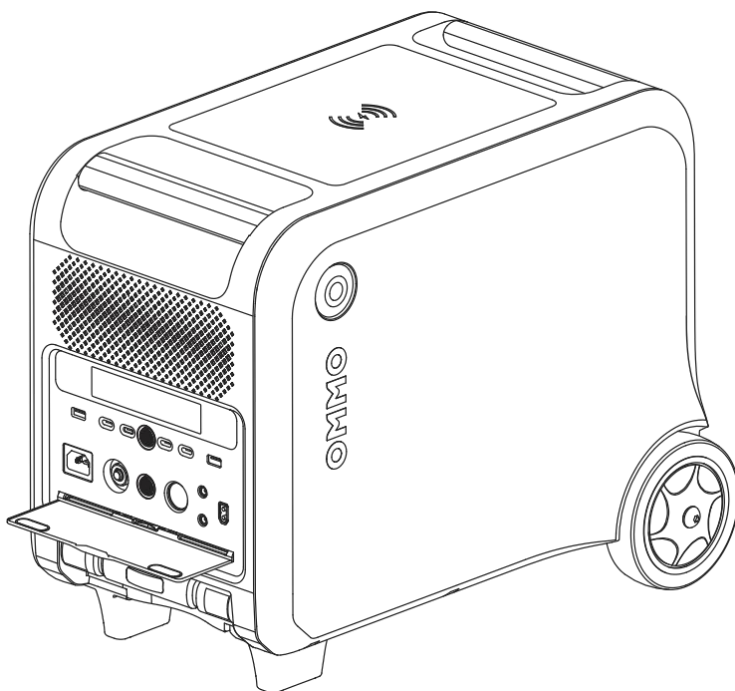


OM-2400

Portable power station

User Manual



Please read this manual book and follow the instructions before using it.
Please keep the user manual properly for future reference.

DONGGUAN OMMO TECHNOLOGY Co., Ltd.

Version: V1.02

Catalogue

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1.Disclaimer

Please read the user manual of this product to ensure that you use it correctly after fully understanding it. After reading, please keep the user manual in a safe place for future reference. If you do not operate this product correctly, you may cause serious injury to yourself or others, or cause product damage and property loss. Once you use this product, it is deemed that you have understood, recognized and accepted all the terms and contents of this document. The user promises to be responsible for his or her own behavior and all the consequences arising therefrom. OMMO does not bear any losses caused by the user's failure to use the product in accordance with the "User Manual". Subject to laws and regulations, OMMO has the final right of interpretation of this document and all related documents of this product. If there is any update, revision or termination without further notice, please visit the OMMO official website for the latest product information.

2.Safety Notice

2.1.Prohibitions

1. Do not place this product near heat sources, such as fire or heating furnace.
2. Do not allow this product to contact any liquid, do not immerse this battery in water or soak it. Do not use this product in rain or humid environment.
3. Do not use this product in strong static electricity or strong magnetic field environment.
4. Do not disassemble this product in any way or pierce this battery with sharp objects.
5. Do not stack other heavy objects on this electrical product except our battery.
6. Do not place this product in an unventilated or high-temperature space.
7. Do not insert foreign objects into any port (AC, DC or ventilation holes) of the product.
This product generates potentially lethal AC current, which is as dangerous as a household wall socket.
8. Except for the authorized agent, it is dangerous for anyone to replace the internal battery of the product or perform repair operations on other components of the product.

2.2.Notice

1. Please do not use NON-OMMO parts or accessories to avoid any risks. If you need to replace the parts, please visit OMMO's official website and reach out customer support for better assistance.
2. If the shell falls off or the inside part is exposed, please do not operate it by yourself. Please turn to professional personnel to check and repair it.
3. If the chemical substances inside the battery leak accidentally, please do not touch or inhale. If you accidentally contact your skin or eyes, please wash with plenty of clean water. If necessary, please take medical measures.
4. Do not wear metal objects such as watches, necklaces, bracelets, etc. to operate the product to avoid accidentally causing a short circuit. If the product catches fire, use fire extinguishing equipment in the following recommended steps: water or water mist, sand, fire blanket, dry powder fire extinguisher, carbon dioxide fire extinguisher.
5. When using the product for the first time, if you find that the product is not clean or has abnormal phenomena such as odor, do not continue to use, please return the product to the seller.
6. If the product accidentally falls into the water during use, please place it in a safe open area, away from it until the product is completely dry. The dried product must not be used again, please contact after-sales service.
7. If the product is still charging after the normal charging time has passed, stop charging immediately. Overcharging may cause the battery to heat up, smoke, deform, or burn.
8. Please store this product out of reach of children and pets.
9. Before using the product, be sure to check all materials. Stop using the device immediately if it is damaged, cracked, leaking, or disconnected.
10. Do not use the device and connector plug with wet hands. Otherwise, it may cause electric shock or other hazards.
11. Do not block the fan to ensure proper ventilation during use. Otherwise, it may cause permanent damage to the product.
12. Do not move the product during use, as vibration and sudden impact may cause poor connection with internal hardware.
13. Please read and fully understand the instructions for use of the connected electrical appliances. Failure to properly operate electrical products may cause accidents or injuries.
14. Please use cables designed for the product. The company is not responsible for damage caused by third-party equipment, which may invalidate your warranty.

