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> PowMr 1500W Solar Inverter User Manual

Temank Temank 1500W

PowMr 1500W Solar Inverter User Manual

Model: Temank 1500W | Brand: Temank

1. INTRODUCTION

This user manual provides detailed instructions for the installation, operation, and maintenance of your PowMr 1500W Solar Inverter. This pure sine wave inverter, equipped with an 80A MPPT charge controller, is designed to convert 12V DC power to 220/230/240V AC power, suitable for various off-grid applications. Please read this manual thoroughly before installation and operation to ensure safe and efficient use of the device.

2. SAFETY INSTRUCTIONS

WARNING: Failure to follow these safety instructions may result in electric shock, fire, or serious injury.

- Ensure all connections are secure and correct before powering on the inverter.
- Do not expose the inverter to rain, snow, spray, or any liquids.
- Install the inverter in a well-ventilated area to prevent overheating.
- Do not disassemble the inverter. Refer all servicing to qualified personnel.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.
- Ensure the battery bank is properly sized and protected with appropriate circuit breakers.

3. PRODUCT OVERVIEW

The PowMr 1500W Solar Inverter is an all-in-one unit combining an inverter, MPPT solar charger, and battery charger. It features a robust design and an intuitive interface for easy monitoring and control.



Figure 3.1: Front view of the PowMr 1500W Solar Inverter.

3.1. Key Features and Dimensions

1500W MPPT Hybrid INVERTER

Single-phase 230Vac±5%! Only One “Live”wire!
Not a split-phase inverter! Can’t output 110Vac!

80A
MPPT

Solar Charge Controller
MAX. Charge Current: 80A

2000
W

MAX. PV Array Power

450
VDC

Max. PV Array Open Circuit Voltage



Figure 3.2: Key features and dimensions of the 1500W MPPT Hybrid Inverter. It includes an 80A MPPT solar charge controller, supports a maximum PV array power of 2000W, and a maximum PV array open circuit voltage of 450VDC. Dimensions are approximately 10.6 inches (width) x 13.7 inches (height) x 3.7 inches (depth).

3.2. Appearance Description and Connections

Compatible with a variety of daily appliances



Note: Different types of loads have different starting impulse currents. **The following values are for reference ONLY!** Customers need to select the appropriate inverter model according to the actual equipment power, current, and load characteristics.

The corresponding selection model of load power and inverter

S/N	Load Type	Load Rated Power	Start impact coefficient η	The minimum continuous output power of the inverter is recommended	For Example
1	Resistive load	P	1	$S = P \cdot \eta$	Electric Soldering iron, Resistance Stove, Oven, Water Heater, Disinfection Cabinet, Rice Cooker etc.
2	Inductive load		3-10		Electric motors, Refrigerators, Transformers, Air conditioners, Electric drills, Lawn mowers, Range hoods, Vacuum cleaners, Washing machines, etc.
3	Resistive load		3-5		TV, Computer host, Display projector, etc.
4	Mixed load		1.5-3		Induction cookers, Hair dryers, Microwave ovens, etc.

Figure 3.3: Detailed view of the inverter's front panel and connection terminals. The front panel features an LCD display, LED indicators (Charging, Status, Fault), and function buttons (ESC, UP, DOWN, ENTER). The rear panel provides terminals for AC input, AC output, Battery input (+/-), and PV input (+/-), along with a ground terminal.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your solar inverter. Ensure all local electrical codes are followed.

4.1. Wiring Diagram

WIFI Monitoring Ready!

You can see performance in real time without the need of checking on the controller's LCD



Monitor your system



Change parameters



Optional

WIFI module is not included in the package



Figure 4.1: Typical Hybrid Power System setup. Solar panels are recommended to be connected in series to achieve the optimal PV array voltage range (90-430VDC, Max. VOC: 450V DC). Connect the 12V battery (Lead-Acid or Lithium) to the battery terminals. AC input can be from utility grid or a generator. AC output (Single Phase 230V, 1.5KW) connects to home appliances.

4.2. Battery Compatibility

The inverter is compatible with various 12V battery types. For Lithium batteries, settings must be configured via the 'User-Defined' option on the LCD display.

- Flooded (FLD)
- Gel (GEL)
- AGM (AGM)
- Lithium (LI)
- AGM/Sealed (SLD)
- User Custom Battery (USER)



Figure 4.2: The inverter supports various battery types, including Flooded, Gel, AGM, Lithium, and user-defined settings for custom battery configurations.

5. OPERATING INSTRUCTIONS

The inverter features an LCD display and function buttons for easy configuration and monitoring.

