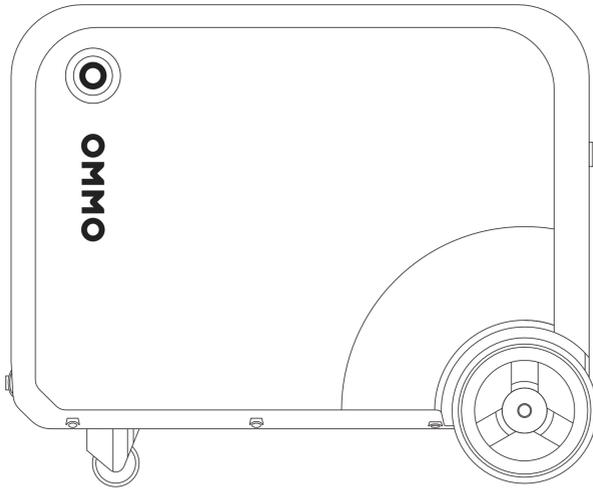


# OM-2400

## 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.**

# Catalogue

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# 1.Critical Safety Note

Please note: The product is a portable energy storage power supply, please read and understand all the safety instructions before using it. If damage is happened by non-compliance with the instructions, it cannot be covered by warranty.

- Make sure to operate the product in a dry and well-ventilated environment. Please dry it thoroughly before using if in a damp environment.
- Make sure to check all materials before using it. Stop using the device immediately when it is damaged, cracked, leakage of electricity, or AC disconnection.
- Do not touch the device or plugs with wet hands, otherwise you may get an electric shock or other dangers.
- Do not touch AC interface with metal objects, otherwise it may lead to an electric shock, high temperature, fire or other dangers.
- Do not block fan openings to ensure proper ventilation while using, otherwise it may lead to permanent damage to the device.
- Do not move the device while using, as vibration and sudden impact may cause poor connection to internal hardware.
- Please read and fully understand the instructions of the connected appliances, improper operation of the electrical device may lead to accidents or injuries.
- Please use cables specifically designed for the device. Our company assumes no responsibility for damage caused by third-party equipment, which may invalidate your warranty.
- Please be careful to use the device and keep it away from children.
- Warning: Please use a dry powder extinguisher in case of fire.
- Warning: Do not insert foreign objects into any port of the device (AC, DC, or Vents). The device may produce a deadly AC that is as dangerous as a household wall outlet.
- Warning: It is dangerous for anyone other than authorized personnel to perform any service or repairing that involves replacing the internal battery or other device components.
- Make sure to keep the device away from fire and heat source.

## 2.Introduction

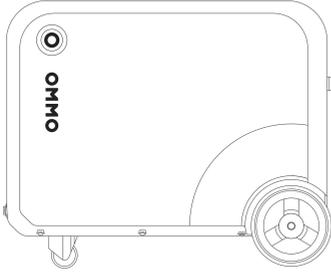
The product is a portable energy storage power supply, born from the extreme innovation and mature technology. Equipped with a 2400W power inverter and a 2048Wh LiFePO4 battery pack, it is enough to power your essentials on the short journey or during a power outage, it measures 512mm\*336mm\*412mm and weighs 25KG. It can be charged to 80% in 1 hour with fast charging mode. In addition, the OM-2400 supports a low power mode, where the AC or DC output can be automatically turned off after 10 minutes 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.

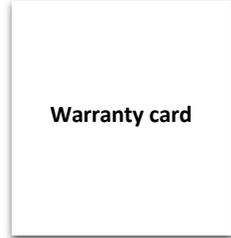
## 3.Abbreviation

- 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

## 4.Packing List

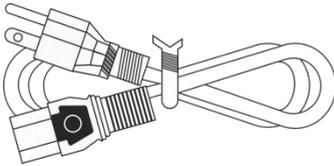


**2400W Portable power station**

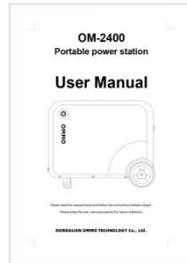


**Warranty card**

**Warranty Card**

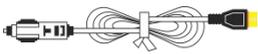


**AC Charging Cable**



**User Manual**

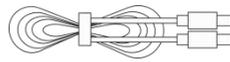
The following accessories are not included in the standard package and can be purchased at : <https://www.ommo.com/>



