Salom Electric(Thailand)co.,LTD.

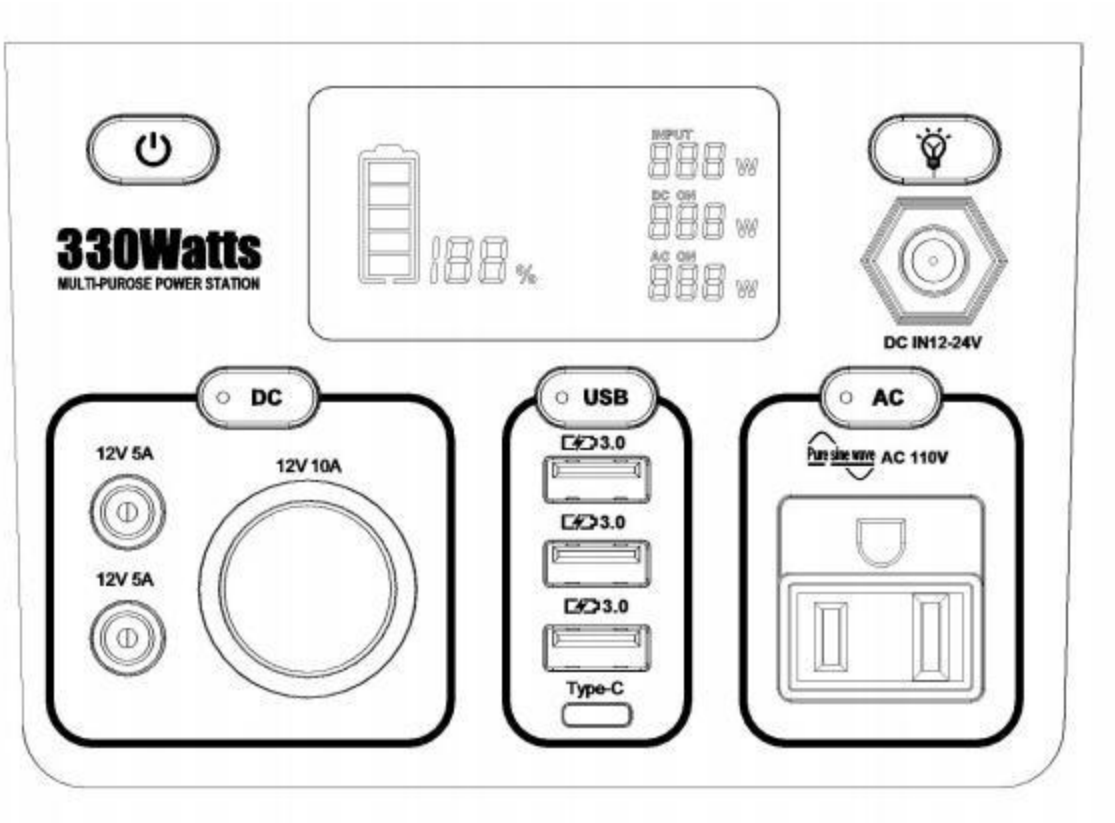
330W Portable Power Station Specifications

Customer	
Product	Portable generator
Model	MP 330
Specification	3.7V/78000mAh/288.6Wh
No	ZF-SPC20081201
Version	A1
Date	20200812

1. Product description

This product is a virtual charging product, which is suitable for applications such as the family's own power supply, travel, emergency rescue, and field work. The product has AC (110V/220V: 330W), USB (QC3.0, Type-C), DC (DC5521: 12V/5A), cigarette lighter: 12V/10A) different port voltages, output 2W LED Illumination lamp and SOS alarm function, support 5W wireless charging function; the system is equipped with AC 15V/4A to charge the system, and it can also be equipped with flash 18V/60-100W charging or flash to charge the system.

2. Front panel control and digital display description



2.1 Switch function

Main switch: The main switch that controls each function of the product (except the lighting function). After pressing the switch, the power display lights up and the wireless charging function is turned on.

DC key switch: control 12V DC5521, the cigarette lighter, the key indicator lights up when the switch is turned on, and turns off when the switch is turned off.

USB key switch: control QC3.0USB and Type-c, the key indicator lights up when the switch is turned on, and turns off when the switch is turned off.

AC key switch: control reverse AC output, the key indicator lights up when the switch is turned on, and turns off when the switch is turned off.

Bulb button switch: control LED lighting, SOS warning light.

