



# Product specifications

MODEL: MRJ3008-PLUS

NAME: U.S. POWER STRIP

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WRITTEN: Jianping Date: 2023-04-22

CHECKED: \_\_\_\_\_ Date: \_\_\_\_\_

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		<b>Drafted date</b>	2023-04-022	版本	REV1.0

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## 1. Product overview

1.1 This datasheet applies to the product: MRJ3008-PLUS

1.2 This product has a simple and novel appearance, small and portable, suitable for commercial or home office use. AC input: 125VAC 60HZ 15A Max, **AC line input length 2.74 meters, with standard US specifications 3-pin plug**, AC output: 3 x 3-pin standard US sockets, no voltage conversion function.

1.3 This product has USB fast charging function, with 1 USBA interface and 2 TYPE-C interfaces; USBA supports QC3.0 protocol, the highest output is 60W, TYPE-C supports PD3.0 protocol, the highest output PD65W, USB any two ports are combined, the total power maximum output is 65W.

1.4 This product has wireless charging function, wireless charging power up to 15W.

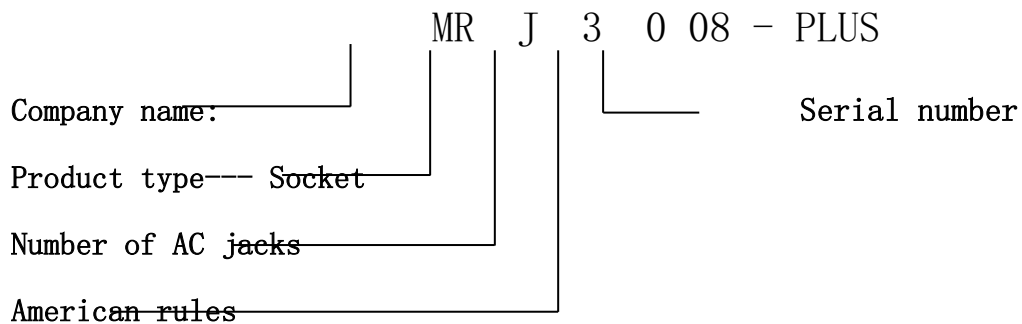
1.5 **The product adopts fan heat dissipation, the fan runs at low speed after booting, when the ring temperature around the USB on-load internal transformer exceeds 55-60°, the fan begins to slowly speed up until full speed running.**

1.6 Product USB output with overload, short circuit, over temperature protection, intermittent output after detecting overload or short circuit abnormality, fault removal USB automatic recovery output; When the heat dissipation fan is stucked abnormally, after the USB is fully loaded for a period of time (within 1 hour), the overtemperature state is detected, and the USB will stop the output until the temperature drops to the normal

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value of the USB and then resume the output

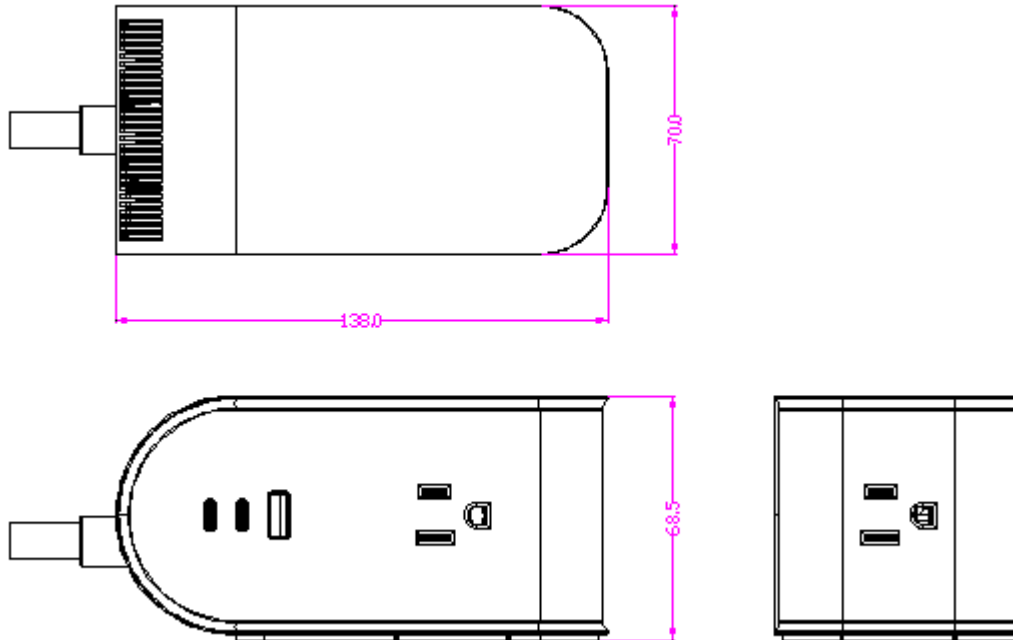
## 2. Product model naming method:



## 3. Product diagram

- The figure below shows (length  $138\pm 1\text{mm}$  x width  $70\pm 1\text{mm}$  x height  $68.5\pm 1\text{mm}$ ).

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## 5. Product characteristic parameters

Basic information	
Product model	MRJ3008-PLUS
Product Classification	Strip insertion
Product Name(Chinese)	<b>U.S. POWER STRIP</b>
Product Name (English)	
Electrical parameters	
AC input and output parameters	125V~ 60Hz 15A Max
USB+Wireless charging input parameters	125V~ 50-60Hz 1.8A MAX
USB-C1 separate output	PD65W 5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/3.25A
USB-C2 separate output	PD65W 5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/3.25A
USB-A1 is output separately	QC60W 5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/3.0A
USB combo	USB*3 Total 65W USB-C1+ USB-C2:

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	<p>USB-C1(PD45W):5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/2.25A; USB-C2(PD20W): 5VDC/3A, 9VDC/2.22A, 12VDC/1.67A;</p> <p>USB-C1+ USB-A1: USB-C1(PD45W):5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/2.25A; USB-A1(QC18W):5VDC/3A, 9VDC/2.0A, 12VDC/1.5A;</p> <p>USB-C2+ USB-A1: total 5VDC/3A</p> <p>USB-C1+ USB-C2+ USB-A1: C1(PD45W):5VDC/3A, 9VDC/3A, 12VDC/3A, 15VDC/3A, 20VDC/2.25A; USB-C2+ USB-A1: total 5VDC/3A</p> <p>Wireless Charger: 15W Max.</p>
Output interface	<p>AC interface: 3 American standard AC output ports, AC output and AC input pass-through; USB interface: 1*USB-A plus 2*USB-C</p>
Lightning protection parameters	not
Protection features	USB overcurrent protection, USB overload protection, USB short circuit protection
<b>Feature definition</b>	
Light	not
Other features	/
<b>Appearance structure parameters</b>	
Product color	White/black
USB color scheme	blue
Housing material	PC+ABS V0
Shrapnel material	Phosphor bronze
Safety gate configuration	not
AC input line	2.74 meters with weaving
Product net weight	xxxg±10g
Product size	138*70*68.5mm
<b>Packaging information</b>	
Product gross weight	
Package size	160*110*75mm
Carton size	495*345*320mm



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Number of boxes	36pcs
fittings	Instruction manual, double-sided tape, wood screws
<b>Safety certification</b>	
Authentication type	ETL

## 6. Performance indicators:

### 6.1 Input properties

Items	minimum	Typical value	maximum	Remarks
AC input voltage range	108VAC	120AC	125VAC	
USB input voltage range	108AC	120VAC	125VAC	
Rated input voltage range	108AC	120VAC	125VAC	
Input frequency range	58	60	62	
USB+Wireless input current	/	/	1.8A	Minimum input voltage, full load
Inrush current	/	/	120A	Vin=230Vac, cold start
Leakage current	/	/	0.5	Vin = 100Vac, fully loaded
No-load power consumption	/	/	1.2W	Full voltage range, no load
Overload switch	/	Yes	/	/

