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> Sanzla 3KVA 24V PMW Solar Hybrid Inverter User Manual

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Comprehensive instructions for installation, operation, and maintenance.

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Sanzla 3KVA 24V PMW Solar Hybrid Inverter. Please read this manual thoroughly before installation and use. Keep it for future reference.

The Sanzla Solar Hybrid Inverter is designed to convert DC power from solar panels or batteries into AC power for household appliances, while also managing battery charging from solar or utility sources. It features a Pure Sine Wave output, ensuring compatibility with sensitive electronics.



Figure 1: Sanzla 3KVA 24V PMW Solar Hybrid Inverter. This image shows the front view of the inverter unit, featuring the display panel and branding.

2. SAFETY INSTRUCTIONS

- Read all instructions and cautionary markings on the unit and in this manual before operating.
- Do not disassemble the inverter. Refer servicing to qualified personnel.
- Keep the inverter away from rain, water, or excessive moisture.
- Ensure proper ventilation around the inverter to prevent overheating.
- Do not connect the inverter to AC power sources that are not properly grounded.
- Use appropriate circuit breakers and fuses as specified in the installation section.
- This device is certified with CE, indicating compliance with European safety standards.

3. SETUP AND INSTALLATION

3.1 Unpacking and Inspection

Upon receiving the inverter, carefully unpack it and inspect for any damage. If any damage is found, contact your dealer immediately.

3.2 Mounting the Inverter

- Choose a suitable location: dry, well-ventilated, and protected from direct sunlight and moisture.
- Mount the inverter vertically on a sturdy wall or surface.
- Ensure sufficient clearance around the unit for proper airflow (at least 20 cm on all sides).

3.3 Wiring Connections

All wiring must be performed by a qualified electrician in accordance with local electrical codes.

1. **Battery Connection:** Connect the battery bank to the inverter's DC input terminals. Ensure correct polarity (+ to + and - to -). Use appropriate cable gauges for the 24V input.
2. **Solar Panel Connection:** Connect the solar panel array to the MPPT solar input terminals. Verify correct polarity and ensure the open-circuit voltage (Voc) of the solar array does not exceed the inverter's maximum PV input voltage.
3. **AC Input Connection:** Connect the utility grid or generator AC input to the inverter's AC input terminals.
4. **AC Output Connection:** Connect your loads (appliances) to the inverter's AC output terminals.
5. **Grounding:** Ensure the inverter chassis is properly grounded to a reliable earth ground.

Refer to the wiring diagram provided in the packaging for detailed connection points.

4. OPERATING INSTRUCTIONS

4.1 Powering On the Inverter

1. Ensure all wiring connections are secure and correct.
2. Switch on the battery breaker.
3. Switch on the solar array breaker (if applicable).
4. Switch on the AC input breaker (if applicable).
5. Press and hold the power button on the inverter's front panel for a few seconds until the display illuminates.
6. The inverter will perform a self-test and then enter operating mode.

4.2 Display and Control Panel

The front panel features an LCD display and several buttons for monitoring and configuring the inverter's settings.

- **LCD Display:** Shows real-time operating status, input/output voltages, battery level, and error codes.
- **Function Buttons:** Used to navigate menus, adjust settings, and view different parameters (e.g., UP, DOWN, ENTER, ESC).

4.3 System Settings

Access the settings menu via the control panel to configure parameters such as:

- Output voltage and frequency.
- Charging source priority (Solar first, Utility first, SBU priority).
- Battery type and charging current.
- Low battery cut-off voltage.

Refer to the detailed settings section in the full manual for specific parameter adjustments.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Keep the inverter's exterior clean and free from dust. Use a dry cloth. Do not use liquid cleaners.
- **Ventilation:** Ensure ventilation openings are clear and not obstructed.
- **Connections:** Periodically check all electrical connections for tightness and signs of corrosion.
- **Battery Inspection:** Regularly inspect battery terminals for corrosion and ensure proper electrolyte levels for flooded batteries.
- **Environmental Conditions:** Monitor the operating environment to ensure it remains within specified temperature and humidity ranges.

6. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Inverter does not power on.	No battery connection or low battery voltage.	Check battery connections and ensure battery voltage is above the low voltage cut-off.
No AC output.	Overload, short circuit, or inverter in fault mode.	Reduce load, check for short circuits, restart the inverter.
Battery not charging.	Solar panels not connected, insufficient solar input, or AC input not present.	Verify solar panel connections, check solar input voltage, ensure AC input is available if charging from utility.
Overheating error.	Blocked ventilation or excessive ambient temperature.	Clear obstructions from vents, ensure adequate airflow, move inverter to a cooler location if necessary.

7. SPECIFICATIONS

Feature	Detail
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Feature	Detail
Model	3KVA 24V PMW
Brand	Sanzla
Type	Solar Sine Wave Hybrid Inverter
Input Voltage	24 Volts (DC)
Power Source	Solar Powered
Work Efficiency	90%
Product Certification	CE
Item Weight	26.5 pounds (approx. 12 kg)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Assembly Required	No
Number of Pieces	1

Note: The provided package dimensions (1.18 x 0.79 x 0.39 inches) appear to be incorrect given the item weight of 26.5 pounds. Please refer to the actual product packaging for accurate dimensions.

8. WARRANTY AND SUPPORT

For warranty information and technical support, please contact your point of purchase or the manufacturer directly. Keep your purchase receipt as proof of purchase.

Manufacturer: SaNzia

For further assistance, please visit the official Sanzla website or contact their customer service department.