**Car Charging Cable**



**Solar Charging Cable**



**Type-C Cable**

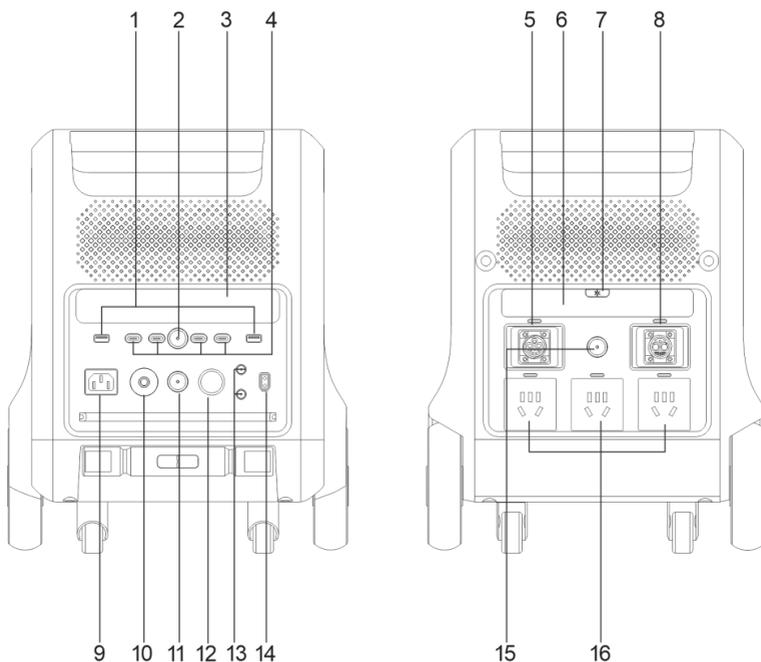
**AC charging cable :3X1.5mm<sup>2</sup>, 1500mm**

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

**Car charging cable :16AWG, 720mm**

**Solar charging cable :2X2.5mm<sup>2</sup>, 1500mm**

## 5.Product Introduction



01. USB-A18W\*2

02. USB Switch

03. Type-C 100W port x 4

04. LCD display

05. Parallel port

06. LED light

07. LED light switch

08. 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

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

## 6.Key Operation Guide

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

### 6.1.Individual Button Guide

Any key, tap, light up for 1 minute

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

Press any key for about 3 seconds to turn off all functions

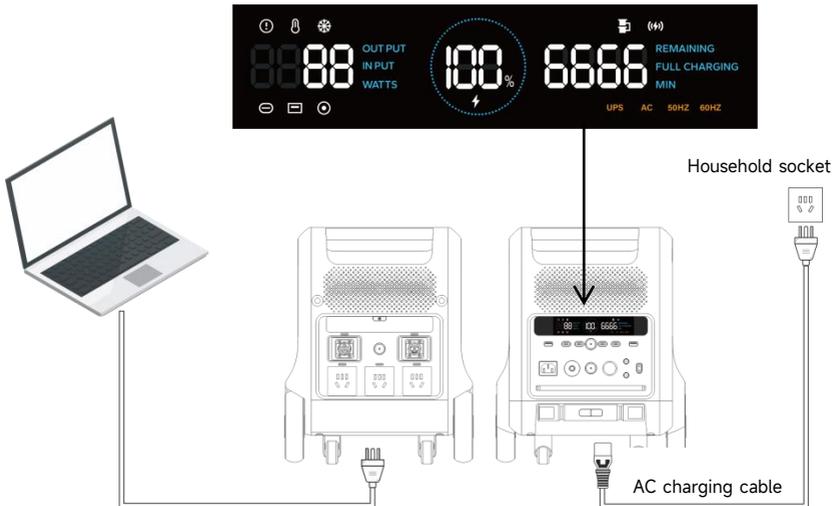
### 6.2.UPS Bypass Mode

Open the AC output button after the product is connected to the AC power supply. "UPS" is displayed on the LCD screen, and the product is output in bypass mode. The AC power supply directly powers the load on the AC output port in this case. Meanwhile, the AC power supply charges the product until it is fully charged..

Note: Maximum output power: 2400W.

