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› [Temank](#) /

› [Temank 3000W Solar Inverter User Manual](#)

Temank HF2430U60

Temank 3000W Solar Inverter User Manual

Model: HF2430U60 | Brand: Temank

1. PRODUCT OVERVIEW

The Temank 3000W Pure Sine Wave Solar Inverter is an all-in-one hybrid solar charge inverter designed for various applications including residential, office, vehicle, and marine use. It features a built-in 80A MPPT charge controller and supports both lead-acid and lithium batteries. This inverter provides reliable power conversion from 24V DC to 120V/110V AC, with a maximum PV input of 4000W and 450V.



Figure 1: Temank 3000W Solar Inverter

2. IMPORTANT SAFETY INSTRUCTIONS

Please read all instructions and cautionary markings on the unit, the batteries, and all appropriate sections

of this manual before using the unit.

- Installation must be performed by qualified personnel.
- Ensure all wiring is correctly sized and properly connected to prevent overheating and damage.
- Do not disassemble the unit. There are no user-serviceable parts inside.
- Avoid exposing the inverter to rain, snow, spray, or any liquids.
- Ensure proper ventilation around the inverter to prevent overheating.
- Always disconnect all power sources (PV, battery, AC) before performing any maintenance or wiring.

3. KEY FEATURES

- 3000W Pure Sine Wave Inverter: Converts 24V DC to 120V/110V AC, suitable for sensitive electronics.
- Built-in 80A MPPT Charge Controller: Maximizes power extraction from solar panels.
- Wide PV Input Range: Max 4000W, 450V, 13A. Starting voltage >150V.
- Battery Compatibility: Supports 24V Lead-Acid (sealed, AGM, Gel, Flooded) and Lithium batteries.
- Multiple Charging Modes: PV priority, Utility Priority, Hybrid Charging, and Only Solar Charging.
- Two Output Modes: Inverter and Mains, to meet diverse application requirements.
- LCD Display & LED Indicators: Provides dynamic display of system data and operating status.
- Intelligent Variable Speed Fan: Efficiently dissipates heat and extends system life.
- Comprehensive Protections: Includes short circuit, over voltage, under voltage, overload, and reverse protection.

3000W 24V SOLAR INVERTER



PowMr's 3000W Solar Inverter

- ✓ 24Vdc to 120Vac
- ✓ Built-in **80A** MPPT Controller
- ✓ Max.PV Open Circuit Voltage **450V**
- ✓ Max.PV Input: **4000W, 13A**
- ✓ Max.PV Output: **4000W, 80A**
- ✓ Starting voltage greater than **150V**
- ✓ 4 charging modes and 2 output modes
- ✓ Support Utility/Generator/Solar Charge.



Others 3000W Solar Inverter

- ✓ 24Vdc to 120Vac
- ✓ Built-in **60A** MPPT Controller
- ✓ Max.PV Open Circuit Voltage **100V**
- ✓ Max.PV Input: **1600W, 40A**
- ✓ Max.PV Output: **1400W, 60A**
- ✓ Starting voltage greater than **30V**
- ✓ 4 charging modes and 2 output modes
- ✓ Support Utility/Generator/Solar Charge.

Figure 2: Temank Inverter Features Comparison

4. SETUP AND INSTALLATION

4.1 Unboxing and Components

Upon unboxing, ensure all components are present: the inverter unit, user manual, warranty card, battery terminals, and spare screws. Familiarize yourself with the inverter's layout and connection points.

Video 1: PowMr Solar Inverter Installation Guide (Unboxing and Components Overview)

4.2 Mounting the Inverter

Mount the inverter in a dry, temperature-appropriate, and well-ventilated room. Ensure a minimum clearance of about 20cm on both sides and 50cm at the top and bottom for proper air circulation and heat dissipation. Use recommended M5 screws for secure wall mounting.

4.3 Wiring Connections

All wiring must be done by qualified personnel following local electrical codes. Ensure correct polarity for DC connections and proper grounding for safety.

