

## Luminous Eco Volt+850 SW

# Luminous Eco Volt+850 SW Sine Wave UPS Inverter User Manual

Model: Eco Volt+850 SW | Brand: Luminous

## 1. INTRODUCTION AND OVERVIEW

The Luminous Eco Volt+850 SW is a pure sine wave UPS inverter designed to provide reliable and stable power backup for various applications, including homes and small shops. This inverter ensures the safety of sensitive electronic appliances by delivering a clean power output, similar to grid power. It incorporates advanced features for efficient battery charging and protection, ensuring longer battery life and consistent performance.

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Luminous Eco Volt+850 SW inverter.

## 2. KEY FEATURES

- **Pure Sine Wave Output:** Delivers clean power, making it safe for sensitive appliances and ensuring noiseless operation.
- **Adaptive Battery Charging Control System (ABCC) Technology:** Optimizes battery charging for faster charging and extended battery life.
- **Three-Stage Charging:** Ensures safe and efficient charging, contributing to a longer battery lifespan.
- **4-Step Battery Type Selection:** Compatible with various battery types including Flat Plate, Tubular, and VRLA (SMF) batteries.
- **Overload Protection with Auto Reset:** Automatically protects the inverter from damage due to excessive load and attempts to restart.
- **Intelligent Water Level Indicator:** Provides a clear indication of battery water levels, simplifying maintenance for lead-acid batteries.
- **ECO Mode (180V to 260V):** Designed for general use, offering a wider voltage window to reduce battery usage.

- **UPS Mode (Extended Voltage Range):** Maintains a stable output voltage range for sensitive appliances like computers, ensuring uninterrupted operation.
- **High Efficiency:** Optimized design for maximum power conversion and minimal energy loss.

### 3. SETUP AND INSTALLATION

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Proper installation is crucial for the safe and efficient operation of your inverter. It is highly recommended to have the inverter and battery installed by a qualified technician.

#### 3.1 Unpacking and Inspection

Carefully unpack the inverter and inspect it for any signs of damage during transit. If any damage is found, contact your dealer immediately.

#### 3.2 Choosing a Location

- Place the inverter in a well-ventilated area to ensure proper heat dissipation.
- Avoid direct sunlight, high humidity, and dusty environments.
- Ensure the inverter is placed on a flat, stable surface.
- Keep it away from flammable materials and sources of heat.

#### 3.3 Battery Connection

The Luminous Eco Volt+850 SW supports a single 12V battery. Follow these steps for battery connection:

1. Ensure the inverter is switched OFF and disconnected from the mains power supply.
2. Connect the **red** cable from the inverter to the **positive (+)** terminal of the battery.
3. Connect the **black** cable from the inverter to the **negative (-)** terminal of the battery.
4. Ensure all connections are tight and secure to prevent sparking or poor contact.

#### 3.4 Battery Type Selection

The inverter features a 4-step switch to select the appropriate battery type. Set this switch according to the type of battery connected (Flat Plate, Tubular, or SMF) for optimized charging performance and battery longevity.

#### 3.5 Mains Power Connection

Connect the inverter's input power cord to a properly grounded wall socket. Ensure the socket can handle the inverter's power requirements.



*Image 1: Front view of the Luminous Eco Volt+850 SW Sine Wave UPS Inverter. This image shows the compact blue casing with control buttons and indicators on the front panel.*

## 4. OPERATING INSTRUCTIONS

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### 4.1 Powering On/Off

- **To Power On:** After completing all connections, switch on the main power button located on the inverter. The indicator lights will illuminate, signifying that the inverter is operational.
- **To Power Off:** Switch off the main power button on the inverter. If connected to mains, disconnect the mains power cord.

### 4.2 Mode Selection (ECO / UPS)

The Luminous Eco Volt+850 SW offers two operational modes to suit different power requirements:

- **ECO Mode:** This mode is ideal for general household appliances. It operates within a wider input voltage range (180V to 260V), which helps in reducing battery usage and extending battery backup time by minimizing transfers to battery power.
- **UPS Mode:** This mode is specifically designed for sensitive electronic appliances such as computers,

televisions, and medical equipment. It maintains a narrower and more stable output voltage range (typically 180V to 260V) to ensure consistent and clean power, protecting these devices from voltage fluctuations.

