

AFERIY AF-P310-EC-H+2X400W

AFERIY Solar Generator 3840Wh Portable Power Station User Manual

Model: AF-P310-EC-H+2X400W | Brand: AFERIY

1. INTRODUCTION

Thank you for choosing the AFERIY Solar Generator 3840Wh Portable Power Station. This powerful and versatile unit, combined with two 400W solar panels, is designed to provide reliable power for a wide range of applications, from home backup and outdoor camping to RV use and emergency power outages. This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your new power station.



Figure 1: AFERIY Solar Generator with two 400W solar panels.

2. SAFETY INFORMATION

Please read and understand all safety warnings and instructions before using this product. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- Do not disassemble, repair, or modify the unit. Incorrect reassembly may cause fire or electric shock.
- Keep the unit away from fire or direct sunlight to prevent overheating.
- Do not use or store the unit in a bathroom or in an area exposed to water or moisture.
- Ensure proper ventilation during use to prevent overheating.
- The integrated Battery Management System (BMS) provides six levels of safety protection, including charge over-voltage, discharge low voltage, charge/discharge high temperature, charge/discharge overcurrent, and charge/discharge short circuit protection.
- This item contains lithium batteries and is subject to hazardous materials regulations for transportation. Handle with care.



Figure 2: The Battery Management System (BMS) ensures comprehensive safety.

3. PACKAGE CONTENTS

Upon receiving your AFERIY Solar Generator, please verify that all the following items are included in the package:

- AFERIY AF-P310-EC-H Portable Power Station (3840Wh/3600W)
- 2 x 400W Solar Panels
- AC Charging Cable
- Solar Charging Cable (MC4-XT90)
- User Manual
- Warranty Card
- Dust Cover

Your browser does not support the video tag.

Video 1: Unboxing the AFERIY P310 Portable Power Station and its accessories.



Figure 3: All components included with the AFERIY Solar Generator.

4. PRODUCT OVERVIEW

The AFERIY AF-P310-EC-H is a high-capacity portable power station designed for robust performance and portability.

4.1 Key Features

- **High Capacity:** 3840Wh LiFePO4 (LFP) battery, expandable up to 11520Wh with additional batteries.
- **Powerful Output:** 3600W AC output (120V) capable of powering 99.99% of heavy-duty devices.
- **Fast Charging:** 0-100% in 2.5 hours via AC input. Supports 5x 400W solar panels for 2.5-hour solar charging.
- **Long Lifespan:** LFP batteries offer 3500+ cycles, providing over 10 years of service life.
- **Multiple Outputs:** 4x USB-A, 2x USB-C, 5x AC outlets, 2x DC outlets, 1x Vehicle Power Output, 2x Anderson ports.
- **Smart APP Control:** Monitor status, control switches, and customize settings remotely via the AFERIY APP.
- **Uninterrupted Power Supply (UPS):** Less than 10ms switching time for seamless power during outages.
- **Portable Design:** Equipped with a sturdy pull handle and silky smooth dual wheels for easy transport.

4.2 Components and Ports

Familiarize yourself with the various components and input/output ports of the power station.

Easy to Carry



Figure 4: The portable design with handle and wheels for easy transport.

For Travel & Home Use

You may apply for the Residential Clean Energy Credit for qualified solar electric property costs.

3840Wh



Phone (3915mAh)
231 times



Switch (4310mAh)
210 times



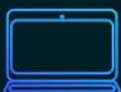
Electric Grill (1450W)
2.3hr



Portable Coffee Maker (80w)
41.9hr



Projector (65W)
51.6hr



Laptop (70W)
48 times



Refrigerator (120W)
27.9hr



Microwave (1300w)
2.6hr

Figure 5: Front panel with display and various output ports.

