

POWER STATION

5000W S5-E

3000W S3-E

USER MANUAL



Content:

- 1. Introduction4
- 2. Product list.....5
- 3. Product description5
 - 3.1 Parameter specifications5
 - 3.2 Function description6
 - 3.3 LCD screen description.....7
- 4. Instruction for use8
- 5. Recharge methods.....9
 - 5.1 AC charging9
 - 5.2 Solar charging11
 - 5.3 Car charging12
 - 5.4 Power pack charging12
- 6. Other function13
 - 6.1 EPS (Emergency power supply)13
 - 6.2 Disconnection switch14
- 7. APP16
 - 7.1 Sign up and log in16
 - 7.1.1 Sign up.....16
 - 7.1.2 Log in.....17
 - 7.1.3 Log in by third-party account17
 - 7.2 Connection setup.....18
 - 7.2.1 Bluetooth connection18
 - 7.2.2 Device’s Wi-Fi hotspot connection21
 - 7.2.3 IOT connection.....21
 - 7.3 Device control and upgrade.....22
 - 7.3.1 Device control22
 - 7.3.2 Firmware upgrade22

7.4	Personal settings and more	23
7.4.1	Modify avatar and nickname	23
7.4.2	Change password	23
8.	FAQ.....	23
9.	Fault code and troubleshooting	25
10.	Storage and maintenance.....	27
11.	Electrical waste disposal	27
12.	Warranty list	27

1. Introduction

Dear consumer,

Company ALFA IN a.s. thank you for purchasing our product; we believe you will be satisfied with our machine. Congratulations on choosing a professional device for an independent power generator based on battery storage.

To ensure safe operation, please carefully read the user manual. Improper device use may result in personal injury or damage to the device or other property. ALFA IN a.s. will not accept liability for damage caused by improper use. Our complete range of services is, of course, available to you.

The power station has a large battery capacity, high power output, and various outlets to support multiple devices.

Advantages of power station series S5-E and S3-E:

- 1. Seamless UPS Backup** – UPS mode switching time $\leq 20\text{ms}$,
- 2. MPPT** – Dynamic tracking of the maximum power of solar panel transfer efficiency is 15% higher than without MPPT.
- 3. PV input** – Allows power supply from solar panels up to $6 \times 240\text{W}$
- 4. APP remote control**
- 5. Smart extra battery** – Double-rated power can be achieved by connecting two batteries.
- 6. Portable pull rod**
- 7. Smart HD LCD** – Data overview – charging power, safety warning, over temperature warning, charging time, function status, power display, IoT
- 8. Smart power management** – Over-discharge protection, overload protection, overcharge protection, short circuit protection, overvoltage protection, over-temperature protection, and low-temperature protection.
- 9. LiFePO₄ battery** - 2500+ cycles battery health (3500+ cycles for S3-E), intelligent three-speed cooling fan control, fire rating UL94-V0

2. Product list

1. Power station
2. AC charging cable
3. Anderson cable
4. Anderson – car charging cable
5. Anderson - 7909 cable
6. Anderson - MC4 cable
7. User manual and Warranty card

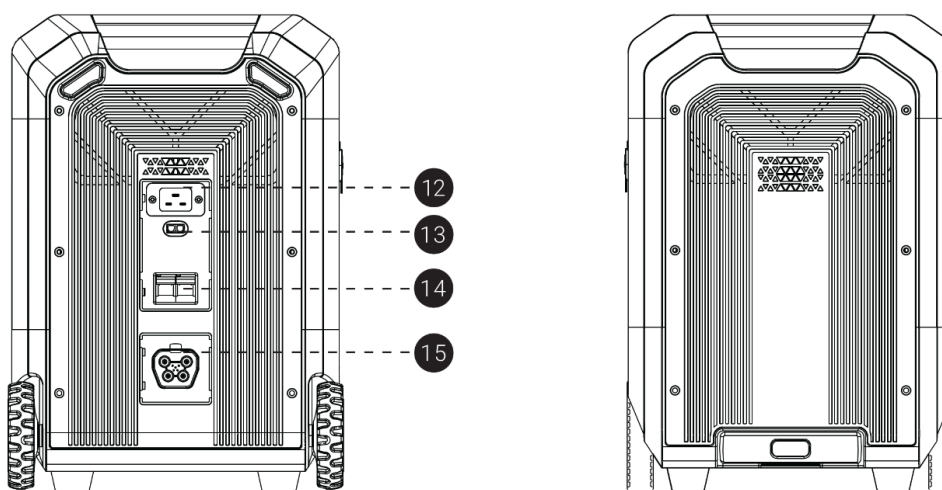
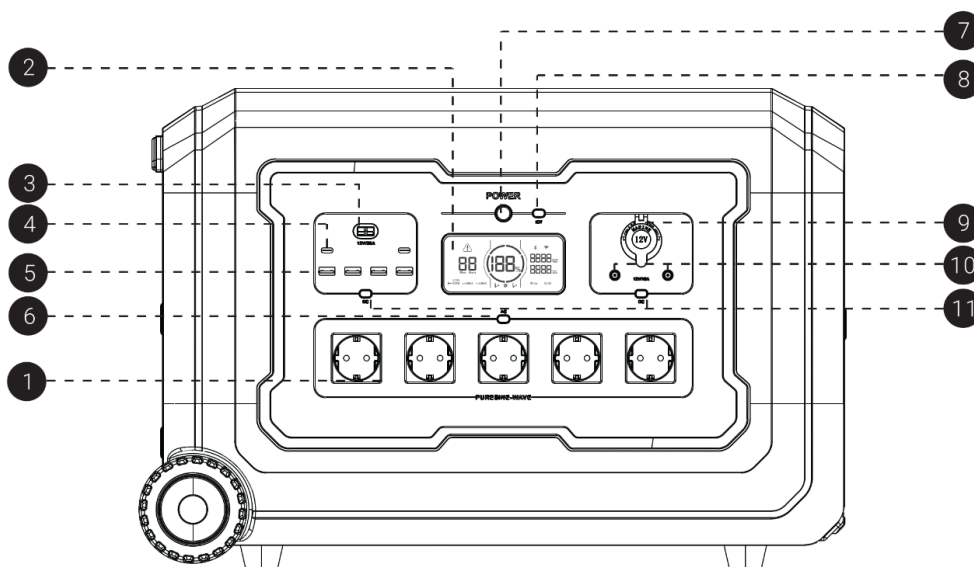
3. Product description

