

# 样品承认书



*SAMPLES SPECIFICATION FOR APPROVAL*

*Switching power Supply/开关电源*

客户:

CUSTOMER: \_\_\_\_\_

产品描述:

DESCRIPTION: Input:100-240V ~ 50-60Hz Output: 12VDC 3A

机种型号:

OUR MODEL NO: MX36W1-1203000V

样品编号:

日期:

SAMPLE NO: \_\_\_\_\_

DATE: 2024-05-30

客户编码:

产品颜色/SAMPLE COLOR:

Customer part number: \_\_\_\_\_

Black

White

APPROVAL SIGNATURE/客户确认

核准/APPROVED BY

审核/CHECKED BY

检测/TESTED BY

Manufacturer/制造商

核准/APPROVED BY

审核/CHECKED BY

制定/MAKER

朱代富

程梦飞

## 广东明鑫电源技术有限公司

GUANGDONG MINGXIN POWER TECHNOLOGIES CO., LTD.

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版本目录/Rev. List			
版本/Rev.	日期/Date	描述/ Description	制订/Design
A0	2024-05-30	新版本/New Rev.	程梦飞

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**1、描述/ DESCRIPTION:**

该开关式电源的连续输出功率为 36 W.

The S.M.P.S should be capable of a total continuous DC power output of 36 W atts.

**2、输入特性/INPUT CHARACTERISTICS:**

**2.1 输入电压/Input Voltage:**

额定电压/Rated Voltage: 100-240 Vac

调整范围/Variation Range: 90-264 Vac

**2.2 输入频率/Input Frequency:**

额定频率/ Rated Frequency: 50-60 Hz.

调整频率/Variation Frequency: 47-63 Hz

**2.3 输入电流/Input Current:**

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 1 A.

1 Amps max At any input voltage and rated, DC output rated load.

**2.4 浪涌电流/Inrush Current:**

冲击电流峰值在额定电压输入,冷启动(25℃)时,不大于 60A;且在任何负载和输入条件下,不导致永久性损坏或危险.

Impact current peak in the rated voltage input, cold start (25 °C), not more than 60 A; And in any load and input conditions, don't cause permanent damage or dangerous.

**2.5 AC 漏电流/Ac Leakage Current:**

当输入电压 240Vac 时,最大漏电流为 0.25mA./ 0.25mA Max.At240Vac input.

**2.6 Stand-by power consumption ≤ 0.1 Watts.**

待机功耗 ≤ 0.1 W.

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**3、输出特性/OUTPUT CHARACTERISTICS:**

**3.1 输出功率/Power output**

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	输出功率 Output power
<b>12Vdc</b>	<b>0.01A</b>	<b>3A</b>	<b>36W</b>

**3.2 输出特性/Output Characteristics**

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	电压范围 Voltage Range	
<b>12Vdc</b>	<b>0.01A</b>	<b>3A</b>	空载电压 (V)	负载电压 (V)
			<b>11.4-12.6</b>	<b>11.4-12.6</b>

**3.3 纹波和噪音 Ripple and Noise:**

测试条件:在输入 115/230Vac 25℃和输出最小及最大负载时, 使用示波器带宽为 20MHz 连接到适配器的输出端, 同时输出端并联一个 47uF 的电解电容和一个 0.1uF 的瓷片电容.

At 115/230Vac 25℃ input and output Min and Max.Load,the ripple and noise are as follows when measure with Max.Bandwidth of 20MHz and Parallel 47uF/0.1uF,crossed connected at testing point.

电压	最大纹波/最大噪音
<u>Voltage</u>	<u>Ripple and Noise(Max.)</u>
<b>+12Vdc</b>	<b>200mV p-p</b>

**3.4 启动延迟时间/Turn on delay time:**

当输入 115Vac 和输出最大负载时,最大启动时间为 3 S.

3 Second Max.at 100Vac input and output Max.load.

**3.5 保持时间/Hold up time:**

当输入 115Vac 和输出最大负载时,最小保持时间为 5 mS .

5 mS Min.at 115Vac input and output Max.Load.

**3.6 效率/Efficiency:**

当 115Vac 输入电压时, 1/4, 1/2, 3/4 和满载计算平均效率, 最小 87.40%, 适配器满足能效 VI .