2.3.Transportation Precautions

1. When carrying the product, grab on the non-slip metal handle on the top of the product to avoid damage to other parts.
2. When carrying the product, please fix it and keep it upright and stable.
3. Be careful to handle it.

3.Introduction

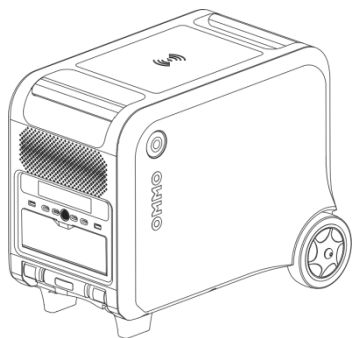
The product is a portable power station with the extreme innovation and mature technology. Equipped with a 2400W power inverter and a 2048Wh LiFePO4 battery pack, it is enough to power your essentials on the short journey or during a power outage, it measures 512mm*336mm*412mm and net weight of 25KG. It can be charged to 80% in 1 hour with fast charging mode. In addition, the OM-2400 supports a low power mode, that is the AC or DC output can be automatically turned off after 4 hrs of low power or no load to save power consumption.

Overall, this product is the best choice for portable energy storage, and its powerful features are perfect for your backup or outdoor activity needs.

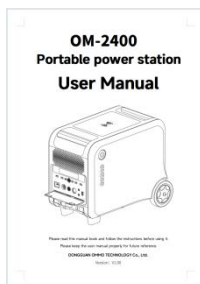
4.Abbreviation

- MPPT: Maximum power point tracking
- SOC: State of charge
- UPS: Uninterruptible power supply
- AC: Alternating current
- DC: Direct current
- PV: Photovoltaic
- DOD: Depth of discharge

5.Packing List



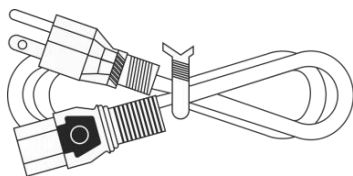
2400W Portable Power Station



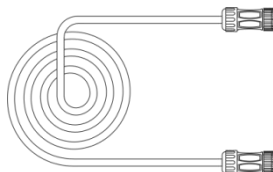
User Manual



Warranty Card



AC Charging Cable



70cm Battery connection cable

The following accessories are not included in the standard package and can be purchased at : <https://www.ommo.com/>



Car Charging Cable



Solar Charging



Type-C Cable

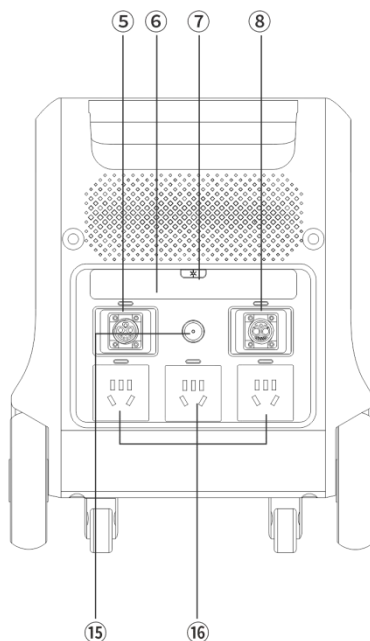
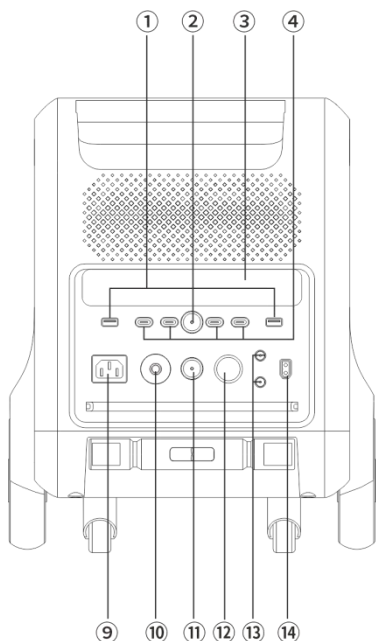
AC charging cable :3X1.5mm², 1500mm

TYPE-C cable: 5A/100W, length 2m

Car charging cable :16AWG, 720mm

Solar charging cable :2X2.5mm², 1500mm

6.Products



01. USB-A 18W*2

02. USB Switch

03. LCD display

04. Type-C 100W port x 4

05. Battery Parallel port

06. LED light

07. LED light switch

08. OM-2400 Parallel port

09. AC charging port

10. Circuit breaker

11. Cigarette port & DC5521 switch

12. Cigarette port

13. Port DC5521

14. Solar charging /DC charging port

15. AC switch

16. AC output

Mark: A circuit breaker is an electrical safety switch used to protect your equipment from damage caused by over-current or short circuit.

