

# Specification

**Portable Power Station 600W**

# S03pro-E

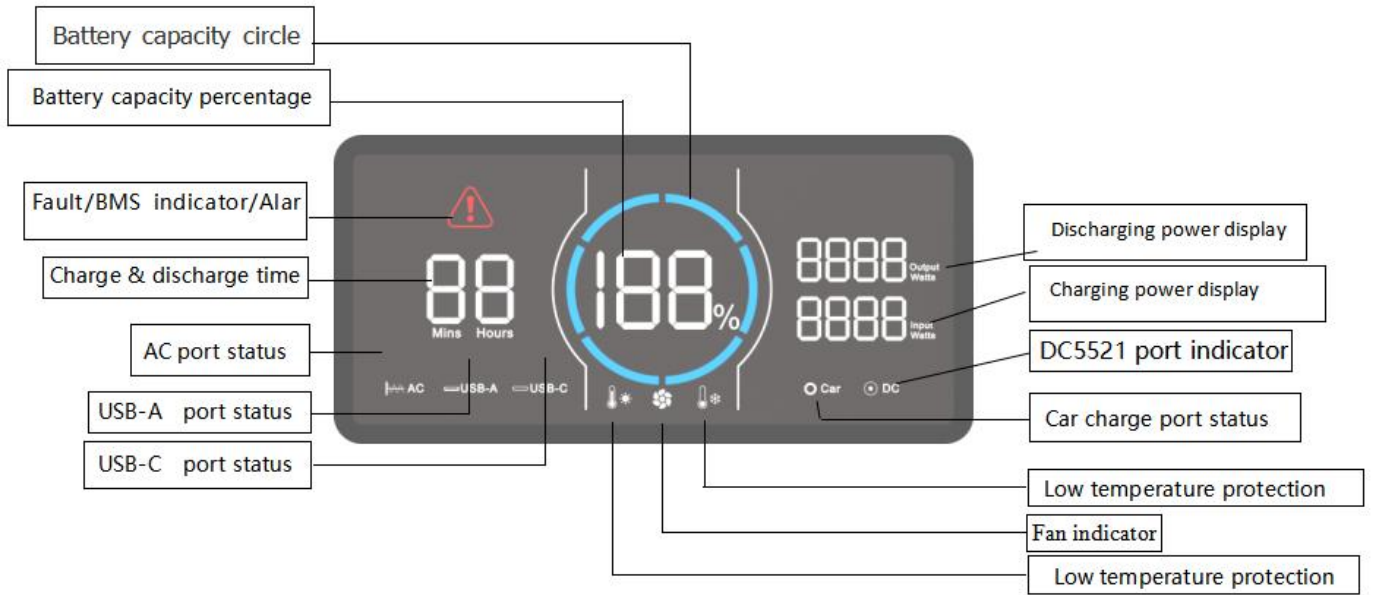
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## Product Description:

This product is a high-end fashion off-grid energy storage power supply product, light and portable, stylish and generous appearance; Automotive grade lithium iron phosphate battery, safe, reliable, durable; Providing 230V/12V, 9V, 5V AC and DC output, suitable for a variety of different equipment such as aerial drones, portable ventilators, medical equipment, mobile phones, tablets, laptops, desktop computers, small printers, all kinds of lamps, small fish tanks, photography equipment, electric balance unicycles, etc., convenient for users to travel at home, outdoor work, camping picnic, etc. Mountaineering expeditions, etc. There may be some differences between the pictures in the specification and the samples, and the company reserves the right to final understanding.

Model	AC Output Power	Battery Cell	Battery Pack Methods	Battery Pack Capacity
S03 Pro	600W	40135 LiFePO <sub>4</sub> 20Ah/3.2V	4S2P (40Ah/12.8V)	512WH





## 1、Control+Display

Item	Function	Remark
Main Power Button	Master Switch for Each Function	Long press 3S to turn on or off the main power supply. When it is turned on, the LED around the button will light up, and it will automatically turn off for 4 hours without use or operation
DC Control Switch	Control car ignition output and turn off	When master switch on,slightly press to turn on or turn off its single button for car ignition. Automatically check there are any devices connecting with in 12 hours、 overload、 short circuit、 over-temperature etc..until automatically turn off output.
AC Power Button	AC Output Control Switch	When master switch on, slightly press to turn on or turn off its single button for car ignition,Automatically check there are any devices connecting with in 12 hours 、 overload、 short circuit、 over-temperature etc..until automatically trun off output.
Electric Volume Display	Charging& discharging electric volume display	When charging, the screen will show the battery percent rate cycle. Full Charging or cut off the recharging cable, the battery volume indicate will stop.According to the actual battery capacity, the screen will show the percent of battery capacity. When discharging, According to the actual battery capacity, the screen will decrease the percent of battery capacity in blue cycle.
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