5. SETUP

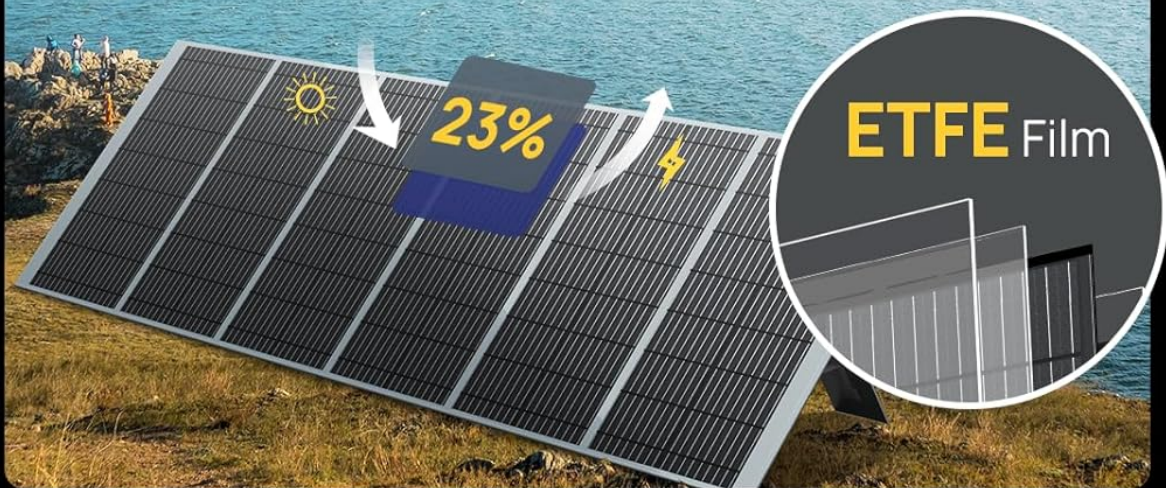
Follow these steps to set up your AFERIY Solar Generator for first use:

1. **Unpack the Unit:** Carefully remove the power station and all accessories from the packaging. Retain the packaging for future storage or transport.

2. **Initial Charge:** For optimal performance, fully charge the power station before its first use. Connect the AC charging cable to a standard wall outlet and to the AC input port on the power station. The display will indicate charging status.
3. **Solar Panel Setup:** Unfold the solar panels and position them in direct sunlight for maximum efficiency. Connect the solar panels to the power station using the provided solar charging cable (MC4-XT90).
4. **Download the APP:** Download the AFERIY APP from your device's app store to enable smart control and monitoring.

High Quality

Each monocrystalline silicon cell is covered with an ETFE film, which provides good light transmission and improves the conversion of light. Up to 23%



With an IP67 waterproof rating, the protects against debris, dirt and rain, making it ideal for off-grid living camping and caravanning adventures.



Figure 6: High-quality monocrystalline silicon solar panels with ETFE film for efficient charging.

6. OPERATING INSTRUCTIONS

This section details how to operate your AFERIY Solar Generator for various power needs.

6.1 Charging the Power Station

- **AC Charging:** Connect the AC charging cable to a wall outlet. The power station can charge from 0-100% in approximately 2.5 hours. A rotary knob allows adjustment of charging speed.
- **Solar Charging:** Connect the solar panels to the power station. With 5x 400W solar panels, the unit can be fully charged in about 2.5 hours. Solar conversion efficiency is up to 23%.
- **Car Charging:** Use a compatible car charger (not included) to charge the unit from your vehicle's 12V outlet.
- **AC + Solar Charging:** Combine AC and solar input for the fastest charging, achieving a full charge in approximately 1.3 hours.

Fast Charging



**Charging
100%**

2.5H 16% Faster

AFERIY AF-P310-EC-H

2.9H

Another

UPS

10ms

50% Faster

AFERIY AF-P310-EC-H

20ms

Another



**AC CHARGE
2.5hr**



**SOLAR CHARGE
5*400W
2.5hr**



**CAR CHARGE
32hr**



**AC+SOLAR
CHARGE
1.3hr**

NOTE: When the maximum wattage charge is adjusted on the machine and the AF-P310-EC-H is connected to an AC power supply.

Figure 7: Various fast charging options for the power station.

6.2 Powering Devices

The power station offers multiple output ports to power a wide range of devices simultaneously.

- **AC Outlets:** Use the 5 AC outlets for household appliances and heavy-duty tools up to 3600W.
- **USB Ports:** Utilize the 4 USB-A and 2 USB-C ports for charging mobile phones, tablets, laptops, and other USB-

powered devices.

- **DC & Vehicle Output:** Connect DC-powered devices or use the vehicle power output for compatible accessories.
- **Anderson Ports:** For specific high-power DC applications.



Figure 8: Powering kitchen appliances with the AFERIY Solar Generator.

You can apply for a 30% tax credit

Under the Inflation Suppression Act signed into law on 16 August 2022, the Investment Tax Credit (ITC) was expanded. If you are a U.S. taxpayer interested in installing a solar system on your primary residence, the federal solar tax credit may save you up to 30% of the current cost of a solar system.

