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› Temank 10000W Solar Inverter 10K Instruction Manual

Temank 10K

Temank 10000W Solar Inverter 10K Instruction Manual

Model: 10K | Brand: Temank

1. PRODUCT OVERVIEW

The Temank 10000W Solar Inverter 10K is a multi-functional split-phase pure sine wave power inverter designed for solar energy storage. It integrates solar energy storage, utility charging, energy storage, and AC sine wave output. This inverter supports two solar inputs and simultaneous tracking of two solar maximum power charging/carrying capacity functions. It is suitable for off-grid backup and self-use applications in homes, cabins, campers, RVs, trailers, and boats.

Key features include compatibility with various battery types (AGM, Gel, Lead acid, Lithium-ion, LiFePO4) and batteryless operation. It offers 360° protection against short circuits, over-current, over/under voltage, overload, and backfill. The inverter can output 110V/220V with a single unit, supporting four different voltage levels per phase (100Vac, 105Vac, 110Vac, and 120Vac).

2. WHAT'S IN THE BOX

- Temank 10000W Solar Inverter 10K
- 2AWG battery cable
- 10AWG solar extension cable
- Instruction manual
- Cable Lugs and screws

COMPATIBLE WITH 95% HOUSEHOLD APPLIANCES

Support **Split-Phase** and **Single-Phase** pure sine wave output

AC Output

10000W

(20000W Peak)

Only need 1 unit can output 110Vac and 220Vac
at the same time



Image: Contents of the Temank 10K Solar Inverter box, showing the inverter unit, battery cables, solar cables, user manual, and mounting hardware.

3. SAFETY INFORMATION

Please read this manual carefully before installation and operation. Failure to follow instructions may result in electric shock, fire, or other serious injury. Keep this manual for future reference.

- Installation must be performed by qualified personnel.
- Ensure all wiring is correctly sized and properly connected.
- Do not attempt to repair the inverter yourself. Contact qualified service personnel.
- Ensure proper ventilation around the inverter to prevent overheating.
- Always disconnect all power sources before performing any maintenance or wiring.

4. SETUP AND INSTALLATION

The Temank 10K Solar Inverter is designed for easy installation. Follow these steps for proper setup.

4.1 Mounting the Inverter

Mount the inverter on a sturdy, non-flammable surface in a well-ventilated area. Ensure sufficient clearance around the unit for airflow.

10KW SPLIT-PHASE HYBRID SOLAR INVERTER

- Pure Sine Wave Hybrid Inverter built-in Dual MPPT
- Max.PV Array Power 11KW, 500V VOC, 22A
- Support Split-Phase and Single-Phase Output 120V/220V AC.
- Compatible with Lead-acid, Lithium batteries and Batteryless
- Supports Solar, Utility, or Generator Power to Charge the Battery

10KW

AC Output Power

120A

Max.AC Charging

200A

Max.Hybrid
Charging Current

150V

Starting Voltage



Image: The Temank 10000W Solar Inverter 10K unit, showcasing its design and size, typically mounted vertically.

4.2 Wiring Connections

Connect the battery, solar panels (PV array), and AC loads to the inverter. Ensure correct polarity and secure connections for all cables.

Battery Connection

The inverter is compatible with 48V AGM, Gel, Lead acid, Lithium-ion, and LiFePO4 batteries. It also supports batteryless operation. Use the provided 2AWG battery cables for connection.

COMPATIBLE WITH 48V LEAD-ACID AND LITHIUM BATTERIES, AND CAN RUN BATTERYLESS

Battery charging current setting range:0~200A.



With a dual activation function when the li-ion battery is dormant; either mains/photovoltaic power supply access can trigger the activation of the li-ion battery

Batteryless support: the inverter can power the loads from PV array / ac grid without battery connected

Image: Visual representation of the inverter's compatibility with different 48V battery types, including AGM, Gel, FLD, LI, SLD, and USER-defined options.

Solar Panel (PV Array) Connection

Connect your solar panels to the PV input terminals. The inverter supports two solar inputs with a maximum PV input power of 11KW (5500W*2) and a maximum PV input voltage of 500Vdc. Use the provided 10AWG solar extension cables.

AC Load Connection (Split-Phase/Single-Phase)

The inverter supports both split-phase and single-phase pure sine wave output. It can output 110V/220V with just one unit. Refer to the diagrams below for wiring configurations.

