DEWIN DEWIN-GTMI-X

DEWIN 150W 230V Solar Grid Tie Micro Inverter Instruction Manual

Model: DEWIN-GTMI-X

1. Introduction

This manual provides essential information for the safe and efficient operation of your DEWIN 150W Solar Grid Tie Micro Inverter. This device is designed to convert direct current (DC) electricity generated by photovoltaic (PV) solar modules into alternating current (AC) electricity for direct use or feeding into the electrical grid. It is intended for use in solar power generation systems.

Note: This device is a grid-connected power generation unit. It must be connected to the electrical grid and will only generate electricity normally when the grid is operating correctly. It can only be connected to photovoltaic solar modules as an input source and is not compatible with batteries.

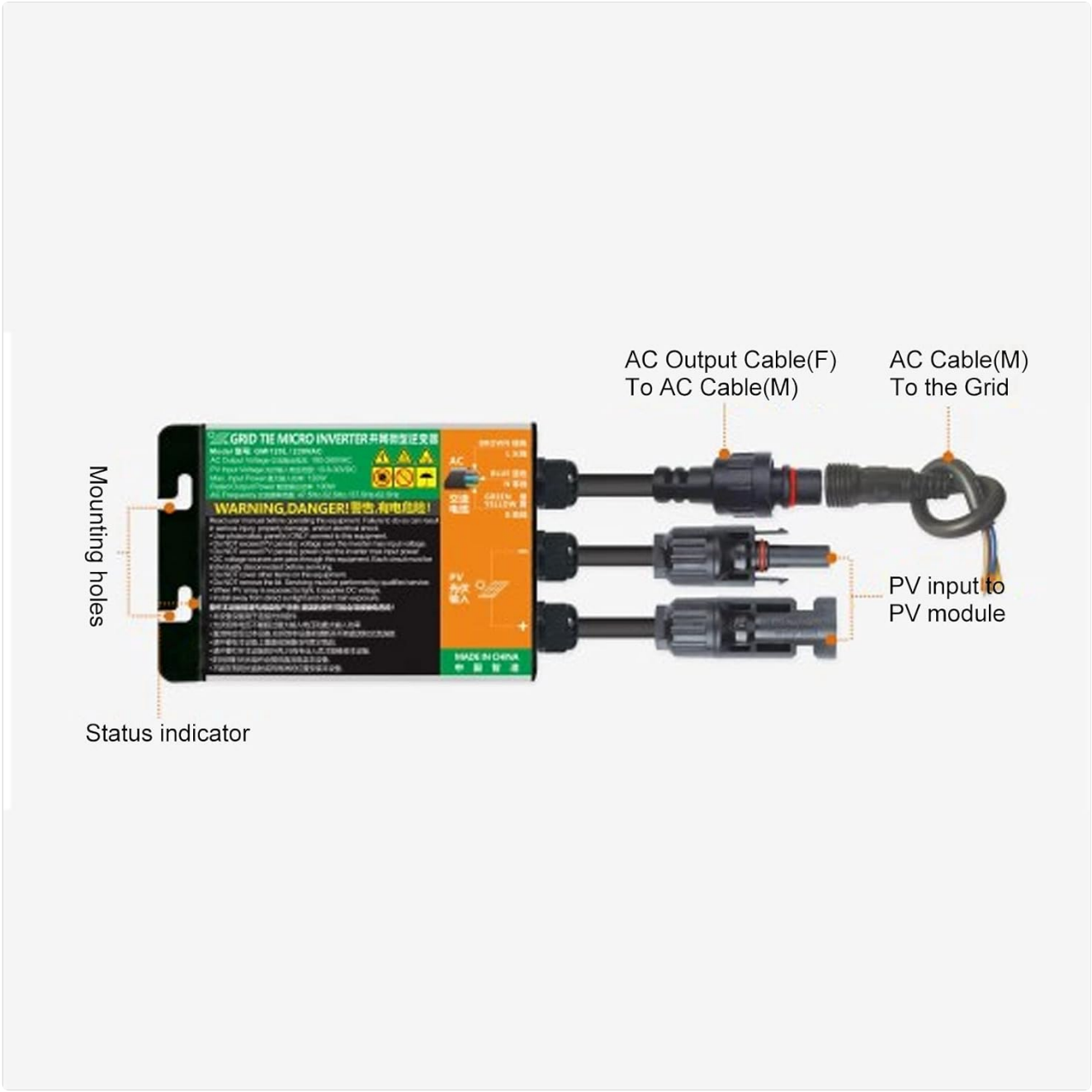


Figure 1: DEWIN 150W Solar Grid Tie Micro Inverter

2. Safety Information

WARNING! DANGER! Read this entire manual before operating this equipment. Failure to do so can result in serious injury, property damage, and/or electrical shock.

- Only connect this device to photovoltaic (PV) solar modules as the input source. Do **NOT** connect batteries or any other DC power source.
- Ensure the PV panel(s) power does not exceed the inverter's maximum input voltage (30V) or maximum input power (150W).
- This equipment is designed for grid-tied operation only. It must be connected to a functioning electrical grid.
- All electrical connections must be performed by qualified service personnel in accordance with local and national electrical codes.
- Do **NOT** remove the cover of the inverter. There are no user-serviceable parts inside.
- Install the inverter in a well-ventilated area, away from direct sunlight and heat sources.

- Ensure proper grounding. The PE end of the AC cable serves as the device's grounding cable.
- Regularly inspect the inverter and all connections for damage or loose wiring.



