

Revision History(修改履历)

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1 概述(Description)

本规格书详细定义 12V 1.25A AC-DC 适配器电气性能、结构性能及环境要求, 此款产品具有全球输入电压范围、低功耗、高效率、高可靠性、安全隔离等优点, 并且符合 RoHS 要求.

The document detail the electrical, mechanical and environmental specifications of 12V 1.25A AC-DC adapter, This series features universal input voltage, low power consumption, high efficiency, high reliability, safer isolation, and meet the RoHS requirement.

2 产品特点(Features)

- 全球通用电压/Universal input Voltage: 90 - 264VAC, 50/60Hz
- 能效等级 DoE VI/DoE Level VI efficiency
- 过压、过流、短路保护/Over voltage、Over current、Short circuit protection
- 全封闭塑料外壳/Fully enclosed plastic case
- 2 极中式插头/2 pole China plug
- 小型插墙式封装/Small wall-mounted type

3 输入特性(Input Characteristics)

项目(Item)	工作条件(Operating Conditions)	Min.	Typ.	Max.	单位(Unit)
标称输入电压 (Nominal Input Voltage)		100	--	240	VAC
输入电压范围 (Operation Range)		90	--	264	VAC
标称输入频率 (Nominal Input Frequency)		--	50/60	--	Hz
输入频率范围 (Input Frequency Range)		47	--	63	Hz
输入电流 (Input Current)	输入 100VAC, 满载 100VAC input, full load	--	--	0.5	A
浪涌电流 (Inrush Current)	输入 115VAC 60Hz, 满载, 冷启动 115VAC 60Hz input, full load, cold start	--	--	30	A
	输入 230VAC 50Hz, 满载, 冷启动 230VAC 50Hz input, full load, cold start	--	--	60	A

平均效率 (Average Efficiency)	输入 115VAC 60Hz/230VAC 50Hz(25%、50%、75%、100%负载, 取平均值) 115VAC 60Hz/230VAC 50Hz input(25%、50%、75%、100% Load, Averaging)	84.13	--	--	%
空载功耗 (No Load Power Consumption)	输入 115VAC 60Hz/230VAC 50Hz 115VAC 60Hz/230VAC 50Hz input	--	--	0.1	W

4 输出特性(Output Characteristics)

项目(Item)	工作条件(Operating Conditions)	Min.	Typ.	Max.	单位(Unit)
标称输出电压 (Nominal Output Voltage)		--	12	--	V
输出电压范围 (Output Voltage Range)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	11.4	--	12.6	V
标称输出电流 (Nominal Output Current)		--	1.25	--	A
输出电流范围 (Output Current Range)	输入 100-240VAC 100-240VAC input	0.1	--	1.25	A
纹波&噪声* (Ripple and Noise)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	--	--	150	mVp-p
电压精度 (Voltage Accuracy)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	-5	--	+5	%
线性调整率 (Line Regulation)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	-5	--	+5	%
负载调整率 (Load Regulation)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	-5	--	+5	%
开机延迟时间 (Turn on delay time)	输入 100-240VAC, 满载 100-240VAC input, full load	--	--	3	s
关机维持时间 (Hold up time)	输入 115VAC/60Hz, 满载 115VAC/60Hz input, full load	5	--	--	ms
	输入 230VAC/50Hz, 满载 230VAC/50Hz input, full load	20	--	--	ms
上升时间 (Rise time)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	--	--	100	ms
输出过冲 (Output over shoot)	输入 100-240VAC, 额定负载 100-240VAC input, rated load	-10	--	10	%
输出负载瞬态响应 (Output Load Transient Response)	输出电压在 $\pm 5\%$, 负载变化 25%-50%, 50%-75%, 斜率: 0.5A/us, 频率: 50Hz-10KHz Output voltage range $\pm 5\%$, load 25%-50%, 50%-75%, slope: 0.5A/us, frequency: 50Hz-10KHz				

项目(Item)	工作条件(Operating Conditions)	Min.	Typ.	Max.	单位(Unit)
*纹波和噪声的测试方法: 全负载, 输入 100-240VAC, 输出端并联一颗 0.1uF 的陶瓷电容和一颗 47uF 的电解电容, 在 20MHz 带宽下测量.					
*Ripple and noise are measured by 20MHz bandwidth; at full load, 100-240VAC input, output terminated with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor.					

