

# PYP ELECTRONIC LTD

*SWITCHING POWER SUPPLY*

## **SPECIFICATION FOR APPROVAL**

Customer : \_\_\_\_\_

Part NO. : \_\_\_\_\_

Customer Approval NO. : \_\_\_\_\_

Model NO: SPS-121500EU ROHS : Yes

Description: 12V 1500mA Revision : 02

Issued Date: 2018.03.12 Certification : CE

### **CUSTOMER APPROVED**

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Remark:

- 1).Please approve and sign back to PYP.
- 2).If there is on signing back,this Approval sheet will be regarded as being approved automaticly once the first P.O of the model specified in the sheet is issued.

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### Change List

ECN No.	REV	Revision Description	Date
1	01	NO SAMPLE	2018.05.18
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

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## 1. Description.

This product is a [Switching Power Supply](#)(AC TO DC power transfer device) , it can provide for a [18W \(12V DC 1500mA\)](#) single DC output with constant voltage source, it covers all the related electrical, mechanical, environmental and safety aspects.

## 2. Electrical.

### 2.1 Input Voltage (AC) :

- a. From [100- 240Vac](#) Nominal.
- b. From [90 - 264Vac](#) Maximum.

### 2.2 Input Frequency Range

[47 Hz](#)(min) ~ [63 Hz](#)(max)

### 2.3 Input In-rush Current.

[50A](#) Max at Cold start@[25°C](#), AC input [220V](#) and dc output full-loading.

### 2.4 Input Current.

- a. [0.5A](#) Max at 90V ac
- b. [0.4A](#) Max at 264V ac

### 2.5 Hold-Up time.

[3mS](#) minimum at dc output full loading and 115 Vac 50/60Hz input.

### 2.6 Input wattage at output no-load / minimum-load condition.

Less than [0.1W](#) Pin DC output load and 240Vac input voltage and frequency condition.

### 2.7 Efficiency.

[86%\(Level VI\)](#)minimum at dc output full loading and 115/230Vac input voltage range included dc output cable voltage drop loss.

### 2.8 Safety Test.

- a. Leakage current less than [0.25mA](#) at 264Vac, 50Hz.
- b. Hi-Pot test : [3000Vac, 10mA, 3Sec](#) between Primary to Secondary ground.
- c. Insulation : at dc [500Vdc, 1 Sec](#) between Primary to Secondary circuit, IR shall  $\geq$  [50MΩ](#).

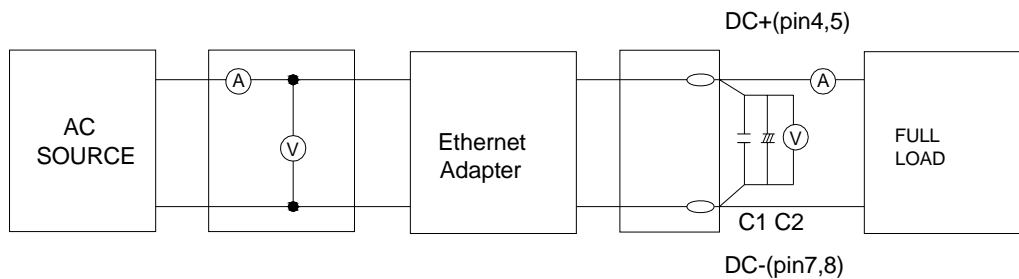
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2.9 Output Voltage and Current (DC).

V/out	V/range	I /out(Nominal)	I/out(max)10Sec
12.0V	12.6 -11.4V	1.5A	

2.10 Ripple and Noise.

Low frequency ripple ( < 100KHz )  $\leq$  100mVpp, and Total composite Ripple and Noise. Less than 120mVpp, tested by dc loading side parallel with a 10uF/EC(C2) and 0.1uF/Ceramic(C1). Capacitors and Measured Band-Width with DC-20MHz.



2.11 Over-Shoot and under-shoot.

Less than 10% of nominal Voltage value.

