Solar power station

500W

V1.2

User Manual

Contents

1. Safety Instructions

1. Do not expose the power supply to any liquids; avoid submerging it in water or wetting it. Do not use the power supply in the rain or in damp environments.

2. If the power supply accidentally falls into water during use, place it in a safe, open area and stay away until it is completely dry. Do not reuse the dried power supply; dispose of it properly according to local regulations. In case of fire, use fire extinguishing agents in the following order: sand, fire blanket, dry chemical powder, and carbon dioxide extinguisher.

3. Do not use the power supply in environments with strong static electricity or magnetic fields, as it may malfunction. For example, some protective functions of the power supply may fail, leading to serious malfunctions.

4. Do not place the power supply in a microwave or pressure cooker.

5. Keep the power supply away from children and pets, and away from heat sources.

6. Store the power supply in a dry, well-ventilated place.

7. Do not cause a short circuit with wires or other metal objects.

8. Do not hit the power supply or place heavy objects on it to avoid deformation.

9. Do not disassemble or puncture the device with sharp objects in any way. Doing so may cause the power supply to malfunction, catch fire, or even explode.

10. If the power supply has experienced a severe fall or impact from an external force, to ensure your personal safety, do not use it again.

11. Do not use parts provided by non-official sources. If replacement is needed, please contact the dealer for purchase. The official will not be responsible for any product accidents or malfunctions caused by the use of non-official parts.

12. The recommended operating temperature range is 0°C to 30°C (32°F to 86°F). Charging a frozen battery is prohibited.If it is used in a cold area,it is better to place it at a higher temperature environment,which helps it to release more power.

13. If there are contaminants on the power supply's interface, clean it with a dry cloth. Failure to do so may result in poor contact, leading to energy loss or inability to charge.

2. Interface Description

① Handle

② Display

③ Switch

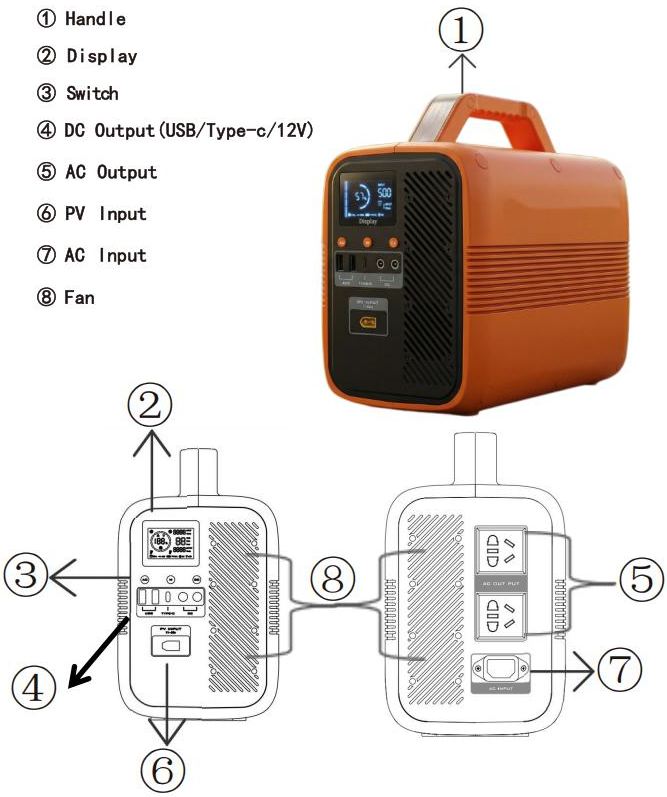
④ DC Output(USB/Type-c/12V)

⑤ AC Output

⑥ PV Input

⑦ AC Input

⑧ Fan



*Infrared function's appearance will vary from the pictures according to different countries and regions.Please refer to the actual product for details.

3. Indicator Description

Battery Indicators

Charging: During charging, the outer circle of the SOC rotates in a running light form, and the percentage of SOC gradually increases from the current battery level to 100%. Once fully charged, the display goes off.

Discharge: The SOC decreases successively from 100% to 0%. When the battery level drops below 10%, the power supply will emit a "beep, beep, beep" alarm sound. Users can click the M key to eliminate it. When the power is exhausted, the 0% indicator light flashes and the power supply to the output port stops.

Low battery: When the SOC is below 0%, it flashes continuously and the output cannot be turned on.

