



# **Instruction Manual**


## **Lithium Battery Portable Power Station**

Ver.A0

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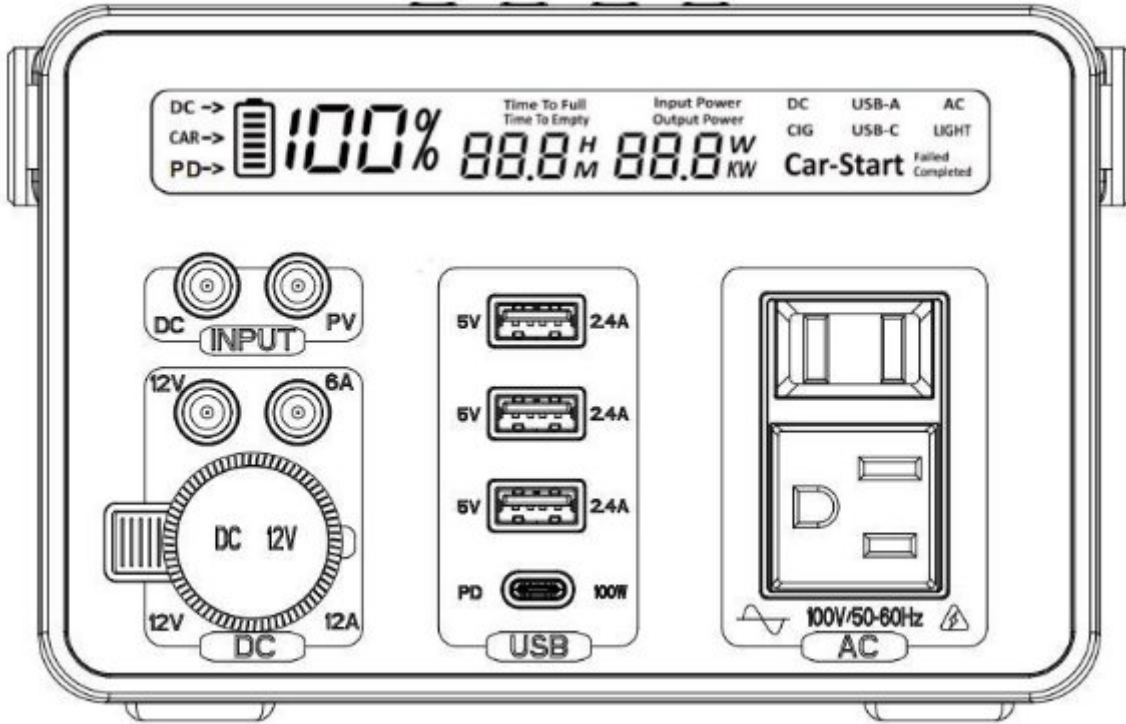
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- Before using the product, please read this instruction manual carefully.
- If the product will not be used for an extended period, ensure it maintains 50%-80% remaining capacity to prolong battery life.
- Keep the product away from fire and do not use it if it becomes overheated.
- It is normal for the product to generate heat during use as heat is dissipated through its casing.
- Avoid covering the product when in use at room temperature.
- Note that products and accessories are subject to changes without prior notice.

## 1 Package List

NO.	Name	Note
1	Power station	
2	Adapter	Charge the power station

NO.	Name	Note
3	Charging cable	AC adapter cable
4	Car charging cable	Car charging and car start
5	Instruction manual	Manual instruction and guarantee card

## 2 Product Introduction

FPR P series is mainly used for outdoor power supply (travel, office, outdoor work, rescue) and household emergency power supply, it has versatile features such as a 12V DC output port, USB-A and USB-C fast charging ports, a 220V pure sine wave AC output port, and an array LED lighting system.

This series offers multiple charging options, including solar power generation, vehicle charging, and conventional power charging. It is equipped with a built-in UL-certified automotive-grade lithium-ion battery, along with advanced systems including a battery management system (BMS), charging management system, power management system, DC module, and AC inverter module. The sturdy construction features a high-strength series six aluminum alloy casing.

