

SPECIFICATION

PART NO. : 10102279

MODEL NO. : SP-UPP-600J-O

DESCRIPTION : 12-30V/4A , AC600W/120V*2 , DC12V/10A*1/
DC5521 12/5A*2 , USB-A QC3.0*2 , PD60W*1/LED 7W

VERSION NO. : V0.9

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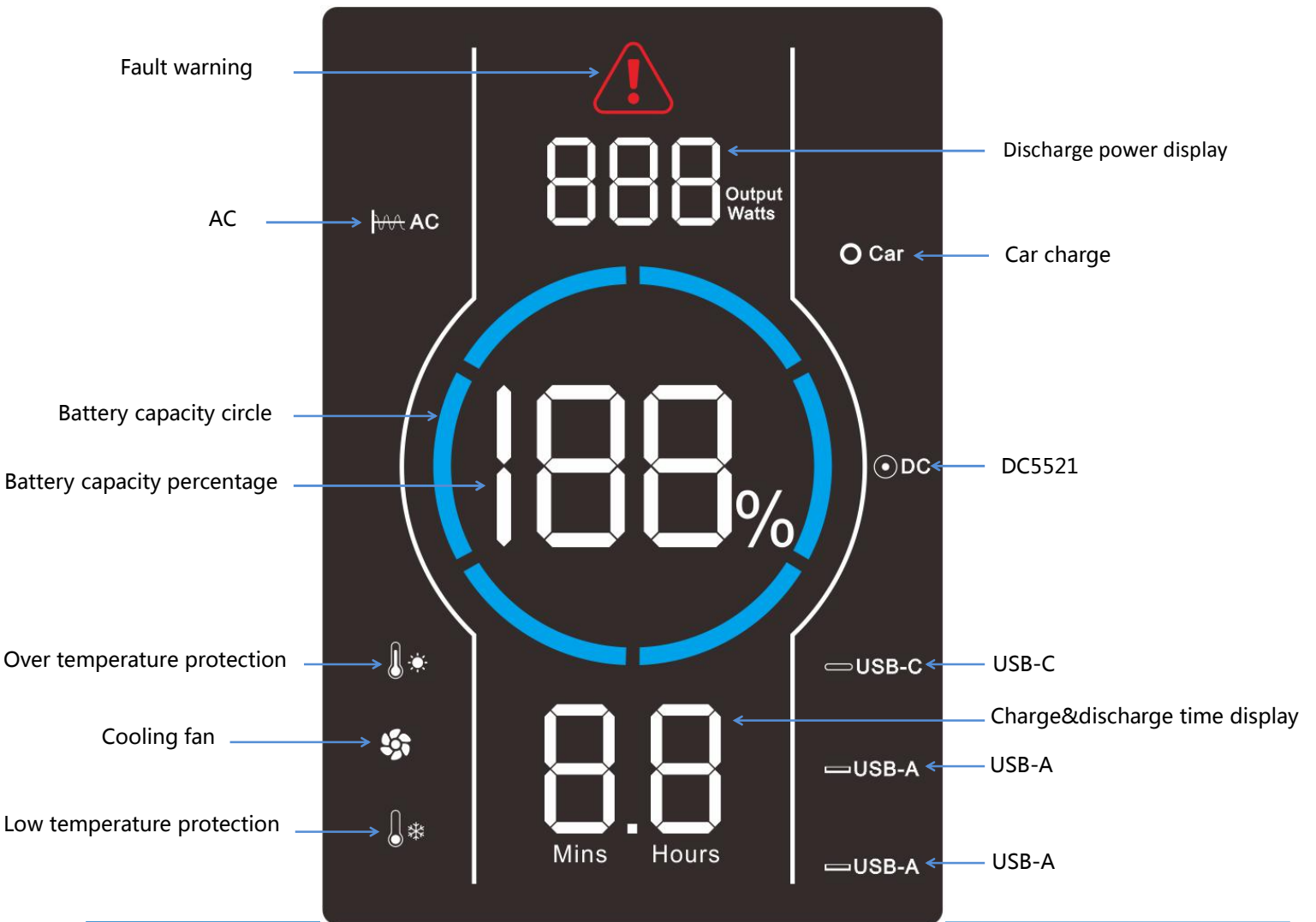
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General Description

