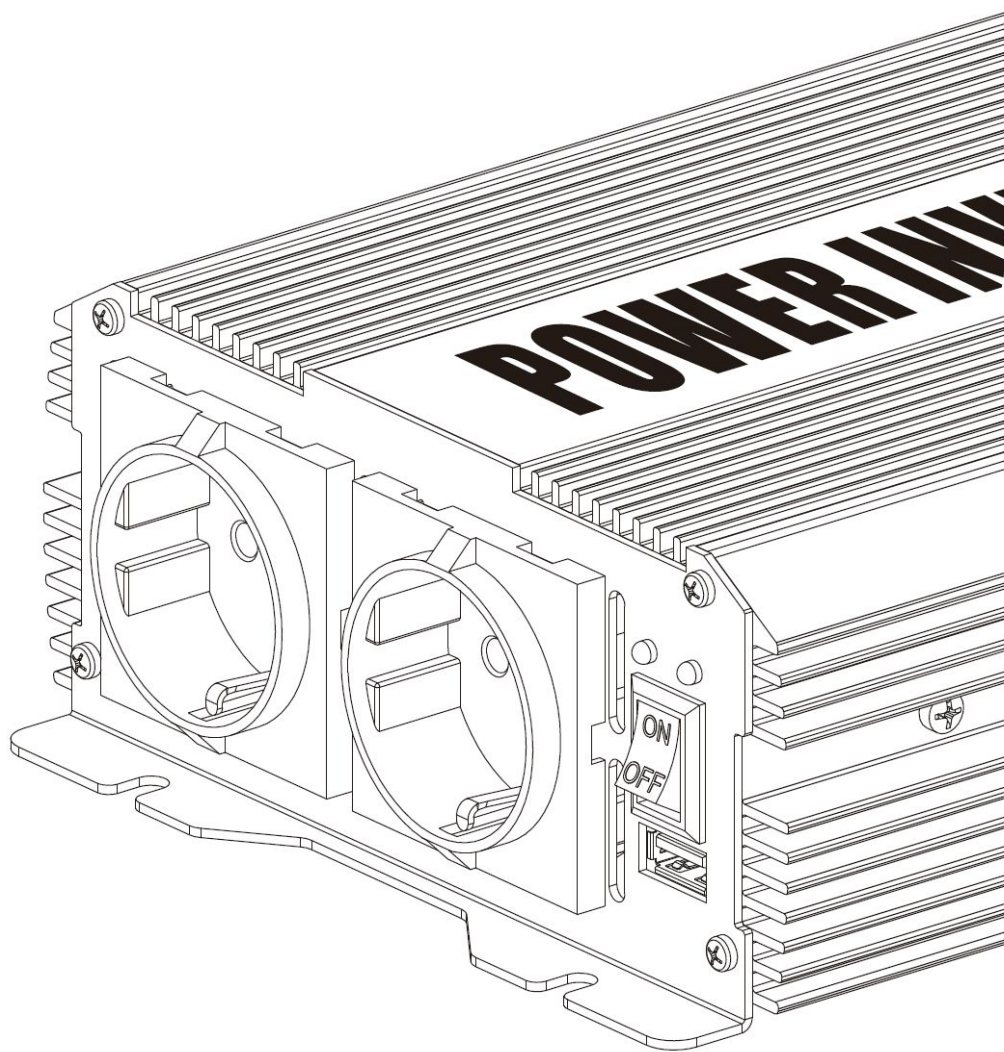


# SONOPOWER

## USER MANUAL - IPS800MSW 800W Power Inverter



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## Description

This inverter is a power conversion device that transforms 12V DC power from a battery into 230V AC power, allowing it to supply power to external devices. It is ideal for use in automobiles, boats, offices, telecommunications, public security, emergency rescue, and various other environments.

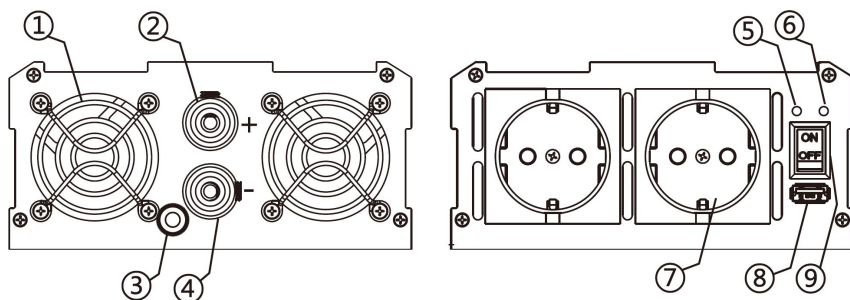
Featuring an advanced internal circuit design, this inverter offers a compact and lightweight build with enhanced stability and high conversion efficiency. It includes five comprehensive protection features to ensure safe operation:

- Low Voltage Protection
- Overvoltage Protection
- Overload Protection
- Overheat Protection
- Short Circuit Protection

These safety features are designed to protect both your electrical devices and your DC circuitry.

