FCPLEXSW HFP-103248

FCPLEXSW HFP-103248 Hybrid Inverter User Manual

Model: HFP-103248

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the FCPLEXSW HFP-103248 Hybrid Inverter. This device is designed to integrate photovoltaic (PV) power with grid and battery systems, offering both on-grid and off-grid functionalities. Please read this manual thoroughly before installation and operation to ensure proper use and to prevent potential hazards.

2. Safety Instructions

WARNING: Electrical shock hazard. Only qualified personnel should perform installation and maintenance procedures.

- Ensure all power sources (PV, battery, grid) are disconnected before installation or maintenance.
- Do not attempt to 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.
- Wear appropriate personal protective equipment (PPE) during installation.
- Keep children away from the inverter and its connections.

3. Product Overview

The FCPLEXSW HFP-103248 is a versatile hybrid inverter capable of managing power flow from solar

panels, batteries, and the utility grid. It features a user-friendly interface and robust connectivity options.

3.1 Front Panel and Display

The front panel provides status indicators, a liquid crystal display (LCD), and control buttons for monitoring and configuring the inverter.

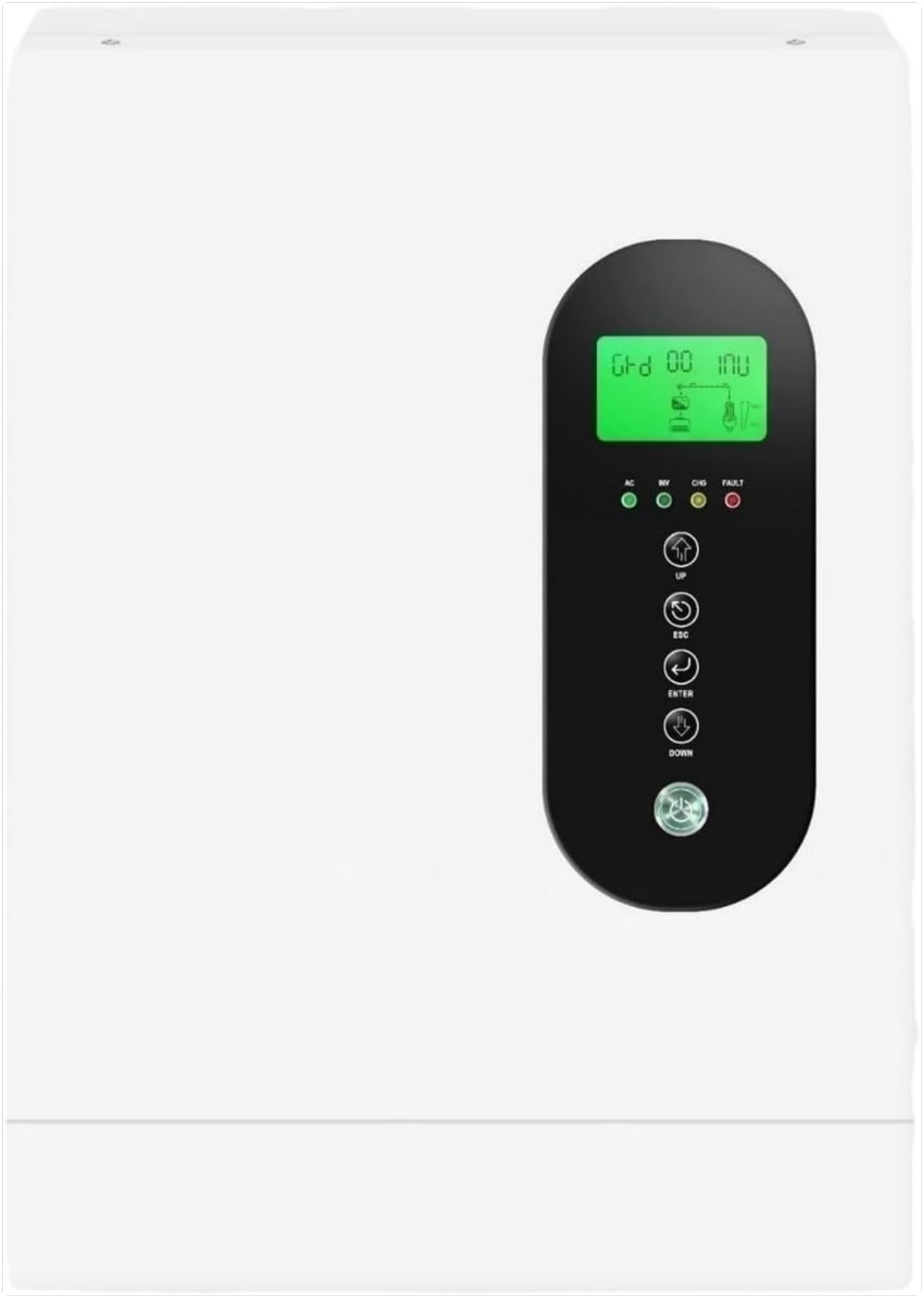

Figure 1: Front view of the HFP-103248 Inverter. The central black panel houses the green LCD screen at the top, displaying operational status and data. Below the screen are several indicator LEDs (AC, INV, CHG, FAULT) and a series

of control buttons: UP, ESC, ENTER, and DOWN, arranged vertically. A power button is located at the very bottom.

