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RDYMONKEY GS-III-10000W-48V

ZLPOWER 10000W 48V Hybrid Solar Inverter User Manual

Model: GS-III-10000W-48V | Brand: RDYMONKEY

1. PRODUCT OVERVIEW

The ZLPOWER 10000W 48V Hybrid Solar Inverter is a pure sine wave inverter designed for off-grid systems, solar hybrid applications, and home backup power. It converts 48V DC to 120V/240V AC and features a built-in dual MPPT solar charge controller. This inverter is UL 1741 standard ETL certified, ensuring safety and reliability for various electrical appliances.



Figure 1.1: Front view of the ZLPOWER 10000W 48V Hybrid Solar Inverter.

8KW/10KW/12KW PURE SINE WAVE POWER INVERTER

Split Phase Pure Sine Inverter Charger DC 48V AC Input:240V,AC Output:120V/240V



Figure 1.2: Key features and specifications of the inverter, highlighting its dual MPPT charge controllers and maximum current/voltage ratings.

2. SAFETY INFORMATION

Read all instructions and cautionary markings on the unit and on the batteries before using the inverter. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure proper grounding of the inverter.
- Do not disassemble the inverter. Refer all servicing to qualified personnel.
- Keep the inverter away from flammable materials and liquids.
- Ensure adequate ventilation around the inverter to prevent overheating.
- Verify battery voltage and polarity before connecting to the inverter.
- This inverter is designed for indoor use in a dry, well-ventilated area.

MULTIPLE INTELLIGENT PROTECTION SYSTEMS

ETL certification to UL 1741 standards



Figure 2.1: The inverter incorporates multiple intelligent protection systems for safe operation, including safeguards against short circuits, over-voltage, over-temperature, overload, and low voltage.

3. SETUP AND INSTALLATION

3.1 Unboxing and Component Identification

Carefully remove the inverter from its packaging. Verify that all components listed in the packing list are present and undamaged. The package typically includes the Solar Hybrid Inverter unit.

3.2 Physical Installation

Mount the inverter in a location that meets the safety requirements. Ensure the mounting surface is sturdy enough to support the inverter's weight (approximately 99 pounds). Allow sufficient clearance for ventilation.

ZLPOWER Solar Hybrid Inverter



Figure 3.1: A typical installation diagram for the ZLPOWER Hybrid Solar Inverter, illustrating connections for solar panels, battery bank, AC input (grid or generator), and AC output to loads.

3.3 Wiring Connections

Refer to the wiring diagram for correct connections. Ensure all connections are secure and properly insulated. The inverter supports various battery types including AGM, GEL, lead acid, lithium-ion, and LiFePO4 batteries.

WIRING TERMINAL

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. CAN/RS485/USB
10. Remote switch
11. DC FAN
12. Generator start signal
13. AC FAN



Figure 3.2: Detailed wiring terminal diagram, indicating connection points for battery, AC input/output, communication ports, and fan.

