

PXNQMTJM SPF5000TLHVMP

PXNQMTJM SPF 5000TL HVM Hybrid Off-Grid Inverter

User Instruction Manual - Model: SPF5000TLHVMP

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your PXNQMTJM SPF 5000TL HVM Hybrid Off-Grid Inverter. This device is designed to integrate solar and/or wind power with battery storage and utility power, providing a reliable AC power supply for various applications. Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage to the unit or injury to personnel.

2. SAFETY INFORMATION

WARNING: This inverter generates high voltage. Installation and maintenance must be performed by qualified personnel only. Failure to follow these instructions may result in serious injury or death.

- Ensure all power sources (PV, battery, utility) are disconnected before installation or maintenance.
- Do not attempt to disassemble or repair the inverter yourself. Contact qualified service personnel.
- Install the inverter in a well-ventilated area, away from flammable materials and direct sunlight.
- Ensure proper grounding of the inverter according to local electrical codes.
- Do not operate the inverter if it is wet or damaged.

3. PRODUCT OVERVIEW

The SPF 5000TL HVM is a versatile hybrid inverter designed for off-grid and hybrid solar/wind power systems. It features a robust design with a clear display and intuitive controls for monitoring and configuration.



Figure 3.1: Front view of the SPF 5000TL HVM Inverter. The front panel includes a digital display for status monitoring and navigation buttons for settings adjustment.



Figure 3.2: Angled view of the SPF 5000TL HVM Inverter, highlighting the cooling fins on the side and the various input/output terminals for battery, PV, and AC connections.

3.1. Key Components

- **LCD Display:** Shows system status, operating parameters, and error messages.
- **Control Buttons:** Used for navigating menus and adjusting settings.
- **AC Input/Output Terminals:** Connections for utility grid and AC loads.

- **PV Input Terminals:** Connections for solar panel arrays.
- **Battery Terminals:** Connections for battery bank.
- **Communication Ports:** For external monitoring and control (e.g., RS232, USB).
- **Cooling Fan/Vents:** Ensures proper heat dissipation.

4. SETUP AND INSTALLATION

Careful installation is crucial for the safe and reliable operation of your inverter. Ensure all steps are followed precisely.

4.1. Unpacking and Inspection

- Unpack the inverter and inspect it for any shipping damage. Report any damage to your supplier immediately.
- Verify that all accessories are included as per the packing list.

4.2. Mounting the Inverter

- Choose a suitable mounting location: indoors, vertically mounted on a solid wall, away from direct sunlight, water, and heat sources.
- Ensure adequate clearance (at least 20 cm) around the inverter for proper ventilation.
- Use appropriate mounting hardware to secure the inverter firmly to the wall.

4.3. Wiring Connections

Before making any connections, ensure all circuit breakers are OFF and the battery bank is disconnected.

1. **Battery Connection:** Connect the battery cables to the inverter's battery terminals. Ensure correct polarity (positive to positive, negative to negative) and tighten connections securely.
2. **PV Array Connection:** Connect the solar panel strings to the PV input terminals. Observe correct polarity and ensure the open-circuit voltage and current do not exceed the inverter's specifications.
3. **AC Input Connection:** Connect the utility grid or generator AC input to the designated AC input terminals.
4. **AC Output Connection:** Connect your AC loads to the AC output terminals.
5. **Grounding:** Connect the inverter's ground terminal to a reliable earth ground.

5. OPERATING INSTRUCTIONS

Once all connections are secure and verified, you can proceed with powering on the inverter.

5.1. Initial Startup

1. Connect the battery bank. The inverter's display should light up.
2. Turn on the PV array disconnect switch (if applicable).
3. Turn on the AC input circuit breaker (if connected to utility/generator).
4. Turn on the AC output circuit breaker to power your loads.
5. Observe the LCD display for system status and any error messages.

5.2. LCD Display and Button Functions

The LCD display provides real-time information about the inverter's operation. Use the navigation buttons (UP, DOWN, ENTER, ESC) to browse menus and adjust settings. Refer to the on-screen menu for specific parameter adjustments such as output voltage, charging current, and operating modes (e.g., Utility Priority, Solar Priority, Battery Priority).

5.3. Shutdown Procedure

1. Turn off the AC output circuit breaker to disconnect loads.
2. Turn off the AC input circuit breaker (if connected).
3. Turn off the PV array disconnect switch.
4. Disconnect the battery bank.
5. Ensure the inverter display is off before performing any maintenance.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your inverter.

- **Periodic Inspection:** Regularly check all wiring connections for tightness and signs of corrosion.
- **Cleaning:** Keep the inverter's ventilation openings clear of dust and debris. Use a soft, dry cloth to clean the exterior. Do not use liquid cleaners.
- **Battery Maintenance:** Follow the battery manufacturer's guidelines for maintenance, including checking electrolyte levels (for flooded batteries) and terminal cleanliness.
- **Environmental Check:** Ensure the installation environment remains within specified temperature and humidity ranges.

7. TROUBLESHOOTING

This section provides solutions for common issues. If the problem persists, contact technical support.

Problem	Possible Cause	Solution
Inverter not turning on	Battery not connected or low voltage; DC breaker off.	Check battery connections and voltage; ensure DC breaker is on.
No AC output	AC output breaker off; Overload; Inverter fault.	Turn on AC output breaker; Reduce load; Check display for error codes.
Battery not charging	PV input disconnected; AC input disconnected; Charging settings incorrect.	Check PV and AC input connections; Verify charging settings on LCD.
Overload warning	Connected loads exceed inverter capacity.	Reduce the total load connected to the inverter.

8. SPECIFICATIONS

Technical specifications for the SPF 5000TL HVM Inverter (Model: SPF5000TLHVMP).

Feature	Detail
Model	SPF5000TLHVMP
Inverter Efficiency	93%
Dimensions (L/W/H)	315 x 400 x 130 mm
Item Weight	31.3 pounds (approx. 14.2 kg)
Power Source Type	Battery Powered (Inverter power supply)
Wattage	1 kWh (Note: This refers to energy capacity, not continuous output power. Consult product datasheet for full power ratings.)
Manufacturer	PXNQMTJM
ASIN	B0GHDPV3CB

9. WARRANTY AND SUPPORT

For warranty information, please refer to the warranty card included with your product or contact your point of purchase. For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact PXNQMTJM customer service or your authorized dealer. Please have your model number (SPF5000TLHVMP) and purchase date available when contacting support.