### 6.2 Output characteristics

#### 6.2.1 Rated output

NO		Output voltage (Vdc)	Output voltage range (Vdc)	Output current range (A)	Minimum overcurrent protection (A).	Overcurrent protection maximum (A).	No-load voltage	Full load voltage (load line > 0.3 square line length 0.5m)
Separate A1	QC60W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.75-5.35	4.75-5.35
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
		15.0	14.25-15.75	0-3.0	3.25	3.85	14.25-15.75	14.25-15.75
		20.0	19.0-21.0	0-3.0	3.25	3.85	19.0-21.0	19.0-21.0
C1 or C2	PD65W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35



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alone								
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
		15.0	14.25-15.75	0-3.0	3.25	3.85	14.25-15.75	14.25-15.75
		20.0	19.0-21.0	0-3.25	3.35	3.95	19.0-21.0	19.0-21.0
C1+C2	C1-PD45W	5.0	4.75-5.25	0-3.0	3.25	3.85	4.9-5.25	4.75-5.25
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
		15.0	14.25-15.75	0-3.0	3.25	3.85	14.25-15.75	14.25-15.75
		20.0	19.0-21.0	0-2.25	2.35	2.85	19.0-21.0	19.0-21.0
	C2-PD20W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35
		9.0	8.55-9.45	0-2.22	2.35	2.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-1.67	1.85	2.25	11.4-12.6	11.4-12.6
C1+A1	C1-PD45W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
		15.0	14.25-15.75	0-3.0	3.25	3.85	14.25-15.75	14.25-15.75
		20.0	19.0-21.0	0-2.25	2.35	3.95	19.0-21.0	19.0-21.0
	A1-QC18W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
C2+A1	C2+A1 Shared 5V3A	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35
C1+C2+A1	C1-PD45W	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35
		9.0	8.55-9.45	0-3.0	3.25	3.85	8.55-9.45	8.55-9.45
		12.0	11.4-12.6	0-3.0	3.25	3.85	11.4-12.6	11.4-12.6
		15.0	14.25-15.75	0-3.0	3.25	3.85	14.25-15.75	14.25-15.75
		20.0	19.0-21.0	0-2.25	2.35	2.85	19.0-21.0	19.0-21.0
	C2+A1 Shared 5V3A	5.0	4.75-5.35	0-3.0	3.25	3.85	4.9-5.35	4.75-5.35

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### 6.2.2 Steady-state output characteristics

Items	unit	minimum	Typical value	maximum	Remarks	
Voltage regulation	%	-3	/	+3	Full input voltage, full load	
Load regulation	%	-5	/	+5	Rated input voltage, full load range	
Wireless charging efficiency	5W/7.5W/10W/15W	%	68%	/	/	USB test without load: AC input 115V, 230V, test the efficiency of 5W, 7.5W, 10W, 15W respectively, and calculate the average efficiency
USB efficiency	5V output	%	75%	/	/	Wireless charging test without load: AC input 115V, 230V, test the maximum load 25%, 50%, 75%, 100% efficiency respectively, calculate the average efficiency
	9V output		80%	/	/	
	12V output		80%	/	/	
	15V output		85%	/	/	
	20V output		85%	/	/	
Ripple with noise	P-P	mVp-p	/	/	200	The oscilloscope bandwidth is 20 MHz and the outputs are paralleled 0.1μF high frequency capacitor and 10μF electrolytic capacitor
	RMS	mV	/	/	50	

Dynamic response Overshoot amplitude	%	-5		+5	25%~50%~25%Iomax, di/dt= 0.2A/μS 50%~75%~ 50%Iomax, di/dt= 0.2A/μS
		-10		+10	10%~100%~10%Iomax, di/dt= 0.2A/μS

Note: Dynamic load, when testing one load, the other output channels work at full load.