5.1. LCD Display and Function Buttons

Hybrid Power System

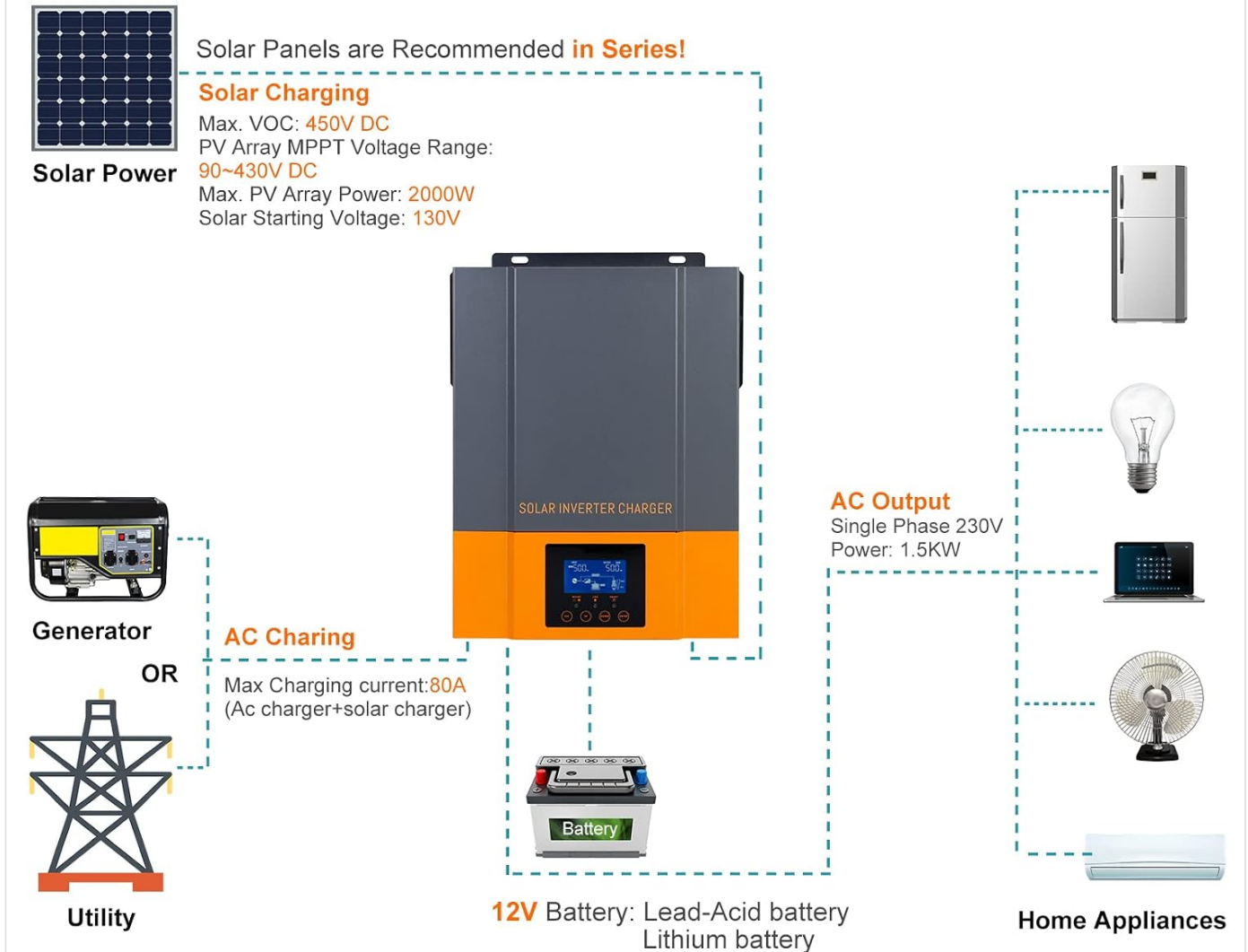


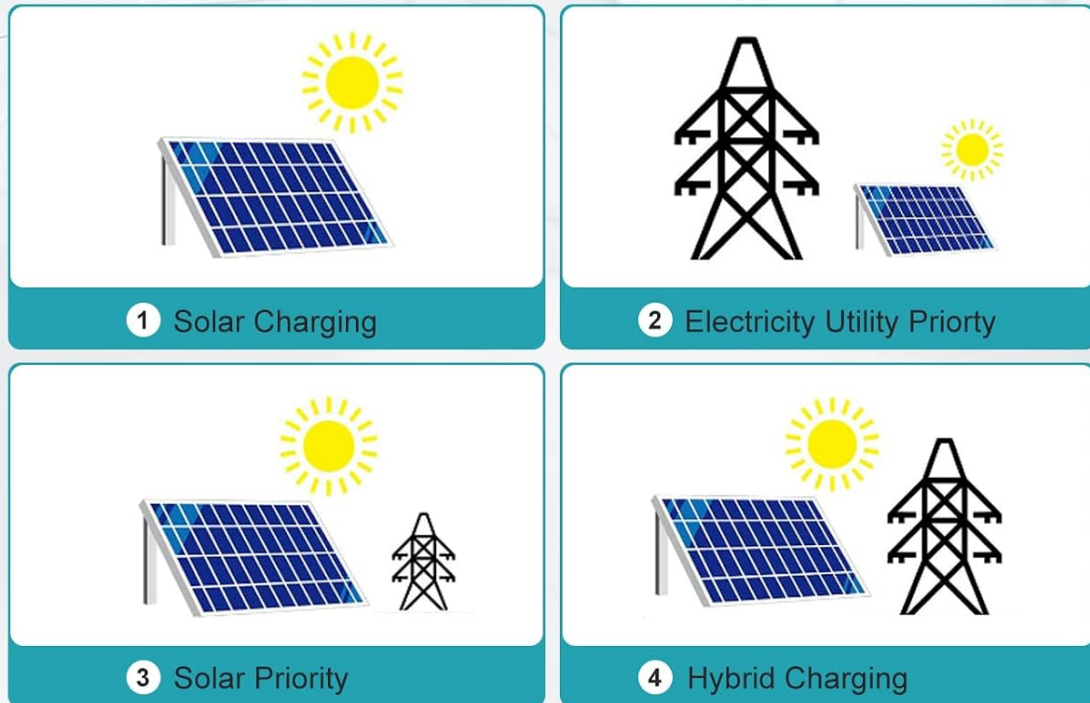
Figure 5.1: The LCD display provides dynamic system data and operating status. Function buttons (ESC, UP, DOWN, ENTER) allow for navigation and configuration of settings such as battery charging current, AC/Solar Charger priority, and Load Supply Priority.

5.2. Charging and Output Modes

The inverter offers flexible charging and output modes to suit different application requirements.

Gives You the Ultimate Control

4 charging Modes



3 Load Output Working Modes



Figure 5.2: The inverter supports four charging modes: Solar Charging, Electricity Utility Priority, Solar Priority, and Hybrid Charging. It also offers three load output working modes: PV Priority, Utility Priority, and Inverter Mode (SBU Priority).

5.3. WIFI Monitoring (Optional)

The inverter supports WIFI/GPRS remote monitoring with an optional module (purchased separately). This allows users to monitor the PV system status from a mobile phone or website anytime, anywhere.

Appearance Description



Figure 5.3: The inverter is ready for WIFI monitoring, enabling real-time performance tracking and parameter changes remotely. Note that the WIFI module is not included in the standard package.

6. MAINTENANCE

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

- Keep the inverter clean and free from dust and debris. Use a dry cloth for cleaning.
- Ensure proper ventilation around the unit. Do not block air vents.
- Periodically check all electrical connections for tightness and signs of corrosion.
- Inspect cables for any damage or wear. Replace damaged cables immediately.
- Monitor the LCD display for any fault codes or unusual readings.

7. TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following common troubleshooting steps. For persistent problems, contact customer support.

7.1. Common Issues and Solutions

Problem	Possible Cause	Solution