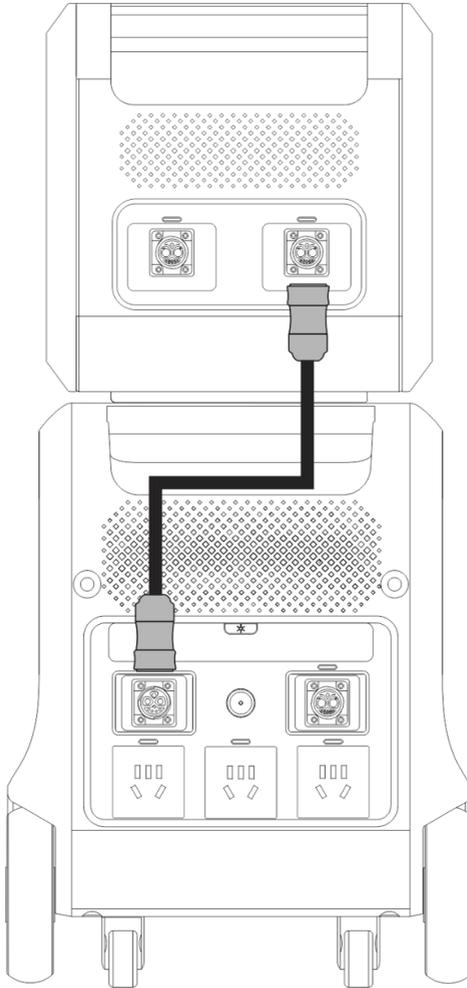
In UPS bypass mode, the AC inverter output will be shut down.

The machine will get into this mode when the AC power supply is connected and the AC output key is opened.



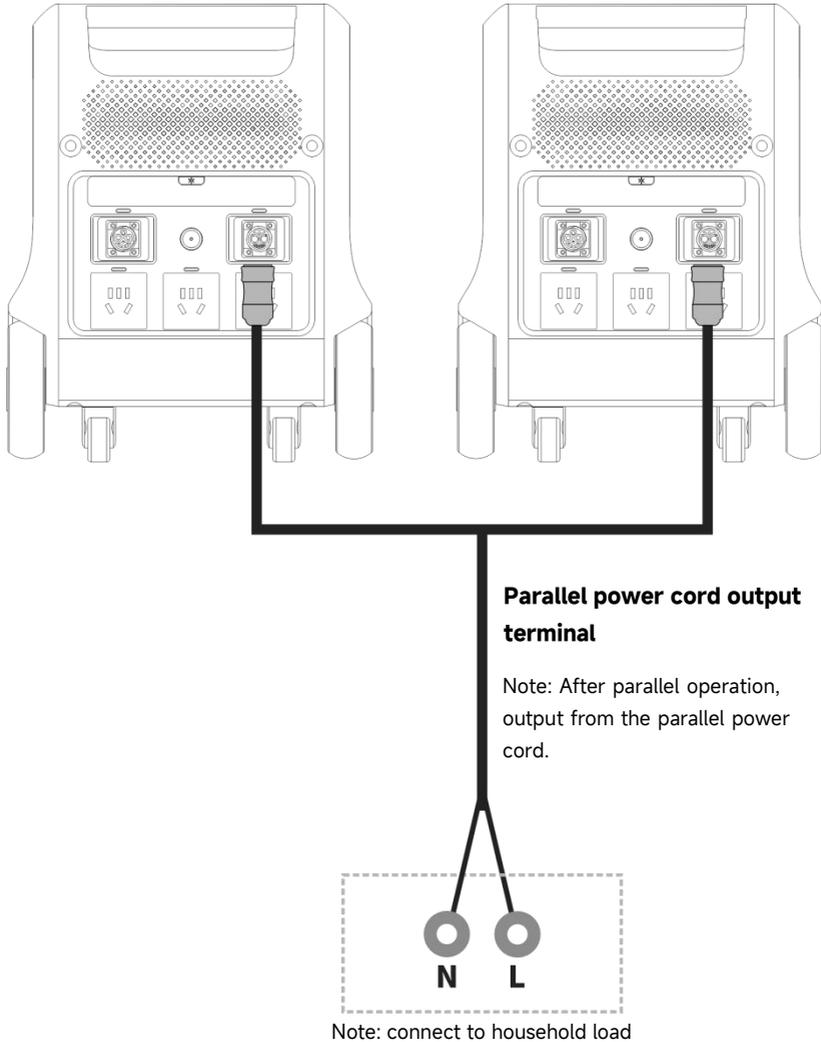
### 6.3. Concurrent Mode

 is displayed on the LCD when the product is connected parallel port. In this mode, the power supply enables to expand the capacity of the battery pack to provide additional capacity for the OM-2400. At the same time, the power supply can directly charge the battery pack until it is fully charged.



