

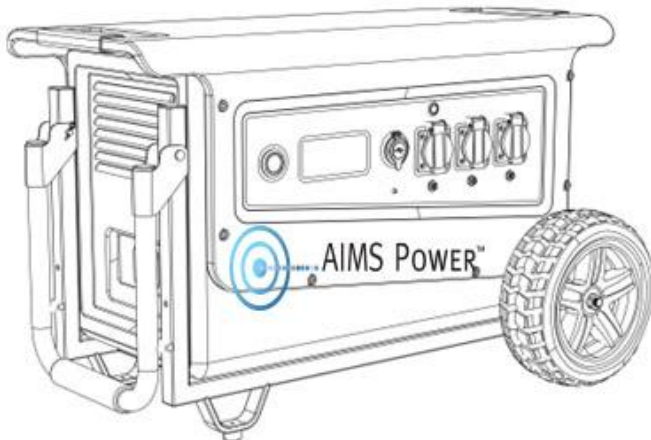


USER MANUAL

PORTABLE SOLAR POWER BOX

AIO-3KWH3600 | AIO-5KWH4KW

AIO-5KWHBAT



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INTRODUCTION

Please read this user manual thoroughly before operating the product to ensure proper understanding and correct usage. Retain this manual for future reference. Failure to use the product per these guidelines may result in serious injury, damage to the product, or property loss. By using this product, you acknowledge, accept, and agree to the terms outlined in this document. AIMS Power™ assumes no liability for any loss resulting from improper use of the product.

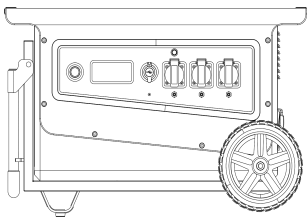
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www.aimscorp.net

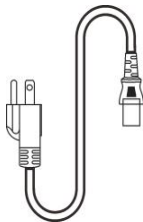
SPECIFICATIONS

Output		AIO-3KWH3600	AIO-5KWH4KW
AC Output	Rated Voltage	100~120Vac	
	Continuous Power	3600 W	4000W
	Peak Power	7000 W	7000 W
	Frequency	60Hz	
USB-A Output	5V/3A; 9V/1.8A; 12V/1.5A (18W Max)		
USB-C Output	5V/3A; 7V/2.4A; 9V/1.8A; 12V/1.5A		
Input			
AC Charge	90~140Vac	16A Max	1800W Max
Solar	12~150Vdc	15A Max	2100W Max
Battery			
Rated Capacity	Watt Hours	3072Wh	5040Wh
Rated Voltage	51.2 Vdc		
Other	LiFePO ₄		
Other			
IP Grade	IP54 Water Resistant		
Operating Temperature	0° C~40° C / 32° F~104° F		
Dimensions	31¼" L x 20½"W (with wheels) x 19¾"H		
Weight	LBS	140	150

