

客户承认书

SPECIFICATION FOR APPROVAL

Customer/ 客户:
CUSTOMER P.N./客户代码:

Product name/ 产品名称:电源适配器

Model No./ 产品型号:NT48-150300AE

APPROVAL NO.承认书编号:NT-2504011

Date/ 制定日期:2025.05.07

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核		

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature./客户确认签字，盖章后请回传一份承认书给我司。

深圳市华利晟有限公司

N-TECH ELECTRONICS.,LTD

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客户名称:	深圳市华利晟电子有限公司 N-TECH ELECTRONICS.,LTD
产品型号: NT48-150300AE	
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1. SCOPE/概述

The document details the electrical, mechanical and environmental specifications of a SMPS, the power supply provides **45W** continuous output power.

资料详细描述了一款 **45W** (连续输出功率)开关电源的电气性,结构性及环境等要求.

The power supply shall meet the **RoHS** requirements.

此款电源符合 **RoHS** 要求.

Description/描述:

- | | |
|---|--|
| ☒ SMPS Adaptor(Wall mount)/插墙式适配器 | ☐ SMPS Adaptor(Desk-top)/桌面型适配器 |
| ☐ Open Frame/开放式结构 | ☐ SMPS Unit (With Case)/带铁壳型 |
| ☐ Others/其他 | |

2. Input Characteristics/输入特性

2.1. Input Voltage & Frequency/输入电压与频率

The range of input voltage is from **90Vac** to **264Vac** with a single phase.

输入电压范围: 从 **90Vac** 到 **264Vac**, 单相输入.

	Minimum/最小	Rating/额定值	Maximum/最大
Input Voltage/输入电压	90Vac	100Vac~240Vac	264Vac
Input Frequency/输入频率	47Hz	60Hz/50Hz	63Hz

2.2. Input AC Current/输入交流电流

1.0AMax. @ **90Vac** input & Full load/在 **90Vac** 输入和满载条件下最大 **1.0A**

2.3. Inrush Current (cold start)/浪涌电流(冷启动)

50A Max. @ **264Vac** input/在 **264Vac** 输入条件下最大 **50A**

2.4. Average Efficiency /6 级平均效率

While input **115Vac** and **230Vac**,the average efficiency is more than **87.4%**.The test point is at 25%,50%,75% and 100% of max load respectively.

在输入 **115Vac** 和 **230Vac** 条件下, 平均效率不小于 **87.4%**。测试点分别是最大载的 25%,50%,75%和 100%。

2.5. No-Load Input Power Dissipation/输入空载功率损耗

While input **115Vac** or **230Vac** and the output is no load, the input power loss must be less than **0.1W**.

在输入 **115Vac/230Vac**, 空载功耗小于 **0.1W**.

3. Output Characteristics/输出特性

3.1. Static Output Characteristics <Vo & R+N>/静态输出特性<输出&纹波+噪音>

Output	Rated Load/额定负载		工作模式 Mode	Output Range	R+N	Remark
Rating	Min. Load	Max. Load		输出电压范围	纹波与噪声	备注
+15V	0A	3A	CC	DC14.4V--15.6V	200mVp-p	

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Ripple & Noise: Tested by a oscilloscope using 20MHz bandwidth and the output is paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (Under the input Voltage 100~240Vac)纹波与噪声: 量测时示波器选用 20MHz 带宽限制,输出端要并联一颗 0.1uF 的陶瓷电容和一颗 10uF 的电解电容(输入电压 100~240Vac)

3.2. Line/ Load Regulation/线性/负载调整率

Output	Load Condition/负载条件		Line Regulation	Load Regulation	Remark
Rating	Min. Load	Max. Load	线性调整率	负载调整率	备 注
+15V	0A	3A	± 3%	±5%	

3.3. Turn - on Delay Time/开机延迟时间

4S Max. @ 90Vac input & Full load/在 90Vac 输入和满载条件下最大 4S

3.4. Hold-up Time/关机维持时间

10mS min. @ Full load & 115Vac/60Hz input turn off at worst case

在 115Vac 输入, 满载同时最差情况下关机, 最小 10mS

20mS min. @ Full load & 230Vac/50Hz input turn off at worst case

在 230Vac 输入, 满载同时最差情况下关机, 最小 20mS

3.5. Rise Time/上升时间

30mS Max. @ Full load/在满载条件下最大 30mS

3.6. Fall Time/下降时间

20mS Max. @ Full load/在满载条件下最大 20mS

3.7. Output Overshoot / Undershoot/输出过冲/欠冲

10% Max. When the power on or off/当电源开, 关机时最大 10%

4. Protection Requirements/保护要求

4.1. Over Current Protection/过流保护

OCP Point Limited: ≥3.6A Load/保护点限制: ≥3.6A

The output shall hiccup when the over current applied to the output , and shall be self-recovery when the fault condition is removed

