PowMr POW-RELAB 10KU-SPLIT

PowMr 10KW 48V Split Phase Solar Inverter User Manual

Model: POW-RELAB 10KU-SPLIT

1. Introduction

This manual provides essential information for the safe and efficient operation of your PowMr 10KW 48V Split Phase Solar Inverter. Please read this manual thoroughly before installation and use, and retain it for future reference. Proper installation and adherence to safety guidelines are crucial for optimal performance and longevity of the unit.

Safety Information

- Ensure all electrical connections are made by qualified personnel.
- Do not attempt to disassemble or repair the inverter yourself. Refer to authorized service personnel.
- Keep the inverter away from water, moisture, and flammable materials.
- Ensure adequate ventilation around the unit to prevent overheating.
- Always disconnect power before performing any maintenance or wiring.

2. Product Overview

The PowMr 10KW 48V Split Phase Solar Inverter is designed to convert DC power from solar panels into usable AC power for various applications. It features a built-in 120A MPPT charge controller and supports both 110V and 220V AC outputs.

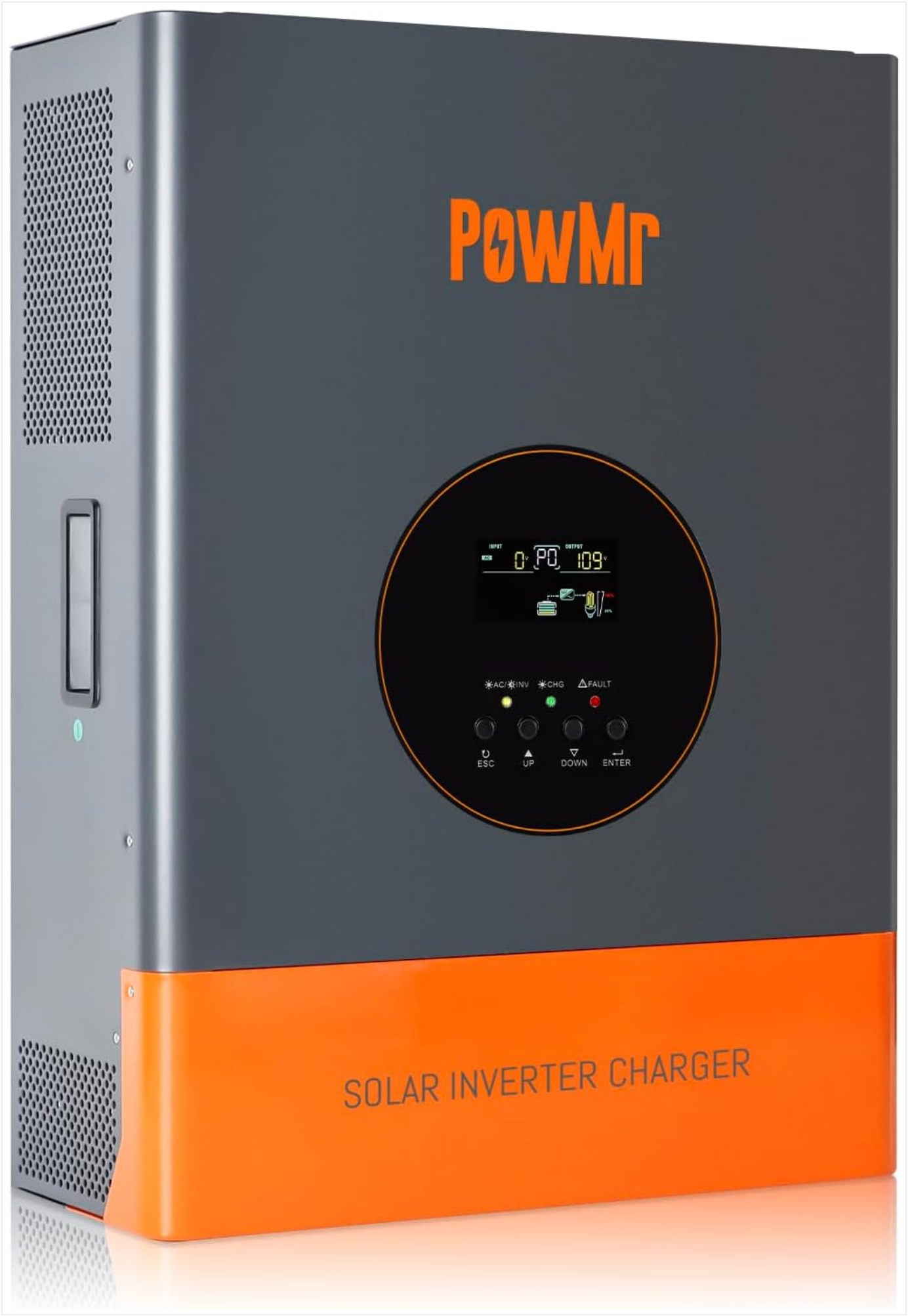


Image: Front view of the PowMr 10KW 48V Split Phase Solar Inverter, showcasing its grey and orange casing with a central LCD display

and control buttons.

