MODEL NO. ENA-1606

This specification describes the requirements of Max **60watts** switching power supply, Full voltage range.

☞ 1.0 INPUT REQUIREMENTS

1.1 AC input requirements

The input voltage, current, and frequency requirements for continuous operation are stated below.

Table 1 AC Input Line Requirements

Parameter	Min	Nom.	Max	Unit
Input voltage	90	**100-240**	264	VACrms
Vin Frequency	47	**60-50**	63	Hz
Input current		**1.5**		Arms

AC input :200-240V

Parameter	Min	Nom.	Max	Unit
Input voltage	180	**200-240**	264	VACrms
Vin Frequency		**50**		Hz
Input current		**1.5**		Arms

1.2 Inrush current

100Amps Maximum(for 230Vac).

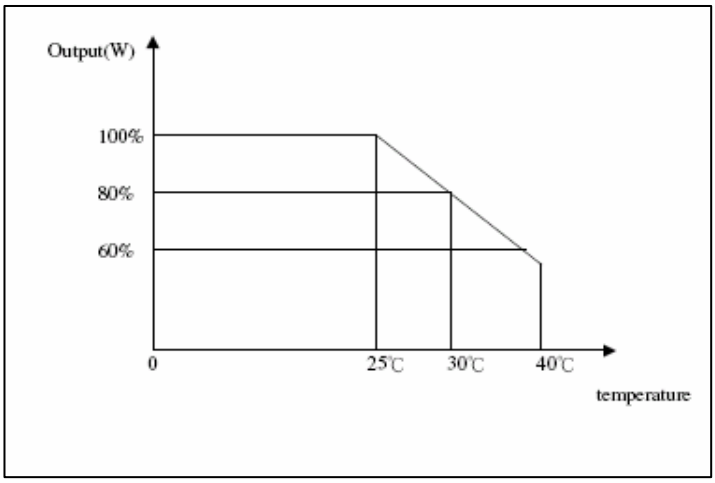
50Amps Maximum(for 115Vac)(at cold start).

☞ 2.0 OUTPUT REQUIREMENTS

2.1 Static load:

Output	Voltage	Minimum load	Nominal load
1	+12V	0A	**5A**
2	+19V	0A	**3.15A**

2.2 power derating curve:



2.3 Output voltage:

The output voltage shall be statically regulated for all combinations of load, line and environment including cross regulation as shown.

Output	Voltage	Range	Tolerance
1	+12V	11.4V~12.6V	±5%
2	+19V	18.05V~19.95V	±5%

2.4 Ripple and Noise

Output	Voltage	Maximum peak to peak ripple & Noise
1	+12V	**120m Vp-p**
2	+19V	**190m Vp-p**

2.5 Efficiency

The 12Vout Power supply efficiency minimum **80%** at normal AC main voltage and full load . and the avarge officiency must be meet the ERP of 2010s years.
the ERP of 2010s years:(25%+50%+75%+100%Load)/4>85%.

The 19Vout Power supply efficiency minimum 82% at normal AC main voltage and full load. and the avarge officiency must be meet the ERP of 2013s years .
the ERP of 2013s years:(25%+50%+75%+100%Load)/4>87% .

☞ 3.0 PROTECTION REQUIREMENT

3.1 Over-voltage protection---12V

The power supply shall shutdown all output when +12V output voltage reaches to its over-voltage protection trigger point **.**

3.2 Over-voltage protection---19V

The power supply shall shutdown all output when +19V output voltage reaches to its over-voltage protection trigger point .

3.3 Over-load protection

No damage to the power supply shall be sustained when operating any output under any line condition, into an over load condition for an indefinite period of time.
The power supply shall be self - recovering when fault condition remove.

3.4 Short circuit protection

No damage to the power supply shall be sustained when operating any output under any line condition, into a short circuit condition for an indefinite period of time.
The power supply shall be self - recovering when fault condition remove.

☞ 4.0 POWER SUPPLY SEQUENCING

Hold up time

When the power loss its input power, it shall maintain **10ms** in regulation limit at nominal input voltage.(AC: 115V)

☞ 5.0 ENVIRONMENT

5.1 Operation

Temperature	**0 to 40 °C**
Relative Humidity	10 to 85%,on-condensing

(Notice: Please reference 2.2)

5.2 Shipping and Storage

Temperature	-20 to 60°C
Relative Humidity	5 to 95%,non-condensing

5.3 Altitude

Operating	10,000FT max.
Storage	50,000FT max.