3.1 Parameter specifications

Output technical parameters		5000W	3000W
AC Output	Rated voltage	220 – 240V AC	
	Rated power	5000W	3600W
	Peak power	7000W	
	Frequency	50Hz (60Hz)	50Hz
DC 12V output	Rated voltage	12V	
	Rated power	120W	
USB-A output	5V/3A; 9V/2A; 12V/1,5A [18W MAX] 5V/2A		
USB-C output	5V/3A; 9V/3A; 12V/3A; 15V/3A; 20V/3A [60W Max]	5V/3A; 9V/3A; 12V/3A; 15V/3A; 20V/5A [100W Max]	
Anderson output	12V/30A		
Input			
AC Charge input	220-240V AC 16A Max 2500W Max		
PV input	12-140V DC 15A Max 2100W Max		
Battery			
Rated capacity	5040Wh	3072Wh	
Rated voltage	48V DC	51,2 V	
Battery type	LiFePO ₄		

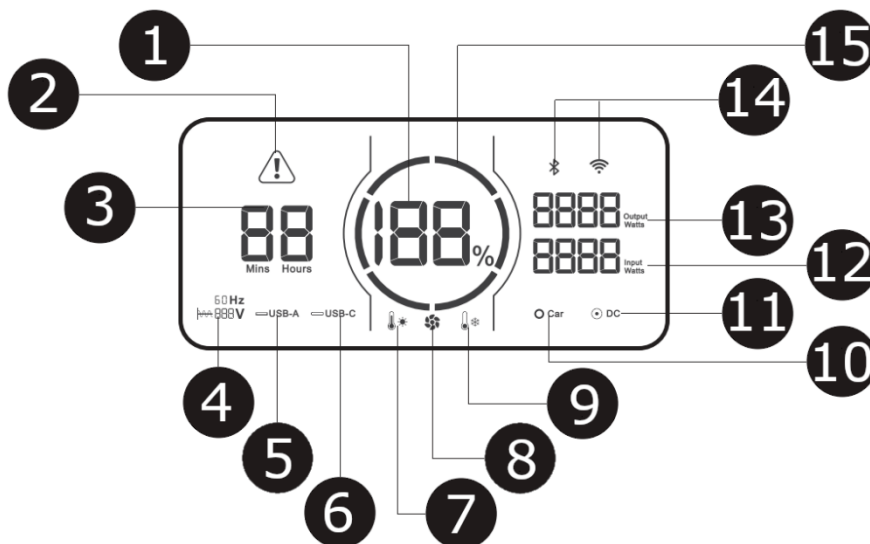
Common information		
IP Grade	IP22	
Working temperature	0-40 °C	
Dimensions	641,5*304,5*437,5mm	
Weight	51 kg	37,8 kg

3.2 Function description



Pos.	Name
1	AC Output port (16A Max)
2	LCD Screen
3	Anderson output port
4	USB-C Output
5	USB-A Output
6	AC Output power On/Off switch
7	Main power On/Off switch
8	IOT On/Off switch
9	12V Car charger output port
10	DC 5521 Output port
11	DC Output power On/Off switch
12	AC Recharging input port
13	Anderson input port
14	Circuit breaker port
15	Fuel pack connection port

3.3 LCD screen description



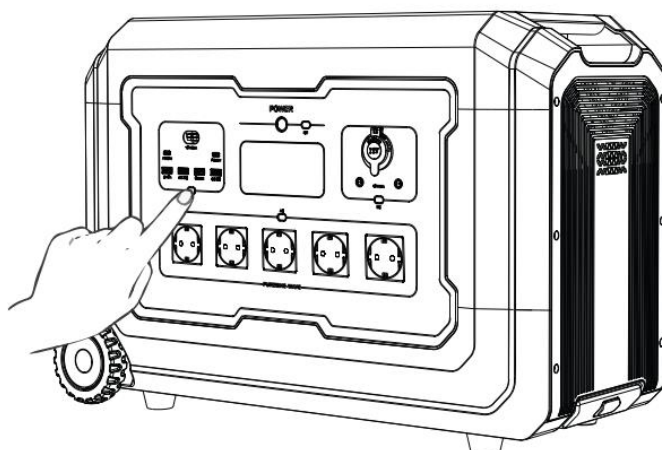
Pos.	Name
1	Battery capacity percentage
2	Fault warning
3	Remaining discharge time display
4	AC output
5	USB-A
6	USB-C
7	High-temperature protection
8	Cooling fan
9	Low-temperature protection
10	Car charge port status
11	DC 5521 port status
12	Input power display
13	Output power display
14	Wi-Fi and Bluetooth connection
15	Battery capacity circle

4. Instruction for use

The LCD battery capacity circle indicates the remaining capacity. The circle has been divided into six equal segments. When discharging, the blue segments of the circle will disappear to the real-time remaining capacity. When charging, the circle will flash clockwise, and the number to the right of the circle will show the charging power. After a full charge, the blue circle will light up and remain stable. When charging is complete, please unplug the adapter.

Long press the power button, the power station is turned on, the LCD screen lights up, and the power button enters the white light breathing status; long press the power button (about 3 seconds or more), the product shuts down, and the LCD screen goes out.

When the main power button is turned on, lightly press the separate button for each part. The corresponding LCD screen will light up the function icon simultaneously, and the function of the corresponding part can be used normally; lightly press the separate button again, the corresponding LCD screen icon will go out, and the corresponding part will stop working.



NOTICE:

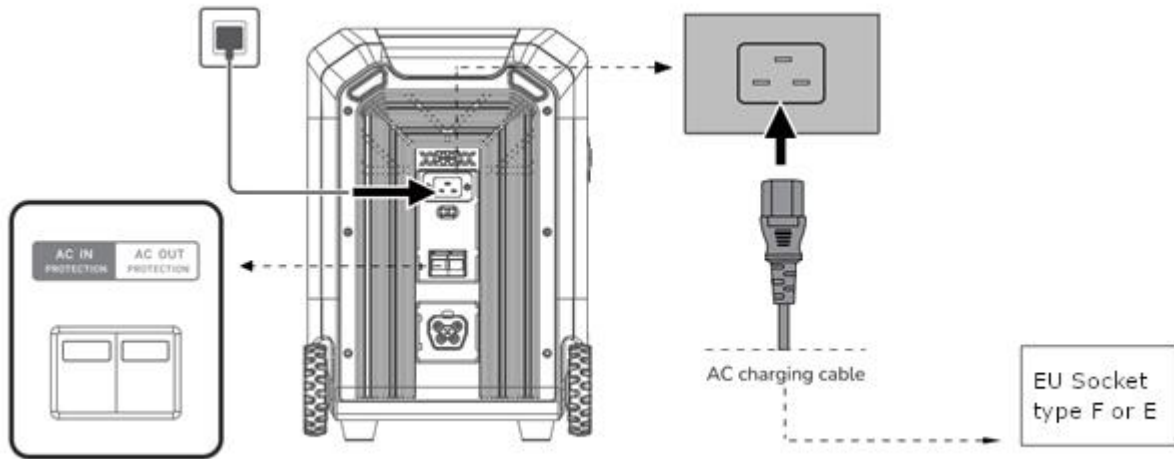
Never cover the device, and always keep the air vents clean

1. After the product is turned on, short press the main power button, and the LCD screen will turn off, but the product will not be turned off.
2. If the product is not operated within 5 minutes, the product will enter the asleep state, and the LCD screen will automatically turn off. The LCD screen automatically lights up when the product has a load change or operation.
3. The default standby time of this product is 12 hours. If the output power buttons are not turned on, and the product is not connected to any load, the product will automatically shut down after 12 hours, and the standby time can be set on the APP.

