

深圳华瑞川科技有限公司
ShenZhen Kuanten Limited
ShenZhen Hrcpower Techology Co LTD

Customer No.: H2 MODEL No.: KT090A1200667B3 P/N (Part number): SSA201700 REV: 01

承 認 書
(SPECIFICATION)

客户名称(Customer) :

機型(Model) : KT090A1200667B3
安規(Safety) : 3C/GS/CE/UL/SAA/RCM/PSE-Mark
型號(Type) : Output 12V 6.67A Plug-In Type Power Supply
料號(P/N) : SSA201700
日期(Date) : 2017-11-02
版本(Version) : REV. 01

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1	2017-11-02	01	First issue 首次发行	

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1 GENERAL 概述

1.1 Description

This specification defines the performance and characteristics of a adapter, Total output power 80W. Single output level power supply. This specification also defines world wide safety requirements and manufactures process test requirements. 规格书定义了该款电源的性能及特点。单相 80 瓦. 单路输出开关电源。该规范还定义了全球范围内的安全要求和制造工艺的测试要求。

- Simple design philosophy. 简洁的设计理念
- Overload Latch-Off protection during either (a) specified power threshold requirements or (b) short circuit condition. 在 (a) 规定的功率限值要求或 (b) 短路状态超载时 锁断保护
- Reliability level of 50000 hours MTBF & 0.5% annual field failure rate @ 25°C. 可靠性水平 50000 小时 MTBF 及@25°C 0.5% 的年度故障率
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC60950-1 3rd edition. 通过 IEC 60950-1 第 3 版定义, DC 输出电压必须是安全特低电压 (SELV) 及限制功率

The maximum room ambient temperature, as mentioned in clause 1.4.12 of IEC60950-1 3rd edition, for the external power supply is 40°C. 最大的室内环境温度, 如在 IEC60950-1 第 3 版 1.4.12 条款中指出, 外部电源为 40°C。

1.2 DC Output Requirements DC 输出要求

The power supply shall have one regulated DC outputs of 12V. 电源有 12V 的稳压直流输出. The wall defines the total regulation band for the output , which includes line regulation , load regulation ,and effects due to environmental conditions and aging . Voltage shall be measured at the power supply output connector. 定义总的输出调整范围, 包括线性调整率, 负载调整率, 以及因环境条件和老化的影响。电压在电源输出连接器来测量。

Output 输出	Output Current Range 输出电流范围		Output Voltage Range 输出电压范围		Ripple/ Noise 纹波/噪音
type 典型值	Min. 最小	Max. 最大	Min. 最小	Max. 最大	Max. 最大
12V	0.01A	6.67A	11.4V	12.6V	300mV

Rated input,output with full load, 20MHz bandwidth. Load end connects with 0.1uF ceramic capacitor and 35V 47uF electric capacitor. 额定输入, 满载输出, 20 MHz 带宽。负载端用 0.1uF 的陶瓷电容和 35V 47uF 的电解电容连接.

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2 INPUT REQUIREMENTS 输入要求

2.1 Input Conditions 输入条件

The Supply shall operate over the voltage ranges as follows: 该电源在以下电压范围内使用

Input Voltage Variation Range 输入电压调整范围: 90Vac - 264 Vac 50 & 60 Hz

Nominal Voltage 额定电压:100-240Vac

Input Variation Frequency 输入调整频率:47-63Hz

Input Nominal Frequency 输入额定频率:50/60Hz

No Loading Power Consumption (115V60Hz / 230V50Hz) 空载能耗: $\leq 0.21W$

2.2 AC Inrush Current AC 浪涌电流

Input 100Vac, 240Vac inrush current Shall be less than the rating of adapter critical component (including rectifiers, fuse surge and current limiting device)

输入 100Vac, 240Vac 浪涌电流小于适配器关键组件的额定值（包括整流器、保险丝浪涌电流限制装置）

2.3 Efficiency 效率

The efficiency of the Supply shall meet the following requirements: 电源的效率符合下列要求

Input 输入:	Load 负载:	Input voltage 输入电压	Avg Efficiency 平均效率
Universal 全球通用	25%,50%,75%,100% Full load 满载	115V60HZ 230V50HZ	$\geq 88\%$ (DOE VI)

3 OUTPUT REQUIREMENTS 输出要求

3.1 Output Voltage / Current 输出电压 / 电流

Output NO. 输出编号	Voltage 电压	Minimum load 最小负载	Max load 最大负载	Peak load 峰值负载
#1	12V	0.01A	6.67A	/