Notable characteristics include compact dimensions, lightweight design, quiet operation, and a high IP rating for durability and weather resistance. The product has obtained various international certifications including CE, FCC, RoHS, PSE, UN38.3, ensuring compliance with global standards of quality and safety.

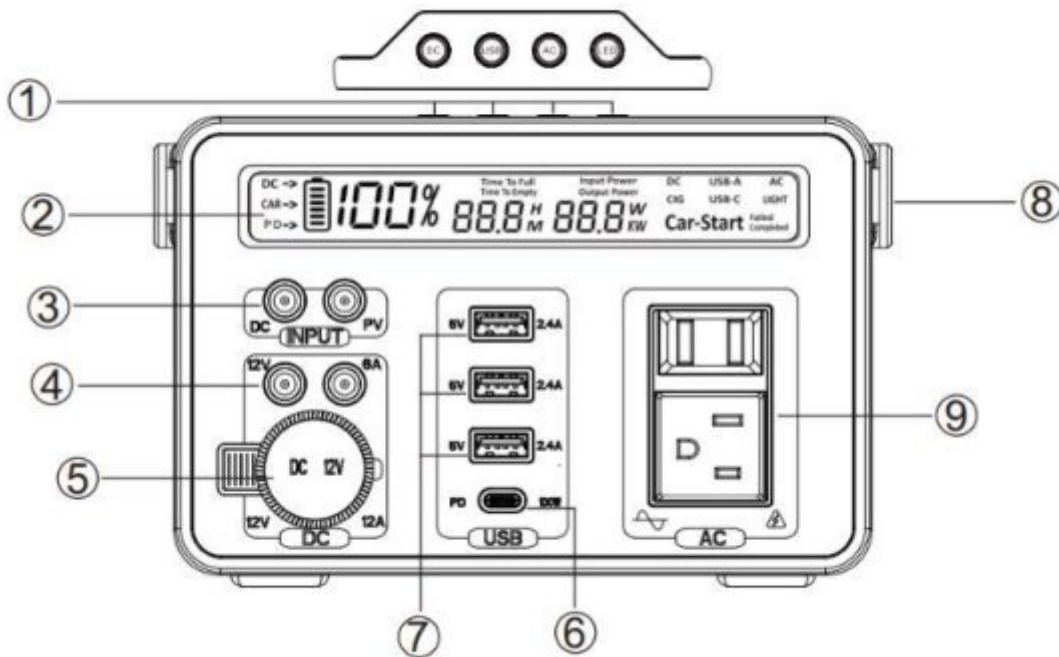
## 3 Main Functions and Features

- AC100V-240V/50-60HZ pure sine wave output (set as per the power standards of each country or region)
- Three charging methods (main power charging, solar charging, and car charging)
- 12V12A car cigarette lighter output
- 12V6A DC5521 output port \*2
- USB-C PD3.0 port (45-100W, some models support bidirectional, refer to the nameplate on the back of the product)
- USB-A 2.4A intelligent recognition output\*3
- Car emergency flexible start, start inside driving cab, start outside driving cab

- High brightness LED display (showing real-time power, remaining capacity, remaining time, etc.)
- Array LED lighting (four modes: low brightness, high brightness, SOS, and fast flashing)
- BMS battery management system has a multi-stages protection system for overvoltage, undervoltage, high and low temperature, overcurrent, and short circuit.
- Fanless design and low noise.
- Seamless structure and high IP rating reducing sand, dust and water vapor erosion make it safer and have a longer life.
- Sandblasted and anodized series six aluminum alloy casing.

## 4 Product Diagram

### 4.1 Panel Display Introduction



NO.	Function
1	On/Off switch 6 USB-A Intelligent Recognition Charging output*3
2	LED display 7 USB-C PD3.0port(some models support bidirectional)
3	DC5521 charging port 8 AC output port set as per the power standards of each country or region
4	DC12V discharge port 9 LED lighting is on the back of the product
5	Cigarette lighter port

4.2 LED Display Introduction



NO.	Name	Function
1	Charging indication	"DC->" / "CAR->" / "PD->" represent different charging mode.
2	Battery Icon	Indicate battery level in 6 bars.

