

S5: 5000W Power Station, 5040Wh Battery Capacity

S5 Brief Introduction:

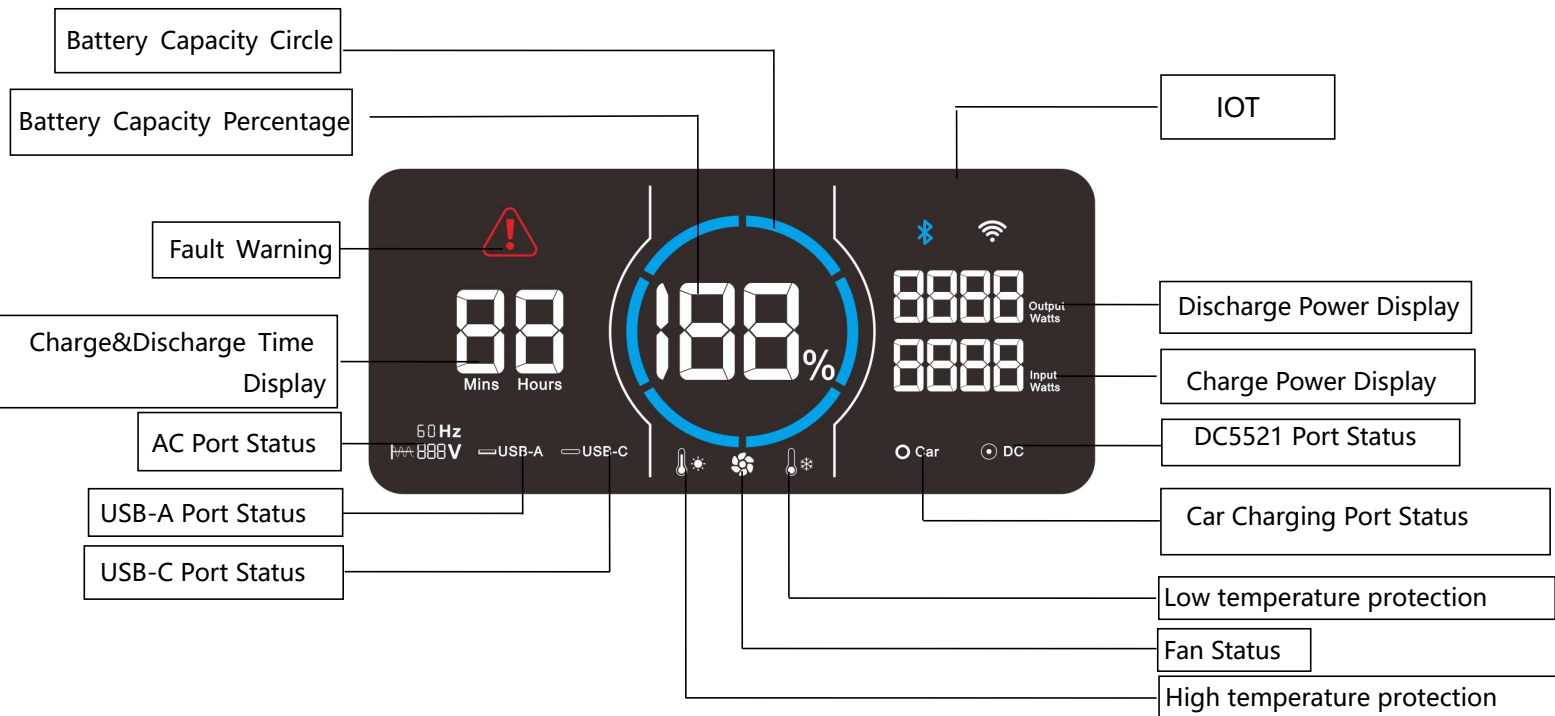
EU Version,5040Wh, AC 5000W 230V ,PV 2100W,DC 120W+360W,QC3.0*2+5V2A+PD60W*2

This product is a high-end fashion off-grid energy storage power product independently developed by our company. It is light, portable and stylish in appearance. Automotive grade lithium iron phosphate battery, safe, reliable, durable; Provide 120V/20V, 15V, 12V, 9V, 5V AC/DC output, suitable for a variety of different equipment such as aerial UAV, portable ventilators, medical equipment, mobile phones, tablets, laptops, desktop computers, small printers, all kinds of lamps, small fish tanks, photographic equipment, electric balancing unicycles and so on, convenient for users to travel at home, outdoor work, Camping picnics, hiking expeditions, etc.