5. Recharge methods

5.1 AC charging

Use the AC charging cable included in the package to charge the device and connect it, as shown in the figure. Then, turn on the AC IN switch. When a reading appears on the input power on the screen, the device starts to charge. It can support fast charging up to 2500W, and the device can be fully charged in about 2,5 hours (1,4 hours for S3-E).



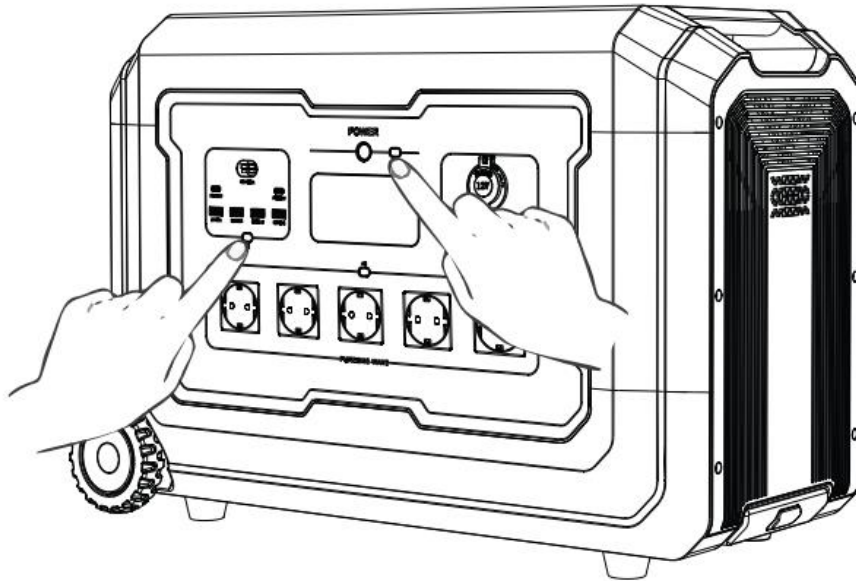
NOTICE:

For fast charging, use the power cable that was included. Do not use other cables for charging. Plug the cable into a mains socket and ensure the mains output is more than 16A. Otherwise, reduce the charging speed using the AC charging switch. The company is not responsible for any consequences caused by failure to follow these instructions, including charging with other power cables.

INSTRUCTION FOR FAST CHARGING AND SLOW CHARGING SWITCHING FUNCTION

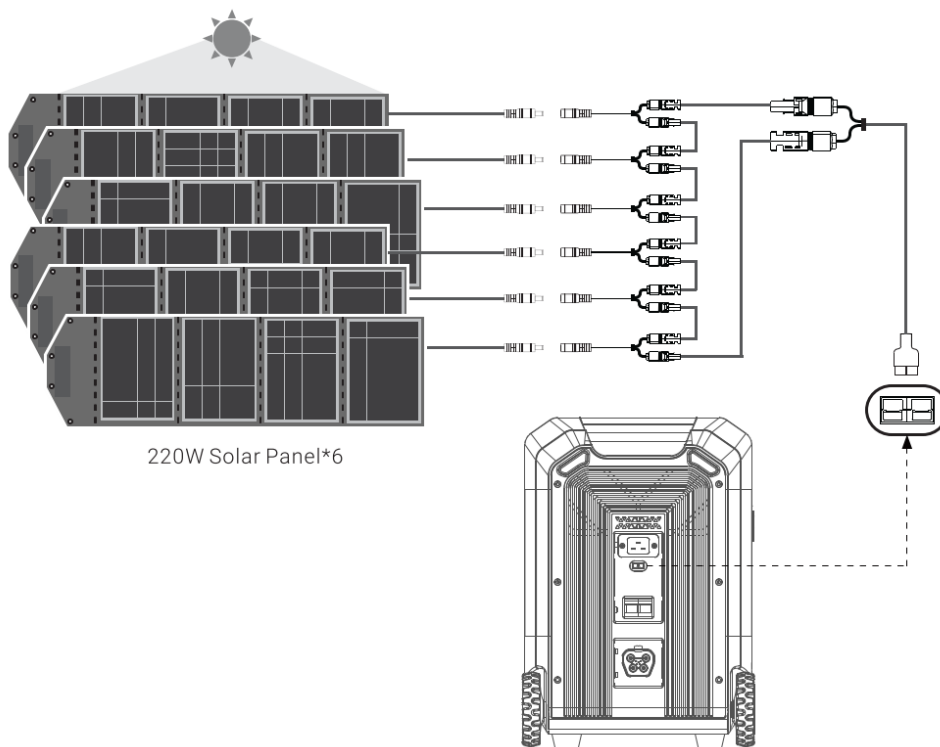
NOTICE: The product must be turned on, and the input and output ports must be disconnected.

1. Simultaneously press the IOT button + the left DC button for 3-5 seconds, and the LCD screen flash and display "SET", the product enter the input power switching interface. Lightly press the IOT button to switch, "L" means slow charging (1250W input), "H" means fast charge (2500W input);
2. After the switching is completed, press the power button for 3-5 seconds to confirm the setting: the LCD screen stops flashing and display "SUC", which means the setting is successful;
3. Press the POWER button again for 3-5 seconds to exit the fast and slow charging switching functions.



5.2 Solar charging

Use the accessories Anderson-MC4 cable and 6 pcs MC4-7909 (only one pc of MC4-7909 cable is included). With approximately 1500W of solar panel power, the device will be fully charged in about 3,5 hours. For charging the device, it is also possible to use PV panels of frame or foil construction in possible serial or serial-parallel connection under maximum voltage 140V, maximum current 15A.