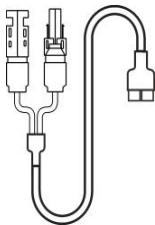
INCLUDED COMPONENTS



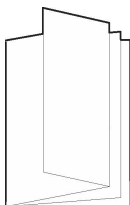
Power Box



AC Charging

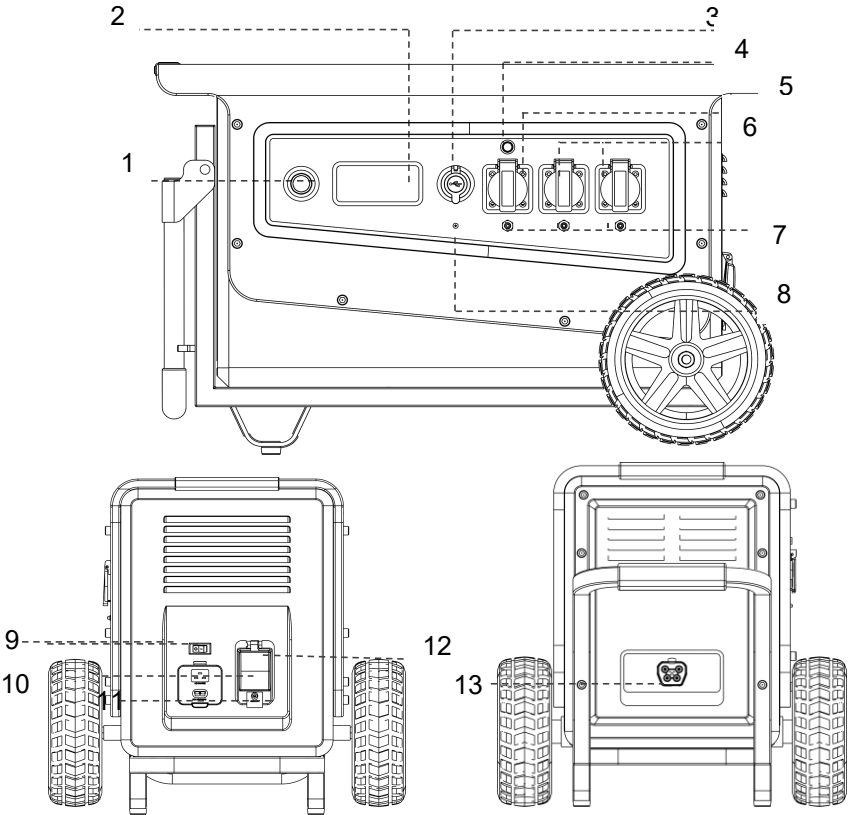


Anderson Type-MC4
Cable



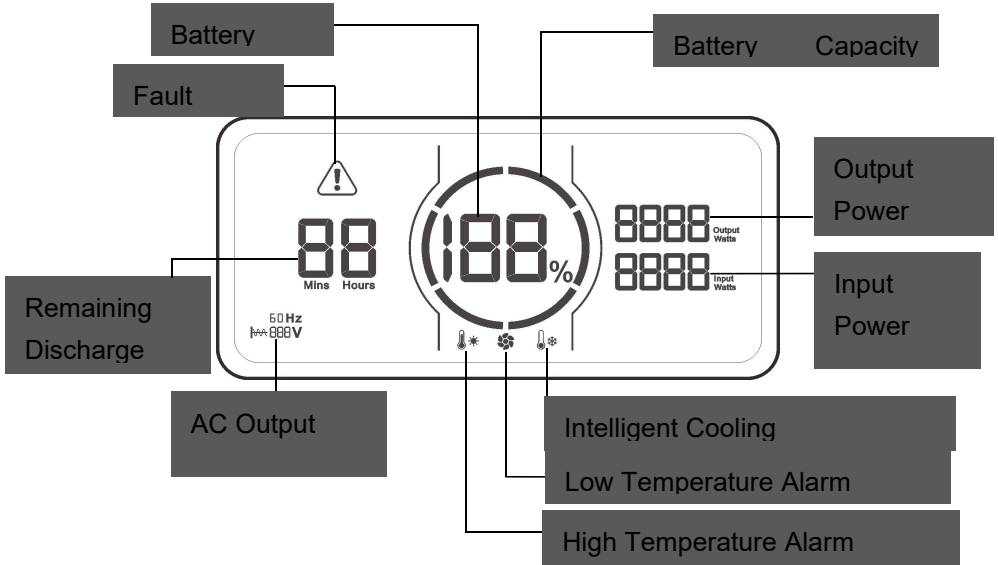
User Manual

FUNCTIONAL DESCRIPTION



- | | |
|-----------------------------------|---------------------------------------|
| 1. Main Power On/Off Switch | 8. Ground protection |
| 2. LCD Screen | 9. Charging Power Port |
| 3. USB-C & USB-A Output | 10. AC Input |
| 4. AC Output Power On/Off Switch | 11. Anderson Type Input |
| 5. AC Output Port (30A MAX) | 12. Circuit Breaker Protection Switch |
| 6. AC Output Port (20A MAX)*2 | 13. Extended Power Pack Connector |
| 7. Over Current Protection Switch | |