The unit total output power, under steady state conditions, shall not exceed 80W

该电源的总输出功率，在稳态条件下，不得超过 80W

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3.1.1 Load/Line Regulation 负载/线性调整率

The output voltage shall be statically regulated for all combinations of load, line and environment including cross regulation as shown. 输出电压是静态调整，对于所有负载组合，线路和环境，包括交叉调节的所有组合调整。如表所示

Output NO. 输出编号	Normal Voltage 标称电压	Min. Voltage 最小电压	Max. Voltage 最大电压	Tolerance 公差
#1	12V	11.4V	12.6V	±5%

3.1.2 Light Load Output Voltage 轻负载输出电压

The output voltage shall be within the specified limits shown when subjected to the following conditions: 在下列条件时，输出电压在标示的指定范围内:

Ambient temperature 环境温度: 0° C – 40° C

Output voltage(No load) 输出电压(空载): 12V ±5%

No damage or hazardous condition will occur with the DC output connector disconnected from the load under all input line conditions.

从负载断开直流输出连接器，在所有输入电压条件下，不会出现损害或危险情况。

3.2 Short Circuit Protection 短路保护

The power supply shall have self-limiting protection.

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

电源具有自限保护.该电源在供电时短路解除时,能恢复正常工作

3.3 Over-voltage protection 过压保护

The output shall be protected to latch off at over-voltage condition, maximum value can't be over 18V. 输出将保护闭锁在过压条件下，最大值不能超过18V。

3.4 Over current protection 过流保护

The power supply will be protection when output power over 110%—200% of rated dc output. 当输出功率超过额定 110%-200%，电源将被保护。

3.5 Rise Time 上升时间

The Supply shall have a start-up rise time of less than ≤50ms to rise to within regulation limits for DC.outputs.

电源输出上升时间≤50 毫秒，上升到直流输出调节范围之内。

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3.6 Hold Up Time 保持时间

$\geq 10\text{mS}$ Min. At 115Vac input and output Max. Load 当输入 115V 和输出最大负载时, 最小保持时间为 $\geq 10\text{mS}$ 。

3.7 Turn On Delay Time 启动延时

115Vac: The output shall reach steady state value within $\leq 3\text{sec}$ of turn on

115V 启动 ≤ 3 秒, 电源输出达到稳定状态

230Vac: The output shall reach steady state value within ≤ 3 sec of turn on

230V 启动 ≤ 3 秒, 电源输出达到稳定状态

3.8 Output Ripple 输出纹波

Maximum Ripple must be less than 300mVpp when subjected to the following conditions:

在如下条件下, 最大纹波须小于 300mVpp :

Input voltage 输入电压: 100Vac-240Vac 50 & 60 Hz (Universal)

Output Load: 输出负载: Full Load 最大负载

Remarks 备注: Rated input,output with full load, 20MHz bandwidth. Load end connects

with 0.1uF ceramic capacitor and 35V 47uF electric capacitor. 额定输入, 满载输出, 20 MHz 带宽。

负载端用 0.1uF 的陶瓷电容和 35V 47uF 的点解电容连接。

3.9 Overshoot 过冲

During Turn-On or Turn-Off of the power supply, the output voltage shall not exceed 10%. No voltage of opposite polarity shall be present on the output during turn-on or turn-off. 在电源接通或关断时, 输出电压不超过 10%, 输出端不出现反极性的电压。

3.10 Components Thermal Derating 元器件热降额

In the output nominal load conditions and any work under the condition of the rated Input Voltage, all components shall not exceed thermal derating. shall not exceed their designed safety rated temperatures for the insulation. 在输出标称负载条件及任何工作额定输入条件下, 所有元件不超过其降额温度。不得超过其设计的安全绝缘等级温度。

4 MECHANICAL 机械尺寸

4.1 Input connector 输入连接器

The AC input connection shall be an IEC320-C14 power connector

交流输入连接该是 IEC320-C14 型电源连接器

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4.2 Output connector 输出连接器

UL 1185 16AWG, Black 1meters 黑色 1米.

PLUG 插头: 5.5*2.5*10mm, H Head fork and groove 音叉带槽.

5 REGULATORY COMPLIANCE 法规符合

5.1.1 EMC Specifications 电磁兼容性要求

The external power supply must meet all specification in this section. It is required that the external power supply work closely with the Product in order to get the best EMC solution. 外部电源必须符合此部分的所有规范。它要求外部电源与配套产品匹配，以获得最佳的 EMC 解决方案。

5.1.2 Radiated and Conducted Emission 辐射和传导发射

The power supply shall comply to:

FCC part 15 : Subpart B for radiated and conducted emissions.

