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RDYMONKEY GS-III-8KW-48V

RDYMONKEY ZLPOWER UL1741 8000W 48V Off-Grid Inverter Charger Instruction Manual

Model: GS-III-8KW-48V | Brand: RDYMONKEY

1. Introduction

This manual provides essential information for the safe and efficient operation of your ZLPOWER UL1741 8000W 48V Off-Grid Inverter Charger. This pure sine wave inverter charger is designed for off-grid solar systems, offering a peak power of 24000W for 20 seconds, 240V AC input, and 120/240V split-phase output. It features built-in 2 MPPT low-frequency charge controllers and is UL 1741 certified. Please read this manual thoroughly before installation and use.



Figure 1.1: ZLPOWER GSIII Solar Hybrid Inverter with pure copper transformer and solar panels.

2. Safety Information

Always observe the following safety precautions to reduce the risk of electric shock, fire, or injury:

- Installation must be performed by qualified personnel in accordance with all local and national electrical codes.
- Ensure the inverter is disconnected from all power sources (AC, DC, and solar) before performing any maintenance or wiring.
- Do not expose the inverter to rain, snow, spray, or any liquids.
- Ensure proper grounding of the inverter.
- Do not disassemble the inverter. There are no user-serviceable parts inside.
- Verify battery voltage and polarity before connecting to the inverter.
- This inverter is designed for indoor use in a well-ventilated area.



Figure 2.1: The inverter features multiple intelligent protection systems including overvoltage, low voltage, over-temperature, overload, and short circuit protection, meeting ETL certification to UL 1741 standards.

3. Product Overview

3.1 Key Features

- 8000W Pure Sine Wave Inverter Charger, 24000W peak power for 20 seconds.
- Low frequency 48V inverter with transformer for 120/240V split-phase output.
- Built-in 2 x 80A MPPT solar charger controllers.
- Supports various battery types: AGM, GEL, lead acid, lithium-ion, and LiFePO4.
- Adjustable 0%-100% charging current (max 200A).
- Smart remote control with Automatic Generator Start (AGS) function.
- 5-stage AC charging and AC/DC priority modes.
- Up to 98% efficiency in line mode.

- Equipped with an external WiFi-module for mobile monitoring.



Figure 3.1: Key features of the 8000W 48V Split Phase Pure Sine Inverter.

3.2 Components and Dimensions

The inverter features clearly labeled terminals for battery, AC input/output, and grounding. An LCD display provides operational status and settings. The unit measures approximately 16.38 inches in width, 8.03 inches in depth, and 24.68 inches in height, with a net weight of 125 lbs.

