+) terminal of the battery bank.
 - Connect the negative (-) terminal of the inverter to the negative (-) terminal of the battery bank.
 - Ensure all connections are tight and secure. Loose connections can cause excessive heat and damage.
3. **Grounding:** Connect the inverter's chassis ground terminal to a reliable earth ground. This is a critical safety step.
4. **AC Output Connections:**
 - The inverter features quadruple Type 2 - 3 prong AC output sockets for standard appliances.
 - For higher power loads or permanent installations, use the AC direct connect terminal block. Ensure the main power ON/OFF switch is OFF before connecting wires to the terminal block. Connect Live, Neutral, and Earth wires as indicated.
5. **Remote Switch (Optional):** If using an optional remote switch, connect it to the designated remote port on the inverter.



Image 1: Rear view of the AIMS Power 8000 Watt Inverter, highlighting the DC input terminals (positive and negative) and the cooling fan. This view is essential for understanding DC power connections.



Image 2: Front panel of the AIMS Power 8000 Watt Inverter, displaying the ON/OFF switch, Over Temp and Over Load LED indicators, battery voltage and amperage meters, AC output sockets, and the AC terminal block for direct wiring.



Tools



Compressors



Appliances



Pumps

Image 3: Detailed view of the AC terminal block on the AIMS Power 8000 Watt Inverter's front panel. This image illustrates the connections for Live, Neutral, and Earth wires, crucial for hardwired AC loads.

5. OPERATING INSTRUCTIONS

- Power On:** After ensuring all connections are secure and correct, switch the inverter's main power ON/OFF switch to the 'ON' position. The inverter will perform a self-test, and the cooling fan may briefly activate.
- Monitoring:** Observe the digital volt meter to confirm the battery voltage is within the operating range (10 to 15 Volts DC). The amp meter will display the current draw when AC loads are connected.
- Connecting AC Loads:** Plug your AC appliances into the output sockets or ensure your hardwired loads are connected to the AC terminal block. Start with smaller loads and gradually add larger ones.
- Understanding Indicators:**
 - Over Temp LED:** Illuminates if the inverter's internal temperature exceeds safe operating limits. The inverter may shut

down to protect itself.

- **Over Load LED:** Illuminates if the connected AC load exceeds the inverter's continuous or surge capacity. The inverter may shut down.

5. **Power Off:** Before disconnecting any AC loads or servicing the inverter, switch the main power ON/OFF switch to the 'OFF' position.



Image 4: The AIMS Power 8000 Watt Inverter demonstrating its capability to power various appliances, tools, compressors, and pumps. This illustrates the versatility of the inverter for different applications.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter, especially the cooling fan and vents, to prevent dust and debris buildup. Use a dry cloth. Do not use liquids or solvents.
- **Connection Checks:** Regularly inspect all DC and AC connections for tightness. Loose connections can lead to power loss, overheating, and potential fire hazards.
- **Battery Health:** Ensure your battery bank is well-maintained and charged. The inverter's performance is directly dependent on the health of your batteries.
- **Environment:** Verify that the installation environment remains dry and well-ventilated.

7. TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No AC Output / Inverter Not Turning On	Main switch is OFF. Loose DC connections. Battery voltage too low (below 10.0V). Internal fuse blown.	Switch inverter ON. Check and tighten all DC cables. Recharge or replace batteries. Contact support for fuse replacement.
Over Load LED On / Inverter Shuts Down	Connected load exceeds inverter capacity. High surge current from motor-driven appliances.	Reduce the total AC load. Turn off and restart the inverter. Connect loads one by one.
Over Temp LED On / Inverter Shuts Down	Insufficient ventilation. Ambient temperature too high. Cooling fan blocked or faulty.	Ensure clear airflow around the inverter. Move inverter to a cooler location. Clean cooling fan and vents.
Low Voltage Alarm Sounds	Battery voltage is low (around 10.5V). Excessive load causing voltage drop.	Recharge batteries immediately. Reduce AC load.

The inverter features an auto-reset function for most fault conditions. If a fault persists after attempting the solutions above, disconnect the inverter from the battery bank and contact AIMS Power support.

8. SPECIFICATIONS

Feature	Specification
Continuous Output Power	8000 Watts
Surge Power Capability (Peak)	16000 Watts
DC Input Voltage	10 to 15 Volts DC
AC Output Voltage	120 Volts AC +/- 10%
Output Frequency	60 Hz +/- 1 Hz
Battery Low Voltage Alarm	10.5 +/- 0.5 Volts DC
Battery Low Voltage Shutdown	10.0 +/- 0.5 Volts DC
No Load Current Draw	<1.3 DC Amps
Full Load Efficiency	90%
1/3 Load Efficiency	95%
Operating Temperature Range	30°F to 140°F (No load minimum to Full load maximum)
AC Output Sockets	Quadruple Type 2 - 3 Prong
High Input Voltage Protection	15V-17V DC

Feature	Specification
Low Input Voltage Shutdown	10V DC
Internal Protection	Internal fuse protection
Dimensions (LxWxH)	19.02" x 7.76" x 6.02"
Weight	19.8 lbs

9. WARRANTY AND SUPPORT

AIMS Power stands behind its products with over 20 years of experience in the inverter business. For technical support, warranty claims, or sales inquiries, please contact AIMS Power directly. All support services are provided from Nevada, USA. Refer to your product packaging or the official AIMS Power website for the most current warranty terms and contact information.