2.2 LCD display information

LCD display information: battery power, input power, output power.

1) After the charger is plugged into the DC charging port, the battery marquee will be displayed on the left side of the screen and the battery will be displayed, the screen "INPUT" will light up and the charging power will be displayed.

2) After the DC circuit is turned on, the "DC ON" of the digital tube lights up and displays the output power.

3) After the AC circuit is turned on, the "AC ON" of the digital tube lights up and displays the output power.

3. Portable energy storage power supply parameters

3.1 DC IN Input port parameters

Item	Min.	STD.	Max.	Remarks
Standard input voltage range	12Vdc	15Vdc	24Vdc	Standard 15V/4A adapter.
Input charging current	...	3A	3.7A	
Input polarity reverse protection	...	Support	...	Cannot charge when the input is reversed, and the display does not display.
Input short circuit protection	...	Support	...	Cannot charge when the input is short-circuited, no display on the display.

3.2 DC5521 Output port parameters

Item	Min.	STD	Max.	Remarks
Output voltage range	9Vdc	...	12.6Vdc	Battery module rated input 9~12.6Vdc, when 0-100% load.
Rated output current	...	5A	...	Battery module rated input 9~12.6Vdc, output voltage range can meet 9~12V.

				If the output current exceeds this current limit,
Current limit protection	5.1A	6A	7A	the output will be turned off. After the overcurrent is released, you need to manually press the DC switch to restore the output.
Note: Overcurrent, overload, short circuit, etc. are destructive tests. Continuous and long-term tests are not allowed. The test time should be less than 3S.				

3.3 Cigarette lighter output port parameters

Item	Min.	STD	Max.	Remarks
Output voltage range	9Vdc	…	12.6Vdc	Battery module rated input 9~12.6Vdc, when 0-100% load.
Rated output current	…	10A	…	Battery module rated input 9~12.6Vdc, output voltage range can meet 9~12V.
Current limit protection	10.5A	12A	14A	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 DC switch to restore the output.

3.4 QC3.0 Output port parameters

Item	Min.	STD	Max.	Remarks
5V no-load output voltage	4.8V	5.0V	5.50V	Under no-load output conditions, measure the product USB output port voltage.
5V full load output voltage	4.5V	5.0V	5.30V	Under the condition of full output load, measure the product USB output port voltage.
5V Rated output current	…	2.5A	…	
9V rated output current	…	2.5A	…	
9V no-load output voltage	8.80V	9V	9.5V	Under no-load output conditions, measure the product USB output port voltage.
9V full load output voltage	8.50V	9V	9.3V	Under the condition of full output load, measure the product USB output port voltage.
9V rated output current	…	2.0A	…	

12V rated output current		Battery voltage		Battery voltage 9-12.6V
12V no-load output voltage	Battery voltage-0.2V		Battery voltage	Under the condition of full output load, measure the product USB2 output port voltage.
12V full load output voltage	…	1.5A	…	Overcurrent 3.3 ±0.5A
Auto recognition	…	yes	…	Output corresponding voltage and current according to different loads.
Note: Overcurrent, overload, short circuit, etc. are destructive tests. Continuous and long-term tests are not allowed. The test time should be less than 3S.				

3.5 Type-C Output port parameters (QC3.0 protocol)

Item	Min.	STD	Max.	Remarks
5V no-load output voltage	4.8V	5.0V	5.50V	Under no-load output conditions, measure the product USB output port voltage.
5V full load output voltage	4.5V	5.0V	5.30V	Under the condition of full output load, measure the product USB output port voltage.
5V rated output current	…	2.5A	…	
9V rated output current	8.80V	9V	9.5V	Under no-load output conditions, measure the product USB output port voltage.
9V no-load output voltage	8.50V	9V	9.3V	Under the condition of full output load, measure the product USB output port voltage.
9V full load output voltage	…	2.0A	…	
12V rated output current		Battery voltage		Battery voltage 9-12.6V
12V no-load output voltage	Battery voltag-0.2V		Battery voltage	Under the condition of full output load, measure the product USB2 output port voltage.
12V full load output voltage	…	1.5A	…	Overcurrent 3.3 ±0.5A
Auto recognition	…	yes	…	Output corresponding voltage and current according to different loads.

Note: Overcurrent, overload, short circuit, etc. are destructive tests. Continuous and long-term tests are not allowed. The test time should be less than 3S.