Disclaimer.

*With qualifying battery storage technology of 3kWh or more, you may be able to claim the Residential Clean Energy Credit for improvements made to your principal residence, whether you own or lease the residence. Your primary residence is usually where you live the longest. The tax credit applies to new or existing homes located in the United States. You cannot claim the credit if you are a landlord or other property owner who does not live in the residence. Depending on your individual circumstances, you should consult with your tax professional to determine if you qualify for the Residential Clean Energy Credit under Section 25D of the Internal Revenue Code. AFERIY DOES NOT GUARANTEE ANY TAX CREDITS BASED ON OUR PRODUCTS, and any information we provide is for educational purposes only, and should not be considered legal advice. It does not constitute professional tax advice or financial guidance and should not be used as the sole source of information for purchasing decisions, investment decisions, tax decisions or implementation. Effective date: 1 December 2025

Figure 9: Powering workshop tools with the AFERIY Solar Generator.

6.3 Smart APP Control

The AFERIY APP provides convenient remote control and monitoring capabilities.

- Monitor the power supply status, including input and output wattage, battery level, and remaining runtime.
- Remotely control all switches for outputs and customize settings such as charging parameters.
- Optimize your energy usage to meet specific needs.

Smart APP can control the Power

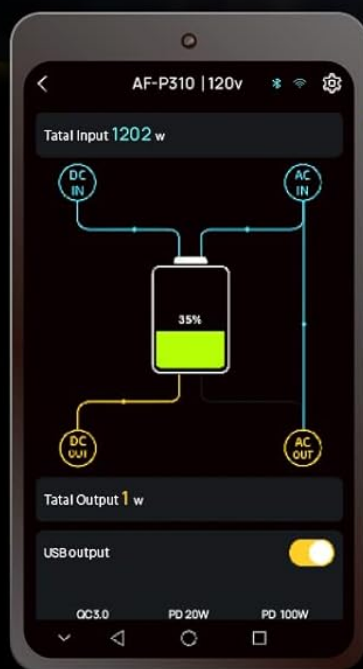


Figure 10: Smart APP control for remote monitoring and management.

6.4 Uninterrupted Power Supply (UPS) Function

When connected to an AC power source, the power station can function as a UPS, providing seamless power to connected devices during an outage with a switching time of less than 10 milliseconds.

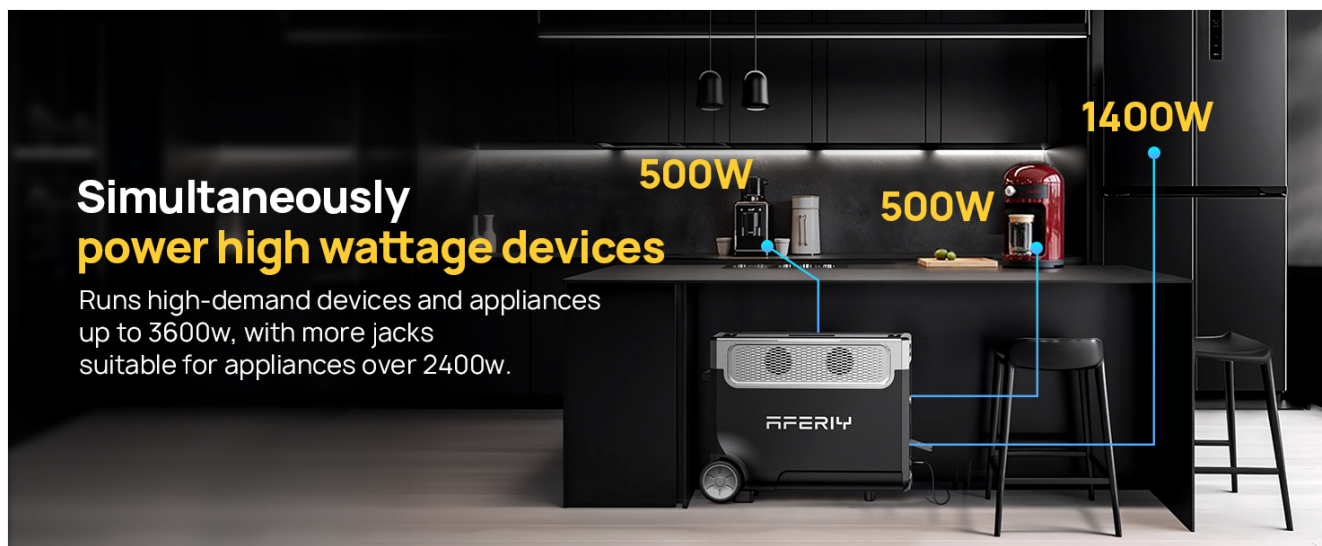


Figure 11: Ensuring continuous power supply for critical devices.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your AFERIY Solar Generator.