7.Button Operation Guide

The product has separate AC and DC power buttons. Press either button to start or close the specified port area.

7.1.Individual Button Guide

Any button, tap, light up for 1 minute.

Press any button for about 1 second to turn on or off the corresponding function.

Press any button for about 3 seconds to turn off all functions.

7.2.UPS Bypass Mode

7.2.1.UPS mode setting

Connect the AC power, then click the AC power button to turn on the AC output. The LCD screen displays "UPS", indicating that the product has entered the UPS working mode. The AC power directly supplies power to the load at the AC output port. If the load power is less than the maximum power of the AC input, the AC power will also charge the product until the battery is fully charged. (Note: In UPS mode, the AC power will first supply power to the load and then charge the battery.)

7.2.2.DC charging in UPS mode

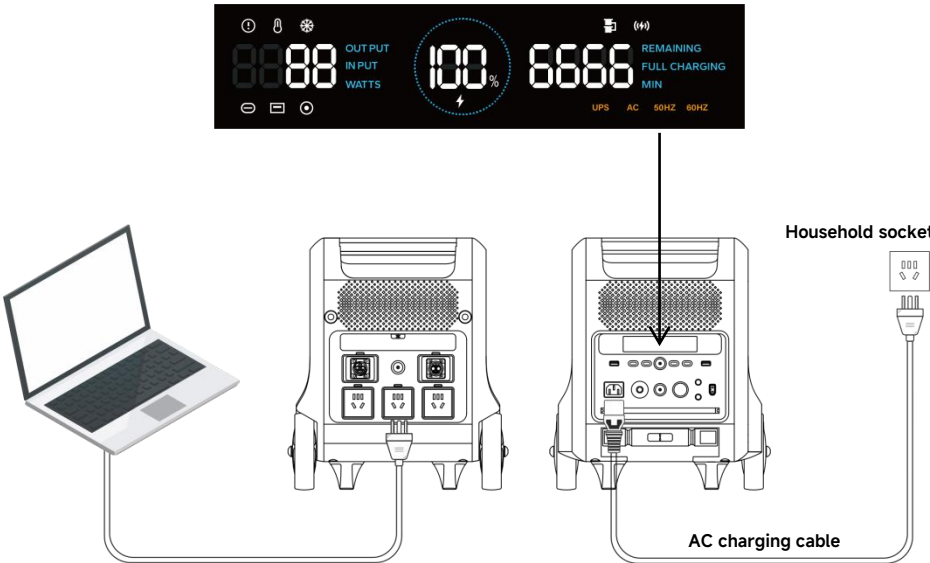
In UPS mode, connect photovoltaic power generation or other DC power supply (12~80VDC) to the solar charging port/DC charging port. At this time, the DC will charge the battery until the battery is fully charged.

7.2.3.Maximum output current in UPS mode


The maximum output current in the UPS working mode is: 10A for 220~240V voltage level and 15A for 100~120V voltage level. When the output current is greater than the maximum current, the product will enter the protection state and the DC port will stop charging.

