WZRELB SP5K24RC

WZRELB 5000W 24V Pure Sine Wave Split Phase Power Inverter Instruction Manual

Model: SP5K24RC
Brand: WZRELB

1. Introduction

This manual provides essential information for the safe and efficient operation of your WZRELB 5000W 24V Pure Sine Wave Split Phase Power Inverter. Please read this manual thoroughly before installation and use. Retain this manual for future reference.
The WZRELB 5000W inverter converts 24 Volt DC battery power to 120V/240V AC split phase power, suitable for a wide range of applications including off-grid systems, RVs, and emergency backup power. It features a continuous output of 5000 watts and a peak surge capacity of 10000 watts, ensuring reliable power for demanding loads.

2. Safety Information

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

- Ensure proper ventilation around the inverter to prevent overheating.
- Do not expose the inverter to water, rain, snow, or spray.
- Do not operate the inverter if it has received a sharp blow, been dropped, or otherwise damaged.
- Do not disassemble the inverter. Incorrect reassembly may result in electric shock or fire.
- Keep children away from the inverter.
- Connect the inverter only to a 24V battery system. Connecting to a different voltage may cause damage.
- Always connect the ground wire properly.
- Ensure all connections are tight to prevent sparks and overheating.

3. Package Contents

Verify that all items are present in the package:

- WZRELB 5000W Pure Sine Wave Inverter
- Battery Cables (Red and Black)
- Spare Fuses
- Wireless Remote Control
- Instruction Manual

Image: The WZRELB 5000W Pure Sine Wave Inverter, showing the main unit, battery cables, and wireless remote control.

4. Product Overview

Familiarize yourself with the components of your inverter.

4.1 Front Panel (AC Output Side)

Image: Front view of the WZRELB 5000W inverter, displaying the AC outlets, hardwire terminals, and power switch.

- **AC Outlets:** Two dual 120V AC outlets, each supporting a maximum of 2500W.
- **Hardwire Terminals:**
  - 1x 240VAC 3-wire terminal (L+N=240V) with 5000W max.
  - 1x 4-wire terminal for Multi-mode (L1+L2=240V, L1+N=120V, L2+N=120V), supporting 120VAC and 240VAC output simultaneously.
- **Power Switch:** ON/OFF switch for the inverter.
- **Ground Wire Connector:** For safety grounding.

Image: Detailed view of the AC output panel, highlighting the 120V outlets, power switch, ground wire connector, and hardwire terminals for L1, N, L2, and G connections.

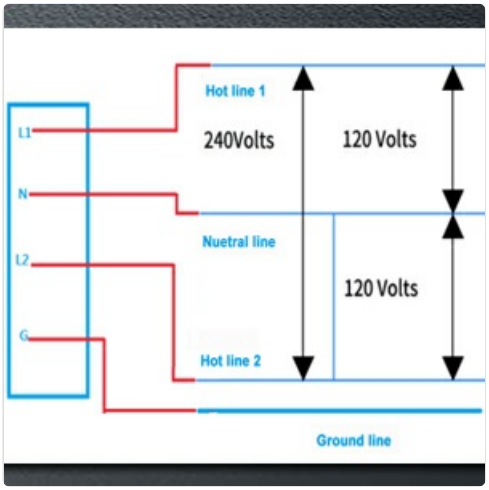

Image: Wiring diagram illustrating the split phase output, showing L1, N, L2, and G connections for both 120V and 240V outputs.

4.2 Rear Panel (DC Input Side)

Image: Rear view of the WZRELB 5000W inverter, showing the DC input terminals and cooling fans.

- **DC Input Terminals:** Positive (Red) and Negative (Black) terminals for battery connection. Features spark-proof nuts.
- **Cooling Fans:** Temperature-controlled fans for efficient heat dissipation.

Image: Detailed view of the DC input panel, showing the positive and negative terminals with spark-proof nuts and the 90mm x 90mm cooling fans.

