Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

SUMRY EP-4000L

SUMRY Hybrid Solar Inverter EP-4000L User Manual

Model: EP-4000L | Brand: SUMRY

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your SUMRY Hybrid Solar Inverter, Model EP-4000L. This device integrates a power inverter, an MPPT solar charge controller, and an AC battery charger into a single unit, designed for various applications including RVs, caravans, camping, and home backup power systems. It supports both 12V and 24V battery systems and provides a pure sine wave output.



Figure 1: Front view of the SUMRY Hybrid Solar Inverter EP-4000L, showing the LCD display and control buttons.

Safety Information

Please read all instructions and warnings carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or severe injury. Keep this manual for future reference.

- Installation must be performed by qualified personnel.

- Ensure all wiring is correctly sized and properly connected.
- Do not disassemble the inverter. There are no user-serviceable parts inside.
- Avoid exposure to rain, snow, spray, or excessive dust.
- Ensure adequate ventilation around the inverter to prevent overheating.
- Always disconnect power sources (solar, battery, AC utility) before performing any maintenance or wiring.
- This inverter is designed for 220V/230V/240V single-phase AC output. It is not compatible with 110V split-phase systems without an external transformer.

Setup and Installation

1. Unpacking

Carefully remove the inverter from its packaging. Inspect for any damage that may have occurred during transit. Retain the packaging for future transport or storage.

2. Mounting

Mount the inverter vertically on a non-flammable surface in a well-ventilated area. Ensure there is sufficient clearance around the unit for proper airflow. Avoid direct sunlight, heat sources, and moisture.

- **Dimensions:** 11 x 3.5 x 13.4 inches (27.9 x 8.9 x 34 cm).
- **Weight:** 13.64 pounds (6.19 kg).

3. Wiring Connections

All wiring must comply with local electrical codes. Use appropriate wire gauges for all connections.



Figure 2: Example installation diagram showing the inverter connected to solar panels, batteries, and various loads within an RV setup.

1. **Battery Connection:**

   Connect the battery bank to the inverter's battery terminals. This inverter is compatible with both 12V and 24V battery systems (AGM, Lithium, LiFePO4, Flooded). Ensure correct polarity. For 12V systems, the inverter outputs 2000W (4000W peak). For 24V systems, it outputs 3500W (7000W peak).

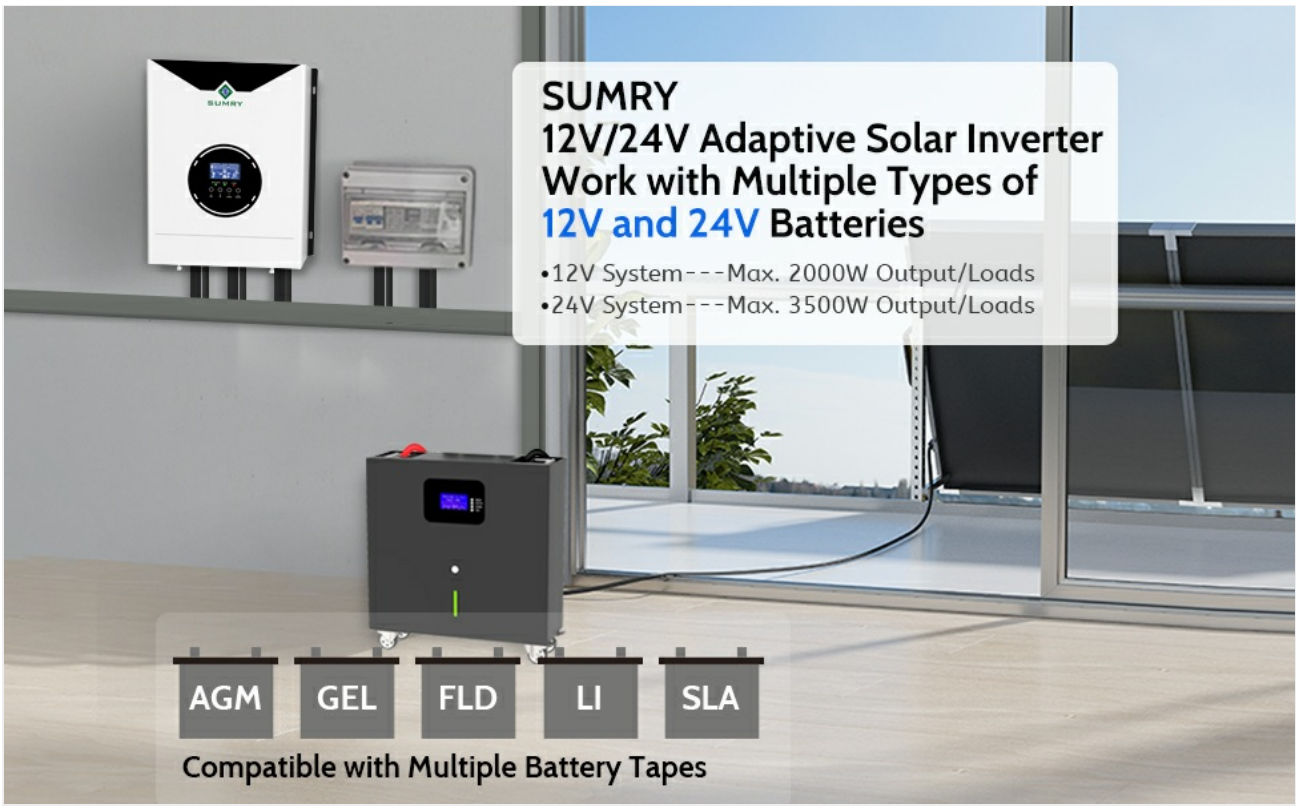


Figure 3: The inverter's compatibility with various 12V and 24V battery types, including AGM, GEL, Flooded, Lithium, and SLA.