87.40%Min,At 115Vac input voltage,1/4, 1/2, 3/4 and full load calculation average efficiency.Adapter meet efficiency lever VI .

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**4、保护功能/PROTECTION FUNCTION:**

**4.1 短路电路保护/Short circuit protection:**

该电源供给器在短路解除时能正常工作恢复.

**The power supply will be auto recovered when short circuit faults remove.**

**4.2 过流保护/Over current Protection:**

过流故障排除后,电源将自动恢复正常工作.

**The power supply will be auto recovered when over current faults remove.**

**5、环境要求/ENVIRONMENTAL REQUIREMET:**

**5.1 工作温度/Operating Temperature:**

0℃-40℃,满载,正常工作.

**0℃ to 40℃,Full load, Normal operation.**

**5.2 储藏温度/Storage Temperature:0℃ to 60℃**

带外壳/With package

**5.3 工作湿度/Relative Humidity:**

5%(0℃)~90%(40℃),72 小时,满载,正常工作.

**5%(0℃)~90%(40℃)RH,72Hrs,Full load, Normal operating.**

**5.4 振动/Vibration:**

**1. 测试标准:国际电工电子委员会**

**Operating: IEC 721-3-3 3M3**

**5~9Hz,A=1.5mm**

**加速度(9~200Hz,Acceleration 5m/S<sup>2</sup>)**

**2. 运输/Transportation:**

**IEC 721-3-2 2M2**

**5-9Hz,A=3.5mm**

**9~200Hz,加速度 Acceleration=5m/S<sup>2</sup>**

**200~500Hz,加速度 Acceleration=15m/S<sup>2</sup>**

**3. 轴向振动/Axes,10 cycles per axis.**

在测试过程中不能出现永久性的损坏.

**No permanent damage may occur during testing.**

在电源开启和关闭后,样机能够恢复到最初条件.

**The SAMPLE has to restore to its original situation after power off/on..**

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**5.5 跌落试验/Dropping Packed:**

插墙式跌落高度为 1 米、桌面式跌落高度为 760mm、6 个面各跌一次

1M for wallmount type and 760mm for desktop type as above described, 6 surfaces or one

测试台面是厚 13mm 的夹木板, 离地面高 19-20mm

The horizontal surface Consists of hardwood at least 13mm thick,mounted on two layers of plywood each 19mm to 20mm thick,all supported on a concrete or equivalent non-resilient floor.

**6、安全要求/SAFETY REQUIREMENT:**

**6.1 主熔断器/ MAIN FUSE**

3.15A250V 保险管 Input fuse is 3.15A250V

**6.2 安全: 符合标准 EN62368 ; Safety:accord standard with EN62368 ;**

1. 干扰噪声抑制标准 Noise-suppressed acc : IEC55032;

2.谐波电流的抑制标准 Harmonic current measurement acc : IEC61000-3-2 ;

3.抗静电的承受标准 Immunity to electrostatic discharge(ESD)acc:IEC61000-4-2 ;

空气放电 Air discharge: ±8KV ; 接触放电 Contact discharge: ± 4KV ;

4.抗干扰抑制标准 Immunity to radiated electromagnetic field acc:IEC61000-4-3;

测试条件 Test characteristic: 80-1000MHz; 80%AM(1KHz) 检验条件 Test level 3V/m : A ;

5. 抗快速脉冲群标准 Immunity to fast electric transients(burst)acc: IEC61000-4-4;

耦合方式 Coupling On power supplylines 测试条件 Test Level: 1KV Assessment criteria 评估标准: B ;

6.浪涌测试标准 Surge capability acc: IEC61000-4-5;

浪涌电压 Surge voltage: 1KV Assessment criteria 评估标准: B ;

7. 抗骚扰测试 Injected currents susceptibility acc: IEC61000-4-6;

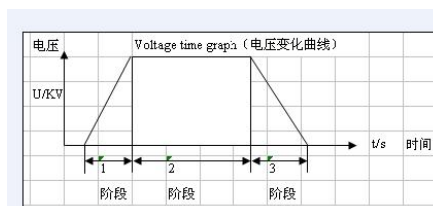
测试条件 Test Level: 3V/m Assessment criteria 评估标准: A ;

**6.2 高压/DIELECTRIC STRENGTH Hi-Pot:**

输入对输出/INPUT to OUTPUT :3000Vac/5mA/60S for type test.