4.3 LCD Display

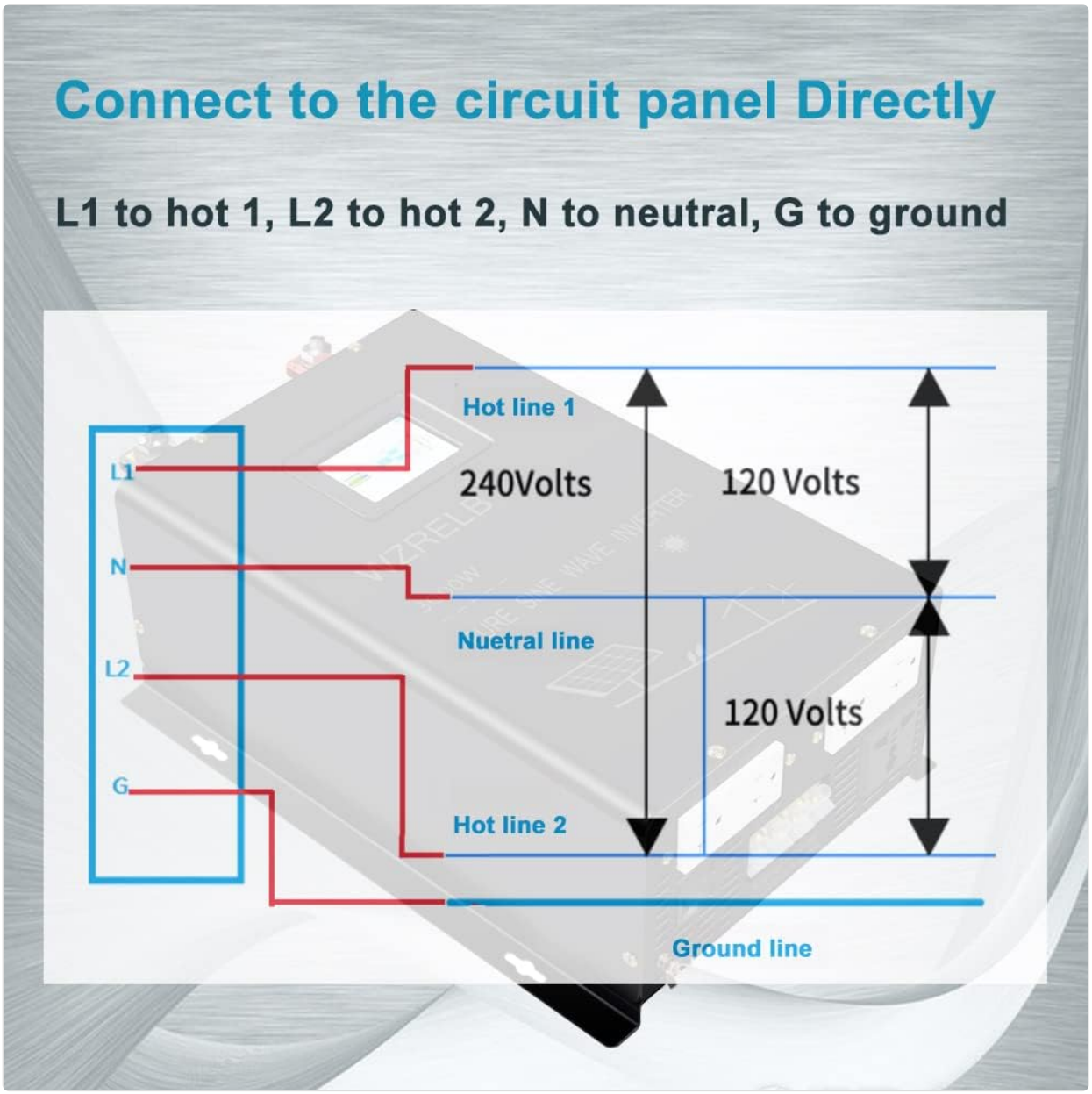

Image: The LCD display of the WZRELB inverter, showing various operational parameters such as battery status, temperature, and AC output voltage/current.