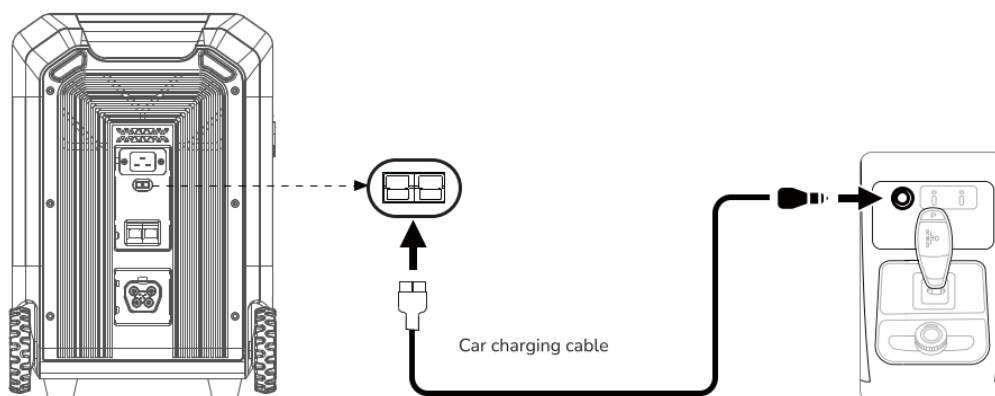


NOTICE:

1. The solar charging cable (MC4-7909) cable is included in the delivery. Solar panels and connection cables with MC4 connectors are not part of the package.
2. When using the matching solar panel to charge this product, please connect it according to the user manual.
3. **Before connecting the solar panel, please confirm that the output open circuit voltage is within 140V to avoid damage to the product.**

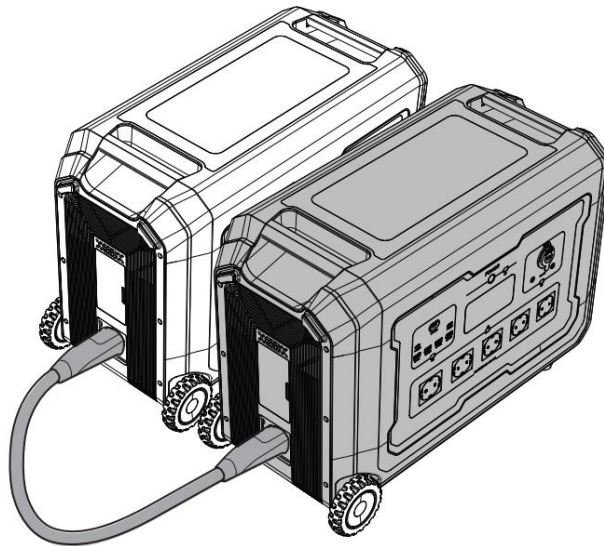
5.3 Car charging

Use the car charger port of the car to charge this product, supporting 12V/8A car charger charging. Charge your car battery after starting the car to avoid power loss and potential failure. At the same time, ensure that the car charger port and the cigarette lighter of the car input cable are connected well. The company shall not be held responsible for any loss caused by non-compliance with the standard operation. For charging, use the included cable number 4.



5.4 Power pack charging

A power pack (up to one) can be connected to this product. Use the product-specific power pack cable to connect the product and the battery pack (this cable is not included in the delivery). The device starts to charge when a reading appears on the input power on the screen.



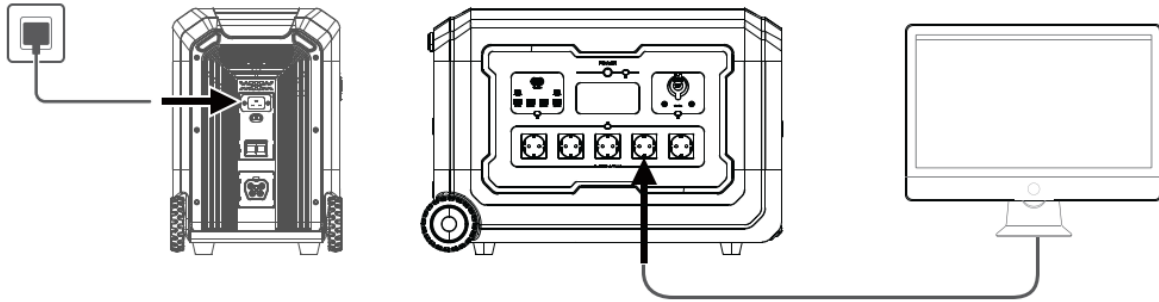
NOTICE:

1. Please ensure that the product and the power pack are turned off before connecting the power pack to this product.
2. After this product is connected to the power pack, make sure that the LCD of this product shows the input power, and then start to use it.
3. Do not directly connect or remove the power pack during the charging and discharging. If you need to connect or remove the power pack during use, please turn off the power before operating.
4. Do not use your hands or other objects to touch the metal terminals at the connection port of the power pack. If foreign objects are attached to the metal terminals, please lightly wipe them with a dry cloth.
5. The additional battery pack S5-BAT can only be used for the S5 model.

6. Other function

6.1 EPS (Emergency power supply)

This product supports the EPS (emergency power backup) function. When connecting the power grid and the AC input port of this product through the AC charging cable, the electrical appliance can connect the AC output port of this product to work (the AC power comes from the power grid instead of the battery at this time). When the power grid is cut off, the product can automatically switch to the battery power supply mode within 20ms.



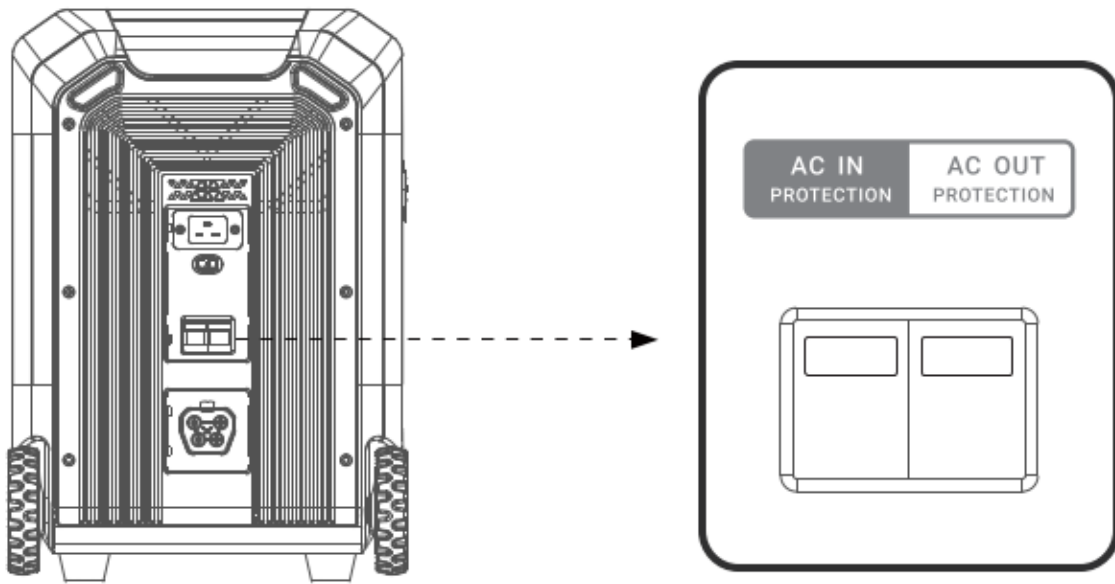
NOTICE:

This function is a non-professional UPS function and does not support 0ms switching. Please do not connect it to devices that require a high uninterrupted power supply (such as data servers and workstations) or use it after multiple tests to confirm whether it is compatible. The device's operating power (input + output) should not exceed 5000W (3600W for S3-E). When the load and charging reach this value, the output will be turned off in one minute for overloading. If the output is more than this value, the output switches off in 1 second. Do not use multiple devices simultaneously to avoid overload protection of this product. If the device does not operate normally or data is lost due to failure to follow the instructions, the company will not bear the corresponding responsibility.