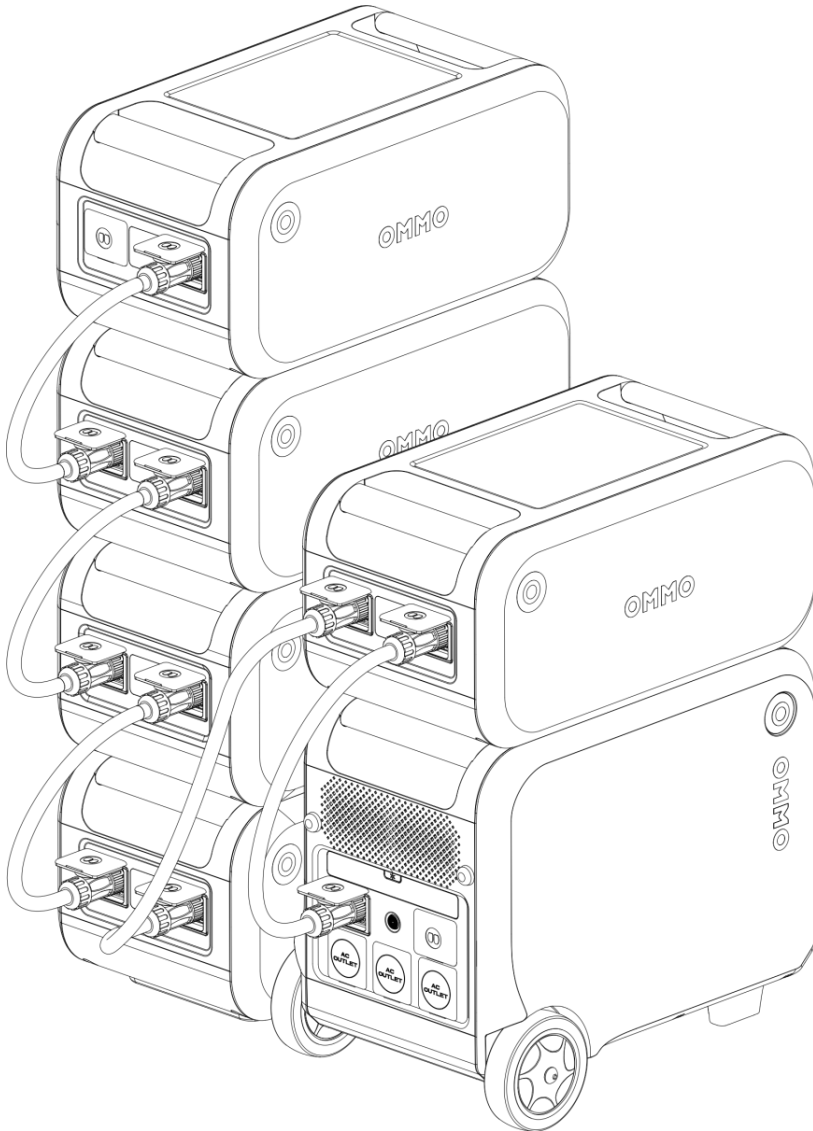
7.2.4.UPS work switching

In UPS mode, if the external AC power input stops suddenly, the product will switch to internal battery power supply in less than 20ms to maintain power supply to the load.



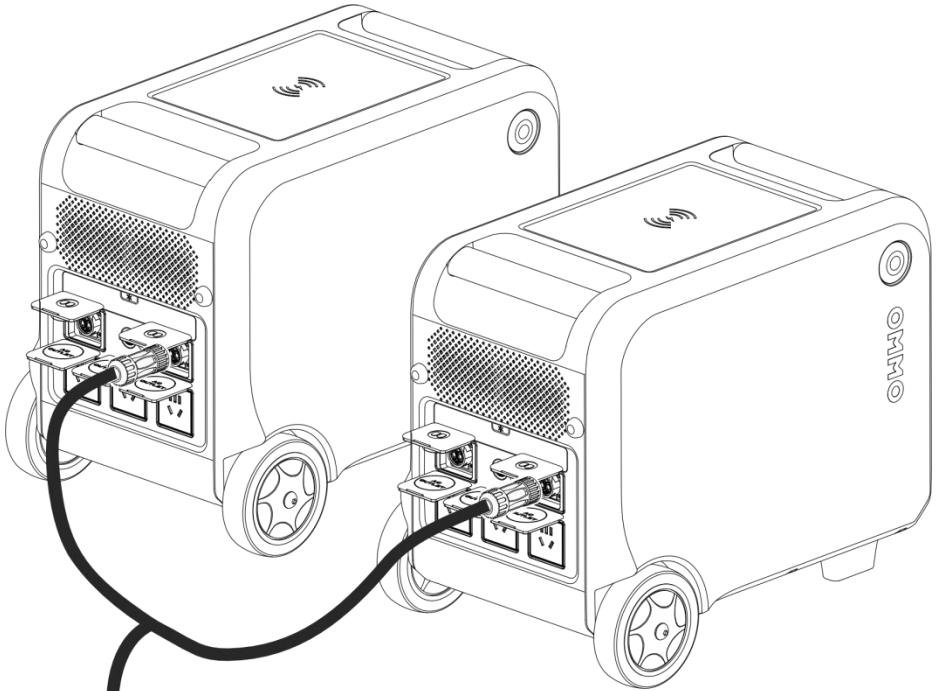
7.3.OM-2400 Capacity Expansion

Connect the battery pack to the parallel port of OM-2400, and the LCD screen will display "  ". At this time, the product capacity is expanded, and the user can charge and discharge product and the battery pack through the input/output port of OM-2400. (Note: up to 5 batteries can be connected)



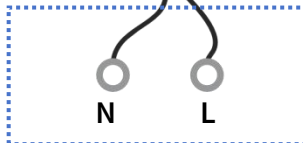
7.4.OM-2400 Parallel Mode

Use parallel cables to connect two OM-2400s to achieve an output power expansion of 4800W (4096Wh), as shown in the picture below. Connecting the load to the output end of the parallel cable can provide users with greater power output.