Key Features

- **10KW Split Phase Output:** Provides both 110V and 220V AC outputs to meet diverse power requirements.
- **High Peak Power:** Achieves a peak power output of up to 30000W, suitable for high-demand appliances.
- **Integrated MPPT Charge Controller:** Features a 120A MPPT charge controller for efficient solar charging.
- **Multiple Charging & Discharging Modes:** Offers 3 charging options (Solar-Only, Utility Priority, Solar Priority) and 3 discharge modes (PV Priority, Utility Priority, Solar-Only).
- **Battery Compatibility:** Supports various 48V battery types including Flooded, LiFePO4, AGM, Gel, and USER-defined settings.
- **Robust Design:** Equipped with dual cooling fans, corrosion-resistant, and dust-proof housing.
- **Comprehensive Protection:** Includes short circuit, over/under voltage, overload, and reverse polarity protection.



Image: A graphic summarizing the key features of the 10KW Split Phase Solar Inverter, including 10000W pure sine wave, 120A MPPT, 110V/220V AC output, 30000W peak power, 6400W max PV array power, 60A max AC charging, and 60V starting voltage.

Product Components



Image: Diagram illustrating the external components of the PowMr inverter. Key labeled parts include: 1. LCD Display, 2. LED Indicators, 3. Function Keys, 4. Power on/off switch, 5. AC input, 6. AC output, 7. Communication port, 8. PV input, 9. Battery input.

3. Setup and Installation

Careful planning and correct installation are essential for the safe and efficient operation of your solar inverter system. Ensure all local electrical codes and regulations are followed.

AC Wiring Diagram

The inverter supports split-phase AC output. Refer to the diagram below for correct AC input and output connections to ensure proper 110V and 220V distribution.