(批量生产时/Batch production: 3300Vac/5mA/3S)

1.Between input and output <输入 (2pin 脚短路) ---输出 (正, 负极短路)



2.电压输出变化曲线 Voltage time graph

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**6.3 绝缘抗阻/Insulation resistance:**

输入对输出/INPUT to OUTPUT  $10M\Omega$  min at 500V DC.

**7、 结构参数/MECHANICAL REQUIREMENT: (单位: mm)**

**7.1 外壳/Enclosure:**

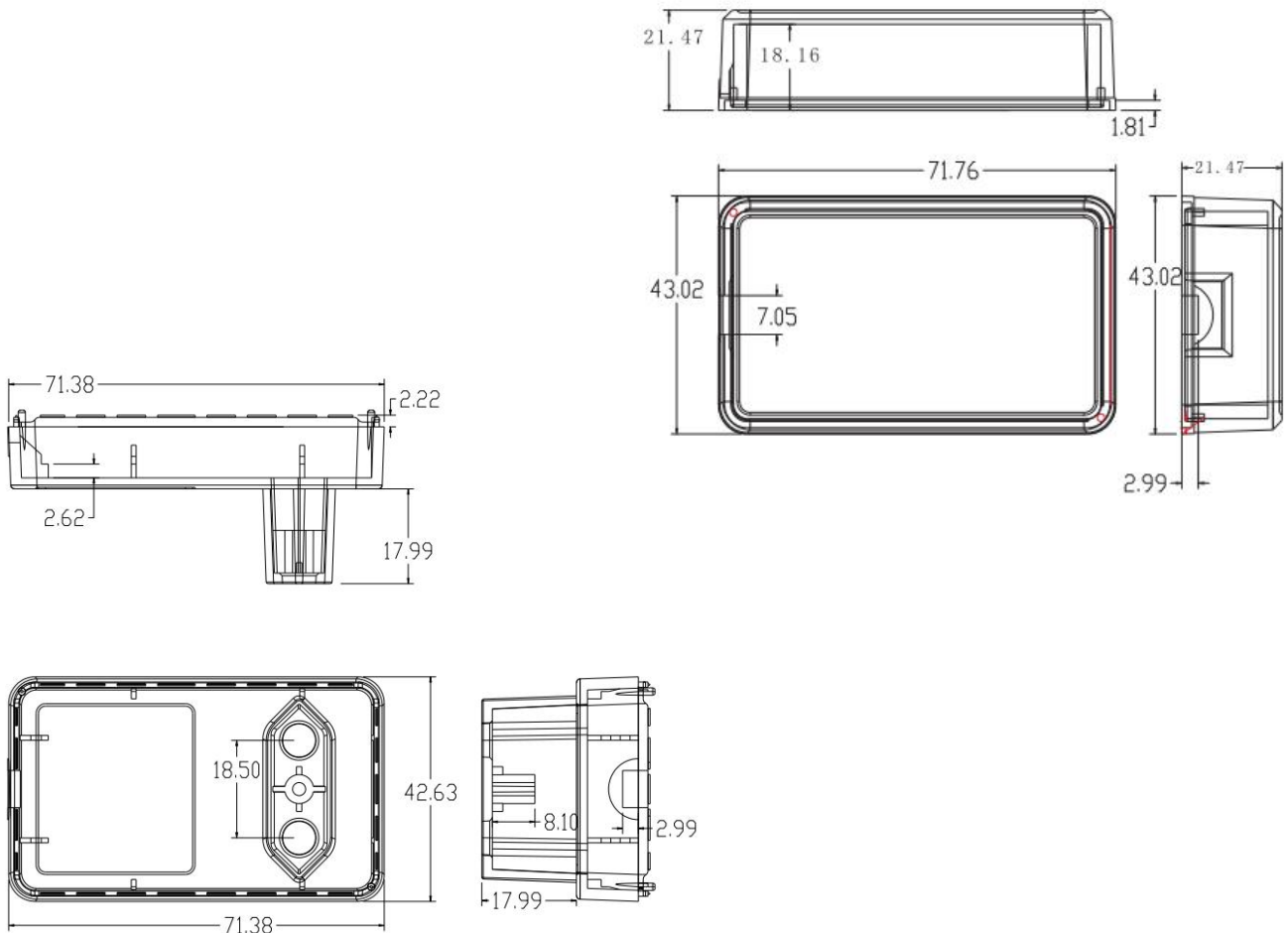
外壳尺寸: L71.76x W42.63x H33.58mm (未标注公差 $\pm 1$ mm);

