DATOUBOSS DATOUBOSS-3500W

DATOUBOSS 24V 3500W Pure Sine Wave Inverter User Manual

Model: DATOUBOSS-3500W

1. Introduction

This manual provides essential information for the safe and efficient operation of your DATOUBOSS 24V 3500W Pure Sine Wave Inverter. Please read it thoroughly before installation and use, and retain it for future reference. This inverter converts 24V DC power from a battery into 220V/230V AC pure sine wave power, suitable for a wide range of electronic devices and appliances.

2. Safety Instructions

Adherence to these safety guidelines is crucial to prevent personal injury and damage to the inverter or connected devices.

- **Electrical Safety:** Ensure all connections are secure and correctly polarized. Do not operate the inverter with wet hands or in wet environments. Disconnect power before performing any maintenance or troubleshooting.
- **Ventilation:** Install the inverter in a well-ventilated area. Do not block the ventilation openings. Overheating can lead to reduced performance or damage.
- **Environment:** Avoid exposure to direct sunlight, heat sources, flammable materials, or corrosive substances. Keep out of reach of children.
- **Load Capacity:** Do not exceed the inverter's rated continuous power output of 3500W or peak power of 7000W. Overloading can trigger protection mechanisms or cause damage.
- **Battery Compatibility:** Ensure the input voltage of the inverter matches your battery system (24V DC).

3. Package Contents

Verify that all items are present and undamaged upon unpacking:

- DATOUBOSS 24V 3500W Pure Sine Wave Inverter

- Battery connection cables (red and black)
- User Manual

4. Product Overview

The DATOUBOSS 24V 3500W Pure Sine Wave Inverter features a robust design with essential indicators and connection points for reliable power conversion.

Figure 4.1: Front and side view of the DATOUBOSS 24V 3500W Pure Sine Wave Inverter, showing AC outlets, USB ports, and the LCD display.

4.1. Front Panel

- **AC Outlets:** Two standard EU sockets for connecting 220V/230V AC appliances.
- **USB Ports:** Includes a Type-C port and a USB 2.1A port for charging compatible devices.
- **ON/OFF Switch:** Main power switch for the inverter.
- **LCD Display:** Provides real-time operational status.

4.2. Rear Panel

- **DC Input Terminals:** Red (+) and Black (-) terminals for connecting to the 24V DC battery.
- **Cooling Fans:** Integrated smart fans for efficient heat dissipation.

4.3. LCD Display

The LCD display provides critical information about the inverter's status:

Figure 4.2: Detailed view of the LCD display showing input voltage, output voltage, real-time power, battery level, output frequency, and protection indicators.

- **Input Voltage (DC):** Displays the current DC voltage from the battery.
- **Output Voltage (AC):** Shows the AC output voltage (e.g., 230V).
- **Real-time Power (W):** Indicates the current power consumption of connected devices.
- **Battery Level:** Visual indicator of the battery charge status.
- **Output Frequency (Hz):** Displays the AC output frequency (e.g., 50Hz).
- **Protection Mode Indicators:** Icons for high voltage, low voltage, overheating, and overload protection.
- **Ambient Temperature:** Briefly displayed upon startup.

5. Setup

Follow these steps for proper installation and connection of your inverter.

5.1. Choosing an Installation Location

- Select a dry, cool, and well-ventilated area.
- Ensure sufficient clearance around the inverter for airflow, especially around the cooling fans.
- Mount the inverter securely on a stable surface to prevent movement.

5.2. Connecting to the Battery

Figure 5.1: Red and black battery connection cables for the inverter.

1. Ensure the inverter's ON/OFF switch is in the OFF position.
2. Connect the **red** battery cable to the **positive (+)** terminal of the inverter and then to the **positive (+)** terminal of the 24V battery.
3. Connect the **black** battery cable to the **negative (-)** terminal of the inverter and then to the **negative (-)** terminal of the 24V battery.
4. Tighten all connections securely to prevent loose contacts, which can cause overheating or arcing.

Warning: Incorrect polarity can severely damage the inverter and battery. Double-check all connections before proceeding.

6. Operating Instructions

Follow these steps to operate your DATOUBOSS inverter.

6.1. Powering On the Inverter

1. After connecting the battery, switch the inverter's ON/OFF button to the **ON** position.
2. The LCD display will illuminate, showing the ambient temperature briefly, followed by input voltage, output voltage, and other operational parameters.
3. The cooling fans may activate briefly during startup or when the inverter detects a load or internal temperature increase.