Model	AC Output Power	Cell Spec.	PACK Method	Battery Pack Capacity
S5	5000W	IFP27175200A LiFePO4 105Ah/3.2V	15S (105Ah/48V)	5040WH



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1、Control+Display

Item	Feature	Remark
Main Power Button	Master switch for each function	Long press for 3 seconds to turn on or off the main power supply. When turning on, the LED light around the key will light up the breathing lamp
DC Power Button	Control DC5521 , USB-A , USB-C 12V30A On&Off	Under the condition that the main power switch is on, tap the button to turn on the car charger, DC5521, USB-A, USB-C 12V30A output; Press again, turn off car charge, DC5521, USB-A, USB-C 12V30A output. The output will be automatically shut down if no device access, overload, short circuit, or over-temperature protection is detected within 12 hours
AC Power Button	AC Output Power Button	When the main power switch is on, press the button to turn on the AC output. Press again to disable AC output. After 12 hours, the output will be automatically shut down if no device access, overload, short circuit, or over-temperature protection is detected
Bluetooth&WiFi Power Button	Control Bluetooth&WiFi On&Off	To turn on the main switch, click the button
Battery Capacity Circle and Battery Capacity Percentage	Power Display When Charging or Discharging	When charging, the percentage of electricity displayed in the middle, the blue circle in the form of running horse lamp cycle, full charge or disconnect the charger, power indicator stop. According to the actual power display ratio and outer ring. When discharging, the battery percentage is displayed according to the actual battery quantity. The blue circles decrease by percentage.
AC Display	Display AC Voltage Frequency	AC voltage frequency real-time display
Charging Power Display	Display Charging Power	When charging, display the current charge power
Discharging Power Display	Display Discharging Power	When charging, display the current discharge power
Discharge Remaining Time	Displays the Remaining Discharge Time	Based on the current battery capacity and discharge power, the remaining discharge time is displayed in real time. The display logic is as follows: If the time exceeds 1 hour, it is displayed in X.Y hour; if the time is less than 1 hour, it is displayed in minute
Fault/Protection Warning	Indicates that the Product is in a Fault State	When the output interface is overloaded, short-circuited, or the internal temperature is too high or too low, the icon is displayed and closed after the fault is rectified
High Temperature Protection Warning	Display High Temperature Status	When the internal temperature is too high, the icon will be displayed and closed after the temperature recovers
Low Temperature Protection Warning	Display Low Temperature Status	When the internal temperature is too low, the icon will be displayed and closed after the temperature recovers
Fan Status	Display Fan Working Status	When the fan is on, the icon is displayed. When closed, the icon goes out

S5: 5000W Power Station, 5040Wh Battery Capacity

Car Charger Status	Display Car Charger Working Status	When the output of the car charger is on, the icon is displayed. When it is off, the icon is off
DC5521 Port Status	Display DC5521 Port Working Status	When output is enabled for DC5521, the icon is displayed. When output is disabled, the icon is off
USB-C Port Status	Display USB-C Port Working Status	When USB-C output is on, the icon is displayed. When USB-C output is off, the icon is off
USB-A Port Status	Display USB-A Port Working Status	When USB-A output is on, the icon is displayed. When USB-A output is off, the icon is off
AC Port Status	Display AC Port Working Status	When AC output is enabled, the icon is displayed. When AC output is disabled, the icon is off
Backlight		When there is key operation, all lights up. After 1 minute, no button operation is detected, and the screen backlight goes out
Power Button Breathing Light		When charging, discharging, or standby, the breathing light flashes, and when hibernating, the breathing light goes out.
备注:		

2、AC Input Characteristics

Parameter	Symbol	Unit	Typical	Remark
Input Voltage Range	V _{in}	V _{ac}	200~240	The low voltage protection 180V is restored to 190V, and the high voltage protection 245 is restored to 240V
Input Current Range	I _{in}	A	11	
Input Frequency	/	HZ	50/60	The low frequency protection restores 45HZ from 42HZ and the high frequency protection restores 62HZ from 65HZ
Switching Time	/	Ms	20	UPS switchover time ≤20ms
EV Charging Input Voltage	/	V _{ac}	200-240	
EV Charging Input Current		A	11	
AC Input Circuit Breaker		A	40A	The AC input is available only when the AC input circuit breaker is turned on. The AC input circuit breaker cannot be turned on when EV charging
Input Port	/	A	16A	IEC-C20 Socket
AC Charging		W	2500W	