2. **PV Input Connection:**

   Connect your solar panels to the PV input terminals. The built-in MPPT charge controller supports a PV input voltage range of 15V-60VDC and a maximum PV input power of 500 watts.

3. **AC Input/Output Connection:**

   Connect the AC utility grid (if used) to the AC input terminals and your loads to the AC output terminals. This inverter provides a pure sine wave output of 230VAC. **Note:** This unit is designed for 220V/230V/240V single-phase voltage. It is not compatible with 110V split-phase voltage. For 110V/120V US appliances, an external step-down transformer is required (not included).

4. **Grounding:**

   Ensure the inverter is properly grounded according to local regulations.



Figure 4: Overview of the inverter's integrated functions, including MPPT charge controller (20A), power inverter (2000W/3500W), and battery charger (100A).

Operating Instructions

1. Initial Power-Up

After all connections are secure, switch on the battery breaker, then the solar array breaker (if applicable), and finally the AC utility breaker (if applicable). The inverter will initiate its startup sequence.

2. LCD Display and Control Buttons

The inverter features an LCD display that shows operating status, input/output information, and allows for parameter settings. Use the control buttons (ESC, UP, DOWN, ENTER) to navigate menus and adjust settings.



Figure 5: The LCD display provides real-time monitoring of input/output power, battery status, and operational modes. Remote monitoring is available via the built-in WiFi/Bluetooth module.

3. Setting Parameters

Through the LCD menu, you can configure various parameters, including:

- **Battery Type:** Select the type of battery connected (e.g., AGM, Lithium, LiFePO4, Flooded).
- **Battery Charging Current:** Adjust the charging current for the battery.
- **Charging Source Priority:** Configure whether solar, utility, or a combination is prioritized for charging.
- **Output Source Priority:** Set the priority for power output (e.g., Solar First, Utility First, or Battery First).

4. Charging and Output Modes

The inverter offers flexible charging and output modes to optimize energy usage.



Figure 6: Visual representation of the available charging and output priority modes, allowing users to customize energy flow.

Charging Modes:

- **Solar First:** Prioritizes solar power for charging the battery.
- **Solar and Utility:** Uses both solar and utility power for charging.
- **Only Solar:** Charges the battery exclusively from solar power.

Output Modes:

- **SOL (Solar Priority):** Prioritizes solar power to supply loads.
- **UTI (Utility Priority):** Prioritizes utility power to supply loads.
- **SBU (Solar-Battery-Utility Priority):** Prioritizes solar, then battery, then utility for supplying loads.

5. Pure Sine Wave Output

The inverter produces a pure sine wave AC output, which is identical to grid power. This ensures compatibility with sensitive electronic devices and reduces interference, making it suitable for general household appliances and inductive loads within its power range.

