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PowMr 10200W

PowMr 10200W Solar Inverter User Manual

Model: 10200W | Brand: PowMr

1. Introduction

This manual provides essential information for the safe and efficient operation of your PowMr 10200W Solar Inverter. Please read this manual thoroughly before installation and use, and retain it for future reference.
The PowMr 10200W Solar Hybrid Inverter is designed to convert 48V DC power to 220-230VAC, featuring a 160A MPPT solar charge controller. It is compatible with both 48V lead-acid and lithium batteries, offering a robust solution for off-grid solar energy systems.

2. Product Features

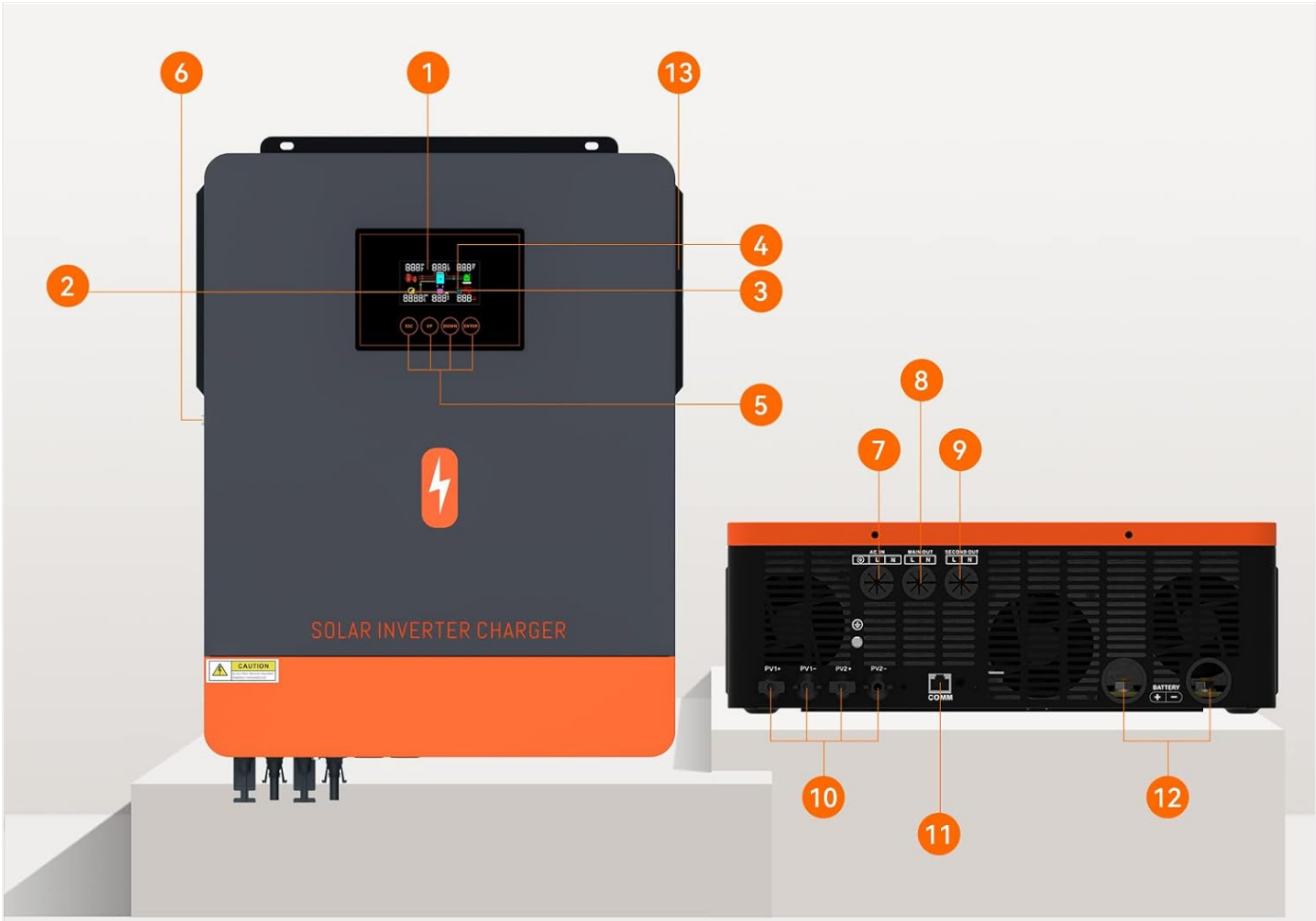
- **New Upgrade Solar Inverter:** 10.2KW Solar Hybrid Inverter with Output Voltage Regulation: 230Vac±5%, Rated Output Power: 10200W.
- **Max PV Array Open Circuit Voltage:** 500VDC, PV Array MPPT Voltage Range: 90VDC~500VDC, Max Charging Current: 160A.
- **Four Safe Charging Modes:** Supports solar, utility priority, solar priority, and utility hybrid charging.
- **Three Output Modes:** PV priority, Utility priority, and Inverter priority to meet diverse application needs.
- **RGB Light Mode:** The PowMr Inverter LOGO displays different colors (white, purple, red, blue) to indicate the current working mode.
- **One Click Restore Default Settings:** Allows for easy restoration of system settings to prevent machine damage from configuration errors.
- **Intelligent Variable Speed Fan:** Efficiently dissipates heat to extend system life.
- **Wide Range Of Applications:** Powers various home and office appliances, including motor-type appliances like tube lights, fans, refrigerators, and air conditioners.