### 6.2.3 Power on and off characteristics

Items	unit	minimum	Typical value	maximum	Remarks
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Power-on delay time	S	/	/	3	Starting with Vin and going up to 90% with Vout
Shutdown hold time	mS	5	/	/	From the time Vin was turned off to Vout dropped to 90%.
Output rise time	mS	/	/	20	Vout went from 10% to 90%.
Descent time	mS	/	/	20	Vout dropped from 90% to 10%.
Power on and off overshoot	%	-10	/	+10	Low input voltage, full load range
Maximum capacitive load	uF	/	2000	/	Low input voltage, full load range (Capacitance is calculated as 500uF/1A).

### 6.3 Protection features

Items		unit	minimum	Typical value	maximum	Remarks
Overload/short circuit protection	USB-A	A	Overload points refer to the overcurrent points in column 5.2.1			Automatic jump 5V gear output after overload; Intermittent output is detected after short circuit, and 5V gear output is restored after fault resolution
	USB-C	A				
Over-temperature protection			95°	100°	105°	The secondary NTC resistor of the motherboard transformer is set to detect the temperature, <b>and when the fan stall occurs</b> , the temperature around the thermistor reaches the set value, and the USB stops the output until the temperature drops to the normal value and then resumes the output

### 6.4 Light

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LED category	state	Description of the condition	remark
Power LED		No power LED	
		No power LED	

## 7. Security requirements

### 7.1 Safety standards

Power supply safety meets the following standards:

- 1) UL62368
- 2) EN60950

The safety performance of the socket meets the series of standards:

- 1) UL498

### 7.2 Electrical strength test

Items	Specification requirements	Remarks
Input—Output	3000Vac/5mA/1min no arc no breakdown	/
Input—Ground	1500Vac/5mA/1min no arc no breakdown	/
Output—ground	3000Vac/5mA/1min no arc no breakdown	/

### 7.3 Insulation resistance

Items	Specification requirements	Remarks
Input—Output	DC500V is greater than 50MΩ	Relative humidity 90%, tested at standard atmospheric pressure
Input—Ground	DC500V is greater than 50MΩ	
Output—ground	DC500V is greater than 50MΩ	

## 8. Electromagnetic compatibility

### 8.1 Electromagnetic interference

Power supply electromagnetic interference meets the following standards:

- 1) Conduction interference:
  - \*EN55022, CLASS B
  - \*GB9254, CLASS B
  - \*FCC PART15 CLASS B
- 2) Radiation interference:
  - \*EN55022, CLASS B
  - \*GB9254, CLASS B
  - \*FCC PART15 CLASS B

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## 8.2 Electromagnetic immunity

Power supply electromagnetic immunity meets the following standards:

- 1) Electrostatic immunity  
\*GB17626.2-1998/IEC61000-4-2
- 2) Burst immunity  
\*GB17626.4-1998/IEC61000-4-4 3.0KV
- 3) Lightning strike surge  
\*GB17626.5-1998/IEC61000-4-5 900 joules

## 9. Environmental requirements

### 9.1 Ambient temperature

Working temperature:  $-5^{\circ}\text{C}\sim+25^{\circ}\text{C}$

Storage temperature:  $-20^{\circ}\text{C}\sim+80^{\circ}\text{C}$

### 9.2 Ambient humidity

Operating humidity: 10%RH~90%RH

Storage humidity: 5%RH~95%RH

### 9.3 altitude

Working: less than 2000m

Storage: Less than 20,000ft

### 9.4 Cooling method

Air-cooled heat dissipation

### 9.5 Vibration tolerant

\* 10-55Hz,  $19.6\text{m/s}^2$ (2G), 3minutes period, 60minutes each along X, Y and Z axis.

### 9.6 Impact resistance

\*  $49\text{m/s}^2$  (5G), 11ms, once each X, Y and Z axis.



广东百事泰医疗器械股份有限公司

Guangdong BESTEK Medical Devices Co.,Ltd

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### FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance

could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.