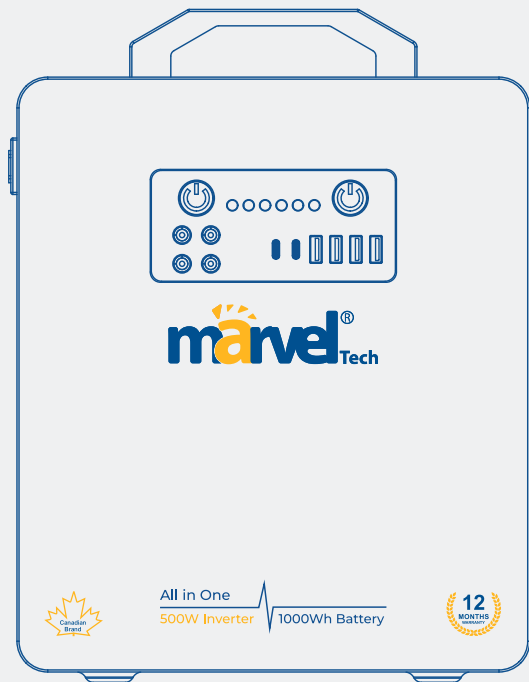




All In One MESS-500W-01 user manual

*The actual product may slightly differ from certain promotional videos or images; please refer to the actual product as the standard. Unless otherwise specified, all data on this page is derived from our laboratory testing and may vary due to environmental factors.

*Specifications are subject to change without prior notice.

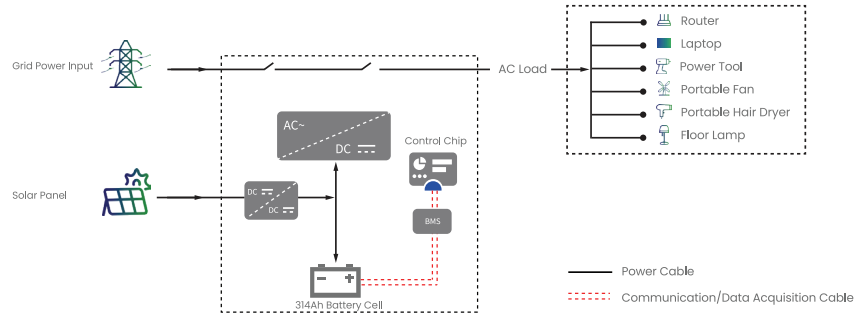
All In One



MESS-500W-01

Specifications

MESS-500W-01 is a highly integrated off-grid energy storage system designed for outdoor and household use. It combines a high-power inverter, grid & MPPT charging, and UPS functionality. Utilizing long-cycle life battery cells, it delivers an exceptional user experience.

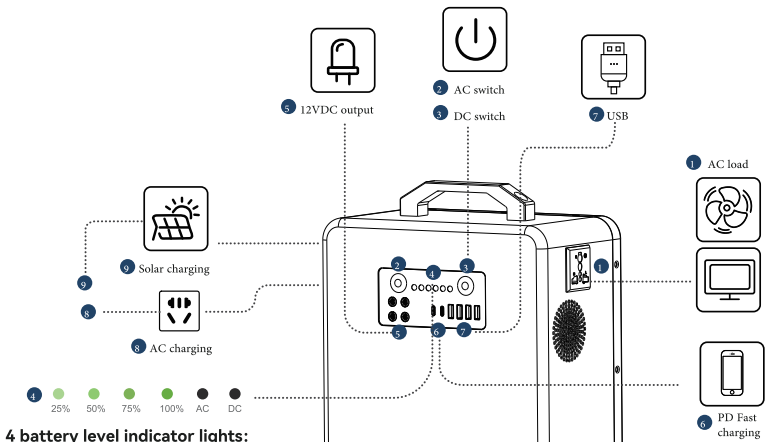


Product Model MESS-500W-01

Inverter Output Power	500VA
AC Charging Power	500W
MPPT Charging Power	300W
AC Input	90~280VAC
AC Output	230VAC
DC Output	DC 12V max 48W USB 5V max 15W Type-C 5/9/12V max 20W
UPS Switching Time	≤20ms
PV Input	11~55VDC
Battery	LiFePo4 314Ah
Weight	8.5KG
Dimensions(L*W*H)	L250*W140*H295mm
Operating Temperature	0~45°C
Operating Humidity	0~95%
Operating Altitude	≤2000m
Protection Rating	IP20

Protection Functions: AC Over/Under Voltage Protection / AC Over Under Frequency Protection / Overload Protection Short Circuit Protection AC Input Overcurrent Protection Overtemperature Protection Overcharge/Overdischarge Protection / BMS Protection

Interface description and dimensions



4 battery level indicator lights:

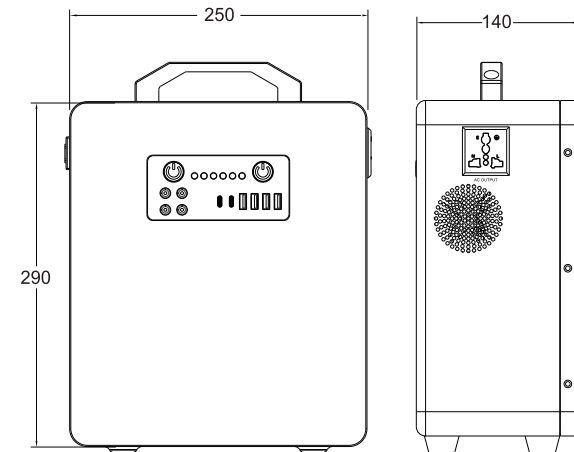
25%-100%

AC/AC light indication description:

1. Charging when the green light flashes

2. The green light remains constantly on, fully charged/discharging

3. Red light flashing: Overvoltage/undervoltage



Function Operating Instructions

1. How to charge the device

Supports charging with mains power (alternating current) and solar cells.

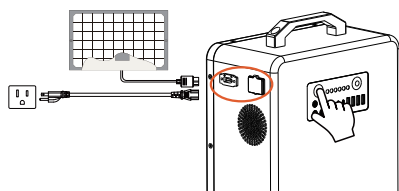
Charging with mains power: Connect a power cord to a household socket (AC230V, 50/60Hz) for charging.

Solar charging: Place the solar panels in a sunny spot and connect them to the charging input port of the device via a solar charging cable. maximum MPPT charging power is 300W

⚠ Notes

When charging, press the "AC" switch first.

When wiring PV, the positive terminal should correspond to the positive terminal and the negative terminal to the negative terminal.



2. How to charge devices using USB-C/USB-A

It is very convenient to charge mobile phones, tablets and other devices via the USB interface.

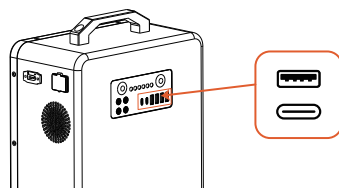
Confirm output parameters

USB-A interface: Usually supports 5V/2.1A or 2.4A output, and some may support QC fast charging (such as 5V to 9V/2A).

USB-C interface: It usually supports higher power fast charging, such as 5V/3A, 9V/2A, 12V/1.5A.

Connection and charging: Use an appropriate USB data cable to connect your device to the corresponding interface of the energy storage power supply. After a successful connection, the device usually starts charging, and the display of the energy storage power supply may show the output power or current of this USB port.

⚠ **Note:** For smart devices that require a very small current (less than 150mA), such as certain Bluetooth headphones and LED lights, the power station may not be able to detect and start power supply. The USB output has functions such as overcurrent protection and short-circuit protection. In case of any abnormality, it will automatically stop the output. Usually, it can be restored after the abnormal load is removed.



3. How to use AC inverters, rated power and peak load

The AC inverter function enables you to power various household appliances.

Operation steps

Make sure the power switch of the equipment is turned on.

2. Press the button marked "AC" to switch to the AC output mode

3. Plug the power cord of the electrical appliance into the AC output socket of the energy storage power supply

4. It can be used immediately after turning on the electrical equipment.

⚠ Precautions:

Do not overload: Ensure that the total power of all AC appliances in use simultaneously does not exceed the rated power. Overload may trigger overload protection and stop the output.

Pay attention to the waveform: High-quality portable energy storage power supplies usually output pure sinusoidal alternating current, the same as household electricity, which can better be compatible with precision electrical appliances.

Heat dissipation: When using high-power equipment, ensure good ventilation to avoid clogging the cooling fans.

Timely shutdown: After use, promptly turn off the AC output function to save power.

4. How to determine the remaining battery power

The main way to determine the remaining battery power is to observe the battery power display system of the device:

LED light strip display: The most common way to show battery level. It is usually composed of 4 LED lights, each representing approximately 20% to 25% of the battery power. For instance, when all four lights are on, it indicates that the battery level is between 80% and 100%. When only one light remains on, it means the battery level is below 20% and it should be charged as soon as possible.

Alarm prompt: When the battery is about to run out, the device alerts the user through flashing indicator lights, screen prompts or sounding an alarm sound, etc.

5. Precautions for equipment storage and use

Proper storage and use can extend the lifespan of the equipment and ensure its safety.

Storage method

1. Before long-term storage, it is recommended to charge the battery to about 50% to 80%, rather than completely charging or draining it.

2. Perform a complete charge and discharge cycle on the device at least once every three months to maintain the battery's health.

3. Store in a cool and dry place, away from dampness, high temperatures (such as near radiators) and direct sunlight.

⚠ Precautions for use:

Temperature environment: It is recommended to use and charge in an ambient temperature range of 10°C to 30°C. Extreme high temperatures may cause the overheat protection to shut down. Extreme low temperatures can significantly reduce battery performance and charging efficiency.

