

SPECIFICATION FOR APPROVAL

承认书

客户 / CUSTOMER : _____

客户型号 / CUSTOMER P/N : _____

产品名称 / ITEM : 12V1A 可转换AC插头适配器 12V1A Convertible AC Plug

产品种类 / DESCRIPTION : 车充 Vehicle charger

本公司产品型号 / OUR MODEL NO. : AD-RAD100-01

标准 / STANDARD : _____

额定 / RATING : I/P: AC 100V~240V 50HZ/60HZ
O/P: DC12V 1A

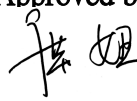
备注 / REMARKS : _____

注意:在贵司出单前,请确认签回以下项目/ Attention: Before placing orders, please confirm to sign back the followings:

- ☐ 产品规格(首页) /Production Spec(Front Page)
- ☐ 铭牌规格(如有) /Nameplate Spec(if any)
- ☐ 包装规格(如有)/Packing Spec(if any)

版本 REV	描述/DESCRIPTION	日期 DATE
A0	首次发行/FIRST EDITION	
A1	修改格式/CHANGE FORMAT	2019-1-28

瑞鼎电子/ Ryder Electronics	
批准/APPROVED BY	
签名 Signature	衣绍鹏
日期/DATE	2019-1-28

客户/ CUSTOMER
确认
Approved by

(签字或公司盖章)
日期/DATE

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1 产品特点 Product characteristics

- 本机是一款可转换 AC 插头适配器；恒流输出，短路保护，确保充电的质量及安全。This machine is a convertible AC plug adapter; constant current output, short circuit protection, to ensure the quality and safety of charging.
- AC 220V 50/60Hz 供电输入。AC 220V 50/60Hz power supply input.
- 发光二极管指示充电状态，显示直观。Light-emitting diodes indicate charging status and display intuitively.

2 电气性能 Electrical performance

2.1 输入特性及要求 Input characteristics and requirements

2.1.1输入 input

输入电压：AC 220V 50HZ/60HZ Input voltage: AC 220V 50HZ/60HZ

2.2 本适配器输出特性 Output characteristics of this adapter

2.3.1输出空载电压 Output no-load voltage

空载电压：DC 12±1V No-load voltage DC 12±1V

2.3.2额定输出电流：(正常充电条件下) Rated Output Current: (Normal Charging Conditions)

额定输出电流：1000±100 mA Rated output current: 1000 +100 mA

2.3.3短路保护 Short Circuit Protection

将输出端短路，适配器进入短路保护状态，故障排除后其带载正常。The output terminal is short-circuited and the adapter enters the short-circuited protection state. After the fault is eliminated, the load is normal

2.3.4输出纹波 Output ripple

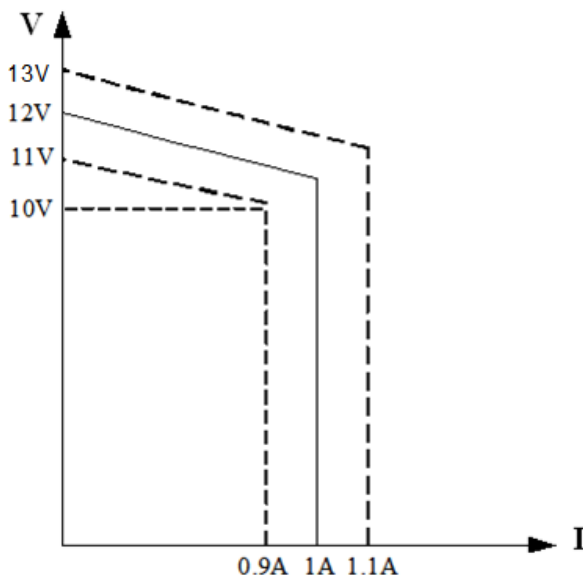
输出纹波：<150mV @CC=1000mA 时 Output ripple: <150mV@CC=1000mA

说明:输出端并 0.1uF 与 47uF 电容,限制示波器带宽 20MHz 时,测得纹波小于 150mV p-p Explanation: When the output port is parallel to 0.1uF and 47uF capacitors and the oscilloscope bandwidth is limited to 20MHz, the measured ripple is less than 150 mV p-p.

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3 工作方式及 LED 指示状态 Working mode and LED indication status

3.1 适配器输出特性曲线 Output characteristic curve of adapter



4 适用环境 Applicable environment

4.1 工作温度 Working temperature

在 0~+35℃ Between 0 ~+35 C

4.2 工作湿度 Working humidity

工作湿度: ≤90% (不结露) 工作湿度: ≤90% (不结露)

4.3 贮存温度 Storage temperature

贮存温度: -20~+80℃ Storage temperature -20~+80℃

4.4 存储湿度 Storage humidity

相对湿度: ≤85% Relative humidity: <85%

4.5 大气压力 Atmospheric Pressure

大气压力: 70~106Kpa Atmospheric pressure: 70-106 Kpa

5 符合 EMC 标准 Compliance with EMC standards

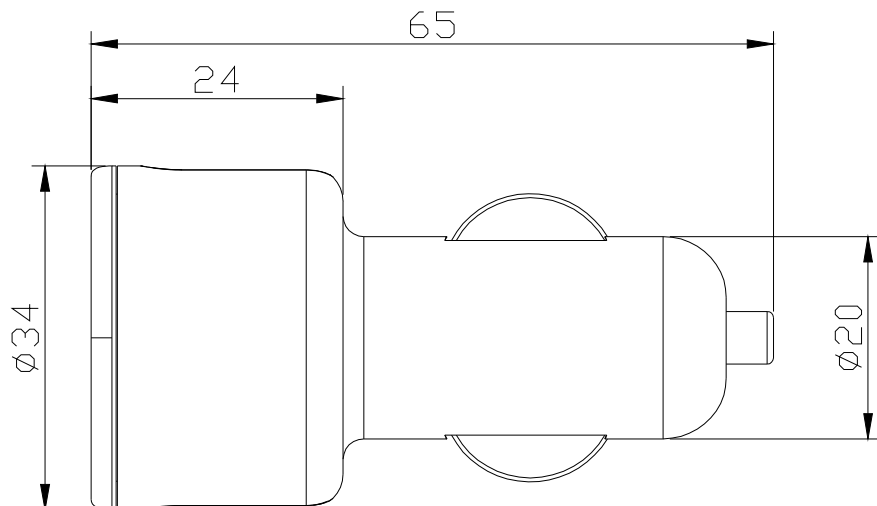
产品符合 E/emark 认证标准。The product meets the E/emark certification standard.

6 机械 machinery

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6.1 本充电器外观图 Appearance of the charger

具体外观颜色及印字按客户要求定制 Specific appearance color and printing are customized according to customer requirements



6.2 本充电器铭牌标贴 The nameplate of this charger

铭牌具体规格可按客户要求订制 Specific specifications of nameplate can be customized according to customer requirements



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7 可靠性能 Reliability performance

- 1 高温试验：实验温度为 $65^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ，产品不包装，持续时间为 5 小时。在常温下放置待恢复后对其外观、指示功能及电气性能进行重新测试。外观应平整无划痕、毛刺以及其它机械损伤，外露金属部分不应有锈蚀；LED 指示功能及电气性能正常。High temperature test: the temperature of the experiment is 65 ± 2 . The product is not packaged and lasts for 5 hours. After being restored at room temperature, the appearance, indicating function and electrical performance of the device are re-tested. Appearance should be flat without scratches, burrs and other mechanical damage, exposed metal parts should not be rusted; LED indicator function and electrical performance are normal.
- 2 低温试验：实验温度为 $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ，产品不包装，持续时间为 8 小时。在常温下放置待恢复后对其外观、指示功能及电性能进行重新测试；外观应平整无划痕、毛刺以及其它机械损伤，外露金属部分不应有锈蚀；LED 指示功能及电气性能正常。Low temperature test: the test temperature is $-20 (+3) ^{\circ}\text{C}$, the product is not packaged and lasts for 8 hours. After restoring at room temperature, the appearance, indicating function and electrical performance of the device should be re-tested; the appearance should be flat without scratches, burrs and other mechanical damage, and the exposed metal part should not be corroded; and the LED indicator function and electrical performance should be normal.
- 3 恒定湿热试验：实验温度为 $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ，湿度为 90%~95%，产品不包装，持续时间为 48 小时。测试后对其外观、指示功能及电性能进行重新测试。外观应平整无划痕、毛刺以及其它机械损伤，外露金属部分不应有锈蚀；LED 指示功能及电气性能正常。Constant humidity and heat test: the experimental temperature is 40 ± 2 and the humidity is 90%-95%. The product is not packaged and lasts for 48 hours. After testing, the appearance, indicating function and electrical performance of the product were re-tested. Appearance should be flat without scratches, burrs and other mechanical damage, exposed metal parts should not be rusted; LED indicator function and electrical performance are normal.
- 4 振动试验：频率为 10~55HZ，振幅为 0.35mm，每个方向上扫频循环次数为 10 次。实验后对其外观、指示功能及电性能进行重新测试。外观应平整无划痕、毛刺以及其它机械损伤，外露金属部分不应有锈蚀；LED 指示功能及电气性能正常。Vibration test: the frequency is 10-55 HZ, the amplitude is 0.35 mm, and the frequency sweeping cycles in each direction are 10 times. After the experiment, its appearance, indicating function and electrical performance were re-tested. Appearance should be flat without scratches, burrs and other mechanical damage, exposed metal parts should not be rusted; LED indicator function and electrical performance are normal.
- 5 跌落试验：高度为 1 米，实验台厚度为 20mm 的硬木板，6 个表面，每个方向 1 次。实验后对其外观、绝缘强度、指示功能及电性能进行重新测试，电性能应满足要求。外观无破损，内部无异响。Drop test: Hardwood board with height of 1 meter and thickness of 20 mm, 6 surfaces, once in each direction. After the experiment, its appearance, insulation strength, indicating function and electrical performance were re-tested, and the electrical performance should meet the requirements. No damage to the appearance, no noise inside.

8 外观要求 Appearance requirements

充电器外壳表面平整无划痕，毛刺及其它机械损伤，丝印完整清晰，外露金属部份无锈蚀。

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9 体积与重量 Volume and weight

9.1 体积 volume

体积 volume L65 * W34 * H34 mm³

9.2 重量 weight

净重: Net weight 23 g

10 抽样标准 Sampling criteria

产品抽样检验参照 MIL-STD-105E 标准制定满足本公司产品品质检验之抽样计划，并严格督导实施。

当客户或合同有特殊要求时。可按客户和合同要求执行。Sampling inspection of products refers to the MIL-STD-105E standard to formulate a sampling plan to meet the company's product quality inspection, and strictly supervise the implementation. When customers or contracts have special requirements. It can be executed according to customer and contract requirements.

11 包装 packaging

产品包装方式按客户要求订制。Packaging methods of products are customized according to customers' requirements.

12 使用注意事项 Use considerations

1. 不可在超过 40℃ 环境使用本适配器 This adapter should not be used at temperatures above 40 C.
2. 本适配器使用时请远离热源和火源。Keep away from heat source and fire source when using this adapter.
3. 请勿在酸、碱、和有腐蚀的环境中使用本适配器。Do not use this adapter in acid, alkali or corrosive environment.
4. 请勿将适配器进水或淋雨，以免引起安全问题。Do not let the adapter into the water or rain, in order to avoid causing safety problems.
5. 请勿自行拆开适配器，以免发生危险。Do not disassemble the adapter by yourself to avoid danger.
6. 不得让小孩单独使用本适配器。Children should not be allowed to use this adapter alone.

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