Luminous SOLARVERTER PRO 10.1KVA ECO

Luminous SOLARVERTER PRO 10.1KVA ECO Hybrid Solar Inverter User Manual

Model: SOLARVERTER PRO 10.1KVA ECO

1. Product Overview

The Luminous SOLARVERTER PRO 10.1KVA ECO is a hybrid solar inverter designed for efficient energy management in homes and businesses. It operates at 48V and provides a pure sine wave output, ensuring stable and safe power for connected appliances. This inverter integrates an MPPT charge controller for maximizing solar generation and an isolation transformer for protection against grid surges.
Key features include:

- **10.1KVA Hybrid Inverter:** Supports both solar and grid power sources.
- **Smart Energy Management:** Automatically optimizes power usage between solar and grid.
- **Pure Sine Wave Output:** Ensures stable power delivery, protecting sensitive electronics.
- **High Efficiency 48V System:** Optimized for significant power needs and energy savings.
- **BIS Certified:** Complies with Bureau of Indian Standards for quality and safety.
- **User-Friendly LCD Display:** Provides informative operational data.
- **Comprehensive Protection:** Includes short-circuit, reverse polarity, and battery overload protection.



Figure 1: Front view of the Luminous SOLARVERTER PRO 10.1KVA ECO Hybrid Solar Inverter. This image displays the main unit with its control panel and LCD screen.

2. Installation and Setup

Proper installation is crucial for the safe and efficient operation of your Luminous SOLARVERTER PRO. It is highly recommended that installation be performed by a qualified and certified technician.

2.1 Safety Precautions

- Ensure the installation area is well-ventilated and free from flammable materials.
- Keep the inverter away from direct sunlight, rain, and excessive dust.
- Verify that all electrical connections are secure and correctly polarized.
- Do not attempt to open or repair the inverter yourself. Refer to qualified service personnel.
- Always disconnect all power sources (solar, battery, grid) before performing any maintenance or wiring.

2.2 Site Selection

Choose a location that is:

- Cool and dry.
- Easily accessible for maintenance.
- Protected from physical damage.
- Close to the battery bank and solar panels to minimize cable length and voltage drop.

2.3 Electrical Connections

1. **Battery Connection:** Connect the 48V battery bank to the designated battery terminals, ensuring correct polarity.
2. **Solar Panel Connection:** Connect the solar panel array to the MPPT charge controller input terminals. Ensure the input voltage (Vmp 150V-320V, Voc 200V-400V) is within the specified range.
3. **Grid Connection:** Connect the AC grid input to the inverter's grid input terminals.
4. **Load Connection:** Connect your household or business loads to the AC output terminals of the inverter.
5. **Grounding:** Ensure the inverter is properly grounded according to local electrical codes.