LCD SCREEN DESCRIPTION



LCD Battery Capacity Display Instructions

Battery Status Indicators:

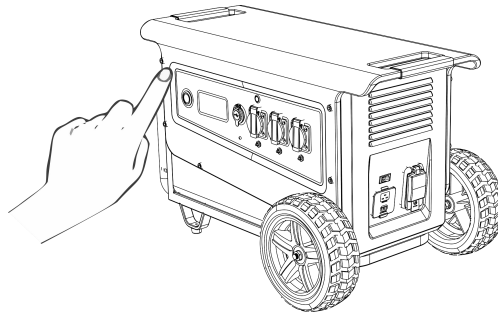
- The LCD battery capacity circular illumination represents the current charge level.
- It is divided into six sections, indicating approximate capacity levels: 17% / 35% / 51% / 68% / 85% / 100%.
- When in use, the LCD display automatically wakes up.
- During discharge, the blue capacity segments disappear, showing the remaining charge.
- When charging, the blue battery capacity circle flashes clockwise, indicating active charging.
- The real-time input power is displayed as a number on the right side of the energy circle.
- Once fully charged, all blue capacity segments remain illuminated and stable.
- After charging is complete, unplug the charger.

Power Button Operations:

1. Turning On: Press and hold the power button for about 3 seconds—the unit powers on, the LCD screen lights up, and the power button indicator remains steady.
2. Turning Off: Press and hold the power button for about 3 seconds—the LCD screen displays "Off", then release the button to shut down, turning off the display.

Functional Area Control:

- When the main power button is on, lightly press the on/off switch button—the corresponding function icon lights up on the LCD screen.
- At this point, the selected function is activated.
- To deactivate a function, tap the corresponding functional area button again—the LCD screen icon turns off, and the function is disabled.



NOTE:

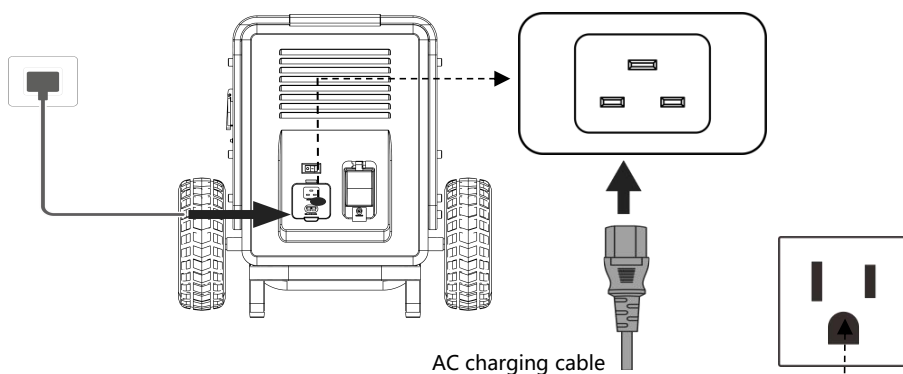
1. Power Button Functionality: After turning on the product, briefly press the main power button. The LCD screen will turn off, but the product will remain operational.
2. Sleep Mode Activation: If the product remains inactive for 5 minutes, it will enter sleep mode, and the LCD screen will automatically turn off. The screen will relight upon detecting load changes or user operations.
3. Automatic Shutdown: The default standby time is 12 hours. If no output power keys are activated and no load is connected, the product will shut down automatically.

