DATOUBOSS PSW-E24V3500W

DATOUBOSS 24V to 230V Pure Sine Wave Inverter User Manual

Model: PSW-E24V3500W

1. Introduction

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your DATOUBOSS 24V to 230V Pure Sine Wave Inverter, Model PSW-E24V3500W. This inverter is designed to convert 24V DC battery power into stable 220V-240V AC 50Hz power, suitable for a wide range of sensitive electronic devices and appliances.

Figure 1.1: DATOUBOSS 24V 3500W Pure Sine Wave Inverter with LCD display and connection cables. This image shows the DATOUBOSS 24V 3500W Pure Sine Wave Inverter, a white and black unit with an LCD screen displaying voltage and wattage. It features two EU power outlets, USB and Type-C ports, and an ON/OFF switch on the front. Included are red and black battery connection cables.

2. Safety Information

Please read and understand all safety warnings and instructions before operating the inverter. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block ventilation openings.
- **Environment:** Operate the inverter in a dry, cool, and well-ventilated area, away from direct sunlight, heat sources, and flammable materials.
- **Connections:** Always connect the inverter to a battery with the correct voltage (24V for this model). Ensure all connections are secure and properly insulated.
- **Overload:** Do not exceed the inverter's rated continuous power output (3500W) or peak power (7000W). Overloading can damage the inverter and connected appliances.
- **Protection Features:** The inverter is equipped with multiple protection systems, including:
    - Input Undervoltage Protection

- Input Overvoltage Protection
- Overload Protection
- Output Short-Circuit Protection
- Overtemperature Protection
- Reverse Polarity Protection (via fuse)

- **Maintenance:** Only qualified personnel should perform maintenance or repairs. Do not attempt to disassemble the inverter.

Figure 2.1: Intelligent Protection Systems. This visual depicts the comprehensive safety features integrated into the inverter, including protection against reverse polarity, overtemperature, overload, surge, low voltage, and short circuits. These systems ensure safe and reliable operation.

3. Product Features and Components

The DATOUBOSS PSW-E24V3500W inverter is designed for user convenience and robust performance.

Key Features:

- **Pure Sine Wave Output:** Provides clean and stable power, ideal for sensitive electronics, reducing noise and energy consumption.
- **High Efficiency:** Conversion efficiency greater than 95%.
- **LCD Display:** Easy-to-read screen showing inverter status, input voltage, and output wattage.
- **Smart Cooling Fan:** Operates based on load and temperature, ensuring efficient heat dissipation and quiet operation at lower loads.
- **Multiple Output Ports:** Includes 2 EU AC outlets, 1 USB port, and 1 Type-C port.
- **Durable Construction:** Robust aluminum casing for advanced protection and improved cooling.

Component Identification:

Figure 3.1: Port Introduction. This image highlights the various ports and cooling features of the inverter. On the front, it shows two AC outlets, a Type-C port, a USB interface, and the ON/OFF switch. On the side, it illustrates the intelligent cooling fans, positive terminal (red), and negative terminal (black).

The inverter's front panel includes the ON/OFF switch, USB and Type-C charging ports, and two standard EU AC outlets. The rear features the positive (red) and negative (black) battery terminals, along with integrated cooling fans.