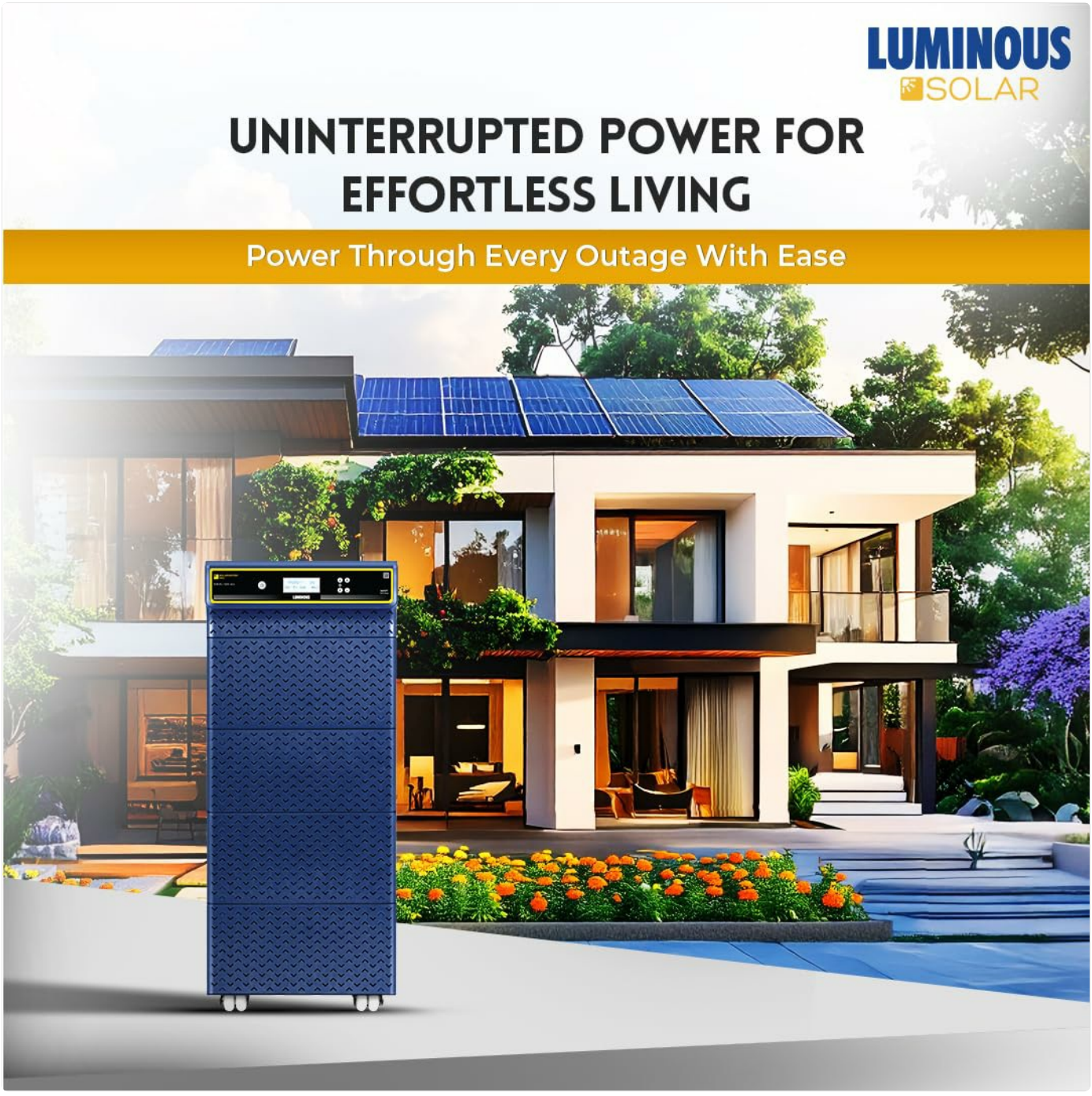


Figure 2: The Luminous SOLARVERTER PRO 10.1KVA ECO integrated into a residential solar power system. This illustrates a typical installation scenario for

home use.

3. Operating Instructions

Once installed, the Luminous SOLARVERTER PRO is designed for user-friendly operation. The informative LCD display provides real-time status and allows for configuration.

3.1 Powering On/Off

- **To Power On:** Ensure all connections are secure. Switch on the battery breaker, then the solar array breaker, and finally the AC input breaker. Press the power button on the inverter.
- **To Power Off:** Reverse the power-on sequence. First, switch off the AC input breaker, then the solar array breaker, and finally the battery breaker. Press and hold the power button until the unit shuts down.

3.2 LCD Display and Controls

The LCD display provides critical information about the system's performance, including battery status, solar generation, load consumption, and grid status. Use the navigation buttons to scroll through different screens and access settings.

3.3 User Selectable Source Priority

The inverter allows you to configure the energy source priority (Solar, Battery, Grid) to best suit your needs. This setting can typically be adjusted via the LCD display menu.

- **Solar First:** Prioritizes solar power, then battery, and uses grid only when solar and battery are insufficient.
- **Battery First:** Prioritizes battery power, then solar, and uses grid as a last resort.
- **Grid First:** Prioritizes grid power, using solar to charge batteries or supplement grid, and battery only during grid outages.



Figure 3: The Luminous SOLARVERTER PRO 10.1KVA ECO with callouts for key operational features such as Maximum Power Point Tracking (MPPT) and the user-friendly LCD display.

4. Maintenance

Regular maintenance ensures the longevity and optimal performance of your Luminous SOLARVERTER PRO. Always disconnect all power sources before performing any maintenance.

4.1 Routine Checks

- **Visual Inspection:** Periodically check the inverter for any signs of physical damage, loose connections, or corrosion.
- **Cleaning:** Keep the inverter's ventilation openings clear of dust and debris to ensure proper airflow and cooling. Use a soft, dry cloth for cleaning the exterior. Do not use liquid cleaners.
- **Cable Integrity:** Inspect all cables for wear, fraying, or damage. Replace any damaged cables immediately.
- **Battery Health:** If using lead-acid batteries, check electrolyte levels and terminal connections regularly.

4.2 Professional Servicing

It is recommended to have the system inspected by a qualified Luminous service technician at least once a year to ensure all components are functioning correctly and to perform any necessary firmware updates or advanced diagnostics.

5. Troubleshooting

This section provides solutions to common issues you might encounter. For problems not listed here, or if solutions do not resolve the issue, contact Luminous customer support.

Problem	Possible Cause	Solution
Inverter not turning on	No battery power; loose connections; tripped breaker.	Check battery connections and charge; ensure all breakers are ON.
No AC output	Overload; short circuit; inverter fault.	Reduce load; check for short circuits in wiring; restart inverter.
Low solar charging	Dirty solar panels; shading; faulty panel/connection.	Clean solar panels; remove shading; inspect panel connections.
Unusual noises or smells	Internal component failure.	Immediately power off the inverter and contact customer support. Do not attempt to open.

6. Technical Specifications

Feature	Detail
Model Number	SOLARVERTER PRO 10.1KVA ECO
Rated AC Power	230V (single phase)
Max Supported Panel Power	10000 Wp
Input Voltage Range (Vmp)	150V-320V
Charge Controller Type	MPPT
Input Voltage Range (Voc)	200V-400V
Nominal Battery Bank Voltage	120V
Output Waveform	Pure Sine Wave
Dimensions (LxWxH)	32 x 30.2 x 13 cm
Item Weight	31.5 kg
Country of Origin	India
Certifications	BIS certified

7. Warranty Information

The Luminous SOLARVERTER PRO 10.1KVA ECO comes with a**2-year warranty** from the date of purchase. This

warranty covers manufacturing defects and malfunctions under normal operating conditions.
The warranty does not cover damage resulting from:

- Improper installation or wiring.
- Unauthorized repairs or modifications.
- Misuse, abuse, or negligence.
- Natural disasters or acts of God.
- Operating the inverter outside its specified environmental or electrical limits.

Please retain your purchase receipt as proof of purchase for warranty claims.

8. Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact Luminous customer support.
Luminous Customer Service:

Website: www.luminousindia.com

Contact Information: Refer to the official Luminous website or product packaging for the most current contact numbers and email addresses.



Figure 4: An illustration of a complete Luminous solar solution, including the inverter, solar panels, and battery. This represents the broader ecosystem the inverter operates within.

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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

Anonymous

Email

you@example.com

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