Image: Key features of the 10.2KW Hybrid Solar Inverter, highlighting 10.2KW AC output, 160A max AC charging current, 500Vdc max PV array open circuit voltage, 150V starting voltage, and 75W no-load power consumption. The image also notes it's a dual photovoltaic input and dual AC output pure sine wave inverter.

3. Components and Interface

Familiarize yourself with the various components and connection points of the inverter for proper installation and operation.



1	LCD display	6	Power ON/OFF switch	11	RS232/WIFI/Remote LCD Communication Port)
2	Status indicator	7	AC input		
3	Charging indicator	8	Main output	12	Battery input
4	Fault indicator	9	Second output	13	Anti dust cover
5	Touch Function buttons	10	PV 1 and PV 2 input		

Image: Detailed diagram showing the front and side panels of the inverter with numbered components:

1. LCD display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Touch Function buttons
6. Power ON/OFF switch
7. AC input
8. Main output
9. Second output
10. PV 1 and PV 2 input
11. RS232/WIFI/Remote LCD Communication Port
12. Battery input
13. Anti dust cover

4. Setup and Installation

Proper installation is crucial for the safe and optimal performance of your inverter. It is recommended that installation be performed by a qualified professional.

4.1. Site Selection

- Install the inverter in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials.
- Ensure the mounting surface is strong enough to support the inverter's weight (approximately 35.1 pounds).
- Maintain adequate clearance around the inverter for proper airflow and cooling.

4.2. Electrical Connections

Connect the solar panels, batteries, and AC loads to the inverter as per the wiring diagram. Ensure all connections are secure and correctly polarized.

- **Battery Connection:** Connect 48V lead-acid or lithium batteries to the battery input terminals (12). Ensure correct polarity.
- **PV Array Connection:** Connect your solar panels to the PV 1 and PV 2 input terminals (10). The MPPT voltage range is 90VDC~500VDC.
- **AC Input/Output:** Connect the AC utility grid to the AC input (7) and your household loads to the Main output (8) and Second output (9).



Image: Illustrates the hybrid power system setup, showing connections between solar panels, generator/utility, battery, the inverter, and household appliances. It highlights the 500V DC max VOC, 90-500V DC MPPT voltage range, and 10.2KW max PV array power.

4.3. Battery Type Configuration

The inverter is compatible with multiple battery types. Ensure the correct battery type is configured in the inverter settings for optimal charging and discharge performance.

