POWLAND inverter

POWLAND 10000W Hybrid Solar Inverter User Manual

Model: Inverter | Brand: POWLAND

1. Introduction

This manual provides essential information for the safe and efficient operation of your POWLAND 10000W Hybrid Solar Inverter. Please read this manual thoroughly before installation and use, and retain it for future reference. This inverter is designed to integrate solar power, battery storage, and grid electricity to provide a reliable and efficient power solution for your home or RV.

2. Safety Information

Always observe safety precautions to prevent injury and damage to the inverter. Installation and maintenance should only be performed by qualified personnel.

- Ensure all connections are secure and correctly polarized.
- Do not expose the inverter to rain or moisture unless specifically rated for outdoor use.
- Avoid touching live terminals.
- Disconnect all power sources before servicing.
- The inverter features comprehensive 360° protection, including safeguards against overload, short circuit, reverse polarity, over/under voltage, and over-temperature.

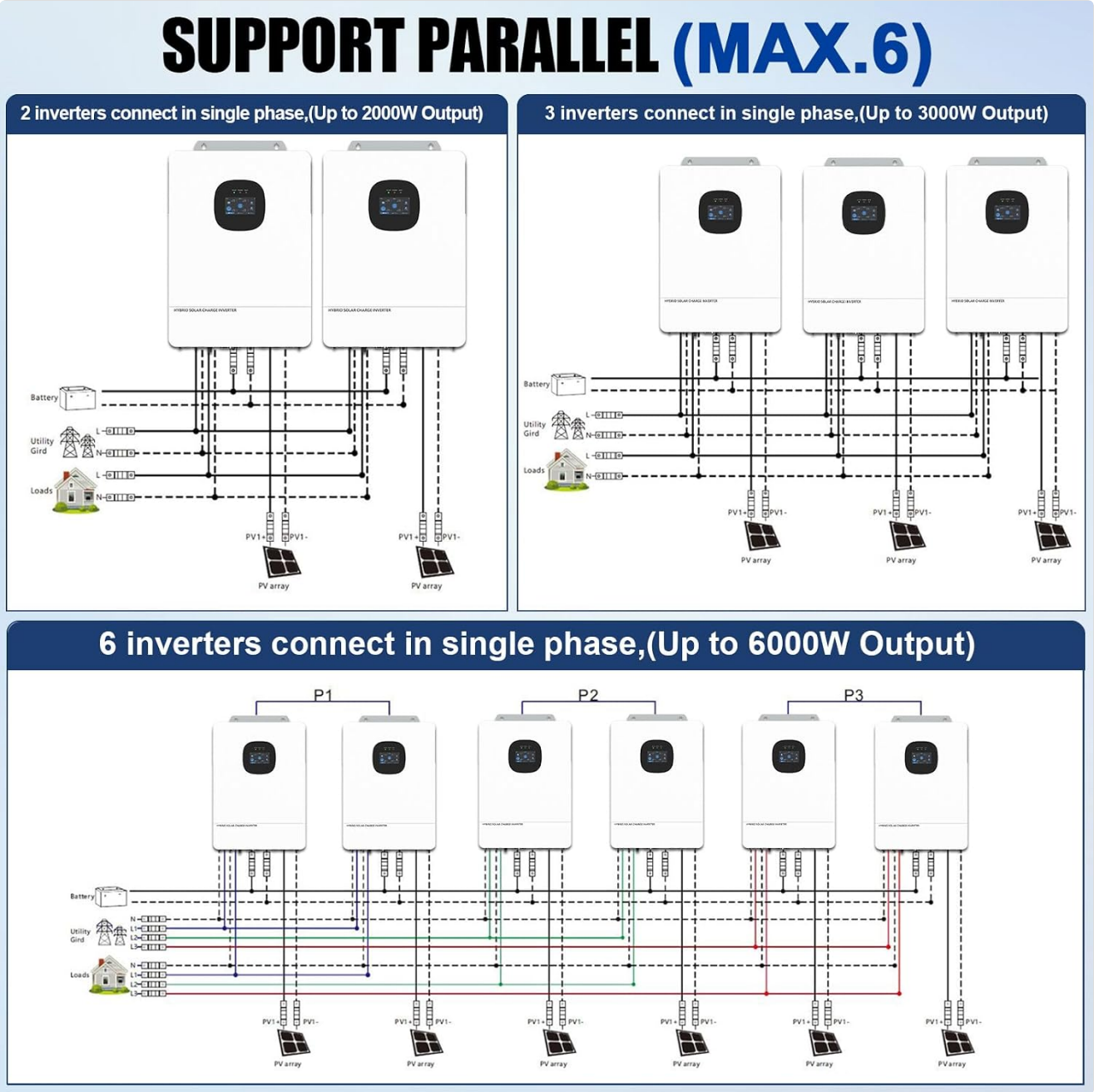


Image: Comprehensive 360° Protection features of the POWLAND Hybrid Solar Inverter.

3. Product Features

- **Energy Saving and Grid Integration:** Delivers 10,000W of pure sine wave power (120V ± 5%) for heavy loads. Its battery-less design allows excess solar energy to be fed directly to your home and the grid (with an optional CT sensor), potentially reducing battery costs. Ideal for large homes and RV parks.
- **Hybrid Power with Grid Backup:** Seamlessly integrates solar, battery, and grid power. When the grid is available, it prioritizes powering your home from solar, then intelligently sends excess energy to the grid (anti-reflux enabled). This ensures continuous power for critical loads.