☞ 6.0 SAFETY

6.1 Underwriters Laboratory (UL) listee.

The power supply designed to meet UL 60950.

6.2 The power supply must be certified to EN60 950, A1 and A2.

6.3 CB test report to meet the IEC 60950.

6.4 NEMKO certified by any NORDIC CENELEC.

6.5 The power supply must bear the German Bauart Mark from GS.

☞ 7.0 ELECTROMAGNETIC COMPATIBILITY (EMC)

7.1 ELECTROSTATIC DISCHARGE (ESD) – IEC 61000-4-2(EN 61000-4-2).

7.2 RADIATED SUSCEPTIBILTY – IEC 61000-4-3(EN 61000-4-3).

7.3 ELECTRICAL FAST TRANSIENT / BURST (EFT/B) – IEC 61000-4 -4(EN 61000-4-4).

7.4 SURGE – IEC 61000-4-5(EN 61000-4-5).

7.5 CONDUCTED SUSCEPTIBILTY – IEC 61000-4-6(EN 61000-4-6).

7.6 POWER FREQUENCY MAGNETIC FIELD – IEC 61000-4-8(EN 61000-4-8).

7.7 VOLTAGE DIPS – IEC 61000-4-11(EN 61000-4-11).

7.8 VOLTAGE FLUCTUATIONS – IEC 61000-3-3 (EN 61000-3-3).

7.9 HARMONIC CURRENT EMISSION – IEC61000-3-2(EN 61000-3-2).

7.10 EN55032:Class B Radio interference (CISPR 22).

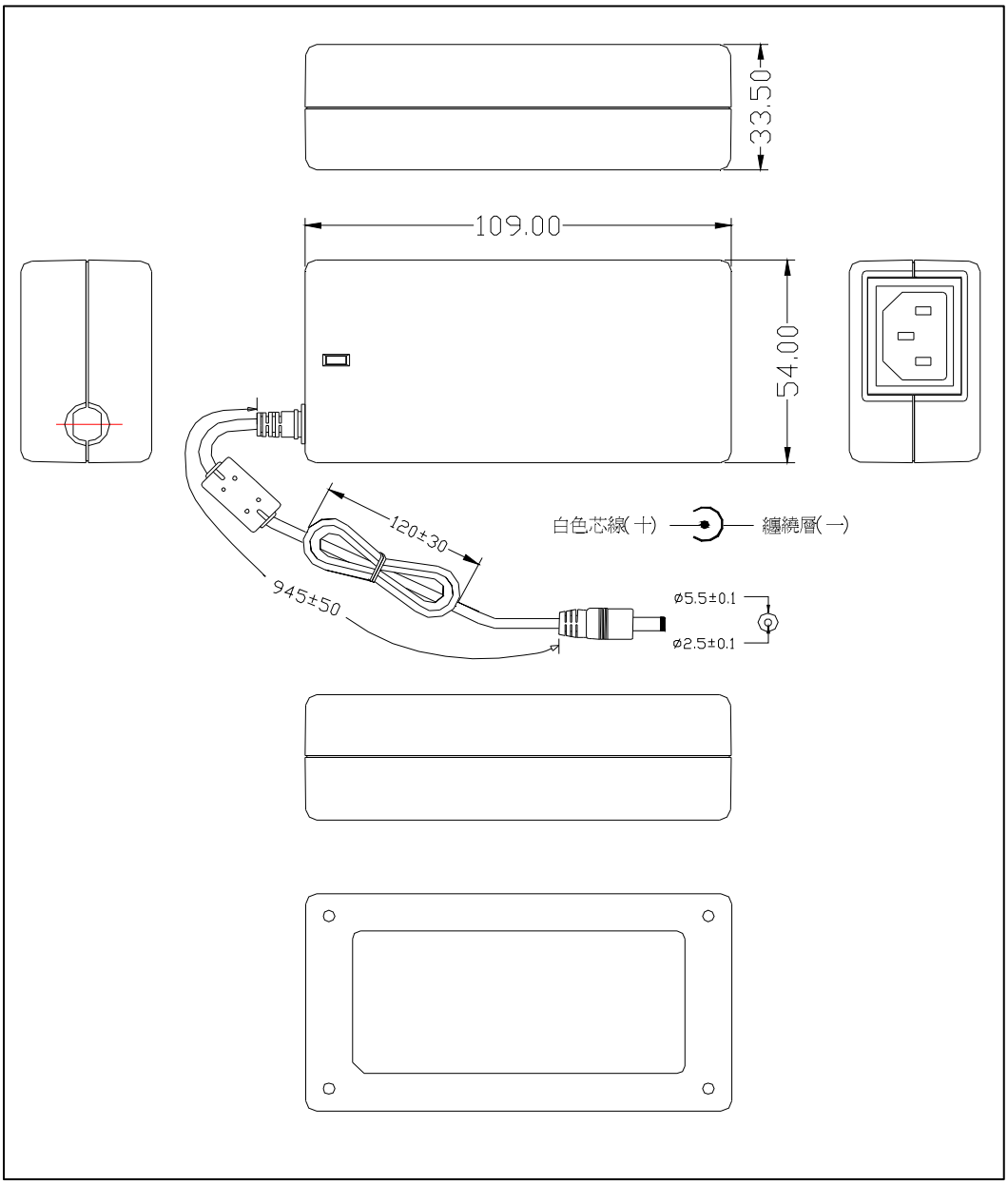
7.11 ANSI C63.4-2009 / FCC Part 15 Subpart B / ICES-003 lssue 5 Class B 115VAC operation.