The power supply size: L71.76x W42.63x H33.58mm;

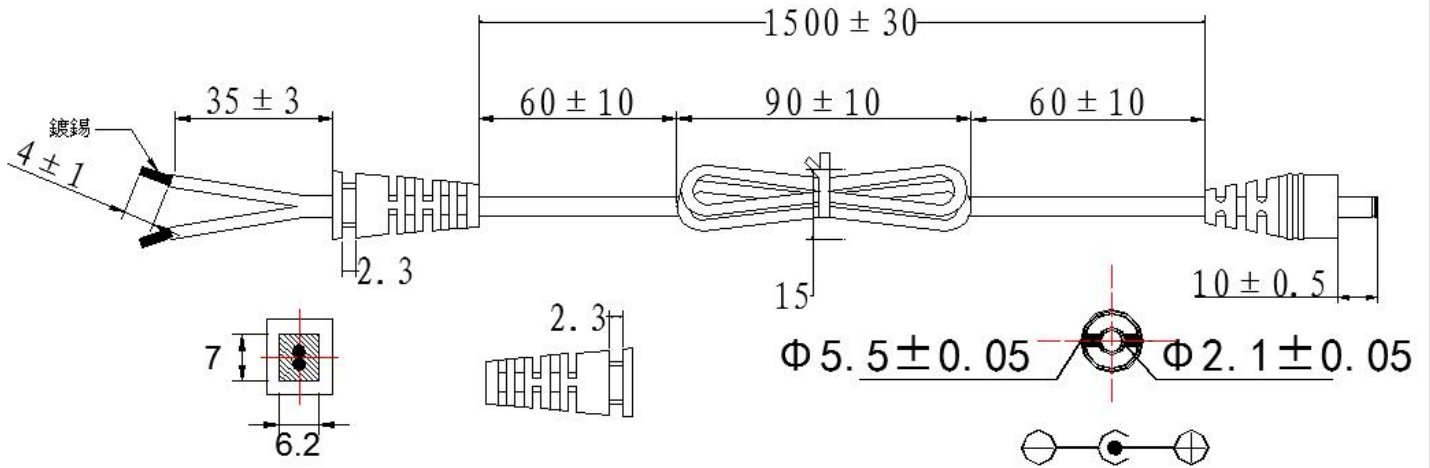
**7.2 输入线/Input Connector:**

2 Pin EU 插脚/Two pin input plug of EU.

外观图 OUTLOOK DRAWING: mm



8、线材/CORD: (单位: mm)

