EDECOA TR12322B1200

EDECOA 1200W 12V to 220V Modified Sine Wave Power Inverter User Manual

Model: TR12322B1200

Introduction

This manual provides instructions for the safe and efficient operation of your EDECOA 1200W Modified Sine Wave Power Inverter. This device converts 12V DC power from your vehicle's battery into 220V-240V AC household power, suitable for various conventional electronic devices. Please read this manual thoroughly before use and retain it for future reference.

Setup and Installation

Follow these steps for proper installation of your power inverter:

1. **Placement:** Place the inverter in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Ensure there is adequate space around the unit for proper airflow.
2. **Cable Connection:** Connect the included battery cables to the inverter's DC input terminals. Ensure correct polarity: the red cable connects to the positive (+) terminal, and the black cable connects to the negative (-) terminal.
3. **Battery Connection:** Connect the other end of the cables to a 12V battery. Double-check that the battery voltage matches the inverter's input voltage (12V). **Warning:** Connecting a 24V battery to a 12V inverter will cause severe damage to the unit.

Figure 1: Easy installation diagram showing connections to a battery and potential solar setup, along with examples of compatible devices.

Figure 2: Important note on selecting the correct voltage (12V vs 24V) for your inverter to prevent damage.

Operating Instructions

Once the inverter is properly installed, follow these steps to operate it:

1. **Power On:** After connecting the inverter to the battery, switch the inverter ON using the power button.
2. **LCD Display:** The integrated LCD display will show real-time information including battery status, internal temperature, and connected amperage.

3. **Connect Devices:** Plug your 220V-240V AC devices into the AC output socket. For charging smaller electronics, use the dual USB ports (5V/2A).

Figure 3: Front view of the inverter, highlighting the LCD display for monitoring operational parameters.

Important Note on Modified Sine Wave Output

This EDECOA inverter produces a **modified sine wave** output. This type of waveform is suitable for most conventional electronic devices such as laptops, televisions, radios, and basic household appliances. However, it is *not compatible* with certain sensitive electronics or devices that require a pure sine wave for optimal performance. Examples of devices that may not function correctly or could be damaged by a modified sine wave include:

- Capsule coffee machines
- Smart TVs
- Appliances with sensitive motors (e.g., some refrigerators, microwaves)
- Medical equipment

Always check the power requirements of your device before connecting it to ensure compatibility with a modified sine

wave inverter.

Figure 4: Visual comparison of Pure Sine Wave and Modified Sine Wave outputs.

Figure 5: Examples of electronic devices that can be powered by the inverter.

Maintenance

To ensure the longevity and optimal performance of your EDECOA inverter, consider the following maintenance tips:

- **Cooling System:** The inverter features silent cooling fans that activate automatically when the internal temperature reaches 45°C (113°F). The aluminum casing is designed to aid in heat dissipation.
- **Cleanliness:** Regularly inspect the inverter for dust and debris accumulation, especially around the fan vents. Keep the unit clean to ensure proper airflow and prevent overheating.
- **Connections:** Periodically check all cable connections to ensure they are secure and free from corrosion. Loose connections can lead to power loss or overheating.

Figure 6: Side view of the inverter, highlighting the aluminum casing and cooling fins for efficient heat management.

Troubleshooting

If you encounter issues with your inverter, refer to the following common problems and solutions:

- **Alarm Sounds:** If the inverter alarm sounds, it indicates that a protection mode has been activated. Check the LCD display for specific error codes or indicators to identify the problem.
- **Low Voltage Alarm:** If the low voltage alarm sounds but your battery appears fully charged, it may indicate insufficient battery capacity (AH) for the connected load, or that the battery cables are too long or thin, causing a significant voltage drop. Ensure you have an appropriate battery capacity and use adequately sized cables.
- **Multi-Protection Features:** The inverter is equipped with multiple protection features, including protection against low voltage, overvoltage, overtemperature, overload, short circuit, and reverse polarity. If any of these protections are triggered, the inverter will automatically shut down to prevent damage to itself or connected devices. Always ensure proper installation and correct the underlying problem before attempting to restart the inverter.