3.6 AC output port parameters

Item	Min.	STD	Max.	Remarks
No-load output voltage	105Vac	110Vac	115Vac	American Standard, Japanese Standard
Load output voltage	99V	110V	121V	American Standard, Japanese Standard
No-load output voltage	210Vac	230Vac	240Vac	China Regulation/ European Regulation/ Australian Regulation
Load output voltage	198V	230V	245V	China Regulation/ European Regulation/ Australian Regulation
Output waveform	…	Sine wave	…	Rated R load
Output frequency	59Hz	60Hz	61Hz	American Standard, Japanese Standard
Output frequency	49Hz	50Hz	51Hz	China Regulation/ European Regulation/ Australian Regulation
Rated output power	…	330W	…	Battery module rated input 10.5~12.6Vdc rated R load.
Output power factor	0.8	…	…	Battery module rated input 9.6~12.6Vdc, rated R load.
Efficiency	85%	…	…	Average efficiency with R load at four points of load current 40%, 60%, 80%, 100%. (for reference only).
Short circuit protection	…	yes	…	If the output terminal, wire or external equipment is short-circuited, turn off the inverter output. The product should not be damaged during the short-circuit process, and the output needs to be restored manually.
Overload protection	110W	120W	130W	The overload protection is triggered after the load power is greater than 120W (specifically defined according to the debugging situation).
Inverter over temperature protection	85℃	…	…	Stop the inverter output after protection, and need to manually restore.
Note: Overload and short circuit are destructive tests, the time cannot exceed 3S, and continuous operation is not allowed.				

3.7 LED lights warning light parameters

Item	Min.	STD	Max.	Remarks
Lamp power	---	2W	---	
Color temperature	2800K	3000K	3200K	
Operating mode	Steady on: Short press the constant once, then short press once to close. SOS flashing: continuous short press twice to flash, short press once to turn it on, and then short press once to turn off.			

3.8 Wireless charging parameters

Item	Min.	STD	Max.	Remarks
Power	---	5W	---	

3.9 Energy storage battery pack parameters

Battery type: 3.7V/18650 ternary lithium battery

Item	Min.	STD	Max.	Remarks
Rated voltage	---	11.1V	---	
Cell capacity	---	26Ah	---	Optional according to customer requirements
Internal resistance of cell	---	/	70mΩ	
Cell resistance	---	25mΩ	40mΩ	

3.10 System protection function

Item	Min.	STD	Max.	Remarks
Low battery alarm	9.4V	9.6V	9.8V	When the discharge voltage reaches a low battery alarm, the AC buzzer will sound.
Low power protection	8.8V	9V	9.2V	When the discharge voltage reaches the low telegram protection voltage, the product stops working.
Charging high temperature protection	45℃	50℃	55℃	When the discharge voltage reaches the low telegram protection voltage, the product stops working.
Charging high temperature protection recovery	40℃	45℃	50℃	Automatic recovery.
Charging low temperature protection	-5℃	0℃	5℃	If the battery temperature is lower than or equal to 0°C, it is forbidden to charge the battery.
Charging low	0℃	5℃	10℃	Automatic recovery.

temperature protection recovery				
Discharge high temperature protection	60℃	65℃	70℃	If the cell temperature exceeds this value, discharging the battery is prohibited.
Discharge high temperature protection recovery	55℃	60℃	65℃	It cannot be restored automatically, you must press the button to restore.
Discharge low temperature protection	-25℃	-20℃	-15℃	
Discharge low temperature protection recovery	-15	-10	-5	It cannot be restored automatically, you must press the button to restore.

3.11 Shutdown, self-consumption current and hibernation

Item	Standard	Remarks
Power consumption after shutdown	< 800uA	
	no hibernation	
DC output	no hibernation	
USB output	no hibernation	
AC output A	hibernation	9H current is less than 2W to enter hibernation.

Note: In order to meet the requirement of low-current power supply and charging and refrigeration appliances of low-power products that can be started after the heat preservation state (no working current), only the AC output will enter hibernation after 9H, and any output port of the product should be closed when the output port is not in use. The whole battery turn off the main switch when not in use to prevent the product from consuming power.