RECHARGE METHODS

AC CHARGING

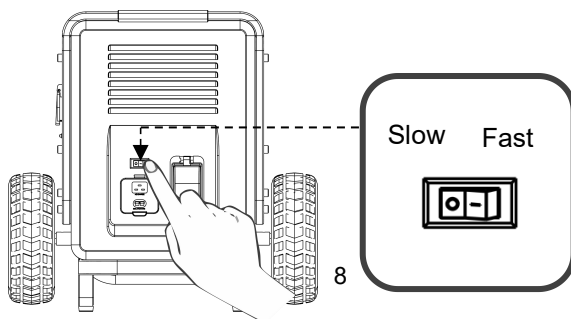
To charge the device using the standard AC charging cable:

1. Manually turn on the input circuit breaker protection switch.
2. Connect the cable as shown in the figure. **MAKE SURE TO POSITION THE SLOW/FAST SWITCH PRIOR TO CONNECT THE AC INPUT CORD.**
3. The input power reading will appear on the screen, indicating that charging has begun.
4. The unit supports up to 1800W fast charging, 15A outlet, requiring approximately 1.7 hours for a full charge.



Fast and Slow Charge Switching Instructions:

1. When the AC output is turned on, set the switch to:
 - SLOW: Provides 900W input power for slow charging. This allows for normal use of the AC outputs.
2. When the AC output is turned off, you may set the switch:
 - FAST: Provides 1800W input power for fast charging.

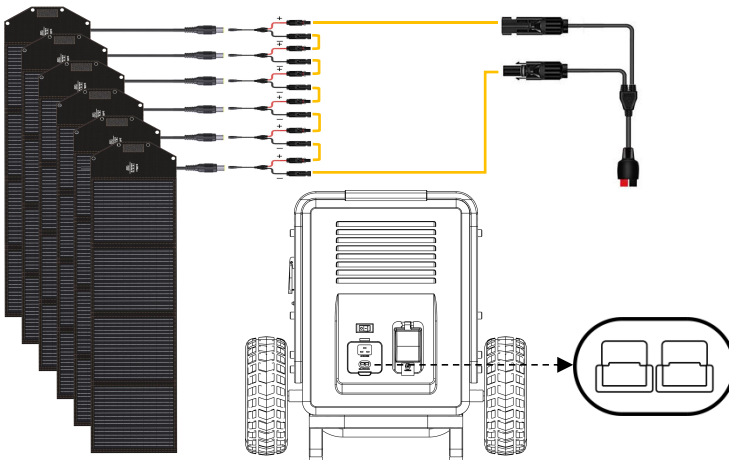


SOLAR CHARGING

Use the Anderson type to MC4 style adapter cable to connect standard solar panels to the device. Up to 6 - 350 Watt (2100 Watts Max) solar panels can be connected, and will take about **2.5-3.5** hours to fully charge (in ideal solar conditions and depending on model).

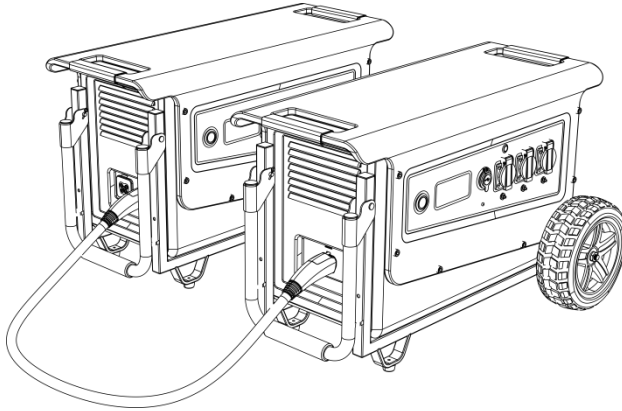
NOTE:

1. The solar charging cable (MC4-Anderson type adapter cable) and solar panels are not included and can be purchased separately.
2. When using solar panel(s) to charge the AIO, make the connections according to the solar panel specifications.
3. Before connecting the solar panel(s), confirm that the output open circuit voltage specification of the solar panel is $< 150V$ and $< 15A$ to avoid damage to the product. Most common is wiring in series.



BATTERY TO BATTERY CHARGING

An optional, extra AIMS Power™ battery pack (up to one) can be connected to the All-In-One unit. Use the product-specific battery pack cable to connect the AIO to the battery pack. The AIO will start to charge when a reading appears on the input power on the screen.