Parallel cable

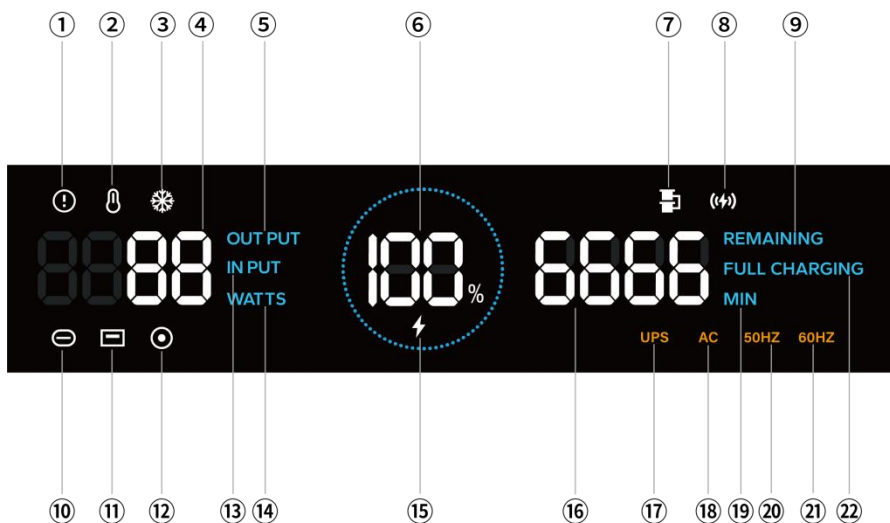
Note: After parallel operation, output from the parallel power cord.



Note: output port(Connect load)

8.LCD Screen Guide

8.1.Description OF LCD Screen ICONS



1.Warning icon

2.High temperature warning icon

3.Low temperature warning icon

4.Real-time power display

5.Output power

6.Battery Capacity

7.Parallel icon

8.Wireless charging icon

9.Remaining time

10.USB-C icon

11.USB-A icon

12.Cigarette lighter port/DC5521 port icon

13.Input power

14.Watt

15.Charging icon

16.Charge/discharge time remaining

17.UPS icon

18.AC icon






19.Minutes

20.50HZ AC frequency

21.60HZ AC frequency

22.Full charging time

8.2. LCD Screen Status Description

LCD Status Description	
Normal power on	The LCD screen lights up
Normal power off	LCD screen off
AC connect on	LCD screen shows "AC"
USB-A, USB-C & wireless charge are enabled	LCD screen shows "   ,  "
Cigarette lighter, car charge, DC5521 are enabled	LCD screen shows "  "
AC charge and discharge	"UPS" displayed on the LCD screen
Parallel mode	LCD screen shows "  "

Please refer to section 9 for more information on fault indication and solution.

9.Troubleshooting

The fault code is displayed at position 16 of the display screen, and the related fault type and recovery method are as follows:

Fault Description	Fault Code	Troubleshooting
USB-A1、USB-A2 alarm	E61	Remove abnormal load and the system will automatically recover after the load returns to normal.
USB-C1,USB-C2 alarm	E71	
USB-C3,USB-C4 alarm	E72	
Wireless charging alarm	E81	Automatic recovery after load returns to normal.
Cigarette lighter alarm	E51	
Battery charging high temperature	E11	The battery temperature will automatically recover after it drops < 45°C.
Battery charging at low temperature	E12	The battery temperature will automatically recover after it returns to > 5°C.
Battery discharge high temperature	E13	The battery temperature will automatically recover after it drops < 45°C.
Battery discharge low temperature	E14	The battery temperature will automatically recover after it returns to > -10°C.
Battery communication timeout	E15	Restart the machine to see if it can be restored. If not, please contact after-sales.
Battery charging over-current	E16	Please contact after-sales.

