KEMOT PROsinus-700 URZ3406B

KEMOT PROsinus-700 URZ3406B Pure Sine Wave Inverter User Manual

Emergency Power Supply with Charging Function

1. Introduction

The KEMOT PROsinus-700 URZ3406B Pure Sine Wave Inverter is designed to provide a reliable emergency power supply for various household and office equipment. It ensures uninterrupted operation of devices sensitive to power fluctuations or outages, such as central heating stoves, televisions, refrigerators, induction cookers, electric fans, and office equipment.
This device functions as a pure sine wave inverter, a rectifier (battery charger), and an emergency power supply with a charging function, converting 12V DC from an external battery to 230V AC.

2. Product Overview

2.1 Key Features

- **Pure Sine Wave Output:** Ensures safe and reliable operation for all connected devices.
- **Multiple Functions:** Operates as an emergency power supply with charging, a rectifier, and an inverter.
- **Comprehensive Protection:** Integrated safeguards against overload, short-circuit, overvoltage, undervoltage, and overheating.
- **LED Display:** Provides real-time status indication of the unit.
- **Wide Input Voltage Range:** Accommodates 180-275V AC input.

2.2 Components and Controls

Familiarize yourself with the inverter's front and rear panels to ensure correct setup and operation.

Figure 1: Front Panel Overview

This image displays the front panel of the KEMOT PROsinus-700 URZ3406B inverter, featuring the LED display, 'Mains On' and 'Mains Off' switches, and the 'Output/Inverter On/Off' button. The display shows voltage and battery status indicators.

Figure 2: Rear Panel with Connections

This image shows the rear panel of the inverter, highlighting the output sockets, battery terminals (red for positive, black for negative), the 230V AC input cable, a cooling fan, and a circuit breaker button. Battery connection cables are visible.

Figure 3: Detailed Rear Panel Connections

A closer view of the rear panel, detailing the two 230V/50Hz output sockets, the 12V battery terminals, the 230V input, the cooling fan, and the circuit breaker. This view emphasizes the connection points for external devices and power sources.

3. Setup

3.1 Placement

Place the inverter in a well-ventilated area, away from direct sunlight, heat sources, and moisture. Ensure there is sufficient space around the unit for proper airflow, especially around the cooling fan on the rear panel.

3.2 Connecting the External Battery

1. Ensure the inverter is turned off and disconnected from the mains power.

2. Connect the red cable from the inverter to the positive (+) terminal of a 12V DC external battery.
3. Connect the black cable from the inverter to the negative (-) terminal of the 12V DC external battery.
4. Ensure all connections are secure and tight to prevent arcing or poor contact.

3.3 Connecting to Mains Power

Plug the inverter's 230V AC input cable into a standard wall outlet. This will allow the inverter to charge the external battery and provide pass-through power to connected devices when mains power is available.

3.4 Connecting Devices to the Inverter

Plug your appliances (e.g., central heating pump, TV, refrigerator) into the 230V/50Hz output sockets on the rear panel of the inverter. Ensure the total power consumption of all connected devices does not exceed the inverter's rated power of 700W.