当过电流时,输出将进入打嗝模式,当过流情况解除后,产品将会自动恢复正常

4.2. Short Circuit Protection/短路保护

The input power shall decrease when the output is short to GND, the power supply shall not damage, and shall be self-recovery when the fault condition is removed

当输出对地短路时, 产品输入功率降低且不会损伤, 当短路情况解除后, 产品将会自动恢复正常

4.3. Over Voltage Protection/过压保护

The power supply shall be protected when the output is over voltage, and the power supply shall not be damaged. OVP range: <16Vdc.

当输出过压时,产品保护且不会损伤, 过电压范围: <16Vdc

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5. Environment Requirements/环境要求

5.1. Operating Temperature and Relative Humidity/操作温度和湿度要求

0°C to +40°C

20%RH to 80%RH

5.2.Storage Temperature and Relative Humidity/存储温度和湿度要求

-40°C to +85°C

5%RH to 95%RH (non-condensing) @ Sea level shall below 10,000 feet

在海拔低于 10,000 英尺的条件下, 低温存储下限为-40°C (无结冰环境); 高温存储上限为

+85°C, 相对湿度为 5%RH to 95%RH。

5.3 Vibration/振动

10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z

扫描频率: 10 to 300Hz, 加速度: 1.0G(位移: 3.5mm), X, Y, Z 三垂直坐标轴向各振动 1 小时

6. Reliability Requirements/可靠性要求

6.1. Burn-in/老化

The power supply shall be burned-in at least 4 hours at 30°C ± 5°C under full load condition

产品至少要在 30°C ± 5°C 的环境及满载条件下老化 4 小时

6.2. MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 27000hours at 25°C, Full load and nominal input condition

平均间隔故障时间: 至少 27,000 小时, 25°C 环境及额定输入与满载条件下

7. EMI/EMS Standards/EMI/EMS 标准

7.1. EMI Standards/EMI 标准

EN55032:2012+AC:2013, EN55024;

7.2. EMS Standards/EMS 标准

EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge(ESD): 8kV air discharge, 4kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient/Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 1kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips

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8.Safety Standards/安规标准

8.1 Dielectric Strength(Hi-pot)/介电耐压强度(高压)

Primary to Secondary: 3000Vac / 10mA / 60 seconds(3 seconds for production)

初级对次级: 3000Vac / 10mA / 60 秒(生产时高压测试时间: 3 秒)

8.2 Leakage Current/漏电流

0.25mAmax. at 264Vac / 50Hz input/在输入 264Vac/50Hz 的条件下最大 0.25mA

8.3 Insulation Resistance/绝缘阻抗

50MΩ min. @ primary to secondary add a 500Vdc test voltage

在初级与次级间加 500Vdc 进行测试,最小 50MΩ

8.4 Regulatory Standards/安规标准

Type	Country	Standard	Type	Country	Standard
☐ UL/CUL ☐ ETL/CET	USA	☐ UL62368 ☐ ETL1310	☐ PSB	Singapore	IEC60950-1
☐ ITS/GS	Europe	☐ EN62368 ☐ EN61558	☐ PSE	Japan	J62368
☐ CCC ☐ CQC	China	☐ GB4943 ☐ GB8898 ☐ GB4706.1	☐ RCM	Australia	AS/NZS 61000 AS/NZS 62368
☒ CE	Europe	EN62368	☐ KC	Republic of Korea	KC(KC60950-1 CLASS II)
☐ FCC	USA	FCC FART 15B	☐ CB		IEC62368

9.0 机械特性 Mechanical Specifications

9.1 物理特性 Physical

外壳材质 Case material : PC 130℃/94V0

重量 Weight : $\angle$ 产品单个重量: 225g±20

尺寸 Dimensions : 119mm(L) x52mm(W) x31.7mm(H)