5 保护功能(Protection Function)

项目(Item)	Min.	Typ.	Max.	单位(Unit)	恢复特性/Recover characteristic
过流保护/ Over current protection	1.5	--	2.25	A	打嗝式, 可持续过流, 自恢复 Hiccup, Continuous, self-recovery
过压保护/ Over Voltage protection	16.8	--	24	V	打嗝式, 自恢复 Hiccup, self-recovery
短路保护/ Short circuit protection	--	--	--	A	打嗝式, 可持续短路, 自恢复 Hiccup, Continuous, self-recovery

6 环境要求(Environment Requirements)

项目(Item)	工作条件(Operating Conditions)	Min.	Typ.	Max.	单位(Unit)
工作温度 (Operating Temperature)		0	--	40	℃
存储温度 (Storage Temperature)		-20	--	70	
工作湿度 (Operating Humidity)		20	--	90	%RH
存储湿度 (Storage Humidity)		--	--	90	
海拔 (Altitude)		--	--	2000	m

7 可靠性要求(Reliability Requirements)

项目(Item)	参数/specification	备注/Note
寿命 (Lifetime)	2 年/2 years, 115Vac/230Vac	25℃
平均故障间隔时间 (CMTBF)	35k hours, MIL-HDBK-217F (25℃)	

项目(Item)	参数/specification	备注/Note
老化 (Burn-in)	40℃ Ambient,85-95%load,50min.ON and 10min.OFF,Burn-in 4Hrs	
跌落 (Drop in)	1.0m/6 次/硬木板 1.0m/6times/plank	

8 EMC 标准(EMC Standards)

8.1 EMI 标准(EMI Standards)

测试项目 (Test Item)	国际标准 (IEC Standards)	性能标准 (Performance Criterion)
辐射(RE)	EN55032	CLASS B
传导(CE)	EN55032	CLASS B

8.2 EMS 标准(EMS Standards)

测试项目 (Test Item)	实验规格参数 (Test Specification)	国际标准 (IEC Standards)	性能标准 (Performance Criterion)
静电放电(ESD)	Contact :4KV / AIR :8KV	IEC61000-4-2	perf. Criteria B
辐射抗扰度(RS)	IEC61000-4-3 3V/m	IEC61000-4-3	perf. Criteria A
传导骚扰抗扰度(CS)	IEC61000-4-6 3Vrms	IEC61000-4-6	perf. Criteria A
浪涌抗扰度(SURGE)	±1KV(DM)	IEC61000-4-5	perf. Criteria B

9 安规要求(Safety Requirements)

项目(Item)	工作条件(Operating Conditions)	Min.	Typ.	Max.	单位/Unit
绝缘电压 (Isolation Voltage)	输入-输出, 测试时间 60s, 漏电流小于 5mA Input-output, Test 1 minute, leakage current<5mA	3000	--	--	VAC
绝缘电阻 (Hi-pot)	输入-输出, 绝缘电压 500VDC Input-output, add 500Vdc test voltage	50	--	--	M Ω
漏电流 (Leakage current)	240Vac input	--	--	0.25	mA

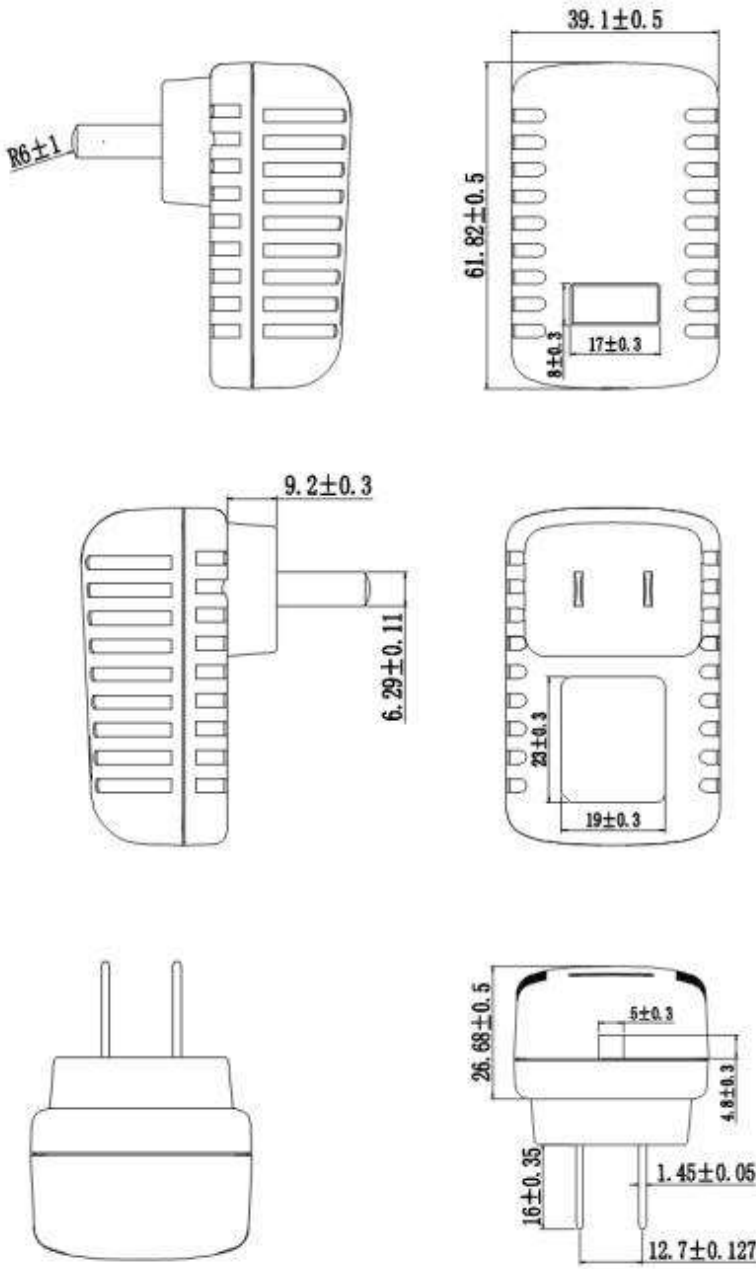
9.1 安规标准(Safety Standards)