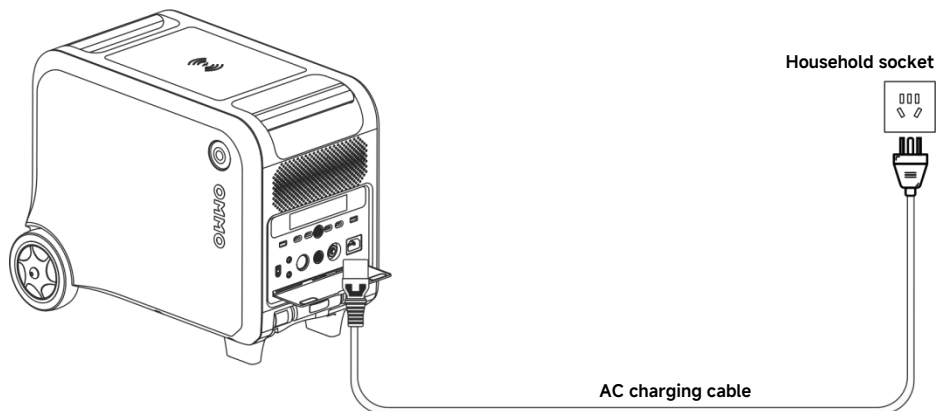
Battery output low voltage	E17	Please contact after-sales.
Motherboard high temperature	E21	The motherboard temperature will automatically recover after it drops <45°C.
Inverter overload	E41	Remove abnormal load and restart the machine to recover.
Abnormal battery voltage	E42	Remove the power device and restart the machine to see if can be restored. If not, please contact after-sales personnel.
Inverter failure	E43	
Abnormal AC input frequency	E44	Please confirm whether the local voltage and frequency are consistent with the manual. If yes, please contact after-sales.
Abnormal AC input voltage	E45	
Abnormal AC output voltage	E46	Remove the abnormal load and restart the machine to see if can be restored. If it cannot be restored, please contact after-sales.
Inverter overload short circuit	E47	
AC output high temperature	E48	Restart the machine to recover.
PV over-current	E31	Remove the solar charging cable and restart the machine to recover.
PV over-voltage	E32	

10.Charging Method

This product supports AC, solar, car, generator four charging methods.

10.1.AC Charging

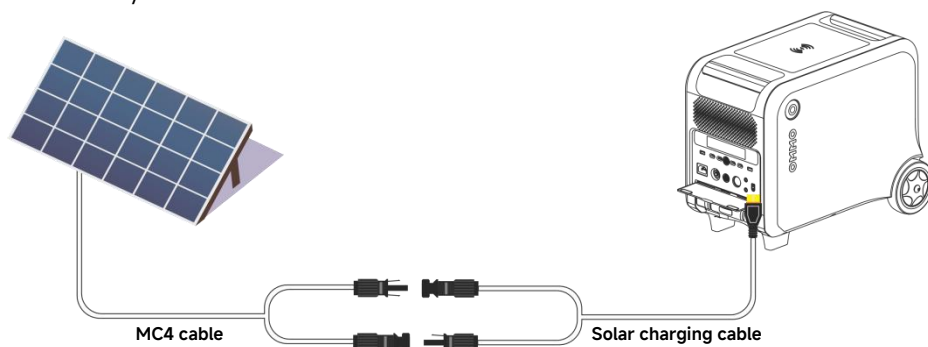
Connect the AC power cord input plug to the wall outlet and connect the other end to the AC charging input port of the product. Equipment built-in advanced control circuit. After full charge (about 1.5 hours), it will automatically stop charging.



10.2.Solar Panel Charging

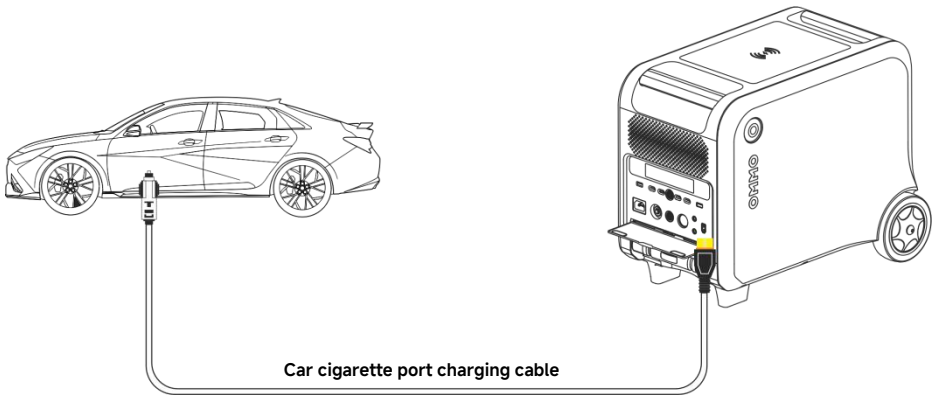
Connect solar panels (series or parallel), open circuit voltage range :12-80V. Then connect the solar panel to the product via the solar charging cable.

When charging with solar panels, the maximum input current and power are 24.7A and 1200W, respectively. In addition, when it is fully charged (about 2 hours),it will stop charging automatically.