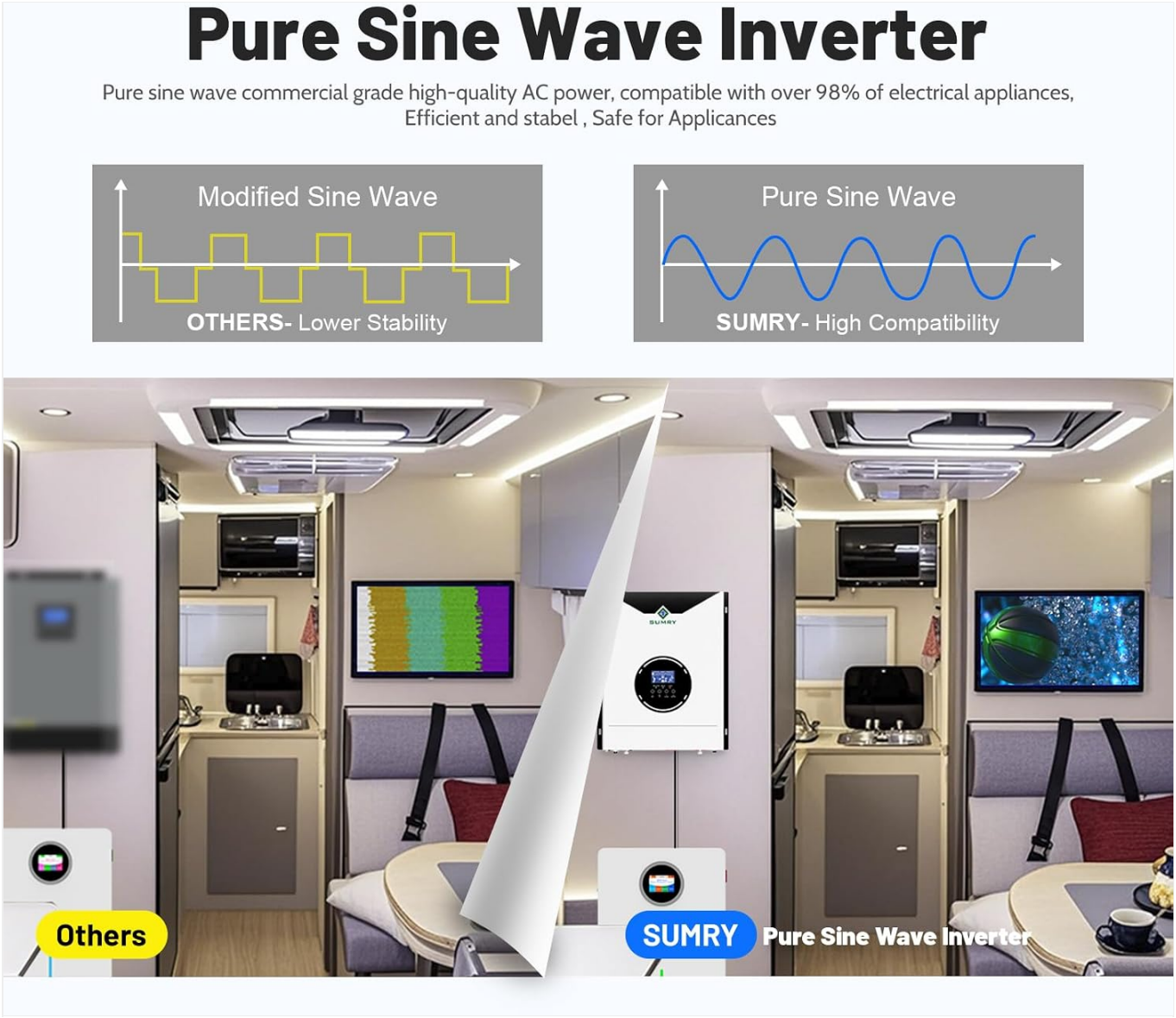


Figure 7: Illustration comparing modified sine wave output with the stable, high-compatibility pure sine wave output provided by the SUMRY inverter.

Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Keep the inverter's exterior clean and free of 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:** If using lead-acid batteries, check electrolyte levels and terminal cleanliness as per battery manufacturer guidelines.

Troubleshooting

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

1. Common Issues and Solutions

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No power output	Battery discharged, inverter off, loose connections, overload.	Check battery voltage, ensure inverter is on, verify all connections, reduce load.
Inverter beeping/fault indicator	Overload, overheat, short circuit, battery fault.	Check LCD for error code, reduce load, ensure ventilation, inspect wiring.
Battery not charging	PV input issue, AC input issue, incorrect settings, battery fault.	Verify solar panel connections and output, check AC input, confirm charging mode settings, inspect battery.

2. Protection Features

The SUMRY Hybrid Solar Inverter is equipped with multiple protection mechanisms to ensure safe operation:

- **Overload Protection:** Automatically shuts down if the connected load exceeds the inverter's capacity.
- **Overheat Protection:** Activates if the internal temperature becomes too high, preventing damage.
- **Over Current Protection:** Safeguards against excessive current flow.
- **Short Circuit Protection:** Protects the inverter and connected devices from short circuits.
- **GFCI Control for Leakage Protection:** Essential for RV applications, the inverter will turn off the output if leakage current exceeds 75mA.



Figure 8: Overview of the comprehensive safety features integrated into the inverter, including GFCI for leakage protection.

Specifications

Feature	Specification
Model Name	EP-4000L
Brand	SUMRY
Product Dimensions	11 x 3.5 x 13.4 inches (27.9 x 8.9 x 34 cm)
Item Weight	13.64 pounds (6.19 kg)
Power Source	Solar, Utility, and Battery Powered
Wattage (24V System)	3500 watts (7000W Peak)

Feature	Specification
Wattage (12V System)	2000 watts (4000W Peak)
Battery Compatibility	12V and 24V (AGM, Lithium, LiFePO4, Flooded)
MPPT Charge Controller	20A
Max. PV Input Voltage	60VDC
Max. PV Input Power	500 watts
AC Battery Charger	100A
Output Waveform	Pure Sine Wave
AC Output Voltage	230VAC (220V/230V/240V single-phase)
Monitoring	LCD Display, Built-in WiFi Module, Bluetooth Function
Manufacturer	SRGFTS

Warranty and Support

For warranty information and technical support, please refer to the warranty card included with your product or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.
Manufacturer: SRGFTS
For further assistance, please visit the official SUMRY website or contact their customer service department.

© 2025 SUMRY. All rights reserved.

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

Open the live page

https://manuals.plus/asin/B0FJ8DKRTR

More documents and user manuals: **https://manuals.plus/**