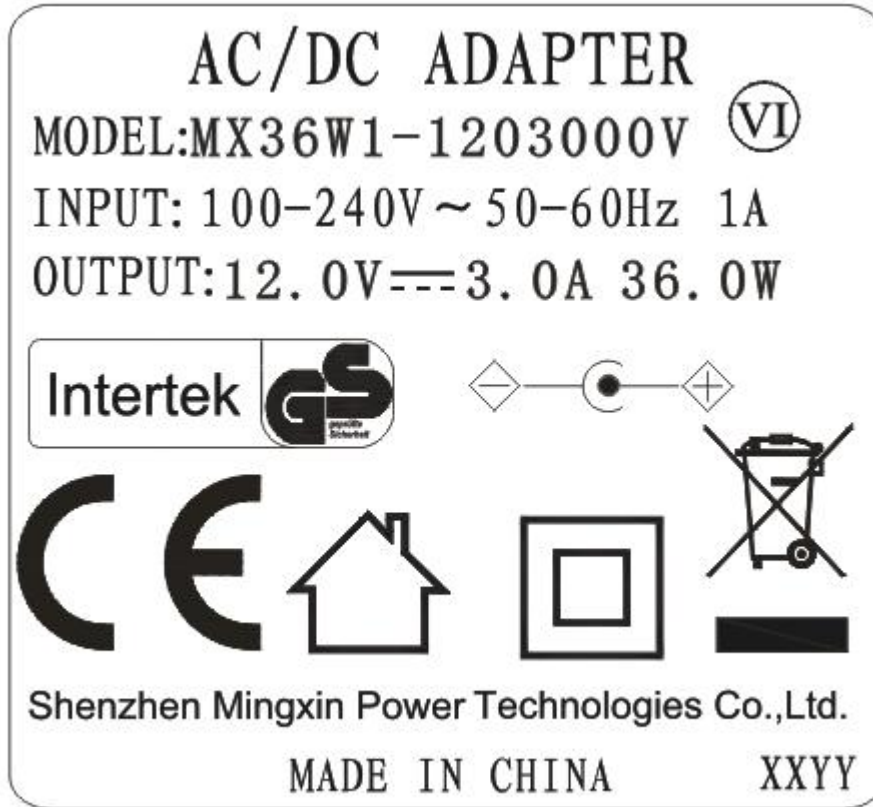


注: 2464 20AWG 1.5m 黑色 DC头 5.5\*2.1\*10mm黑嘴音叉带沟槽  
 SR:1号模 7X6.2X2.3mm



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9、铭牌/LABEL:(单位: mm)



NOTE:

标签镭射居中

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**10、样品测试报告/ SAMPLES ELECTRICAL TEST REPORT :**

Sample form		sample ( 1 )						
No	Test Items /测试项目	Unit /单位	Test condition & result				Spec. Limit	Pass/ Fail
			90V	115V	230V	264V		
1	Unload input power 空载输入功率	W	0.04	0.06	0.09	0.09	≤ 0.1W	PASS
2	Power factor 功率因数	/		0.57	0.42		/	/
3	Rated load input power 额定负载输入功率	W	41.17	41.22	41.07	41.15	≤45W	PASS
4	Unload output voltage 空载输出电压	V	12.27	12.27	12.27	12.27	11.4-12.6	PASS
5	Rated load output voltage 额定负载输出电压	V	11.42	11.42	11.42	11.42	11.4-12.6	PASS
6	Output ripple&noise voltage 输出纹波及噪声电压	mV		90	100		≤ 200mVp-p	PASS
7	Over current protection 过流保护点	A	4.2	4.3	4.4	4.5	3-6A	PASS
8	Average Efficiency 平均效率			87.92	87.75	87.56	87.40	PASS
9	Short-circuit Protection 短路保护	W	not damage and with auto recovery function					PASS
Sample form		sample ( 2 )						
1	Unload input power 空载输入功率	W	-					PASS
2	Power factor 功率因数	/					/	/
3	Rated load input power 额定负载输入功率	W						PASS
4	Unload output voltage 空载输出电压	V						PASS
5	Rated load output voltage 额定负载输出电压	V						PASS
6	Output ripple&noise voltage 输出纹波及噪声电压	mV						PASS
7	Over current protection 过流保护点	A						PASS
8	Short-circuit Protection 短路保护	W	not damage and with auto recovery function					PASS
sample ( 1 )/sample ( 2 )								
1	Drop test 跌落试验	the Dropping hight of wall mount type is 1M,6 surfaces Dropping respectively						PASS
2	appearance 外观	Content of the NP label is correct,the appearance is clear no spot,scratch color-difference,disconnection and gap						PASS
3	Burn-in test 老化试验	Input:230Vac/50Hz Full Load 4hrs						PASS
4	Insualtion test 绝缘测试	INPUT TO OUTPUT:10MΩ min/DC500V,						PASS
5	Hi-pot test 介电强度	INPUT TO OUTPUT: 3000Vac/5mA/60S or 4242Vdc/5mA/60S						PASS
DATE/日期:2024-05-30		CHECK/审核:			APPROVED BY/核准:			
TEST/测试员: 程梦飞								