

WZRELB SPVC300024

WZRELB 3000W 24V DC to 120V/240V AC Split Phase Pure Sine Wave Inverter Instruction Manual

Model: SPVC300024

1. PRODUCT OVERVIEW

The WZRELB 3000W 24V DC to 120V/240V AC Split Phase Pure Sine Wave Inverter is designed to convert 24V DC battery power into stable 120V/240V AC electricity. This inverter features a pure sine wave output, making it suitable for sensitive electronics. It offers 3000 watts of continuous power and a 6000-watt peak surge capability, ideal for various applications including off-grid systems, RVs, boats, and emergency power backup.

Key features include a built-in soft starter, high-frequency design, and an LCD display for monitoring system status. Multiple output options are available, including 120V AC outlets and a 240V AC hardwire terminal.



Figure 1: WZRELB 3000W Split Phase Pure Sine Wave Inverter.

2. PACKAGE CONTENTS AND COMPONENTS

2.1 Package Contents

Upon unpacking, ensure all items listed below are present:

- 1 x WZRELB 3000W Split Phase Pure Sine Wave Inverter Unit
- 1 x Set of Battery Cables (7AWG)
- 1 x User Manual
- Spare Fuses



Figure 2: Inverter package contents, including the inverter unit, battery cables, spare fuses, and user manual.

2.2 Inverter Components

Familiarize yourself with the inverter's front and rear panels:



Multiple Outlets

2 * double US sockets for 120VAC, each support 1500W Max

1* heavy-duty 240VAC Universal plug, 3000W Max

1* Hardwire terminal for house panel wiring

Figure 3: Front panel with 120V AC outlets and 240V AC hardwire terminal. Each 120V circuit supports up to 1500W, and the 240V output supports up to 3000W.

DC Connection Guide

- Spark-proof Nut



1. Connect Negative Cable first:

After connecting black cable to battery, connect the other end of black cable to the negative terminal of the inverter



2. Contacting Spark-Proof Nut:

After connecting red cable to battery, contact the other side of red cable to the Spark-Proof nut and wait for 3-5 seconds



3. Connect Positive Cable:

Connect the red cable to the positive terminal of the inverter to finish wiring

Note: Use all the cables coming with the inverter, if 4 cables, 2 black for Negative, 2 red for Positive, and so on

Figure 4: Rear panel with DC input terminals (positive and negative) and cooling fans.

3. INSTALLATION GUIDE

3.1 Battery Connection (24V System)

This inverter requires a 24V DC battery system. If using 12V batteries, connect two 12V batteries in series to achieve 24V. Ensure correct polarity.

Your browser does not support the video tag.

Video 1: This video demonstrates the unboxing, features, installation, and application of a WZRELB Split Phase Pure Sine Wave Inverter.

Note that the video refers to a 6000W model, while this manual is for the 3000W model. The general connection principles remain applicable.

3.2 DC Connection Steps (Spark-Proof Nut)

- 1. Connect the Negative Cable:** First, connect the black (negative) cable to the negative terminal of your 24V battery bank. Then, connect the other end of the black cable to the negative terminal of the inverter.

2. **Contacting Spark-Proof Terminal:** After connecting the negative cable, contact the other side of the red (positive) cable to the spark-proof terminal on the inverter for 3-5 seconds. This helps to prevent sparks during the final connection.
3. **Connect the Positive Cable:** Finally, connect the red (positive) cable to the positive terminal of the inverter to complete the wiring.

Ensure all connections are tight to maintain stable current flow and prevent overheating. Use the cables provided with the inverter.

3.3 AC Panel Wiring

The inverter provides multiple AC output options, including standard 120V AC outlets and a hardwire terminal for direct connection to a circuit panel. The hardwire terminal supports L1 (hot 1), L2 (hot 2), N (neutral), and G (ground) connections for 120V and 240V applications.