6.2 Disconnection switch

The primary function of the circuit breaker is to cut off and connect the load circuit and cut off the fault circuit to prevent the expansion of the accident and ensure safe operation. In case of an electrical overload or abnormal operation, the circuit breaker will automatically disconnect the load if a fault occurs.

1. Please turn on the AC IN switch when charging by mains electricity.
2. Please turn on the AC OUT switch when loading with AC output. Otherwise, there will be no output at the AC output.
3. Please turn on the AC IN and AC OUT switches at the same time if you want to use EPS function (Load takes precedence over charging: charging + load <5000W (<3600W for S3-E)).



4. Certain modifications of the device are installed with thermal protectors under the sockets. When the rated current is exceeded, the socket is disconnected. By pressing the thermal protection button, the disconnected circuit can be reconnected.

7. APP

Control, monitor and customize your power station from afar with the APP.

Download at: <https://wp2-us.doiting.com/release/wpoem/download.html?param=1,JTEnK3,0>

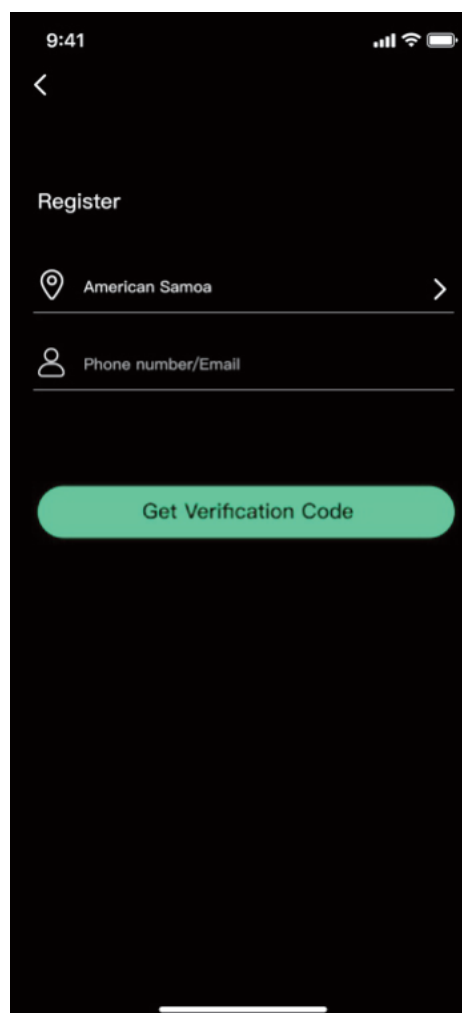
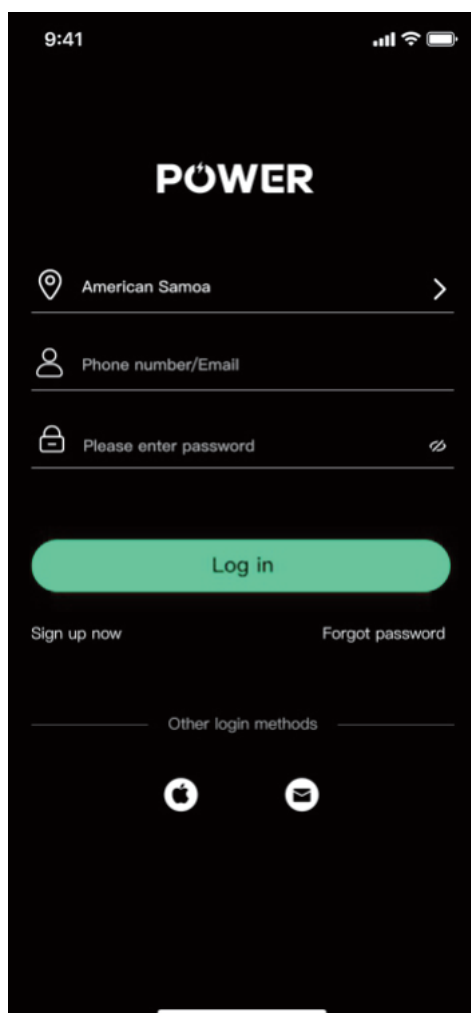
Scan the QR code to download the smart control APP.



7.1 Sign up and log in

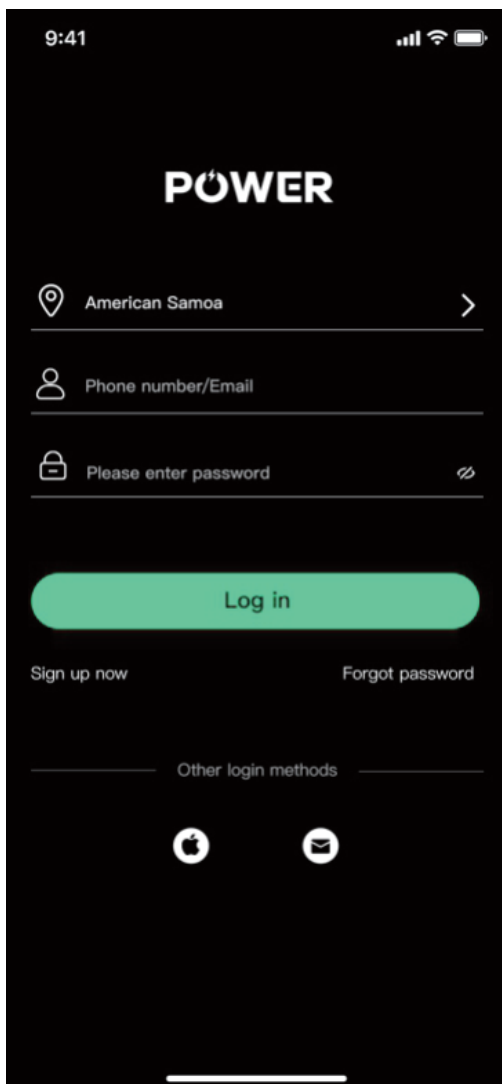
7.1.1 Sign up

Open the APP and click "Sign up now" to sign up. Enter your email or phone number in the form to request a verification code.



7.1.2 Log in

If you have an account already, tap "Log in" to enter your account name and password. If you forget your password, on the password login page, click "Forgot password" and follow the steps to reset it.