- **Solar Harvest Efficiency:** An advanced MPPT controller captures up to 99.9% of available solar energy, generating approximately 15% more power during low light conditions (e.g., dawn/dusk) compared to standard inverters. It supports a massive solar input range of 90-485V DC / 250A.
- **Protection and Monitoring:** Built with robust 360° safety protections, including overload, short circuit, reverse polarity, over/under voltage, and an IP65 waterproof housing for protection against rain and dust. A clear LCD display and intuitive LED indicators provide real-time operational status.
- **Quiet Operation and Future-Proof:** Offers universal 48V battery compatibility (LiFePO4 and lead-acid). A

smart ECO mode extends battery life by 30%. The ultra-quiet dual-fan cooling system operates at only 45 dB, making it 50% quieter than many competitors. Power can be easily expanded up to 6,000W by stacking up to 6 units using patented synchronization technology.



Image: The inverter provides 10000W pure sine wave output, compatible with most household appliances.

4. Setup and Installation

Proper installation is crucial for the inverter's performance and safety. Refer to the connection diagram and follow local electrical codes.

4.1 Connection Diagram

The following diagram illustrates the typical connection setup for the POWLAND Hybrid Solar Inverter, including solar panels, battery, home load, and grid connection.

Image: Connection Diagram for the POWLAND Hybrid Solar Inverter.

4.2 Parallel Operation

The inverter supports parallel operation for increased power output, allowing up to 6 units to be stacked for a total output of up to 6000W in single-phase configurations.