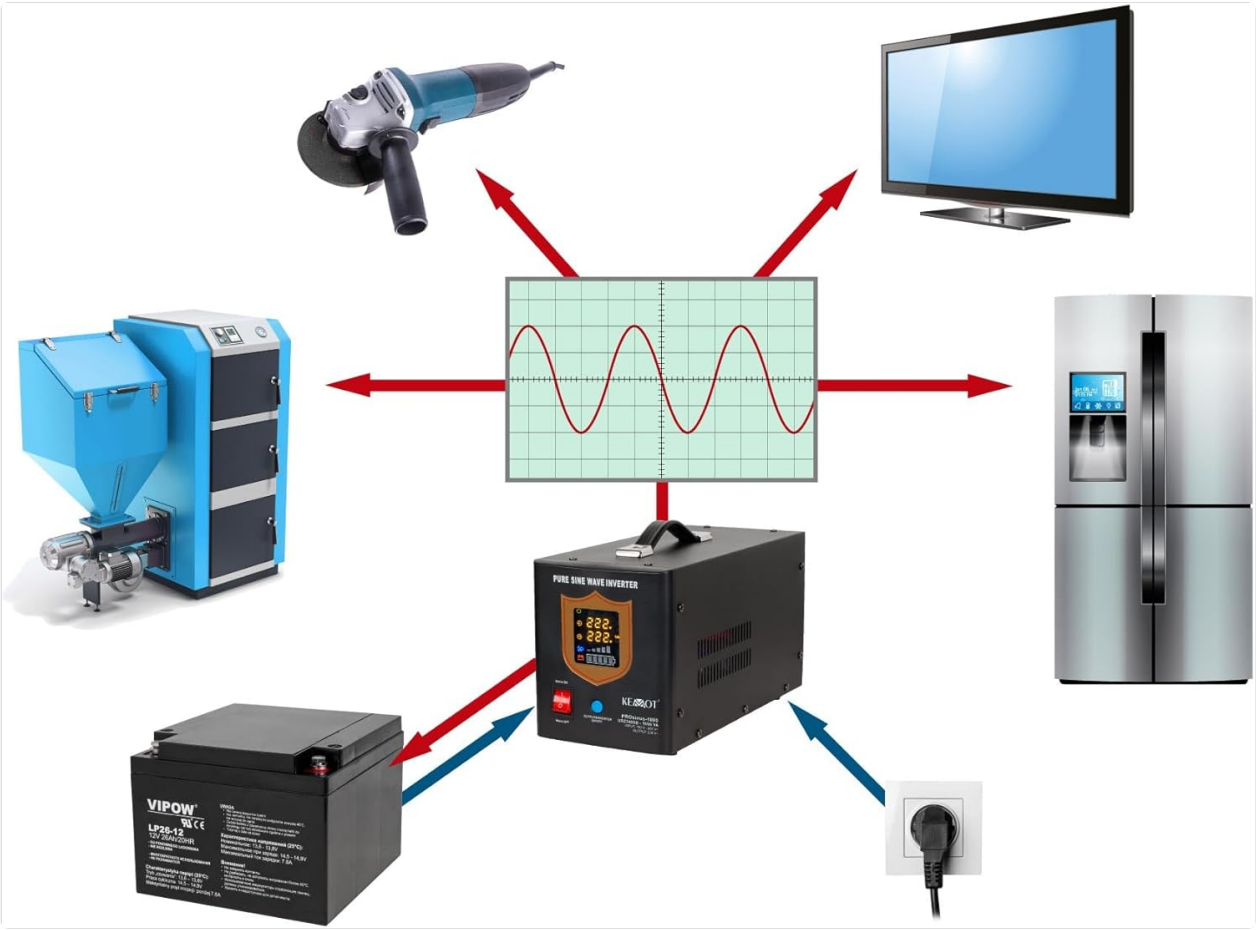

Figure 4: Inverter Connection Diagram
This diagram illustrates how the KEMOT PROsinus-700 URZ3406B inverter connects to an external 12V battery and a 230V AC mains input, then provides pure sine wave power to various household appliances such as a grinder, television, refrigerator, and a pellet stove.

4. Operation

4.1 Powering On/Off

1. **To Power On:** Press the 'Mains On' switch to connect the inverter to the mains power. Then, press the 'Output/Inverter On/Off' button to activate the output.
2. **To Power Off:** First, press the 'Output/Inverter On/Off' button to disable the output. Then, press the

'Mains Off' switch to disconnect from mains power.

