

SPECIFICATION

**High Quality
Switching Power Adapter
Energy Efficiency Level VI**

**Universal AC Input
36W 12VDC
Single Output**

P/N: A120030SUL

**** Specification Approval****

This specification is approved in it's entirety by:

Company Name	Print Name	Signature	Date
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Specification subject to change without notice unless prior agreement in place.



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General

This specification defines the performance characteristics of a 36W single 12VDC 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	47-63 Hz Sine Wave

Universal range - 90 ~ 264Vac

1.2 Input Current

1.5A rmx max.	At AC low line input and DC output full load
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1.3 Input protection

2A Fuse	The power supply shall be protected against power line surges and any abnormal condition.
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1.4 Input surge current

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

87.4%	Minimum average efficiency in active mode (meets LVL VI)
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* calculate the model's single average active mode efficiency value by testing at 100%, 75%, 50% and 25% rated current output.

*Burn-in 2 hours, full-load before testing

*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

0.1W	At AC nominal input @ output min load (meets LVL VI)
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2.0 Output requirements

2.1 Turn on delay

7000 ms max	At AC low line input @ output full load
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* Test on delay is measured from 0 voltage output to the main output regulation.

2.2 DC output regulation

Voltage	Loading(A)			Tolerance Range	Adjustable voltage Range
	Min	Normal	Max	Total Regulation	
+12V	0.05A	3A		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 (DC)	Ripple/Noise (p-p)
+12V	200mV

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

(By passed at the end of connector with 10uf electrolytic and 0.1uf ceramic disk capacitor under DC output full Load, AC nominal input 25°C ambient temperature).

2.4 Output Transient Response

0.6v dv max	At AC nominal input loading from 50% load to max load or peak load.
	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 Circuit / 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.

Voltage	OCP Current(A)	Power in(W)	OCP method		
			Latch Off	Current Limit	Fold back
+12V	3.1~5A		()	()	(X)

3.2 Over Voltage Protection

Voltage	OVP Current(V)	OVP method		
		Latch Off	Auto Recover	Voltage Limit
+12V	24V Max	(X)	()	()

4.0 PLD (Power Line Disturbance)

4.1 Line Power Surge

The power supply shall meet its specification with a rise in AC voltage to 120% maximum rated line voltage (288V for 100-240Vac operation) for a maximum of 20 milliseconds at 50Hz and 16 millisecond at 60Hz. The surge is to be applied five times with an interval of one minute between surges.

5.0 EMC

EN55022 Class B, FCC Part 15 Sub Part B Class B

5.1 CE spec.

EN55022

EN61000-3-2

EN61000-3-3

EN61000-4-2

EN61000-4-3

EN61000-4-4

EN61000-4-5

EN61000-4-6

EN61000-4-8

EN61000-4-11

6.0 Leakage Current

3.5mA Max.

7.0 Safety

UL/cUL, GS, CB, CCC, PSE, FCC, CE, RCM, BIS

8.0 Hi-pot

1500Vac 10Ma 1Min. Primary to Secondary

9.0 Environmental

Temperature and Humidity

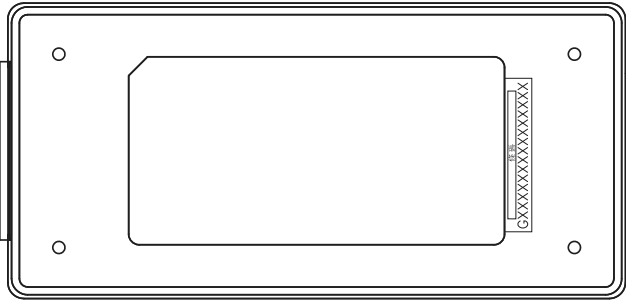
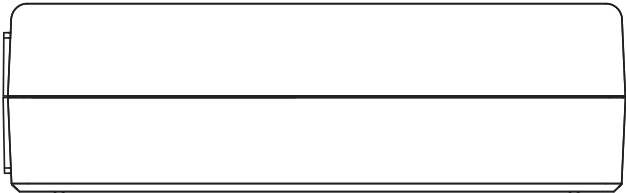
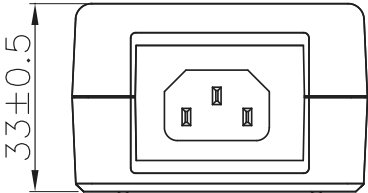
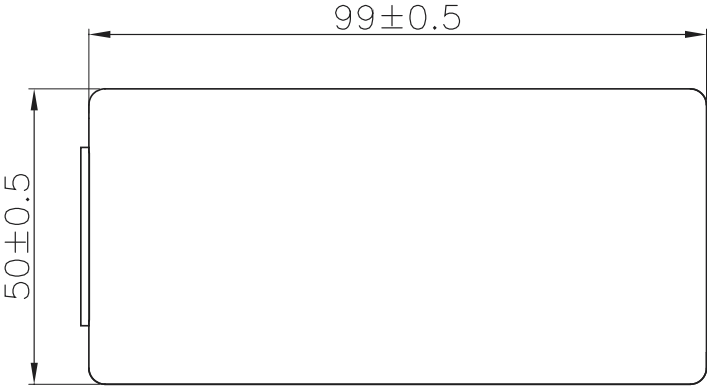
Operating Temperature : 0C to +40C

Operating Humidity: 8% to 90%

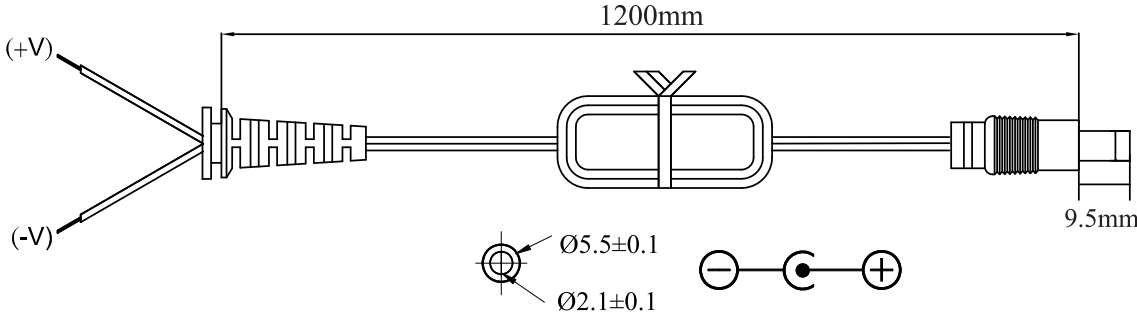
Storage Temperature: -20C to +85C

Storage Humidity: 5% to 95%

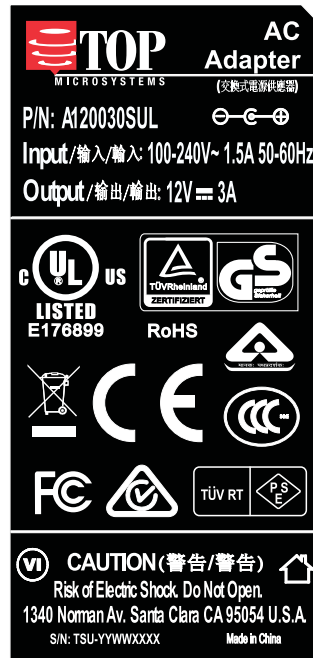
10.0 Mechanical



11.0 Output Cable & Connector



12.0 Label



Label design and contents subject to change pending finalization.