Every part matters

EN

Datasheet

RS PRO Class I DeskTop Power Supply

RS stock No: 144-0986

Output: 12V/7A

Index

1. General Description

The purpose of the document is to specify a Single phase AC input, single output switching power supply. This specification is suitable for: EA10952C_12V
This product is AC to DC switching power transfer device, it can provide for 12V, 7A max & 84W max DC output with constant voltage source. This Specification defines the input, output, performance characteristics, environment, noise and safety requirement for a power supply.

2. Input Electrical Specification

2-1. Input Voltage

Maximum Voltage: 264Vac
Normal Voltage: 100~240Vac
Minimum Voltage: 90Vac

2-2. Input Frequency

Maximum Frequency: 63Hz
Normal Frequency: 50~60Hz
Minimum Frequency: 47Hz

2-3. Input Current

A. 1.5A Max. @ 115Vac input with full load.
B. 0.75A Max. @ 230Vac input with full load.

2-4. Energy Saving Standard:

A. Average Efficiency ≥88% under normal line input.
B. No load power consumption: ≤0.21W at normal line input.

2-5. Configuration

2-wire AC input (Line, Neutral)

2-6. Input Fuse

The hot line side of the input shall have a fuse, rating T3.15A/250V.

2-7. Inrush Current

≦ 60A at 110 Vac At cold start, maximum load.

≦ 120A at 220 Vac At cold start, maximum load.

2-8. Line Regulation

This line regulation is less than ± 1%, of rated output voltage @ full load.

2-9. Hold Up Time

≧ 10 mSec., @ normal line, with full load.

2-10. Rise Time

≦50 mSec., @ rated AC input, with full load from 10% to 90% of output voltage.

2-11. Turn-ON Time

The output voltage should rise to 90% of rated output voltage in less than 3 SEC. from AC voltage apply.

2-12. Harmonic Standard and Power Factor

The adapter complied with IEC 61000-3-2 Class D harmonic standard while input power over than 75W. The PF shall > 0.95@100Vac input and >0.9@240Vac input with full load.

3.Output Electrical Specification

3-1. Output Voltage and Current

Output Voltage (V)	Current Min.(A)	Current Max.(A)
+12	0	7.00

3-2. Load Regulation

Voltage (V)	Output Voltage Range
+12	11.40V –12.60V

3-3. Dynamic Load Regulation

±5% excursion for 50% - 100% or 100% - 50% load change of DC output at any frequency up to 1KHz (duty 50%).

3-4. Ripple & Noise

The power supply shall not exceed the following limits on the indicated voltage for 60Hz or 50Hz ripple, Switching frequency ripple and noise and measured with a 20MHz bandwidth

Output	Ripple/Noise
+12V	180mV(PK)

Input condition : for rated voltage , Output condition : for max load
Ripple / Noise: 60Hz ripple + switching ripple and noise
Ripple & Noise is measured at the end of output cable which is added a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor

3-5. Over Voltage Protection

150% Max. of the rated output voltage.
The adapter shall have over-voltage protection with auto-recovery mode when output voltage reaches the trigger point of OVP or during the feedback open loop condition.

3-6. Over Current Protection

110~150% of rated output current.
The adapter can withstand continuous short at DC output and no damage.
It will enter into normal condition if the fault condition is removed.

3-7. Stability

2% Max. at constant load with constant input (after 30 minutes of operation).

3-8. Drop-out (Power Line Disturbance)

Output voltage shall remain within the specified regulation range, through the absence of a line input during 1/2 cycle, at full load and normal AC line input

3-9. Voltage Isolation

The DC ground will be isolated from the AC neutral and AC line.

4. Reliability Specification

4-1. **MTBF (MIL-HDBK-217F)**

The power supply shall be designed and produced to have a mean time between failure (MTBF) of 100,000 hours at 25 degrees C.

5. Environment Specification

5-1 Temperature

a. Operating : 0 to 40 ℃

b. Storage : -20 to 85 ℃

5-2 Humidity

a. Operating : 10 to 90 %

b. Storage: 5 to 90 %

5-3 Altitude

From sea level to 5,000 Meters (operation) and 5,000 Meters (non operation)

6. Safety Specification

6-1. Hi-Pot Test

3000Vac, 3mA, 2 seconds between primary and secondary circuit.