This product is a high-end fashion off-grid portable power station, independently developed by Shenzhen Chang Tian Chuangxin Technology Co., Ltd. Light and portable, stylish and generous, using automotive-grade LiFePO4 battery, safe, reliable, and durable; providing 110V /12V/5V AC and DC output, suitable for various equipment such as aerial drones, portable ventilators, medical equipments, mobile phones, tablets, laptops, desktop computers, small printers, various lamps, small fish tanks, photographic equipments, electric balance wheelbarrows, etc. It' s convenient for users to use at home, travel, outdoor work, camping picnics, mountaineering adventures, etc.





1. Control and display

Item	Features	Notes
Main power button	Master switch for each function (except lighting)	Long press for 2S to turn on or off the main power supply, when it is turned on, a circle of LED lights around the button will light up
Car charge and DC5521 power button	Control car charger and DC5521 output or turn off	When the main power switch is turned on, lightly press the button to turn on the car charger and DC5521 output; press it again to turn off. Automatically turn off the output if no equipment access, overload, short circuit, over temperature protection, etc. are detected within 12 hours
USB-A power button	Control USB-A output or turn off	When the main power switch is on, press the button lightly to turn on the USB-A output; press it again to turn off. After 12 hours, no device access, overload, short circuit, over temperature protection, etc. are not detected and the output is automatically turned off
AC power button	AC output control switch	When the main power switch is on, press the button lightly to turn on the AC output; press it again to turn off. After 12 hours, no device access, overload, short circuit, over temperature protection, etc. are not detected and the output is automatically turned off
LED lamp power button	Control LED lighting on or off	Press the button once (no need to turn on the main switch), the LED brightness is 50%, press again to be 100%, press again to SOS signal, press again to turn off, and then cycling in turn. The LED lighting module is not controlled by the main switch
USB-C output port	/	Automatically detect the port, turn on the output when a device is plugged in, and turn off the output when the device is removed. When the main power switch is turned off, charging the product through this port will automatically activate the product..
Battery capacity circle and battery capacity percentage	Battery level display when charging or discharging	When charging, the battery capacity percentage is displayed in the middle, and the blue circle circulates in the form of a marquee. When the product is fully charged or the charger is disconnected, the battery indicator stops. The percentage and outer circle are displayed according to the actual battery.. When discharging, the battery capacity percentage is displayed according to the actual power. The blue circle decreases in percentage accordingly.
Charging power display	Display charging power	When charging, display the current charging power; if charging and discharging simultaneously, and the charging power is higher than the discharging power, display the actual charging power (adapter or solar panel charging power minus discharging power)
Discharge power display	Display discharge power	When discharging, display the current discharging power; if charging and discharging simultaneously, and the charging power is lower than the discharging power, display the actual discharging power (discharging power minus adapter or solar panel charging power)
Remaining charge/discharge time	Display remaining charge/discharge time	Real-time display of remaining charge/discharge time according to current battery capacity and charge/discharge power. Display logic: when the time exceeds 1 hour, it is displayed in X.Y hours, and when the time is less than 1 hour, it is displayed in minutes.