**Important:** Please read this manual thoroughly before using the product to ensure safe and proper operation.

## Product Overview



- |                                     |                      |
|-------------------------------------|----------------------|
| ① Cooling Fan                       | ⑥ Fault LED (Red)    |
| ② 12V DC Input + (Positive) (Red)   | ⑦ AC Output Socket   |
| ③ Ground Terminal                   | ⑧ USB-A Port         |
| ④ 12V DC Input - (Negative) (Black) | ⑨ Turn On/Off Switch |
| ⑤ Power LED (Green)                 |                      |

## Specifications

Model:	IPS800MSW
DC Input:	12V (11V-15V)
AC Output:	230V $\pm$ 10%
Output Frequency:	50Hz $\pm$ 3Hz
Rated Power Output:	800W
Peak Power Output:	1600W
USB Output:	5V DC, 2100mA
Output Waveform:	Modified Sine Wave
Efficiency:	>85%
Idle Current Draw:	0.4A (12V DC)
Working Temperature:	5 - 35°C
Cooling Method:	Load-Controlled Fan
Low Voltage Alarm:	10.2V - 10.8V DC
Low Voltage Shutdown:	9.2V - 9.8V
Overvoltage Shutdown:	15V - 16V
Overload Shutdown:	900W - 1100W
Fuse:	4 x 25A (Internal)

## Wiring and Setup Instructions

**Important:** Before operating this product, please read the setup instructions carefully to ensure safe and proper use.

### Wiring Installation

**Recommended Power Range:** 0 - 800W

1. Connect the black (negative) cable to the inverter's black (-) terminal.
2. Connect the red (positive) cable to the inverter's red (+) terminal.
3. Attach the black (negative) wire to the negative (-) terminal of the battery.
4. Attach the red (positive) wire to the positive (+) terminal of the battery.
5. Turn on the inverter using the power switch.
6. Wait for the green indicator light to confirm the inverter is ready.
7. Plug your device into the AC outlet on the inverter.

**Important Note:** *Do NOT reverse the positive and negative connections. Doing so will cause a short circuit and may permanently damage the inverter.*

### Ground Terminal

This inverter includes a separate ground terminal for additional safety. Whether you need to use it depends on how the inverter is installed:

Use the ground terminal if:

- The inverter is part of a permanent installation (e.g., in an RV, boat, or off-grid setup).
- You are using 3-prong devices that require grounding for safe operation.

## Security

1. To avoid electric shock, do not operate the device with wet hands.
2. For safety, do not allow children to access or operate the device. This may cause injury or electric shock.
3. Do not insert metal objects into the inverter. This may cause electric shock.
4. Do not touch the metal part of a plug while inserting it into the inverter's socket.
5. Keep the inverter away from explosives.
6. Do not touch the inverter after extended heavy use. It may become very hot.

## Troubleshooting

Protection Type	LED Indicator	Alarm	AC Output	Solution
Input Low Voltage Alarm	Green ON Red OFF	Yes	Yes	Restore the DC input voltage to the normal operating range.
Input Low Voltage	Green ON Red ON	Yes	No	Restore the DC input voltage to the normal operating range.
Input Overvoltage	Green ON Red ON	No	No	Adjust the DC input voltage back to the acceptable range.
Overload Protection	Green ON Red ON	No	No	Reduce the connected load to within the rated power.
Overheat Protection	Green ON Red ON	Yes	No	Allow the device to cool down to the safe operating temperature range.
Short Circuit Output	Green ON Red ON	No	No	Fix the short circuit, then disconnect and reconnect the inverter properly.

## Waste Disposal

Do not discard it with regular household waste, as improper disposal may harm the environment. Instead, take it to a certified electronic waste recycling center or follow your local regulations for electronic device disposal.

# Operating Scope and Restrictions

## Supported Devices

- This inverter is intended for use **only with Class II devices**

## Unsupported Devices

- Devices that exceed the rated power of the inverter.
- Devices with capacitive or inductive loads, such as: Air conditioners, high-power electric drills, refrigerators, microwave ovens and blenders.
- Precision equipment that requires highly stable power supply. Using a modified sine wave inverter may interfere with accuracy or proper function.

## USB Port Usage

- The USB port is for charging only. It does not support data transfer.
- Before charging, ensure that your device's charging current is lower than or equal to the USB port output current.  
Using a device that requires more current may damage the USB port.
- Some devices must be charged using their original chargers. Do not use the USB port to charge such devices.

## Ventilation and Environment

- Use the inverter in a well-ventilated area and do not block the cooling fan.
- Keep the inverter dry; do not use in rain or high-humidity environments.
- For longer lifespan, operate the inverter at no more than 85% of its rated capacity.

## Protection Features

- Low Voltage Protection
  - Overvoltage Protection
  - Overload Protection
  - Overheat Protection
  - Short Circuit Protection
- If any of these issues occur, the inverter will automatically shut down.  
Once the issue is resolved, the inverter will resume normal operation.

## Using Extension Cables

- If longer power input cables is necessary, use high-quality cables with appropriate thickness to minimize voltage drop.

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