7.1.3 Log in by third-party account

The Android version APP allows users to log in through Google accounts. The IOS version APP allows users to log in through Facebook, Google, and Apple ID.

Click the third-party platform icon at the bottom of the APP login interface to log in using a third-party account.

7.2 Connection setup

There are three connection methods for the devices: Bluetooth, the device's Wi-Fi hotspot, and IOT.

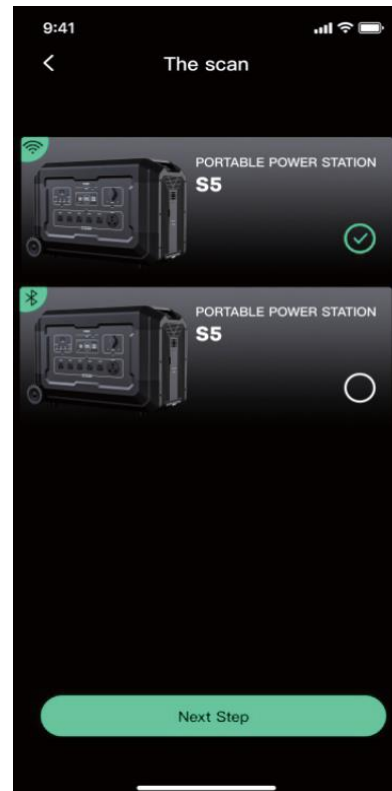
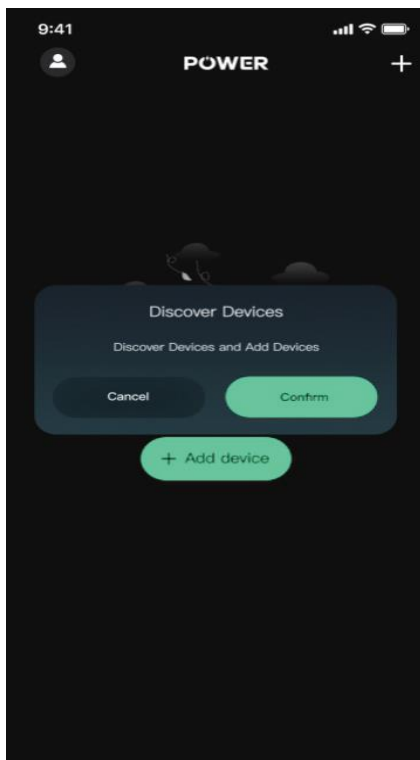
When the APP establishes a Bluetooth or a Wi-Fi hotspot connection with the device, you can view the real-time status of the device through the APP and then control and manage the device wirelessly. We also provide users with an advanced way to connect devices: IOT. Based on establishing a Bluetooth or Wi-Fi hotspot connection between the mobile APP and the device, the device can be set up to connect to the internet by joining your Wi-Fi, and the connection has changed to the IOT connection at the same time, then users can use the APP to control and manage the device anytime anywhere.

7.2.1 Bluetooth connection

1. Automatically discover Bluetooth devices

Hold the IOT button on the device for a long time, the icon will flash quickly. This indicates that the device is searching. When your device is found it will display the message "Discover device", use the "confirm" button to add the device.

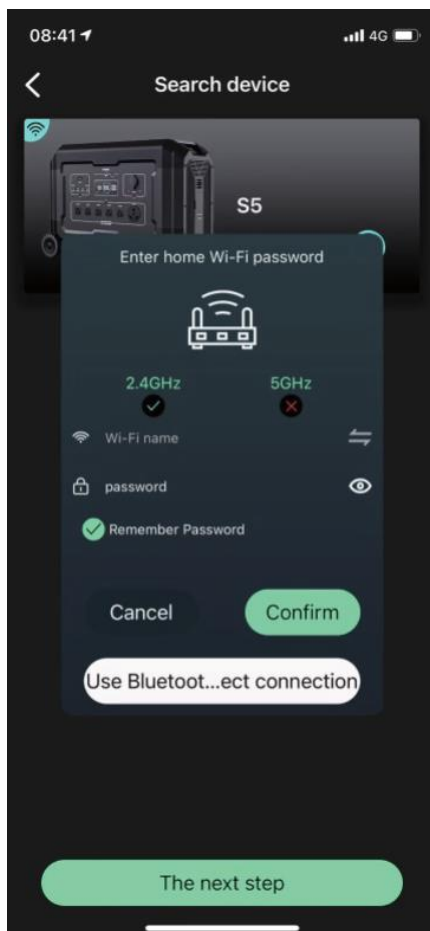
Select the device to be linked and click "Next".



To connect to your device using Bluetooth, press "Use Bluetooth direct connection" on your mobile device. You can tell when the two devices are paired by the icon flashing more slowly.

NOTE: The application can be on multiple devices, but only one device will be connected to the battery source. When you turn Bluetooth off or go out of range and want another device to connect to the battery source, you must long press the IOT button again until the icon flashes quickly and continue with the previous step.

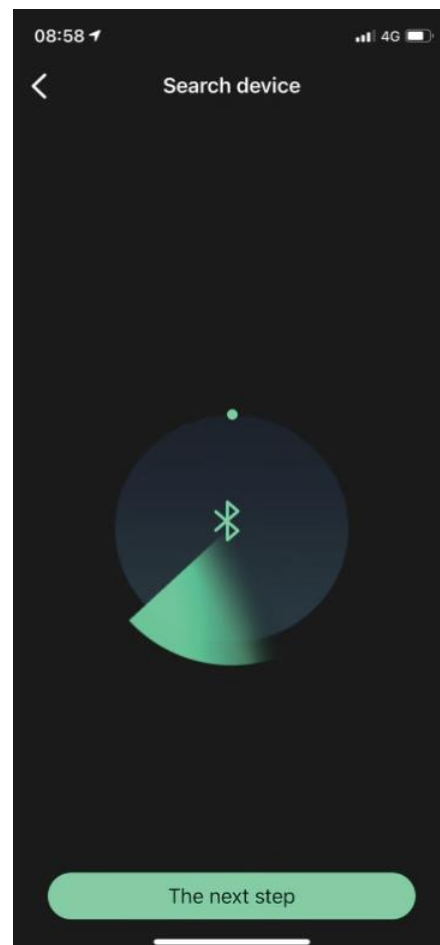
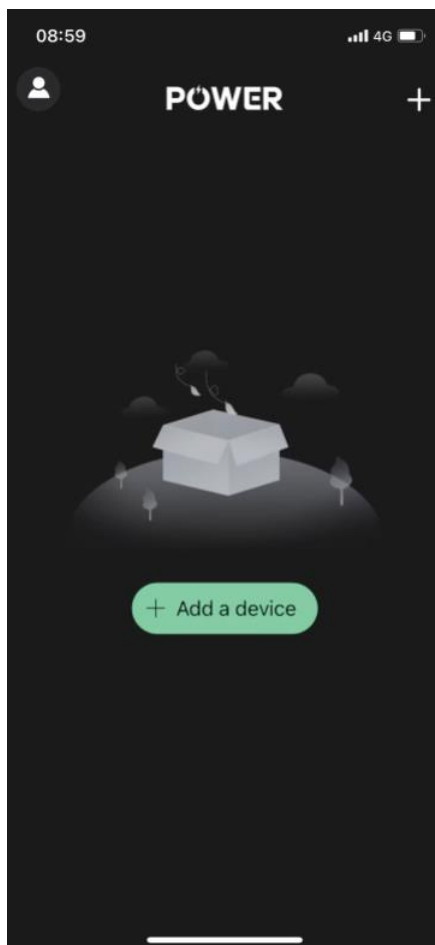
Click the pairing button and match the 2,4GHz frequency Wi-Fi signal, enter the password and click "Confirm". After the Wi-Fi matching is successful, start to connect the device. After the loading is completed, the connection is successful.