Remaining Discharging 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
Errors/Protection Alarm	Inform that station is on the faults.	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	Inform that temperature is too high	When internal temperature is too high, this icon will be pops up,and after temperature recover normally, this icon will be disappeared.
Low Temperature Protection Warning	Inform that battery temperature is too low	When the internal temperature is too low, this icon will be pops up,and after temperature recover normally, this icon will be disappeared.
Cooling Fans Opening Hint	Display Fan Working Status	When the fan is on, the icon is displayed. When closed, the icon goes out
DC Output Port Icon	Inform that car ignition port working status	Car ignition output port is be turned on, the icon will be showed, when turn off, the icon will be gone.
AC Output Port Status Icon	AC output port working status	AC output turn on, the icon will be showed, when it turns off, this icon will be disappeared
Screen Back Light		If there are buttons operating, the back light will be all lighting, but if no button operation, the screen back light will be turned off.
Switch Button Back Light		Recharging,discharging,standby status,the light is flashing.When buttons sleep,the breathing lights will be turned off.
Remarks :		

## 2、AC Input Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Input Voltage Range	V <sub>in</sub>	V <sub>ac</sub>	190~240	Low voltage protection in 180V, Recovery in 190V,High voltage protection in 245,Recovery in 240V (±5)
Input Current Range	I <sub>in</sub>	A	1.3	
Input Frequency	/	HZ	50/60	Low frequency protection in 42Hz,Recovery in 45HZ, high frequency protection in 65 Hz, recovery in 62HZ (±1)
Switch Time	/	ms	20	UPS switch time ≤20ms
Insurance Fuse		A	6A	When fuse was consumed, you can manually exchange it with a new one.
Input Port	/	A	10A	IEC-male
AC Charging Power	/	W	300	

## 3、Solar Panel Input Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Input Voltage Range	Vin	Vdc	15-35V	High voltage protection in 35V
MPPT Voltage Range	Vin	Vdc	15-35V	Photovoltaic panel open circuit voltage $\leq 35V$
MPPT Input Current	/	A	12A	MAX240W
Solar Panel Charging Time	/	Hour	/	The fastest charging time depends on illumination intensity and solar panel power.
The Longest Charging Interval Time	/	month	/	When remaining battery volume over 50%.
Solar Panel Input Port	/	/	/	7909 connector port

## 4、DC Output Parameters

### 4.1、Car ignition Output Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Output Voltage	Vo	Vdc	12.8	
Output Current	Io	A	10	
Overload Protection	/	A	11	When Output current > 11A,output will be off,After overload excluded,manually press the DC switch will recover the output.
Short Circuit Protection	/	/	/	When Output terminal,cable and outer devices short circuit, output port will stop to output. After short circuit excluded, manually to press the DC switch to recover the output.
Output Port	/	/	/	One Car ignition port output

### 4、USB-A Output Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Output Voltage	Vo	Vdc	5.0	Default output 5V, Automatically recognize QC protocol, output corresponding voltage, DCP/QC2.0/QC3.0/FCP/AFC
			9.0	
			12.0	

Output Current	Io	A	3	@5.0V
			2	@9.0V
			1.5	@12.0V
Overload Protection	/	W	18	When Output terminal,cable and outer devices short circuit, output port will stop to output.After power status excluded,manually press the USB switch to recover output.
Short Circuit Protection	/	/	/	When Output terminal,cable and outer devices short circuit, output port will stop to output.After short circuit excluded,manually press the DC switch to recover output.
Output Port	/	/	/	Two USB-A single output

## 5、USB-C (PD18W) Output Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Output Voltage	Vo	Vdc	5.0	PD protocol is automatically identified and corresponding voltage is output, DCP/QC2.0/QC3.0/QC3+/FCP/AFC/PD2.0
			9.0	
			12.0	
Output Current	Io	A	3	5V
			2	9V
			1.5	12V
Overload Protection	/	A	3.1A	When Output current over 3.1A, output will be off, after over-current excluded, manually to press DC switch to recover output.
Short Circuit Protection	/	/	/	Output terminal、cable or outer devices short circuit,output stop,when short circuit excluded, station will recover automatically.
Output Port	/	/	/	USB-C output

## 6.AC Output Parameters

Parameters	Symbol	Unit	Typical value	Remarks
Output Voltage Range	Vo	Vac	230	
Output Power	Po	W	600	
Output Peak Power		W	1200	Lasting time $\leq$ 200mS
UPS Output	Po	W	600	Recharging and loading $\geq$ 600W time-lapsed in

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				1minute,overload icon will be showed up,to turn off output can recharge the power station.
Switching Time		ms	20	
Output AC Frequency	F	Hz	50	
Output AC Wave	/	/	/	Sine wave
Over-Load Protection	/	W	102%~105%	Lasting 5S output current over 102%-105%, output will be off, after over-current excluded, manually press AC switch to recover output.
Over-Load Protection 2	/	W	105%~110%	Lasting 1S output current over 105%-110%,output will be off, after over-current excluded,manually press AC switch to recover output.
Short Circuit Protection	/	/	/	Output terminal,cable and outer device short circuit,output port will be off. After short circuit excluded,manually press the AC switch will recover output.
Output Port	/	/	/	AC EU socket,1 circuit parallel to output