- **Status:** Displays normal operation or fault codes.
- **Battery Voltage and Capacity:** Real-time battery status.
- **Internal Temperature:** Shows the inverter's operating temperature.
- **AC Output:** Displays 120V and 240V output voltage and amperage.

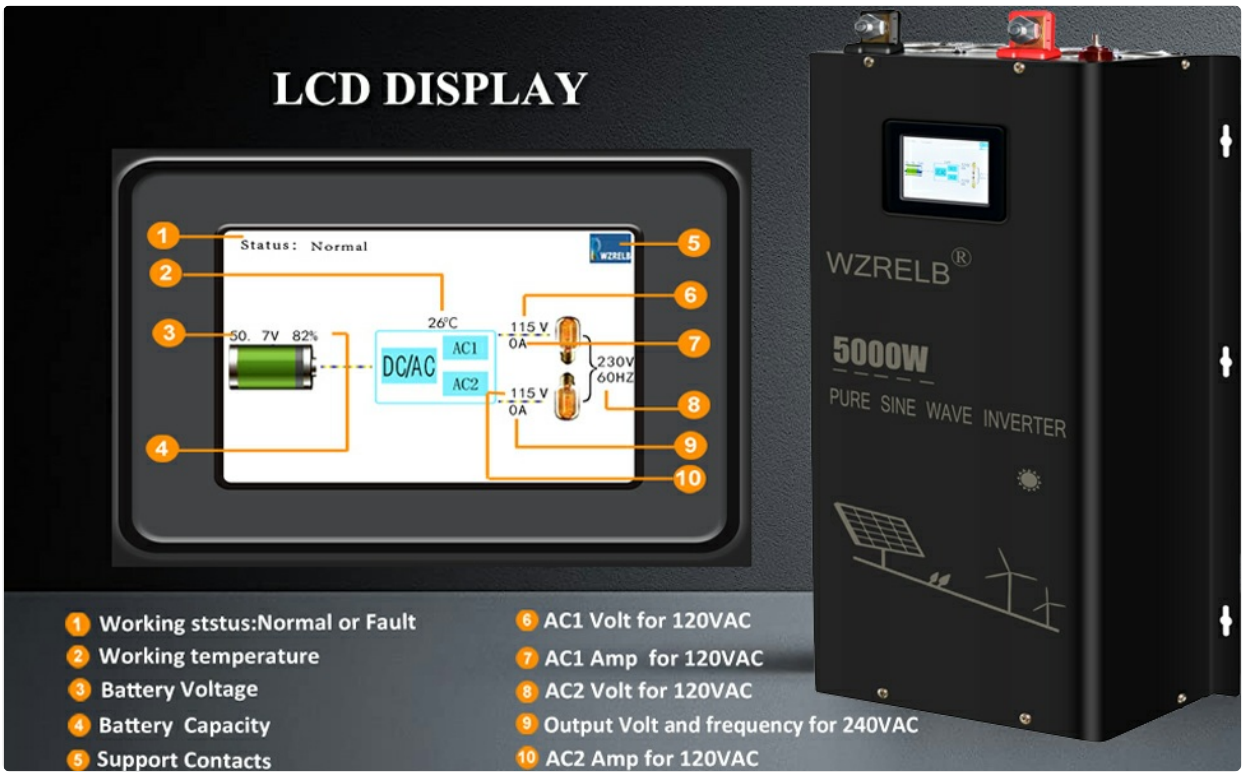

Image: Detailed view of the LCD display with numbered labels indicating working status, temperature, battery voltage/capacity, AC1/AC2 voltage/ampere, and 240V output frequency.

4.4 Wireless Remote Control

Image: The wireless remote control for the WZRELB inverter, featuring ON/OFF buttons and an antenna.

- Allows remote ON/OFF switching of the inverter.
- Effective range: up to 100ft indoors (with walls/doors) and 150ft in open areas.
- Requires a 23A 12V Alkaline Battery (not included).