- **LCD Display:** Shows real-time operational data, settings, and error codes.
- **LED Indicators:** Provide quick visual status (e.g., AC input, inverter operation, charging, fault).
- **Control Buttons:** Used for navigating menus and adjusting settings.

3.2 Rear Panel and Connections

The rear panel contains all necessary input and output terminals for connecting to solar panels, batteries, the utility grid, and loads.

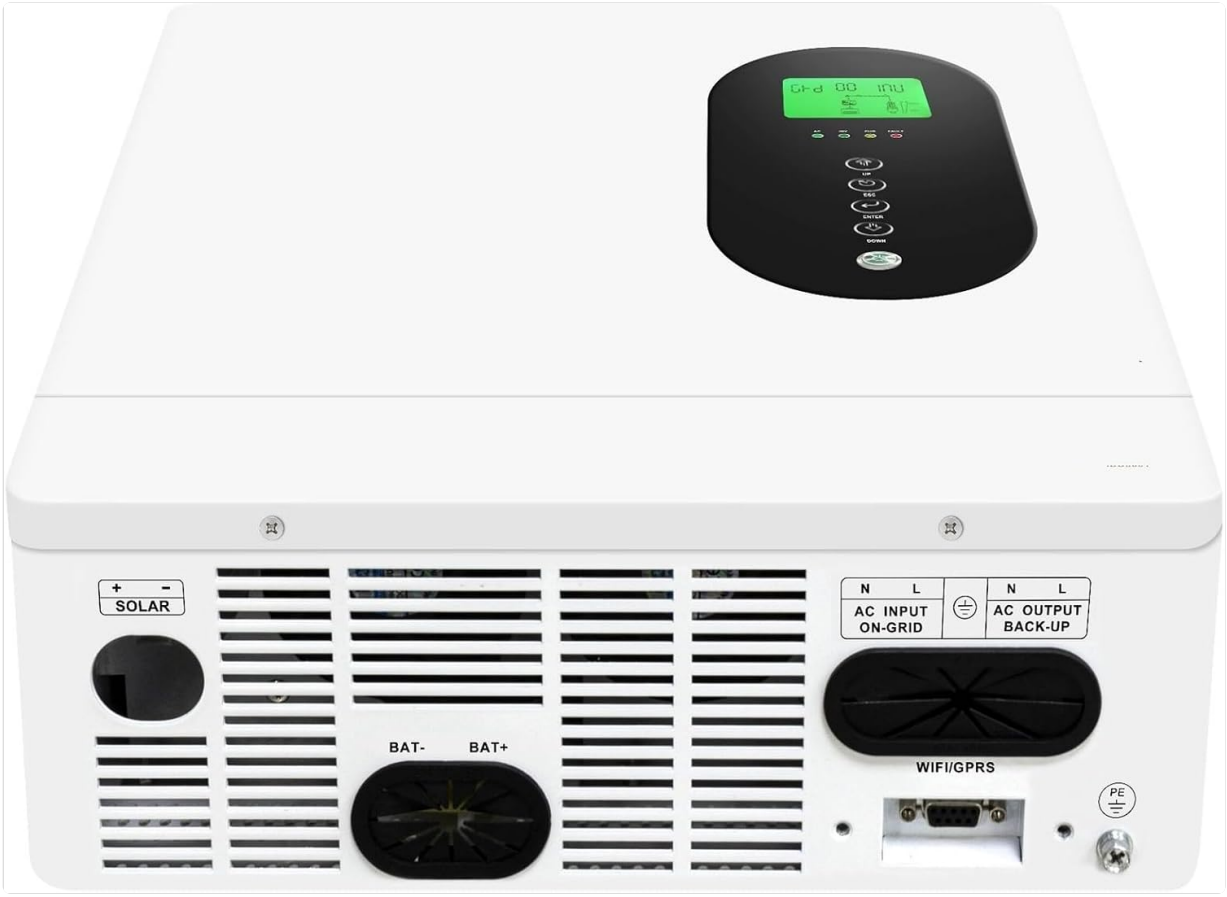

Figure 2: Rear view of the HFP-103248 Inverter. On the left, there are terminals labeled '+ SOLAR' and '- SOLAR' for photovoltaic input. Below these are ventilation grilles. In the center, large terminals are visible for 'BAT-' and 'BAT+' connections. To the right of the battery terminals, there are AC input terminals labeled 'N', 'L', and ground for 'AC INPUT ON-GRID', and similar terminals for 'AC OUTPUT BACK-UP'. Further to the right, there are ports for 'WIFI/GPRS' communication and a 'PE' (Protective Earth) grounding point.