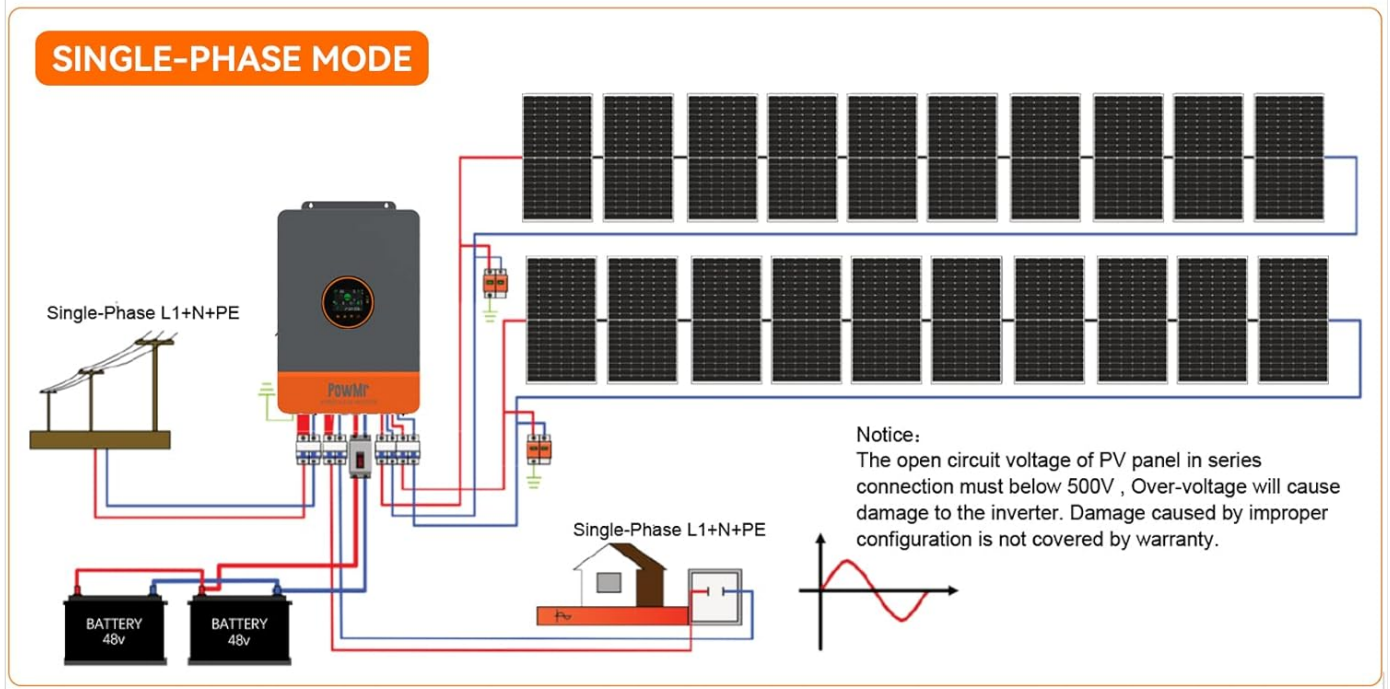
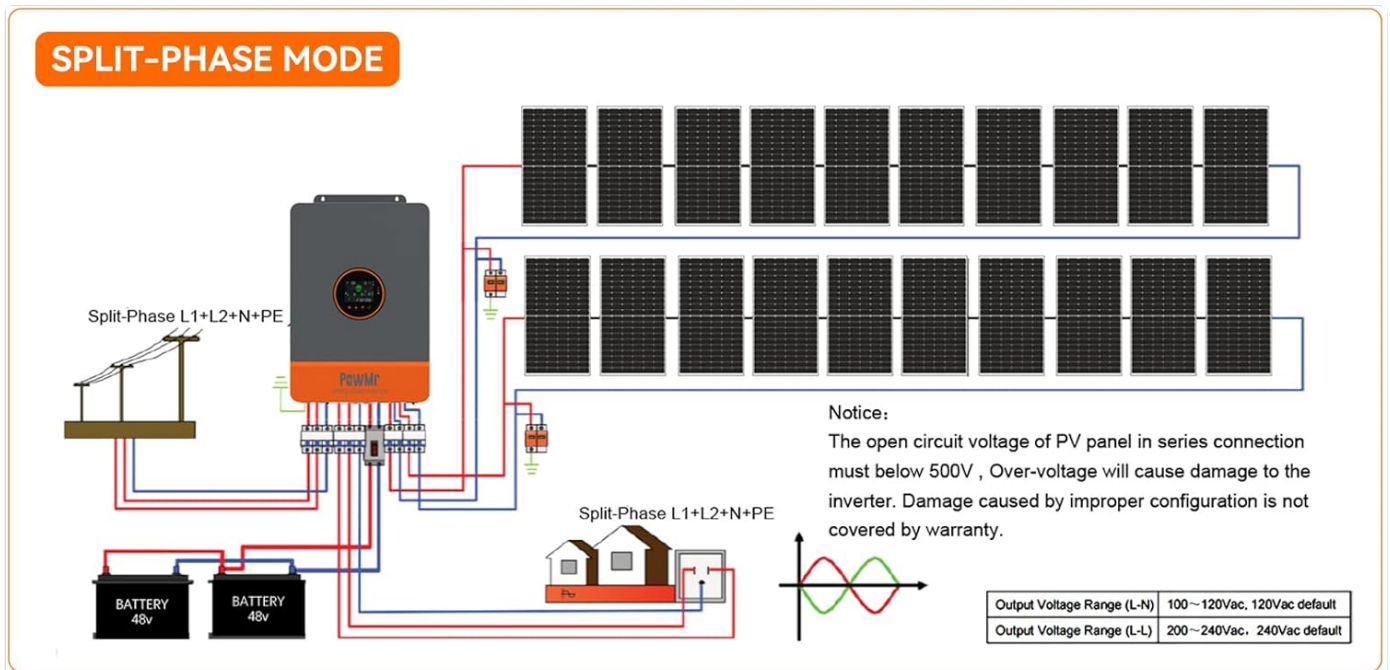