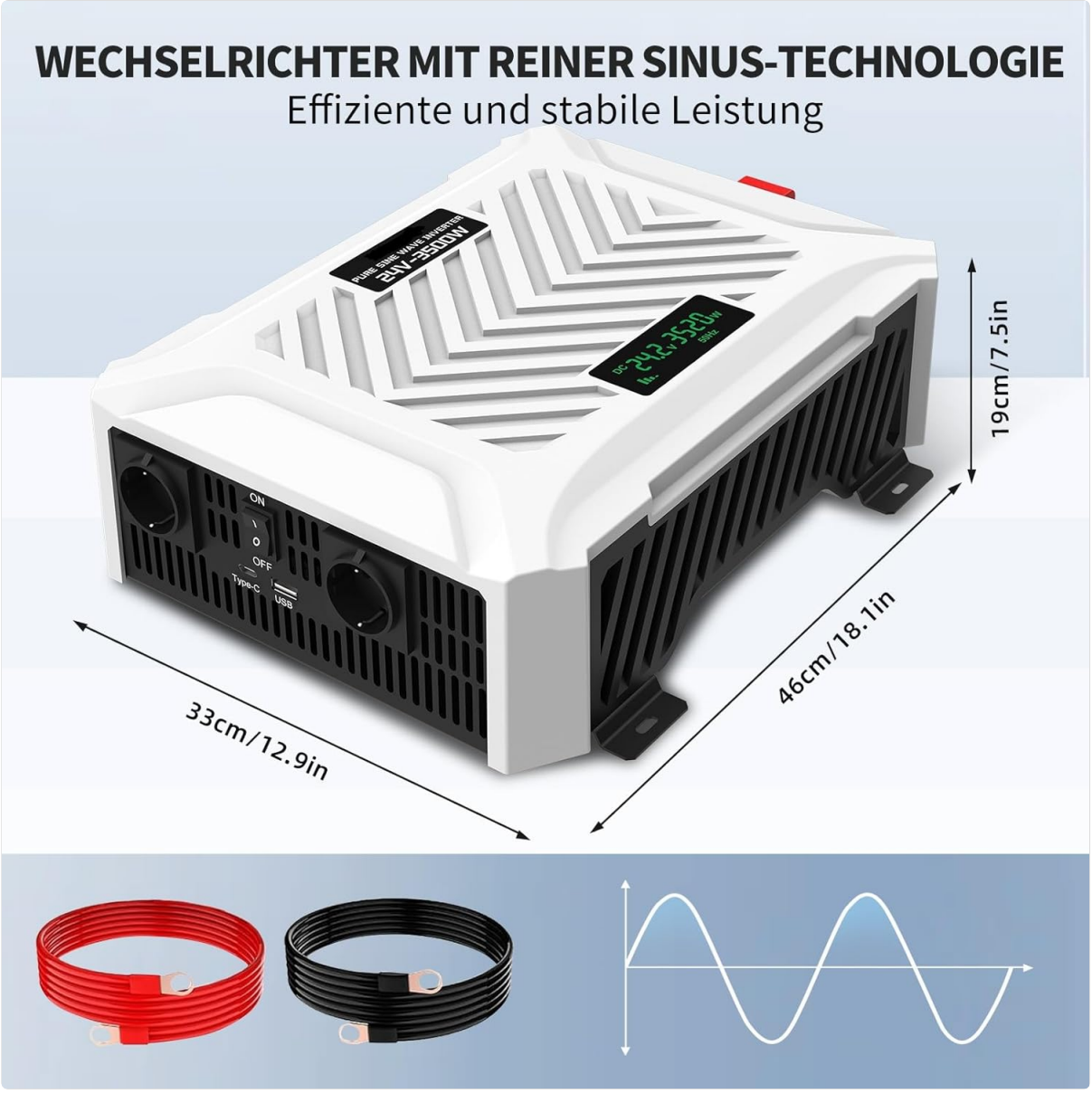

Figure 3.2: Inverter Dimensions. This image provides the physical dimensions of the inverter: approximately 33 cm (12.9 inches) in length, 46 cm (18.1 inches) in width, and 19 cm (7.5 inches) in height. The image also shows the included red and black battery cables and a pure sine wave graphic.

4. Setup

Proper setup is crucial for the inverter's performance and safety.

Connecting to a Battery:

1. Ensure the inverter's ON/OFF switch is in the 'OFF' position.
2. Connect the red battery cable to the positive (+) terminal of your 24V battery and the red terminal on the inverter.
3. Connect the black battery cable to the negative (-) terminal of your 24V battery and the black terminal on the inverter.
4. Ensure all connections are tight and secure to prevent loose connections and potential arcing.

Optional: Connecting to Solar Power:

The inverter can be integrated into a solar power system for off-grid applications.

1. Connect your solar panels to a compatible solar charge controller.
2. Connect the solar charge controller to your 24V battery.
3. Then, connect the inverter to the battery as described in the previous steps.

