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› GIANDEL 300W 12V DC to 230V AC Pure Sine Wave Power Inverter User Manual

GIANDEL 300C DE

GIANDEL 300W Pure Sine Wave Power Inverter

Model: 300C DE

1. INTRODUCTION

The GIANDEL 300W Pure Sine Wave Power Inverter is designed to convert 12V DC power from your vehicle's battery into stable 230V AC household power. This device is suitable for powering various electronic appliances and features dual USB ports for charging mobile devices. It is ideal for road trips, camping, outdoor activities, and emergency power needs.



Image 1.1: GIANDEL 300W Pure Sine Wave Power Inverter with pure sine wave output and 91% efficiency indicated.

2. SAFETY INSTRUCTIONS

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

- Do not connect loads exceeding 150W to the vehicle's cigarette lighter socket, as most vehicle sockets are rated for a maximum of 150W (15A).
- Do not leave the inverter powered on when the vehicle engine is off to prevent battery drain.
- Avoid exposing the inverter to direct sunlight. Store and operate in a cool, dry, and well-ventilated environment.
- Do not use the inverter with devices that exceed its rated power output (300W continuous, 600W peak) to prevent damage to both the inverter and the connected device.
- Ensure proper ventilation around the inverter during operation to prevent overheating.
- Keep the inverter away from flammable materials, gases, or liquids.
- Do not open the inverter casing. There are no user-serviceable parts inside.
- This inverter features advanced safety protections including overvoltage, undervoltage, overload, short-circuit, and overheating protection.



Image 2.1: Internal view highlighting safety protections such as overcurrent, overvoltage, overload, short-circuit, temperature, and undervoltage protection.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x GIANDEL 300W Pure Sine Wave Power Inverter
- 1 x User Manual
- 2 x 35A Spare Fuses