6-2. Insulation Test

500Vdc, 3 Sec. between primary and secondary circuit

IR should ≧ 50 MΩ.

6-3. Leakage Current

≦250uA, at 240Vac/50 Hz

6-4. Safety

UL/CUL, TUV, CB, CCC, CE, FCC

6-5. EMS

Items	Specification	Reference
ESD	Contact: ± 4KV	IEC 61000-4-2
	Air: ± 8KV	
RS	Frequency: 80~1000MHz Field Strength: 3V/M，80% AM(1KHz)	IEC 61000-4-3
EFT	1.0 KV on input AC power ports.	IEC 61000-4-4
SURGE	Line to Line: ± 1KV (peak)	IEC 61000-4-5
	NC	

6-6. EMI

Comply with Standards
CISPR 32, EN 55032 Class B

7. Mechanical Specification

7-1. Physical Size : 133mm (L) * 59 mm (W) * 34 mm (H)

7-2. Enclosure material : 94V-0 minimum

7-3. Output Cable (Reference): UL1866 #14

7-4. Vibration Test

The vibration frequencies are set at 20Hz, with total amplitude of 1.5mm Along the 3 directions namely X-Y-Z. The each direction should be vibrated for 60 minutes, after testing no abnormal electrical or mechanical should occur.

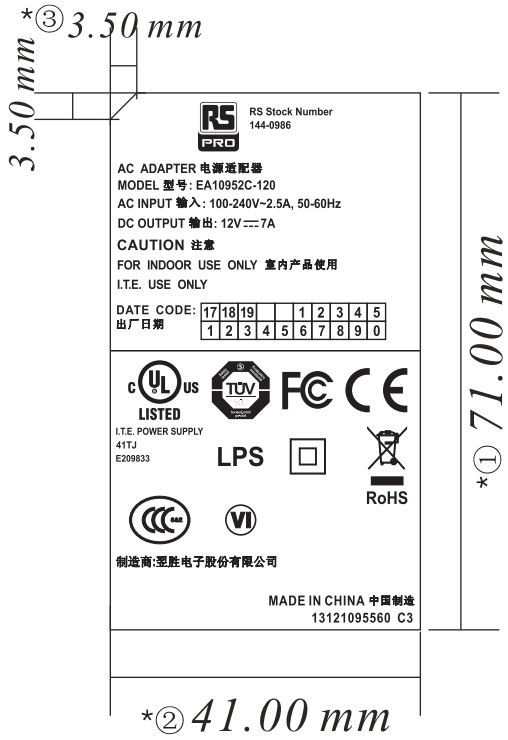
7-5. Drop Test (Referencing to CSA C22.2 No.950/UL1950/UL1310/EN60950)
Products shall be dropped from a height of 900 mm onto a horizontal surface consists of hardwood at 13mm thick, mounted on two layers of plywood each 19mm to 20mm thick, all supported on a concrete or equivalent non-resilient floor. Upon conclusion of test, the equipment need not be operational.

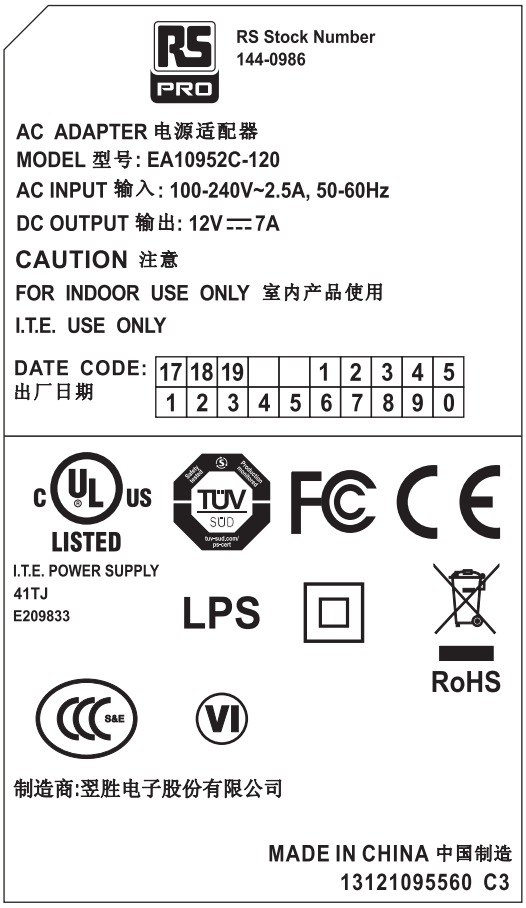
7-6. Net Weight (Reference) : 450 g

工程確認圖

客戶名稱	B009

版本	变更项目
1	





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5.出货检验报告□有□无
6.包装方式:
7.其他:*标示为重点检验尺寸