Image: The inverter shown with its wireless remote control, illustrating the convenience of remote operation.

5. Setup and Installation

Follow these steps carefully to connect your inverter to a 24V battery system.

5.1 Battery System Configuration

The inverter requires a 24V DC input. If using 12V batteries, connect them in series to achieve 24V.

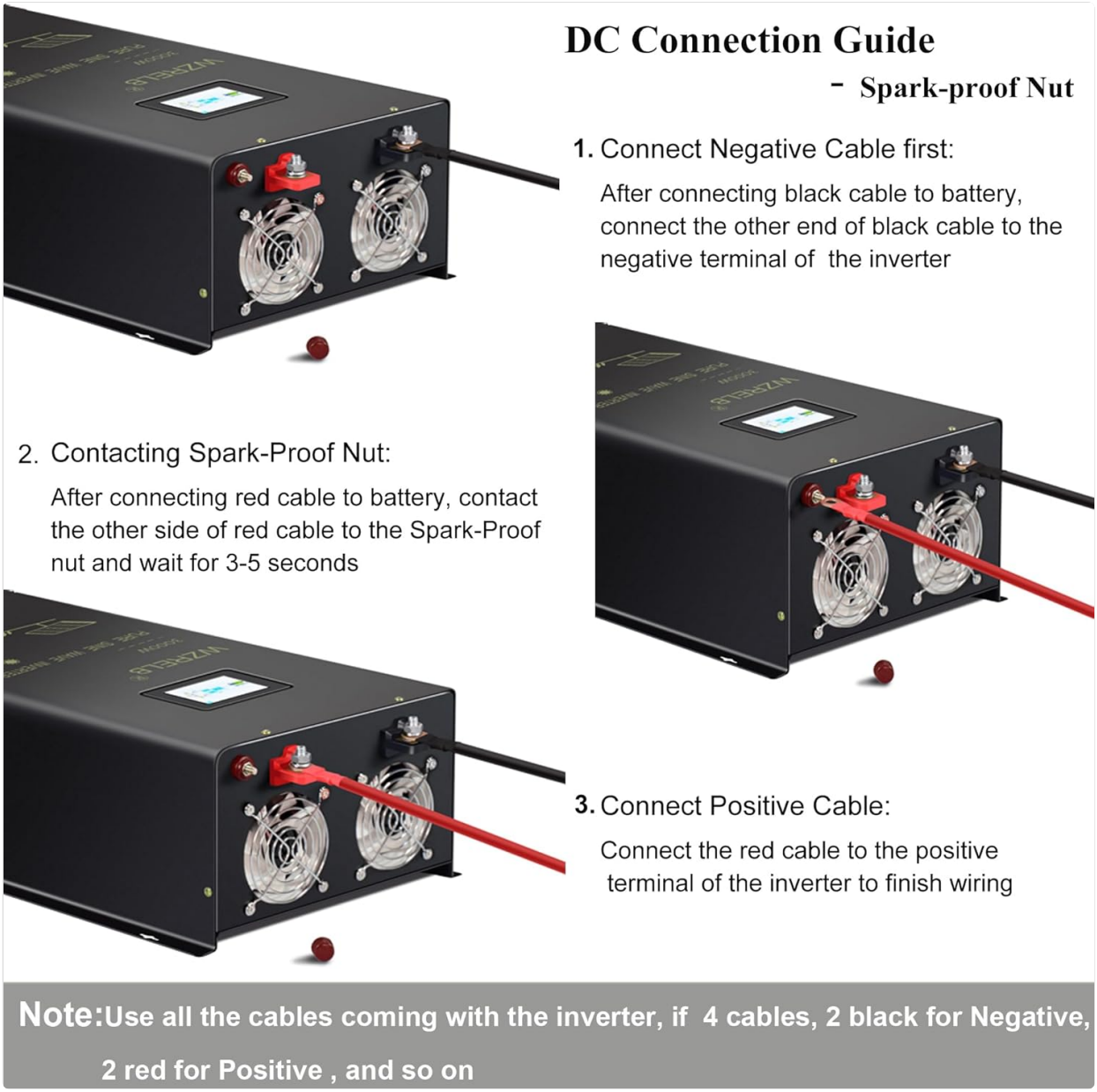

Image: A visual guide for DC connection, showing the spark-proof nuts and the three steps for connecting battery cables.