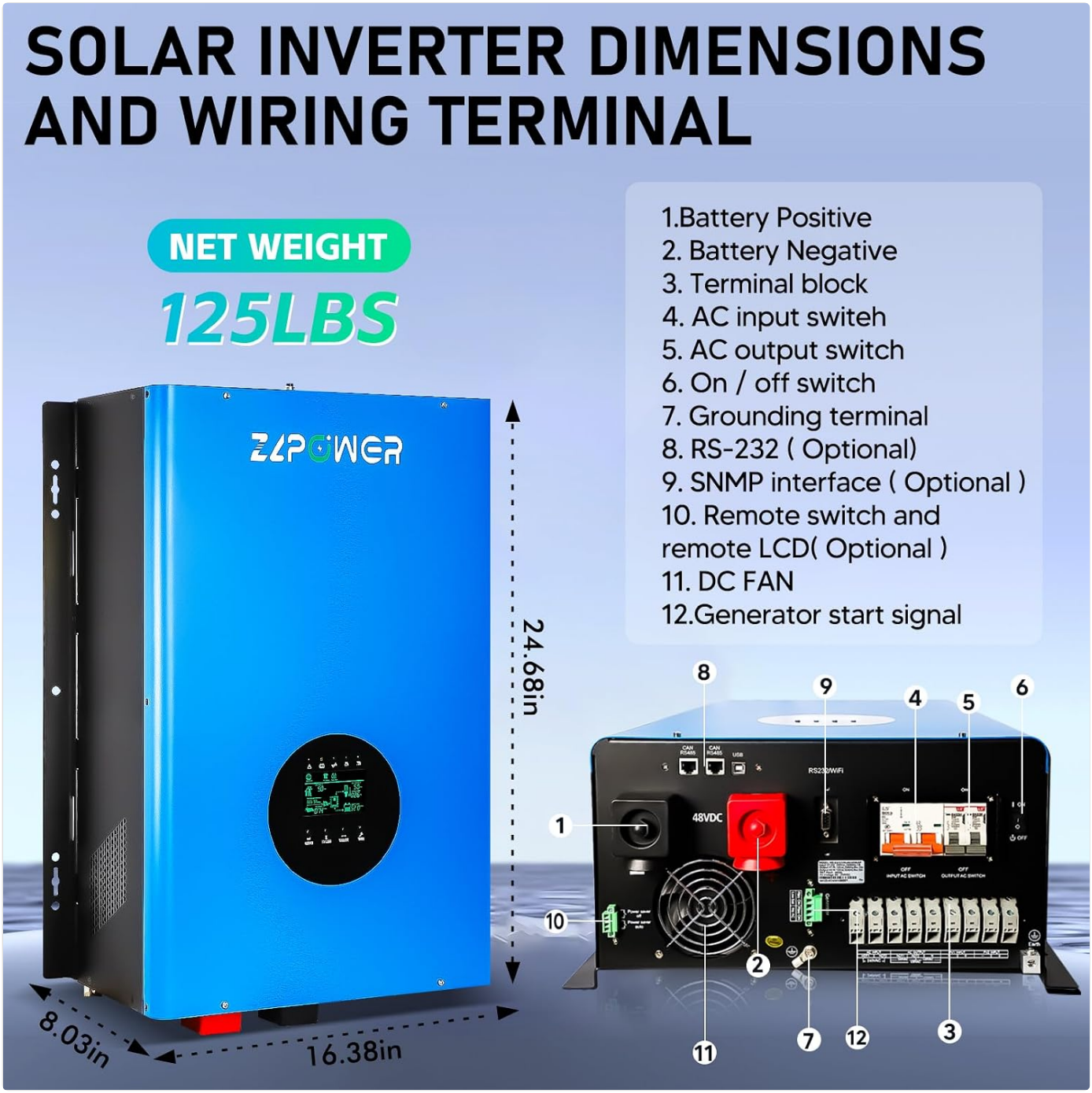


Figure 3.2: Solar Inverter Dimensions and Wiring Terminal Layout. Key components include (1) Battery Positive, (2) Battery Negative, (3) Terminal block, (4) AC input switch, (5) AC output switch, (6) On / off switch, (7) Grounding terminal, (8) RS-232 (Optional), (9) SNMP interface (Optional), (10) Remote switch and remote LCD (Optional), (11) DC FAN, (12) Generator start signal.

4. Setup and Installation

4.1 Unboxing and Initial Inspection

Upon receiving your inverter, carefully unbox it and inspect for any signs of damage during transit. Ensure all components listed in the packing list are present.

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Video 4.1: An unboxing video demonstrating the initial inspection of the inverter and its components.

4.2 Mounting the Inverter

Mount the inverter in a vertical position on a solid surface, ensuring adequate clearance for ventilation. Avoid direct sunlight, high

temperatures, and moisture. Refer to the dimensions provided in Section 3.2 for mounting space requirements.

4.3 Wiring Connections

All wiring must comply with local electrical codes. Ensure all connections are secure and properly insulated. The inverter supports 48V DC input from batteries and 240V AC input from grid or generator, providing 120/240V split-phase AC output.



Figure 4.1: ZLPOWER Hybrid Solar Inverter Installation Diagram illustrating the connection points for solar panels, MPPT solar controller, 48V battery bank, generator, utility grid, and household AC loads.

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Video 4.2: This video provides a detailed guide on how to correctly wire the inverter, emphasizing the connection of live and neutral cables to the AC output terminal.

