

SPECIFICATION

High Quality Switching Power Adapter

Universal AC Input 30W 12VDC Single Output

P/N: A120025SUL

**** Specification Approval****

This specification (total 8 pages including cover page) is approved in it's entirety by:

Company Name

Print Name

Signature

Date

Specification subject to change without prior notice unless agreement is in place.



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General

The specification defines the performance characteristics of a 30W single output switching power supply.

1.0 Input Requirements

1.1 Input Voltage Range

Type	Low range	High range
Nominal	115Vac	230Vac
Minimum	90Vac	185Vac
Maximum	132Vac	264Vac
Frequency	47-63Hz sine wave 1	47-63 Hz sine wave 1

1.2 Input Current

1.0A rms max	At AC low line input and DC output full load
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1.3 Input Protection

1.6A Fuse	The power supply shall be protected against power line surges and any abnormal condition.
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1.4 Input Surge Current

40A/60A max	At power supply cold start, ambient temperature 25C @ 115Vac /230Vac nominal AC input.
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1.5 Efficiency

83.5%	Minimum average efficiency in active mode
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* calculate the model's single average active mode efficiency value by testing at 100%, 75%, 50% and 25% of rated current output.

* Input AC 115V 60HZ / 230V 50HZ

1.6 Hold Up Time

10ms min	At AC nominal input & output full load (1 half cycle)
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1.7 Power Consumption

0.3W rms max	At AC nominal input & output min load
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2.0 Output Requirements

2.2 DC Output Regulation

Voltage	Loading(A)		Tolerance Range	Adjustable voltage Range
	Min	Normal Max	Total Regulation	
+12V	0.00	2.5A	+/-5%	none

Total regulation involved line regulation load regulation cross regulation, etc.

Line regulation is measured from 90Vac to 132Vac or 185Vac to 264Vac.

Load regulation is measured all output from min load to max load at 115Vac or 230Vac nominal AC input voltage.

2.3 Ripple/noise

Voltage	Low frequency	High frequency	3	4
(DC)	Ripple mv(p-p)	Ripple mv(p-p)	Noise mv(p-p)	Ripple/Noise(p-p)
+12V				120mV

The ripple is measured from peak to peak with band width limit of 20MHZ

(Bypassed at the end of connector with 10uf electrolytic and 0.1uf ceramic disk capacitor under DC output full load, AC nominal input 25 degrees ambient temperature).

1.2.3.4 Unless has special requirements otherwise *4 is the testing spec.

2.4 Output Transient Response (dv, tmax)

0.6v dv max	At AC nominal input loading from 50% load to max load or peak load.
16ms t max	Dynamic rise time 10uS max, duty 40mS max, Dynamic load step is slew rate of 0.5A/uS

Test only for main output or designed by customer.

3.0 Protection

3.1 Short protection / Over current protection

The power supply will self-protect any output to ground, And auto recovery when abnormal circuit faults remove. An output short circuit is defined as any output impedance of less than 0.1 ohms.

3.2 Over Voltage Protection: 17V Max.

3.3 No Load Protection

The power supply is provided with no-load operation protections to prevent the power supply and system from damage.

3.4 Temperature coefficient: Less than 0.5% per degree C

4.0 EMC

Meets EN55022 Class B, FCC Part 15 Subpart B Class B.

5.0 Leakage Current 3.5mA Max.

6.0 Safety

FCC	CCC
GS	PSE
CB	MEPS 5
UL	CE
CEC5	C-TICK, SAA

7.0 Hi-Pot

HI-POT A IEC-320 3pin primary to secondary (FG) 1500Vac 10mA 1min.

HI-POT B IEC-320 2pin primary to secondary 3000Vac 10mA 1min.

8.0 Environment

OPERATING TEMPERATURE 0 DEGREES C TO 40 DEGREES C.

OPERATING HUMIDITY 8% TO 90% RH. (RELATIVE HUMIDITY).

STORAGE TEMPERATURE -20 DEGREES C TO 85 DEGREES C.

STORAGE HUMIDITY 5% TO 95% RH. (RELATIVE HUMIDITY).