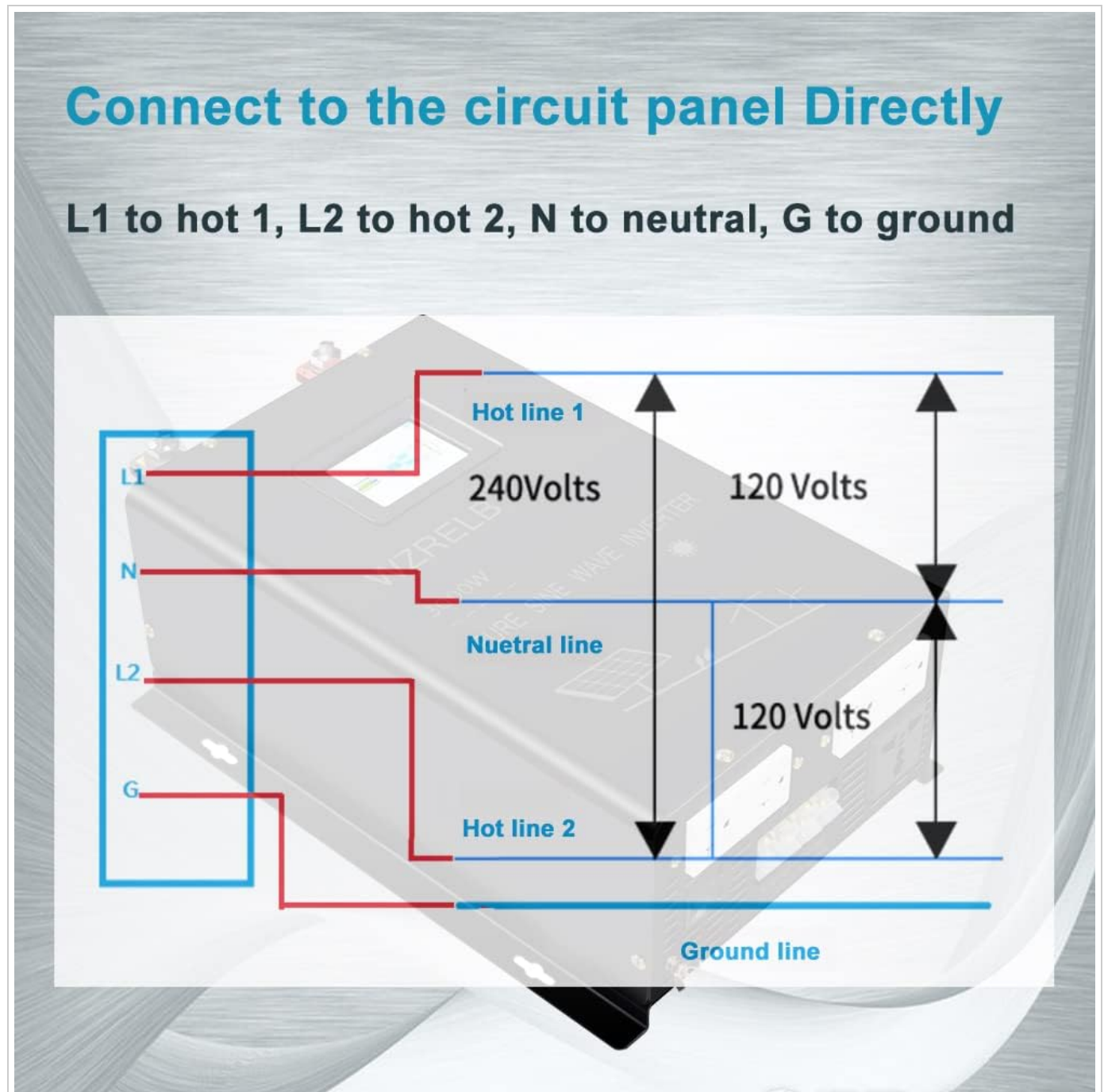


Figure 5: Wiring diagram for connecting the inverter to a circuit panel, illustrating L1, L2, N, and G connections for 120V and 240V outputs.

4. OPERATING INSTRUCTIONS

4.1 LCD Display

The inverter features an LCD display that provides real-time information about its operational status, including battery voltage, output voltage, temperature, and load status.