Image: Detailed wiring diagrams illustrating connections for both split-phase (L1+L2+N+PE) and single-phase (L1+N+PE) output modes, including solar panels, batteries, and household loads. Important notices regarding PV panel open circuit voltage are included.

4.3 Video Guides for Wiring

Three Wiring Methods for POW-SunSmart 10K Solar Inverter

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Video Description: This video demonstrates three different wiring methods for the POW-SunSmart 10K solar inverter, providing visual guidance for connecting the unit to various power sources and loads.

Split-Phase Solar Inverter 10000W 48V to 120/240V

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Video Description: A brief overview of the 10000W 48V split-phase solar inverter, highlighting its capabilities for 120/240V output.

BMS Communication Protocol Settings for Inverter & Battery

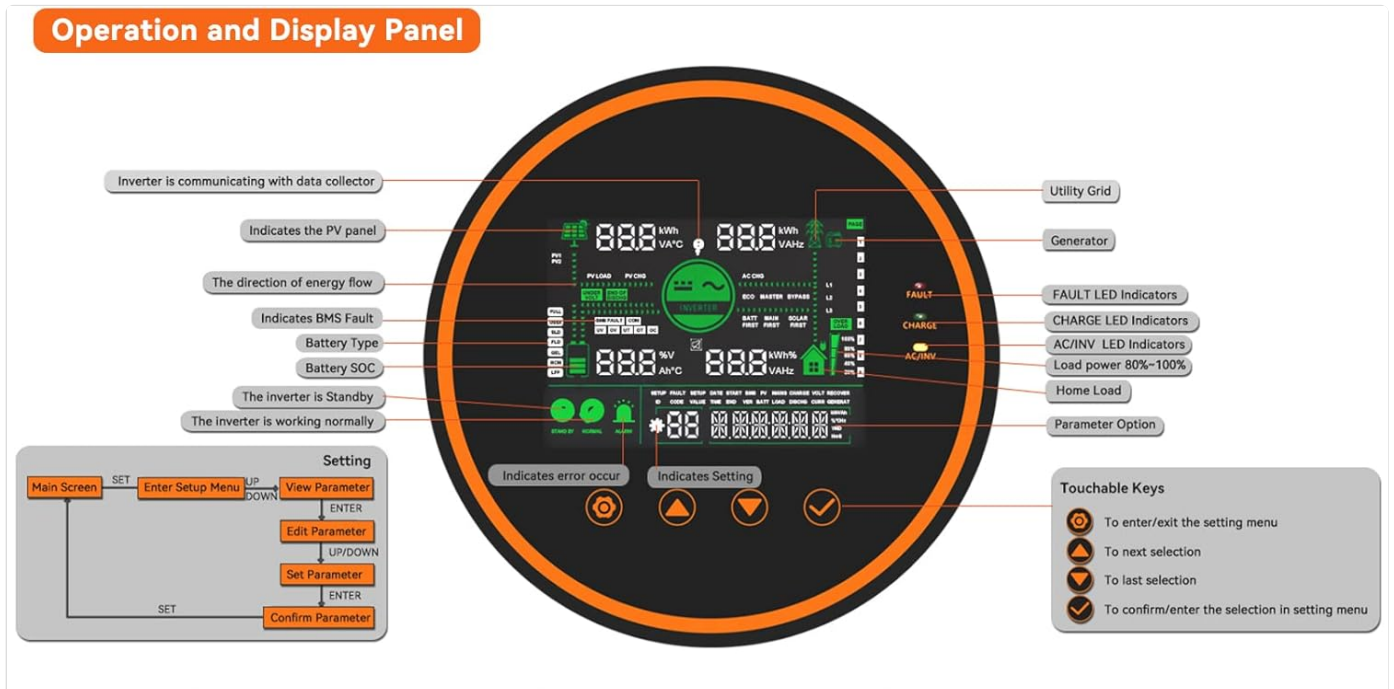
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Video Description: This video explains how to configure the BMS communication protocols between the inverter and compatible batteries, ensuring proper integration and functionality.

5. OPERATING INSTRUCTIONS

The inverter features an intuitive operation and display panel for monitoring and configuration.

5.1 Operation and Display Panel



View Real-Time Data

In the main screen, press the UP / DOWN keys to view the real-time data of the inverter during operation.

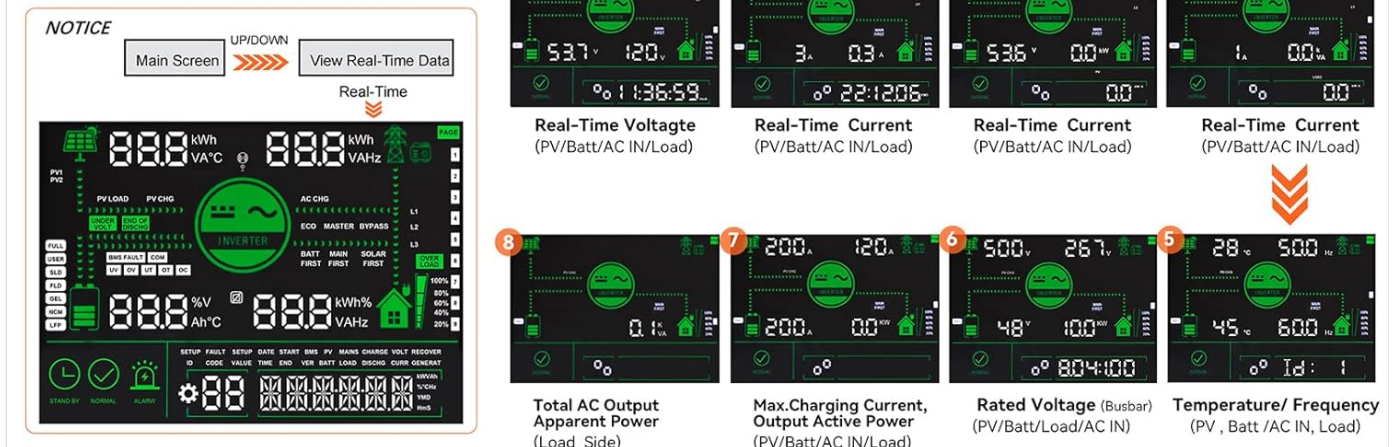


Image: Close-up of the inverter's LCD screen and control buttons (ESC, UP, DOWN, ENTER), showing various indicators for PV, battery, utility, and load status, along with menu navigation options.

