

SPECIFICATION FOR APPROVAL
AC/DC ADAPTORCUSTOMER SPEC:INPUT: 100-240V AC 50/60Hz OUTPUT:12VDC 5000mACUSTOMER DWG./PART NO. SW3101F-C2PART NO. SW3101F-C2 (PAHS+REACH+ROHS)SAMPLE NO: S83636 REV.: A ISSUE DATE: 2017-03-07

PRODUCT NO: _____

Unit Color: Black



White



APPROVED SIGNATURES/客户确认

核准/APPROVED BY	审核/ CHECKED BY:	检测/TESTED BY:

Manufacturer/制造商

业务/SALES	品管/QE	核准/APPROVED BY	制样/DESIGNED BY
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Project Modify List					
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1 GENERAL

1.1 Description

This specification defines the performance characteristics for a class II adapter., single-phase 60.0watts. Single output level power supply.

- Simple design philosophy.
- Reliability level of 50K hours MTBF @ 25° C(rated input voltage, and using the BELLCORE SR-332 method).
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC60950-1.

The maximum room ambient temperature (T_{mra}), as mentioned in clause 1.4.12 of IEC60950-1, for the external power supply is 40°C.

- Cooling: natural convection.

2 INPUT REQUIREMENTS

2.1 Input Conditions

The Supply shall operate over the voltage ranges as follows:

Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Rated input current	1.5A max.
Maximum input power	70.96W
Input current (no loading)	≤55mA
Power consumption (no loading)	0.15W Max.
Primary current protection	An adequate internal fuse on the AC input line is provide.
Configuration	<u>2</u> Conductor

2.2 AC Inrush Current

No damage shall be occurred and the input fuse shall not be blown up nominal input voltage full load 25°C cold start.

3 OUTPUT REQUIREMENTS

3.1	Nominal dc output voltage	+12V
3.2	Minimum load current	0.05A
3.3	Rating load current	5.0A
3.4	Peak load current	/
3.5	Rating output power	60W
3.6	Line regulation	The line regulation is less than <u>±5%</u> while measuring at rated load and +/-10% of input voltage changing.

3.7	Load regulation	The load regulation for <u>+12V</u> is less than <u>+/-5%</u> , at measured output load from 10% to 100% rated load .
3.8	Peak load regulation	The peak load regulation for <u>+12V</u> is less than <u> / </u> , at measured output load from 30% to 100% rated load.
3.9	Ripple and noise	150mVp-p Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.10	Switching efficiency	<u>89.00%</u> minimum output current from 100%, 75%, 50%, 25%. <u>79.00%</u> minimum 10% load 115V/60Hz and 230V/50Hz
3.11	Turn on delay time	<u>4000mS</u> Max At nominal input AC voltage and full load
3.12	Rise time	The Supply shall have a start-up rise time of less than <u>20mS</u> to rise to within regulation limits for all DC outputs.
3.13	Hold up time	<u>8mS</u> minimum At nominal input AC voltage and full load
3.14	Output over-shoot	Less than <u>10%</u> of nominal voltage value
3.15	Temperature coefficient	Output voltage temperature coefficient $\pm 0.05\%/^{\circ}\text{C}$
3.16	LED indication function	/
3.17	Protection function	
	Over-voltage protection	The output voltage shall be clamped by internal protection.
	Short-circuit protection	The adapter shall not be damaged by short the DC output to Ground. The adapter shall resume normal operation when a short circuited fault condition is removed.
	Over current protection	The power supply will be protection when output power at <u>110-200%</u> of all rated dc output

4 MECHANICAL

4.1 Enclosure And Layout

Plastic case: UL94V-1
 Weight : /(Max.)
 Dimensions: 125*57.1*34.7 mm
 Color : BLACK

4.2 Input and Output Configuration

Input pin: MINI 2PIN
 Output connector : dc plug type: 5.5*2.1*12mm
 Polarity: Center“+”
 Cable: 1.2M VW-1 2468 80°C 300V 16AWG 2C BLACK+WHITE (PAHS+REACH+ROHS)

5 REGULATORY COMPLIANCE

5.1 EMC Specifications

The external power supply must meet all specification in this section. It is recommended that the external power supply be tested with the customer's equipment in order to get the best EMC solution.

