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### AFERIY AF-P310-EC-H

# AFERIY P310-EC-H Expansion Battery Pack Instruction Manual

Model: AF-P310-EC-H | Brand: AFERIY

## 1. PRODUCT OVERVIEW

The AFERIY P310-EC-H is an expansion battery pack designed to significantly increase the energy storage capacity of your AFERIY P310 Main Unit. This unit adds 3840Wh of LiFePO4 extra capacity, allowing for extended home backup, outdoor camping, and reliable power for various applications. It integrates seamlessly with the main unit for charging and monitoring.



Figure 1: AFERIY P310 Expansion Battery Pack with integrated wheels and handles for portability.

## 2. SETUP INSTRUCTIONS

This expansion battery pack is designed to work exclusively with the AFERIY P310 Main Unit. It cannot function independently. Follow these steps to connect and set up your expansion battery pack:

- 1. Unpack the Unit:** Carefully remove the AFERIY P310-EC-H Expansion Battery Pack and its included accessories from the packaging.
- 2. Position the Units:** Place the expansion battery pack next to your AFERIY P310 Main Unit on a stable,

flat surface.

- 3. Connect the Units:** Locate the 'Extra Battery Port' on both the AFERIY P310 Main Unit and the expansion battery pack. Use the provided 3600W connecting cable to securely link the two units. Ensure the connection is firm to prevent accidental disconnection.
- 4. Power On:** Turn on the AFERIY P310 Main Unit. The main unit will automatically detect and integrate the expansion battery pack.
- 5. Verify Connection:** Use the smart app connected to your AFERIY P310 Main Unit to verify that the expansion battery pack's battery level and status are being displayed correctly.



Figure 2: Two AFERIY P310 units connected via the dedicated connecting cable, demonstrating the expandable capacity setup.

### 3. OPERATING INSTRUCTIONS

#### 3.1 Charging the Expansion Battery Pack

The expansion battery pack recharges seamlessly through the connected AFERIY P310 Main Unit. No separate charging setup is needed for the expansion pack.

- AC Charging:** Connect the AFERIY P310 Main Unit to a standard AC wall outlet. The entire system, including the expansion pack, will charge. It can reach a full charge in approximately 1.5 hours under optimal input conditions.
- Solar Charging:** Connect compatible solar panels (not included) to the AFERIY P310 Main Unit. The main unit will then charge itself and the connected expansion pack using solar energy.
- Car Charging:** Use a compatible car charger (not included) to charge the AFERIY P310 Main Unit from your vehicle's 12V outlet. This will also charge the expansion pack.

# Rapid Charging

AC Recharge 0-80% in 2H



Figure 3: AFERIY P310 units demonstrating various rapid charging methods, including AC wall and solar input.

## 3.2 Discharging and Powering Devices

Once connected, the expansion battery pack contributes to the overall capacity of your AFERIY P310 system, allowing you to power devices for extended periods.

- **AC Output:** The AFERIY P310 Main Unit provides 3600W pure sine wave AC output. Connect your appliances directly to the main unit's AC outlets.
- **DC Output:** Utilize the various DC output ports (USB-A, USB-C, 12V/3A, 12V/10A, 12V/25A) on the main unit to charge or power smaller electronic devices.

- **UPS Functionality:** When the main unit is connected to an AC power source and has devices plugged in, it acts as an Uninterruptible Power Supply (UPS). In case of a power outage, the system will automatically switch to battery power within <10ms, ensuring continuous operation for critical devices.

### 3.3 App Monitoring

Use the dedicated smart app (connected to the AFERIY P310 Main Unit) to monitor the status of your entire power system, including the expansion battery pack. The app allows you to track battery level, cycle status, health, and control various settings remotely.

## 4. FEATURES & BENEFITS

- **Expandable LiFePO4 Capacity:** Each expansion pack adds 3840Wh of LiFePO4 battery capacity. The system can scale up to 11.5kWh with multiple packs, providing long-lasting, stable power. LiFePO4 batteries offer over 3500 cycles and up to 10 years of service, outperforming traditional lead-acid batteries in longevity and safety.
- **Seamless UPS Backup:** When paired with the main unit, the expansion battery reinforces the <10ms transfer time Uninterruptible Power Supply. This ensures critical devices like medical equipment, security systems, and routers remain operational during power outages.
- **Dramatically Extended Runtime:** Connect this pack to your main power station to prolong power for essentials. For example, it can support a refrigerator, lights, and phones for multiple days, or power camping equipment for up to 34 hours, depending on the total load.
- **Portability:** The main unit features built-in wheels and an extractable handle, making it easy to move the entire system between different locations, whether for home use, camping, or professional work sites.
- **Safety Features:** The system is UL Listed for safety and incorporates robust protection mechanisms, including charge over-voltage protection, discharge low voltage protection, charge/discharge high temperature protection, charge/discharge low temperature protection, charge/discharge overcurrent protection, and charge/discharge short circuit protection.
- **Tax Credit Eligibility:** This expansion battery pack qualifies as a solar-related accessory under the U.S. Residential Clean Energy Credit (up to 30%). Consult your tax advisor for eligibility.