9.2 输入输出配置 Input and Output Configuration

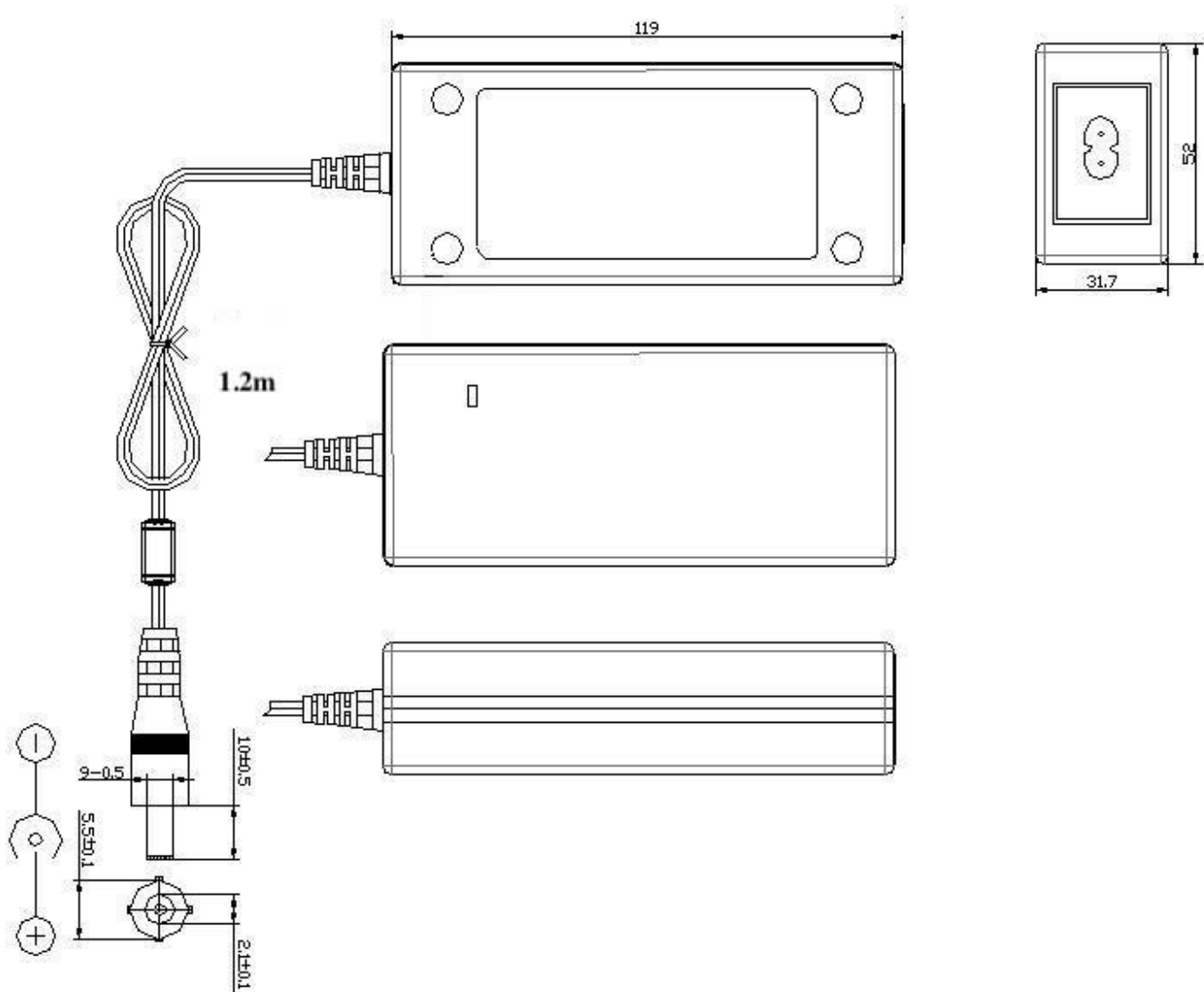
输入端 Input Lead : C8 inlet

输出端 Output Lead: AWM2464 20AWG OD4.0mm 2 米 DC 端 : 5.5*2.1*10mm

极性 Polarity :

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10.Mach. Outline Drawing/外观图



10.1European code pin/欧规插脚

10.2 Size/尺寸: 119mm(L) x52mm(W) x31.7mm(H)

10.3 Colour/颜色: 黑色 black

10.4 Texture of material/材质: PC 130℃/94V0

10.5 AWM2464 20AWG OD4.0mm 1.2 米 DC 端 : 5.5*2.1*10mm

11.Package Drawing/包装示意图

Unless special requirement of customer,the packing style shall be performed according to sunup company's style.

若客户未提出包装方式时，均使用本公司之包装方式。

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12.1 Inner package/内包装

PE bag/PE 袋 L190xW120mmxT0.03

12.2 outer package/外包装

Paper-box /纸箱

12.3 Outer package notes include the information/外包装标示

Customer Name, LOT Number, Model NO., Date, and so on/客户, 订单号, 品名, 数量, 等信息。