5.1.1 Radiated and Conducted Emission

The power supply shall comply to:

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

EN55022, Class B for radiated and conducted emissions.

GB9254, GB17625.1.

5.2 Immunity

5.2.1 Electrostatic Discharge Immunity

EN 55024, EN 61000-4-2

- Air Discharge: $\pm 8\text{kV}$

- Contact Discharge: $\pm 4\text{kV}$

- Performance Criteria B

Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester, energy storage capacitance of 150pF, and discharge resistance of 330Ω , 8KV air discharge, 4KV contact discharge.

5.2.2 Radiated Field Immunity

EN 55024, EN 61000-4-3

Frequency Range: 80-1000MHz

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

Performance Criteria A

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

5.2.3 Fast Transient Immunity

EN 55024, EN 61000-4-4

- Power line: 1kV

- Signal line: 0.5kV

- Performance Criteria B

5.2.4 Surge Immunity

EN 55024, EN 61000-4-5

- 1.2/50 usec Open Circuit voltage

- 8/20 usec Short Circuit current

- Power line: 1kV

- Line to Earth: 2kV

Lightning Surge Voltage shall be applied in differential and common mode to AC input lines and cross primary ac input and secondary GND.

5.3 Safety Requirements and Certification

5.3.1 Regulatory Standard

The power supply shall comply with the following international regulatory standards

for short	Country	Certified Status	Standard/标准
UL	USA/美国	MEET	UL 60950-1
CUL	Canada/加拿大	MEET	CSA C22.2 NO.950
GS	Europe/欧洲	MEET	TUV/VDE-EN60950
CE	Europe/欧洲	MEET	Declared & CE Mark

5.3.2 Additional Safety Requirements

- ◎ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 3000 Vac, 10mA, 1 minute.
- ◎ Insulation Resistance, Input to output: 10M Ω (MIN.) at 500 VDC.
- ◎ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- ◎ The leakage current shall not exceed 0.25mA.