Figure 6: LCD display showing inverter working status, battery voltage and capacity, internal temperature, and AC output voltage/amperage for 120V and 240V circuits.

4.2 Powering Appliances

The inverter can power a variety of AC appliances. It provides two 120V AC circuits, each capable of supporting up to 1500W, and a 240V AC output with a maximum of 3000W. Ensure the total load does not exceed the inverter's continuous power rating of 3000W.



Figure 7: The inverter can power various appliances simultaneously, demonstrating its dual AC output capability for 120V and 240V devices.

5. SAFETY FEATURES AND PROTECTIONS

The WZRELB inverter is equipped with multiple protection features to ensure safe and reliable operation:

- **Input Low Voltage Protection:** Shuts down the inverter if the DC input voltage drops below a safe operating level, protecting your batteries from over-discharge.
- **Input High Voltage Protection:** Activates if the DC input voltage exceeds the maximum safe limit, preventing damage to the inverter and connected components.
- **Overload Protection:** Automatically shuts down the inverter if the connected load exceeds its rated capacity, preventing damage to the inverter and appliances.
- **Over Temperature Protection:** Engages if the internal temperature of the inverter becomes too high, utilizing intelligent temperature-controlled cooling fans and shutting down if necessary.
- **Short Circuit Protection:** Protects against short circuits in the output, preventing electrical damage.

- **Battery Reverse Protection:** Prevents damage from incorrect battery polarity connections.
- **Internally Fused:** Provides additional protection against overcurrents.

The LCD display will indicate the status of these protections when activated.

6. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	WZRELB
Model Name	SPVC300024
Rated Continuous Power	3000W
Surge Output Power	6000W
DC Input Voltage	24V
DC Input Voltage Range	20-30VDC
High Battery Shut Down	19.5V ± 1V (Note: This value seems inconsistent with 24V system, typically refers to 12V battery cutoff. Refer to product label for exact 24V system cutoff.)
Low Voltage Shut Down	40V (Note: This value seems inconsistent with 24V system, typically refers to 48V battery cutoff. Refer to product label for exact 24V system cutoff.)
AC Output Voltage (Nominal)	120VAC and 240VAC
AC Output Frequency	60 ± 2Hz
AC Output Waveform	Pure Sine Wave
Conversion Efficiency	≥91.6%
Ambient Operating Temperature Range	32°F-104°F / 0°C-70°C
Cooling Method	Intelligent temperature controlled fan
Number of Outlets	4 (120V AC) + Hardwire Terminal (120V/240V)
Item Dimensions (L x W x H)	16.2"L x 9.7"W x 3.7"H
Item Weight	11.5 Pounds

Note: Some voltage specifications in the provided data (High battery shut down: 19.5V±1V, Low voltage shut down: 40V) appear to be inconsistent with a 24V system. Please refer to the product label or contact WZRELB support for precise 24V system cutoff values.

7. TROUBLESHOOTING

The inverter's LCD display provides indicators for various protection states. If the inverter stops functioning or displays an error, check the following:

- **No Output / Low Voltage Indication:** Check your battery voltage. If it's too low, the inverter will shut down to protect the battery. Recharge or replace the battery.
- **Overload Indication:** Reduce the total wattage of connected appliances. The inverter will shut down if the load exceeds its capacity. Disconnect some devices and restart the inverter.
- **Over Temperature Indication:** Ensure the inverter has adequate ventilation. Clear any obstructions from the cooling fans. Allow the unit to cool down before restarting.
- **High Voltage Indication:** Verify the input voltage from your battery bank. If it's too high, disconnect the inverter immediately and check your battery system.
- **Short Circuit Indication:** Disconnect all AC loads and check for any short circuits in your wiring or appliances.

For persistent issues, refer to the detailed troubleshooting section in the full user manual or contact WZRELB customer support.

8. WARRANTY AND SUPPORT

The WZRELB 3000W Split Phase Pure Sine Wave Inverter comes with a 12-month warranty. WZRELB also provides lifetime technical support for this product.

For warranty claims, technical assistance, or any questions regarding your inverter, please refer to the contact information provided in your full user manual or visit the official WZRELB website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question