5.2 Basic Settings and Modes

The inverter offers four charging modes and two output modes, allowing flexible configuration based on your needs. You can set charging modes and time according to your requirements.

How to Set the Hybrid Solar Inverter

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Video Description: This video provides a detailed explanation of various setting procedures for the hybrid solar inverter, including output source priority, maximum charging current, AC input voltage range, battery type, auto restart functions, output frequency, output voltage, and battery equalization settings.

The inverter also features a power-saving mode. When the load power is below 50W, the inverter output will switch off after a 5-minute delay. If the load is more than 50W, the inverter automatically restarts.

SPLIT-PHASE PURE SINE WAVE SOLAR INVERTER



Category	Image	Features
PowMr's 10KW Solar Inverter		<ul style="list-style-type: none">Hybrid Solar InverterDUAL MPPT PV InputMax.MPPT Charging Current up to 200AOnly need 1 unit can output 110V/220V at same timecan works without batteriesTemperature probe can be connectedEquipped with 4 cooling fansDemountable insect screen for cleaning
Others		<ul style="list-style-type: none">off-grid Solar InverterDUAL MPPT PV InputMax.MPPT Charging Current up to 80-120AAt least two units can output 220VacBattery must be connectedTemperature probe cannot be connectedEquipped with 2 cooling fansFixed insect screen

Image: A visual explanation of the Power Saving Mode, detailing how the inverter manages output based on load power to conserve energy.

5.3 Monitoring via SmartESS App

Monitor and control your inverter remotely using the SmartESS App, available on the App Store and Google Play. A Wi-Fi/GPRS data acquisition module needs to be purchased separately for this functionality.

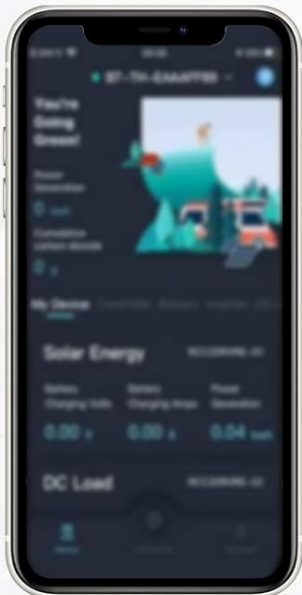
MONITOR AND CONTROL VIA SMARTESS APP



Download on the
APP Store



Get it on
Google Play



Optional


The Wi-Fi/GPRS data acquisition module need to be purchased separately. 



Image: Depicts the SmartESS mobile application interface for remote monitoring and control of the solar inverter, showing download options and the optional Wi-Fi module.

6. TECHNICAL SPECIFICATIONS

Feature	Specification
Rated Output Power	10000W continues (Surge 20000W)
Rated Output Voltage	120/240Vac (split phase/single phase)
Switch Time	10ms
Max. PV Input Power	11KW (5500W*2)
Max. PV Input Voltage	500Vdc

Feature	Specification
Max. PV Input Current	22A
Starting Voltage	> 150V
PV Wire	10AWG
Communication	CAN, USB, RS485
Battery Compatibility	AGM, Gel, Lead acid, Lithium-ion, LiFePO4
Protection	Short circuit, over-current, over-under voltage, overload, backfill, etc.

7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your inverter.

- Keep the inverter clean and free from dust and debris.
- Ensure all connections are tight and free from corrosion.
- Check ventilation openings regularly to ensure they are not blocked.
- Periodically inspect cables for any signs of wear or damage.

8. TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following common troubleshooting tips:

- **No Power Output:** Check battery connections, AC input breaker, and inverter's ON/OFF switch.
- **Overload Error:** Reduce the connected load. The inverter provides overload protection.
- **Battery Not Charging:** Verify solar panel connections, PV input voltage, and charging current settings. Check battery type settings.
- **Inverter Not Turning On:** Ensure sufficient battery voltage and proper AC input (if applicable).

For persistent issues, consult the detailed troubleshooting section in the user manual or contact Temank customer support.

9. WARRANTY AND SUPPORT

The Temank 10000W Solar Inverter 10K comes with a manufacturer's warranty. Please refer to the warranty card included in your package for specific terms and conditions.

For technical support, service, or warranty claims, please contact Temank customer service through their official channels. Provide your product model number (10K) and purchase details for efficient assistance.