Figure 4.1: Wiring Diagram. This diagram illustrates a typical setup for the inverter, showing connections from solar panels (via solar connectors and a solar charge controller) to a battery, and then from the battery to the inverter. The inverter then provides AC output for various appliances like phones, computers, washers, electric cookers, and refrigerators.

Figure 4.2: Connecting Solar Power. This image shows the inverter and a battery connected to portable solar panels in an outdoor setting, emphasizing its use as an off-grid solution for clean energy. It highlights the high performance and durability of the system.

5. Operation

Once the inverter is properly set up, follow these steps for operation:

1. **Power On:** Flip the ON/OFF switch on the inverter to the 'ON' position. The LCD screen will illuminate, displaying the input voltage and output wattage.
2. **Connect Appliances:** Plug your AC appliances into the EU outlets. For charging smaller devices, use the USB or Type-C ports.
3. **Monitor Performance:** Observe the LCD screen for real-time information on battery voltage and power consumption.
4. **Power Off:** When finished, first turn off all connected appliances, then flip the inverter's ON/OFF switch to the 'OFF' position.

Recommended Uses:

This inverter is highly versatile and suitable for various applications, including:

- **Vehicles:** Powering electronics in trucks, RVs, and cars.
- **Camping:** Running lights, small refrigerators, and charging devices during outdoor activities.
- **Home Appliances:** Operating sensitive electronics like computers, fans, and other household devices during power outages or in off-grid setups.

Note: While this model is rated for 3500W continuous output, some general usage diagrams indicate that the maximum operating wattage for certain applications may not exceed 3000 Watts. Always ensure the total power consumption of your connected devices does not exceed the inverter's continuous power rating to prevent overload.

Figure 5.1: Usage Scenarios. This collage demonstrates the versatility of the inverter, showing its use in camping, with drones/cameras, RVs/vehicles, computers, car refrigerators, microwave ovens, coffee machines, and fans.