Waterproof and dustproof: The equipment is not waterproof or not fully waterproof. It should be protected from rain, contact with liquids or being in a humid environment.

Avoid over-discharging: Do not completely drain the battery until it automatically shuts down. Shallow charging and discharging are more beneficial to the lifespan of lithium batteries.

- Safety first**
1. Keep away from children. Avoid impact, needle pricking and throwing into fire.
 2. Only use original or certified charging accessories.
 3. If the equipment makes abnormal noises, overheats, smokes or has an odd smell, it should be stopped from use immediately and placed in a safe place.

Protection

- Output overload protection
- Battery low voltage protection
- Input overvoltage protection
- Output short-circuit protection
- Battery overvoltage protection
- Input under-voltage protection
- Battery over-temperature protection
- Input overload protection

Protection and recovery: After removing the faulty device, turn it on and off again, or charge it before use.

Disclaimer

Mentation to ensure correct usage uponBefore use,please read the product docurfull understanding. After reading, please keep this document properly for futurereference, Improper handling of this product may lead to severe harm to yourselor others, or cause product damage and property loss. By using this product, youare deemed to have understood, acknowledged, and accepted all terms andcontents of this document. The company assumes no responsibility for any lossarising from the user's failure to follow the "Disclaimer and Safety Guidelines" inusing the product.

In compliance with laws and regulations, the company retains the finalinterpretation rights for this document and all related documents regarding thisproduct. in case of updates, revisions, or terminations, no prior notice will be givenPlease visit the official website for the latest product information.

Safety Cuidelines

Usage

1. Do not use this product near heat sources (e.g. fire or heating stoves).
2. Strictly follow the environmentaltemperature specified in the user manual when using this product.Excessivetemperatures may cause battery ignition or even explosion; too low temperatures can severely reduce product performancepotentially failing to meet normal usage requirements.
3. In case of accidental fire, use extinguishers in the following recommendedorder: water or water mist, sand, fire blanket, dry powder, or carbon dioxide extinguisher.
4. Keep this product away from any liquids. Do not get it wet, and avoid use in rainor humid environments.
5. When in humid environments (e.g., seaside, swimming pool), it is recommendedto use a moisture-proof bag.
6. If the product gets wet or falls into water, immediately stop using it, turn offthe power, and place it in a safe, open area. Do not approach until it has driedensure anti-electric shock measures when handling. Do not use or discard theproduct without proper disposal by contacting customer service.
7. If the product's ports are dirty, wipe them clean with a dry cloth.
8. Avoid using this product in environments with strong static electricity or magnetic fields.
9. Do not place heavy objects on this product.
10. Store the product in a dry and ventilated space.
11. Keep the product out of reach of children and pets.
12. Do not expose the battery to extremely low air pressure environments, as it may cause explosion or flammable liquid or gas leakage.
13. Do not disassemble or puncture this product in any way.
14. Do not cover or block the fan during use.
15. Avoid touching product ports with wires or other metal objects to prevent short circuits.
16. Avoid impacts, falls, and strong vibrations during use or transport. If subjected to significant force, stop use immediately and turn off the power.

17. Only use official comporFor replacements, consult official sales channels for purchase information.
18. This product is not recommended for powering life-critical medical devicesincluding but not limited to hospital-grade CPAP (Continuous Positive AirwayPressure) machines or ECMO (Extracorporeal Membrane Oxygenation)systemsHome CPAP machines for residential environments generally do not requirecontinuous professional monitoring and can be used as normal. Follow medicaregarding equipment usage restrictionsadvice and consult the manufacturerFor general medical equipment, monitor battery levels to avoid depletion.
19. This power product inevitably generates electromagnetic fields duringoperation, potentially affecting implanted medical devices or personal medicalequipment, such as pacemakers, cochlear implants, hearing aids, or defibrilla-tors. Consult the manufacturer for usage restrictions to maintain a safe distancebetween this product and implanted medical devices.
20. When connecting this power product to a refrigerator load in normal mode,fuctuations in refrigerator power may trigger automatic shutdown, Forrefrigerators storing medications, vaccines, or other valuable items, it isrecommended to set the output to "Always On" mode via the app for continuouspower supply. Monitor battery levels regularly.
21. For long-term storage, charge and discharge the product once every threemonths (discharge to 0% then charge to 60% for prolonged storage). Productsunused for over six months without charging or discharging are not covered bythe warranty.

Disposal

1. If conditions allow, fully discharge the battery before placing it in a designatedbattery recycling box, This product contains a battery, which is hazardous andshould not be discarded in regular waste, Follow local battery recycling anddisposal laws for specific details.
2. If a malfunction prevents complete discharge, do not place the battery directlyin a recycling box; contact a professional battery recycling company for furtherhandling.
3. The battery cannot be activated after over-discharge. Please dispose of itaccordingly.