NOTICE: The device only supports 2,4GHz frequency Wi-Fi connection, please use 2,4GHz frequency Wi-Fi.

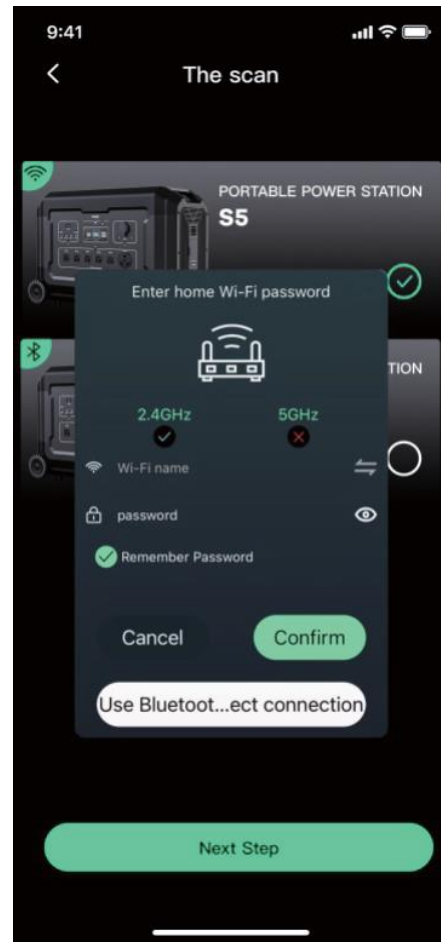
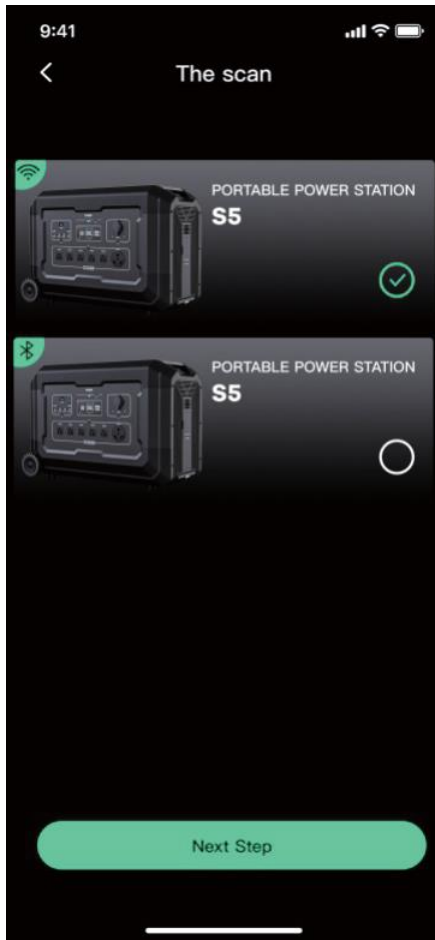
2. Automatically discover Bluetooth

If the "Discover devices" dialogue does not appear on the APP's home page, you can click the "Add device" button to search for nearby Bluetooth devices. If you click the "Add device" button, the APP does not scan the Bluetooth devices to be added. You can manually select the corresponding device, reset it according to the APP guidelines, and then connect the Bluetooth. If the Bluetooth cannot be found after the above steps, please check whether the device is powered on and try again. If you fail repeatedly, don't hesitate to contact the official customer service for technical support.



7.2.2 Device's Wi-Fi hotspot connection

Click the "Add device" button on the APP's home page. You can select the corresponding device that supports a Wi-Fi hotspot connection in the manually added device list, and according to the instructions of the APP, click the "IOT" button to reset the device and connect to the Wi-Fi hotspot.



7.2.3 IOT connection

Before establishing a Bluetooth or a Wi-Fi hotspot connection between the APP and the device, please ensure that the device is installed with the APP and connected to the internet. Currently, the device is connected to the IOT, which the APP can control anywhere from the internet.

7.3 Device control and upgrade

7.3.1 Device control

After the successful connection, the APP will display the connected device. You can enter the device details page by clicking the corresponding device icon to view the real-time status and data and control it.

Device is offline

When there is no Bluetooth, Wi-Fi hotspot, or IOT connection between the APP and the device, it is offline, and you cannot view the device status and data or control the device in the APP.

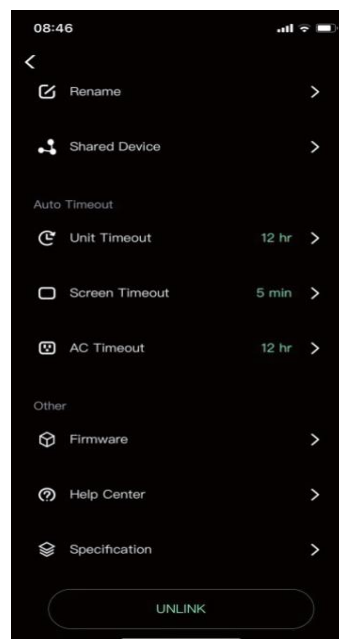
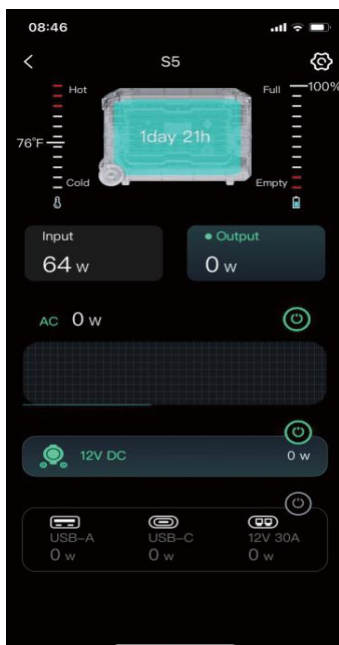
7.3.2 Firmware upgrade

The firmware upgrade function is an essential function of the APP. A new firmware version will be released to fix known bugs, improve performance, and add new features.