- a. 1.6A (the condition of 100Vac input)
- b. 1.65A (the condition of 240Vac input)

2.12 Protection.

- a. SCP: For short circuited protection and with auto-recovery function.

2.13 Rise time.

The output voltage should rise from 10%~90% volt and settle within regulation in less than 20 msec from apply of AC input voltage condition.

2.14 Output voltage Temperature Coeffience.

Less than 0.5%/C.

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**3. Environment.**

3.1 Temperature

- a. Operation : -10 to 40 °C
- b. Storage : -30 to 80 °C

3.2 Humidity

- a. Operation : 10 to 95%
- b. Storage : 10 to 95%

3.3 Altitude.

From sea level to 10,000Ft (operation) and 40,000Ft (Non operation)

**4. EMC.**

4.1 EMS

Test Item	Test Specification	IEC Standards
ESD	Contact	61000-4-2
ESD	Air	61000-4-2
RF	FR:26MHz-1.0GHz, Field Strength :3V/M	61000-4-3
EFT	1KV on AC power line	61000-4-4
SURGE	1KV	61000-4-5
CS 3	V/M	61000-4-6
DIPS	0%250Cy,40%5Cy, 0% .5Cycle	61000-4-11

4.2 EMI for both Conduction & Radiation.

**5. Reliability.**

Refering Standards	Specification
CISPR	Part 22,class B

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5.1 .Life.

a. Average life expectancy of 3 years. 8(H)×300(D)×3(Y).

b. Environment Ambient: 25°C

5.2. M.T.B.F.

30,000 Power On Hours at 25°C

5.3 Temperature Rise.

Less than 45°C at nominal AC input / DC output full loading and environment temperature 25+/-1°C on Top/Bottom of plastic case.

5.4. Burn-in.

100% Burn-In with 80~100% loading & 35~45°C Environment temperature .

5.5. Vibration Test.

a. Non operation vibration with shipping container shall be 2G'S peak, 7-50Hz, 4G'S peak 50-500Hz, after test no abnormally to be found.

b. Operation vibration shall be 0.5G'S peak, 10-60Hz, 3 Axes, after test no abnormally to be noted.

5.6. Drop-Test.

The product to be dropped from 1000mm height onto a concrete floor covered with 20mm vinyl tile one times from 3 different surface(X-Y-Z),after test,the switching power supply is not broken, disassembled, or damaged to access hazardous parts.