- **Regular Cleaning:** Use a soft, dry cloth to clean the exterior of the power station and solar panels. Avoid using harsh chemicals or abrasive materials.
- **Storage:** When not in use for extended periods, store the power station in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure the battery is charged to approximately 50-80% before storage.
- **Battery Health:** The LFP battery is designed for over 3500 charge cycles, providing a long service life of up to 10 years. Regular usage within recommended parameters will help maintain battery health.
- **Dust Cover:** Utilize the provided dust cover to protect the power station from dust and debris when not in use or during transport.

Easy to Carry and **Protect**

Can be easily folded and put anywhere Nylon design protects the solar panel and is **easy to carry**.



Unfolded: **110.24 x 32.28 x 0.16 inch** Folded: **18.98 x 32.28 x 2.52 inch**



Figure 12: The solar panel's nylon design allows for easy folding and protection.

8. TROUBLESHOOTING

If you encounter issues with your AFERIY Solar Generator, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Unit not turning on	Low battery; Power button not pressed correctly.	Charge the unit; Press and hold the power button for a few seconds.
No output from AC/DC ports	Output port not activated; Overload protection; Low battery.	Ensure AC/DC output is enabled; Reduce connected load; Recharge the unit.
Slow charging via solar	Insufficient sunlight; Panels not optimally angled; Dirty panels.	Reposition panels for direct sunlight; Adjust angle; Clean panels.
Display issues (e.g., dark segments)	Possible loose connection or defect.	Try gently moving the unit; If persistent, contact AFERIY customer service.
APP connectivity issues	No internet connection; Bluetooth/Wi-Fi off; APP not updated.	Ensure stable internet connection; Check device's Bluetooth/Wi-Fi; Update APP.

For more complex issues or if troubleshooting steps do not resolve the problem, please contact AFERIY customer service.

9. SPECIFICATIONS

Feature	Detail
Model	AF-P310-EC-H
Battery Capacity	3840Wh (expandable up to 11520Wh)
AC Output Power	3600W (120V)
Battery Type	LiFePO4 (LFP)
Cycle Life	3500+ cycles to 80% capacity
AC Charging Time (0-100%)	Approx. 2.5 hours
Solar Charging Time (5x 400W panels)	Approx. 2.5 hours
AC + Solar Charging Time	Approx. 1.3 hours
UPS Switching Time	< 10ms
Dimensions (L x W x H)	27.32" x 15.9" x 23.11"
Item Weight	158.04 Pounds
Material	ABS
Total Power Outlets	15 (4*USB-A, 2*USB-C, 5*AC, 2*DC, 1*Vehicle, 2*Anderson)

10. WARRANTY AND SUPPORT

AFERIY stands behind the quality of its products.

- **Warranty:** This product comes with a 7-year warranty. Please refer to your warranty card for detailed terms and conditions.
- **Customer Service:** For any questions, technical support, or warranty claims, please contact AFERIY customer service. Contact information can be found on the warranty card or the official AFERIY website.

- **Tax Credit Information:** Qualifying solar electric property costs may be eligible for the Residential Clean Energy Credit (30% tax credit). Please consult with your utility company or a tax professional for eligibility and requirements. AFERIY does not guarantee tax credits based on its products and provides information for educational purposes only.

A photograph of a modern, two-story house at night. The house has a light-colored exterior and dark wooden accents on the roof and eaves. The interior lights are on, and the windows are visible. A large potted plant sits on the wooden deck. A portable solar generator, labeled 'AFERIY', is plugged into a wall outlet on the house. The generator has a digital display showing '33.00'.

You can apply for a **30%** tax credit

You may apply for the Residential Clean Energy Credit
for qualified solar electric property costs.

30%
TAX credit

Check with your utility to verify eligibility and requirements on IRS

Figure 13: Information regarding potential tax credits for solar electric property costs.

