Specification

MIC-CN1800A Portable Power Station

Product Name:1800A Portable Power Station

Ver No :VER-1.0

Release Date :2022-11-07

MIC Power Approved		
Engineer	Audit	Approval
Client Approved		
Engineer	Audit	Approval

Dear Customer,Thanks for choosing MIC Power Portable power station.We provide you with the samples and relevant specifications and graphic files. Hope to get test confirmation thank you.

Alteration Resume

Ver No	Description	Date	Operator
VER:1.0	First Issue	2022-11-07	Liu Yang

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1、Application environment

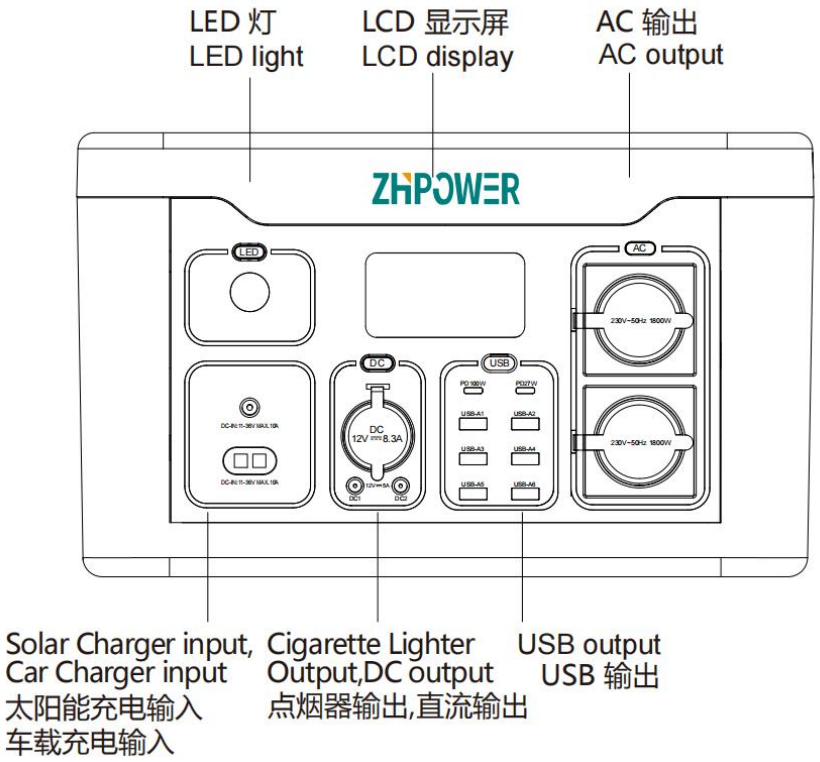
1.1 As an energy storage power station for outdoor/office use, it can be connected with mobile phones tablet computers, laptops and other consumer digital devices.

1.2 Car charging output port: car refrigerator, air pump, vacuum cleaner.

1.3 DC output port: UAV, router, car refrigerator and other 12V power equipment, outdoor photography, off-road enthusiasts use electricity in the field, as well as outdoor electricity for TV camera equipment.

1.4 AC output port: Electricity consumption for outdoor lighting, Emergency electricity for field maintenance of telecommunications departments, Emergency electricity for mine, oil field, geological exploration and geological disaster rescue,etc.

2、Photo of the product and PIN Assignment



The Keypad Functions	
Function of the key	In the case of shutdown,any key switch can wake up the system,Press the key switch at first time.It will turn on the display and wireless charging function.Press the key switch for second time ,it will turn on the corresponding function.
DC key switch	It controls12V DC5521 and cigarette lighter.The indicator icon lights up when switch is turned on ,and turns off when switch is turned off

USB key switch	It controls USBA and Type-c. The icon indicator lights up when the switch is turned on, and turns off when the switch is turned off
AC key switch	It controls inverter AC output. The icon indicator lights up when the switch is turned on, and turns off when the switch is turned off
Light key switch	It controls LED lights, SOS warning lights

Main information of LED display	
LCD display	Battery level
	Input power
	Output power (DC,USB,AC power)
	Charge-discharge
	Time remaining