3、Solar Panel Input Characteristics

Parameter	Symbol	Unit	Typical	Remark
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S5: 5000W Power Station, 5040Wh Battery Capacity

Input Voltage Range	Vin	Vdc	12-150V	High voltage protection 150V;Low voltage protection 11V
MPPT Voltage Range	Vin	Vdc	18-140V	
MPPT Input Current	/	A	15A	
Charging Time	/	Hour	/	The maximum charge time depends on the intensity of the light and the power of the solar panel
Maximum Time Between Charges	/	month	/	Storage when the remaining power is greater than 50%
Car Charging Input Voltage Range		VDC	12-15V	
Car Charging Input Current		A	8A	
Input Port	/	/	/	Anderson interface, car charger and solar is a shared input

4、DC Output Characteristics

4.1、Car Charging Output Characteristics

Parameter	Symbol	Unit	Typical	Remark
Output Voltage	Vo	Vdc	12	
Output Current	Io	A	10	
Over-Load Protection	/	A	11	If the output current exceeds this threshold, the output will be shut down. After the overload is removed, you need to manually press the DC switch to restore the output
Short-Circuit Protection	/	/	/	If the output terminal, cable or external device is short circuited, the output outlet stops. When the short circuit is removed, you need to manually press the DC switch to resume output
Output Port	/	/	/	Cigarette lighter all the way out

4.2、DC5521 Output Characteristics

Parameter	Symbol	Unit	Typical	Remark
Output Voltage	Vo	Vdc	12	
Output Current	Io	A	10	Two DC(5521) parallel output, and the car charge (smoke outlet) total current <10A.
Over-Load Protection	/	A	11	If the output current exceeds this threshold, the output will be shut down. After the overload is removed, you need to manually press the DC switch to restore the output

S5: 5000W Power Station, 5040Wh Battery Capacity

Short-Circuit Protection	/	/	/	If the output terminal, cable or external device is short circuited, the output outlet stops. When the short circuit is removed, you need to manually press the DC switch to resume output
Output Port	/	/	/	DC5521 two channels and cigarette lighter output in parallel

4、USB-A Output Characteristics

Parameter	Symbol	Unit	Typical	Remark
Output Voltage	Vo	Vdc	5.0	Default output 5V, automatic identification QC protocol, output corresponding voltage, QC3.0/QC2.0, FCP, SCP, AFC, MTKPE+2.0/1.1, Apple2.4A
			9.0	
			12.0	
Output Current	Io	A	3	@5.0V
			2	@9.0V
			1.5	@12.0V
Over-Load Protection	/	W	18	When the output power exceeds the maximum power, the output will be turned off. After the overpower state is removed, manually press the USB switch to restore the output.
Short-Circuit Protection	/	/	/	If the output terminal, cable or external device is short circuited, the output outlet stops. When the short circuit is removed, you need to manually press the DC switch to resume output.
Output Port	/	/	/	Two independent USB-A outputs

5、USB-C (PD60W) Output Characteristics

Parameter	Symbol	Unit	Typical	Remark
Output Voltage	Vo	Vdc	5.0	PD protocol is automatically identified and corresponding voltage is output. PD3.0, PD2.0, QC3.0, QC2.0, FCP, SCP, AFC, MTKPE+2.0/1.1, Apple2.4A,
			9.0	
			12.0	
			15.0	
			20.0	
Output Current	Io	A	3	
Over-Load	/	A	3.3A	If the output current exceeds this threshold, the output

S5: 5000W Power Station, 5040Wh Battery Capacity

Protection				will be shut down. After the over-current is removed, you need to manually press the DC switch to restore output
Short-Circuit Protection	/	/	/	When the output terminal, wire or external device is short circuited, the output outlet stops output. When the short circuit is removed, the output will resume automatically
Output Port	/	/	/	One USB-C output

6. DC High Current Output

Output Voltage	Vo	Vdc	12	
Output Current	Io	A	30	
Over-Load Protection	/	A	32	If the output current exceeds this threshold, the output will be shut down. After the overload is removed, you need to manually press the DC switch to restore the output
Short-Circuit Protection	/	/	/	If the output terminal, cable or external device is short circuited, the output outlet stops. When the short circuit is removed, you need to manually press the DC switch to resume output
Output Port	/	/	/	Anderson interface output

