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AIMS Power PWRINV360012120W

AIMS Power 3600 Watt Modified Sine Power Inverter Instruction Manual

Model: PWRINV360012120W | Brand: AIMS Power

1. Introduction

The AIMS Power 3600 Watt Modified Sine Power Inverter converts 12 Volt DC battery power to 120 Volt AC household power. This unit is ETL Listed and conforms to UL 458 Standards, as well as CSA Standard C22.2 No. 107.1-01 in Canada. It is designed for various applications including mobile power, backup systems, or off-grid power solutions in homes, RVs, cabins, boats, and vehicles.

Key features include 3600W continuous power and 7200W surge capability, dual GFCI outlets, and an AC direct connect terminal block for full wattage delivery. The inverter incorporates soft start technology and comprehensive protections against overload, over temperature, high/low voltage, and short circuits. Integrated volt and amp meters allow for performance monitoring, complemented by LED indicators for power and fault conditions.

2. Important Safety Instructions

WARNING: Failure to follow these instructions may result in serious injury or property damage.

- **Ventilation:** Ensure the inverter is installed in a well-ventilated area to prevent overheating. Do not block ventilation openings.
- **Moisture:** Do not expose the inverter to rain, snow, spray, or bilge water. Do not install in a wet environment.
- **Flammable Materials:** Do not install the inverter in compartments containing flammable materials or where flammable fumes may accumulate.
- **Battery Connections:** Always connect the inverter to a 12V DC battery system. Ensure correct polarity (red to positive, black to negative) to avoid damage. Use appropriate gauge cables for connections.
- **Grounding:** The inverter must be properly grounded. Connect the grounding terminal to a suitable earth ground.
- **Qualified Personnel:** Installation and servicing should be performed by qualified personnel familiar with electrical systems and safety procedures.
- **Children:** Keep the inverter and all associated wiring out of reach of children.

3. Package Contents

Your AIMS Power 3600 Watt Modified Sine Power Inverter package includes the following items:

- AIMS Power 3600 Watt Modified Sine Power Inverter
- Instruction Manual
- DC Battery Terminal Covers (Red and Black)

4. Product Features and Components

The AIMS Power 3600 Watt Modified Sine Power Inverter is engineered for robust performance and user convenience. Below are its primary features and components:

- **Power Output:** 3600W maximum continuous power, 7200W surge capability, with soft start technology.
- **AC Outlets:** Dual 20 Amp GFCI (Ground Fault Circuit Interrupter) outlets for enhanced safety.
- **AC Terminal Block:** Direct connect AC terminal block capable of delivering the full 3600 watts to a single source.
- **DC Input:** Rugged DC terminals for secure battery connections.
- **Protection Features:** Overload, over temperature, high voltage, low voltage, short circuit, internally fused, low and high voltage alarm, cooling fan, and isolated ground neutral.
- **Monitoring:** Integrated Volt and Amp meters to monitor inverter performance. LED indicators for power and fault conditions.
- **Frequency Switch:** A switch to select between 50Hz and 60Hz output, if needed.
- **Remote Port:** Dedicated port for an optional remote switch (adapter cable included).

Figure 4.1: Overall view of the AIMS Power 3600 Watt Modified Sine Power Inverter.

Figure 4.2: Front panel showing AC outlets, terminal block, and controls.

Figure 4.3: Rear panel displaying the DC input terminals and cooling fans.

Figure 4.4: Detailed view of the dual GFCI outlets and the AC direct connect terminal block.

Figure 4.5: Detailed view of the DC input terminals with protective covers.

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Video 4.1: An overview of the AIMS Power 3600 Watt Modified Sine Inverter, highlighting its features and connection points.

5. Setup and Installation

Proper installation is crucial for the safe and efficient operation of your inverter. Follow these steps carefully:

5.1 Choosing a Location

- Install the inverter in a dry, well-ventilated area, away from direct sunlight, heat sources, and moisture.
- Ensure adequate clearance around the inverter for proper airflow to the cooling fans.
- Mount the inverter securely on a stable, non-flammable surface.