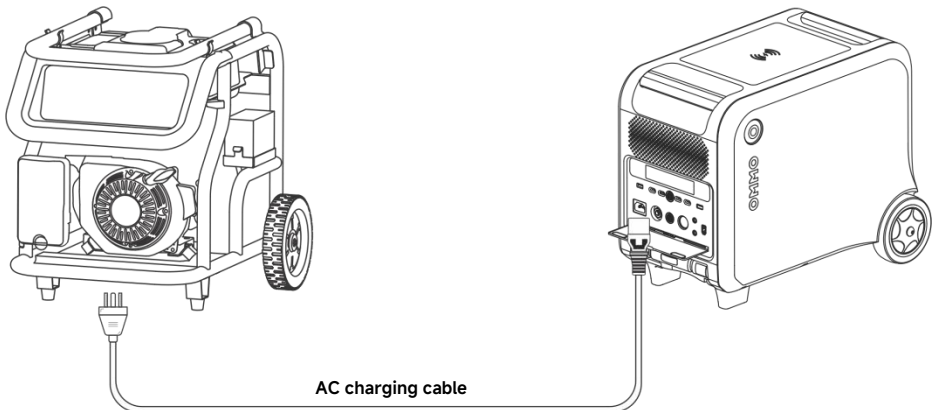
10.3.Car Charging

Connect the product to the vehicle 12V cigarette lighter socket via the vehicle charging cable. When the device is fully charged it will automatically stop charging.



10.4.Generator Charging

Connect the AC adapter input plug to the generator and the output plug to the AC charging port of the product. When fully charged (about 1-2 hours), it will automatically stop charging.



11.Discharging(Output)

System runtime will be determined by a variety of factors such as ambient temperature, discharge rate, battery capacity, altitude, and other factors.

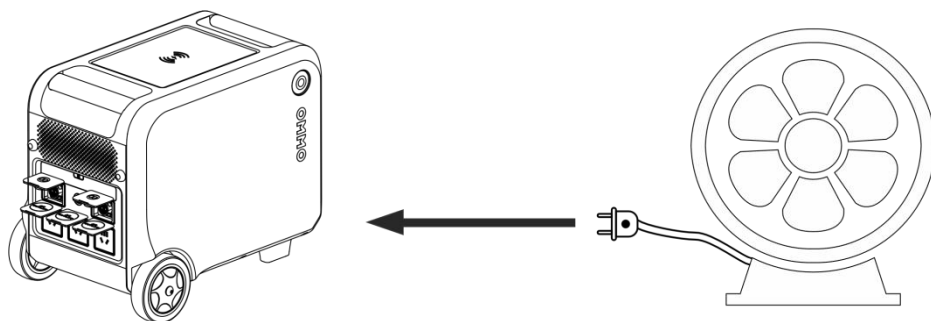
11.1.Output Port

11.1.1.AC Outlet

This product is suitable for Japanese, American, European, British, Australian and New National Standard High Voltage version, and is equipped with 3 AC output ports, the rated output power is 2400W and peak power is 4800W. Please ensure that the load power connected to the device does not exceed 2400W.

When the output power exceeds 2400W, it will enter overpower protection mode and E41 is displayed on the screen.

- 1) 105%-130% rated load, enter overpower protection mode after 10s;
- 2) 131%-200% rated load, enter overpower protection mode after 1.5s;
- 3) More than 200% of rated load, enter overpower protection mode after 300ms.



11.1.2.DC Outlet

12V/10A cigarette lighter output port

12V/10A 5521 output port (traditional jack for routers/cameras, older laptops, etc.)

USB-C Output Port (PD 100W)

USB-A Output Port (5V3A)

Wireless charging (If your mobile phone supports wireless charging, please place your mobile phone on the top of the product and turn on the USB key switch to start wireless charging)

11.2.Estimated Operation Duration

Please note: All statistics below are based on estimation. Actual results may vary depending on environment, usage, and firmware version.

Drone 40W 48+ times	TV 110W 15 hours	Laptop 60W(Type-C) 32+ times	Digital camera 16W(USB) 118+ times
Electric cooker 600W 4 hours	Air conditioner 1100W 2 hours	Electric hair dryer 1600W 1.1 hours	Refrigerator 120W 23 hours
Electric Saw 750W 3.2 hours	Electric kettle 1500W 1.2 hours	Ventilator/Respirator 40W 60 hours	Microwave 1300W 1.5 hours
Air fryer 800W 2.3 hours	Coffee machine 1000W 2.4 hours	Lawn mower 400W 6 hours	Car Refrigerator 30W 80 hours

$2048\text{Wh} \times \text{DOD} \times \text{transferring efficiency} / \text{load power} = \text{Loading time/hour}$

If you want to calculate the rated power of 1500W electric kettle can be used for how long?

For example: $2048\text{Wh} \times 90\% \times 90\% / 1500\text{W} = \text{about } 1.1\text{hours}$.

What is Battery Depth of Discharge (DOD)?

In order to extend the battery life, the system sets the battery to 90% discharge depth, which means that the battery can only discharge 90% of the battery capacity, and reserve 10% of the battery power to prevent the battery from over-discharging. DOD = 80% ~ 90% (determined by ambient temperature and discharge rate)

Note: In low temperature environment and large load conditions, the discharge capacity of the battery cell is greatly affected, the product performance will be seriously reduced, the load time will be shortened, and it may not meet the normal use requirements.