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 will be displayed, and the icon will be closed after troubleshooting.
High temperature protection warning	Indicates that the battery temperature is too high	When the internal temperature is too high, the icon will be displayed, and the icon will be closed when the temperature is restored
Low temperature protection warning	Indicates that the battery temperature is too low	When the internal temperature is too low, the icon will be displayed, and the icon will be closed when the temperature is restored
Fan on indicator	Indicate fan working status	When the fan is on, the icon is displayed. When closed, the icon goes out.
Car charger port status indication	Indicate the working status of the car charger port	When the car charger is turned on, the icon is displayed, when it is turned off, the icon is off
DC5521 port status indication	Indicate the working status of DC5521 port	When DC5521 turns on the output, the icon is displayed, when it is turned off, the icon goes out
USB-C port status indication	Indicate the working status of USB-C port	When USB-C turns on the output, the icon is displayed, when it is turned off, the icon goes out
USB-A port status indication	Indicate the working status of USB-A port	When USB-A turns on the output, the icon is displayed, when it is turned off, the icon goes out
AC port status indication	Indicate the working status of AC port	When AC turns on the output, the icon is displayed, when it is turned off, the icon goes out
Backlight	/	When there is a button operation, it is fully lit, when no button operation is detected for 5 minutes, the screen backlight is off. When charging, it is fully lit, and if no button operation is detected for 5 minutes, the screen backlight is off. When the charge is removed, 30% brightness, it will go out automatically without operation after 5 minutes.
Power button breathing light	/	When charging, discharging, and standby, the breathing light flashes, and the breathing light goes out during sleep..

Remarks: USB-A, USB-C, LED lighting support charging and discharging simultaneously. The AC port supports full power output when the power is greater than 50%; when the power is 20-50%, the maximum output power does not exceed 100W; when the power is less than 20%, it does not support AC output. The cigarette lighter and port 5521 do not support charging and discharging simultaneously.

2、DC Input Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Input voltage range	Vin	Vdc	12	24	30	The product comes standard with 24V/4A adapter
Input current range	Iin	A	0	/	4.2	Intelligent Recognition MPPT
Adapter charging time	/	Hour	7.5	8	8.5	
Solar panel charging time	/	Hour	8	/	/	The maximum charging time depends on the light intensity and solar panel power

Maximum charging interval time	/	month	/	/	12	Store when the remaining power is greater than 50%
Input port	/	/	/	/	/	DC7909 female end, middle and inner ring are positive, outer ring is negative

3、DC Output Characteristics

3.1、Car Charger Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output voltage range	Vo	Vdc	12	13.5	14.5	/
Output current range	Io	A	/	/	10	/
Overload protection	/	A	11	/	13	When the output current exceeds this current limit, the output will be turned off. After the overload is released, the output must be restored by pressing the DC switch manually.
Short circuit protection	/	/	/	/	/	If the output terminal, wire or external device is short-circuited, the output port will stop output. When short-circuit is removed, you need to manually press the DC switch to restore the output.
Output port	/	/	/	/	/	One cigarette lighter output

3.2、DC5521 Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output voltage range	Vo	Vdc	12	13.5	14.5	/
Output current range	Io	A	/	/	5	Two DCs (5521) are output in parallel, and the total current with the car charger (cigarette lighter) is less than 10A.
Overload protection	/	A	5.5	/	6.5	When the output current exceeds this current limit, the output will be turned off. After the overload is released, the output must be restored by pressing the DC switch manually.
Short circuit	/	/	/	/	/	If the output terminal, wire or

protection						external device is short-circuited, the output port will stop output. When short-circuit is removed, you need to manually press the DC switch to restore the output.
Output port	/	/	/	/	/	Two DC5521 parallel outputs

Note: If it is in the charging state, the cigarette lighter and DC5521 cannot turn on the output.

4、USB-A Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output voltage range	Vo	Vdc	4.75	5.0	5.25	The default output is 5V, the QC protocol is automatically recognized, and output corresponding voltage, QC3.0/QC2.0, FCP, SCP, AFC, MTKPE+2.0/1.1, Apple2.4A
			8.55	9.0	9.45	
			11.25	12.0	12.5	
Output current range	Io	A	/	/	3	@5.0V
			/	/	2	@9.0V
			/	/	1.5	@12.0V
Overload protection	/	W	/	/	18	When the output power exceeds the maximum power, the output will be turned off. After the over-power state is released, you need to manually press the USB switch to restore the output..
Short circuit protection	/	/	/	/	/	When the output terminal, wire or external device is short-circuited, the output port will stop output. When short-circuit is removed, you need to manually press the USB switch to restore the output.
Output port	/	/	/	/	/	Two USB-A independent outputs