5.2 DC Input Connection (Battery)

1. Ensure the inverter's power switch is in the OFF position.
2. Connect the supplied DC battery terminal covers to the appropriate terminals on the inverter: red to positive (+), black to negative (-).
3. Connect the other end of the DC cables to your 12V DC battery bank, ensuring correct polarity. Use heavy-gauge cables suitable for the inverter's wattage.

4. Tighten all connections securely to prevent loose connections, which can cause overheating and damage.

5.3 AC Output Connection

- **GFCI Outlets:** For standard AC appliances, plug them directly into the dual 20A GFCI outlets on the front panel.
- **AC Terminal Block:** For applications requiring the full 3600W or a hardwired connection, use the AC direct connect terminal block. Consult a qualified electrician for proper wiring to this block. Ensure all wiring adheres to local electrical codes.

5.4 Remote Switch Connection (Optional)

If using an optional remote switch, connect its cable to the dedicated remote port on the inverter's front panel. An adapter cable is included for this purpose.

6. Operating Instructions

Once the inverter is properly installed and connected, follow these steps for operation:

6.1 Powering On/Off

1. Ensure all AC loads are disconnected or turned off before powering on the inverter.
2. Flip the main power switch on the inverter to the "ON" position. The green LED indicator should illuminate, and the volt/amp meters will display readings.
3. If using a remote switch, ensure the inverter's main switch is ON, then use the remote switch to control the inverter's power.
4. To power off, first disconnect or turn off all AC loads, then flip the inverter's main power switch to "OFF."

6.2 Monitoring Performance

- The integrated volt and amp meters provide real-time feedback on your system's performance. Monitor these displays to ensure stable operation and prevent overloading.
- LED indicators will show green for normal operation and red for fault conditions (e.g., overload, over temperature).

6.3 Frequency Selection

A switch is provided on the unit to change the output frequency between 50Hz and 60Hz. Adjust this setting according to the requirements of your connected appliances.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your AIMS Power Inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a dry cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners.
- **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:** Monitor your battery bank's health and charge level. A healthy battery system is essential for

inverter performance.

- **Storage:** If storing the inverter for an extended period, ensure it is disconnected from all power sources and stored in a cool, dry place.

8. Troubleshooting

If you encounter issues with your inverter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No AC Output / Inverter Not Turning On	Loose DC connections, low battery voltage, blown fuse, inverter switch off.	Check DC cable connections and battery voltage. Ensure inverter switch is ON. Replace internal fuses if necessary (consult manual or qualified technician).
Overload Alarm / Red Fault LED	Connected load exceeds inverter's continuous or surge rating.	Reduce the total load connected to the inverter. Disconnect some appliances and restart the inverter.
Over Temperature Alarm	Inadequate ventilation, blocked cooling fans, high ambient temperature.	Ensure inverter is in a well-ventilated area. Clear any obstructions from cooling fans. Allow inverter to cool down before restarting.
Low Voltage Alarm	Battery voltage is too low.	Recharge or replace the battery bank. Ensure battery cables are of adequate gauge and length.
GFCI Tripping	Ground fault detected in connected appliance or wiring.	Disconnect all appliances from the GFCI outlets. Reset the GFCI. Reconnect appliances one by one to identify the faulty device.

9. Specifications

Specification	Value
Model Name	PWRINV360012120W
Continuous Power	3600 watts
Surge Power	7200 watts
DC Input Voltage	12 Volts
AC Output Voltage	120 Volt AC
Output Waveform	Modified Sine Wave
Certifications	ETL Certified to UL 458, CSA Standard C22.2 No. 107.1-01
AC Outlets	Dual GFCI Outlets (20 Amp each)

Specification	Value
Additional AC Output	AC Terminal Block
Item Weight	9.04 pounds
Product Dimensions	14.5 x 6.62 x 5.6 inches
Recommended Uses	Home, Office, RV, Cabin
Power Source	Battery Powered

10. Warranty and Support

AIMS Power stands behind its products. This inverter comes with a**2-year warranty**. All technical support, warranty claims, and sales inquiries are handled directly from our support center in Nevada, USA. For assistance, please refer to the contact information provided in your product packaging or visit the official AIMS Power website.