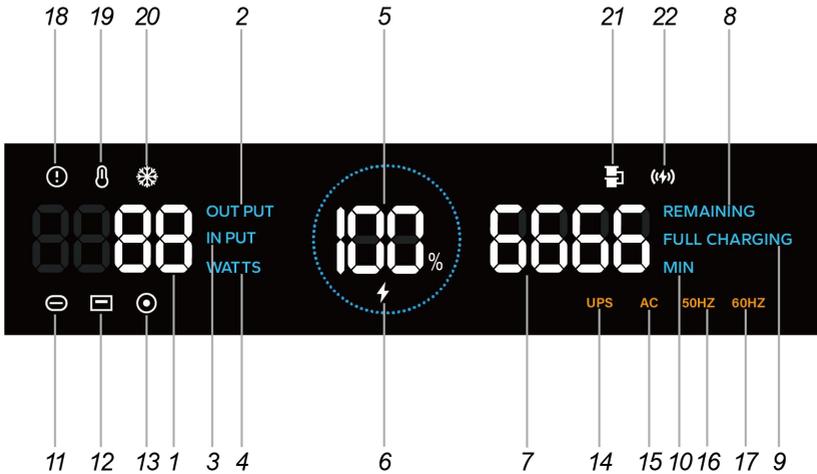
## 6.4.Parallel Mode

When the product is connected to the parallel port, the LCD screen displays . In this mode, the power supply extends the AC output to provide additional power to the OM-2400. (2 OM-2400 power supplies can be extended to 4800W in parallel mode)



## 7.LCD Screen Guide

### 7.1.Description OF LCD Screen ICONS



1. Real-time power display
2. Output power
3. Input power
4. Watts (power unit)
5. Battery Percentage
6. Charging icon
7. Charge or discharge time remaining
8. Remaining time
9. Charging time
10. Minutes
- 11.USB-C icon
- 12.USB-A icon
13. Cigarette lighter port/5521 port icon
14. UPS active
15. AC connect active
16. 50HZ AC frequency
17. 60HZ AC frequency
18. Warning icon
19. High temperature warning icon
20. Low temperature warning icon
21. Parallel icon
- 22.Wireless charging icon

## 7.2.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"
USBA, USBC & wireless charger are enabled	LCD screen shows "   ,  "
Cigarette lighter car charge, DC5521 enabled	LCD screen shows "  "
Ac charge and discharge	"UPS" displayed on the LCD screen
Parallel mode	LCD screen shows "  "

Please refer to section 8 for more information on fault indication and solution.

## 8.Troubleshooting

The fault code is displayed at position 7 of the display screen, and the related fault type and recovery method are as follows:

Fault Description	Fault display	Troubleshooting
USBA1、USBA2 alarm	E61 E62	Remove abnormal load and the system will automatically recover after the load returns to normal.
USB C1C2 alarm	E72	Remove abnormal load and the system will automatically recover after the load returns to normal.
USB C1C2 alarm	E71	Remove abnormal load, and the system will automatically recover after the load returns to normal.
Wireless charging alarm	E81	Automatic recovery after load returns to normal.
Cigarette lighter alarm	E51	Automatic recovery after load returns to normal.
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.