5、USB-C (PD) Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output voltage range	Vo	Vdc	4.75	5.0	5.25	Automatically recognize the PD protocol and output the corresponding voltage. PD3.0, PD2.0, QC3.0, QC2.0, FCP, SCP, AFC, MTKPE+2.0/1.1, Apple2.4A,
			8.55	9.0	9.45	
			11.25	12.0	12.5	
			14.25	15.0	15.75	

			19.0	20.0	21.0	
Overload protection	/	A	3	/	3.3	If the output current exceeds this current limit point, the output will be turned off. After the overcurrent is released, re-plug the device to restore the output.
Short circuit protection	/	/	/	/	/	If the output terminal, wire or external device is short-circuited, the output port will stop output. When short-circuit is removed, re-plug the device to resume output.
Output port	/	/	/	/	/	One USB-C output

6、AC Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output voltage range	Vo	Vac	100	110	120	/
Output power	Po	W	0	--	600	/
Peak output power	/	W	--	--	900	Duration \leq 200mS
Output AC frequency	F	Hz	59	60	61	/
Output power factor	PF	/	0.9	/	/	/
Output AC waveform	/	/	/	/	/	Sine wave
Overload protection	/	W	650	/	750	If the output current exceeds this current limit, the output will be turned off. After the overcurrent is released, you need to manually press the AC switch to restore the output.
Short circuit protection	/	/	/	/	/	If the output terminal, wire or external device is short-circuited, the output port will stop output. When short-circuit is removed, you need to manually press the AC switch to restore the output.
Output port	/	/	/	/	/	AC 2PIN American socket, 2 parallel outputs

Note: If the battery power is greater than 50% when it is in the charging state, the full power output is supported; when the battery power is between 20-50%, and the output power must not exceed 100W; when the battery power is less than 20%, the AC output cannot be turned on.

7、LED Lighting Output Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Output power	/	W	6.5	7	7.5	/
Luminous flux	/	lm	/	1000	/	/
Color temperature	CCT	K	3850	4000	4150	/
CRI	CRI	/	80	/	/	/

8、Battery Pack Parameters

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Cell model	/	/	/	/	/	32135 LiFePO ₄
Pack method	/	/	/	/	/	6 series 2 parallel
Voltage	/	Vdc	/	19.2	/	/
Battery capacity	/	Ah	/	31	/	/

9、Environmental Requirements

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Working temperature (ambient temperature)	/	°C	0	--	45	/
Working humidity	/	/	10%	--	90%	/
Storage temperature	/	°C	-20	--	65	/
Storage humidity	/	/	5%	--	95%	/
Altitude	/	m	-50	--	3000	/
Cooling method	/	/	Fan forced cooling			/

10、Other Characteristics

Parameter	Symbol	Unit	Min.	Typical	Max.	Remarks
Life time	Lf	year	3			/
Estimates MTBF	MTBF	hours	200000			Ta 25°C (MIL-HDBK-217F)
Weight	N.W	g		6900		/
Dimension	DIM.	mm (inch)	L*W*H 267 (10.5) *197 (7.76) *247 (9.73)			/

Remarks: Unless otherwise specified, all the above parameters are measured under the fully loaded state of the product and at 25°C.