1. **Identify Battery Terminals:** Confirm the positive (+) and negative (-) poles of your 12V batteries.
2. **Series Connection for 24V:** Connect the positive terminal of one 12V battery to the negative terminal of another 12V battery using a short cable. This creates a 24V series connection.
3. **Connect to Inverter:**
    - **Step 1: Connect Negative Cable First.** Attach the black 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.
    - **Step 2: Contacting Spark-Proof Nut.** After connecting the red cable to the positive terminal of your 24V battery bank, briefly touch the other side of the red cable to the spark-proof nut on the inverter's positive terminal for 3-5 seconds. This helps to prevent sparks during final connection.
    - **Step 3: Connect Positive Cable.** Securely connect the red cable to the positive terminal of the inverter.
4. **Tighten Connections:** Ensure all screws on the battery terminals and inverter terminals are tightened to maintain stable current flow and prevent overheating.

Image: A three-step visual guide for connecting the DC cables to the inverter, emphasizing the spark-proof connection process.

Your browser does not support the video tag.

Video: This video demonstrates the unboxing, overview of the inverter's panels, and the DC connection process for a WZRELB split phase inverter. It shows how to connect batteries and the inverter's terminals.

6. Operating Instructions

6.1 Powering On/Off

- **Manual Operation:** Use the ON/OFF switch located on the AC output panel.
- **Remote Operation:** Use the provided wireless remote control to switch the inverter ON or OFF from a distance.

6.2 Connecting AC Appliances

The inverter offers multiple AC output options:

- **120V AC Outlets:** Plug your 120V appliances into the dual AC outlets. Each outlet supports up to 2500W.
- **240V AC Hardwire Terminal (3-wire):** For 240V appliances, connect to the L+N=240V terminal. Maximum 5000W.
- **Multi-mode Hardwire Terminal (4-wire):** This terminal allows simultaneous 120V and 240V output. Connect L1+L2 for 240V, and L1+N or L2+N for 120V.

CAUTION: Do not exceed the maximum wattage for each outlet or terminal, and ensure the total load does not exceed the inverter's continuous power rating of 5000W.

7. Applications

The WZRELB 5000W inverter is designed to power a variety of appliances, making it ideal for off-grid living,

mobile businesses, RVs, trailers, semi-trucks, boats, and home backup during power outages.

Image: The inverter connected to various household appliances, demonstrating its capability to power multiple devices simultaneously.

Examples of compatible appliances include:

- Air conditioners
- Refrigerators
- Power tools
- Microwaves
- Coffee makers
- Lighting
- Electronics (laptops, TVs, etc.)

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Video: This video segment illustrates the WZRELB inverter powering various appliances such as a sandwich maker, electric pan, air fryer, and mini-fridge, showcasing its versatility in different power scenarios.