NO.	Name	Function
3	Battery indication	Display battery level in percentage, battery level 0%-100%.
4	Remaining time indication	<b>[Time To Full] [Time To Empty]</b> , the <b>H</b> downside means Hours and <b>M</b> Downside means minutes.
5		<b>[ Input Power ]</b> means charging Power, <b>[Output Power]</b> means discharging Power. W or KW downside means the Power Unit Watt or Kilowatt. If you want to transfer the AC frequency, press AC buttons for 3 consecutive times, <b>[F50]</b> on the screen represents 50HZ; <b>"F60"</b> represents "60HZ" .
6	Car charge constant current mode	<b>[Car-Start]</b> represents constant car charging output. This applies to charging the car battery, flexible start of the car
7	Interface status indication	DC, CIG, USB-A, USB-C, AC, Light, represent the status of each port
8	Car start status indication	<b>Car-Start /Car-Start Failed /Car-Start</b> indicate the car is charging, car charging failed, and car charging finished

## 5 Parameter



	Parameter	P300	P800	P1000	P1000S
Battery Type	UL certified automotive grade A+ Lithium Ion Battery	UL certified automotive grade A+ Lithium Ion Battery	UL certified automotive grade A+ Lithium Ion Battery	UL certified automotive grade A+ Lithium Ion Battery	UL certified automotive grade A+ Lithium Ion Battery
Battery Capacity	303Wh	686Wh	747Wh	911Wh	1121Wh
Battery Volume	83200mAh	185600mAh	204800mAh	249600mAh	307200mAh
Battery Voltage	14.6V	14.6V	14.6V	14.6V	14.6V
Battery Am- pere Hour	83.2Ah	135.2 Ah	166.4Ah	204.8Ah	268.8Ah
BMS Protection	Over voltage, under voltage, high and low temperature, three-stage over current, short circuit protection	Over voltage, under voltage, high and low temperature, three-stage over current, short circuit protection	Over voltage, under voltage, high and low temperature, three-stage over current, short circuit protection	Over voltage, under voltage, high and low temperature, three-stage over current, short circuit protection	Over voltage, under voltage, high and low temperature, three-stage over current, short circuit protection
AC output	Output Voltage	100-240V Pure sine wave	100-240V Pure sine wave	100-240V Pure sine wave	100-240V Pure sine wave
AC output	Output Frequency	50-60HZ (convert manually)	50-60HZ (convert manually)	50-60HZ (convert manually)	50-60HZ (convert manually)
AC output	Rated Power	350W	800W	1000W	1000W

Parameter		P300	P800	P1000	P1000S
DC output	DC Output	DC12V6A Max	DC12V6A Max	DC12V6A Max	DC12V6A Max
DC output	Car	DC12V12A Max	DC12V12A Max	DC12V12A Max	DC12V12A Max
USB-A	USB1	5V2.4A	5V2.4A	5V2.4A	5V2.4A
	USB2	5V2.4A	5V2.4A	5V2.4A	5V2.4A
	USB3	5V2.4A	5V2.4A	5V2.4A	5V2.4A
USB-C	USB-C	PD3.0,5-20V,45W-100W (Max)	PD3.0,5-20V,45W-100W (Max)	PD3.0,5-20V,45W-100W (Max)	PD3.0,5-20V,45W-100W (Max)
LED Lighting	The First Gear	5W(Max)	5W(Max)	5W(Max)	5W(Max)
	The Second Gear	10W(Max)	10W(Max)	10W(Max)	10W(Max)
	The Third Gear	SOS	SOS	SOS	SOS
	The Fourth Gear	Strobe (Alarm flashes)	Strobe (Alarm flashes)	Strobe (Alarm flashes)	Strobe (Alarm flashes)
Chargin	Adapter Charging	65W Max	145W Max	145W Max	145W Max
	Car Charging	100W Max	100W Max	100W Max	100W Max
	Solar Charing	Support 2 solar panels 120W Max.	Support 2 solar panels 120W Max.	Support 2 solar panels 120W Max.	Support 2 solar panels 120W Max.
Standby Power Consumption	Self Discharge Current	<100uA	<100uA	<100uA	<100uA
Weight	Net Weight	3.5kg	6.0kg	8.0kg	8.0kg