Check for new firmware version

There are two methods to check whether the current device has a firmware version to be upgraded: automatic detection and manual checking.

1. **AUTOMATIC DETECTION:** After the APP enters the device details page, if an upgradable firmware version is detected, a pop-up window will appear to remind you to upgrade it.
2. **MANUAL CHECKING:** You can upgrade the firmware by selecting the "Firmware Upgrade" item from the **APP device details page settings**.



7.4 Personal settings and more

7.4.1 Modify avatar and nickname

Enter the APP, click the button at the upper left to enter the homepage, and then click the avatar and nickname area at the top to enter the personal settings page. On the personal settings page, click the avatar or nickname button and follow the prompts on the page to modify the avatar or nickname.

7.4.2 Change password

On the personal settings page, click the "Set password" button, enter the previous and new passwords twice according to the page prompts, and click "Finish".

8. FAQ

1. What battery does the product use?

It uses high-quality lithium iron phosphate batteries (LiFePO₄).

2. What devices can the product's AC output power?

With 5000W rated power and 7000W peak power, the product's AC output port can power most household appliances. Before you use it, we recommend confirming the appliances' power first and ensuring the power sum of all loaded appliances is lower than the rated power.

3. How long can the product charge my devices?

The charging time is shown on the product's LCD screen, which can be used to estimate the charging time of most appliances with stable power usage.

4. How can I know if the product is charging?

When it's charging, the remaining charging time will be shown on the LCD screen. Meanwhile, the charging indicator icon begins to rotate with the remaining battery percentage and the input power shown on the circle's right.

5. How to clean the product?

Wash it with a dry, soft, clean cloth or paper towel.

6. How to store the product?

Before storing, please turn off the product and store it in a dry, ventilated place at room temperature. Do not place it near water sources. Please discharge and charge it every three months for long-term storage to extend its battery life.

7. Can this product be taken on the plane?

No.

8. Is the actual output capacity of the product consistent with the capacity states in the user manual?


















The capacity listed in the manual is the nominal capacity of the battery. Due to efficiency losses due to charging and discharging, the actual capacity may be lower.












9. How long will it last to supply electricity to appliances?

- 150W refrigerator -> 3-5 hours
- TV 60W -> 57+ hours
- Microwave 800W -> 2 hours
- Coffee maker 500W -> 4,2 hours
- Electric grill 1500W -> 4 hours
- Projector 100W -> 40 hours

(Values are given for S5)

9. Fault code and troubleshooting

Code	Description	Performance	Troubleshooting
E000	AC output short circuit protection	  Flashing, no output	Press the AC output power ON/OFF button for recovery.
E001	Output overload protection	   Flashing, no output	Flashing icons indicate which circuit overloads. Overload protection needs to be restored manually (by disconnection)
E002	AC battery low power protection	The corresponding port has no output	Restart the corresponding function button to restore the function and charge in time.
E003	AC output over-voltage and low-voltage protection	 Flashing, no output	Press the AC Output power ON/OFF button for recovery.
E004	Abnormal AC input frequency	 Flashing, no output	Frequency is normal and automatically restored
E005	Busbar high and low voltage, over-circuit protection	 Flashing, no output from each part	You need to press the AC ON/OFF switch to restore manually.
E006	Inverter over-temperature charging 	 Flashing, no output	Automatic recovery after the temperature returns to normal
	over-temperature protection 		
E007	PV input over-voltage and low-voltage protection	No PV charging	Return to normal charging after the photovoltaic input voltage is normal
E008	12V30A overload short circuit protection	  Flashing, no output	You need to press the DC ON/OFF switch to restore manually.
E009	24V auxiliary power overload short circuit system	The DC board reports a fault but does not turn off the output	Reduce the load on the DC port
E010	Cigarette lighter port overload and short circuit	  Flashing, no output	You need to press the DC ON/OFF switch to restore manually.
E011	USB-A port overload and short circuit	  Flashing, no output	You need to press the DC ON/OFF switch to restore manually.

E012	USB-C port overload and short circuit	  Flashing, no output	You need to press the DC ON/OFF switch to restore manually.
E013	Battery low voltage protection when DC discharge	 Flashing, no output	Restart the corresponding function button to restore the function and charge in time.
E020	BMS communication fault	 Flashing, no output	Check the BMS communication line.
E021	Single-cell of the battery over-voltage	Capacity percentage flashing	Put the device aside and wait for the cell voltage to recover automatically.
E022	Single-cell of the battery low-voltage	Capacity percentage flashing	Connect the AC charging cable and charge until the voltage returns to normal.
E023	The total voltage of the battery is too high	E023 code flashing but does not turn off the output	Put the device aside and wait for the cell voltage to recover automatically
E024	The total voltage of the battery is too low.	 Flashing, no output	Connect the AC charging cable and charge until the voltage returns to normal.
E025	Battery cell over-temperature	  Flashing, no output	Temperature recovery automatic recovery
E026	Battery cell low-temperature	  Flashing, no output	Temperature recovery automatic recovery
E027	System overload	The AC icon flashes to turn off the AC function, and the DC output is normal. AC load is higher than 5400W, or AC+DC loads are higher than 5400W	You need to press the AC ON/OFF switch to restore manually.
E028	Charging over-temperature	  Flashing, the device stops input.	Temperature recovery automatic recovery

10. Storage and maintenance

1. Please store the product away from water, heat, and metal objects.
2. To prolong the battery's service life, it is recommended to use or store this product in an environment temperature between 20°C and 30°C.
3. For long-term storage, please charge and discharge the product once every three months (discharge to 0% first, then fully charge, and discharge to 60%) for long-term storage.
4. For safety, do not store this product in an environment temperature above 45°C or below -10°C for a long time.
5. If the product has been idle for too long and the battery is severely low, it will enter a deep sleep protection mode. In such a case, please charge the product before using it again.
6. For long-term storage, please place it horizontally.

11. Electrical waste disposal

Information for users on the disposal of electrical and electronic devices in EU:

This device meets all the requirements of EU directions. The device meets the requirements of the 2011/65 EU direction on restricting the use of certain hazardous substances in electrical and electronic equipment (RoHS).



This symbol on products means that discarded electrical and electronic products must not be added to household waste. This product must not be disposed of as normal household waste following the EU Directive on Waste Electrical and Electronic Equipment (WEEE - 2012/19 / EU). The product must be disposed of in separate collection and take-back facilities.

For users in European Union countries:

If you want to dispose of electrical and electronic equipment, ask your dealer or supplier for the necessary information.

12. Warranty list

The warranty list is the proof of purchase (invoice) on which the product's serial number is indicated.