When the AC load is less than 10W, the DC (including USB, wireless charging) load is less than 1W of light power or 0 power, the output will automatically close after 4 hours.

12. Technical Specifications

Model	OM-2400
Weight	25Kg
Dimension	512mm*336mm*412mm(L*W*H)
Optimal operating environment temperature	20°C ~ 30°C
Charging temperature	0~40°C
Discharge temperature range	-10 ~ 40°C
Storage temperature range	0-40°C(20 °C to 30 °C is optimal)
Operating humidity range	10~90%
Safety certification	UN38.3,MSDS and RoHS
Battery capacity	2048Wh(40Ah)
Battery type	LiFePO4
DC Output Specification	
Cigarette lighter	12VDC/10A
DC5521 X 2	12VDC/10A
USB-A X 2	5V/3A,9V/2A,12V/1.5A
Type-C X 4	5/9/12/15,3A; 20V/5A
Wireless charge	5W/10W/15W
<p>Noted:</p> <ol style="list-style-type: none"> 1、Cigarette lighter port is in parallel with DC5521, sharing 10A current. 2、There is no fast charging function when Type-C1 and Type-C2 are output at the same time (10W output), and the maximum output power of a single is 100W; There is no fast charging function when Type-C3 and Type-C4 are output at the same time (10W output), and the maximum output power of a single is 100W; 3、The ability of this product to charge and discharge depends on the actual temperature of the battery. 	

Standard	EU	US	JP
AC Output Parameter			
Rated output power	2400W Total	2400W Total	2400W Total
Rated output voltage	230Vac	120Vac	100Vac
Rated output current	10.5A	20A	24A
Rated output frequency	50Hz	60Hz	50Hz/60Hz
AC Input			
Rated input voltage	230Vac	120Vac	100Vac
Maximum input current	7A	12.5A	15A
Input frequency	50Hz	60Hz	50Hz/60Hz
UPS function	Yes,≤20ms		
Charging power	Max1500W/1.5 hours full/@0~40°C		
DC Input			
Interface type	XT60		
Input power	Max 600W/@0~40°C		
Input voltage range	12 ~ 80VDC		
Input current	9.6Amax		
Solar MPPT DC Input			
Interface type	Solar interface to XT-60		
Input power	Max 1200W/@0~40°C		
Input voltage range	12~80VDC		
Input current	0~25A		

13.Product Guide

13.1.Usage Method

- Most electrical appliances on the market are suitable for 5521 interface, cigarette outlet, USB-A, USB-C outlet specifications of this product. Largely transient current generated by some appliance when charging may activate over current protection
- It is suitable for household appliances with output power below 2400W. However, overload protection is still activated, though rated power is below 2400kwh. Just apply the product to electrical equipment with low power rating.
- Though output overcurrent, overload, or short circuit, the product will close the corresponding output port. If above situations exist, turn off the device, press a button to restart. Seek help from supplier and professors
- Straight-through charging been supported. Please keep the device flat during use, charging, and discharging.
- The AC and DC outputs automatically turn off when the product power level drops to 0%. Check the battery level before using the AC/DC output to maintain a long battery life. Be better to recharge it when battery capacity drops to 20% or less.

13.2.How To Maintain

- Be better to use or store the product at environment with temperature from 20°C to 30°C, away from water, heat sources, or metal objects.
- Be better to recharge and discharge it once per month that is, discharge the product to 30% and then charge to 80%; No guarantee if product not been charged or discharged for more than 6 months.
- Do not store it in temperature over 45°C or lower than -10°C for a long time
- Recharge to 80% before storage, if the power of this product is less than 1% after use.
- Irreversible damage and shorter longevity will be caused in terms of server shortage and long time disuse of battery. When into the deeper sleep, recharging is necessary to second.

14.FAQ

Q1: What devices can the product charge/power?

A: The maximum AC output power of the product is 2400W, so please make sure that the total power of your device does not exceed this power, otherwise the product will automatically shut down the output and enter the protection mode.

Tips: For some equipment with built-in motor/compressor, the instantaneous starting power may be 2-4 times the rated power, which may exceed the upper limit of the product.

Q2: How can solar panel charge the whole system?

A: Solar panels must meet:

- (1) Open circuit voltage (OCV) between 12V-80V;
- (2) Equipped with MC4 connector. If your photovoltaic panel uses Anderson connector, please purchase Anderson to MC4 cable.

Note: The actual charging time depends on the weather, solar conditions and the Angle of the solar panel.

Q3: Can I charge and discharge at the same time?

A: Yes, the product supports simultaneous charging and discharging. It uses premium LiFePO4 batteries and an advanced battery management system, so feel free to use it in a way that better suits your needs.

Q5: How to clean the product?

A: Be better with dry and non-abrasive cloth. The multi-functional product need to be cleaned to keep its good state in simple method.