SPECIFICATION

Open Frame Power Supply
Universal AC Input
60W 12VDC Output

P/N: N1060LN-12

This specification is approved in it's entirety by:

Company Name	Print Name	Signature	Date

Specification subject to change without prior notice.

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1. INPUT

1.1 Input

Parameter	Conditions / Description	Min.	Nom.	Max.	Units
Voltage	Universal-ranging	90	115 230	264	Vac
Current	@115Vac 60W Load	--	--	1.2	Arms
	@230Vac 60W Load	--	--	0.8	Arms
Frequency	Auto-ranging	47	50/60	63	Hz

1.2 Input Surge Current

@115Vac (Cold Start at 25℃) ---------- < 30 Ap-p
@230Vac (Cold Start at 25℃) ---------- < 60 Ap-p

2. OUTPUT

2.1 Output Power

Convection Rating ---------- 60W Max.

2.2 Output Range

Voltage (Vdc)		Load Range (A)			Line Regulation (%)	Load Regulation (%) (Note 2)	Ripple&Noise (PARD) (mVp-p) (Note 3)
		MIN.	Max. (Convection)	Peak (Note 1)			
V1	+12.0V	0A	5.0A	5.5A	±0.5%	11.64~12.36Vdc (±3.0%)	120mVp-p (1.0%)

Note：

1.Peak current lasting <30 seconds with a maximun 10% Duty Cycle.
2.Cross/Load regulation is tested at 10% to 100% of rated load and other outputs are set at 50% of rated load.
3.Peak-to-peak for 60W (convection rating) @90Vac MIN. ; Measurements with a 20MHZ bandwidth and terminated with a 10uF electrolytic CAP. in parallel with a 0.1uF ceramic Cap.

2.3 Transient Dynamic Response：(0.1A/uS slew rate with 50%~100% load change @100HZ&1KHZ)

Recovery Time to within 1% of initial set point ---------- < 1mS
Voltage Deviation ---------- < ±5%

2.4 Overshoot/Undershoot

Turn-on / turn-off ---------- < 5%

3. GENERAL SPECIFICATIONS

3.1 Efficiency

@115Vac with Full Load ---------- > 80%
@230Vac with Full Load ---------- > 82%

3.2 Turn-on Time

@115Vac with Full Load ---------- < 2Sec

3.3 Hold-up Time

@115Vac with Convection Rating ---------- > 16mSec

3.4 Safety Ground Leakage Current: （UL60950-1；EN60950-1）

@264Vac 60HZ ---------- < 3.5mA

3.5 Withstand Voltage ：（UL60950-1；EN60950-1）

@3000Vac，1 Minute from Primany to Secondary of Transformers ----- < 10 mA
@3000Vac，1 Minute from Input(L1&L2) to Output ---------- < 10mA
@1500Vac，1 Minute from Input(L1&L2) to FG(Chassis) ---------- < 10mA

3.6 MTBF

@25℃ with Full Load，MIL-HDBK-217F ---------- > 100KHours

3.7 Weight

Without packing ---------- 170G Max.

4. PROTECTION

4.1 Overvoltage Protection

（Hiccup）@V1 Overvoltage Range ---------- 14V < V1 < 16.5V

4.2 Overpower Protection

V1, Overpower Mode (No Damage) ---------- Hiccup

4.3 Short Circuit Protection

V1, Short Circuit Mode（No Damage） ---------- Hiccup

5. ELECTROMAGNETIC COMPATIBILITY

5.1 Electromagnetic Interference (EMI/RFI)

FCC PART 15 B Conducted/Radiated Emissions ---------- Class B
CISPR 22 Conducted/Radiated Emissions ---------- Class B
EN55022 Conducted/Radiated Emissions ---------- Class B

5.2 Voltage Variation Immunity

EN61000-3-3 ---------- Compliant

5.3 Electrostatic Discharge (ESD)

EN61000-4-2 ； ±4KV Air Discharge ---------- Criterion A
EN61000-4-2 ； ±4KV Contact Discharge ---------- Criterion A
EN61000-4-2 ； ±4KV Indirect Discharge ---------- Criterion A

5.4 Radiated Susceptibility (RS)

EN61000-4-3 ; 3V/M ---------- Criterion A

5.5 Electrical Fast Transient (EFT)

EN61000-4-4 ; Impulse ±1KV ---------- Criterion A

5.6 Surge Susceptibility

EN61000-4-5 ; ±1KV Line(L1) to Neutral(L2) -------- Criterion A
EN61000-4-5 ; ±1KV Line(L1)&Neutral(L2) to FG -------- Criterion A

5.7 Conducted RF Immunity

EN61000-4-6 ; 3V ---------- Criterion A

5.8 Power Magnetic Field Immunity

EN61000-4-8 ; 1A/m ---------- Criterion A

5.9 Voltage Dips / Interruptions

EN61000-4-11 ; Dips ---------- Criterion A
EN61000-4-11 ; Interruptions ---------- Criterion B

6. SAFETY

UL 60950-1	----------	Approval
cUL 60950-1	----------	Approval
TUV EN 60950-1	----------	Approval
CB Report	----------	Approval
CE Marked	----------	Approval

7. ENVIRONMENTAL

7.1 Temperature

Operating Range	----------	0 ~ 50 ℃
Storage Range	----------	-40 ~ 85 ℃

7.2 Relative Humidity

Non-Condensing ---------- 5 % ~ 95 % RH

7.3 Vibration

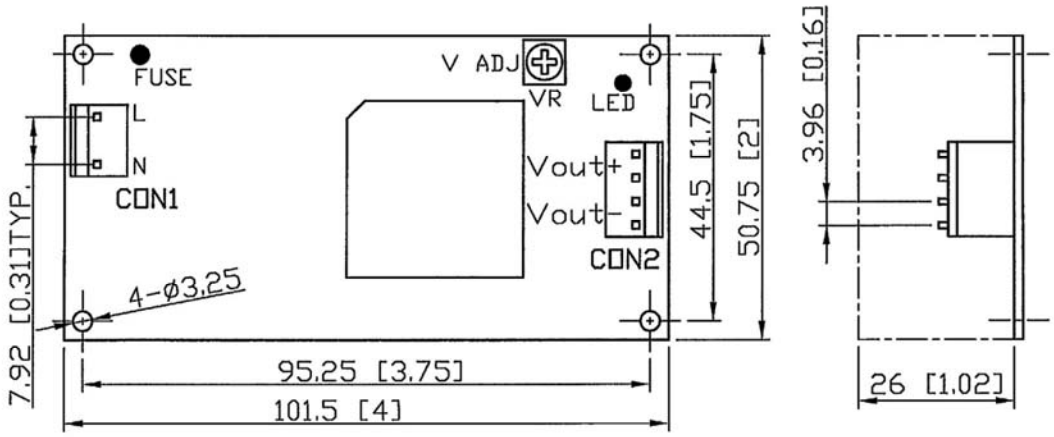
Random — Operating , 3 axes , 50~500Hz , 10 minutes/axis ---- 2.4Grms Max.

7.4 Shock

Operating , Half Sine , 3 axes , 10 mS , 6 shocks total -------- 20Gpk Max.

8. MECHANICAL

8.1 Drawing



TOLERANCE :mm±0.5/[inch]±0.02
UNIT :mm[inch]