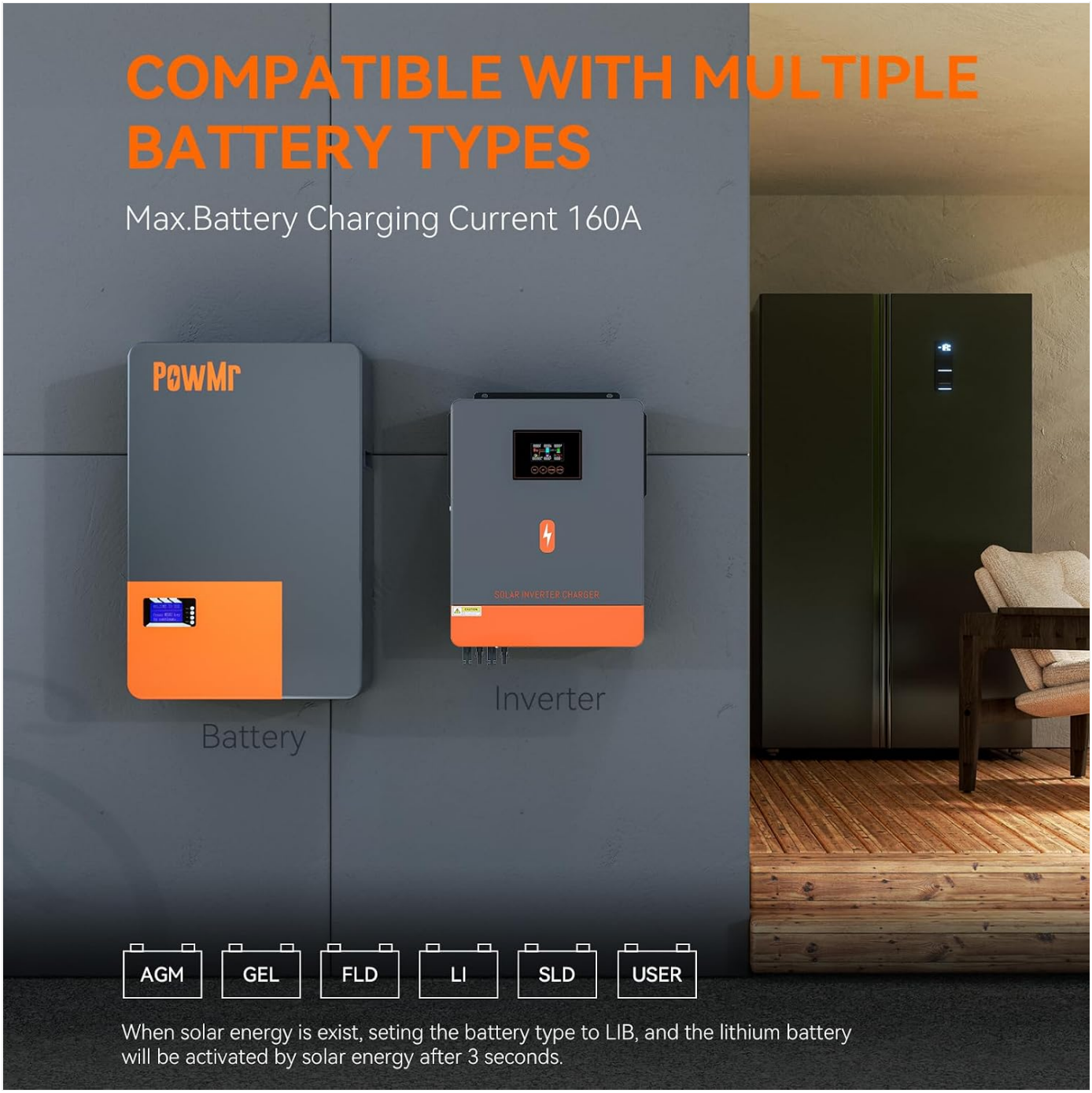


Image: Shows the inverter's compatibility with various battery types including AGM, GEL, FLD, LI (Lithium), SLD, and USER. It notes that for lithium batteries, setting the battery type to LIB will activate the battery by solar energy after 3 seconds.