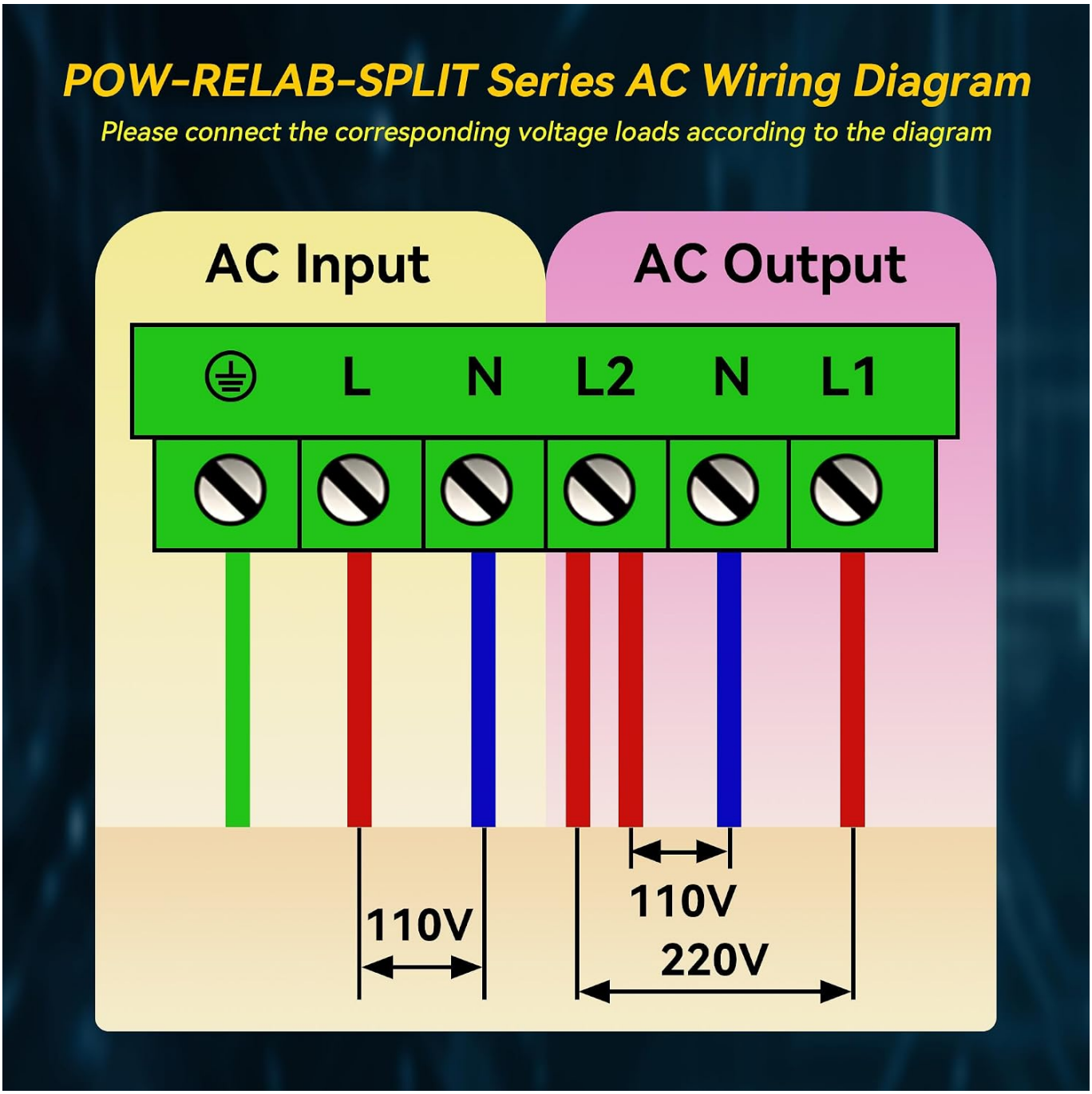


Image: A detailed AC wiring diagram for the POW-RELAB-SPLIT series. It shows connections for AC Input (Ground, L, N) and AC Output (L2, N, L1), indicating how to achieve 110V and 220V connections.

Inverter Connection Diagram

This diagram illustrates the overall connection of the inverter within a solar power system, including AC input, PV input, battery input, and AC output.