应用领域/ Application fields	标准/Standards	状况/Status	备注/Note
IT	GB4943	符合/Meet	

10 结构参数(Mechanical Specifications)

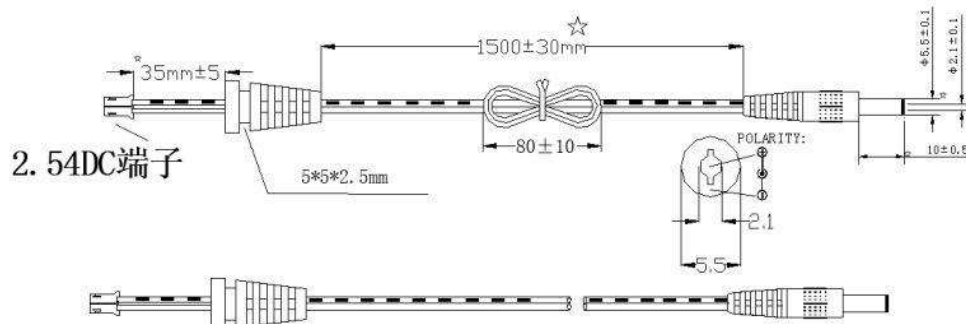
10.1 本体外观图(Mechanical Drawing)

项目(Item)	参数/specification
外壳材料(Casing Material)	PC,120℃ UL94V-0
颜色(Color)	黑/Black
封装尺寸(Dimension)	(L)61.82mm*(W)39.1mm*(H)26.68mm
重量(Weight)	70g (Typ.)
冷却方式(Cooling Method)	自然空冷/Free air convection



备注/Note:
未注公差/No display
tolerance: ± 0.3
单位/Unit: mm

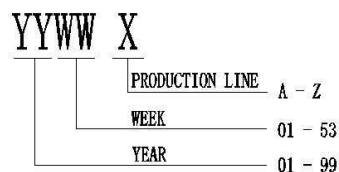
10.2 输出线材图(Output Wire Drawing)



技术要求

- 1、产品不得有明显色差,披锋等注塑不良;
- 2、产品带“★”符号重点尺寸;
- 3、2.54DC 端子, 黑色 1.5m, 5.5*2.1*10MM 正标 UL2468# 20AWG 直头音叉黑嘴 ROHS
- 4、单位: mm

10.3 铭牌(Label)