11、 Safety Regulation

Certification	Safety standard	Status	Remarks
UL	UL2743	pending	

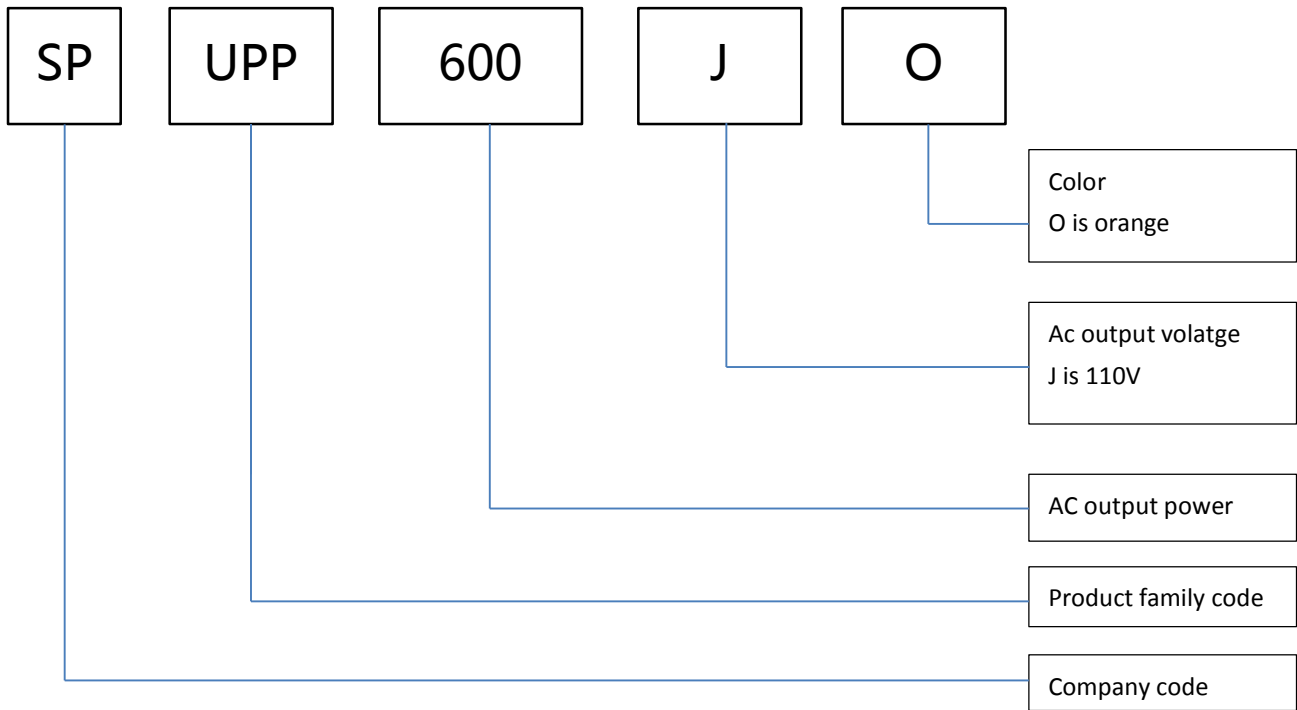
12、 Electromagnetic Compatibility

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

13、 Safety Test Projects

Safety test	Technical requirement	Remarks
Surge	1500Vac/5mA/60S	AC output-ground, no breakdown, no arcing
Insulation resistance	≥100Mohm	AC output to ground, test voltage 500Vdc
Leakage current	≤0.75mA	110Vac

Product model naming rules :



14、Accessories List

No.	Accessory name	Quantity	Remarks
1	SP-UPP-600J-O	1	
2	Adapter 24V/4A	1	
3	Car charger to DC7909 charging cable	1	
4	User manual	1	
5	Warranty card	1	

15、Packaging

- Net weight : 6.8kg
- Quantity : 1pc
- Package size : L*W*H=325*294*319 mm (12.8*11.58*12.6 inch)
- Gross weight : 8.8kg



Precautions

- If the product packaging is damaged, please confirm whether the appearance of the product is complete, and the external structure of the product is not allowed to have cracks.

Transportation

- It is suitable for transportation by car, ship, and airplane. During transportation, it should be covered; sun protected and civilized loading and unloading.

Storage

- Product storage should comply with GB 3873-83.
- When storing for a long time, it is recommended to charge it every six months to avoid damage to the battery due to over-discharge.

RoHS:

- Products comply to the European Standard 2011//65/EC

Change Records

Version No.	Change Content Description	Date	Remarks
V0.9	Initial Draft	2020/12/4	