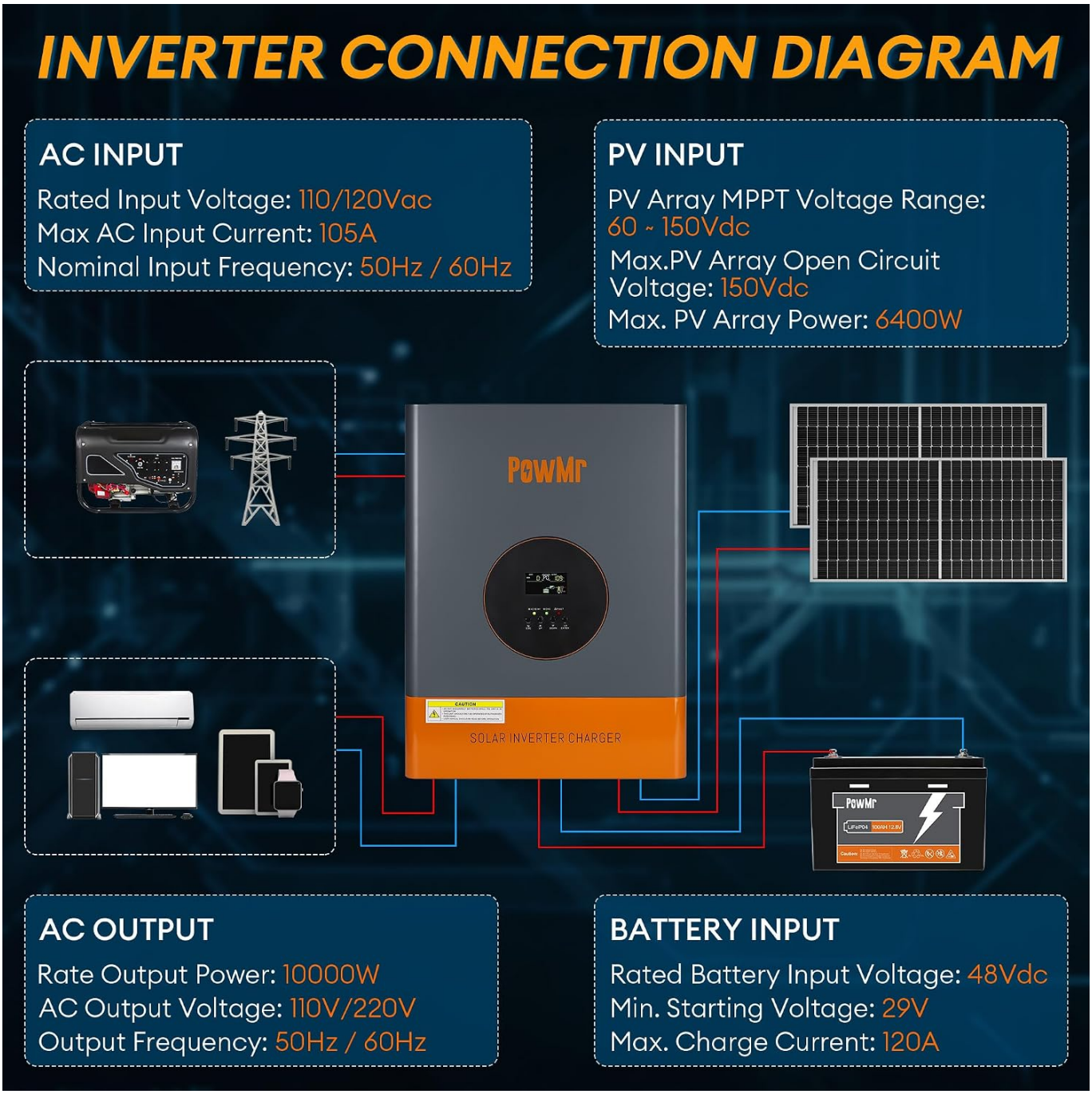


Image: An inverter connection diagram showing the PowMr inverter connected to various components: AC input (utility grid/generator), PV input (solar panels), battery input (48V battery bank), and AC output (household appliances/loads).

Battery Compatibility

The inverter is compatible with a range of 48V battery systems. Ensure your battery type is correctly configured in the inverter settings for optimal charging and discharge performance.



Image: A graphic illustrating the compatibility of the PowMr inverter with multiple 48V battery types, including AGM, GEL, FLD (Flooded), Lithium, and SLD (Sealed Lead-Acid) batteries.

4. Operating Instructions

The inverter offers flexible charging and discharging modes to suit various energy management strategies.

Charging Modes

- **Solar-Only:** Prioritizes solar power for battery charging.
- **Utility Priority:** Uses utility grid power as the primary source for charging, with solar as a supplement.
- **Solar Priority:** Maximizes solar power usage for charging before drawing from other sources.

Discharging Modes

- **PV Priority:** Prioritizes solar power to supply loads, then battery, then utility.

- **Utility Priority:** Prioritizes utility grid power to supply loads, then solar, then battery.
- **Solar-Only:** Supplies loads exclusively from solar power, then battery.

Use the LCD display and function keys (as shown in the Product Components section) to navigate settings and select the desired operating modes.

5. Maintenance

Regular maintenance ensures the longevity and reliable operation of your PowMr solar inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris.
- **Inspection:** Regularly inspect all wiring connections for tightness and signs of corrosion or damage.
- **Environment:** Ensure the installation environment remains within specified temperature and humidity ranges. The corrosion-resistant and dust-proof housing helps protect internal components, but extreme conditions should be avoided.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates to ensure optimal performance and access to new features.

6. Troubleshooting

The inverter is equipped with various protection mechanisms. If an issue arises, the LCD display and LED indicators will provide diagnostic information.

- **Overload Protection:** If the connected load exceeds the inverter's capacity, it will shut down. Reduce the load and restart the inverter.
- **Over/Under Voltage Protection:** The inverter will protect itself and connected devices from abnormal input or output voltages. Check input sources (PV, utility, battery) and output connections.
- **Short Circuit Protection:** In case of a short circuit, the inverter will immediately cease operation. Identify and resolve the short circuit before restarting.
- **Reverse Polarity Protection:** Prevents damage from incorrect battery connections. Ensure battery terminals are connected with correct polarity.

For persistent issues or error codes not covered here, consult the detailed troubleshooting guide on the PowMr website or contact customer support.

7. Specifications

Specification	Value
Rated Output Power	10000W
Peak Power	30000W
Max PV Input Power	6400W
MPPT Input Voltage Range	60-150VDC
Max PV Input Current	120A
Rated Battery Input Voltage	48VDC

Specification	Value
Min. Starting Voltage	29V
Max Charge Current (Hybrid)	120A (AC charger + PV charger)
Max AC Input Current	60A
Output Voltage	110V/220Vac ±10%
Output Frequency	50Hz/60Hz
Product Dimensions	21 x 7 x 15 inches
Item Weight	109.8 pounds
Model Name	POW-RELAB 10KU-SPLIT

8. Warranty and Support

For warranty information, terms, and conditions, please refer to the documentation provided with your purchase or visit the official PowMr website. For technical support, service, or inquiries, please contact PowMr customer service through their official channels.

You can visit the PowMr Store on Amazon for additional product information and support resources.

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

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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