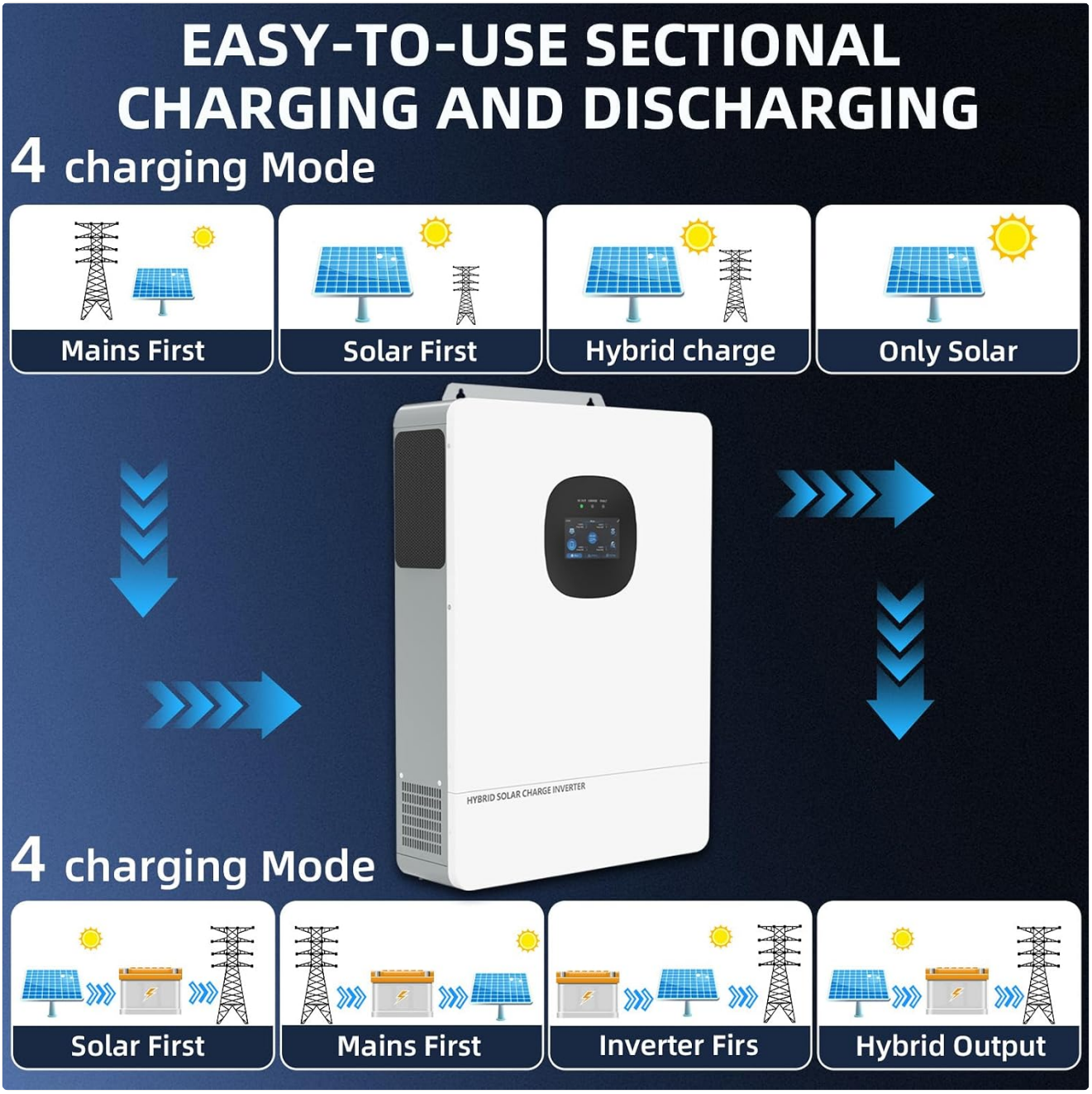


Image: Parallel connection configurations for multiple inverters.

5. Operating Instructions

The inverter features an intuitive LCD HD display for real-time data monitoring and parameter settings.

5.1 LCD HD Display

The LCD provides critical information such as voltage, power, and operational status. Users can view real-time data and adjust various parameters directly from the display interface.



Image: LCD HD Display for viewing real-time data and setting parameters.

5.2 Charging Modes

The inverter offers flexible charging and discharging modes to optimize energy management:

- **Mains First:** Prioritizes grid power for charging.
- **Solar First:** Prioritizes solar power for charging.
- **Hybrid Charge:** Combines solar and grid power for charging.
- **Only Solar:** Charges exclusively from solar power.