- **Battery Connection:** Connect the battery cables to the inverter's battery terminals, ensuring positive to positive and negative to negative. Use 2AWG wires for optimal performance.
- **PV Input Connection:** Connect solar panel cables to the PV input terminals. Ensure the PV open circuit voltage is within the specified range (Max 450V, Starting voltage >150V). Use 12AWG wires.
- **AC Input/Output Connection:** Connect AC input from utility/generator and AC output to loads. Ensure proper live, neutral, and ground connections. Use 10AWG wires.

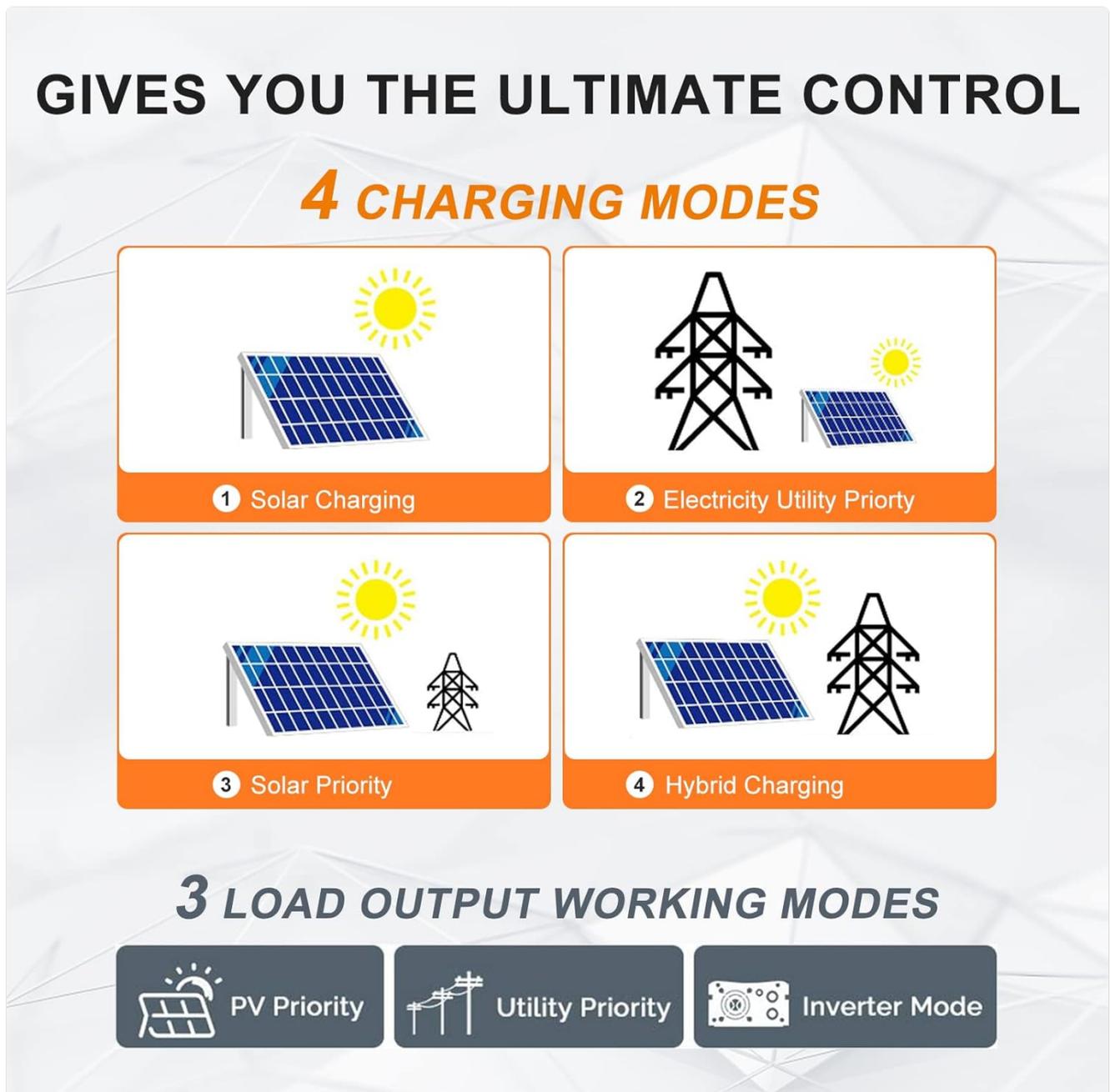


Figure 3: Wiring Diagram and Technical Specifications

Video 2: POW-LVM3K-24V-H Installation and Wiring Guide (Detailed Wiring Steps)

4.4 Turning On/Off the Inverter