LED display Input/Output		
Input	DC Input	Charge flashes and displays the power
		“INPUT”It lights up and displays the charging power
Output	DC Output	“DC”It lights up and displays the used power of the output
	USB Output	“USB”It lights up and displays the used power of the output
	AC Output	“AC 220”It lights up and displays the used power of the output(120V as US Edition, 230V as Europe Version)

3、Parameter specification

3.1 AC IN Input port

Item	Min	TYP	Max	Remark
Input voltage	180V	230V	265V	Chinese Version/Australian Version
Input current	---	---	11A	Chinese Version/Australian Version
Input frequency	50Hz	---	60Hz	

3.2Vehicle Charging Input port

Item	Min	TYP	Max	Remark
Input voltage range	11Vdc	---	36Vdc	
Rated Input current	---	---	10A	Max Input power 200W

Reverse connection protection	---	Yes	---	

3.3 Solar Input port

Item	Min	TYP	Max	Remark
Input voltage range	11Vdc	---	36Vdc	
Rated Input current	---	---	10A	Max Input power 200W
Reverse connection protection	---	Yes	---	

3.4 DC5521 Output port

Item	Min	TYP	Max	Remark
Output voltage range	11.4Vdc	---	13Vdc	
Rated output current	---	5A	5A	Double DC ports and cigarette lighter output 12V100W in total, 8.33A in total
Current limit protection	8.5A	9A	10A	If the output current exceeds this current limiting point, the output will be closed, After the overcurrent is relieved, the system automatically recovers the output
Short circuit protection	---	Yes	---	The output terminal and wire are short circuited to external equipment, and the output port stops outputting When the short circuit is removed, the system will automatically restore the output, and the product will not cause malignant events during the short circuit process

Remarks: Overload and short circuit are destructive tests, which cannot be operated continuously for more than 3s.

3.5 DC (vehicle charging) output port

Item	Min	TYP	Max	Remark
Output voltage range	11.4Vdc	---	13Vdc	
Rated output current	---	---	8.3A	

Current limit protection	8.5A	9A	10A	If the output current exceeds this current limiting point, the output will be closed, After the overcurrent is relieved, the system automatically recovers the output
Short circuit protection	---	Yes	---	The output terminal and wire are short circuited to external equipment, and the output port stops outputting
				When the short circuit is removed, the system will automatically restore the output, and the product will not cause malignant events during the short circuit process
Remarks: Overload and short circuit are destructive tests, which cannot be operated continuously for more than 3s.				

3.6 QC3.0 Output port

Item	Min	TYP	Max	Remark
4.5V Unloading output voltage	4.2V	4.5V	4.8V	
4.5V Full-loading output voltage	4V	4.5V	5.3V	
4.5V Rated output current	---	5A	---	
5V Unloading output voltage	4.7V	5.0V	5.3V	
5V Full-loading output voltage	4.5V	5.0V	4.3V	
5V Rated output current	---	3A/4.5A	---	
9V Unloading output voltage	8.7V	9.0V	9.6V	
9V Full-loading output voltage	8.5V	9.0V	9.5V	
9V Rated output current	---	2.0A	---	
12V Unloading output voltage	11.7V	12.3V	13.0V	
12V Full-loading output voltage	11.5V	12.0V	12.5V	
12V Rated output current	---	1.5A	---	
RFID	---	Yes	---	Output corresponding voltage and current according to different loads
Remarks: Overload and short circuit are destructive tests, which cannot be operated continuously for more than 3s.The short-circuit overload can only be tested at 5V. Overload and short circuit can work normally after removing the load.				