6.2. Connecting AC Appliances

1. Ensure the appliance you wish to power is switched off.
2. Plug the appliance into one of the AC outlets on the inverter's front panel.
3. Switch on the appliance. Monitor the inverter's LCD display to ensure the power consumption (W) does not exceed 3500W.

4. For USB charging, connect your device to the Type-C or USB 2.1A port.

6.3. Powering Off the Inverter

1. Switch off all connected AC appliances and unplug them from the inverter.
2. Switch the inverter's ON/OFF button to the**OFF** position.
3. For long-term storage or maintenance, disconnect the battery cables.

7. Protection Functions

The DATOUBOSS inverter is equipped with multiple protection features to ensure safe operation and extend the lifespan of both the inverter and connected devices.

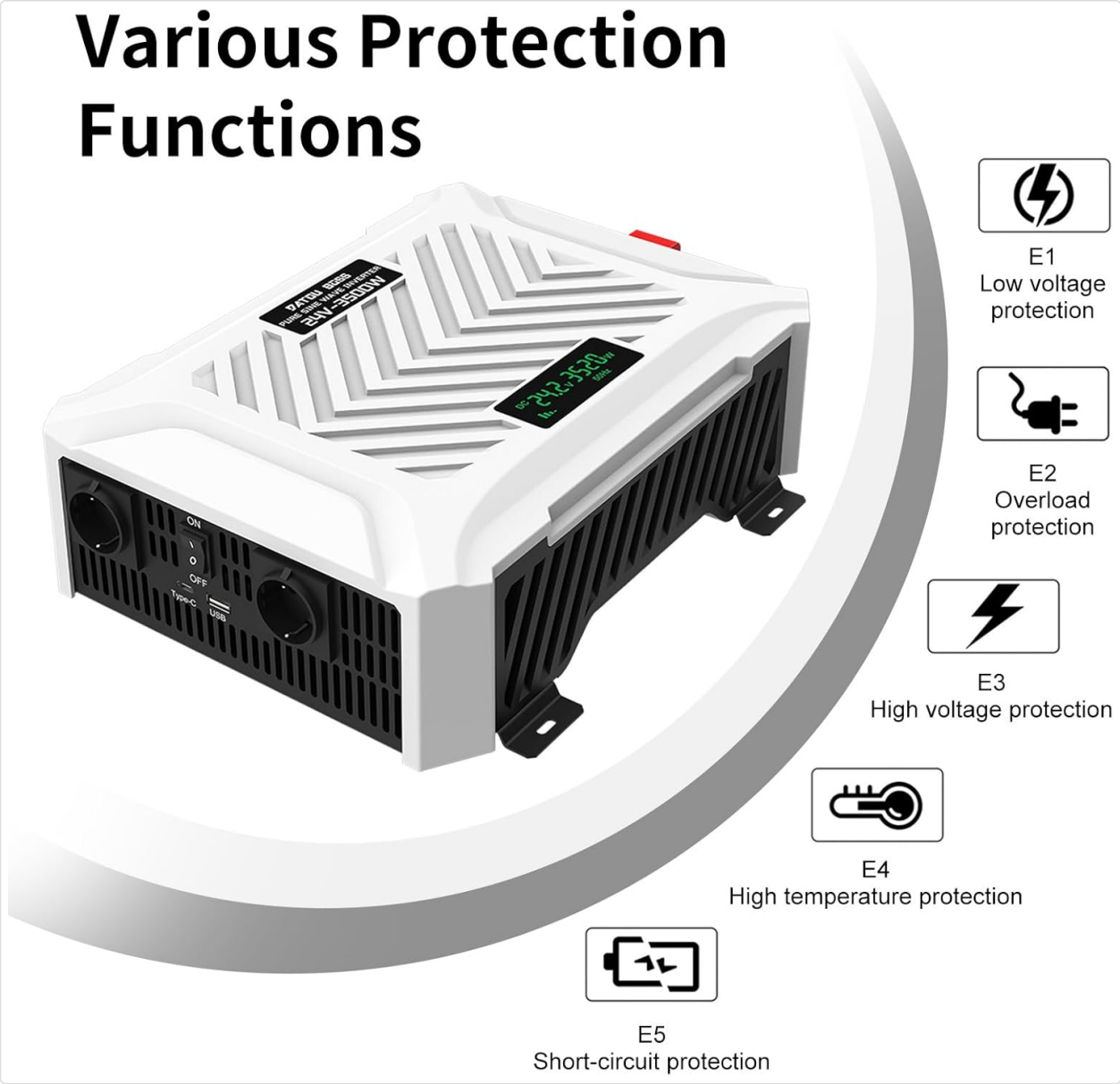

Figure 7.1: Visual representation of the inverter's various protection functions.