	Parameter	P300	P800	P1000	P1000S
	Gross Weight	5.5kg	8.5kg	10.5kg	10.5kg
Size	Product dimensions(mm)	175x118x140	175x118x267	175x118x297	175x118x297
	Package(mm)	270x300x220	402x275x272	402x275x272	402x275x272
Working Temperature	Charging Temperature	0°C- 40°C (Low-temperature version supports -10°C; Minimum-30°Ctemperature with storage bag)	0°C- 40°C (Low-temperature version supports -10°C; Minimum-30°Ctemperature with storage bag)	0°C- 40°C (Low-temperature version supports -10°C; Minimum-30°Ctemperature with storage bag)	0°C- 40°C (Low-temperature version supports -10°C; Minimum-30°Ctemperature with storage bag)
Storage Temperature	Storage Temperature	-10°C-45°C (Long-term storage at 25°C minimizes battery degradation. )	-10°C-45°C (Long-term storage at 25°C minimizes battery degradation. )	-10°C-45°C (Long-term storage at 25°C minimizes battery degradation. )	-10°C-45°C (Long-term storage at 25°C minimizes battery degradation. )

## 6 Product Protection Parameter

NO.	Parameter	P300	P800	P1000	P1000S
1	Battery overvoltage	16.8V±0.1V	16.8V±0.1V	16.8V±0.1V	16.8V±0.1V
2	Battery undervoltage	12V±0.3V	12V±0.3V	12V±0.3V	12V±0.3V

NO.	Parameter	P300	P800	P1000	P1000S
3	Battery Low Temperature Protection	Charging: 0°C(Low temperature version: -30°C)	Charging: 0°C(Low temperature version: -30°C)	Charging: 0°C(Low temperature version: -30°C)	Charging: 0°C(Low temperature version: -30°C)
4	Battery Low Temperature Protection	Discharging: -10°C(Low temperature version: -30C)	Discharging: -10°C(Low temperature version: -30C)	Discharging: -10°C(Low temperature version: -30C)	Discharging: -10°C(Low temperature version: -30C)
5	Charging high temperature	Charging 45°C	Charging 45°C	Charging 45°C	Charging 45°C
6	Discharging high	Discharging 65°C	Discharging 65°C	Discharging 65°C	Discharging 65°C
7	Battery overcurrent: Stage 1	30A2S	60A.2S	100A2S	100A2S
8	Battery overcurrent: Stage 2	60A,30ms	120A,30ms	200A,30ms	200A,30ms
9	Battery short circuit	<1ms	<1ms	<1ms	<1ms
10	AC short circuit	<50ms	<50ms	<50ms	<50ms
11	AC overpower	450W,3S	1000W.3S	1500W.3S	1500W.3S
12	USB-C overcurrent	2.0-3.5A	2.0-3.5A	2.0-3.5A	2.0-3.5A
13	USB-A overcurrent	2.5±0.2A	2.5±0.2A	2.5±0.2A	2.5±0.2A
14	Car charge overcurrent	12A±1A	12A±1A	12A±1A	12A±1A