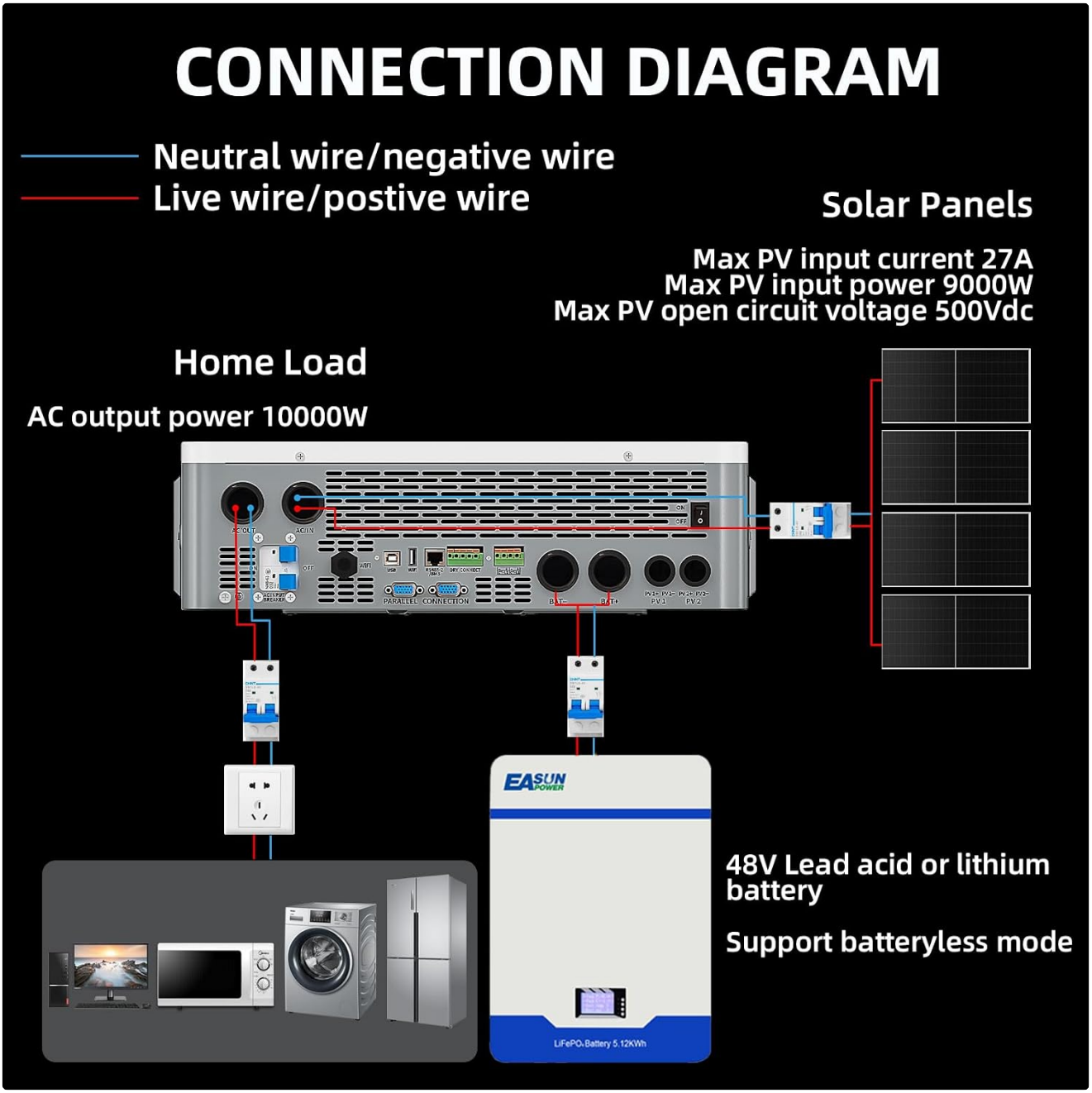


Image: Easy-to-use sectional charging and discharging modes.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter.

- Keep the inverter's ventilation openings clear of dust and debris to ensure proper cooling.
- Periodically inspect all electrical connections for tightness and signs of corrosion.
- Clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners.
- Monitor the LCD display for any error codes or unusual readings.

7. Troubleshooting

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

- **No Power Output:** Check input power from solar panels and battery. Verify all circuit breakers are on.

- **Error Code Displayed:** Consult the specific error code in the full product manual (if available) or contact support with the code.
- **Overheating:** Ensure adequate ventilation around the inverter. Clear any obstructions from cooling fans.
- **Battery Not Charging:** Check solar panel connections and output. Verify battery health and connections.

8. Specifications

Feature	Specification
Brand	POWLAND
Model	Inverter
Manufacturer	EASUN POWER
Rated Power Output	10000W (Pure Sine Wave)
AC Output Voltage	120V/240V AC (Split-Phase)
DC Input Voltage	48V DC
MPPT Charger Current	250A
Max PV Input Voltage	500Vdc
Battery Compatibility	LiFePO4, Lead-Acid (48V)
Parallel Capability	Up to 6 units (6000W max in single-phase)
Protection Rating	IP65

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact POWLAND customer service. Keep your purchase receipt as proof of purchase.

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