Inverter not turning on	No battery connection, low battery voltage, power switch off, faulty wiring.	Check battery connections and voltage. Ensure power switch is ON. Verify all wiring is correct and secure.
Fault indicator lit	Overload, short circuit, high/low battery voltage, high temperature, PV input issue.	Reduce load. Check for short circuits. Verify battery voltage is within range. Ensure adequate ventilation. Check PV input connections and voltage.
No AC output	Overload, inverter fault, AC output wiring issue.	Reduce connected load. Check AC output wiring. If fault persists, contact support.
Battery not charging	No PV input, low PV voltage, AC input issue, incorrect battery settings.	Check solar panel connections and sunlight. Verify AC input is present. Adjust battery type settings on LCD.

Note: The inverter is designed to be compatible with a variety of daily appliances. However, it is crucial to avoid overloading the unit. Refer to the load selection model below for guidance.

Compatible with Multiple Type of Batteries



Figure 7.1: Examples of compatible appliances and a corresponding selection model of load power and inverter. Different types of loads have different starting impulse currents. Customers should select the appropriate inverter model based on actual equipment power, current, and load characteristics.

8. SPECIFICATIONS

Feature	Value
Brand	Temank
Model Name	PowMr 1500W
Power Source	Solar Powered
Wattage	2000 watts (Max. PV Input Power)
Output Power	1500W

Feature	Value
Surge Capacity	3000W
AC Output Voltage	220/230/240V (Single phase/A Hot Leg 230V)
Nominal Input Frequency	50/60Hz
Battery Voltage	12V
MPPT Charge Controller	80A
Max. PV Input VOC	450V DC
PV Input Voltage Range	90-430Vdc
Starting Voltage	>130V
Recommended PV Cable Size	16AWG
Max. Charge Current	80A
Item Weight	12.38 pounds
Package Dimensions	16.89 x 13.98 x 7.32 inches

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the product packaging or contact the manufacturer directly. Keep your purchase receipt as proof of purchase for any warranty claims.

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