4. Working environment parameters

Item	Min.	STD	Max.	Remarks
Operating temperature	0℃	- - -	40℃	Ambient temperature where the product works normally.
Storage temperature	-20℃	- - -	45℃	The product does not work within the storage temperature range and is suitable for storage.
Working	10%	- - -	90%	Ambient humidity where the product works

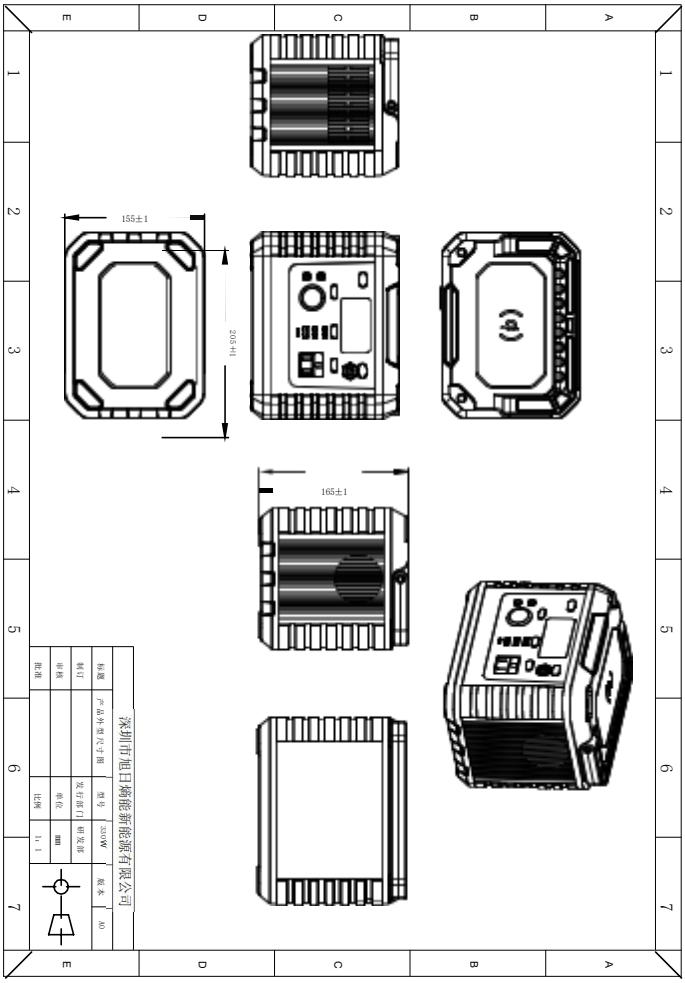
humidity				normally.
Storage humidity		- - -	45%	The product does not work within the storage humidity range and is suitable for storage.

Notes:

When the product is placed in a high temperature environment (40°C) for discharge. When the system detects that the temperature of the battery cell exceeds 65°C. To ensure the safe use of batteries, all output ports are closed. At this time, the battery cell will not discharge.

The product is placed in a low temperature environment (0℃) when charging. When the system detects that the temperature of the battery cell is lower than 0°C. To ensure the safe use of batteries, close the charging port and prohibit charging.

5. Dimession: 205x155x165mm



6 . Aging requirements

The aging sequence during mass production is as follows: first fully charge, then discharge, and then charge 45%~65% of the power. The aging results need to be recorded.

7. Parts list

No	Item and Specification	QTY
1	Host	1
2	Product Manual	1
3	AC charger	1
4	Car charging cable	1
5	Solar panel MC4 interface charging cable	1

8. Charging instructions

The charging voltage should not exceed the maximum value specified in this specification. The design of the charger should meet the requirements of this specification. When the current and voltage range beyond the requirements of this specification are used, it may cause the charging and discharging performance, mechanical performance and Safety performance issues.

9. Precautions for storage

If the battery has been stored for more than half a year, please use a charger within the specified parameter range to perform a charge-discharge cycle for the battery.

10. Warnings and precautions

10.1 Do not put the product in water.

10.2 Do not heat the product or close to the fire source! Do not disassemble or modify the product without authorization! Do not hit the product forcefully! Otherwise, it may cause battery overheating, short circuit, fire or function failure, shortened life and other hazards.

10.3 It is forbidden to use or place the battery in high temperature (in the hot sun or in a very hot car), otherwise it may cause the battery to overheat, catch fire or function failure, and shorten the life.

10.4 It is forbidden to disassemble and install the battery.

10.5 It is forbidden to short-circuit the battery.

10.6 It is forbidden to use non-dedicated chargers to charge the battery, it will be dangerous.

10.7 Do not directly touch the leaking battery. The leaking electrolyte will cause skin discomfort. In case the electrolyte enters the eyes, rinse with clean water as soon as possible, do not rub the eyes, and promptly send to the hospital for medical treatment.