

Y&H GTN-2000W-48V-220V-DE

Y&H GTN-2000W Grid Tie Inverter User Manual

Model: GTN-2000W-48V-220V-DE

INTRODUCTION

The Y&H GTN series 2000W Grid-Tie Inverter is designed for home solar systems, converting solar energy into AC power for your home grid. This inverter helps reduce electricity bills by supplying power to your home loads and preventing excess power from being fed back to the grid. It supports various operating modes and features advanced Maximum Power Point Tracking (MPPT) technology for high efficiency.

Note: This product does not contain a limiter or Wi-Fi module. These functions require separate purchases if desired.

SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your Y&H Grid Tie Inverter. Please follow these guidelines carefully.

1. Product Overview and Connections

Familiarize yourself with the inverter's ports and connections before installation.

ELETTRICITÀ AUTOGENERATA

USO INDIPENDENTE

L'energia in eccesso non andrà online
(Limitatore richiesto)



Image: Product Details. This image highlights the various connection points on the inverter, including the DC input terminals, RS485 communication port, optional WiFi port, and the AC output terminal.

- **DC Terminal Lock Screw Port:** For secure DC input connections.
- **WiFi Port:** For optional Wi-Fi module connection (purchased separately).
- **DC Positive Access:** Connects to the positive terminal of your solar panels or battery.
- **DC Negative Access:** Connects to the negative terminal of your solar panels or battery.
- **RS485 Port:** For RS-485 communication, data transmission, and remote control (optional configuration).
- **AC Terminal Output:** Connects to your home's AC grid.

2. System Requirements and Compatibility

- **DC Input:** 50-90V DC (start-up voltage 24V).
- **AC Output:** Suitable for 240V AC grid connection.
- **Solar Panel Power:** 1000W or higher.
- **Solar Panel VOC Range:** 76V-90V. It is recommended to use solar panels with matching specifications.

- **Battery Compatibility:** Supports 48V/60V batteries. When using battery power, install a protection switch for safe operation. The inverter features a battery discharge mode to optimize discharge levels based on real-time battery status.

3. Connection Diagram

Refer to the following diagram for typical home use connections. There are three main types of inverter connections:

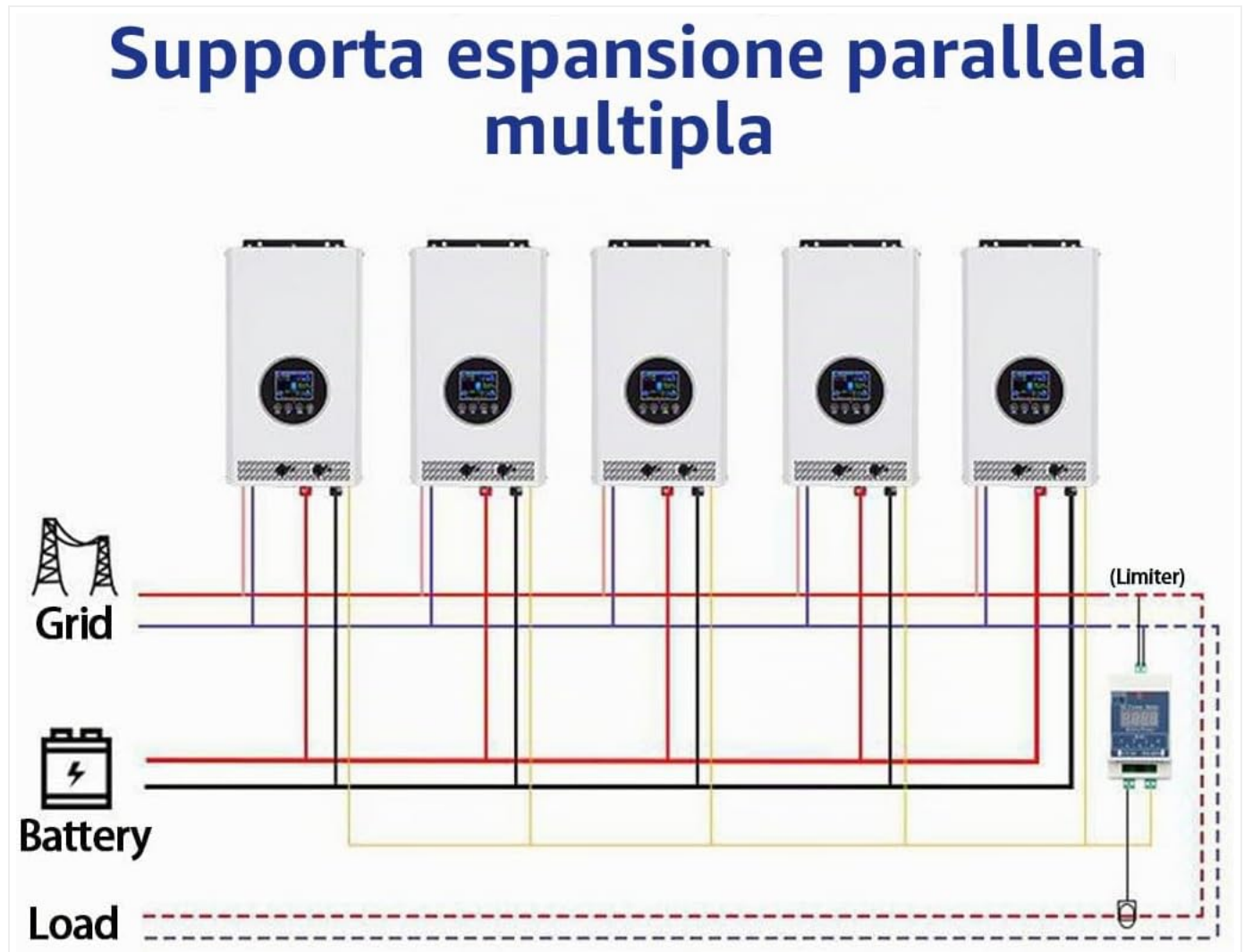


Image: Home Use Link Diagram. This diagram illustrates different configurations for connecting the inverter to your home's electrical system, including solar panels, batteries, and the grid.