3.8 Type-C 输出端口（PD3.0/100W）

项目	最小值	标准	最大值	备注
5V 空载输出电压	4.7V	5.0V	5.3V	
5V 满载输出电压	4V	5.0V	5.3V	
5V 额定输出电流	---	3A	---	过流 3.1-4.5A
9V 空载输出电压	8.5V	9V	9.7V	
9V 满载输出电压	8V	9V	9.5V	
9V 额定输出电流	---	3A	---	
12V 空载输出电压	11.5V	12V	12.7V	
12V 满载输出电压	11V	12V	12.5V	
12V 额定输出电流	---	3A	---	
15V 空载输出电压	14.5V	15V	15.7V	
15V 满载输出电压	14V	15V	15.5V	
15V 额定输出电流	---	3A	---	
20V 空载输出电压	19.5V	20V	21V	
20V 满载输出电压	19V	20V	20.5V	(电量≥10%)
20V 额定输出电流	---	3A	5A	在标准的 E-MARKER 通讯线中可输出 5A 电流
自动识别	---	有	---	根据不同负载输出相应电压、电流

备注：过载，短路属于破坏性试验，时间不能超过 3S，不能连续操作；测试短路只可以在 5V 时候测试。过载，短路移除负载后能正常工作；

3.7 Type-C Output port (PD3.0/27W)

Item	Min	TYP	Max	Remark
5V Unloading output voltage	4.7V	5.0V	5.3V	
5V Full-loading output voltage	4V	5.0V	5.3V	
5V Rated output current	---	3A	---	Over current 3.1-4.5A
9V Unloading output voltage	8.5V	9V	9.7V	
9V Full-loading output voltage	8V	9V	9.5V	
9V Rated output current	---	3A	---	

12V Unloading output voltage	11.5V	12V	12.7V	
12V Full-loading output voltage	11V	12V	12.5V	
12V Rated output current	---	2.25A	---	
RFID	---	Yes	---	Output corresponding voltage and current according to different loads
Remarks: Overload and short circuit are destructive tests, which cannot be operated continuously for more than 3s.The short-circuit overload can only be tested at 5V. Overload and short circuit can work normally after removing the load.				

3.9 AC Output port

Item	Min	TYP	Max	Remark
Unloading output voltage	200V	220V	255V	Chinese Version/Australian Version
On-load output voltage	200V	220V	255V	
Output waveform	---	sine wave	---	Rated R load
Output frequency	49Hz	50Hz	51Hz	China/Europe/Australia(American 60Hz)
Rated output power	1800W	---	---	
Transient Power			3600W	
PF	---	1	---	
Efficiency	88%	---	92%	Full load output with R load
Short circuit protection	---	Yes	---	If the output terminal, wire or external equipment is short circuited, turn off the inverter output. During the short circuit process, the product should not be damaged, and the output should be restored manually
Overload protection	---	---	1800W	If the output power is greater than 1800W for more than 0.5S, the output voltage will be reduced. When the voltage drops below 170Vac, the protection will be shut down and manual recovery is required
Inverter over temperature protection	90℃	---	---	After protection, the inverter output is stopped and needs to be restored manually
Remarks: Overload and short circuit are destructive tests, which cannot be operated continuously for more than 3s.				

3.10 LED light and SOS warning light

Item	Min	TYP	Max	Remark

Power of light	1W	2W	3W	
CCT	5500K	6000k	6500K	
Working Mode	Press once for a short time to keep it on, and the brightness is 30%			
	Then press the brightness for one more time, and the brightness is 100%			
	Then press the brightness for one more time to trigger SOS			
	Then press the brightness for one more time to close			

3.11 Wireless charging

Item	Min	TYP	Max	Remark
Power	5W	10W	15W	Automatic identification of mobile phone charging power

3.12 Energy storage battery pack

Item	Standard	Remark
Rated voltage	43.56V	
Battery level	1306.8wh	

3.13 System protection

Item	Min	TYP	Max	Remark
Lower voltage protection	32.5V	33V	33.5V	When the discharge voltage reaches the low voltage protection, the product stops working

3.14 Self consumed current and dormancy of product shutdown

Item	Standard	Remark
Power consumption after shutdown	≤100Ua	
Total power consumption	Hibernation	< 1W, if there is no input/output within 10s, the system will enter the hibernation mode
DC Output	Hibernation	If there is no power output within 10 minutes, it will enter the hibernation mode
USB Output	Hibernation	If there is no power output within 10 minutes, it will enter the hibernation mode
AC Output	Hibernation	If there is no power output within 8 hours, it will enter the hibernation mode

Remark: Hibernation function, any output port of the product has a corresponding control switch button. When not in use, it is necessary to turn off the output of this port to reduce the standby power consumption of the unit. In the process of use, the screen brightness after 5S decreases by 50%, and after 10S, the screen brightness decreases to 10%. If the whole machine is not used for more than 10S and no output is detected, the system will automatically shut down to prevent the product from self consumption. (Hibernation is to reduce the power consumption of the switchboard and improve the battery utilization.)