**6. MECHANICAL CHARACTERISTICS.**

6.1 Dimension: 75.0mm(L) \* 29.0mm(W) \* 79.0mm(H)

6.2 AC Inlet: EU plug

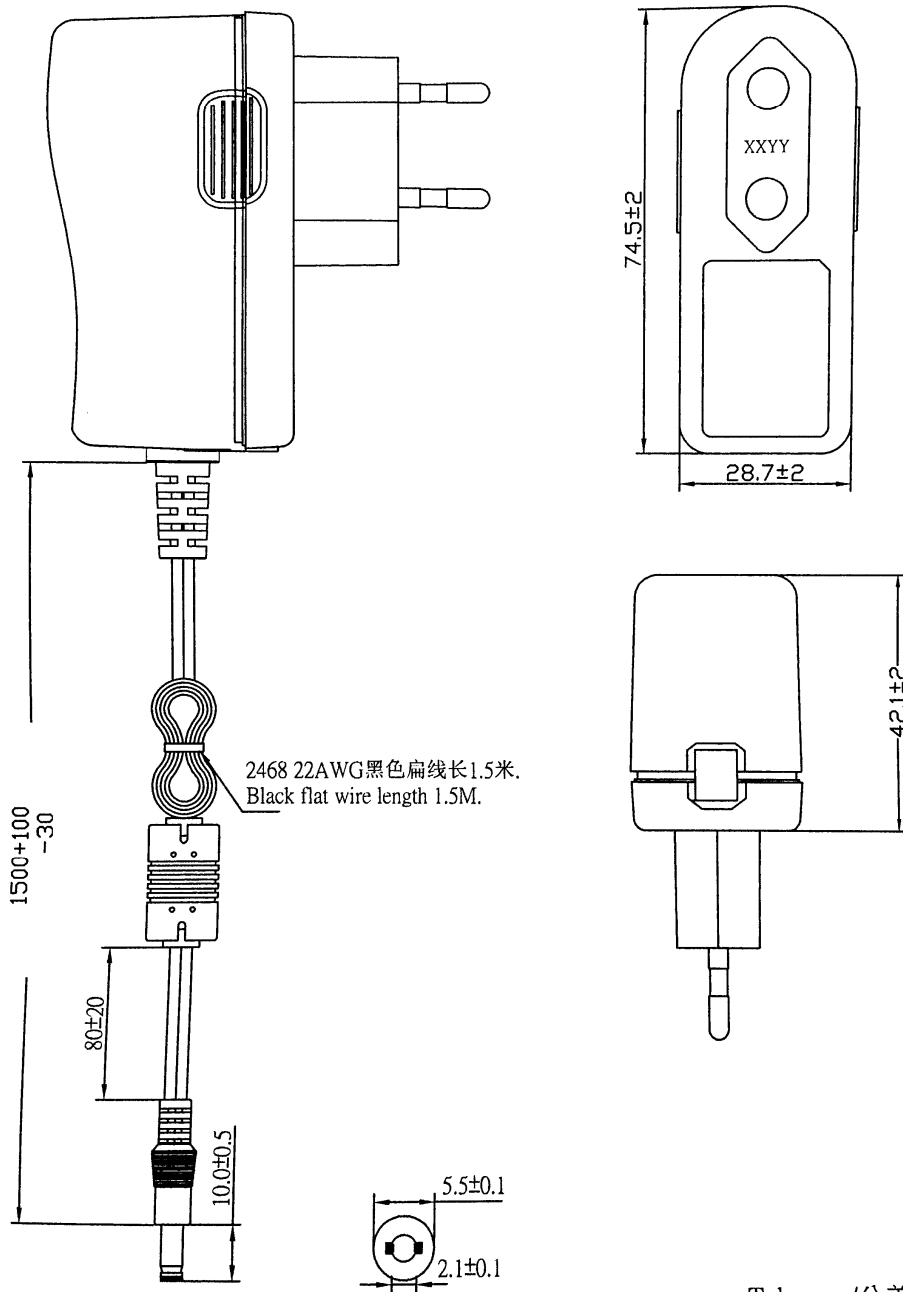
6.3 Case Material: NORYL (PC,PC+ABS,or equivalent),94V-0, Color;Black

6.4 Output Plug: 2468 22awg L=1.5M 5.5\*2.1 DC

6.5 Surface: Damaged, or rusted surface is not permitted

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**7. OUTLINE DIMENSIONS(Unit:mm).**



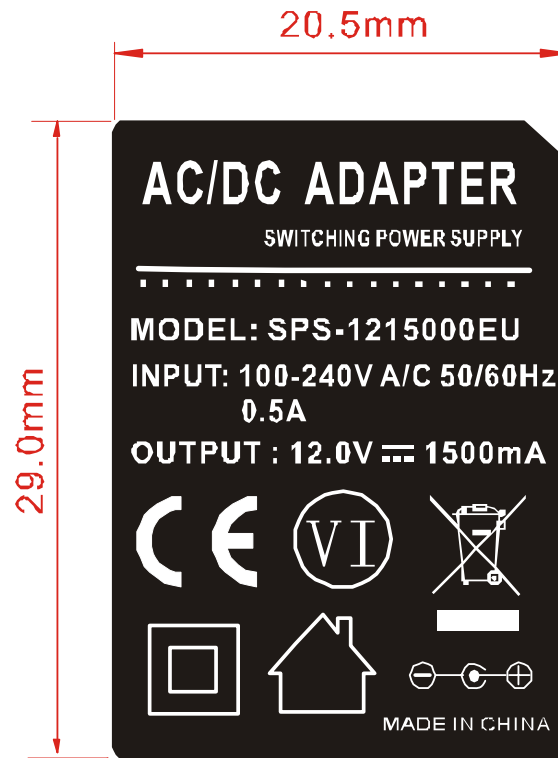
Tolerance/公差:  $\pm 2$

- NOTE:**
1. Case cover & chassis material **PC: BLACK**
  2. AC PIN MATERIAL: BRASS (NI PLATED)
  3. Tolerance:  $\pm 2$
  4. Case cover: NO company LOGO