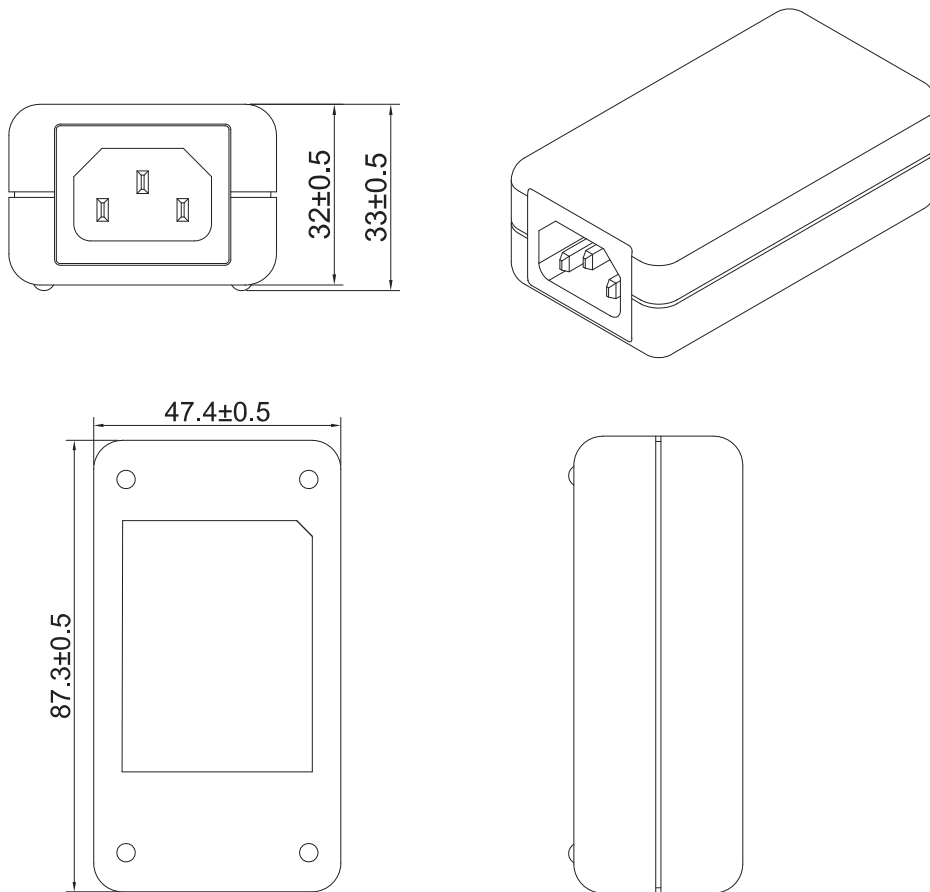
9.0 Vibration

SWEEP AND RESONANCE SEARCH

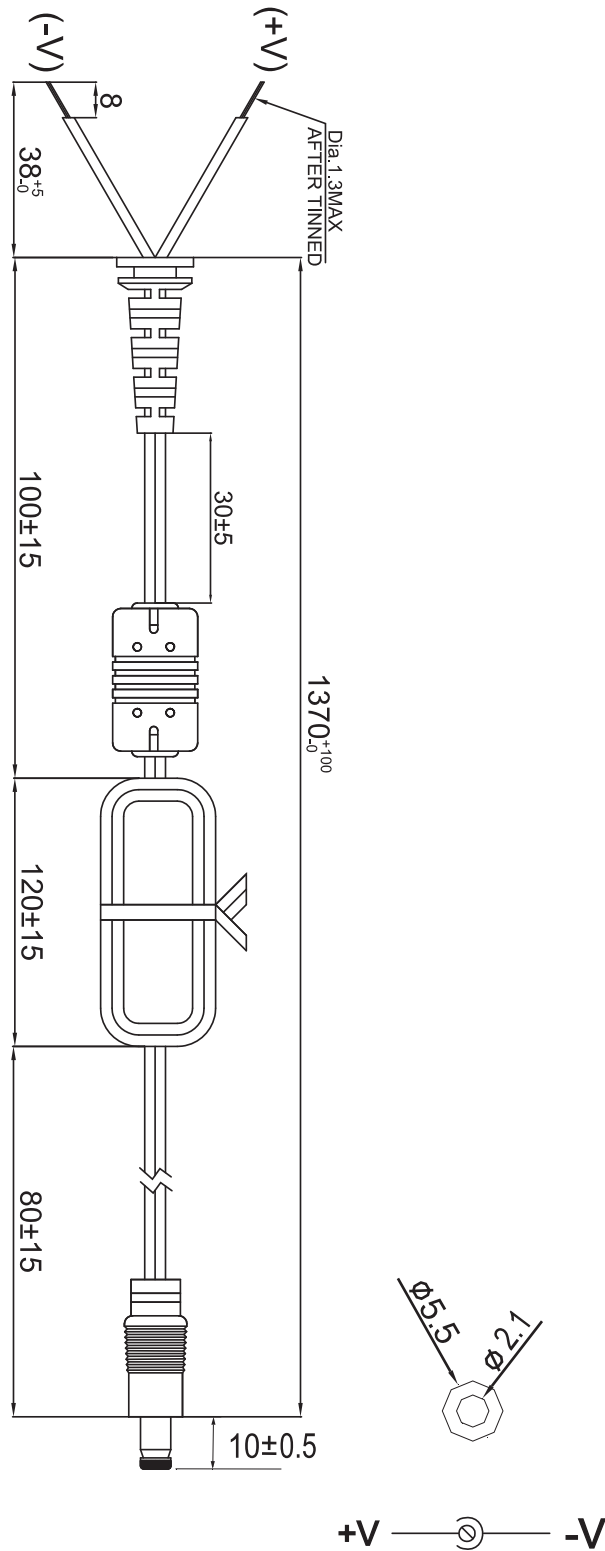
FREQUENCY DURATION AXIS AMPLITUDE

5-20-500 30 MINUTES X,Y,Z 1G

10.0 Mechanical Drawing



11.0 DC Cable



12.0 Label