NOTE:

1. Make sure that both the product and the battery pack are turned off before connecting the optional battery to the AIO. The optional battery is compatible with the **AIO-5KWH4KW** only.
2. After the AIO is connected to the battery pack, make sure that the LCD display of this product shows the input power, then product may be used.
3. Do not directly connect or remove the battery pack during the charging and discharging process. If you need to connect or remove the power pack when using, turn off the power before operating. Warranty is void, if damage occurs from disconnecting when AIO and battery are on.
4. Do not use your hands or other objects to touch the metal terminals at the connection port of the battery pack. If there are foreign objects/debris attached to the metal terminals, lightly wipe with a dry cloth.

OTHER FUNCTIONS

EPS FUNCTION

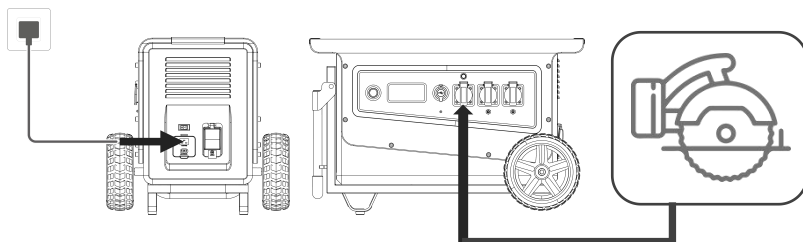
The AIO supports a built-in Emergency Power Backup (EPS) function. When the AC input is supplied from grid power through the AC charging cable, and the AC input circuit breaker is on, the AC output ports will provide power (the AC power is coming from the grid, not the battery). If the power from the grid is suddenly lost, the AIO will automatically switch to the battery within 20ms. This function does not operate as a UPS and does not support 0ms switching. Do not connect it to equipment requiring an uninterrupted power supply (e.g., data servers or workstations). Before use, test compatibility carefully.

For optimal performance:

- Use only one appliance/device at a time.
- Keep total power consumption within 1800W (input + output).
- If load and charging reach 1800W, output will shut down after a one-minute delay.
- If power exceeds 1800W, output will shut down after a one-second delay.
- Avoid using multiple devices simultaneously, as this may trigger overload protection.

Failure to follow these guidelines may result in device malfunction or data loss.

AIMS Power is not responsible for damages caused by improper use.

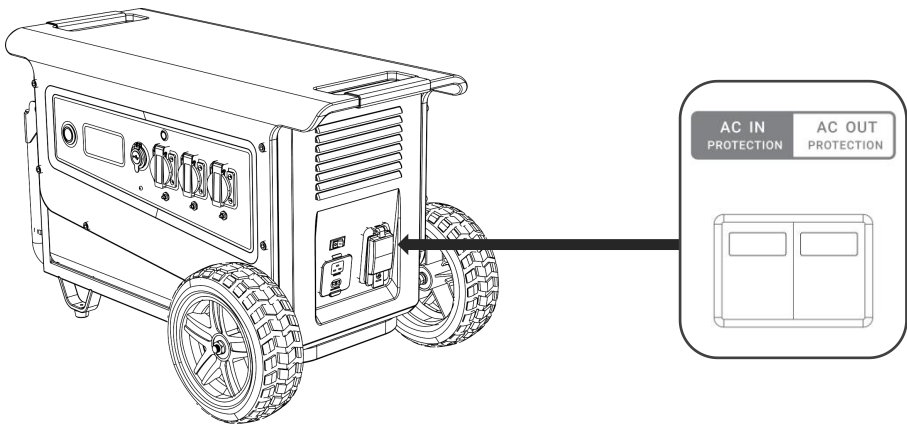


NOTE:

The EPS function is for critical loads only and does not supply the full capacity of the AIO. Only use small devices or one appliance at a time to prevent overloading the AIO. AC input must be supplied with a 15A outlet.

CIRCUIT BREAKER PROTECTION FUNCTION

1. When AC charging, you need to manually open the AC IN circuit breaker protection switch.
2. When using the AC output, the AC switch needs to be turned on, otherwise the output port will have no output.
3. In the EPS functional state, the AC IN circuit breaker and AC switch need to be turned on at the same time (load priority: charging + load < 1800W).