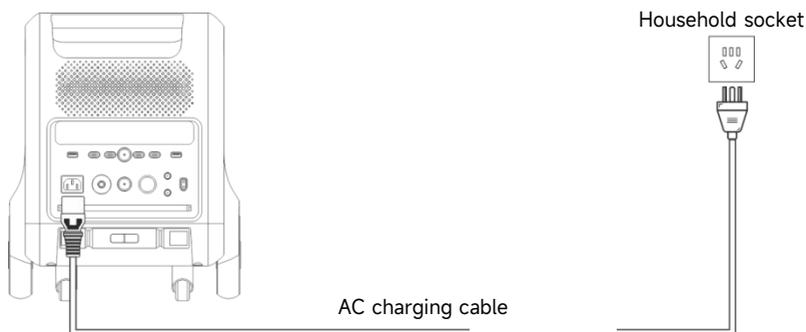
Battery charging over-current	E16	Please contact after-sales.
Battery output low voltage	E17	Please contact after-sales.
Motherboard high temperature	E21	The motherboard temperature will automatically recover after it drops <45°C.
Inverter overload	E41	Remove abnormal load and restart the machine to 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	Remove the power device and restart the machine to see if can be restored. If not, please contact after-sales personnel.
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	Please confirm whether the input voltage is consistent with the manual. If yes, please contact after-sales personnel.
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	Remove the abnormal load and restart the machine to see if it can be restored. If cannot be restored, please after-sales personnel.
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	Remove the solar charging cable and restart the machine to recover.

## 9.Charging Method

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

### 9.1.AC Charging

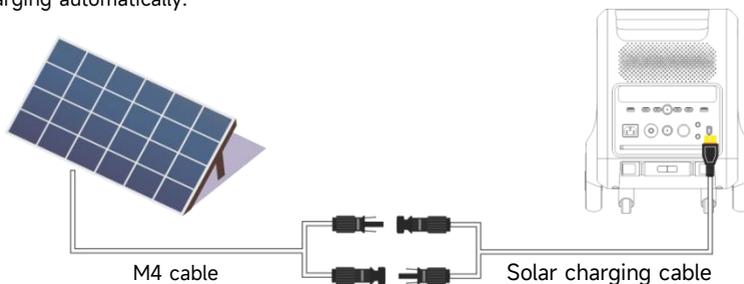
Connect the AC power cord input plug to the wall outlet and connect the other end to the AC charging input port of the product. Equipment built-in advanced control circuit. After full charge (about 1.5 hours), it will automatically stop charging.



### 9.2.Solar Panel Charging

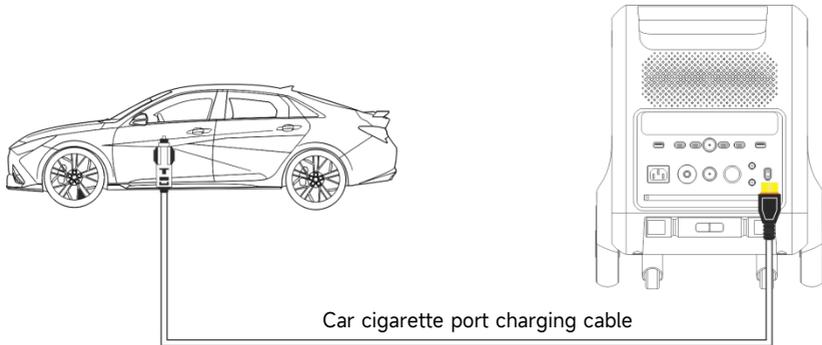
Connect solar panels (series or parallel), open circuit voltage range :12-80V. Then connect the solar panel to the product via the solar charging cable.

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.



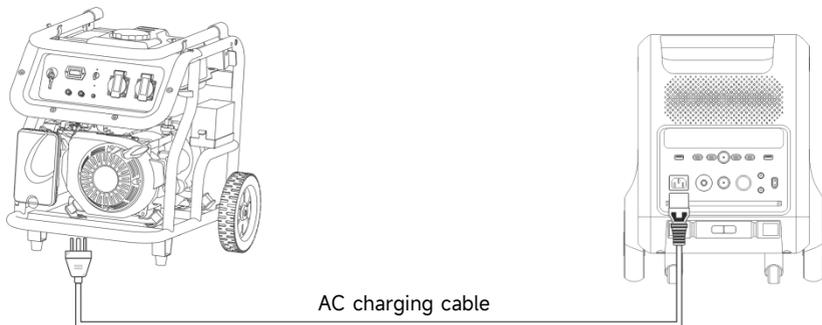
### 9.3. Car Charging

Connect the product to the vehicle 12V cigarette lighter socket via the vehicle charging cable. When the device is fully charged (about 3-4 hours) it will automatically stop charging.