Key function

AC: To turn on or off the AC output, press and hold for 2 s

DC: To turn on or off the DC output, press and hold for 2 s

M: Click to open the display screen. When the low battery alarm occurs, you can click the M key to eliminate the alarm sound

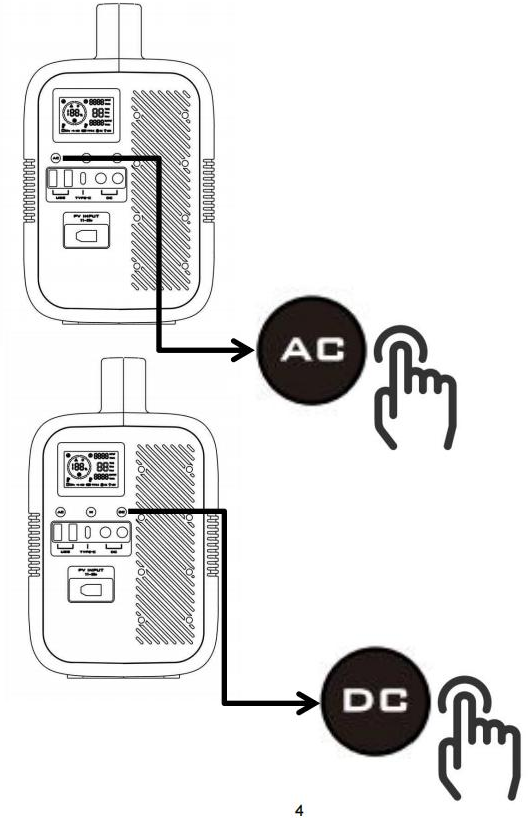
4. Power On/Off

1. AC Power On: Press and hold the AC button for 2 seconds and then release it to turn on the AC output. The AC output indication and output power on the display screen will be turned on simultaneously, allowing users to power the device with AC

2. AC Power Off: With the AC output on, hold down the AC button for 2 seconds and then release it to turn off the AC output. The AC output indication and output power on the display screen will be turned off simultaneously

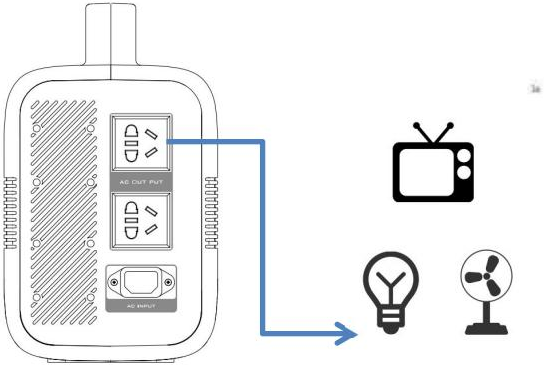
3. Dc power-on: Press and hold the DC button for 2 seconds and then release it to turn on the DC output. The DC output indicator on the display screen and the output power supply will be turned on simultaneously, allowing users to power the device with DC.

4. Dc shutdown: With the DC output on, hold down the AC key for 2 seconds and then release it to turn off the DC output. The DC output indicator on the display screen and the output power supply are turned off simultaneously.



5. Powering Loads

The power supply is equipped with 2 AC output interfaces. After turning on the power, connect the electrical load to the AC output port. The load power must not exceed the rated output power of the power supply. If it does, the power supply will protect and shut down the output.



The power supply is equipped with an automatic power-off or automatic power-off function for AC output when there is no load, reducing power consumption.

Automatic AC Output Shutdown: After the power supply is switched on, if the load is consistently less than 5W, the device will automatically switch off after 24 h to save battery energy.

Low Power Auto Shut-off: When the battery is too low (SOC ≤ 1%), it will be forced to shut down, you need to charge the power supply as soon as possible.

6. Common Loads

Mobile phone
11.76Wh
≈75 times

Mac book
60Wh
≈15 times

iMac
143W
≈6h

iPad
28.65Wh
≈31 times

TV
110W
≈8h

Refrigerator
120W
≈8h

Electric rice cooker 280W
≈3.2h

LED light
10W
≈90h

Hairdryer
800W
≈1.1h

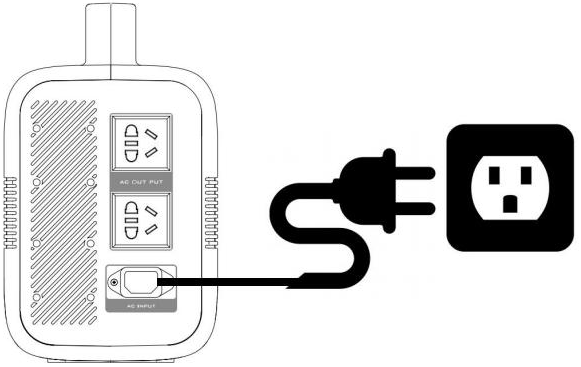
Bracker fan
45W
≈20h

The above data are all from laboratory environment tests. There may be differences in testing under different scenarios or environments, meanwhile, due to the existence of self-consumption of electricity, the above data is only for reference, so please refer to actual usage.

7.1 AC Charging

The power supply is equipped with 1 AC input port.