Select the appropriate mode using the dedicated switch on the inverter, based on the type of appliances you are powering.

### 4.3 Automatic Charging

When the inverter is connected to the mains power supply and switched on, it will automatically begin charging the connected battery. The ABCC technology ensures optimal charging, preventing overcharging and prolonging battery life.

## 5. MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your Luminous Eco Volt+850 SW inverter and battery.

### 5.1 Battery Water Level Check (for Lead-Acid Batteries)

If you are using a lead-acid battery (Flat Plate or Tubular), regularly monitor the electrolyte level using the intelligent water level indicator. Refill with distilled water only when the level drops below the minimum mark.

**Never use tap water.**

### 5.2 Cleaning

- Keep the inverter's exterior clean and free from dust. Use a soft, dry cloth for cleaning.
- Ensure that the ventilation vents are not obstructed by dust or debris to allow for proper airflow and prevent overheating.
- Do not use liquid cleaners, solvents, or abrasive materials on the inverter.

### 5.3 Environmental Conditions

Ensure the inverter remains in a cool, dry, and well-ventilated environment. Extreme temperatures or humidity can affect performance and lifespan.

## 6. TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with your inverter. For problems not listed here or if issues persist, contact customer support.

Problem	Possible Cause	Solution
Inverter not turning ON	<ul style="list-style-type: none"> <li>◦ Main power switch OFF</li> <li>◦ Battery not connected or discharged</li> <li>◦ Loose battery terminals</li> </ul>	<ul style="list-style-type: none"> <li>◦ Switch ON the inverter.</li> <li>◦ Check battery connections and ensure battery is charged.</li> <li>◦ Tighten battery terminals.</li> </ul>
No power output in backup mode	<ul style="list-style-type: none"> <li>◦ Battery deeply discharged</li> <li>◦ Overload condition</li> </ul>	<ul style="list-style-type: none"> <li>◦ Allow battery to charge when mains power is available.</li> <li>◦ Reduce connected load; inverter will auto-reset.</li> </ul>
Battery not charging	<ul style="list-style-type: none"> <li>◦ Mains power not available</li> <li>◦ Loose mains connection</li> <li>◦ Incorrect battery type selection</li> </ul>	<ul style="list-style-type: none"> <li>◦ Check mains power supply.</li> <li>◦ Ensure mains plug is securely inserted.</li> <li>◦ Verify battery type switch setting.</li> </ul>
Overload indicator ON	<ul style="list-style-type: none"> <li>◦ Too many appliances connected</li> </ul>	<ul style="list-style-type: none"> <li>◦ Disconnect some appliances. The inverter will automatically reset after a short period.</li> </ul>

## 7. SPECIFICATIONS

Feature	Specification
Model	Eco Volt+850 SW
Capacity	800 VA
Rated Power	672 W
Output Waveform	Pure Sine Wave
Battery Support	Single Battery (12V)
Supported Battery Types	Flat Plate, Tubular, VRLA (SMF)
Max Charging Current	14 Amperes
ECO Mode Voltage Range	180V to 260V
UPS Mode Voltage Range	180V to 260V (extended range)
Application Area	Small Homes (up to 2 BHK), Small Shops

## 8. WARRANTY AND SUPPORT

### 8.1 Product Warranty

The Luminous Eco Volt+850 SW UPS Inverter comes with a **24-month warranty** from the date of purchase. This warranty covers manufacturing defects and ensures repair or replacement of faulty parts under normal operating conditions. Please retain your original purchase receipt or invoice as proof of purchase for any warranty claims.

The warranty does not cover damages resulting from improper installation, misuse, unauthorized modifications, natural disasters, or normal wear and tear.

## **8.2 Customer Support**

For technical assistance, service requests, or any queries regarding your Luminous inverter, please contact Luminous customer support. You can find the most up-to-date contact information, including phone numbers and email addresses, on the official Luminous website or in the documentation provided with your product packaging.

When contacting support, please have your product model number (Eco Volt+850 SW) and purchase details ready to facilitate quicker service.