4.2 Operating Modes

- **Emergency Power Supply with Charging Function:** When connected to mains power and an external battery, the inverter charges the battery and provides 230V AC to connected devices. In case of a power outage, it automatically switches to battery power (inverter mode) with a transfer time of less than 4ms.
- **Rectifier (Battery Charger):** When only connected to mains power and an external battery, the unit functions as a battery charger, replenishing the external battery.
- **Inverter:** When only connected to an external 12V DC battery (no mains power), the unit converts the DC power to 230V AC pure sine wave power for connected devices.

4.3 LED Display

The front panel LED display provides critical information about the inverter's status, including input/output voltage, battery charge level, and operational mode indicators. Refer to the display for real-time monitoring.

Figure 5: Application Example - Heating System
This image demonstrates a practical application of the KEMOT PROsinus-700 URZ3406B inverter, providing emergency power to a central heating system, ensuring its continuous operation during power interruptions.

5. Maintenance

To ensure optimal performance and longevity of your KEMOT PROsinus-700 URZ3406B inverter, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the exterior of the unit with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure the cooling fan and vents are free from dust and debris to maintain proper airflow.
- **Battery Check:** Periodically inspect the external battery connections for corrosion or looseness. Ensure the battery is kept charged, especially if the inverter is not in constant use.

- **Environmental Conditions:** Operate the inverter within the specified temperature (0 to 40 °C) and humidity (10 - 90 %) ranges. Avoid exposing the unit to extreme conditions.
- **Storage:** If storing the inverter for an extended period, disconnect it from both mains power and the external battery. Store it in a cool, dry place.

6. Troubleshooting

The KEMOT PROsinus-700 URZ3406B inverter is equipped with several protection features. If the unit is not functioning as expected, consider the following:

- **No Output Power:** Check if the 'Output/Inverter On/Off' button is pressed. Verify that the external battery is properly connected and sufficiently charged. Ensure the mains power cable is securely plugged in if operating in emergency power supply mode.
- **Overload Protection:** If the total power consumption of connected devices exceeds 700W, the inverter's overload protection will activate. Disconnect some devices and restart the inverter.
- **Short-Circuit Protection:** In case of a short circuit in the connected load, the inverter will shut down. Identify and resolve the short circuit before restarting.
- **Overvoltage/Undervoltage Protection:** The inverter will protect itself and connected devices if the input or battery voltage is outside the safe operating range. Check the mains power supply and the external battery's condition.
- **Overheating Protection:** If the internal temperature of the inverter becomes too high, it will shut down. Ensure proper ventilation and clear any obstructions from the cooling fan. Allow the unit to cool down before restarting.
- **Circuit Breaker Tripped:** Check the circuit breaker button on the rear panel. If it has popped out, press it back in to reset.

If issues persist after performing these checks, contact customer support or a qualified technician.

7. Specifications

Parameter	Value
Rated Power	700W (1000VA)
Battery Voltage	12V DC
Max Battery Charge Voltage	15V DC
Input Voltage Range	180-275V AC
Input Frequency	45-60Hz
Output Voltage Range	230V AC +/-8%
Output Frequency	50/60Hz +/-0.5Hz
Output Waveform	Pure Sine Wave
Output Efficiency (DC to AC)	>= 85%
Battery Charging Current	Max 10A
Transfer Time	<= 4ms

Parameter	Value
Protections	Overload, Short-circuit, Overvoltage, Undervoltage, Overheating
Operating Temperature	0 to 40 °C
Ambient Humidity	10 - 90 %
Dimensions (L x W x H)	14.5 x 18 x 34 cm
Product Weight	6.95 kg
Material	Plastic
Compliance	CE, RoHS

8. Warranty and Support

8.1 Warranty Information

The KEMOT PROsinus-700 URZ3406B Inverter typically comes with a**2-year warranty** from the date of purchase. Please retain your proof of purchase for warranty claims. The warranty covers manufacturing defects and malfunctions under normal use conditions.

8.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact your retailer or the KEMOT customer support service. Refer to the product packaging or the retailer's website for specific contact details.