AIMS Operating Corp., Inc. dba AIMS Power Warranty Instructions:

This product is designed using the most modern digital technology and under very strict quality control and testing guide lines. If however you feel this product is not performing as it should, please contact us:

techsupport@aimscorp.net or (775)762-5400

We will do our best to resolve your concerns. If the product needs repair or replacement, make sure to keep your receipt/invoice, as that will need to be sent back along with the package and RA# prepaid to AIMS. You have a full 1 year from date of purchase warranty.

This warranty is valid world wide with the exception that freight and duty charges incurred outside the contiguous 48 United States will be prepaid by customer.

Except as provided above, AIMS makes no warranty of any kind, express or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose. In no event shall AIMS be liable for indirect, special or consequential damages. This warranty only applies to AIMS Power branded products. All other name brand products are warranted by and according to their respective manufacturer. Please do not attempt to return non-AIMS Power branded products to AIMS Power.

For additional products such as:

- Modified sine wave inverters
- Pure sine wave inverters
- On Grid Inverters
- Inverter Chargers and Automatic transfer switches
- Custom cut cables
- Batteries
- Solar Products

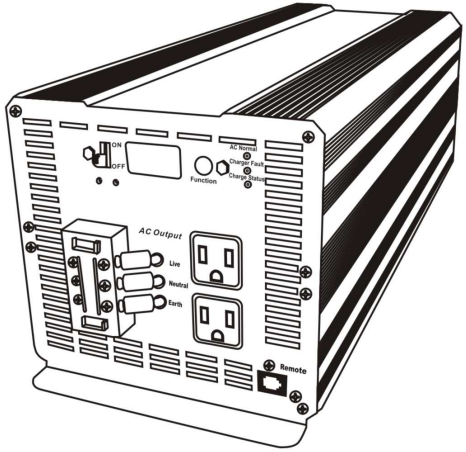
Please visit our web site: www.aimscorp.net

To find out where to buy any of our products, you may also e-mail: sales@aimscorp.net or call (775)359-6703.

AIMS Power™
a Division of the AIMS Corporation

Automatic Power Inverter and Charger Output Power: 3000W

Part# PWRIC300024W



Instruction Manual

Name	Description
Model No	PWRIC300024W
Input	24 V (20– 32V) DC
Output	120V AC ± 10%
Frequency	60 Hz
Output Waveform	Modified Sine Waveform
Continuous Power	3000 watts
Surge Power	6000 watts
Efficiency	Approximately 90%
No load Switch ON Switch OFF	 <1.0A DC <0.2mA DC
Low Battery Alarm	21± 1V DC
Low Battery Shutdown	20±1V DC
Over Temp Shutdown	140°F ± 9°F (60°C ± 5°C)
AC output sockets	2 US standard
Power switch	DC input ON/OFF control
Dimensions (L x W x H)	19 3/8" x 7" x 6 1/2" (495 x 178 x 166 mm)
Net Weight	8. 2 Kg approximately or 18 Lbs

CHARGER SPECIFICATION

AC input voltage	AC 110~125V
DC charging current	15A ± 2.5A
DC charging voltage	DC 30.4 ± 0.4V
Shut down current when fully charged	DC 2.5A ± 1A
Battery capacity available	DC 24V 60-300AH
Battery error connection protection	YES
Charger status	green LED lit in charging green LED not lit after battery full
Charger fault	Red LED lit when over temperature

BYPASS SPECIFICATION

Transfer time	< 3 sec.
Transfer current	25A (3000W) max.

NOTE

All specifications are typical at nominal line, half load, and 77°F (25°C) unless otherwise noted. Specifications are subject to change without notice.

Thank you for purchasing this 3000 Watt Automatic inverter and charger
With minimal care and proper treatment it will provide years of reliable service. Carefully read, understand and comply with all instructions before use. Keep this manual for future reference.

GENERAL INSTRUCTIONS:

- Keep the inverter away from any direct heat source or combustible materials.
- Keep well ventilated – this device generates heat.
- Keep the inverter away from combustible fuel or battery gases.
- Do not continuously operate any equipment over 3000 Watts.
- This inverter operates from a 24 volt DC power source only.
- Do not attempt to connect the inverter output to any other power source, including any AC power source.
- Incorrect battery polarity will damage the inverter and void the warranty.
- Keep this inverter in a dry environment.
- Do not open the inverter; there are no user serviceable parts inside.

ABOUT THE INVERTER

This power inverter converts 24 volts, direct current (24V DC) to 115 volts alternating household current (115V AC). It easily powers TV/VCR combinations, microwave ovens, refrigerators and small air conditioners. It also operates at the highest efficiency (up to 90%) that results in longer running times and extended battery life compared to other inverters with this level of power output.

This inverter has the highest surge capability in its class. Superior surge capability allows the inverter to start most difficult motorized loads. Advanced circuitry runs cooler and is more reliable than competing units.