- **PV Input:** Terminals for connecting solar panel arrays.
- **Battery Input:** Terminals for connecting battery banks.
- **AC Input (On-Grid):** Connection for the utility grid.
- **AC Output (Back-Up):** Output for connecting critical loads during power outages.
- **Communication Ports:** For WiFi/GPRS modules to enable remote monitoring and control.
- **Grounding Terminal:** For protective earth connection.

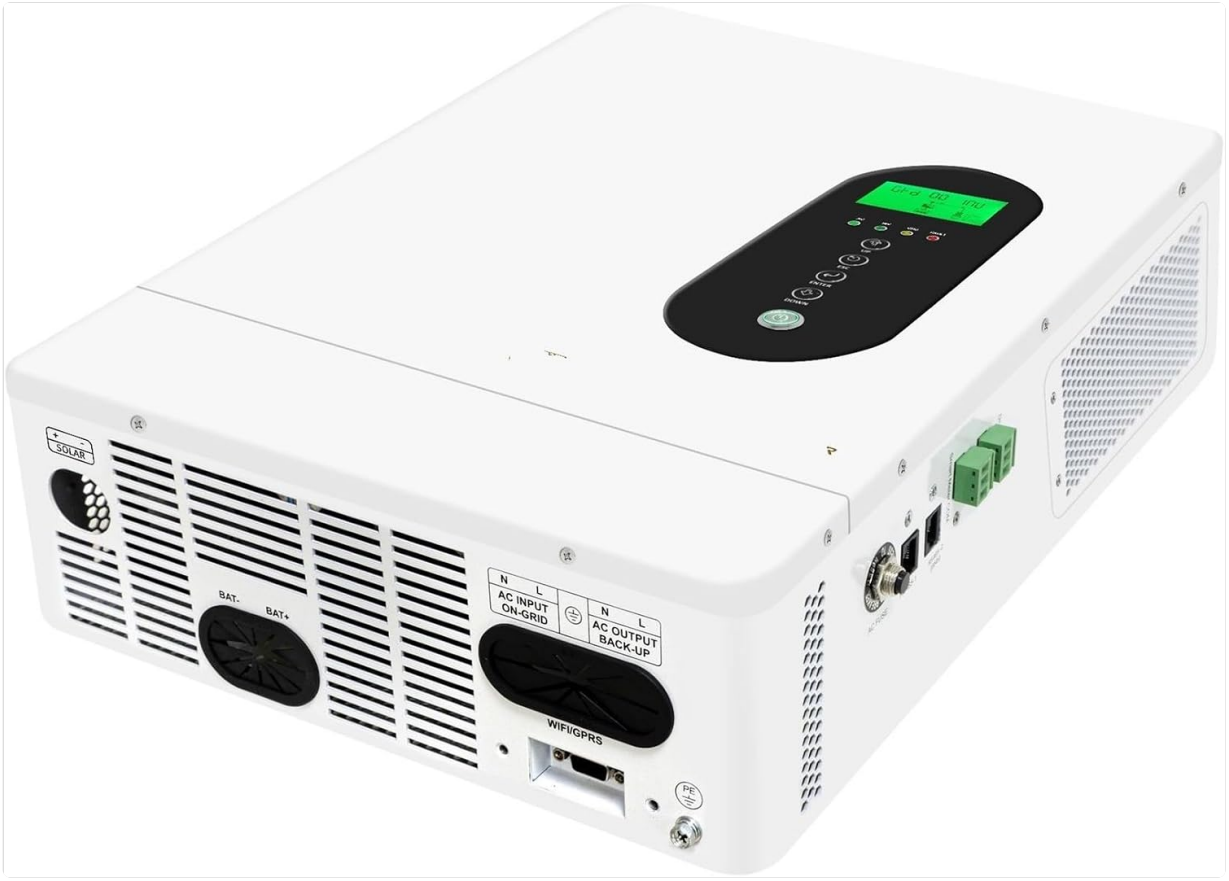

Figure 3: Angled view of the HFP-103248 Inverter, providing a perspective that includes both the front display panel and the rear connection terminals. This view highlights the overall compact design and the placement of various interfaces.