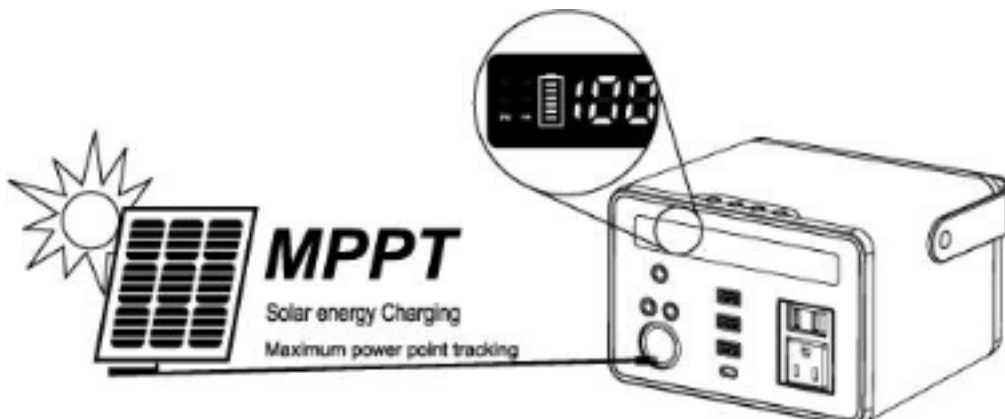
NO.	Parameter	P300	P800	P1000	P1000S
15	DC5.5 overcurrent	6A±0.5A	6A±0.5A	6A±0.5A	6A±0.5A

## 7 Manual Instruction

### 7.1 Solar Charging

Unfold the solar panel and plug into the input port. **PV** in the LED screen flashes and the battery icon will show. Meanwhile, **[Time to Full]** will be showed on the screen.

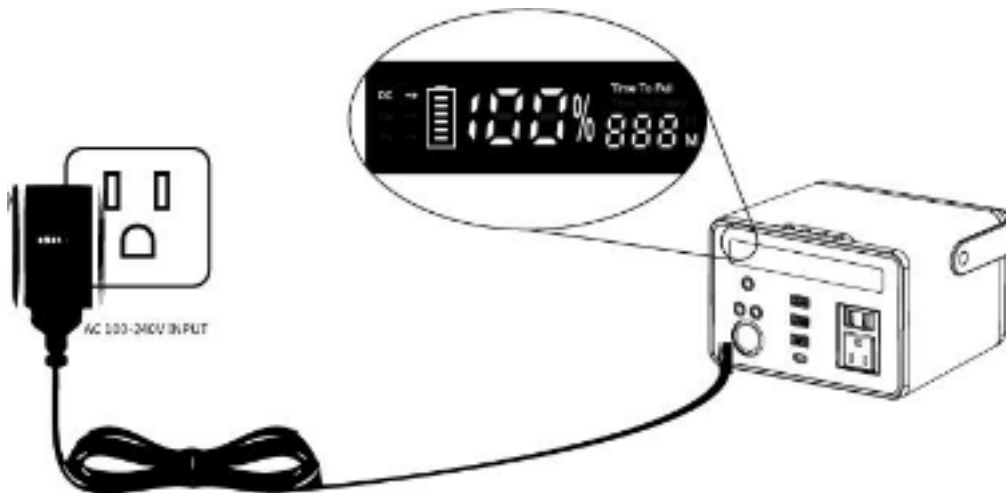
Note: The power of the solar panel is greatly affected by the light condition, and the solar power change will result in the change of the time to full.