6 ENVIRONMENTAL REQUIREMENTS

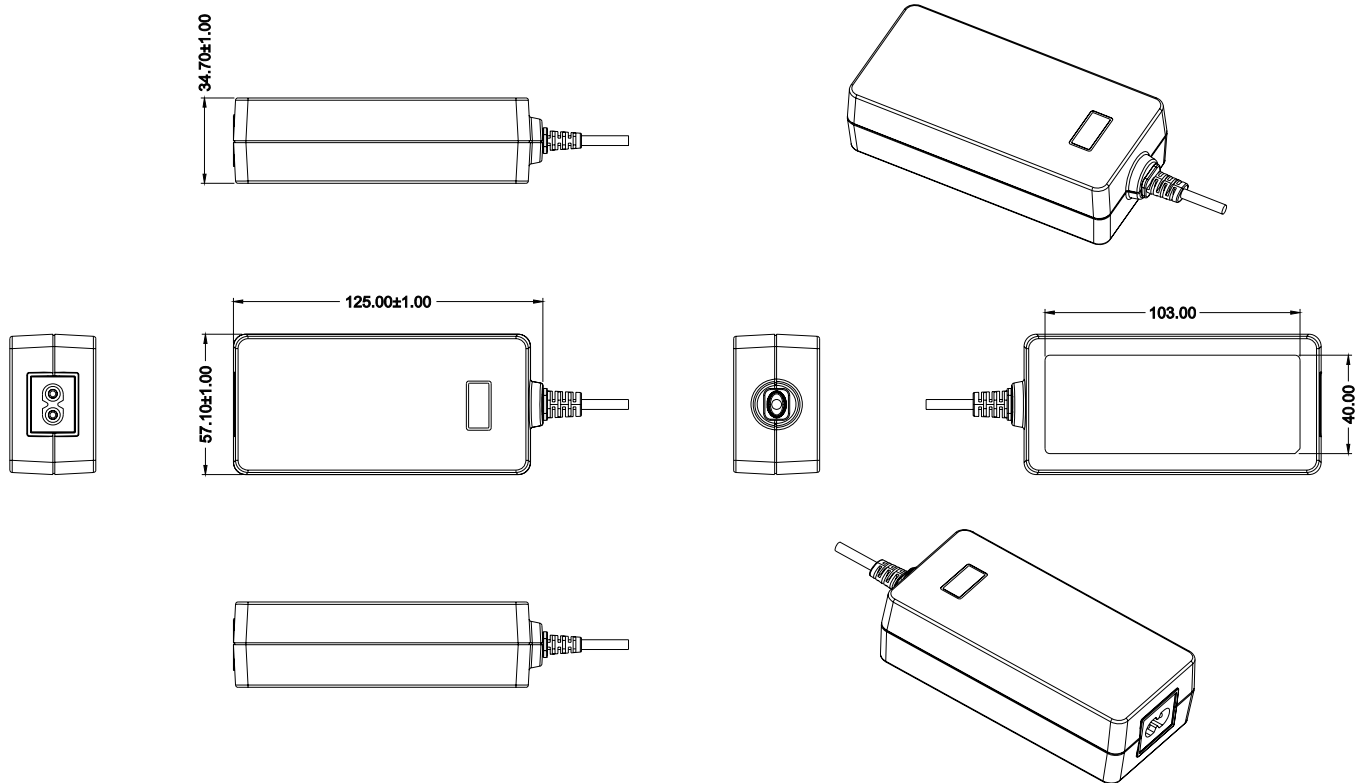
6.1 Temperature

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

6.2 Humidity

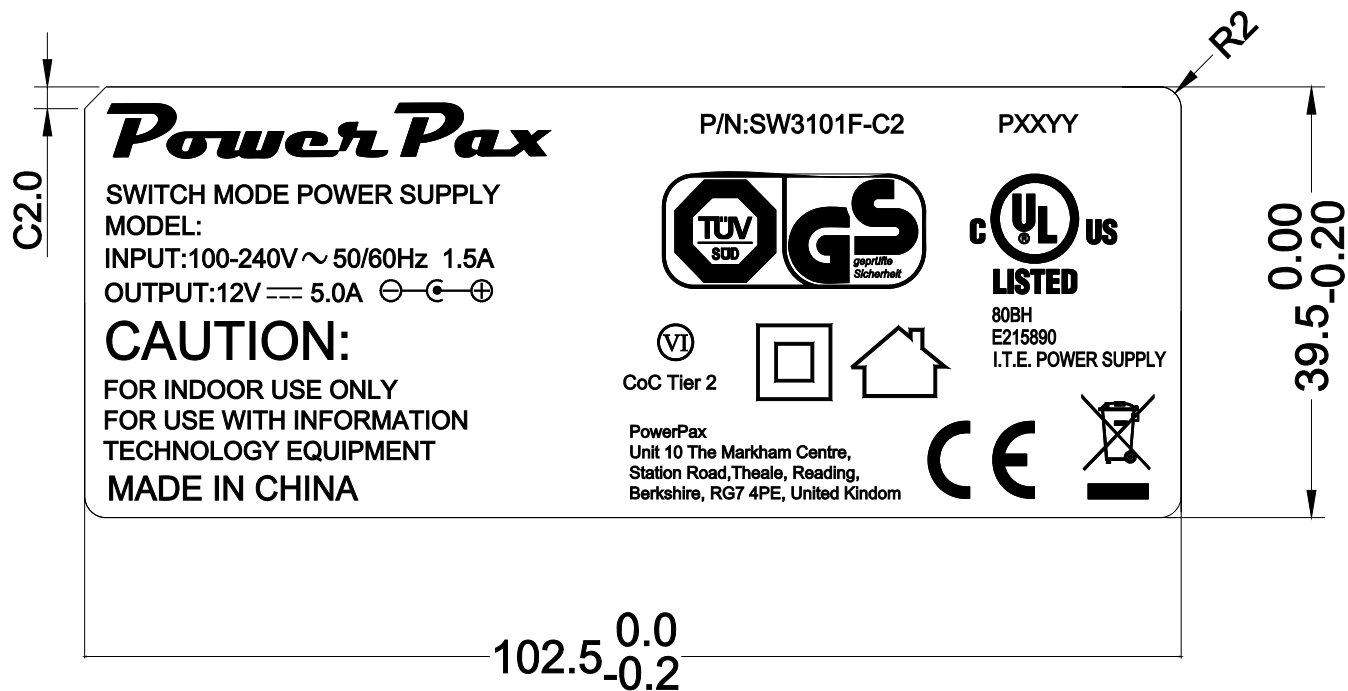
- ◎ Operating: 10%~90% (Non Condensing)
- ◎ Non-Operating: 10%~90% (Non Condensing)