8. Protections

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

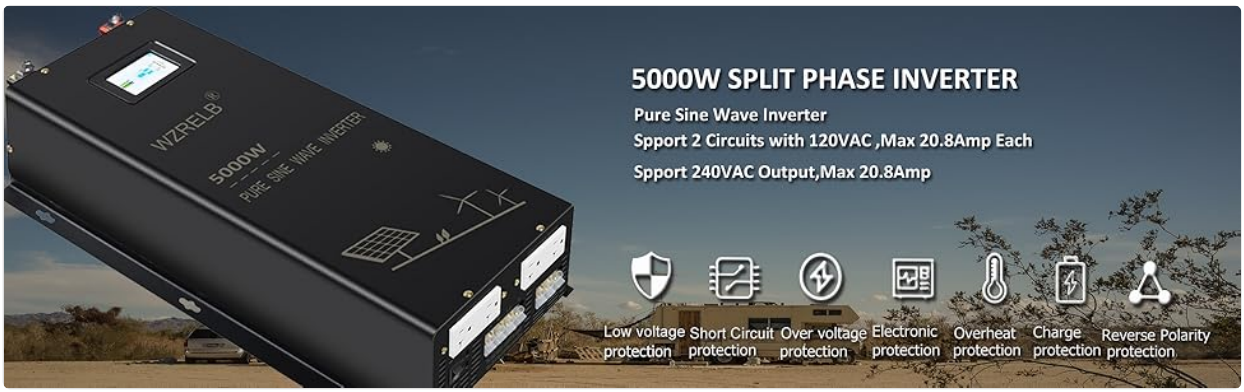

Image: An overview graphic highlighting the various protection features of the 5000W split phase inverter, including low voltage, short circuit, over voltage, electronic, overheat, charge, and reverse polarity protection.

- **Soft Starter:** Gradually increases output voltage to prevent damage to sensitive electronics and reduce inrush current.
- **Overload Protection:** Automatically shuts down if the connected load exceeds the inverter's capacity.
- **Short Circuit Protection:** Protects against damage from short circuits in the output.
- **Over Temperature Protection:** Activates cooling fans and shuts down if internal temperature becomes too high.
- **High Voltage Shutdown:** Protects the inverter and connected devices from excessive input voltage.
- **Low Voltage Alarm/Shutdown:** Alerts and shuts down the inverter when battery voltage drops below a safe operating level, protecting your batteries.
- **Internally Fused:** Provides protection against internal electrical faults.
- **Battery Reverse Polarity Protection:** Prevents damage if battery connections are accidentally reversed.

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Video: This video segment illustrates the inverter's soft start function and various protection mechanisms, including overload, low voltage, over voltage, and short circuit protection, as displayed on the LCD screen.

9. Maintenance

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

- **Keep Clean:** Periodically clean the exterior of the inverter, especially the cooling fan vents, to prevent dust buildup. Use a dry cloth.
- **Check Connections:** Regularly inspect all DC and AC connections to ensure they are tight and free from corrosion. Loose connections can cause overheating and power loss.
- **Ventilation:** Ensure the inverter is always placed in a well-ventilated area, free from obstructions that could block airflow to the cooling fans.
- **Battery Health:** Monitor your battery bank's health and charge levels. A healthy battery system is crucial for inverter performance.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.

10. Troubleshooting

This section addresses common issues you might encounter with your inverter.

Problem	Possible Cause	Solution
No AC output, inverter OFF	Low battery voltage, loose connections, inverter switch OFF, internal fuse blown.	Check battery voltage and charge. Tighten all connections. Turn inverter ON. Check and replace fuses if necessary.
Inverter shuts down with alarm	Overload, over temperature, low/high battery voltage, short circuit.	Reduce load. Ensure proper ventilation. Check battery voltage. Disconnect appliances and restart.
AC output voltage too low/high	Incorrect battery voltage, heavy load, faulty wiring.	Ensure 24V battery input. Reduce load. Check wiring for proper gauge and connections.
Remote control not working	Dead battery in remote, out of range, interference.	Replace remote battery (23A 12V). Move closer to inverter. Reduce potential interference sources.

11. Specifications

Feature	Detail
Model Number	SP5K24RC
Continuous Power	5000 Watts
Peak Power (Surge)	10000 Watts
DC Input Voltage	24 Volts
AC Output Voltage	120V / 240V Split Phase
Waveform	Pure Sine Wave
Efficiency	Up to 91.6%
Product Dimensions	19.8 x 10 x 5.3 inches
Item Weight	25 pounds
Recommended Battery Types	AGM, Gel, Flooded, Lead-acid, Lithium-ion

12. Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your purchase or visit the official WZRELB website. Keep your purchase receipt as proof of purchase.

Manufacturer: Yueqing Reliable Electric Co.,Ltd.