- **Low Voltage Protection (E1):** Activates when the input DC voltage drops below a safe operating level, preventing battery over-discharge. The inverter will stop output.
- **Overload Protection (E2):** Engages if the total power consumption of connected appliances exceeds the inverter's rated capacity (3500W continuous, 7000W peak). The inverter will stop output.
- **High Voltage Protection (E3):** Protects the inverter from excessively high input DC voltage, which could

damage internal components. The inverter will stop output.

- **High Temperature Protection (E4):** If the internal temperature of the inverter rises above a safe threshold, this protection will activate, often accompanied by increased fan speed, and may shut down the inverter if the temperature continues to rise.
- **Short-Circuit Protection (E5):** Automatically shuts down the inverter in case of a short circuit in the output, preventing damage to the inverter and connected devices.
- **Internal Fuse Protection:** Additional protection against severe overcurrent conditions.

When a protection function is triggered, the LCD display will typically show an error code (E1-E5) or an indicator icon. Address the underlying issue before attempting to restart the inverter.

8. Applications

The DATOUBOSS Pure Sine Wave Inverter is versatile and suitable for a wide range of applications where grid power is unavailable or inconvenient.

Figure 8.1: Examples of household appliances, entertainment electronics, and tools that can be powered by the inverter.

- **Recreational Vehicles (RVs) & Caravans:** Powering lights, small appliances, and entertainment systems on the go.

- **Boats:** Providing AC power for marine electronics and comforts.
- **Camping & Outdoor Activities:** Running portable electronics, lights, and small cooking appliances.
- **Remote Work Sites:** Powering laptops, drills, pumps, and other tools where mains power is absent.
- **Emergency Backup Power:** A reliable source of power during outages for essential devices.

The pure sine wave output ensures compatibility with sensitive electronics, reducing interference and ensuring stable operation.

9. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners or solvents.
- **Connection Checks:** Regularly inspect battery cable connections for tightness and corrosion. Clean any corrosion with a wire brush and baking soda solution if necessary.
- **Ventilation:** Ensure the installation area remains well-ventilated and free from obstructions.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.

Figure 9.1: The inverter's smart fan system, designed for efficient and quiet cooling.

10. Troubleshooting

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

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Loose battery connections Battery voltage too low Inverter switch OFF Blown internal fuse	Check and tighten battery cables Recharge or replace battery Turn ON the inverter switch Contact customer support for fuse replacement
Inverter shuts down with E1 (Low Voltage)	Battery voltage below 21V DC	Recharge the battery immediately. Reduce load if battery is weak.
Inverter shuts down with E2 (Overload)	Connected load exceeds 3500W	Reduce the total power of connected appliances. Disconnect high-power devices.
Inverter shuts down with E3 (High Voltage)	Input DC voltage too high (above 30V DC)	Verify battery voltage. Ensure correct battery type (24V). Disconnect charging source if overcharging.
Inverter shuts down with E4 (Overheating)	Poor ventilation High ambient temperature Excessive load	Ensure clear airflow around the inverter. Move to a cooler environment. Reduce load.
Inverter shuts down with E5 (Short-Circuit)	Short circuit in connected appliance or wiring	Disconnect all appliances. Check appliance wiring for faults. Restart inverter.
Fans running constantly or loudly	High internal temperature Heavy load	This is normal operation. Ensure adequate ventilation. Reduce load if possible.

11. Specifications

Technical details for the DATOUBOSS 24V 3500W Pure Sine Wave Inverter.