Figure 2: Inverter with visible warning labels

3. Product Features

- **High Conversion Efficiency:** Achieves up to 92.5% conversion efficiency.
- **Robust Construction:** Made from durable aluminum alloy for excellent heat dissipation, rust, and corrosion resistance.
- **Multiple Protection Features:** Includes islanding protection, voltage protection, frequency protection, temperature protection, and current protection.
- **Weather Resistant:** IP55 waterproof rating ensures suitability for outdoor use and protection against dust and water jets.
- **Compact Design:** Small volume, suitable for various solar power generation systems.



Figure 3: Inverter highlighting protection modes

4. Package Contents

Please check the package for the following items:

- 1 x DEWIN Solar Grid Tie Micro Inverter
- 1 x User Manual
- 1 x AC Cable

5. Setup

Follow these steps for proper installation and connection of your micro inverter:

1. **Mounting:** Securely mount the inverter using the integrated mounting holes on a stable surface. Ensure adequate ventilation around the unit.
2. **PV Input Connection:** Connect the DC output cables from your solar PV module(s) to the PV input connectors on the inverter. Ensure correct polarity (DC+ to DC+, DC- to DC-). The inverter has one set of input connectors.
3. **AC Output Connection:** Connect the AC output cable from the inverter to the AC cable leading to your electrical grid. Ensure the AC cable is properly grounded. The PE (Protective Earth) wire of the AC cable is the device's

grounding cable.

4. **Grid Connection:** Connect the AC cable to your electrical grid. This connection must be performed by a qualified electrician and comply with all local electrical codes and regulations.



Figure 4: Connection diagram for the DEWIN Micro Inverter, illustrating PV input, AC output, and grid connection points.

6. Operating Instructions

Once properly installed and connected to both the solar PV modules and the electrical grid, the DEWIN Micro Inverter will automatically begin converting DC power to AC power. The inverter will only operate and feed power into the grid when the grid is active and stable.

- **Power Generation:** The inverter continuously monitors the PV input and grid conditions. When sufficient sunlight is available and the grid is stable, it will optimize power extraction from the PV modules using Maximum Power Point Tracking (MPPT) technology and convert it to AC power.
- **Status Indicator:** Observe the status indicator light on the inverter for operational status. Refer to the specific indicator patterns (e.g., solid green for normal operation, flashing for fault) as detailed on the device label or in the included manual.

- **Automatic Shutdown:** In the event of a grid outage (islanding), the inverter will automatically shut down to prevent back-feeding power into a de-energized grid, ensuring safety. It will resume operation once grid power is restored.

7. Maintenance

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

- **Cleaning:** Periodically clean the exterior of the inverter to remove dust and debris. Use a soft, dry cloth. Do not use harsh chemicals or abrasive materials.
- **Inspection:** Regularly inspect all cables and connections for any signs of wear, damage, or corrosion. Ensure all connections are secure.
- **Ventilation:** Ensure that the inverter's ventilation openings are not blocked and that there is sufficient airflow around the unit to prevent overheating.
- **Environmental Conditions:** While the inverter has an IP55 rating, avoid exposing it to extreme conditions beyond its specified operating temperature range.

8. Troubleshooting

If the inverter is not operating as expected, consider the following common issues:

- **No Power Output:**
  - Check if the solar panels are receiving sufficient sunlight.
  - Verify all DC and AC connections are secure and correctly wired.
  - Ensure the electrical grid is active and stable. The inverter will not operate if the grid is down.
- **Status Indicator Light:** Refer to the specific meaning of the status indicator light patterns (e.g., flashing, solid, color) as described on the product label or in the detailed manual. This can often indicate the nature of a fault.
- **Overheating:** If the inverter feels excessively hot, check for obstructions around the unit that might be impeding airflow. Ensure it is installed in a well-ventilated area.
- **Protection Activated:** The inverter has multiple built-in protections (islanding, voltage, frequency, temperature, current). If a fault occurs, one of these protections may have activated, causing the inverter to shut down. Address the underlying issue before attempting to restart.

For persistent issues, contact qualified service personnel or the manufacturer.

9. Specifications

Feature	Specification
Item Type	Solar Grid Tie Inverter
Model Number	DEWIN-GTMI-X
Material	Aluminum Alloy
Inverter Box Dimensions	Approx. 10 x 7.5 x 3.5 cm (3.94 x 2.95 x 1.38 inches)
Output Voltage Waveform	Sine Wave

Feature	Specification
PV Input (DC)	
Input Connector Quantity	1 set
MPPT Voltage Range	12.5V to 25V
Operating Voltage Range	10.8V to 30V
Maximum Input Voltage	30V
Startup Voltage	10.8V
Maximum Input Power	150W
Maximum Input Current	9.37A
AC Output	
Single-phase Grid Type	230V
Rated Output Power	130W
Maximum Output Power	140W
Rated AC Current	0.56A
Rated AC Voltage	230V AC
Output Voltage Range	180V to 280V
Rated AC Frequency	50/60 Hz
Output Frequency Range (50 Hz)	47.5 to 52.5 Hz
Output Frequency Range (60 Hz)	57.5 to 62.5 Hz
Output Power Factor	> 0.99
Efficiency	
Highest Conversion Efficiency	92.5%
CEC Weighted Efficiency (230V AC)	91.5%
MPPT Tracking Efficiency	99.9%
Night Loss	< 700 mW
Temperature Range (Ambient)	-40°C to 65°C
Temperature Range (Storage)	-40°C to +85°C
Waterproof Rating	IP55
Communication	None

Feature	Specification
Integrated Grounding	PE end of AC cable

10. Warranty and Support

Specific warranty details and support contact information are not provided in the product data. For warranty claims, technical support, or service inquiries, please refer to the documentation included with your purchase or contact the DEWIN customer service directly through their official channels.

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