

承认书

SPECIFICATION FOR APPROVAL

开关电源/Switching Power Supply

CUSTOMER/客户: _____

DESCRIPTION/产品描述: Input: 100~240V AC 50/60Hz
Output: 12.0VDC 1.0A

OUR MODEL NO/机种型号: PCE12-12-1-WM

SAMPLE COLOR/产品颜色: Black (✓) White ()

SAMPLE DATE/产品日期: 2024-09-27

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TABLE OF CONTENTS

1、描述 / DESCRIPTION

2、输入特性 / INPUT CHARACTERISTICS

3、输出特性 / OUTPUT CHARACTERISTICS

4、保护功能 / PROTECTION FUNCTION

5、环境要求 / ENVIRONMENTAL REQUIREMET

6、安全及 EMI 要求 / SAFETY AND EMC REQUIREMENT

7、可靠性要求 / RELIABILITY REQUIREMENTS

8、外形尺寸 / OUTLINE DIMENSION

9、铭牌标签 / LABEL

1、描述/SCOPE:

本规格书适应 PCE12-12-1-WM 型号的开关电源。

The purpose of the document is to specify the functional requirements of a 12.0W switching power supply.

2、输入特性/INPUT CHARACTERISTICS:

2.1 输入电压/Input Voltage:

额定电压/Rated Voltage:100 ~ 240Vac

调整范围/Variation Range:90-264Vac

2.2 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50/60Hz.

调整频率/Variation Frequency:47-63Hz

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 0.4A.

0.4Amps max At any input voltage and rated, DC output rated load.

2.4 AC 漏电流/Ac Leakage Current:

当输入电压 264Vac 时,最大漏电流为 0.5mA

0.5mA PEAK.At264Vac input

2.5 浪涌电流/Inrush Current:

当输出为额定负载,环境温度为 25°C,输入 240Vac 冷态起机时的最大浪涌电流小于为 80A

80Amps Max. Cold start at 240Vac input, with rated load and 25°C ambient.

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	峰值功率 Peak Load	输出功率 Output power
12.0Vdc	0.00A	1.0A	1.1-1.6A	12.0W

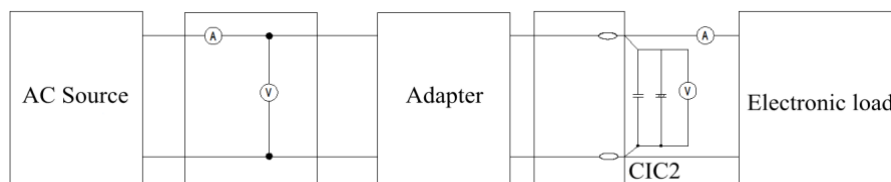
3.2 负载特性,调整率/Combined Load/Line Regulation

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	线性调整 Line Regulation	负载调整 Load Regulation
12.0Vdc	0.00A	1.0A	±3% 11.64-12.36V	±5% 11.4-12.6V

3.3 输出电压精度/Voltage accuracy: ±5%

3.4 纹波和噪音 Ripple and Noise:

Output Ripple voltage is 150mV peak to peak or less.(100Vac 60Hz/240Vac 50Hz)



Measured methods:

*The ripple is measured from peak to peak with band width limit of 20MHz C1:0.1uF Ceramics
capacitor C2:47uF/50V aluminum capacitor under DC output full load, AC nominal input 25°C ambient temperature).

3.5 启动延迟时间/Turn on delay time:

当输入 100Vac 和输出最大负载时,最大启动时间为 3S.

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

3.6 上升时间/Rise time:

当输入 100Vac 和输出最大负载时最大时间为 40 mS.

40 mS Max.at 100Vac input and output Max load.

3.7 保持时间/Hold up time:

当输入 100Vac 和输出最大负载时,最小保持时间为 5 mS.

5 mS Min.at 100Vac input and output Max. Load.

3.7 效率/Efficiency:

Energy Star Compliance: Level VI Requirement

Average Efficiency achieve 82.96% 115Vac input.

Average Efficiency achieve 82.96% 230Vac input.

3.8 待机功耗 Standby Power:

额定电压 Rated Voltage:100~240Vac 0.1W max

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,电源将恢复正常工作.

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

4.3 过压保护/Output voltage achieve over voltage protection point.

will auto protection without output.be capable of auto-recovery function

5、环境要求/ENVIRONMENTAL REQUIREMET:

5.1 工作温度/Operating Temperature:

-20°C-50°C,满载,正常工作.

-20°C to 50°C,Full load, Normal operation.

5.2 储藏温度/Storage Temperature:-40°C to 80°C

带外壳/With package

5.3 工作湿度/Relative Humidity:

25%(0°C)~75%(40°C),72 小时,满载,正常工作.