FAQ

1. What type of battery does the product use?

This product uses high-quality lithium iron phosphate batteries.

2. What equipment can be connected to the AC output port of the product?

The AC output port of the AIO has a rated power of **3600W Z(30A) | 4000W(33A)** and a peak power of 7000W, depending on model used. It can power most household appliances. However, it is recommended that you confirm the power of the appliance before use and ensure that the sum of the power of all load devices is less than the rated power.

3. How to know how long the product can provide power?

The LCD screen of this product will display the battery life, and devices with stable power consumption can be estimated based on this time.

4. How to tell if the product is charging?

When charging, the LCD screen will display the remaining charging time, and the power indicator circle outside the battery power percentage will begin to rotate in a circular motion, and the input power will be displayed.

5. How to clean this product?

Please use a dry, soft, clean cloth or paper towel to wipe the unit.

6. How to store the product?

When storing, please turn off the unit and then store it in a dry, well ventilated location at room temperature. Do not place this product near water. During long-term storage, it is recommended to charge and discharge the battery every three months to extend the service life.

7. Can this product be brought on board a plane?

No.

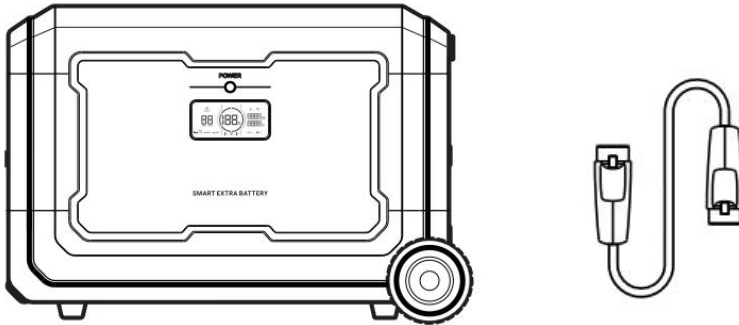
8. Is the actual output capacity of the product consistent with the capacity specified in the user manual?

The capacity indicated in the user manual is the rated capacity of the battery pack of this product. Since this product has a certain efficiency loss during the charging and discharging process, the actual output capacity of the product is lower than the capacity specified in the user manual. Efficiency losses vary

based on load types, ambient temperature, other environmental conditions but typically @10%.

9. What are the optional accessories?

An additional 5040 KWH 105A 48V lithium battery can be purchased to be used with the AIO-5KWH4KW unit. Part #: AIO-5KWHBAT










See page 6 for more information.






When discharging, the blue segments of the circle will disappear to the real-time remaining capacity. When recharging, the blue circle will be flashed clockwise along the trajectory, and the digital number on the right of the circle will show you the real-time input charging power. After full charge, the whole blue circle will light up and remain stable. When charging is complete, please unplug the adapter. Press the power button for about 3 seconds, the power station is turned on, the LCD screen lights up. To power off, press the power button for 3 seconds.









OPTIONAL BATTERY SPECIFICATIONS

Optional Additional Battery Info	
Capacity	5040Wh
Dimensions	25.2*12*17.2 in
Net Weight	97 lbs
Input	
Extra Battery Port Input	48Vdc 5040W Max
Output	
Extra Battery Port Output	45~54Vdc 5040W Max
Battery Info	
Cell Chemistry	LiFePO ₄
Cycle Life	3500+ cycles
Other	
Working Temperature	0~40C
Optimal Temperature	20C~30C