### 7、 Battery Pack Parameters

Parameters	Symbol	Unit	Min.value	Typical value	Max.Value	Remarks
Battery Cell Model No.	/	/	/	/	/	IFP40135 LiFePO <sub>4</sub>
PACK Methods	/	/	/	/	/	4 series
Voltage	/	Vdc	/	12.8V	/	/
Battery Volume	/	Ah	/	20	/	/

### 8、 System Protection Functions

Parameters	Symbol	Unit	Typical value	Remarks
Low Voltage Protection	V <sub>o</sub>	Vdc	11.2	
Over Voltage protection	V <sub>o</sub>	Vdc	15	
Recharging High Temperature Protection	/	°C	50	
Recharging Low Temperature Protection	/	°C	0	
Recharging Low Temperature Protection Recovery	/	°C	3	
Discharging High	/	°C	70	

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Temperature Protection				
Discharging Low Temperature Protection	/	°C	-20	Radiation temperature drop -10°C
Overload Protection	/	W	/	Refer to all ports overload protection
Short circuit Protection	/	/	/	Refer to all ports short circuit protection
Total Power Protection	/	W	600	AC and DC are loading at the same time,DC output first,and AC will be off when AC loading devices over 600VA

## 9、 Environmental Requirements

Parameters	Symbol	Unit	Min. Value	Typical value	Max. Value	Remarks
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

Parameters	Symbol	Unit	Min. Value	Typical value	Max. Value	Remarks
Life Time	Lf	year	3			
Average Spacing Error Time Estimation	MTBF	hours	200000			Ta 25°C (MIL-HDBK-217F)
Weight	N.W	g		5600		

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Size	DIM.	mm (inch)	L*W*H 310*260*265mm	
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**Note:** Unless otherwise specified, all the above parameters are measured at 25°C under full load condition;

### 12. Safety Specifications

Certificate	Safety Test Standard	Status	Remarks
UL	UL2743	pending	



### 13. Electromagnetic Compatibility










EMI/EMS projects	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	Remarks
Withstand Voltage	1500Vac/5mA/60S	AC output-earth, No breakdown, no flare
Insulation Resistance	≥100Mohm	AC output-earth, test voltage 500Vdc
Leakage Current	≤0.75mA	120Vac

### 15. Fault code (to be negotiated)

Error Code	Erros Infos	Status	Remarks
E00	AC output sortcircuit protection	 Flashing,no output	Manually press switch to recover it
E01	Output overload protection	 Flashing,no output	Feature icons present circuit overload,overload need to be recovered manually, UPS overload 600W in 1 second.
E02	Battery low voltage protection	Corresponding features are flashing, no output	Reset the feature button to recover the features and recharging it in time.

E03	AC output over voltage and low voltage protection	 Flashing,no output	Manually press AC switch to recover
E04	AC output frequency erro	 Flashing, AC no input	Frequency automatically recover normally
E05	Bus high-low voltage,over current	 Flashing, all functions without output	Manually press the AC switch to recover
E06	Inverter over temperature,rec harging over temperature protection	 +  Flashing, all functions without output	Temperature recover normally then power station can work normally
E07	Inverter low temperature,rec harging low temperature protection	 +  Flashing, all functions without output	Temperature recover normally then power station can work normally
E08	Car ignition port overload	 Flashing , all functions without output	Manually press the DC switch to recover
E09	System overload	AC icon flashing, turn off AC function, DC output normally,AC over 600VA or AC+DC 大于 600W	Manually press the AC switch to recover
E10	Photovoltaic input voltage is over high	E10 icon come out	No photovoltaic panel recharging
E11	Hardware sampling exception	E11 icon come out	Master switch manually reset the station.
E12	Car ignition short circuit	 flashing, all functions without output	Manually press the DC switch to recover

## 16、 Packing Contents

Number	Packing list	QTY	Remarks
1	S03 pro power station	1	
2	Power cord	1	
3	User instruction	1	
4	Warranty card	1	

## 17、 Package

- Net Weight: 5.6KG
- Quantity: 1PCS
- Packing Size: L\*W\*H=310\*260\*265mm
- Net Weight/Gross Weight: 5.6/7.2KG



## **Notice:**

- If product package is broken, pls confirm product appearance completely and without crack.

## **Shipment:**

- It is suitable for transportation by car, ship and plane. During transportation, it should be covered with awnings, protected from sun, and loaded and unloaded in a civilized manner.

## **Storage:**

- Product storage should comply with the provisions of GB 3873-83.
- For long-term storage, it is recommended to charge the battery every 3 months to prevent the battery from being damaged due to overcharging.

## **RoHS:**

- The product complies with European Directive 2011/65/EC.
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