5. Operating Modes

The PowMr inverter offers flexible operating modes to suit various energy management needs.

5.1. Charging Modes

- **Solar Priority:** Prioritizes solar power for charging batteries.
- **Utility Priority:** Prioritizes utility grid power for charging batteries.
- **Solar/Utility Hybrid Charging:** Utilizes both solar and utility power for charging.

- **Only Solar Charge:** Charges batteries exclusively from solar power.

5.2. Output Modes

- **PV Priority:** Prioritizes solar power for supplying loads.
- **Utility Priority:** Prioritizes utility grid power for supplying loads.
- **Inverter Priority:** Prioritizes battery power (via inverter) for supplying loads.

5.3. RGB Light Indicators

The inverter's logo light changes color to indicate its current operational status:

- **White Light:** Stationary Mode
- **Purple Light:** PV Mode (Solar power active)
- **Red Light:** Battery Mode (Operating from battery)
- **Blue Light:** Utility Mode (Operating from grid)

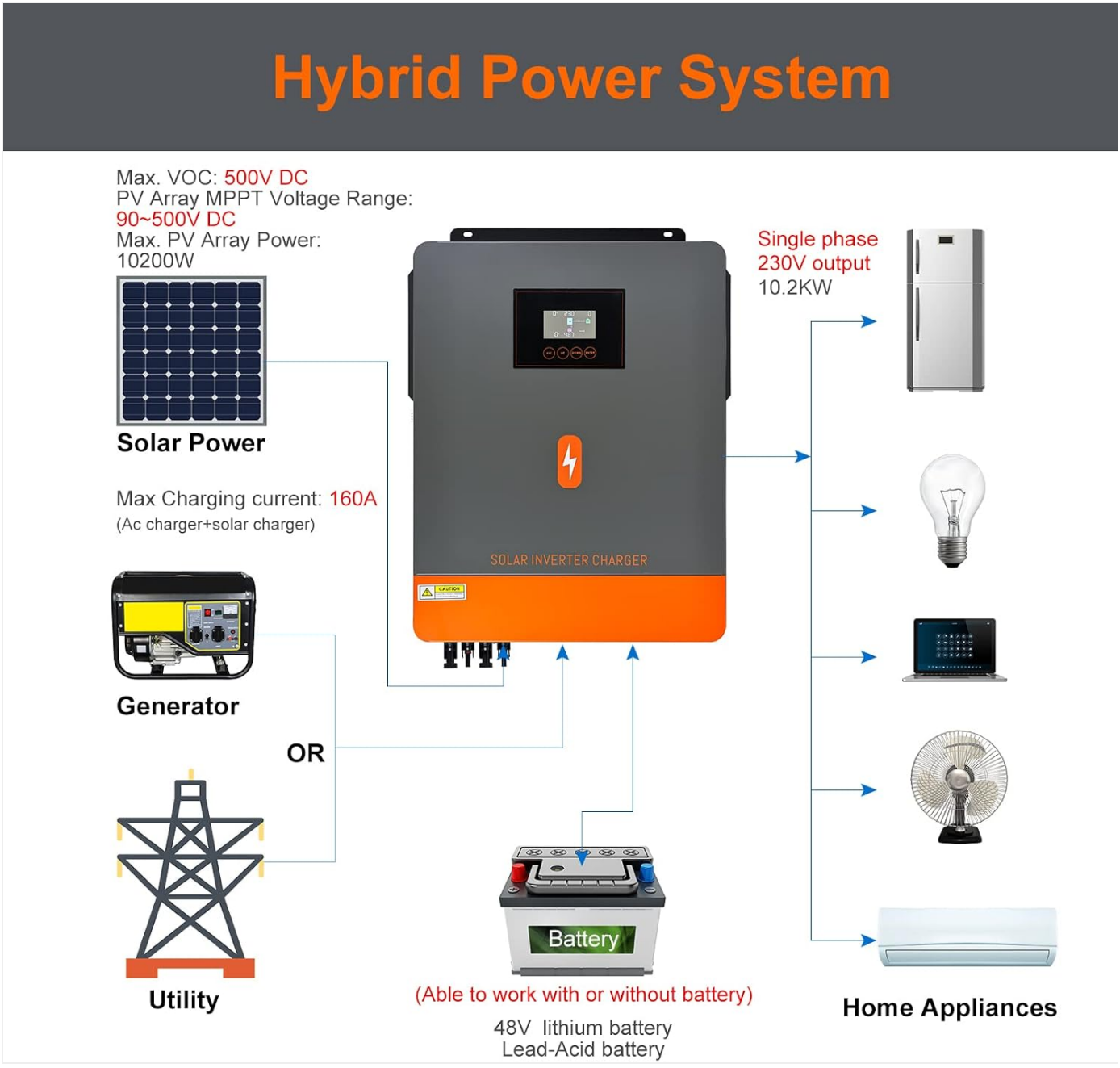


Image: Displays the inverter with its logo illuminated in different colors (white, purple, blue, red) corresponding to Stationary, PV, Utility, and Battery modes, respectively.

5.4. Remote Monitoring

The inverter supports remote monitoring and control via the "SMARTESS" app. A WiFi module and GPRS data need to be purchased separately for this functionality.



Image: Shows a smartphone displaying the SMARTESS app interface alongside the inverter with an optional WiFi module connected. It indicates that the app is available on the App Store and Google Play.

For more information on the HVM Series Solar Inverter, watch the official introduction video:

Your browser does not support the video tag.

Video: An introduction to the HVM Series Solar Inverter by PMing Energy (Seller), detailing its features and capabilities.

6. Maintenance

Regular maintenance ensures the longevity and reliable operation of your PowMr solar inverter.

- **Cleaning:** Keep the inverter clean and free from dust and debris. Use a soft, dry cloth for cleaning. Ensure the anti-dust cover (13) is properly in place.

- **Ventilation:** Periodically check that the ventilation openings are not blocked to ensure proper heat dissipation by the intelligent variable speed fan.