# Expandable Capacity From 3840Wh to 11520Wh

3840Wh | 7680Wh | 11520Wh



Figure 4: The AFERIY P310 system demonstrating its expandable capacity, allowing for increased power storage with additional battery packs.

## 5. MAINTENANCE

- **Regular Charging:** For optimal battery health and longevity, avoid completely draining the battery frequently. It is recommended to keep LiFePO4 batteries between 20% and 80% charge for daily use.
- **Long-Term Storage:** If storing the unit for an extended period, ensure the battery is charged to

approximately 50%. Store in a cool, dry place away from direct sunlight and extreme temperatures.

- **Cleaning:** Keep the unit clean and free from dust and debris. Use a soft, dry cloth to wipe down the exterior. Ensure ventilation ports are clear to prevent overheating.
- **Firmware Updates:** Periodically check for firmware updates via the smart app to ensure optimal performance and access to new features.

## 6. TROUBLESHOOTING

- **Unit Not Powering On:** Ensure the unit is adequately charged. If the battery is completely drained, connect it to an AC power source for initial charging.
- **No Output from Ports:** Verify that the specific output port (AC, DC, USB) is activated on the main unit. Check the display for any error messages or overload indicators.
- **Overload Protection:** If an overload occurs, the system's protection mechanism may shut down output. Disconnect some devices and restart the output.
- **App Connectivity Issues:** Ensure Bluetooth is enabled on your mobile device and the AFERIY P310 Main Unit. Try restarting both the app and the main unit.
- **Unusual Noise/Heat:** The unit has built-in fans for cooling, which may activate during heavy use or charging. If excessive noise or heat persists, or if you notice any unusual smells, discontinue use and contact customer service.

## 7. SPECIFICATIONS

| Feature                    | Specification                       |
|----------------------------|-------------------------------------|
| Brand                      | AFERIY                              |
| Model Name                 | AF-P310-EC-H                        |
| Battery Capacity           | 3840Wh LiFePO4                      |
| Max Expandable Capacity    | Up to 11.5kWh (with multiple packs) |
| Output Wattage (Main Unit) | 3600 Watts (Pure Sine Wave)         |
| Voltage                    | 120 Volts                           |
| Item Weight                | 93.01 Pounds                        |
| Product Dimensions         | 21.65" L x 12.64" W x 18.27" H      |
| Charging Time (AC)         | 1.5 hours (to full charge)          |
| UPS Transfer Time          | <10ms                               |

| Feature               | Specification                             |
|-----------------------|---|
| Battery Cycle Life    | >3500 cycles                              |
| Special Feature       | Rechargeable Battery, App Control, Wheels |
| Material              | Steel/Aluminum, Plastic/Rubber            |
| Safety Certifications | UL Listed                                 |

## 8. INCLUDED COMPONENTS

- 3840Wh Extended Battery Pack ×1
- 3600W Connecting Cable ×1
- MC4-XT60 Cable ×1
- Protective Cover ×1

## 9. WARRANTY & SUPPORT

The AFERIY P310-EC-H Expansion Battery Pack is backed by a 7-year support promise. This includes dedicated customer service to assist with any product-related inquiries or issues. For support, please refer to the contact information provided in your product packaging or visit the official AFERIY website.

## 10. IMPORTANT SAFETY INFORMATION

Always follow basic safety precautions when using this product to reduce the risk of fire, electric shock, or injury to persons:

- **Read all instructions:** Before using the product, read all instructions and cautionary markings on the product, the accessories, and the product manual.
- **UL Listed:** This product is UL Listed, ensuring it meets recognized safety standards.
- **Avoid extreme temperatures:** Do not expose the unit to extreme temperatures or direct sunlight for prolonged periods.
- **Proper ventilation:** Ensure adequate ventilation around the unit during operation and charging to prevent overheating. Keep ventilation ports clear of obstructions.
- **Avoid moisture:** Do not immerse the unit in water or expose it to rain or wet conditions.
- **Handle with care:** Avoid dropping, puncturing, or disassembling the unit.
- **Use approved accessories:** Only use accessories recommended or sold by the manufacturer.

- **Keep away from children:** Store the unit out of reach of children.