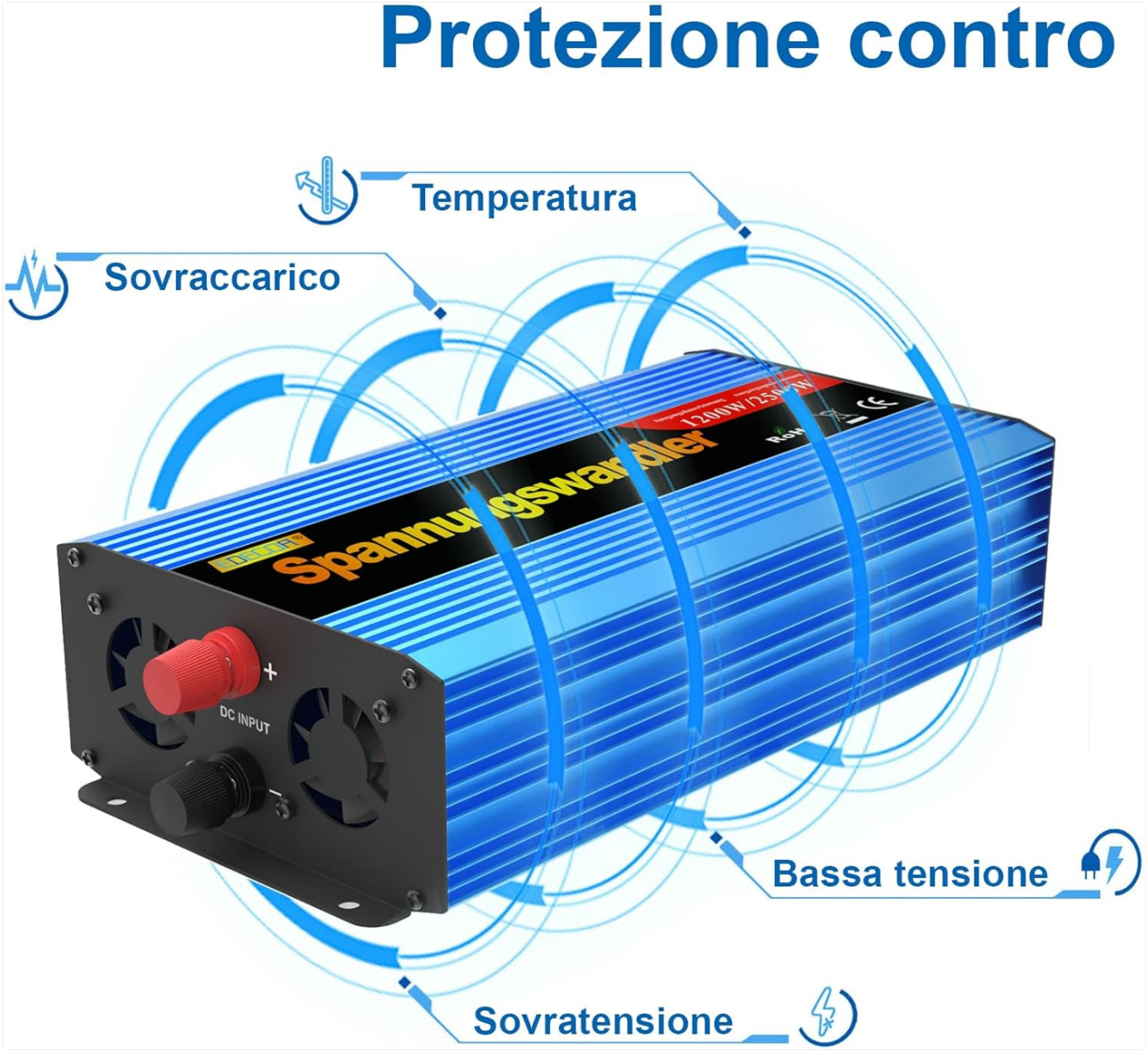

Figure 7: Overview of the inverter's comprehensive protection mechanisms.

If issues persist after following these troubleshooting steps, please contact EDECOA technical support for further assistance.

SPECIFICATIONS

Model Number	TR12322B1200
Continuous Output Power	1200 W
Max. Output Power (Peak)	2500 W
Input Voltage	DC 12 V
Output AC Voltage	220-240 V AC
Frequency	50 Hz
Efficiency	85%
No Load Current	< 0.8 A
Output Waveform	Modified Sine Wave
Thermal Protection	75°C ± 5°C
Net Weight	2 kg
Dimensions (L x W x H)	31.5 x 15 x 7 cm
Material	Aluminum
Certifications	CE, EMC, LVD
Included Components	1 pair of battery cables (16mm²*500MM)
Recommended Battery Capacity	100 Ampere/hours

Figure 8: Physical dimensions and weight of the EDECOA 1200W inverter.

Warranty

Specific warranty details for this product are not provided in the available information. Please refer to your purchase documentation, the product packaging, or contact EDECOA customer service for comprehensive warranty information.

Support

For technical assistance, troubleshooting beyond the scope of this manual, or any other inquiries regarding your EDECOA 1200W Power Inverter, please contact EDECOA customer support. Refer to the contact information provided with your product or visit the official EDECOA website for support options.