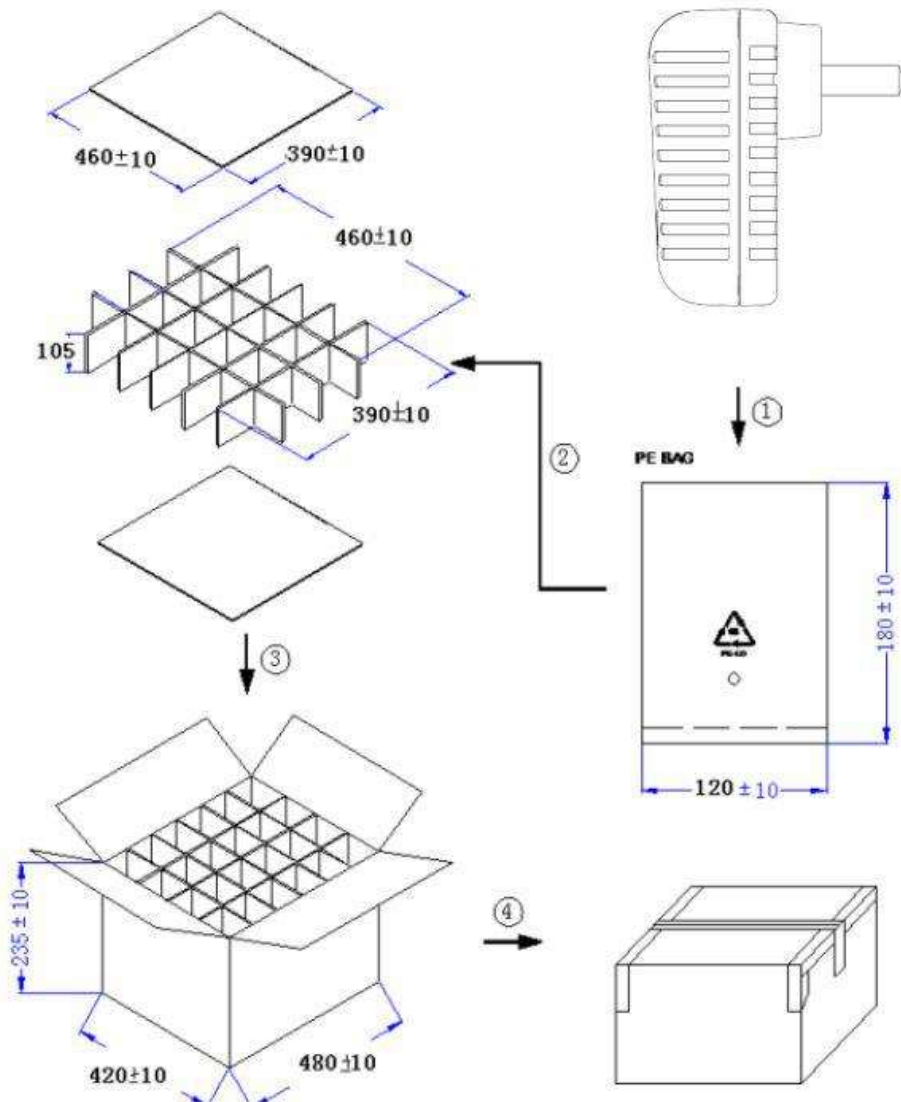
材质/Material: 镭射/Laser engraving

颜色/Color: 本色/originally

公差/Tolerance: ±0.5mm

环保/Hazardous Substances: RoHS

10.4 包装(Packaging)



NOTE: A case of 100PCS, a total of 2 layers, 50PCS/layer. 一箱 100pcs, 共 2 层, 一层 50pcs。

1) Cardboard and Corrugated Board Material: B3C 2) PE Bag Material :0.03mm

隔板及刀卡材质:A=A

PE 袋材质:0.03mm

3) Outer Carton Material: K=K

4) Anlistatig: No requirement.

外箱材质: K=K

抗静电: 无要求

5) Environmental protection requirement: 94/62/EC. 环保要求: 94/62/EC

6) We will select cardboard packing if customer don't specify packing type.

如果客户没有指定包装类型, 我们将选择纸板包装

7)The sample package for temporary packaging, the big goods packaging as shown above packaging.

样品包装为临时包装, 大货包装如上图所示包装。

注:remarks:

1.产品涉及法律法规: 见“产品特点”、“EMC 特性”、“安规标准”;

Products which involved laws and regulations: please see "product features", "EMC characteristics," safety standards "

2.我司产品报废后需按照 ISO14001 及相关环境法律法规分类存放, 并交由有资质的单位处理;

Our products need to be scrapped and classified storage according to ISO14001 and related environmental laws and regulations, this is requested to be handled by qualified institutions;

3.若产品不在要求负载范围内工作, 则不能保证产品性能均符合本规格书中所有性能指标;

If the product is not operated within the specified load, there is no guarantee that product performance can perform with all the performance indicators in this specification;

4.除特殊说明外, 本规格书所有指标都在 Ta=25℃, 湿度<75%RH, 标称输入电压和输出额定负载时测得;

Unless otherwise stated, all specifications in this specification are measured at Ta = 25 °C , humidity <75% RH, specified input voltage and output rated load;

5.我司可提供产品定制, 具体情况可直接与我司技术人员联系;

Customized products available, please contact our technical staff directly for the confirmation of specific details

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