7.AC Output Characteristics

Parameter	Symbol	Unit	Typical	Remark
Output Voltage Range	Vo	Vac	230	
Output Power	Po	W	5000	
Output Peak Power		W	7000	Duration \leq 200mS
Output AC Frequency	F	Hz	50	50HZ/60HZ Setting Available
Output AC Waveform	/	/	/	Sinusoidal Wave
Over-Load Protection	/	W	100%~110%	If the output current exceeds this threshold for 5S, the output will be shut down. After the overcurrent is removed, you need to manually press the AC switch to restore output
Over-Load Protection-2	/	W		If the output current exceeds this threshold for 15 seconds, the output will be shut down. After the overcurrent is removed, you need to manually press the AC switch to resume output
Short-Circuit Protection	/	/	/	Output terminals, cables, or external devices are short-circuited. Output stops at the output outlet. When the

S5: 5000W Power Station, 5040Wh Battery Capacity

				short-circuit is removed, manually press the AC switch to resume output.
Output Circuit Breaker		A	40	You need to open the output circuit breaker to have output
Output Port	/	/	/	AC socket 6 parallel outputs

8、Battery Pack Parameters

Parameter	Symbol	Unit	Min.	Typical	Max.	Remark
Cell Model	/	/	/	/	/	IFP27175200A LiFePO ₄
Pack Method	/	/	/	/	/	15 Series
Voltage	/	Vdc	/	48	/	/
Capacity	/	Ah	/	105	/	/

9、System Protection Function

Item	Symbol	Unit	Typical	Remark
Battery Undervoltage Protection	Vo	Vdc	40.5	
Battery Overvoltage Protection	Vo	Vdc	55.5	
Charging High Temperature Protection	/	°C	55	
Charging High Temperature Protection Recovery	/	°C	50	
Charging Low Temperature Protection	/	°C	-2	
Charge Low Temperature Protection Recovery	/	°C	3	
Discharge High Temperature Protection	/	°C	60	
Discharge High Temperature Protection Recovery	/	°C	55	
Low Temperature Discharge Protection	/	°C	-20	

S5: 5000W Power Station, 5040Wh Battery Capacity

Low-temperature Discharge Recovery	/	°C	-5	
Overload Protection	/	W	/	For details, see Overload Protection for Each Port
Short Circuit Protection	/	/	/	For details, see Short Circuit Protection for Each Port
Total Power Protection	/	W	4500	If the AC and DC are loaded at the same time, the DC output is preferred. If the AC has a load greater than 4500VA, the AC is disabled.

10. Environmental Requirements

Parameter	Symbol	Unit	Min.	Typical	Max.	Remark
Operating Temperature (Ambient Temperature)		°C	0	25	40	
Operating Humidity			10%	--	90%	
Storage Temperature		°C	-20	25	60	
Storage Humidity			5%	--	95%	
Altitude		m	-50	--	3000	
Cooling Method			Forced Cooling by Fans			

11. Other Parameters

Parameter	Symbol	Unit	Min.	Typical	Max.	Remark
Life Time	Lf	year	3			
Estimation of Mean Time Between Failures	MTBF	hours	200000			Ta 25°C (MIL-HDBK-217F)
Weight	N.W	g		50000		
Dimension	DIM.	mm (inch)	L*W*H 25.2*11.9*17.2in (641.5*304.5*437.5mm)			

S5: 5000W Power Station, 5040Wh Battery Capacity

Note: Unless otherwise specified, all the above parameters are measured at 25°C under full load condition;

12. Safety Specifications

Certification	Safety Standard	State	Remark
UL	UL2743	pending	

13. Electromagnetic Compatibility

EMI/EMS Item	Standard	Criterion
Conduction CE	FCC part 15	Class B
Radiation RE	FCC part 15	Class B
Harmonic Wave	IEC/EN 61000-3-2	Class C

14. Safety Test Item

Safety Test	Technical Requirement	Remark
Withstand Voltage	1500Vac/5mA/60S	AC output - ground, no breakdown, no flying arc
Insulation Resistance	≥100Mohm	AC output to ground, the test voltage is 500Vdc
Leakage Current	≤0.75mA	110Vac