吴江巷泉包装材料有限公司 FAX:0512-63333167 TEL:0512-63330858		訂單號 (ORDER NUMBER)	核準 (APPROVED BY:)
品名 (DESCRIPTION) 标 签	料號 (PART NO.) 3121095560	單位 (UNIT) mm	日期 (DATE) 2017/07/18
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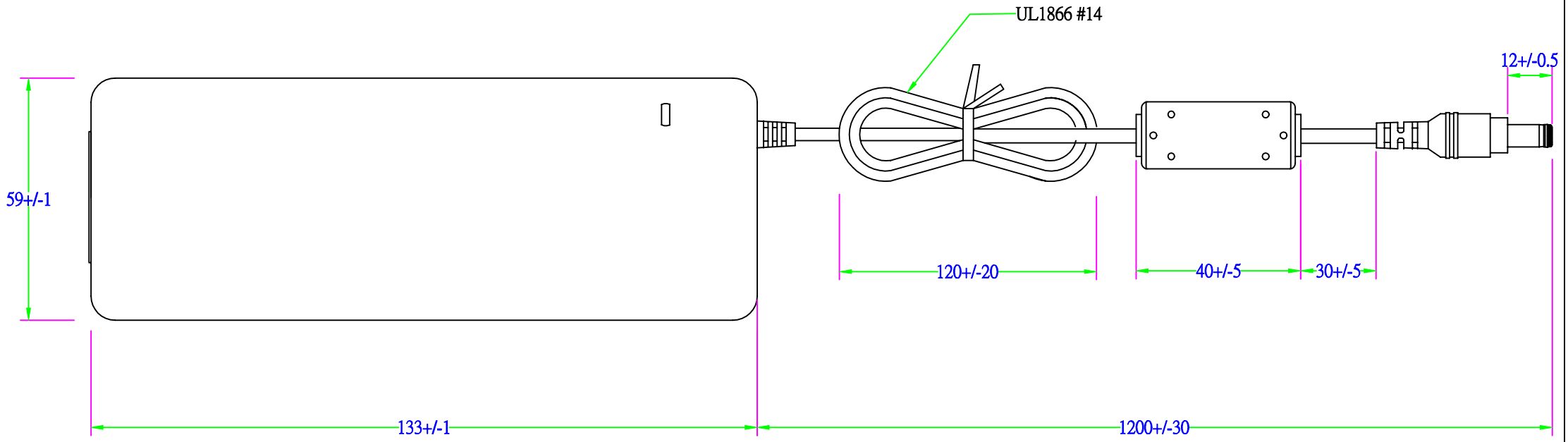