10. ADDITIONAL RESOURCES

For further information or to explore other AIMS Power products, visit the official AIMS Power store:

[AIMS Power Store on Amazon](#)

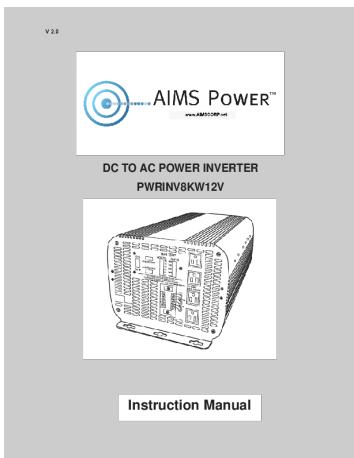
Note on Videos: No official product videos from the seller were available in the provided data for embedding in this manual.

Related Documents - PWRINV8KW12V

	<p>AIMS Power Digital Modified Sine Wave Inverter Operation Manual</p> <p>Comprehensive operation manual for AIMS Power digital modified sine wave inverters, detailing product features, specifications, connection diagrams, function descriptions, troubleshooting, and warranty information.</p>
	<p>AIMS Power PWRIC150012W DC to AC Power Inverter Instruction Manual</p> <p>Instruction manual for the AIMS Power PWRIC150012W DC to AC Power Inverter, covering basic operation, safety precautions, troubleshooting, specifications, and warranty information.</p>

 INSTRUCTION MANUAL	<p>AIMS Power PWRINV250W 250W DC to AC Power Inverter Instruction Manual</p> <p>Instruction manual for the AIMS Power PWRINV250W 250W DC to AC Power Inverter. Covers safety warnings, basic operation, battery usage, troubleshooting, maintenance, specifications, and warranty information.</p>
	<p>AIMS Power Pure Sine Wave Inverter Operation Manual - Specs & Guide</p> <p>Comprehensive operation manual for AIMS Power pure sine wave inverters, covering specifications, features, connection diagrams, operating procedures, troubleshooting, and safety warnings for models PWRIG1000, PWRIG1500, PWRIG2000, and PWRIG3000 series.</p>
 INSTRUCTION MANUAL	<p>AIMS Power PWRI200012120S 2000W Pure Sine Wave Inverter Instruction Manual</p> <p>Instruction manual for the AIMS Power PWRI200012120S 2000W Pure Sine Wave DC to AC Power Inverter. Covers introduction, safety warnings, features, installation, battery requirements, connection, operation, protections, troubleshooting, specifications, and warranty.</p>
 Global LF Series Pure Sine Wave Inverter Charger User's Manual	<p>AIMS Power Global LF Series Pure Sine Wave Inverter Charger User's Manual</p> <p>User's manual for the AIMS Power Global LF Series Pure Sine Wave Inverter Charger, detailing installation, operation, features, and troubleshooting for models PICOGLF10W12V120V, PICOGLF15W12V120V, PICOGLF20W12V120V, and PICOGLF30W12V120V.</p>

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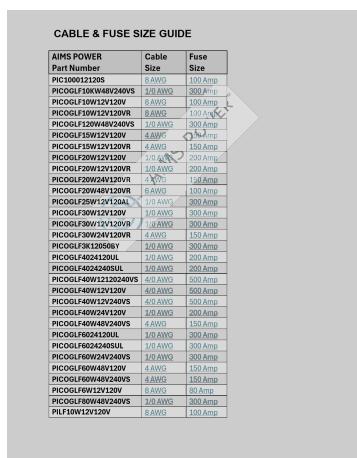
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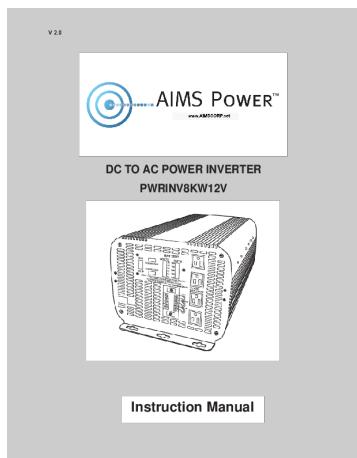
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[Aims Power Cable and Fuse Size Guide for Inverters](#)

Aims Power provides a comprehensive guide to selecting the correct cable and fuse sizes for their range of inverters and power products. This reference helps users ensure optimal performance and safety by matching components to specific model requirements.

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