7 APPEARANCE DRAWING: (Unit: mm)



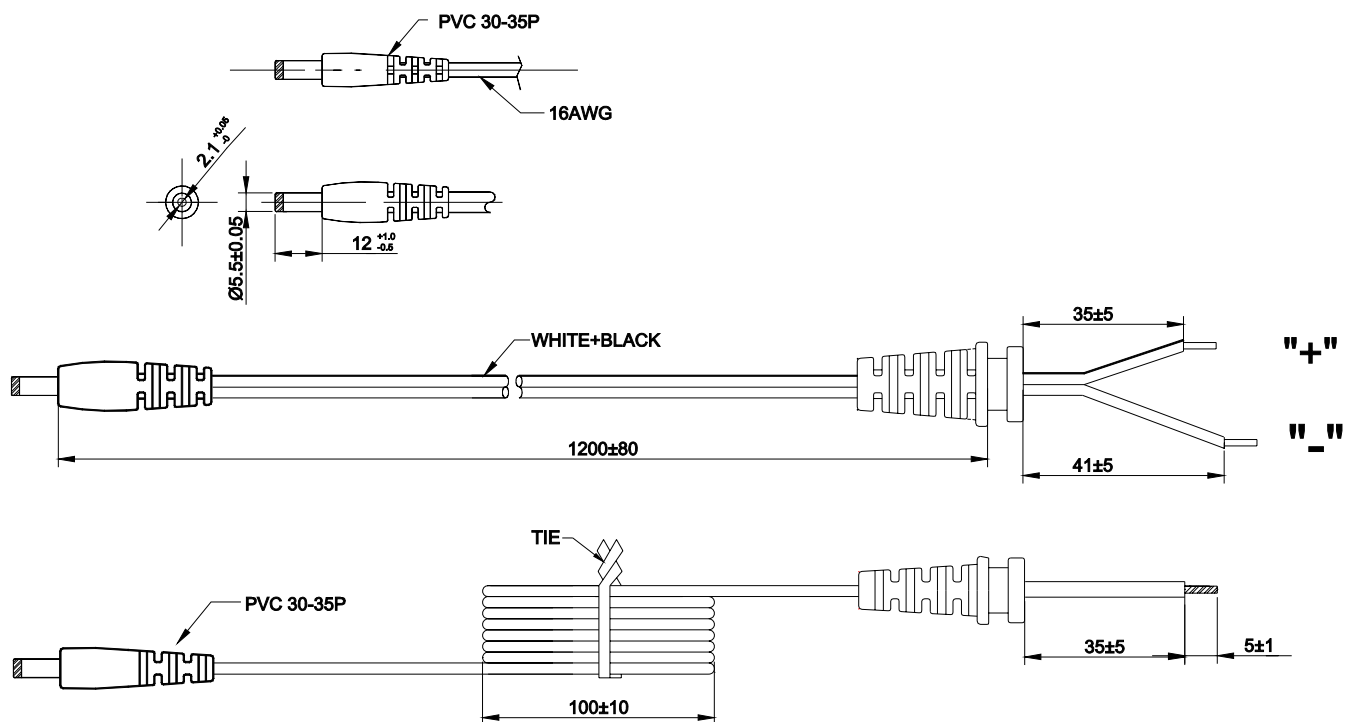
- NOTE: 1. Case cover & chassis material:
PC/SE-1 BLACK (NO)
2. AC PIN MATERIAL: BRASS (NI PLATED)
3 .PAHS+REACH+ROHS
4.Satin Finish 雾面