The AC charging steps are as follows:
1. Use the AC power cables in the package to connect the AC input port to the AC.
2. Check whether the power supply display screen has entered the charging state. The SOC status bar on the display screen rotates in a marquescent light pattern, indicating that the power supply is charging



1.After charging is complete, disconnect the AC connection.
2.To extend the battery's cycle life, it is recommended to charge the battery regularly every 3 to 6 months.
3. If the original power cord is damaged, please contact after-sales service Maintain and use new cables. Do not purchase other types of power cords for charging at will.
4. When charging the equipment, direct sunlight should be avoided.
5. Do not charge in the sun.
6. Do not charge the power supply indoors.

7. Charge the Power Supply

7.2 Solar Charging

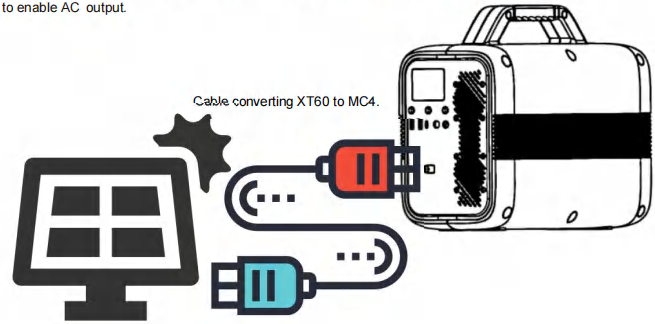
The power supply is equipped with 1 PV input port, which is a standard XT60 port. Since the device interface is MC4, we provide a cable in the box that converts XT60 to MC4.

The solar charging steps are as follows:

1. Unfold the solar panel, set up the bracket and fix it. In order to make the solar panel directly face to the sun, adjust the angle of the solar panel.

2. Improve the solar charging efficiency, please try to make the sunlight shine vertically on the solar panel and ensure that there are no obstructions.

Note: The power supply powers on automatically via solar charging. AC output is off by default (indicator unlit) to minimize standby power use. Press and hold the power button for 2 seconds to enable AC output.



Precautions for Solar charging

Do not mix different types of solar panels. Do not connect solar panels in series to charge the power source, as it may damage the equipment.

The maximum current of the solar panel must not exceed 10A.

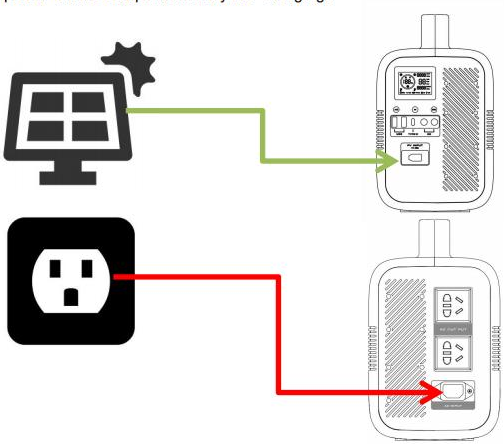
3. The device will automatically start charging and shut down when fully charged.

4. Photovoltaic charging is adopted, with a charging voltage range of 11-55V.

5. When charging with solar energy, be careful to avoid direct sunlight on the device to prevent overheating and damage.

7.3 AC + Solar Simultaneous Charging

The power supply supports simultaneous charging with AC and solar power. When connect AC grid and solar charging at the same time, the power supply will prioritize maximizing the solar input power, and the remaining charging power will be compensated by AC charging.

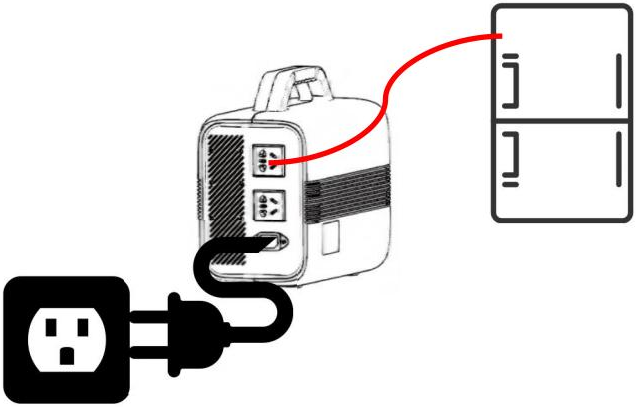


Precautions for Simultaneous Charging:

1. When charging simultaneously, the total charging power will not exceed 800W, and the solar charging power will not exceed 300W.
2. When solar charging stops, if the battery is not fully charged, AC charging will continue until the power supply is fully charged.
3. When charging simultaneously, the power supply can still provide a maximum power of 500W to the load.