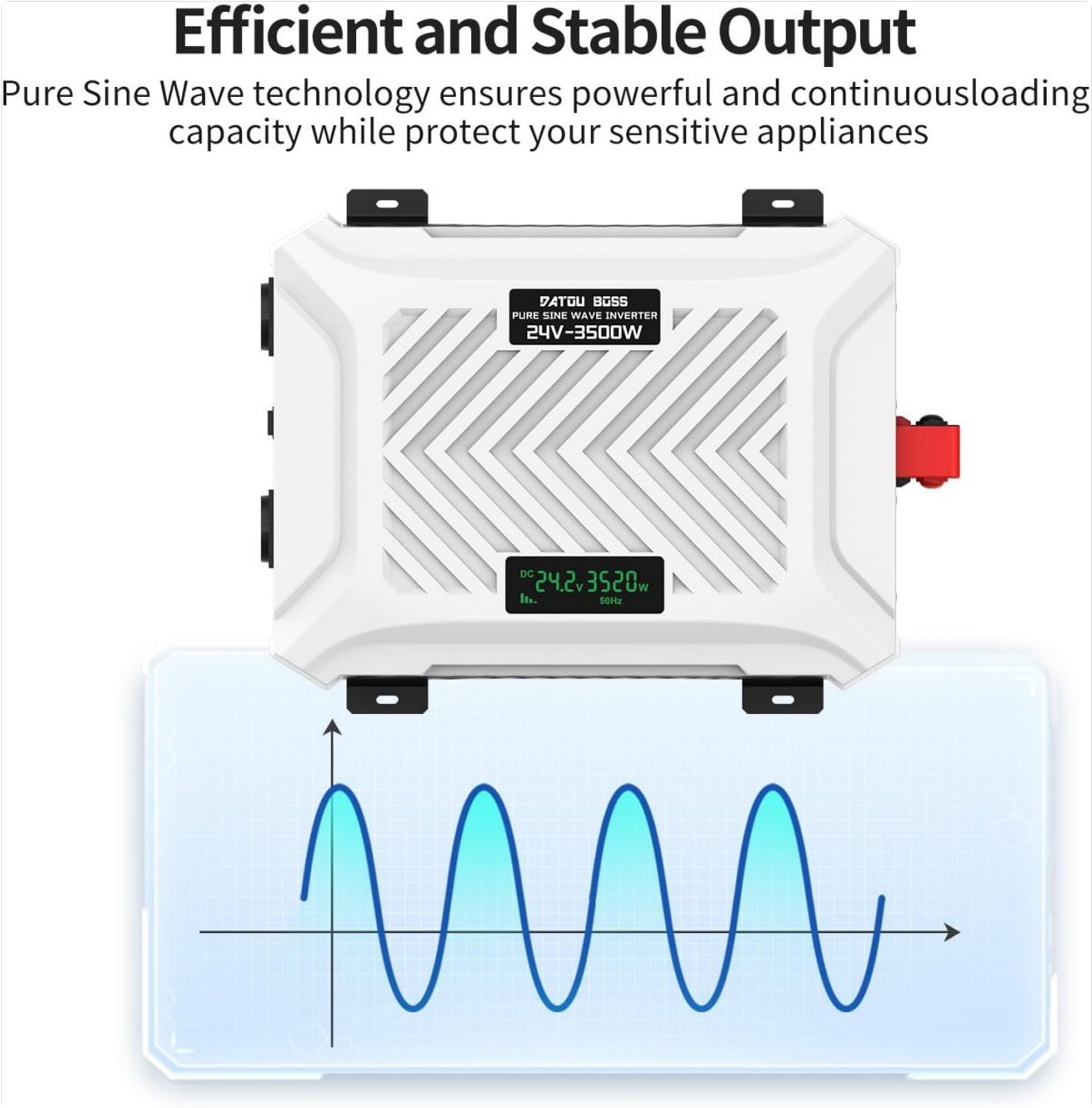

Figure 5.2: Efficient and Stable Output. This image illustrates the pure sine wave technology of the inverter, showing a smooth, continuous waveform. This technology provides clean and stable power, essential for sensitive electronic devices.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your inverter.

- **Cleaning:** Keep the inverter clean and free from dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Periodically check that the ventilation openings are clear and not obstructed. Ensure the cooling fans are operating correctly.
- **Connections:** Regularly inspect battery connections for tightness and corrosion. Clean terminals if necessary.
- **Storage:** If storing the inverter for an extended period, ensure it is in a cool, dry place. Disconnect it from the battery.

7. Troubleshooting

This section addresses common issues you might encounter with your inverter.

Problem	Possible Cause	Solution
Inverter does not turn on	No battery connection; Low battery voltage; Blown fuse; Loose connections.	Check battery cables and connections; Charge battery; Check and replace fuse if necessary; Tighten all connections.
No AC output	Overload; Overtemperature; Low/High input voltage; Short circuit.	Reduce load; Allow inverter to cool down; Check battery voltage; Disconnect faulty appliance.
Alarm sounds	Low battery alarm; Overload alarm; Overtemperature alarm.	Charge battery; Reduce load; Allow inverter to cool down.
Fan not running	Low load/temperature; Fan malfunction.	Fan operates intelligently, may not run at low load. If persistent at high load, contact support.

If the problem persists after attempting these solutions, please contact DATOUBOSS customer support.

8. Specifications

Parameter	Value
Model Number	PSW-E3500W
Input Voltage	24 Volts DC
Continuous Power Output	3500 Watts
Peak Power Output	7000 Watts
Output Voltage	220V, 230V, 240V AC
Output Frequency	50 Hz
Output Waveform	Pure Sine Wave
Efficiency	> 95%
No-Load Current	< 0.7 A
Dimensions (L x W x H)	38 x 28 x 11 cm (approx. 14.9 x 11 x 4.3 inches)
Operating Temperature	-10 to 50°C
Cooling Method	Intelligent Air Cooling
Total AC Outlets	2 (EU type)
USB/Type-C Ports	Yes

9. Warranty and Support

The DATOUBOSS PSW-E24V3500W Pure Sine Wave Inverter comes with a**3-year manufacturer's warranty**.
For technical support, warranty claims, or any inquiries regarding your product, please contact DATOUBOSS customer service through the retailer where you purchased the product or visit the official DATOUBOSS website for contact information.
Please retain your proof of purchase for warranty purposes.