8 NAME PLATE:



- Note: 1. ☐ MATERIAL: POLYESTER+PVC; COATING:0.25+-0.05mm
White characters Black background
PAHS+REACH+ROHS
2. ☒ Laser (镭射)
- PXXYY(P=PAHS XX=WEEK YY=YEAR) 按实际生产日期制作

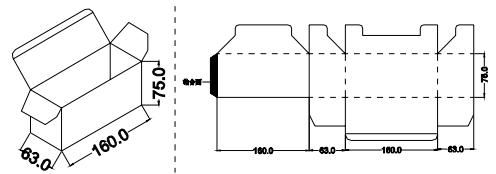
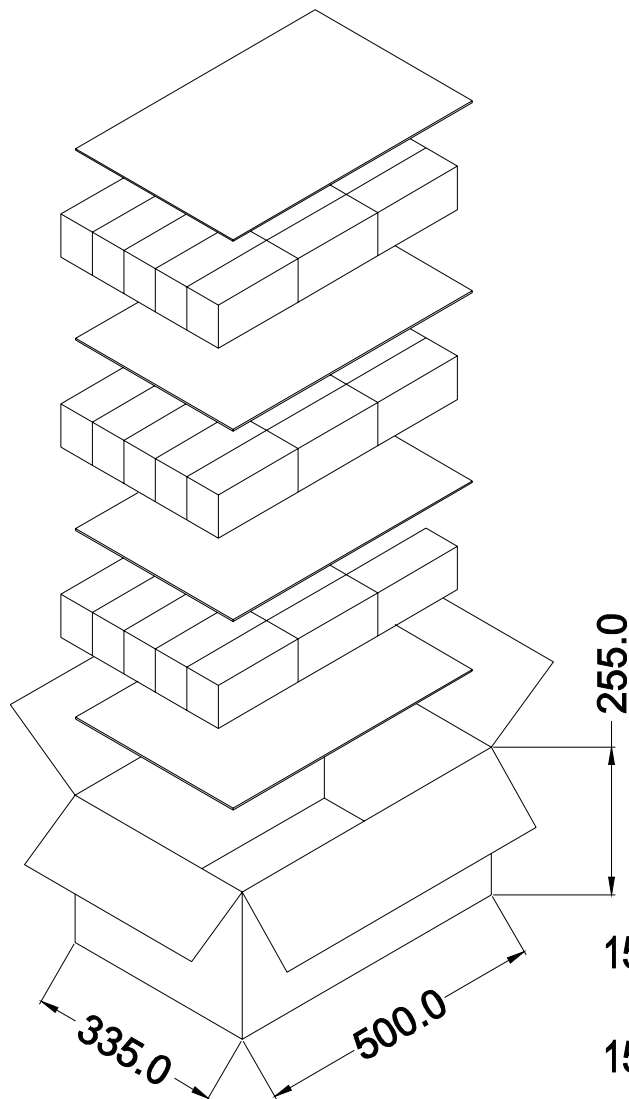
9 DIMENSION OF OUTPUT PLUG & DC CORD (Unit: mm)



NOTE: (unit:mm)

- 1). WIRE TYPE: VW-1 2468 80°C 300V L=1200mm 2C 16AWG WHITE+BLACK
BLACK AND WHITE—POSITIVE BLACK—NEGATIVE
- 2). THE POLARITY: $\ominus \text{---} \oplus$
- 3). PAHS+REACH+ROHS

10 PACKING (Unit: mm)



15PCS Per layer

15PCS*3 layers=45pcs carton

*此为公司标准包装，与样品包装可能不同，请确认！