8. Uninterruptible Power Supply (UPS)

The power supply supports the uninterruptible power supply (UPS) function. Connect the AC to the input port and connect the electrical loads (such as a refrigerator) to the output port, the UPS function is enabled by default.
At this time, AC can power to the power supply and the electrical loads.
In case of a sudden shed off, the power supply can switch to the UPS mode within 20 ms automatically.

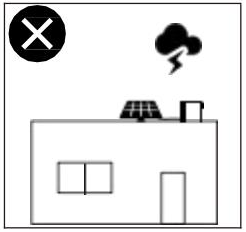


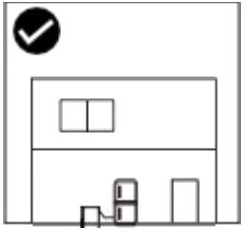
Precautions for UPS:
1. This power supply can't support 0 ms and can't be used in high precision devices, like medical gear or data servers.
2. If the input current exceeds 10A, check your load's power. If it's within limits, reset the input overload manually to use the UPS again.

9. Usage Scenario Description

It is not recommended to use the power supply in the following scenarios or environments:

1. **Extreme Temperatures:** Do not use the power supply in extremely hot or cold conditions as it may affect battery performance and safety.
2. **Humidity/Water:** Avoid using the power supply in humid or water-rich environments to prevent electrical shorts and battery damage.
3. **High-Voltage Proximity:** Keep the power supply away from high-voltage power sources to avoid electromagnetic interference and personal safety hazards.
4. **Flammable Environments:** Do not use the power supply in areas with flammable gases or dust to prevent explosions or fires.
5. **Storms:** Avoid placing power supply and solar panels on high ground during thunderstorms to prevent lightning damage.





10. Frequently Asked Questions

1.What type of battery is used for the power supply?
This product uses LFP cells.
2. For which loads can the output of an AC power supply supply power?
The AC output of this device can continuously process up to 500W.
3. Can the power supply be powered by both AC and photovoltaic simultaneously?
Yes, it supports both AC and photovoltaic charging simultaneously.
4. How to determine if the device is charging?
When charging, the battery level indicator light flashes. When charged to 100%, the display goes out (without turning on the AC output).
5. Can this kind of power supply be carried on an airplane?
No.
Can a car be started with a 12V power supply?
No.
7. How can I know how long the power supply can still operate?
Check the battery display's percentage of power. The remaining power discharged from the power supply will gradually decrease in percentage. The remaining usage time is estimated by dividing the remaining capacity by the load. When the power level drops below 10%, the power supply will automatically alarm and prompt. Please charge the power supply in time.11. Maintenance and Care

1. **Storage Requirements**
(1) For long-term storage, discharge to around battery SOC 60%.
(2) Store the power in the specified storage temperature range (-20°C(-4°F) to 6 5 °C(149°F)).
(3) Store in a cool, dry place, out of direct sunlight.
(4) Do not place the power supply in water or places that may leak water.

2. **Maintenance Requirements**
(1) Within (-20°C(-4°F) to 6 5 °C(149°F)), cycle every 3 months: discharge to SOC 15%, then charge to SOC 100%, check for issues.
(2) Outside this range, maintain monthly: discharge to SOC 15%, charge to SOC 100%, check for issues.
(3) Do not disassemble or modify the power supply (which contains high voltage) on your own. If there is a fault, please contact the after-sales service center for maintenance.

12. Accessories List

AC Power Cable 0.5m(19.7")*1	
PV MC4 Connector Set x 1	
User Manual*1	

13. Specification

Model	500W
Capacity	1004.8Wh
Net Weight	8.5±0.5kg （25lbs）
Dimensions	310x158x220mm
Output	
AC Output	110Vac, 50Hz, 500W
AC Output (Bypass Mode)	500W Max
Input	
AC Input	Voltage:90-130Vac
	Frequency:45-65Hz
PV Input	11-55 Vdc, 300W
Battery	
Cell Type	LiFePO4
Working Enviroment	
Operating Noise	<55dB
Operating Temperature	-10°C to 45°C （10°F to 113°F）
Storage Temperature	-20°C to 65°C （-4 °F to 149°F）

*The power supply can withstand an input voltage range of 90 - 130 Vac

**When the power supply is operating at full power input or output, the maximum temperature is 45°C(113°F). If the temperature exceeds this value, the power supply will limit the power.

This product shall not be disposed of together with ordinary wastes,but must be recycled. This symbol indicates that this product shall not be treated as household waste, but must be handed over to the corresponding waste recycling station for recycling of electronic and electrical devices.

Please strictly follow the operation instructions and precautions, otherwise it may cause fire, electric shock, damage or other injuries

Product qualification certificate

Product qualification certificate:
This certificate indicates that the product has passed the inspection.

Return Registration Form

Product model:_____

Consumer name:_____

Order No.:_____

Product name:_____

Contact details:_____

Reason for return:_____

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