### 7.2 PD Adapter

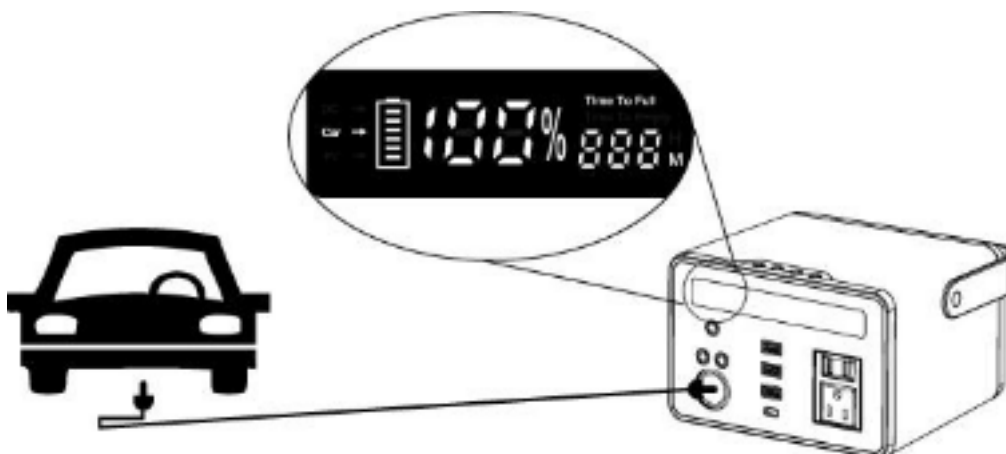
1. Plug the PD Adapter to the AC Power.
2. Plug the other end of the AC Adapter to the DC input port, then the **DC** flashes in the LED screen and the battery icon shows, meanwhile **[Time to Full]** will be showed on the LED screen.

Note: The system will detect the input power when start charging. The time to full will change dynamically as the input changes.



### 7.3 Car Charging

1. Start the car.
2. Plug one end of the car charging cable to the car cigarette lighter.
3. Plug the other end of the car charging cable to the DC Port of the power station. **[Car->]** will flash on the screen and the battery icon scrolling. The meanwhile time to full will be showed on the LED screen.



### 7.4 Charging Pending Status

If the product temperature falls below 0 degrees or exceeds 45°C, the product will enter a charging pending status, indicated by "SUS" appearing on the screen (refer to the pictures below). Once the product temperature returns to the normal range, charging will resume automatically.

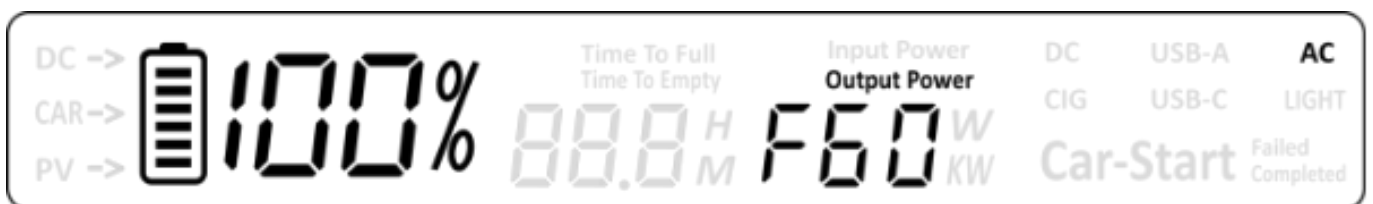


### 7.5 AC Output

Press and hold the AC Switch for 1 second to activate the AC output, indicated by "AC" appearing on the upper right side of the screen. The current frequency will be displayed on the screen. Press and hold the AC Switch for 1 second again to deactivate the AC output. If the AC Switch is held for 3 seconds, the entire power station will shut down.

### 7.6 AC Output Frequency Switching

While the AC output is active, press the AC switch three times consecutively to enter frequency adjustment mode. Then, you can switch between frequencies by selecting either "F50" for 50Hz or "F60" for 60Hz. Please adjust the frequency setting as per the local grid frequency.



### 7.7 DC Switch

Press and hold the DC Switch for 1 second to activate/ deactivate the DC5521 and the Cigar Light output, indicated by [DC] and [CAR] respectively on the screen. If the DC Switch is held for 3 seconds, the entire power station will shut down.

## 7.8 USB Switch

Press and hold the USB Switch for 1 second to activate/ deactivate the USB-A and USB-C outputs, which will be displayed on the screen. Press and hold the USB Switch for 3 seconds the whole power station will shutdown.

## 7.9 Lighting mode switch

Press and hold the LED Switch for 1 second to activate the LED lighting in low brightness mode. The light icon will appear on the screen. Press the USB Switch sequentially to switch to high-brightness mode, SOS mode, and flash mode.