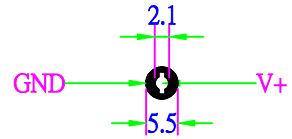

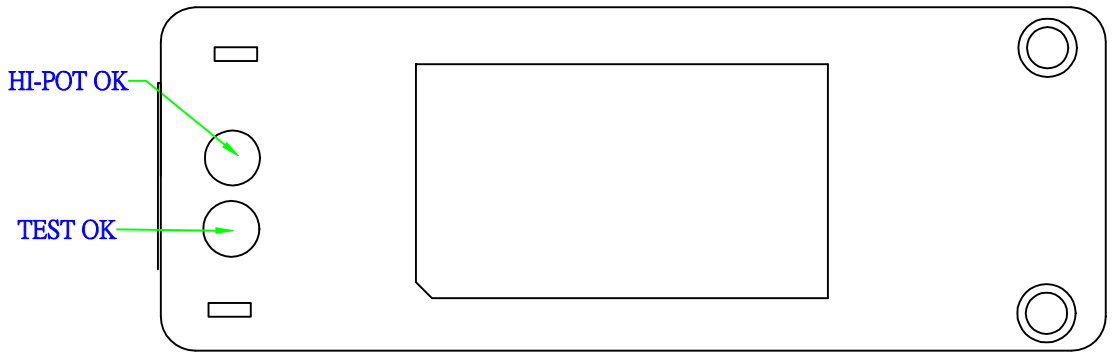

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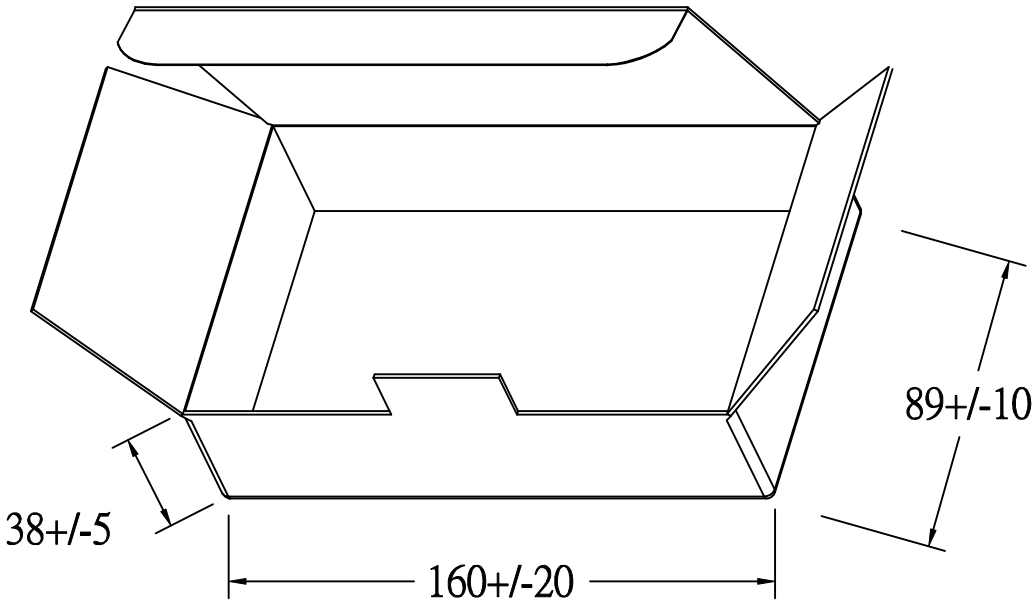

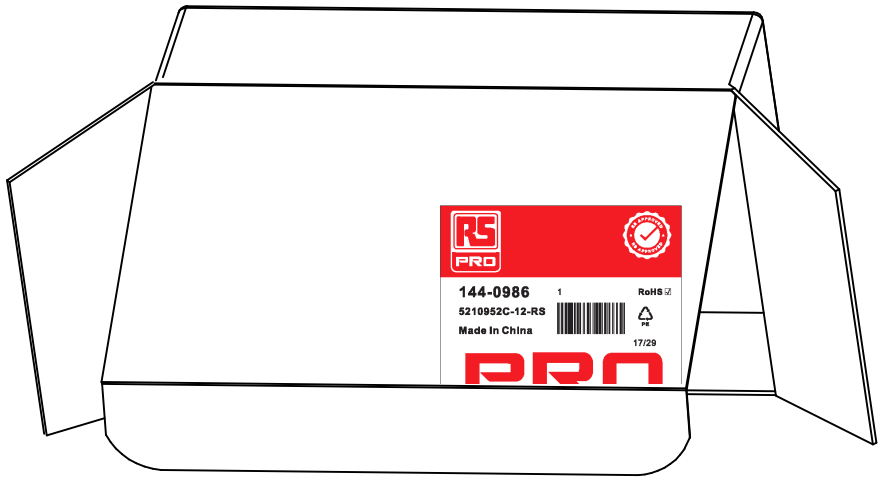

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工程確認圖 A B C

客戶名稱	B009

版本	变更项目
1	

74mm

55mm

Pantone 485C

备注：
17/29=yy/ww
(制造年/周期)

条码扫描内容为：1440986

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	品名 (DESCRIPTION) 标 签	料號 (PART NO.) 3111095124	單位 (UNIT) mm	日期 (DATE) 2017/07/18
	繪圖 (DRAWN BY:) 彭美贞	校稿 (CHECKED BY:)	修訂 (REVISION)	主管 (CHARGE) 程国华

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