LOAD CONSIDERATIONS

When an appliance with a motor starts, it requires a momentary surge of power. This surge of power is the "starting load" or "peak load". Once started, the appliance requires less power to continue to operate. This is known as the "continuous load". It is important to know starting loads and continuous loads of appliances that will be powered by the inverter.

Appliance power is rated in watts. This information is usually stamped or printed on most appliances and equipment. In some cases, a tool will be rated in amperes. To convert from amps to watts, multiply: AMPS x 115 (AC voltage) = WATTS. This formula yields an approximation of the continuous wattage load of that appliance.

Note: This will cause heat, fire, electricity leakage or damage to the machine.

- ☆ a place that is in high humidity.
- ☆ a place that is easy to fall off.
- ☆ a place that has high temperature.
- ☆ a place that is possibly dampened by rain, water or snow.
- ☆ a place that is easily contacted by salt, dust, chemicals or gas.
- ☆ a place that is easily besieged by quake or vibration.
- ☆ a place that is under heavy weighted stuff.

3.When the charger is working. That will cause frequency interference to radio, stereo speakers or T.V. monitors.

4.When connecting the charger clips with battery polarity, fire will spurt out and make a sound. This is the phenomenon for momentary touch of charger clips and battery polarity. The current from the battery start to flow into the charger and begin to work. This is not caused from mistake of operation order or a defection of the product.

⚠ WARNING-RISK OF EXPLOSIVE GASES

Working in vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that each time before using your charger, you read this manual and follow the instructions exactly.

To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of battery. Review cautionary markings on these products.

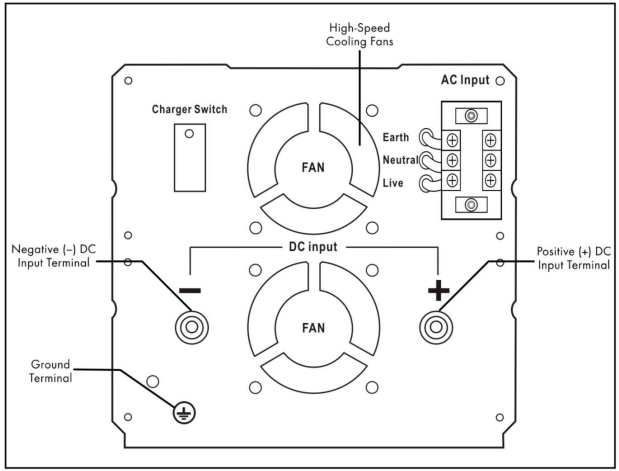
- Read all instructions and cautions printed on the battery charger, battery, or equipment using battery.
- Use charger only on lead-acid type rechargeable batteries. This charger is not intended to supply power to a low voltage electrical system other than in a starter-motor application.
- Never use charger for charging dry cell batteries that are commonly used with home appliances like radios, stereos, remote controls, etc. These batteries may burst and cause personal injury.
- Do not disassemble charger. Take it to a qualified service professional if service or repair is required. Incorrect assembly may result in fire or electrical shock.
- To reduce risk of electrical shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- Always charge battery in a well-ventilated area.

WARNING:Battery chargers get hot during operation and must have proper ventilation. Air needs

- to flow around entire charger. Do not set charger on flammable materials like carpeting,
- upholstery, paper, card- board, etc. Charger may damage leather, plastic and rubber.

This modified sine wave has a root mean square (RMS) voltage of 115 volts. Most ordinary AC voltmeters are calibrated to read "average" voltage and assume that the AC waveform will be a pure sine wave. These meters will not correctly read MSW voltage, and will display about 20 to 30 volts too low. Any multi-meter identified as "TRUE RMS" will accurately read MSW correctly.

REAR PANEL



Ground Terminal

This connection is located on the lower left of the rear panel. It is for attaching a 6 gauge insulated safety ground wire. This safety wire is for protecting personnel if there is an unlikely failure in either the cabling or enclosure insulation. Do not directly connect this ground connection to the negative DC terminal. This safety wire is to be connected to the vehicle frame or earth ground. This is described in the installation procedure.

Negative DC (–) Input and Positive DC (+) Input Terminals

DC input terminals are used to connect the inverter to heavy duty cables from the battery or battery bank. For connection information, refer to the sections on installation.

4 Awg minimum wire size is required to operate inverter properly.

gauge insulated copper wire should be used to make the connections. If the round trip distance is longer than 4 feet, heavier wire will be required. Aluminum wire is not recommended and would require a heavier gauge.

AC input Cable Gauge

AIMS Power recommends the use of a 10 Awg copper stranded wire for the ac input terminal block. For the earth ground on the ac in terminal block we recommend 8 Awg. Only connect when the Main ON/OFF power switch is OFF and the inverter is disconnected from the battery bank. Ensure the other ends of the wires connecting to ac in terminal block are not plugged in.