4.4 Battery Compatibility

The inverter is compatible with a wide range of 48V battery types, including AGM, GEL, lead acid, lithium-ion, and LiFePO4. Ensure your battery bank meets the voltage and current requirements of the inverter.



Figure 4.2: The inverter supports various 48V battery chemistries, including Gel, AGM, Lithium, Sealed Lead Acid, LiFePO4, and Flooded types.

5. Operating Instructions

5.1 Powering On/Off

After all connections are secure, switch on the DC breaker from the battery bank, then the AC input breaker (if applicable), and finally the inverter's ON/OFF switch. To power off, reverse this sequence.

5.2 LCD Display and Settings

The integrated LCD provides real-time operational data, including input/output voltage, current, frequency, battery status, and load percentage. Use the 'CONF', 'SELECT', and 'ENTER' buttons to navigate menus and adjust settings such as AC/DC priority, charging current, and frequency (60Hz to 50Hz).



Figure 5.1: The LCD screen displays critical system information, including solar capacity, battery charge, and power flow, with an indicator for WiFi connectivity.

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Video 5.1: This video demonstrates how to select AC/Solar input via the LCD settings and shows the inverter's operational display.

5.3 WiFi Monitoring

The inverter includes an external WiFi module for remote monitoring. Download the SmartESS app (available on iOS and Android) to connect your inverter to your network and monitor its performance from your mobile device.

Figure 5.2: Steps for connecting the external WiFi module and setting up the SmartESS mobile application for remote monitoring. Download the app for Android or iOS.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter:

- **Cleanliness:** Keep the inverter and its ventilation openings clean and free from dust and debris. Use a dry cloth for cleaning.
- **Connections:** Periodically check all electrical connections for tightness and corrosion. Loose connections can cause overheating and damage.
- **Ventilation:** Ensure the area around the inverter remains clear to allow for proper airflow and cooling.
- **Battery Health:** Monitor your battery bank's health and charge levels. Follow battery manufacturer guidelines for maintenance.

7. Troubleshooting

This section provides solutions to common issues. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
Inverter not turning on	No DC input from battery; DC breaker off; Inverter switch off.	Check battery connections and voltage; Ensure DC breaker is on; Turn inverter switch to ON.
No AC output	AC output breaker off; Overload; Short circuit; Inverter fault.	Check AC output breaker; Reduce load; Check for short circuits in wiring; Contact support if fault persists.
Battery not charging	AC input not connected; Solar panels not connected/producing; Charging current set too low.	Verify AC input connection; Check solar panel connections and output; Adjust charging current via LCD settings.
Overload warning	Connected load exceeds inverter capacity.	Reduce the total load connected to the inverter.

8. Specifications

Feature	Specification
Brand	RDYMONKEY (ZLPOWER)
Model Name	GS-III-8KW-48V
Wattage	8000 Watts
Peak Output Power	24000 Watts (for 20 seconds)
Input Voltage	48 Volts (DC)
Output Voltage	120/240 Volts (AC)
Electrical Output Waveform	Pure Sine Wave
Frequency	60 Hz (Settable to 50Hz via LCD)
MPPT Solar Charger	Built-in 2 x 80A
Max Charging Current	200A (Adjustable 0%-100%)
Efficiency (Line Mode)	Up to 98%

Feature	Specification
Display Type	LCD
Certifications	UL 1741, ETL
Dimensions (approx.)	16.38in (W) x 8.03in (D) x 24.68in (H)
Net Weight (approx.)	125 lbs

9. Warranty and Support

9.1 Warranty Information

The ZLPOWER UL1741 8000W 48V Off-Grid Inverter Charger comes with a **60-month (five-year) warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

9.2 Technical Support

ZLPOWER, a leading solar hybrid inverter manufacturer with over 10 years of experience, provides lifetime technical support for this product. For installation assistance, usage guidance, or any quality-related issues, please contact our customer support team. We are committed to providing timely assistance and replacement services as needed.
For support, please refer to the contact information provided with your purchase or visit the official RDYMONKEY store on Amazon.

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