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**8.LABEL DIAGRAM.**

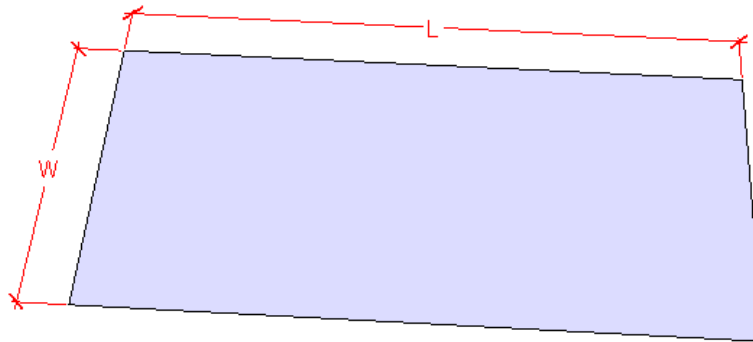


- Note:**
- 1. MATERIAL: POLYESTER+PVC; COATING: 0.25+-0.05mm
  - 2. SILVER characters BLACK background
  - 3. LEAD FRE
  - 4. Tolerance: ±0.1

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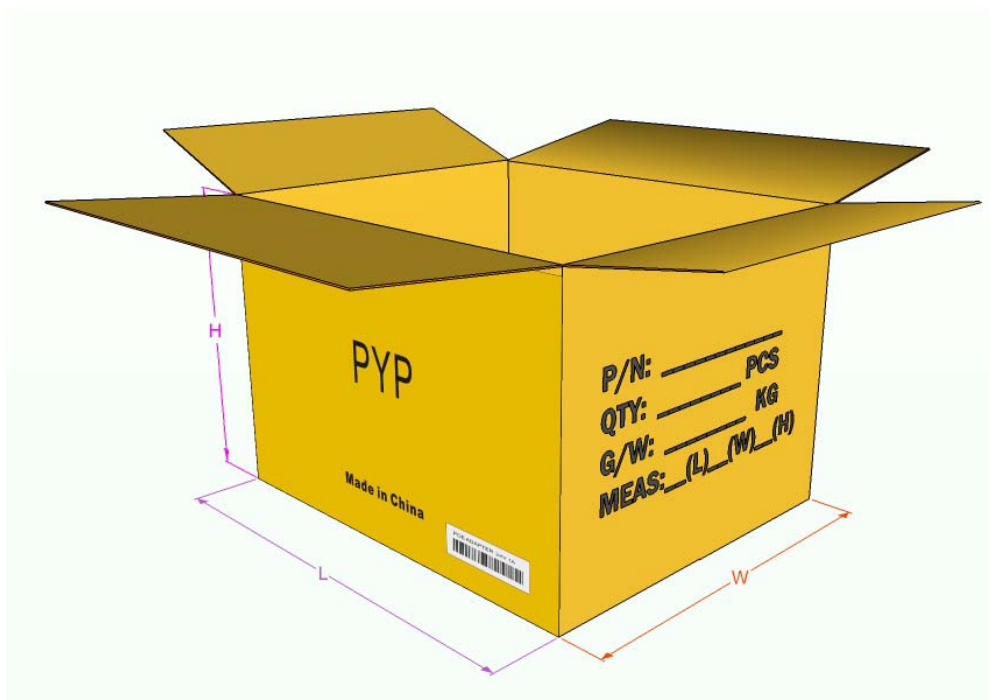
**9. Packing Drawing(Unit: mm).**

**PE Bag**



**Dimensions (L\*W): 200\*120mm**

**Q'ty: One bag /PCS**



**Outer Carton: Dimensions (L\*W\*H): 480\*415\*235mm Q'ty: One Box/100PCS**

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