To turn on the inverter, first ensure all circuit breakers (PV, battery, AC input/output) are in the OFF position. Connect the battery, then the PV array, and finally the AC input/output. Flip the boat-shaped switch located at the bottom of the inverter to the ON position. To turn off, reverse the order of operations.

5. OPERATING INSTRUCTIONS

5.1 LCD Display and Button Functions

The LCD display provides real-time system data and operational status. Use the SET, UP, DOWN, and ENT buttons to navigate menus and configure settings. Refer to the video for a detailed walkthrough of each setting item.

Video 3: Description of Key Operation Setting Item

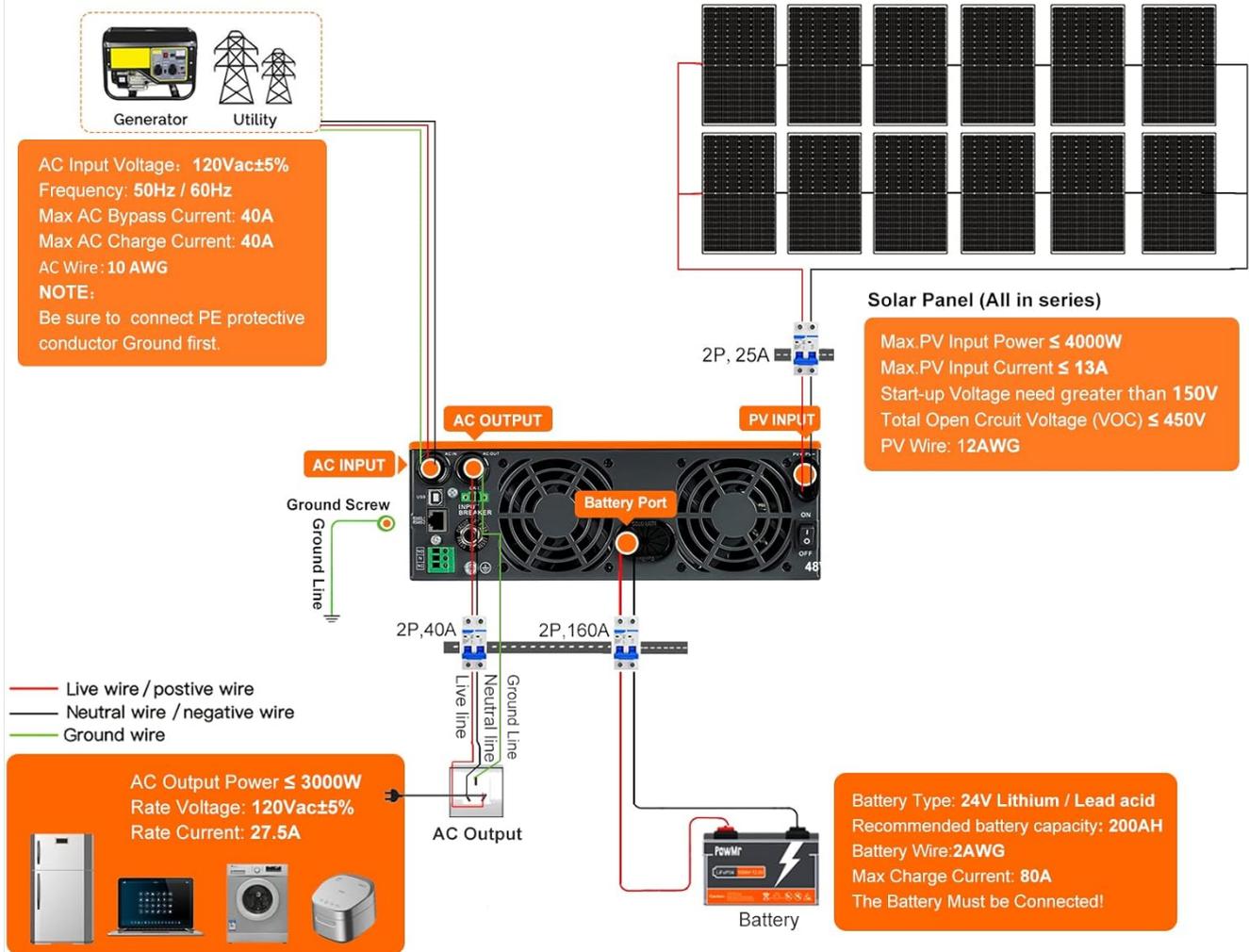
Video 4: Inverter Setup Guide: A Comprehensive Tutorial for Beginners