25%(0°C)~75%(40°C)RH,72Hrs,Full load, Normal operating.

5.4 工作高度/Operating Altitude: -50 to 2000m AMSL

6、安全及 EMI 要求/SAFETY AND EMI REQUIREMENT:

6.1 安规标准/Regulatory Standards

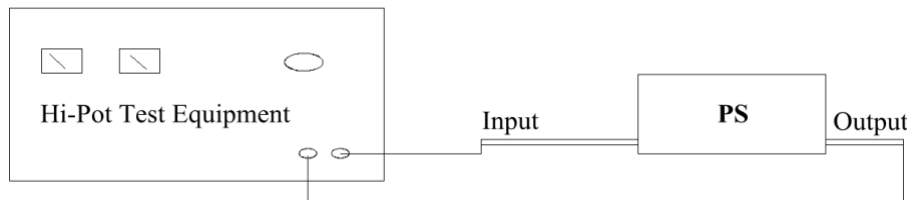
Type	Country	Standard		Type	Country	Standard
UL/FCC	USA	UL62368-1	✓	CB	SINGAPORE	IEC61558-2-16
GS	EUROPE	EN62368-1		PSE	JAPAN	J62368-1
CCC	CHINA	GB4943		KC	KORE	K62368-1
✓	CE	EN61558-2-16		CSA	CANADIAN	CAS C22.2
RCM	AUSTRALIA	AS/NZ62368-1				

6.2 绝缘阻抗: 输入 500VDC 初级到次级最小阻抗 100MΩ

Insulation Resistance: 500VDC primary to the secondary input impedance of 100MΩ(Min)

6.3 高压/DIELECTRIC WITHSTAND Hi-Pot:

HI-POT-- primary to secondary 3000Vac 5mA 1min



6.4 EMI 标准/EMI STANDARD

测试符合/Meets the Limits of

EN IEC 55014-1:2021; EN/IEC 55014-2:2021;

EN IEC 61000-3-2:2019/A1:2021

EN IEC 61000-3-3:2013/A1:2019/A2:2021

7.可靠性要求/Reliability Requirements

7.1 振动/Vibration

5 to 500Hz sweep at a shift gears for 20 minute for each of the perpendicular axes X,Y,Z

There into :acceleration frequency for 10 m2/s3 at 5~10Hz;acceleration frequency for 3 m2/s3

At 10~200Hz; acceleration frequency for 1 m2/s3 at 200~500Hz

扫描频率: 5 to 500Hz 随机振动, X,Y,Z 三垂直坐标轴向各振动 20 分钟, 其中: 5~10Hz 频率范围的加速度频率为 10 m2/s3 , 10~200HZ 频率范围的加速度频率为 3 m2/s3, 200~500HZ 频率范围的加速度频率为 1 m2/s3

7.2 跌落/Drop in

Random surface in all twice, Height: 1.0m,on the cement plane

任意面共两次, 跌落高度: 1.0 米, 跌落到水泥面上

7.3 钢球冲击/STEEL BALL IMPACT

Ball weight: 500g±25g , diameter: 50mm

钢球规格: 球重 500g±25g, 直径: 50mm

Top surface & back surface in all once, steel ball @Height:1.3m free faller, on the cement Plane, the case cannot crack

顶面和底面各冲击一次, 钢球冲 1.3m 处自由下落, 在水泥地面上进行, 外壳不能开裂

7.4 平均间隔故障时间估算/Qualification

The MTBF shall be at least 50000hours at 25°C, Full load and input 230Vac

平均间隔故障时间: 至少 50000 小时, 25°C环境及 230Vac 输入与满载条件下

7.5 电解电容寿命/The lifetime electrolyte capacitor

The lifetime of electrolyte capacitor shall be at least 17520 hours at 25°C, 80% load and Rated input condition

电解电容寿命至少 17520 小时, 25°C环境及额定输入与 80%负载条件下.

7.6 外壳描述及阻燃等级/Case description and flame retardant grade

The case is Black. The material is PC, and the flame retardant grade is UL94V-0

外壳为黑色，材质为 PC 料，阻燃等级为 UL94V-0

7.7 线及 SR 测试/DC wire and SR test

DC wire use 20#2468, Hang 0.3kg weight at the position of below DC wire or SR, rocking angle $\pm 90^\circ$, Swaying frequency 40 times per minute, and wobble 3000 times, The connectivity shall be well, and the Rate of wire breaking shall be less than 30%

DC 线为 20#2468 线，吊重 0.3KG 在 DC 线或 SR 下方，摇摆角度为 $\pm 90^\circ$ ，摇摆频率为 40 次/分钟，摇摆 3000 次，其导通性良好及断线率小于 30%

7.8 连接器插拔测试/Connector Insertion test

The connector insertion test 5000 times, after the test is completed, functional connectivity is normal And no loosening