COMPATIBLE WITH MULTIPLE BATTERY TYPES

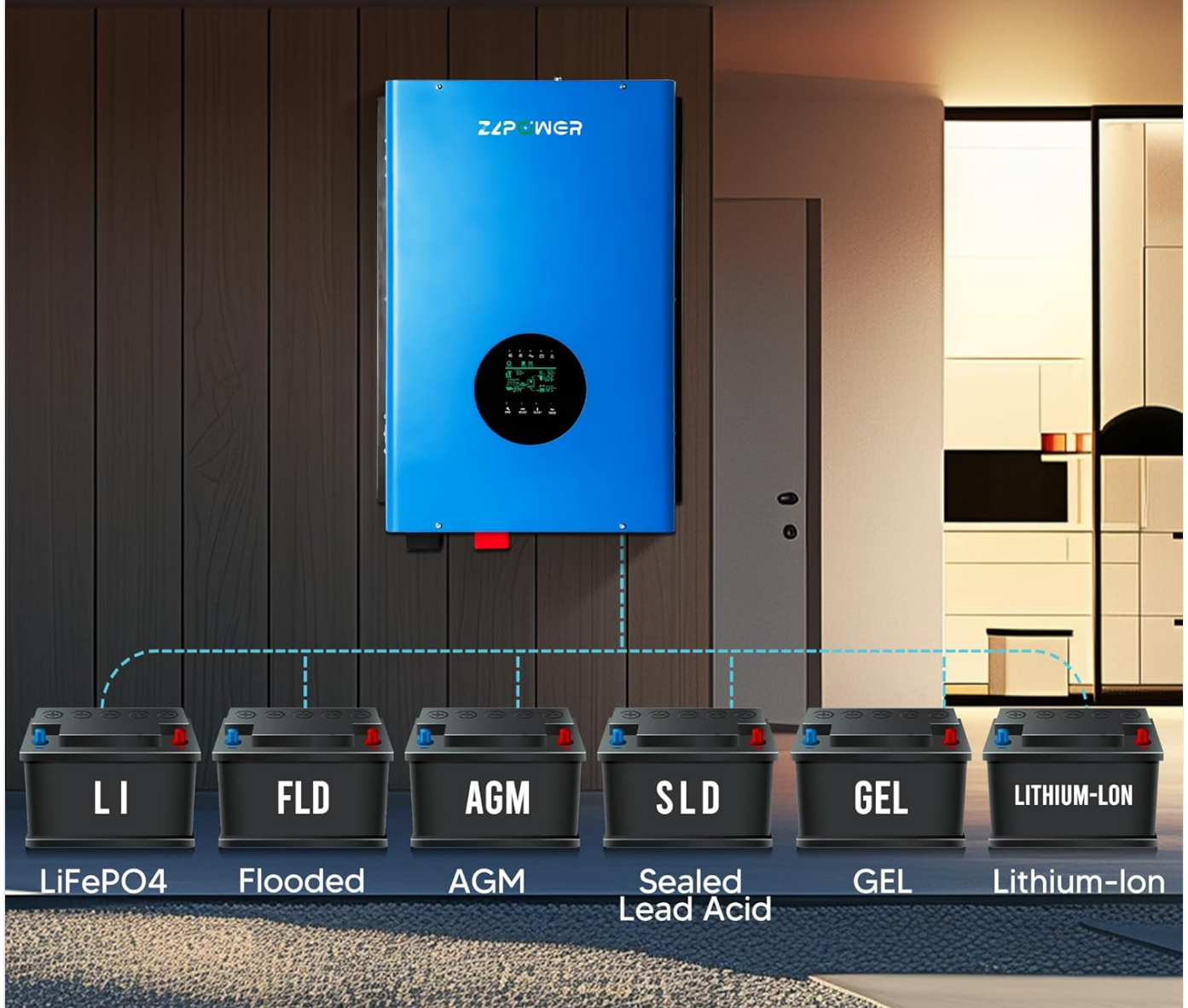


Figure 3.3: The inverter is compatible with a wide range of 48V battery types, including LiFePO4, Flooded, AGM, Sealed Lead Acid, GEL, and Lithium-Ion batteries.

3.4 Initial Power-Up

After all connections are made, switch on the DC breaker from the battery bank first, then the AC input and output switches on the inverter. Finally, turn on the main power switch on the inverter. The LCD screen will illuminate.

4. OPERATING INSTRUCTIONS

4.1 LCD Screen Display and Navigation

The LCD screen provides real-time operational data and allows for configuration adjustments. Use the 'CONF', 'SELECT', and 'ENTER' buttons to navigate through menus and change settings.

LCD SCREEN DISPLAY

LCD SHOWS THE SOLAR CAPACITY.



Figure 4.1: The LCD screen displays critical information such as solar energy generation, AC input/output status, battery charge level, and overall energy flow within the system.

4.2 Battery Charging Modes

The inverter offers adjustable charging current (0%-100%) and multiple energy management modes:

- **AC Priority:** The inverter primarily uses AC input (grid or generator) to power loads and charge batteries.
- **DC Priority:** The inverter prioritizes battery power for loads, using AC input only when battery voltage is low.
- **Smart Mode:** Optimizes energy usage based on system conditions and user settings.

4.3 Wi-Fi Module Connection

The inverter is equipped with an external Wi-Fi module for remote monitoring. Follow these steps to connect:

1. Connect the external Wi-Fi plug to the designated port on the inverter.
2. Download the SmartESS app from your mobile device's app store.

SmartESS (Android)

3. Follow the in-app instructions to connect to the Wi-Fi Datalogger, create an account, and add your inverter.



Figure 4.2: Steps for connecting the external Wi-Fi module and setting up the SmartESS mobile application for remote monitoring.

4.4 Operational Demonstration

The following video demonstrates the inverter's operation, including connections and powering common household appliances like a fan and refrigerator.

Your browser does not support the video tag.

Video 4.1: Demonstration of the ZLPOWER Hybrid Solar Inverter's functionality, showing its ability to power a fan and a refrigerator, and illustrating the LCD screen interface.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris.
- **Connection Checks:** Annually inspect all electrical connections for tightness and signs of corrosion.
- **Environmental Check:** Ensure the installation environment remains dry and free from excessive dust or humidity.

6. TROUBLESHOOTING

This section provides solutions for common issues. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Inverter not powering on	No DC input from batteries; Main switch off; Blown fuse/breaker.	Check battery connections and voltage; Ensure main switch is ON; Inspect and reset breakers or replace fuses.
No AC output	Overload; Short circuit; AC output switch off; Low battery voltage.	Reduce load; Check for short circuits in wiring; Turn on AC output switch; Recharge batteries.
Abnormal noise from inverter	Overload; Loose components; Fan obstruction.	Reduce load; Check for loose screws or internal components (contact support if unsure); Clear fan vents.
LCD display not working	Power issue; Display fault.	Check power supply to inverter; Contact customer support for display replacement.

7. SPECIFICATIONS

Detailed technical specifications for the ZLPOWER 10000W 48V Hybrid Solar Inverter.

Model Name: GS-III-10000W-48V

Wattage: 10000 watts (30000W Peak)

Power Source: Solar and Battery Powered

Product Dimensions: 27.95 x 19.69 x 11.81 inches

Item Weight: 99 pounds

Input Voltage: 48V DC

Output Voltage: 120V/240V AC (Split Phase)

Output Frequency: Selectable 50Hz/60Hz

Solar Charge Controller: Built-in Dual MPPT (2 x 80A)

Max Charging Current: 200A (Adjustable)

Transformer Type: Pure Copper Low-Frequency Transformer

Certifications: UL 1741 Standard ETL Certified

Communication: External Wi-Fi Module (Optional), RS232, CAN/RS485, USB

SOLAR INVERTER DIMENSIONS



10KW

NET WEIGHT:137.78LBS



Outdoor Camping



Outdoor homework



Emergency backup



Night Market Stalls

Figure 7.1: Physical dimensions of the inverter. Note: The image states 137.78lbs, but product specifications state 99lbs. Please refer to the text specifications for the most accurate weight.

8. WARRANTY AND SUPPORT

ZLPOWER provides comprehensive support for its products.

- **Warranty:** The GS Series 10KW hybrid solar inverter comes with a 60-month (5-year) warranty.
- **Technical Support:** Lifetime technical support is available for worry-free usage.
- **Contact:** For any quality-related issues, machine installation, or usage guidance, please contact ZLPOWER customer support.

For more information, visit the official RDYMONKEY Store on Amazon.