EN 55032, Class B for radiated and conducted emissions.

对于辐射和传导发射要求，该电源应该符合 FCC 第 15 部分 B 类。

及 EN 55032 类的辐射和传导发射要求。

5.1.3 Immunity 抗扰度

5.1.3.1 Electrostatic Discharge Immunity 静电放电抗扰度

EN 55024:2010, EN 61000-4-2

Air Discharge 空气放电: ±8kV

Contact Discharge 接触放电: ±4kV

Performance Criteria B 执行标准 B

Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester, 接触或空气静电放电测试，应通过静电放电测试仪进行，

energy storage capacitance of 150pF, and discharge resistance of 330 Ω , 8KV air discharge, 4KV contact discharge. 150pF 的储能电容，放电电阻 330 Ω ，8KV 空气放电，4KV 接触放电。

5.1.3.2 Radiated Field Immunity 辐射场抗扰度

EN 55024:2010, EN 61000-4-3

- Frequency Range 频率范围: 80-1000MHz

- Field Strength 场强: 3 V/m with 80% amplitude modulation of 1kHz

- Performance Criteria A 执行标准 A

Radio-frequency electromagnetic field susceptibility test, RS 80-1000MHz, 3V/m, 80%AM(1KHz).

射频电磁场易受性测试, RS 80-1000MHz, 3V/m, 80%AM(1KHz).

5.1.3.3 Fast Transient Immunity 快速瞬变脉冲抗扰度

EN 55024, EN 61000-4-4

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- Power line: 1kV AC 到 AC 线: 1kV
- Signal line: 0.5kV DC 到 DC 线: 0.5kV
- Performance Criteria B 执行标准 B

5.1.3.4 Surge Immunity 浪涌抗扰度

EN 55024:2010, EN 61000-4-5

- 1.2/50 usec Open Circuit voltage 1.2/50 微秒 开路电压
- 8/20 usec Short Circuit current 8/20 微秒短路电流
- Power line: 1kV 线对线: 1kV
- Line to Earth: 2kV 线对地: 2kV

Lightning Surge Voltage of differential and common modes shall be applies across AC input lines and cross input and frame ground.

差模和共模雷击浪涌电压应当在交流输入线之间及输入和对地之间进行。

5.2 Safety Requirements and Certification 安规要求及认证

5.2.1 Regulatory Standard 法定标准

The power supply shall complied the following international regulatory standards

该电源满足如下国际法定标准

	Country 国家	Certified Status 认证情况	Standard 标准
UL	USA美国	MEET	UL 60950-1
CUL	Canada加拿大	MEET	CAN/CSAC22.2 No. 60950-1
GS	Europe欧洲	MEET	EN60950-1
CE	Europe欧洲	MEET	EN60950-1
SAA+RCM	Australia澳大利亚	MEET	AS/NZS 60950
PSE	Japan日本	MEET	PSE J60950
CCC	China中国	MEET	GB4943
KO	KOREA /韩国	/	K60950-1

5.2.2 Additional Safety Requirements 其他安全要求

- ◎ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short) 耐电压, 初级(输入交流短路)到次级(输出直流短路): 1500Vac, 10mA, 1 minute
- ◎ Insulation Resistance, Input to output 绝缘电阻, 输入到输出: 20M Ω (MIN.) at 500 VDC.

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- ◎ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
增强绝缘系统,初级对地和初级对次级, .
- ◎ Input 264V50Hz, The leakage current shall not exceed 0.25mA.
输入 264V50Hz,漏电流不超过 0.25mA.

Mass Production Condition: 批量生产条件

Primary To Secondary :1800V50HZ ,keeping 3seconds . current 10mA maximum

初级对次级:1800V50Hz,保持 3 秒.电流 10mA 最大

6 PRODUCT ENVIRONMENTAL REQUIREMENTS 产品环境要求

6.1 Temperature 温度

- ◎ Operating 工作: 0 °C- +40 °C
- ◎ Non-Operating 非工作 -20 °C- +70 °C

6.2 Humidity 湿度

- ◎ Operating 工作 20% - 80% (Non Condensing) (不凝结)
- ◎ Non-Operating 非工作 10% - 90% (Non Condensing) 不凝结)

6.3 Vibration 震动

Operating: 10-250Hz, 0.25G peak to peak, 3axes,15min sweep.

使用: 10-250Hz, 0.25G 峰值到峰值, 3 轴向,15 分钟, 摆动.

Storage: 10-300Hz,2.0G peak to peak, 3axes,15min sweep

储存: 10-300Hz,2.0G 峰值到峰值, 3 轴向,15 分钟, 摆动

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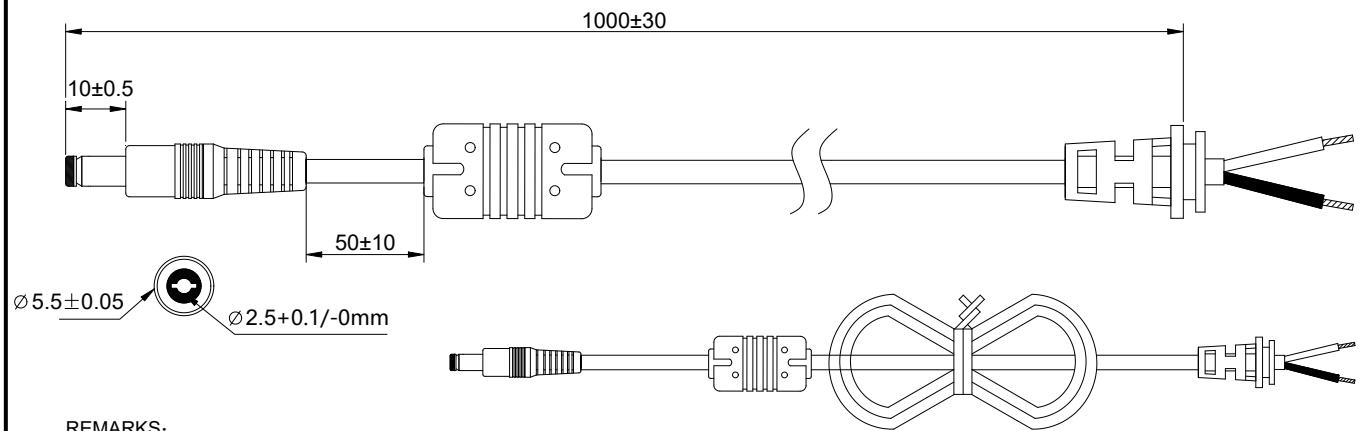
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7、DIMENSION OF OUTPUT PLUG & DC CORD (Unit:mm) 输出插头及电线尺寸(单位:mm)



REMARKS:

- 1>UL1185, 16AWG, L=1000±30mm.
- 2>PLUG:5.5*2.5*10mm,H Head fork and groove.
- 3>Color:black
- 4>RoHS.REACH.PAHs

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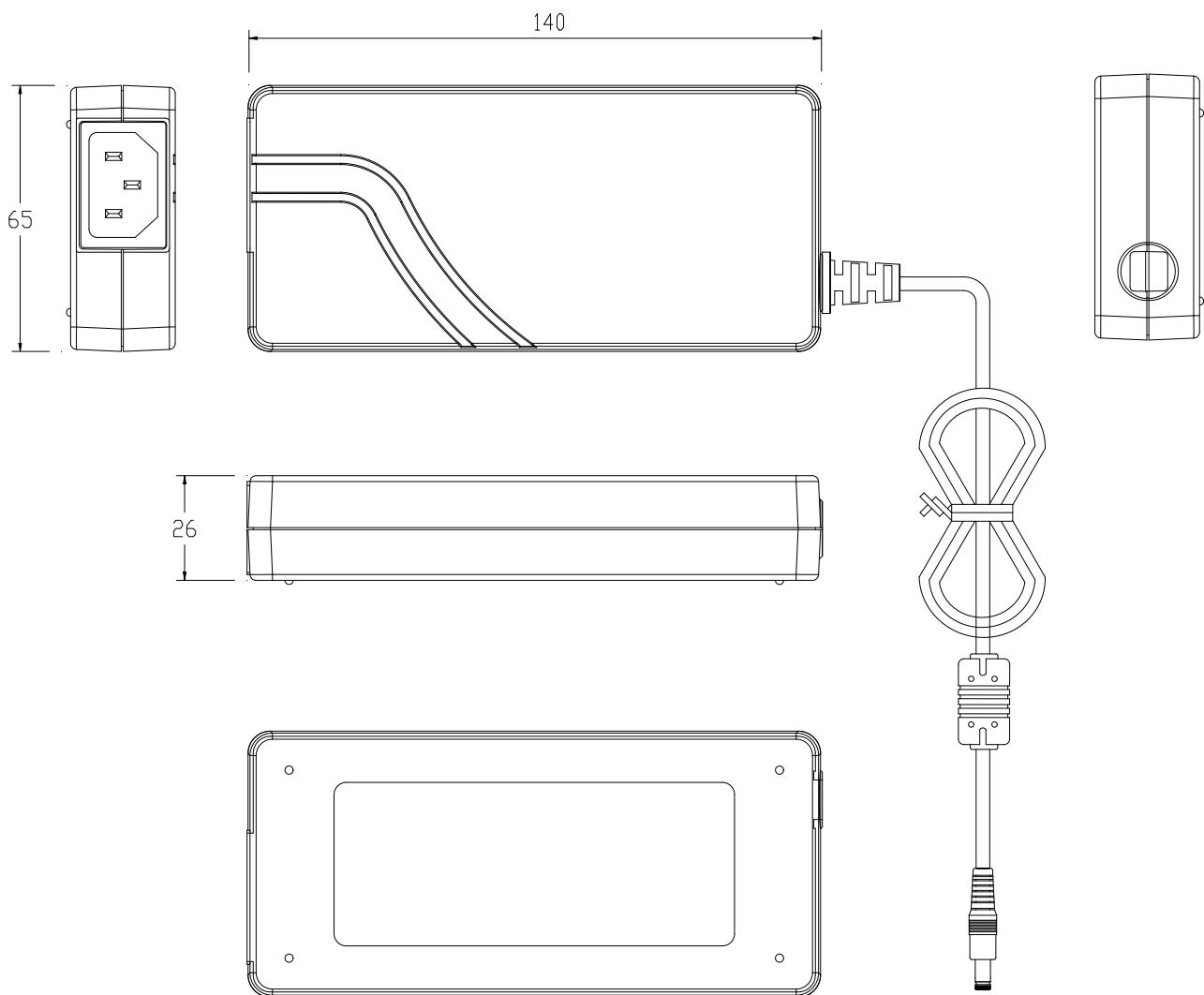
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8、APPEARANCE DRAWING:(Unit:mm) 产品外观图:(单位:mm)



REMARKS:

Dimension (Length X Width X Height): 140 X 65 X 26 mm TOL:±2mm

It does not contain bulging parts Color: Black

备注:

尺寸: (长 X 宽 X 高): 140 X 65 X 26 mm 公差: ±2mm

不包含凸出部分

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9、 LABEL DIAGRAM (Unit: mm) 标签图 (单位: mm)



REMARKS 备注:

1. Thickness 厚度: 0.1mm.
2. Color 颜色: Black silver word 黑底银字.
3. Tolerance 公差:+0/-0.2mm.

APPROVED:TangShangJing

CHECKED: ZhenXianzong

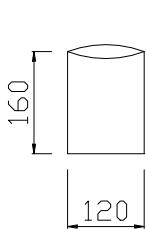
DRAWN:Longli

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ShenZhen Kuanten Limited
ShenZhen Hrcpower Techology Co LTD

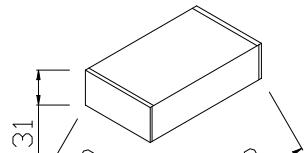
Customer No.: H2 MODEL No.: KT090A1200667B3 P/N (Part number): SSA201700 REV: 01

10. PACKING(unit:mm) 包装 (单位: mm)

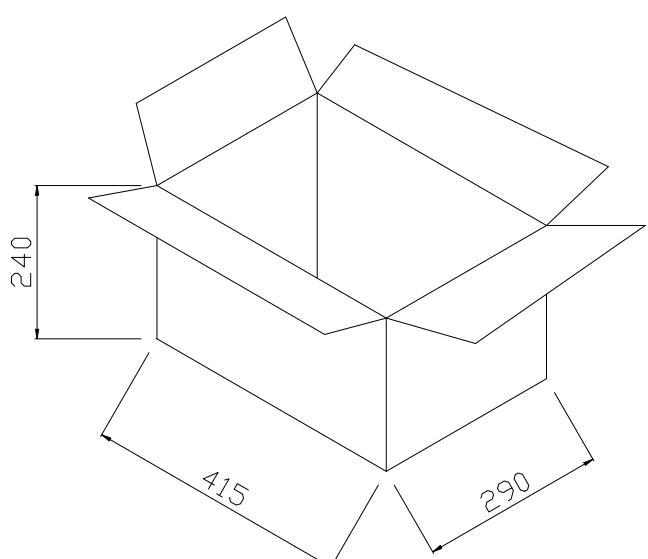
<1>bag 袋子



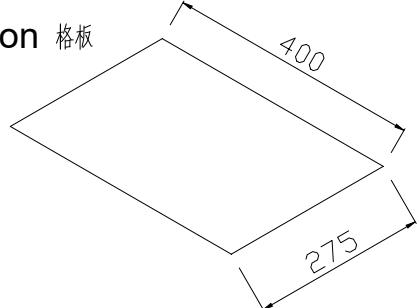
<2>Inside the box 内盒



<4>Outside the box 外箱



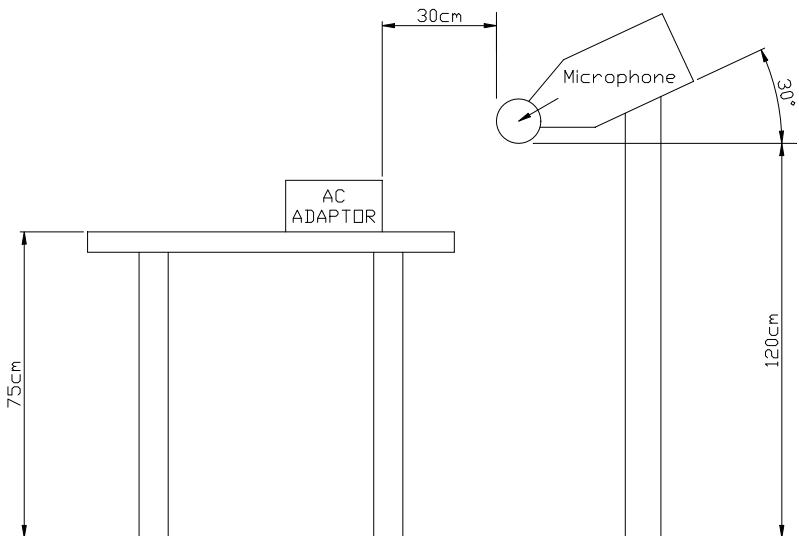
<3>Partition 格板



11. Acoustic Noise 噪音

Input voltage: 100V60Hz / 240Vac/50Hz , Output Rated load. Acoustic Noise < 30dB

输入电压: 100V60Hz / 240Vac/50Hz ,输出额定负载. 噪音 < 30dB



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Customer No.: H2 MODEL No.: KT090A1200667B3 P/N (Part number): SSA201700 REV: 01

12.INSTRUCTION MANUAL/说明书

MODEL NO.:型号 KT090A1200667B3

Please keep reading the following safety notes before use or examination.

使用或检验前需细读下列安全说明:

- 1.) Primary technical specification of the marking on the product.

产品铭牌上标识的主要技术参数:

Model 型号: KT090A1200667B3

Input 输入: 100V-240V~50/60Hz 1.5A

Output 输出: 12V= 6.67A

- 2.) The product is used only within doors or at the dry location.

本产品仅适用于户内或干燥处使用。

- 3.) . Don't store or use this product in the erodent condition.

不要在有腐蚀性的环境中存放或使用此产品。

- 4.) .The ambient temperature around the prod uct must be kept for room temperature because overcool can effect on the feature and working life of product.

本产品周围环温保持在室温状态，避免过热过冷，以免影响产品性能与寿命。

- 5.) .The power supply applies only to the highest temperature 40 °C, and without any covering

该电源仅适用于最高环境温度 40°C，且没有任何覆盖物。

- 6.) .According to the technical specification of product, it must be connected with correct power input and specified out put load or terminal appliance so that it can't be broken. Pay attention to the input voltage & frequency.

请依据产品的技术指标要求,正确接通电源,指定负载或终端产品，以免损坏产品。尤其要注意输入电压与频率的匹配。

- 7.)The disconnection from line voltage is taken by pulling the mains plug.

若需断电，请从插座处拔出产品电源插头。

- 8.)The product is not intended to be repaired by service personnel in in case of failure including component defect of crack of the enclosure and external flexible cord damaged etc, it must be discarded.

如果产品出现故障如元件损坏，外壳裂开，引出线身损伤等，则不可维修再用，必须报废。

- 9.).Fuses replaceable only by service personnel.

保险管的更换必须由专业维修人员完成。

The output polarity: 输出极性:



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