While the lighting is active, press and hold the LED Switch for one second to turn off the lighting. If the LED Switch is held for 3 seconds, the entire power station will shut down.

## 7.10 Car Start Function

1. Start the car by turning the key or, for vehicles equipped with one-click start, press the start button. Note: Some cars may not support starting from inside the cab, in which case please start from outside the cab.
2. Connect the car and the portable power station using the car charging cable.
3. Double-click the DC Switch. When "Car-Start" flashes on the LED screen, the portable power station is charging the car.
4. Charge the car for 5-30 seconds (the duration varies depending on the car model and battery level). Once "Car-Start Completed" appears on the screen, it indicates that the charging is complete. You can attempt to start the car at this point. If "Car-Start Failed" is displayed on the screen, it means the car charging has failed, and the car may fail to start. This failure could be due to insufficient power from the product, improper operation, poor contact, or the car's auxiliary battery not functioning.

Steps to start outside of the cab:

1. Use the cable for starting outside of the cab. Connect the red alligator clip to the positive pole of the car battery. Connect the black alligator clip to the negative pole of the car battery, and connect the other end of the cable to the car charging port of the power station.
2. Double-click the DC Switch. When "Car-Start" flashes on the LED screen, the portable power station is charging the car.



3. Charge the car for 5-30 seconds (the duration varies depending on the car model and battery level). Once "Car-Start Completed" appears on the screen, it means the charging is complete. You can attempt to start the car now. If "Car-Start Failed" is displayed on the screen, it means the car charging has failed, and the car may fail to start. This failure could be due to insufficient power from the product, improper operation, poor contact, or the car's auxiliary battery not functioning.

## 8 Precautions

Please carefully review the safety precautions, which are categorized into three levels: Dangerous, Warning, and Caution.

Dangerous signifies potential risks of personal injury or death.

Warning indicates possible hazardous situations.

Caution highlights risks of product damage or a shortened lifecycle.



Dangerous.

- When the product's AC output is 220V, avoid inserting your hand or any handheld metal conductor into the AC socket.
- Do not attempt to disassemble the product privately to prevent unforeseen hazards.
- Avoid placing the product in high-temperature environments (above 50 degrees Celsius) or near a source of fire.



Warning

- Please carefully read the battery charger manual before using the product.
- Strictly refrain from disassembling the product.

- It is strictly prohibited to use products that show obvious signs of damage.
- Please use the original adapter for charging.
- Select solar panels according to the electrical parameters specified by the manufacturer.
- Charge the power station within the temperature range of 0 to 45°C. Charging at temperatures below this range may shorten the battery cell's cycle life.
- If the product remains idle for an extended period (more than three months), ensure it retains no less than 50% power storage.
- If you notice a peculiar smell or heat emanating from the product during charging or storage, immediately cease charging and place it in a well-ventilated area for observation. After confirming safety, contact the manufacturer or dealer.



#### Caution

- This product is a portable power station. Please select the corresponding model as per the electrical equipment. Overload and over voltage is strictly prohibited.
- No short circuit of the product.
- The factory settings are different as per the different national voltage standard. Please consult your dealer or read the instruction manual carefully before you buy and use.
- When the product battery exhausted, please charge it in time.
- Product parts are environmentally friendly and recyclable, please recycle as per local regulations.
- After using, please shut down the power station in time, the system will consume the battery power until it is empty while is on.
- If idle for more than 6 months, please charge and discharge the power station for 1~2 times to extend the battery life.

## 9 Common Q&A

Q: Without fans in the power station, is it safe?

A: The product utilizes high-frequency resonance technology, effectively reducing heat generation by 50%. Additionally, we employ an alloy shell for heat dissipation, eliminating the need for a fan. This design not only ensures quieter operation but also enhances safety.

Q: How long can the power station be stored?

A: With more than 50% power, you can store it for 6 to 12 months. However, we recommend charging and discharging it every 3 months for optimal performance.