15. Fault Code

Fault Code	Fault Information	State	Remark
E00	AC output short-circuit protection	AC+ Red Warning Icon Blinking. No output is displayed	You need to manually press the AC on/off button
E01	Output overload protection	AC Function Icon + Red Warning icon Blinking, No Output is displayed	The function icon indicates that the line is overloaded. The overload protection needs to be manually restored. The UPS function is overloaded for 5000W-1 minutes or 5100W-1 seconds
E02	AC battery low voltage protection	Function icon + Percentage of Battery Capacity Blinking, the Port has no Output	After protection, restart the corresponding function key to restore the function and timely charge

S5: 5000W Power Station, 5040Wh Battery Capacity

E03	AC input over-voltage and low-voltage protection	The AC icon blinks. The AC has no input	The voltage recovers automatically
E04	The AC input frequency is abnormal	The AC frequency icon blinks. No AC input is provided	The frequency automatically recovers normally
E05	Busbar high and low voltage, over-current	AC Red warning icon blinking. Each function has no output	You need to manually press the AC switch to restore
E06	Inverter over-temperature charging over-temperature protection	The AC icon + temperature icon blinks, and no function is displayed	The system automatically restores to normal
E07	PV input over voltage and low voltage protection	PV no charge	The system automatically restores to normal
E08	12V30A overload and short circuit protection	DC icon Red Warning icon blinking. Each function has no output	You need to manually press the DC key
E09	The 24V auxiliary power is overloaded and short-circuited	DC board report failure, do not close the output	Prompt the customer to reduce the load of the DC interface
E10	Cigarette lighter port overload and short circuit	DC icon Red Warning icon blinking. Each function has no output	You need to manually press the DC on/off button to restore
E11	USB-A port overload and short circuit	DC icon Red Warning icon blinking. Each function has no output	You need to manually press the DC on/off button to restore
E12	USB-C port overload and short circuit	DC icon Red Warning icon blinking. Each function has no output	You need to manually press the DC on/off button to restore
E13	DC discharge battery low voltage protection	Percentage of battery capacity +DC icon + Red Warning icon Blinking. Each function has no output	After protection, restart the corresponding function key to restore the function and timely charge
E20	BMS is faulty	The red warning icon blinks	Check the BMS cable
E21	The voltage of a single battery cell is too high	Percentage of battery capacity icon blinks	Disconnect charging, it is automatically restore
E22	The voltage of a single battery cell is too low	Percentage of battery capacity icon blinks	Connect to charge, it is automatically restore

S5: 5000W Power Station, 5040Wh Battery Capacity

E23	The total battery voltage is too high	Percentage of battery capacity +DC icon + Red Warning icon Blinking. Each function has no output	The system automatically restores to normal
E24	The total battery voltage is too low	Percentage of battery capacity +DC icon + Red Warning icon Blinking. Each function has no output	The system automatically restores to normal
E25	Battery cell is high temperature	Temperature icon + red warning icon blinking, no output for each function	The system automatically restores to normal
E26	Battery cell is low temperature	Temperature icon + red warning icon blinking, no output for each function	The system automatically restores to normal
E27	System overload	AC icon Blinking,the AC function is disabled and the DC output is normal when the AC is greater than 5200VA or AC+DC is greater than 5200W	You need to manually press the AC switch to restore

16. Parts List

No.	Item	Quantity	Remark
1	S5	1	
2	AC charging cable	1	
3	Car charging to Anderson charging cable	1	
4	Anderson to 7909 cable	1	
5	Anderson to MC4 cable	1	
6	Anderson to Anderson cable	1	
7	User Manual	1	
8	Warranty	1	

17. Packing

- Net Weight: 50Kg±0.5
- Quantity: 1PCS
- Carton Dimension: L*W*H=763*414*600 mm
- Gross Weight: 59Kg

S5: 5000W Power Station, 5040Wh Battery Capacity



Note:

If the packaging of the product is damaged, please confirm whether the appearance of the product is complete. No cracks are allowed in the external structure of the product.

Transportation:

- Suitable for vehicle, ship, aircraft transportation, transportation should be covered, sunscreen, civilized loading and unloading.

Storage:

- Products shall be stored in accordance with GB 3873-83.
- When storing for a long time, it is recommended to charge once every 3 months to avoid damage to the battery because of electricity.

RoHS:

- Products comply with European Directive 2011/65/EC.

Version	Update History	Date	Remark
V0.9	First Draft	2023/1/10	