4. Setup and Installation

Proper installation is crucial for the safe and optimal performance of the inverter. Follow these steps carefully.

4.1 Mounting the Inverter

- Choose a suitable location: indoors, dry, well-ventilated, and protected from direct sunlight, rain, and dust.
- Ensure adequate clearance around the inverter for heat dissipation (at least 20 cm on all sides).
- Mount the inverter vertically on a sturdy wall using appropriate fasteners.

4.2 Wiring Connections

All wiring must comply with local electrical codes and regulations.

1. **Grounding:** Connect the grounding terminal (PE) to a reliable earth ground.
2. **Battery Connection:** Connect the battery bank to the BAT+ and BAT- terminals. Ensure correct polarity. Use appropriately sized cables and fuses.
3. **PV Connection:** Connect the solar panel array to the +SOLAR and -SOLAR terminals. Verify correct polarity and ensure the PV input voltage is within the inverter's specified range.
4. **AC Input (Grid) Connection:** Connect the utility grid supply to the AC INPUT ON-GRID terminals (N, L, Ground). Install an external circuit breaker for protection.
5. **AC Output (Load) Connection:** Connect your loads to the AC OUTPUT BACK-UP terminals (N, L, Ground). Install an external circuit breaker.

6. **Communication Module (Optional):** If using, install the WiFi/GPRS module into its designated port.

5. Operating Instructions

Once all connections are secure, you can power on and configure the inverter.

5.1 Powering On the Inverter

1. Ensure all external circuit breakers are in the OFF position.
2. Turn on the battery breaker.
3. Turn on the PV array breaker.
4. Turn on the AC input (grid) breaker.
5. Press and hold the power button on the inverter's front panel until the display illuminates.
6. Turn on the AC output (load) breaker.

5.2 LCD Display and Settings

Use the UP, DOWN, ESC, and ENTER buttons to navigate the LCD menu. The display provides information on:

- Input/Output Voltage and Current
- Battery Status (Voltage, Charge/Discharge Current)
- Load Percentage
- Operating Mode (e.g., Grid-Tie with Battery Backup, Off-Grid)
- System Faults and Warnings

Refer to the detailed menu structure in the full product manual for specific setting adjustments, such as charge current, output voltage, and operating priorities.

5.3 Powering Off the Inverter

1. Turn off the AC output (load) breaker.
2. Turn off the AC input (grid) breaker.
3. Press and hold the power button on the inverter's front panel until the display turns off.
4. Turn off the PV array breaker.
5. Turn off the battery breaker.

6. Maintenance

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

- **Cleaning:** Periodically clean the inverter's exterior and ventilation openings with a dry, soft cloth. Ensure the inverter is powered off before cleaning. Do not use liquid cleaners.
- **Inspection:** Annually inspect all wiring connections for tightness and signs of corrosion. Check for any physical damage to the inverter casing or cables.
- **Environment:** Ensure the installation environment remains within specified temperature and humidity ranges.
- **Battery Care:** Follow the battery manufacturer's maintenance guidelines for your specific battery type.

7. Troubleshooting

This section outlines common issues and their potential solutions. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
Inverter does not power on	No battery connection; Battery voltage too low; Power button not pressed correctly.	Check battery connections and voltage; Ensure battery is charged; Press and hold power button.
No AC output	AC output breaker off; Overload; Inverter fault.	Check AC output breaker; Reduce load; Check LCD for fault codes.
PV input not detected	PV array disconnected; PV voltage too low/high; PV breaker off.	Check PV connections and voltage; Ensure PV breaker is on.
Error code on LCD	Specific system fault.	Refer to the full manual's error code section for detailed explanations and solutions.

8. Specifications

Key technical specifications for the FCPLEXSW HFP-103248 Hybrid Inverter.

- **Brand:** FCPLEXSW
- **Model Name:** FCPLEXSW
- **Model Number:** FCPLEXSW (HFP-103248 variant)
- **Power Source:** Battery Powered
- **Wattage:** 1 kWh (Note: Product title indicates 5KW-12KW output range)
- **Inverter Efficiency:** 94%
- **Maximum Output Power:** 12000W
- **Continuous Output Power:** 5000W-12300W
- **Load Regulation:** 3
- **Type:** Hybrid Inverter/Photovoltaic On-Grid and Off-Grid Inverter

Note: Specifications are subject to change without prior notice. Refer to the product label for the most accurate information.

9. Warranty and Support

For warranty information and technical support, please refer to the documentation included with your purchase or contact FCPLEXSW customer service through their official channels. Ensure you have your product model number (HFP-103248) and purchase details available when contacting support.
No official product videos were provided for this manual.