☞ 8.0 MTBF (MEAN-TIME-BETWEEN FAILURES) CALCULATION

The demonstrated MTBF shall be 70,000 hours of continuous operation at 25°C, Full load. 80% confidence limit and nominal line. The MTBF of the power supply shall be calculated in accordance with MIL-STD-217F.

☞ 9.0 MECHANICAL REQUIREMENTS

Physical Dimension : **L109mm*W54mm*H34mm**



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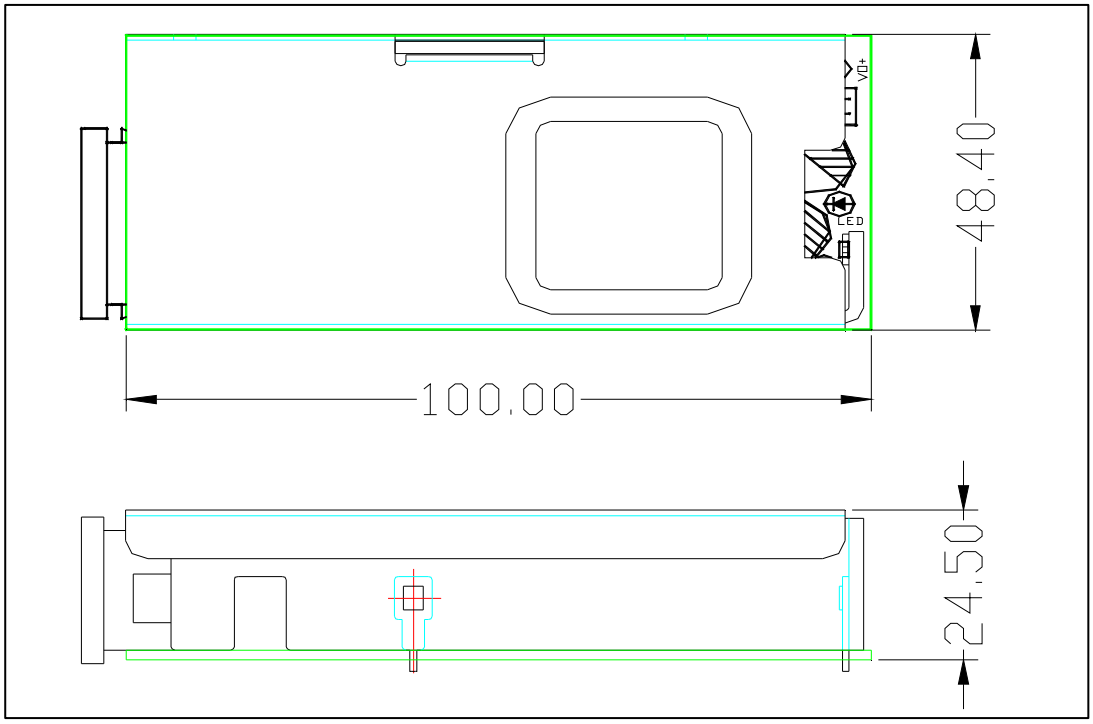

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