- **Connections:** Inspect all electrical connections regularly for tightness and signs of corrosion.
- **Battery Health:** Monitor battery health and ensure they are maintained according to their manufacturer's guidelines.

7. Troubleshooting

This section provides guidance for common issues you might encounter. For complex problems, contact PowMr customer support.

Problem	Possible Cause	Solution
Inverter not turning on	No battery connection, low battery voltage, power switch off.	Check battery connections, ensure battery voltage is within operating range, turn on power switch (6).
No AC output	Overload, short circuit, fault indicator (4) active.	Reduce load, check for short circuits in wiring, refer to fault codes on LCD display (1).
PV input not charging	Low solar input, PV array voltage out of range, PV connections loose.	Check solar panel exposure, verify PV array voltage (90VDC~500VDC), inspect PV input connections (10).
Settings not saving/working	Incorrect button presses, software glitch.	Ensure correct use of touch function buttons (5). Use "One Click Restore Default Settings" if necessary, then reconfigure.



Image: Highlights the comprehensive 360-degree protection features including Short Circuit Protection, Over Current Protection, Over Voltage Protection, Under Voltage Protection, Over-Load Protection, Backfill Protection, Over-Temperature Protection, and Over Charge Protection.

8. Specifications

Specification	Value
Model Name	PowMr 10200W Solar Inverter
Rated Output Power	10200W (10.2KW)
Output Voltage Regulation	230Vac±5%
Max PV Array Open Circuit Voltage	500VDC
PV Array MPPT Voltage Range	90VDC~500VDC

Specification	Value
Max Charging Current	160A
System Voltage	48V
Power Source	Solar Powered
Item Weight	35.1 pounds
Package Dimensions	24.13 x 19.41 x 8.23 inches
Color	Purple, Red, White (referring to RGB light)

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact PowMr customer service through their official channels. Retain your proof of purchase for warranty claims.
Visit the official PowMr Store for additional products and support:PowMr Store on Amazon

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