5.2 Charging Modes

The inverter offers four charging modes to optimize energy flow:

- **PV Priority:** Solar power is prioritized for charging.
- **Utility Priority:** Utility power is prioritized for charging.
- **Hybrid Charging:** A combination of PV and utility power is used for charging.
- **Only Solar Charging:** Only solar power is used for charging.

WIRING DIAGRAM AND TECHNICAL SPECIFICATIONS



This diagram is for reference only, and the wiring method is determined by the actual situation.

Figure 4: Four Charging Modes

5.3 Load Output Working Modes

The inverter supports two main output modes:

- **Inverter Mode:** Power is supplied from the battery via the inverter.
- **Mains Mode:** Power is supplied directly from the utility grid.

6. MAINTENANCE

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

- Keep the inverter clean and free from dust and debris.
- Check all wiring connections periodically for tightness and signs of corrosion.
- Ensure proper ventilation is maintained around the unit.
- Inspect batteries regularly for any signs of damage or leakage.

- Monitor the LCD display for any unusual readings or fault codes.

7. TROUBLESHOOTING

If the inverter encounters an issue, it may display a fault code and/or sound an alarm. Refer to the video and table below for common fault codes and troubleshooting steps.

Video 5: Troubleshooting Fault Codes

Common Fault Codes and Solutions

Fault Code	Description	Possible Cause	Solution
01	Battery undervoltage alarm	Battery voltage too low	Charge battery or check battery connections.
03	Fan fault	Fan not working or blocked	Check fan for obstructions, replace if faulty.
04	Overload protection	Connected load exceeds inverter capacity	Reduce connected load.
05	Over temperature	Inverter overheating	Ensure proper ventilation, reduce load.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Product Dimensions	14.88 x 0.01 x 4.06 inches
Item Weight	15 pounds
Manufacturer	Temank
Item model number	HF2430U60
Wattage	3000 watts
Battery Capacity	200 Amp Hours
Max.PV Input Power	4000W
Max.PV Input Current	13A
Max.PV Open Circuit Voltage	450V

Parameter	Value
Built-in MPPT Controller	80A
Recommended Uses For Product	office, residential, vehicle, boat interior, yacht, power stations

9. WARRANTY AND SUPPORT

The Temank 3000W Solar Inverter comes with a 1-year warranty. For technical support, troubleshooting assistance, or warranty claims, please contact Temank customer service.

You can also refer to the official [User Manual \(PDF\)](#) for more detailed information.