Sicherer Betrieb Zuverlässig

Protect and extend the life of your appliances

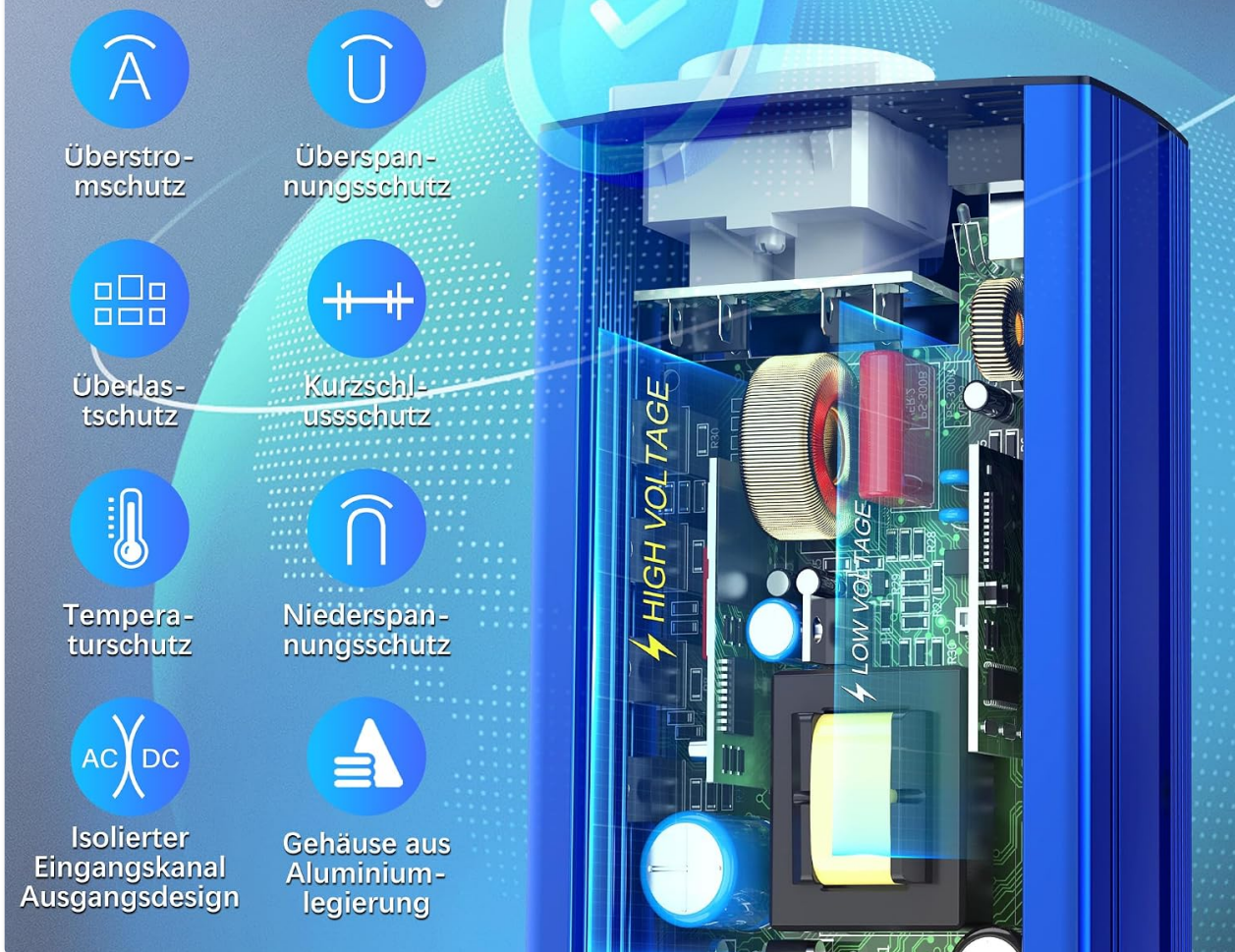


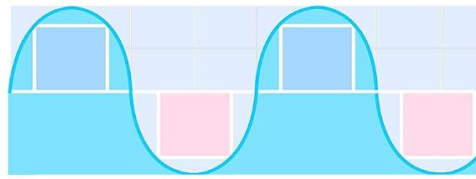
Image 3.1: Illustration of the inverter, user manual, and spare fuses included in the package, along with various application scenarios.

4. PRODUCT FEATURES

- **Pure Sine Wave Output:** Provides stable and clean power, suitable for sensitive electronics, with less than 3% Total Harmonic Distortion (THD).
- **High Power Output:** Delivers 300W of continuous power and up to 600W of peak power.
- **Dual Smart USB Ports:** Two 5V/2.4A USB ports (4.8A total) with automatic device detection for fast charging.
- **AC Outlet:** One 230V AC outlet for standard household appliances.
- **Advanced Safety Protections:** Includes protection against overvoltage, undervoltage, overload, short-circuit, and overheating.
- **Efficient Cooling:** Equipped with a smart cooling fan that operates quietly and activates based on temperature and load.
- **High Efficiency:** Up to 91% power conversion efficiency.
- **Durable Construction:** Features an aluminum alloy housing for enhanced durability and heat dissipation.

Ture Sinus-Wechselrichter

Nutzung der exklusiven Ladetechnologie von GIANDEL



Komarasion des Wellentyps

Reine Sinuswelle

Modifizierte Welle

< 3%

Thd < 3%

91%

Umwandlungseffizienz



Image 4.1: The inverter's fast charging capabilities via USB ports, including PD 30W USB-C and QC 3.0.



Image 4.2: Universal compatibility of the inverter with 12V vehicles (cars, boats, trucks) and various devices (phones, tablets, cameras, lamps, shavers, drones).

5. SETUP

Follow these steps to set up your GIANDEL power inverter:

1. **Placement:** Choose a cool, dry, and well-ventilated location for the inverter. Ensure there is sufficient space around the unit for airflow, especially around the fan vents.
2. **Vehicle Connection:** Insert the inverter's cigarette lighter plug firmly into your vehicle's 12V cigarette lighter socket.
3. **Power On:** Press the ON/OFF switch on the inverter to turn it on. The indicator light should illuminate.
4. **Vehicle Engine:** For optimal performance and to prevent draining your vehicle's battery, it is recommended to operate the inverter while the vehicle's engine is running.