3.15 Weight and Size

N.W.	11.1KG
G.W.	13.2KG
Product Dimension	340*236*205mm
Package Dimension	413*300*290mm
Master Carton Dimension	428*318*313mm 1pcs/Ctn

4、Working environment parameters

Self consumed current and dormancy of Hibernation				
Item	Min	TYP	Max	Remark
Working Temperature	-10℃	---	40℃	The ambient temperature at which the product works normally
Storage Temperature	0℃	---	40℃	It is suitable for storage when produce is not working
Charging Environment Temperature	0℃	---	40℃	When Environment gets below - 10 ℃, Charging efficiency will decline which will affect the service life of the battery
Discharge operating Temperature	-10℃	---	40℃	
Remark	1. When the product is working for discharge in a high-temperature environment (40 ℃), system will detect that the temperature of the battery exceeds 65 ℃. To ensure the safe use of the electric core, all output ports are turned off. At this time, the battery will be prohibited from discharging.			
	2.When the product is working for discharge in a low-temperature environment (0 ℃), system will detect that the temperature of the battery under 0℃. To ensure the safe use of the electric core, all output ports are turned off. At this time, the battery will be prohibited from discharging.			
	3.All test items should be tested at ambient 25±2℃			

5、EMC

5.1 EMI

The power station shall be compliant with the following Criterion:

1) ESD

*GB17626.2-1998/IEC61000-4-2

2) EFT

*GB17626.4-1998/IEC61000-4-4 1KV

6、 Safety

6.1 The power station shall be compliant with the following Criterion:

① TEL
② CE/FCC
③ PSE
④ UN38.3

6.2 Insulation Performance

6.2.1 Insulation withstand voltage

Primary to Secondary:2000VAC 5mA 60S

Disconnect the AC ground and output negative terminal.

7、Note:

1. For the first time, it is recommended that the mobile power supply should be fully charged and the three-plug word input line should be used.
2. Insufficient power is shown during use, please recharge as soon as possible.
3. When the power port is not in use, press the on key to turn it off to save power.
4. If the product is not used for a long time, it should be recharged every 3 months. It is better to keep the electricity at 60%, 80%, and store it in a cool and dry place.
5. After long-term storage, the product needs to be charged and discharged several times to obtain the best use effect.
6. The screen shows that the current energy available time of the product varies with the change of the current output power, the power of the load is not constant, and the display time is only roughly estimated based on the current power.
7. When the device power of the AC output port is less than 2W, the output will be turned off automatically after 45 minutes of work.
8. When the USB output port uses the device power less than 1W, the product will automatically turn off the output after working for 8 hours.
9. When the DC or the vehicle charging output port uses the device power less than 1W, the output will be turned off automatically after working for 8 hours.
10. AC output power lasts 1800W (peak 3600W), exceeding the maximum power of 1800W 0.2s, the product will automatically turn off the power supply to protect the product from damage due to overload use.

The AC output side overload short circuit will alarm flicker, the screen appears exclamation point, remove the fault and then re-open the AC button.

11. The USB output terminal is overloaded, short-circuited and has no output. Remove the load fault device and release it.
12. DC and car charging output short-circuit overload will alarm, DC symbol flashes, re-open the DC button to release.
13.The charging voltage shall not exceed the maximum value specified in this specification. Exceeding the nominal input voltage may cause permanent damage to the product and may cause problems with the charging and discharging performance, mechanical performance and safety performance of the battery core.

8、Aging Requirement

Aging sequence during mass production	
No	Step
1	Full charged
2	Discharge completed
3	Recharge 40%~50% of the power level
Remarks: aging results need to be recorded	

9、List of accessories (package designed customer)

No	Item/Specification	Quantity
1	main engine	1
2	Product manual	1
3	AC charging cable	1
4	Car charging cable	1