Q: How long does it take to fully charge the power station?

A: Using the original Adapter: - P300 takes 3.5 hours to charge to 90% and 4.5 hours to be fully charged. - P800 takes 6 hours to charge to 90% and 8 hours to be fully charged. - P1000 takes 9 hours to charge to 90% and 12 hours to be fully charged.

Q: Can I charge the product with a solar panel and a car charger at the same time?

A: Yes, you can charge the product simultaneously with both a solar panel and a car charger. This dual charging method will reduce the charging time by half.

Q: Can the product be discharged while being charged (for output use)?

A: Yes, this product supports discharging while charging. When the output power exceeds the input power, the battery power gradually decreases. If the battery power decreases to a low level, the output will automatically turn off.

Q: Is there any temperature protection?

A: Yes, the product has temperature protection mechanisms. Charging is limited to 45 degrees Celsius, while discharging is limited to 60 degrees Celsius.

Q: Will the product shut down automatically?

A: The product will automatically shut down after being deeply discharged. However, under normal circumstances, once turned on, it will remain operational to provide continuous power and will not shut down automatically.

Q: Is there any limit on car displacement when using the power station for car start?

A: The car starting function essentially charges the car battery to initiate the car's ignition. Our power station supports all car models with a 12V battery, regardless of engine displacement. There are no restrictions based on car displacement.

## 10 Troubleshooting

### 1) **No response when product is turned on:**

- Remove all electrical equipment, charge for 5-10 minutes, and restart.
- Ensure the product operates within its temperature range.

### 2. **Product turns on, but no output from DC, USB, and AC:**

- Check if the battery power is low; if so, charge it.
- Ensure the electrical equipment's power is within the power station's output capacity.
- Confirm if the product meets the power requirements of the equipment.
- Check for any short circuits between the output port and equipment; restart after removing any.
- Test the equipment with another power source to check compatibility.

### 3. **Product shuts down unexpectedly while running:**

- Internal protection system may activate due to overcharge, overdischarge, high/low temperature, overcurrent, or short circuit.
- Remove all equipment, maintain normal temperature, charge for 5-10 minutes, and check for equipment failures before restarting.

### 4. **Unable to charge the product:**

- Confirm the electrical device's power is within the charging range.
- Check if the device activated temperature protection due to extreme temperatures.

## 11 After-sales Service

- In the event of a product failure, please follow the instructions provided in the manual. If the issue persists, please contact our after-sales technician.

When contacting the after-sales technician, please provide the following information: product model, date of purchase, contact number, detailed address, and a description of the product failure.

It's essential to provide detailed information about the failure to help our after-sales technician accurately identify the cause and resolve the issue. If it's determined that the product needs to be returned for repair, please contact the dealer or online sales platform for assistance. Our after-sales team will promptly respond to your request.

- We offer a 12-month warranty from the date of purchase. For purchases made directly from the manufacturer, a 24-month warranty will be provided.
- During the warranty period, we offer free repairs and parts replacement for defects in materials and workmanship or damages not caused by human error.
- The following conditions are not covered by the warranty:
  - \* Unauthorized opening of the product.
  - \* Obviously deformed damage caused by external forces.
  - \* Failure to follow the manual instructions.
  - \* Damage caused by force majeure (e.g., lightning, flooding), human error (e.g., using non-original chargers), or environmental factors (e.g., high temperature, humidity).
- Product packaging boxes and accessories are not covered by the warranty.

## 12 Disclaimer

The power station is equipped with a built-in battery management system designed to safeguard against various risks including overcharge, overdischarge, overcurrent, short circuit, and extreme temperatures, as well as communication abnormalities. However, it's important to note that when supplying power to specialized equipment such as medical devices and servers, interruptions may occur due to the activation of the protection system.

Our company cannot be held responsible for any losses, whether direct or indirect, resulting from power supply interruptions. We advise users to carefully consider the potential risks and ensure appropriate backup measures are in place to mitigate any potential impacts of power interruptions on critical operations.