### 9.4. 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.



## 10. Discharging

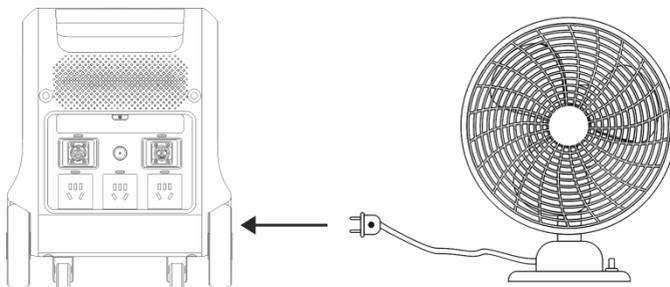
System runtime will be determined by a variety of factors such as ambient temperature, discharge rate, battery capacity, altitude, and other factors.

### 10.1. Output Port

#### 10.1.1. 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 maximum total output power up to 2400W, instantaneous power up to 3600W, 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 55s; 2.131%-200% rated load, enter overpower protection mode after 500ms; 3. More than 200% of rated load, enter overpower protection mode after 200ms.)



#### 10.1.2. DC Output

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)

## 10.2. 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	50 "TV 110W 15 hours	Laptop 60W(Type-C) 32+ times	Digital camera 16W(USB) 118+ times
Electric cooker 1000W 1.9 hours	Electric oven 1800W 1 hour	Electric hair dryer 1600W 1.1 hours	Icebox 120W 14 hours
Electric casserole 1500W 1.6 hours	Electric kettle 1500W 1.2 hours	ventilator / respirator 40W 34 hours	Microwave oven 1300W 1.5 hours
Electric pick 1260W 1.5 hours	Cutting machine 1100W 1.7 hours	Circular saw 1400W 1.3 hours	Hand hammer drill 1080W 1.8 hours

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

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

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

What is Battery Depth of Discharge (DOD)?

In order to extend the life of the battery, 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-discharge. DOD=80-90%(determined by ambient temperature and discharge rate), transferring efficiency -90%.

Note:

In terms of low temperature environment and large load, resulting severely damage of product performance, shorter loading time which can not meet normal demand of usage, 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 and the DC (including USB and wireless charging) load is less than 1W, the output port will automatically close after 4 hours.

## 11. Technical Specifications

Model	OM-2400W
Weight	25Kg
Dimension	512mm*336mm*412mm
Optimal operating environment temperature	20°C ~ 30°C
Charging temperature	0~40°C
Discharge temperature	-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	LiFeP04
DC Output Specification	
Cigarette lighter X 1	12VDC/10A
DC5521X2	12VDC/10A
USB-A X 2	5V/2.4A , 9V/2A , 12V/1.5A , MAX18W , 36W in total
USB-C(Type-C)x 4	5/9/12/15/20VDC,3A; 20VDC/5A MAX100W (Embedded identification chip)
Wireless charge X 1	7.5W/10W/15W

Note: Cigarette lighter port is in parallel with DC5521, sharing 10A current.

1.No fast charge is triggered when USB-C1, 2-port / 3, and 4-port outputs at the same time.

2. Type-C does not have fast charging function when both port 1 and port 2, port 3 and port 4 are output simultaneously.

3. The ability of this product to charge and discharge depends on the actual temperature of the battery pack.

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 cable		
Input power	Max 600W/4 hours full/@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/2 hours fully charged/@0~40°C
Input voltage range	12~60VDC
Input current	0~25A

## 12.Instruction

### 12.1.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.

· Whether this product can be charged or discharged depends on the actual temperature of the battery pack.

## 12.2.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.

## 13.FAQ

Q1: What devices can the product charge/power?

A: The maximum 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 inverter will shut down the DC output automatically, with AC output in priority).

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 XT60 connector. If your panel has Anderson connectors buy Anderson Turn XT60-female 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.

## 14.Declaration

·Please note that specifications and appearance are subject to improvement without prior notice.

·No guarantee to any damage caused by some force majeure( fire, typhoon, flood, earthquake) and abnormal circumstances (as user's intentional negligence, misoperation)

·No guarantee to any accident or damage resulting from failure to comply with the precautions in the instructions.

·No guarantee to any failure caused by the use of unauthorized parts.

·This product is not suitable for electrical appliances that require power reliability and safety, such as aerospace, trunk communications, nuclear control, medical equipment, etc. Please confirm the applicability of this product in advance.