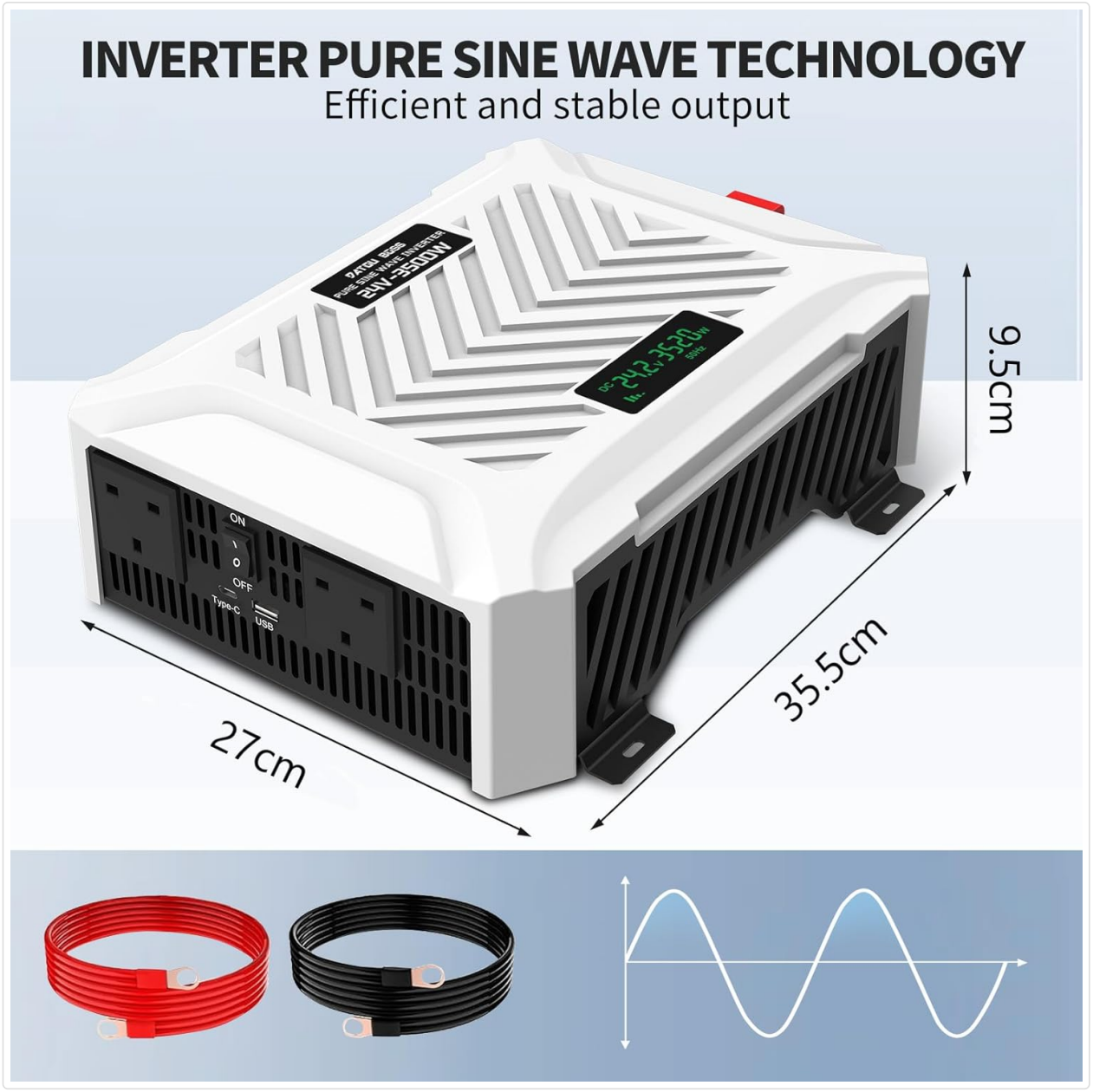

Figure 11.1: Dimensions of the DATOUBOSS 24V 3500W Pure Sine Wave Inverter.

Feature	Specification
Model Number	DATOUBOSS-3500W
Input Voltage	24 Volts DC
Output Voltage	220V/230V AC
Output Waveform	Pure Sine Wave
Continuous Power	3500 Watts
Peak Power	7000 Watts
Output Frequency	50Hz / 60Hz (selectable/auto)
Total AC Outlets	2 (EU type)
USB Ports	1x Type-C, 1x USB 2.1A
Dimensions (L x W x H)	35.5 cm x 27 cm x 9.5 cm
Weight	5.33 Kilograms
Protection Features	Overload, Over-temperature, High/Low Voltage, Short-circuit, Internal Fuse
Material	High-quality plastic shell

12. Warranty and Support

DATOUBOSS is committed to providing high-quality products and excellent customer service.

12.1. Product Warranty

This product comes with a **5-year warranty** from the date of purchase, covering manufacturing defects and malfunctions under normal use. Please retain your proof of purchase for warranty claims.

12.2. Customer Support

If you have any questions, require technical assistance, or need to make a warranty claim, please do not hesitate to contact our professional customer service team. We offer 24-hour support to assist you.
For support, please visit the DATOUBOSS Store on Amazon or refer to the contact information provided with your purchase.