6. OPERATING INSTRUCTIONS

Once the inverter is set up and powered on, you can connect your devices:

1. **Connecting AC Devices:** Plug your 230V AC appliance directly into the AC outlet on the inverter. Ensure the appliance's power consumption does not exceed 300W.
2. **Connecting USB Devices:** Plug your USB-powered devices (smartphones, tablets, etc.) into the USB ports. The smart charging feature will automatically detect your device and deliver the fastest possible charging speed up to 2.4A per port.
3. **Monitoring:** Observe the inverter's indicator lights for operational status. If an overload or fault occurs, the inverter will automatically shut down to protect itself and your devices.
4. **Power Off:** When finished, first disconnect all devices from the inverter, then press the ON/OFF switch to turn off the inverter. Finally, remove the inverter's plug from the vehicle's cigarette lighter socket.

7. MAINTENANCE

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

- **Cleaning:** Periodically clean the exterior of the inverter with a soft, dry cloth. Ensure the ventilation openings are free from dust and debris. Do not use liquid cleaners.
- **Fuse Replacement:** The inverter is equipped with easily replaceable external fuses. If the inverter stops working due to an overload, the fuse may need replacement. Use only 35A fuses as replacements. Refer to Image 7.1 for fuse location.
- **Storage:** When not in use for extended periods, store the inverter in a cool, dry place, away from direct sunlight and moisture.

Universelle Kompatibilität

Vollständig anwendbar für alle Geräte unter 300W

Geeignet für alle 12V Fahrzeuge



Auto



Boot



LKW

Geeignet für alle 12V Fahrzeuge



Telefon



Pad



Milchpumpe



Kamera



Lampe



Rasierer



Autoreiniger



Powerbank



Drohne



Image 7.1: Illustration of the inverter's heat dissipation system with a super quiet smart fan and the location of the replaceable fuse.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Loose connection, vehicle cigarette lighter fuse blown, inverter fuse blown, low vehicle battery voltage.	Ensure the inverter plug is securely inserted. Check your vehicle's cigarette lighter fuse. Replace the inverter's external fuse if necessary (use 35A). Start the vehicle engine to ensure sufficient battery voltage.
Inverter shuts down during operation	Overload, overheating, low/high input voltage.	Reduce the load by disconnecting some appliances. Allow the inverter to cool down. Ensure the vehicle battery voltage is within the 9.8V-16V range.

Problem	Possible Cause	Solution
Connected device not charging/working	Device power consumption too high, faulty cable, device not compatible.	Verify the device's power consumption is within the inverter's limits. Try a different cable or device.
Fan is constantly running or very loud	High load, high ambient temperature, blocked vents.	This is normal under high load or high temperatures. Ensure vents are clear. Reduce load if possible.

9. SPECIFICATIONS

Feature	Specification
Model Number	300C DE
Continuous Output Power	300 Watts
Peak Output Power	600 Watts
Input Voltage	12V DC (9.8V - 16V)
Output Voltage	230V AC
Output Waveform	Pure Sine Wave (THD < 3%)
Output Frequency	50 Hz
USB Output	2 x DC 5V/2.4A (Max 4.8A total)
Efficiency	Up to 91%
External Fuse	35A (replaceable)
Dimensions (L x W x H)	17.5 cm x 10.9 cm x 6.1 cm
Weight	0.75 kg (1.65 lbs)
Certifications	CE, RoHS

10. WARRANTY AND SUPPORT

The GIANDEL 300W Pure Sine Wave Power Inverter comes with a**24-month warranty** from the date of purchase. This warranty covers manufacturing defects and ensures reliable operation under normal use. For warranty claims or technical assistance, please contact GIANDEL customer support through your retailer or the official GIANDEL website. Please retain your proof of purchase for warranty validation.