FAULT & TROUBLESHOOTING

Fault code	Fault information	Status	Remarks
E000	AC output short circuit protection	 +  Flashing, no output	Press the AC output power on/off button for recovery
E001	3. Output overload protection	 +  +  Flashing, no output	Flashing icons indicates which circuit overloaded. Overload protection needs to be restored manually, UPS function overload 1800W 1 min., 3600W 1 sec/ 4000W
E002	4. AC Battery low voltage protection	The corresponding function icon flashes and the corresponding port has no output.	After protection, restart corresponding function keys to restore , and recharge it
E003	AC output over-voltage and low voltage protection	 Flashing ,no AC input	You need to manually press the AC power button to recover
E004	Abnormal AC input	 Flashing, no AC output	Automatically recover when frequency is

	frequency		normal
E005	High and low bus voltage, over-current	 Flashing, no output at all ports	You need to manually press the AC power button to recover
E006	Inverter over-temperature charging over-temperature protection	 +  +  FFlashing, no output	Lower down to normal level, it will recover automatically
E007	PV input low-voltage/ over-voltage protection	No solar input	It will recover automatically when input voltage adjust to the input voltage range
E020	BMS communication failure	 Flashing, no output at all ports	Check BMS communication cable
E021	Battery cell high voltage alarm	Battery capacity percentage flashing	Set the device aside and wait for the battery voltage to recover automatically
E022	Battery cell low voltage alarm	Battery capacity percentage flashing	Connect the AC charging cable and keep charging until the voltage is normal
E023	Total battery voltage is too high	E23 code flashing but output is normal	Set the device aside and wait for the battery voltage to recover automatically

E0 24	Total battery voltage is too low	 Flashing, no output at all ports	Connect the AC charging cable and keep charging until the voltage is normal
E0 25	Battery high temperature	 +  Flashing, no output at all ports	Automatically resumes after temperature recovers
E0 26	Battery low temperature	 +  Flashing, no output at all ports	Automatically resumes after temperature recovers
E0 27	System overload	 Flashing, AC output close, DC output is normal, the AC load is higher than 3600W or AC+DC load is higher than 3600W	You need to manually press the AC power ON/OFF button to recover
E0 28	Charging over-temperature	 +  Flashing, charging stop	Automatically resumes after temperature recovery

STORAGE & MAINTENANCE

1. Store the product away from water, heat sources, and metal objects.
2. In order to extend the service life of the battery, it is recommended to use or store at room temperature.
3. If long-term storage is required, please charge and discharge this product once every 3 months (first discharge to 0%, then fully charge, then discharge to 60% for long-term storage); products that have not been charged or discharged for more than 6 months will void the warranty.
4. For safety reasons, do not store this product in an environment above 113F or below 14F for a long time.
5. If the product is seriously low on power and idles for too long, the product will enter deep sleep mode, and the product must be charged before using again.

WARRANTY

All AIMS Power™ products come with warranty coverage against manufacturer defects as follows, from the date of purchase, unless otherwise indicated:

- 1-Year for non ETL (Extract, Transform and Load) units
- 2-Years for ETL (Extract, Transform and Load) units and batteries
- 3 Years for generators
- Batteries – product specific ALL-IN-ONE 3 Years
- Solar products – product specific
- Cables – 10 years

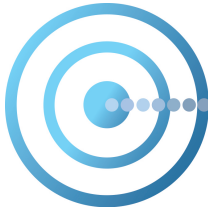
Within the warranty coverage period, AIMS Power™ will either repair or replace, at its sole discretion, the defective product. A restocking fee may be applied if used or missing packaging and/or parts are not returned. Limited and prorated warranties on some products.

NO REFUNDS AFTER 30 DAYS. REPAIR OR REPLACE ONLY.

Any shipping charges that occur as a result of a warranty return or exchange are NOT covered by the warranty and are the responsibility of the customer.

The warranty **does not cover** the following:

- Products that AIMS Power™ determine, in its sole discretion, to be free of any material or workmanship defects or flaws
- Products evidencing excessive wear, misuse or alteration
- Products with missing or defaced labels, stickers, serial numbers or other identifying information
- Improper care or storage (e.g. water damage, exposure to extreme heat or cold temperatures, unsanitary environment)
- Alterations or customizations
- Items that were purchased second hand, or from an unauthorized seller (if you want to know if a seller is authorized, call us at 775-359-6703)
- Items outside of the covered warranty period



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