DESCRIPTION

The PUP120 series of AC/DC switching power supplies are for 96-120 watts of continuous output power. They are enclosed in a 94V-1 rated polyphenylene-oxide case with an IEC320/C6 inlet to mate with interchangeable cord for world-wide use. All models meet CISPR 22 and FCC class B emission limits and comply with UL, CSA, IEC and CE requirements.

PUP120 SERIES

CE (LVD)

RoHS

FEATURES

- High Efficiency
- Low Ripple & Noise
- Overvoltage protection
- Short-circuit protection
- Overpower protection
- Over temperature protection
- 100% burn-in at full rated load
- Standby consumption less than 0.5 W
- Compliant with CEC and Energy Star 2.0 efficiency level V requirements
  * No load power consumption less than 0.5 W
  * Average active efficiency ≧87%
- Compliant with RoHS requirements

SAFETY STANDARD APPROVALS

c UL us LISTED — UL 60950 3 rd, CSA C22.2 NO. 60950 3 rd
File No. E137410

Nemko EN 60950: 2000
Certificate NO. PO4202683

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	50-60 Hz
Input current:	2.0 A (rms) for 115 VAC 1.0 A (rms) for 230 VAC
Touch current:	125 μA max. @ 132 VAC, 60 Hz 250 μA max. @ 264 VAC, 60 Hz

OUTPUT SPECIFICATIONS

Output voltage /current:	See rating chart.
Maximum output power:	See rating chart.
Ripple and noise:	350 mV peak to peak maximum
Overvoltage protection:	Set at 110-140% of its nominal output voltage
Overcurrent protection:	All models protected to short circuit conditions
Temperature coefficient:	All outputs ±0.04% /℃ maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0℃ to +40℃
Storage temperature:	-20℃ to +80℃
Relative humidity:	10% to 95% non-condensing

GENERAL SPECIFICATIONS

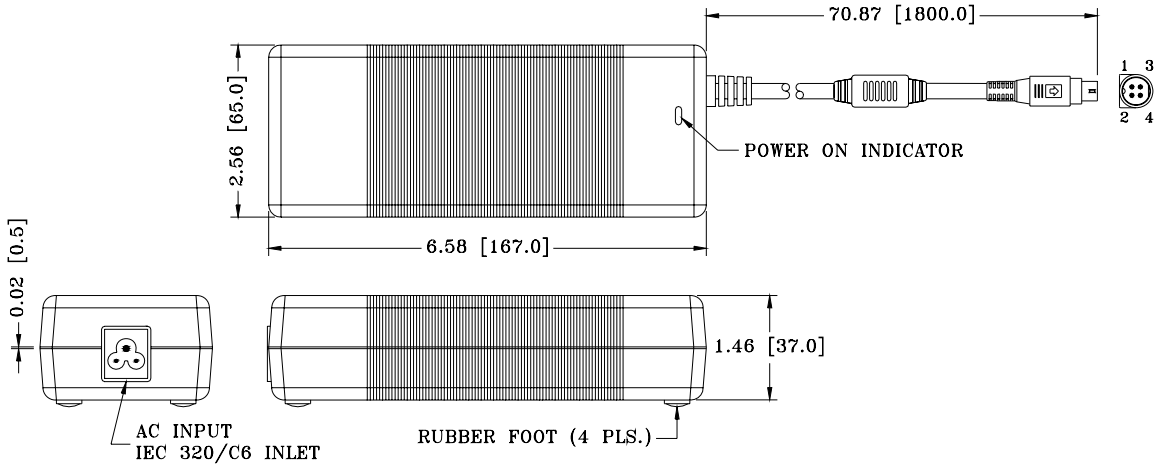
Hold-up time:	15 ms minimum at 115 VAC
Turn on delay time:	2 S maximum
Power factor:	0.98 typical at 115 VAC
Efficiency:	86% min. (80% min. for PUP120-12 & PUP120-13)
Line regulation:	±0.5% maximum at full load
Inrush current:	60 A @ 115 VAC or 120 A @ 230 VAC, at 25℃ cold start
Withstand voltage:	1500 VAC from input to output
MTBF:	100,000 hours at full load at 25℃ ambient, calculated per MIL-HDBK- 217F
EMC Performance (EN55024)	
EN55022:	Class B conducted, Class B radiated
FCC:	Class B conducted, Class B radiated
VCCI:	Class B conducted, Class B radiated
EN61000-3-2:	Harmonic distortion, Class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD,±8 KV air and ±4 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 1 A/m
EN61000-4-11:	Voltage dip immunity, 30%reduction for 500 ms, and >95%reduction for 10 ms

OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output						Average Active Efficiency (typical) @115 / 230 Vac
	V1	Min. Current	Max. Current	Tol.	Ripple & Noise(1)	Max. Output Power	
PUP120-13	15 V	0 A	7.0 A	±5%	350 mV	105 W	88 / 87 %
PUP120-13-1	18 V	0 A	6.67 A	±5%	350 mV	120 W	89 / 88 %
PUP120-13-2	19 V	0 A	6.32 A	±5%	350 mV	120 W	88 / 88 %
PUP120-13-3	20 V	0 A	6.0 A	±5%	350 mV	120 W	88 / 88 %
PUP120-14	24 V	0 A	5.0 A	±5%	350 mV	120 W	89 / 88 %
PUP120-16	30 V	0 A	4.0 A	±5%	350 mV	120 W	89 / 89 %
PUP120-17	36 V	0 A	3.34 A	±5%	350 mV	120 W	89 / 88 %
PUP120-18	48 V	0 A	2.5 A	±5%	350 mV	120 W	89 / 88 %

NOTES:
1. Ripple and noise is maximum peak-to-peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS



NOTES:
1. Dimensions shown in inches [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 621 grams (1.37 lbs.) approx.
4. Refer to Section titled “OPTIONAL OUTPUT CONNECTORS”. Add the suffix assigned for a selected connector to a wanted model number, e.g. PUP120-14-BI, for ordering. The output connector shown is for model PUP120-1X-BI, and its pinning is as shown in the following pin chart.

PIN CHART

MODEL \ PIN		1	2	3	4	SHELL OF CONNECTOR
PUP120-12	PUP120-14	V1 Return & AC Ground	+V1	V1 Return & AC Ground	+V1	V1 Return & AC Ground
PUP120-13	PUP120-16					
PUP120-13-1	PUP120-17					
PUP120-13-2	PUP120-18					
PUP120-13-3						