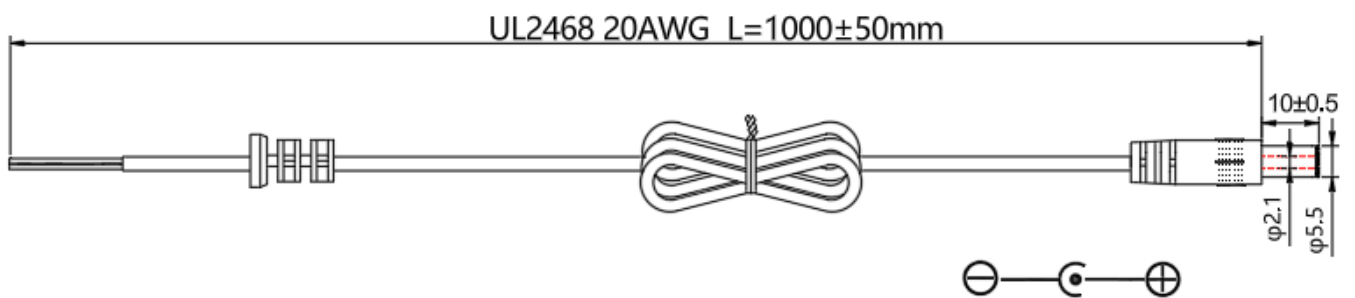
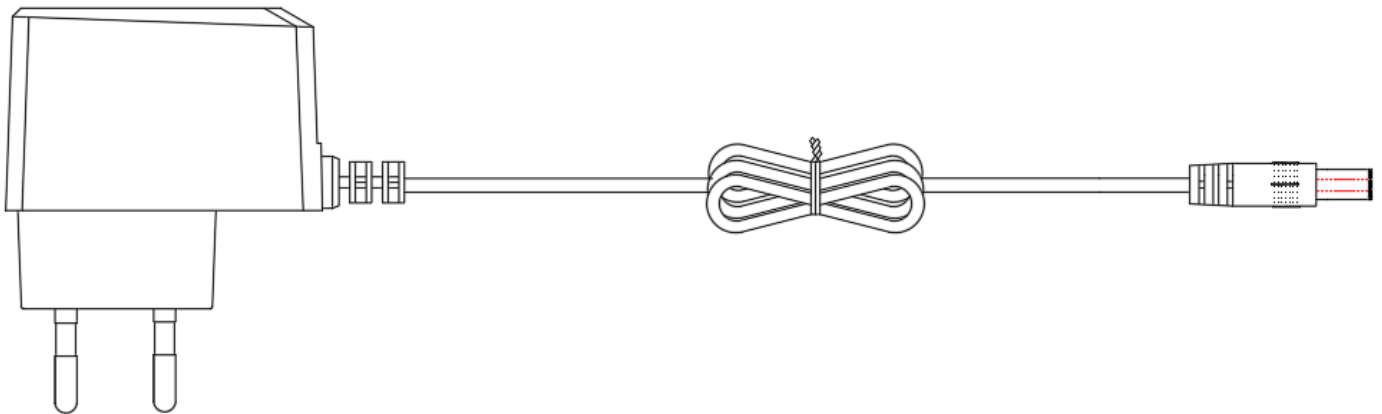
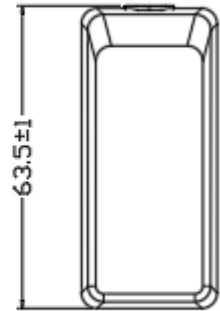
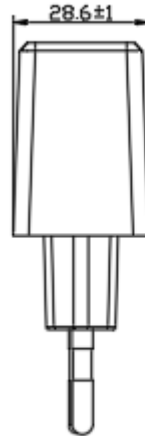
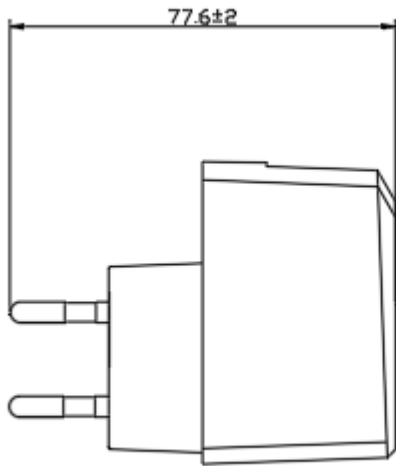
连接器插拔测试 5000 次，测试完成后，功能连接性正常且无松动

7.9 外壳表面温升/Temperature delta of the case surface

Temperature delta of the case surface should not exceed 45K

外壳表面温升不能超过 45K

8. 外形尺寸/OUTLINE DIMENSION:



9. 铭牌标签/LABEL:

