

## SmartU Series



型号: SmartU Plus (SCA607: 六位 USB 充电站)

六个 USB 插口 (总共 5V/8A)

每个插口最大 2.4A 输出

AC 输入线可替换

三年质保



型号: SmartU (六位 USB 充电站: USB x 4 + Micro-USB x 2)

四个 USB 插口 (总共 8A)

每个插口最大 2.4A 输出

底部两条 Micro-USB 充电线

AC 输入线可替换

通过 UL、CE、C-Tick 认证

三年质保

|  |  |                                      |                  |                     |
|--|--|--------------------------------------|------------------|---------------------|
|  | <b>深圳市航嘉驰源电气股份有限公司</b><br>SHEN ZHEN HUNTKEY ELECTRIC CO., LTD. |                                      | REVISION<br>(版本) | <b>T01</b>          |
|  |  |                                      | DATE<br>(日期)     | 2016-1-13           |
| PART NUMBER<br>(产品编码)  | <b>SCA607</b>  | CUSTOMER NAME AND MODEL<br>(客户名称和型号) |                  | <b>中规六位 USB 充电站</b> |

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/AC 输入交流电流

1Amax. @ 90Vac input & Full load/在90Vac 输入和满载条件下最大1A

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

80Amax. @ 264Vac input and/在264Vac 输入条件下, 最大180A

## 2.4. Average Efficiency /平均效率

While input 115Vac and 230Vac, the average efficiency is more than86.07%.The test point is at 25%, 50%, 75% and 100% of max load respectively. (USBA extremity)

在输入115Vac 和230Vac 条件下, 平均效率不小于86.07%。测试点分别是最大载的25%,50%,75%和100%。(USBA 端)

## 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 条件下, 空载功耗小于0.1W.

## 2.6. Flow Backward Electric Current Tests/倒灌电流测试

When cut down AC power, input 0—5V DC power into charger, the current should less than 5mA.

当充电器不接交流电的条件下,在充电器输出端加入 0—5VDC 直流电压,通过充电器的电流应小于 5mA.

## 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>

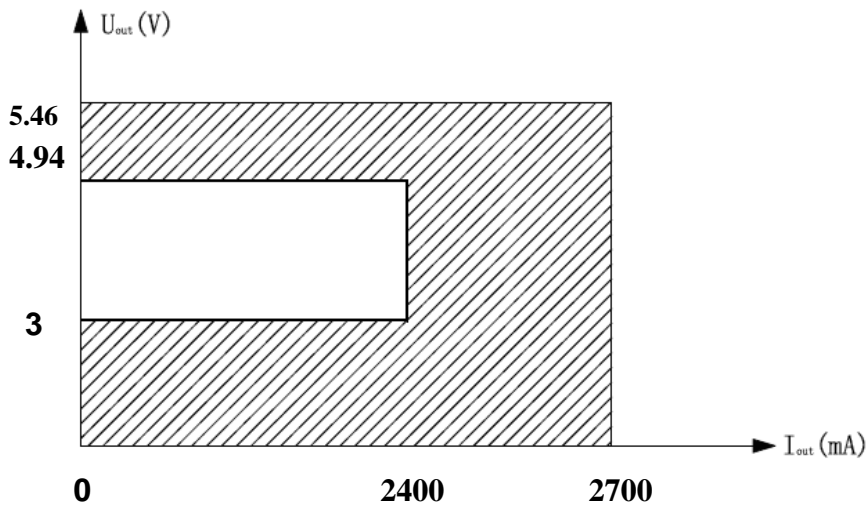
| Output Rating | Rated Load/额定负载 |              |  | Output Range<br>输出电压范围 | R+N<br>纹波与噪声 | Remark<br>备注 |
|---------------|-----------------|--------------|--|------------------------|--------------|--------------|
|               | Rated Load      | CC Mode      |  |                        |              |              |
| +5.0V         | 8A              | 8A           |  | 4.75V ~ 5.25V          | 200mVp-p     |              |
|               |                 | 每路最大<br>2.4A |  | 输出空载电压最大5.3V           |              |              |

Ripple & Noise: Tested by a oscilloscope using 20MHz bandwidth and the output is paralleled a 1uF electrolysis capacitor. (Under the input Voltage 100~240Vac, room temperature)

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1uF 的电解电容。(输入电压 100~240Vac, 常温条件下)

### 3.2. Charger Output Voltage/Current Characteristics/充电器输出电压/电流V-I 特性图

|  |  |   |                         |            |
|--|--|---|-------------------------|------------|
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### 3.3. Turn - on Delay Time/开机延迟时间

3S max. @ 90 Vac input & Full load/在90Vac 输入和满载条件下最大3S

### 3.4. Hold-up Time/关机维持时间

5mS min. @ rated load & 115Vac/60Hz input turn off at worst case

在115Vac/60Hz 输入, 额定负载同时最差情况下关机, 最小5mS

### 3.5. Rise Time/上升时间

50mS max. @ Full load/在满载条件下最大50mS

### 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%

### 3.8. Output Load Transient Response/输出负载瞬态响应

Output voltage is 2.0Vmin and shall be self-recovery while the load step is from 20% to 80% of max load, Cycle : 3S and 2S duration at 80% of max load,

输出电压大于2.0V, 且能自动立即恢复额定电压。负载变化: 从最大载的20%到80%跳变, 周期: 3S, 80%负载持续时间为2S。

## 4. Protection Requirements/保护要求

### 4.1. Over Current Protection/过流保护

单路OCP Point Limited: 保护点限制: 小于3.4A(MAX) 额定3.4A

|  |  |                                      |                  |                     |
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### 总输出过流保护小于10A

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

OVP Point Limited: **7.5V** of Max. Load /保护点限制: 最大7.5V

The power supply shall be protected when the output is over voltage, and the power supply shall not be damaged.

当输出过压时, 产品保护且不会损伤。

## 5.Environment Requirements/环境要求

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

-10°C to +35°C

5%RH to 95%RH

Sea level shall below 2,000 meter/在海拔低于2000 米的条件下, 能正常工作

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

-40°C to +70°C

5%RH to 95%RH (non-condensing) @ Sea level shall be low 5,000 meter

在海拔低于5,000 米的条件下, 低温存储下限为-10°C (无结冰环境); 高温存储上限为

+70°C, 相对湿度为10%RH to 90%RH。

## 6. Reliability Requirements/可靠性要求

### 6.1.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

### 6.2. Drop in/跌落

6 Surfaces each twice, Height: 150cm, on the cement plane

6 面各两次, 跌落高度: 150 厘米, 跌落到水泥地面上

### 6.3.盐雾

Test condition: irtight environment, 35°C±2°C, humidity>85% , use Nacl(PH 6.5-7.2,use 5 %±0.1%)spray AC power 48h (gold-plating) /24h (nickel plating) ,clean the sample and in normal entironment for 2 hours , sample should not have rust, oxidation , blister , paint, orange peel

交流电源适配器在35°C±2°C的密闭环境中, 湿度>85%, PH 值在6.5-7.2 范围内, 用5%±0.1%的Nacl

|  |  |                                      |                     |            |
|--|--|--------------------------------------|---------------------|------------|
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溶液连续喷雾48h（镀金）/24h（镀镍）后，将样品用清水冲洗干净后在常温环境下放置2h 后检查产品的外观。样品不得有生锈、氧化、起泡、掉漆、桔皮等现象

#### 6.4.冲击

Test condition: peak acceleration 300m/s with 11ms half sine pulse,18 times, AC power should be no loose or damaged, electric function should consistent with 4.2.3.1.2、4.2.3.1.3、4.2.3.1.4

交流电源适配器经受峰值加速度300m/s<sup>2</sup> 脉冲持续时间11ms 的半正弦脉冲冲击18 次后机械结构应无松动或损坏，电气性能应符合 4.2.3.1.2、4.2.3.1.3、4.2.3.1.4 的要上

#### 6.5.Common Noise/共模噪音

Common mode noise<2V (frequency: 30 KHz-300 KHz, input voltage264V)  
输入264V，频率2 KHz-500 KHz，共模噪音低于2V

#### 6.6.MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 50,000hours at 25°C, 80% load and nominal input condition  
平均间隔故障时间: 至少50,000 小时,25°C环境及额定输入与80%负载条件下

## 8.EMI/EMS Standards/EMI/EMS 标准

### 8.1. EMI Standards/EMI 标准

|   |
|---|
| EN 55022:1998, +A1:2000 +A2:2003, Class B |
| CISPR 22:2003, Class B                    |
| GB9254-1998, Class B                      |
| AS/NZS CISPR 22: 2004, Class B            |

### 8.2. 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, ± 6kV 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: Differential mode ± 1kV, Common mode ± 2kV            |
| 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   |

## 9.Safety Standards/安规标准

### 9.1. Dielectric Strength(Hi-pot)/介电耐压强度(高压)

Primary to Secondary: 3000Vac / 10mA / 60second (3second for production)  
Or 4242Vdc / 10mA / 60second (3second for production)

|  |  |   |                         |            |
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初级对次级: 3000Vac / 10mA / 60 秒(生产时高压测试时间: 3 秒)  
 或4242Vdc / 10mA / 60 秒(生产时高压测试时间: 3 秒)

**9.2. Leakage Current/漏电流**

20uAmax. at 264Vac / 50Hz/在输入264Vac/50Hz 的条件下最大20uA

**9.3. Insulation Resistance/绝缘阻抗**

100MΩ min. at primary to secondary add a 500Vdc test voltage  
 在初级与次级间加500Vdc 进行测试,最小100MΩ

**9.4. Regulatory Standards/安规标准**

| Type                                   | Country | Standard  | Type                          | Country   | Standard   |
|--|---------|-----------|-------------------------------|-----------|------------|
| <input type="checkbox"/> UL/CUL        | USA     | UL60950-1 | <input type="checkbox"/> PSB  | Singapore | IEC60950-1 |
| <input type="checkbox"/> TUV           | Europe  | EN60950-1 | <input type="checkbox"/> PSE  | Japan     | J60950     |
| <input type="checkbox"/> CCC           | China   | GB4943    | <input type="checkbox"/> NOM  | Mexico    | NOM-001    |
| <input checked="" type="checkbox"/> CE | Europe  | EN60950-1 | <input type="checkbox"/> GOST | Russia    | MEK60950   |

**13.0 产品外观图及线材规格图**



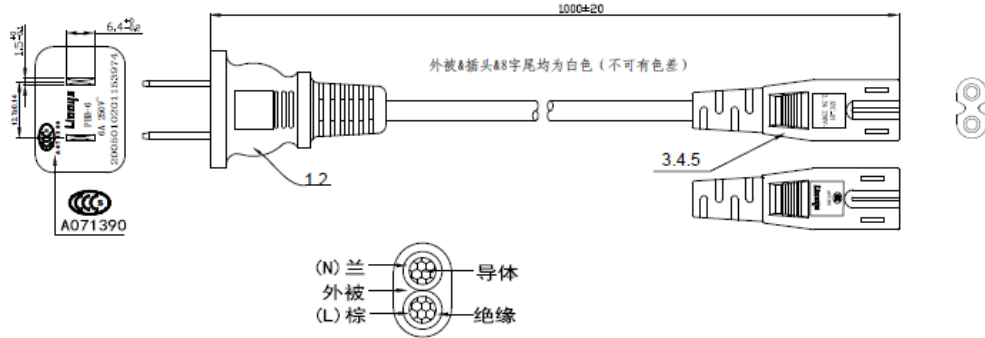
**PART NUMBER**  
(产品编码)

**SCA607**

**CUSTOMER NAME AND MODEL**  
(客户名称和型号)

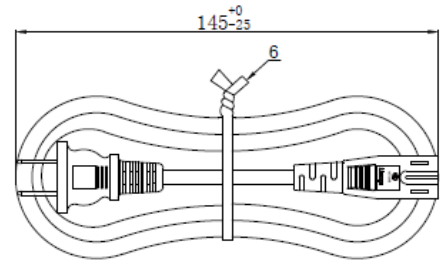
**中规六位 USB 充电站**

251-09102500R0



外被印字:  
CCC 2002010105009097 A001833 60227 IEG 52 (RVV) 300/300V  
2X0.5mm<sup>2</sup> GB/T 5023.5-2008 LINOYA ELECTRONIC TECHNOLOGY CO LTD

- 技术要求:
1. 包装方式: 扎线尺寸参照右扎线尺寸图.
  2. 产品外观要求洁净光亮, 9416白.
  3. 产品符合ROHS环保要求.



|   |                   |    |       |
|---|-------------------|----|-------|
| 6 | 150MM白色扎线带        | 1  | PCS   |
| 5 | 八字尾外壳(白色)         | 1  | PCS   |
| 4 | φ 2.35三爪铜管(磷铜)    | 2  | PCS   |
| 3 | 60P 9416白色插头料     | 8  | g     |
| 2 | 45P 9416白色插头料     | 12 | g     |
| 1 | 国标两插一体式内架 (PBT材质) | 1  | PCS   |
| ☆ | 规格型号              |    | 用量 单位 |

|       |     |          |        |                  |          |               |        |                |
|-------|-----|----------|--------|------------------|----------|---------------|--------|----------------|
|       |     |          |        | FINISH           |          |               |        |                |
|       |     |          |        | <b>Huntkey航嘉</b> |          |               |        |                |
| MARK  | QTY | ECN NO.  | EDITED | DATE             | SIZE     | REV           | WEIGHT | SCALE          |
|       |     |          |        |                  | A4       | 01            |        |                |
| DRAWN | 李霞全 | 15/11/20 | UNIT   | mm               | FILE NO. | EQD-731-26124 |        |                |
| CHKD  | 陈泽光 | 15/11/20 | STDD   |                  |          | SHEET         |        | 251-09102500R0 |
| MFG   |     | APPD     | 大小编    | 15/11/20         |          | OF            |        |                |