Built-In Battery Charger

The AIMS Power PWRIC300024W inverter has a built-in battery charger. It is a smart charger that charges at a maximum rate of 15 Amps per Hour. It will switch to maintenance mode automatically once the batteries are fully charged. It is recommended to check with the battery manufacturer of your particular batteries and find out what the maximum rate of charge per battery is. We recommend at least 200Ahr of battery capacity.

CONNECTING THE INVERTER

General information

Loose connections will result in a severe voltage drop that can cause damage to connectors, conductors, and insulation and can cause sparking. Make sure all cables are the proper gauge and plan to have the ANL fuse holder within one foot of the battery bank's Positive (+) terminal. All cable ends need to be stripped of insulation for approximately ¾ of an inch to have appropriate sized ring terminals crimped onto the bare cable ends. Appropriately sized socket wrenches should be used to carefully tighten the retaining nuts on the terminals of the battery bank, fuse holder and DC terminals on the back panel of the inverter.

Contact AIMS Power for help finding a supplier of assembled cables.

CAUTION: Reverse polarity connection will blow the fuses in the inverter and can permanently damage the inverter. Damage caused by reversed polarity will void the warranty.

Procedure

1. Connect the Negative (–) cable ring terminal to the Negative (–) Battery Terminal.
2. Install the ANL fuse in the Fuse holder Positive (+) cable.
3. Make sure the ON/OFF switch located on the front panel of the inverter is in the OFF position. Disconnect any remote switch from the connector on the front panel.
4. Locate the Ground Lug Terminal at the rear of the inverter. Connect an insulated 6 gauge copper wire to the terminal. The other end of the ground wire is connected to a "proper" grounding point. Use the shortest practical length of wire. Connect this wire to the chassis of your vehicle or to the grounding system in your boat. In a city, the ground wire can connect to a metal cold water pipe that goes underground. In remote locations, the ground wire can be connected to an "earth ground". This can be an attachment to a 6 foot long copper clad metal rod driven into the ground. In the unlikely event of a short circuit, operating the inverter without proper grounding can result in electrical shock. Do not directly connect this ground

wire to the Negative DC Terminal. You can connect the ground wire to the negative battery terminal.

NOTE: The cable ends need to be stripped of insulation for approximately ¾ of an inch at both ends. The battery ends or fuse end needs to have ring terminals crimped onto the bare cable ends.

5. Use a socket wrench to loosen and remove the Positive (+) and Negative (–) cable connector retaining nuts. Place the Negative (–) cable ring terminal onto the Negative (–) DC terminal. Place the retaining nut on the terminal stud. Use the socket wrench to make a good, secure connection.
6. Recheck and make sure the DC cable fuse is installed in the fuse holder.
7. Attach the Positive (+) DC cable to the Positive (+) terminal on the battery. Avoid shorting the socket wrench and carefully tighten the retaining nut.

   CAUTION: Making an initial connection between the positive cable and the inverter's positive terminal may cause a spark. This is a normal and is a result of capacitors in the inverter starting to charge. Because of the possibility of sparking, it is extremely important that both the inverter and the battery bank be positioned away from any source of flammable fumes or gases. Failure to heed this warning can result in fire or explosion. Do not make the positive terminal connection immediately after the batteries have been charging. Allow time for the battery gasses to vent to outside air.

8. Attach the positive cable ring terminal to the Positive (+) DC connector stud on the inverter. Replace the retaining nut and carefully tighten. Make sure the connection is tight and secure.
9. Turn on the inverter. Advance the Digital Display to the Voltage display (right green LED lit) by pressing the FUNCTION button. The display on the front panel should show 21 to 26.4 volts depending on the voltage of the power source. When the voltage reading does not fall within this range, check the connections of the wires to the terminals on the battery bank and the inverter to make sure they are secure. Also check the voltage of the power source. Advance the Digital Display to the Diagnostic Error Codes (green LEDs not lit). Look for code E03: Low Voltage Shutdown. If this code is present, then check for loose connections or discharged batteries.
10. Turn off the inverter. The audible alarm may sound a short "chirp". This is also normal.
11. When you have confirmed that the appliance to be operated is turned off, plug the appliance into one of the two AC outlets on the front panel of the inverter.
12. Turn the inverter on.
13. Turn the appliance on.
14. The Remote On/Off switch (if purchased) should be placed in a location convenient to the user. Insert the cable plug into the front panel connector. The inverter's Front Panel On/Off Switch must be On for the Remote Switch to operate. A lit LED indicator on the Remote Switch indicates when DC power is applied to the inverter. Pressing the momentary button controls On/Off operation of the inverter. Note: If an extension cord is used from the inverter to the appliance, limit the extension cord length to 50 feet or less. Make sure that the cord is properly rated to carry the appliance load.