1. **Inverter connects to the battery pack alone (A+B+C):** For anti-reverse current grid-connected power generation from batteries.
2. **Inverter connects to the photovoltaic panel (A+B+D):** For anti-reverse current grid-connected power generation directly from solar panels.
3. **Inverter connects to the photovoltaic panel + solar charge controller + batteries (A+B+C+D+E):** For comprehensive anti-reverse current grid-connected power generation utilizing both solar and battery storage.

Ensure all connections are secure and comply with local electrical codes. Professional installation is recommended.

OPERATING INSTRUCTIONS

The Y&H Grid Tie Inverter offers advanced features for efficient energy management.

1. Operating Modes

The inverter supports four operating modes:

- Constant Battery Power Mode
- Battery Limiting Mode
- PV Mode
- PV Limiting Mode

These modes allow flexible control over power generation and consumption, optimizing energy usage based on your specific needs.

2. Advanced MPPT Technology

The inverter incorporates advanced Maximum Power Point Tracking (MPPT) to ensure high system efficiency. MPPT efficiency is greater than 99%, maximizing the power harvested from your solar panels throughout the day.

3. Limiter Function

When equipped with an optional limiter (purchased separately), the inverter acts as a power limiter. This function ensures that only the necessary power is supplied to your loads, preventing excess energy from being fed back into the grid. This is particularly useful for avoiding unwanted grid export and potential charges.



Image: Self-Generated Electricity. This image illustrates the inverter's capability for independent power use, emphasizing that a limiter is required to prevent excess energy from being sent to the grid.

4. Cooling System

The inverter features a powerful dual-fan cooling system for high efficiency and stable operation. High-speed DC turbo fans provide strong airflow, ensuring intelligent temperature control, low noise, and energy saving.

Dettagli prodotto

Porta di bloccaggio a vite del
terminale DC
Porta WIFI
Accesso livello positivo DC
Accesso livello negativo DC
Porta RS485

Uscita terminale AC



Image: Powerful Dual Fan Cooling. This image shows the inverter's dual cooling fans, highlighting the high-efficiency cooling system designed for optimal performance and longevity.

5. Parallel Expansion

The inverter supports multiple parallel expansions, allowing you to scale your solar system as needed.

Potente raffreddamento a doppia ventola

Sistema di raffreddamento ad alta efficienza

Ventole turbo DC ad alta velocità, raffreddamento con forte velocità del vento
Controllo intelligente della temperatura, basso rumore e risparmio energetico



Image: Supports Multiple Parallel Expansion. This diagram illustrates how multiple inverters can be connected in parallel to increase the overall power output and system capacity.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Y&H Grid Tie Inverter.

- **Cleaning:** Periodically clean the inverter's exterior, especially the cooling vents, to prevent dust buildup. Use a soft, dry cloth. Do not use liquids or abrasive cleaners.
- **Connections:** Annually check all electrical connections (DC input, AC output, communication ports) to ensure they are tight and free from corrosion.
- **Environment:** Ensure the inverter is installed in a well-ventilated area, free from direct sunlight, moisture, and extreme temperatures.
- **Inspection:** Visually inspect the inverter for any signs of damage, such as cracked casing or frayed cables. If any damage is found, contact customer support immediately.

TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your inverter. For problems not listed here, please contact customer support.

Problem	Possible Cause	Solution
Inverter not turning on.	No DC input power; incorrect wiring; protection activated.	Check solar panel connections and voltage. Verify battery connections if applicable. Ensure all switches are ON.
Low power output.	Insufficient solar input; shading on panels; MPPT not optimizing.	Check solar panel orientation and for any shading. Ensure solar panels meet input requirements.
Inverter overheating.	Blocked ventilation; high ambient temperature; excessive load.	Clear any obstructions from cooling vents. Ensure adequate airflow around the inverter. Reduce load if possible.
Error message on LCD.	Internal fault; connection issue; parameter misconfiguration.	Refer to the specific error code in the full manual (if available) or contact customer support with the error message.

SPECIFICATIONS

Key technical specifications for the Y&H GTN-2000W Grid Tie Inverter.

Feature	Specification
Brand	Y&H
Model Name	GTN
Model Number	GTN-2000W-48V-220V-DE
Recommended Use	Home
Power Source	Solar Powered and Battery Powered
Input Voltage (DC)	50-90 Volts (DC)
Output Power	2000 Watts
Peak Power Wattage	2000 Watts
Output Voltage (AC)	230 Volts (AC)
Output Waveform	Pure Sine Wave
MPPT Efficiency	> 99%
Standby Mode Shutdown	99%
Energy Specifications	CE
GTIN / UPC	704334203174
ASIN	B0FDKD76PG

WARRANTY INFORMATION

Y&H products are manufactured to high-quality standards and are guaranteed against manufacturing defects. Specific warranty terms and duration may vary by region and product. Please retain your proof of purchase for warranty claims. For detailed warranty information, please refer to the documentation included with your product or visit the official Y&H website.

CUSTOMER SUPPORT

If you require assistance with your Y&H Grid Tie Inverter, please contact our customer support team. When contacting support, please have your product model number (GTN-2000W-48V-220V-DE) and proof of purchase ready. For frequently asked questions and additional resources, please visit the Y&H official website or the retailer's support page where you purchased the product.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question