



96-120 WATT SWITCHING POWER SUPPLIES

DESCRIPTION

The PUP120 series of AC/DC switching power supplies are for 96 to 120 watts of continuous output power. They are enclosed in a 94V-1 rated polyphenylene-oxide case with an IEC 320/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.

Note: Warranty period for PUP120 series is one year.

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 0.5W
- Compliant with CEC and Energy Star efficiency level IV requirements
(For all models except PUP120-12)
* No load power consumption less than 0.5W
* Average active efficiency \geq 85%
- Compliant with RoHS requirements

New!!

INPUT SPECIFICATIONS

Input voltage : 90 to 260VAC
 Input frequency : 47 to 63Hz
 Input current : 2.0A (rms) for 115VAC
 1.0A (rms) for 230VAC
 Earth leakage current : 150uA max. @ 115VAC, 60Hz
 (Touch current) 250uA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current : See rating chart
 Total output power : See rating chart
 Ripple and noise : 350mV 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 $\pm 0.04\%$ / $^{\circ}$ C maximum
 Transient response : Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature : 0 $^{\circ}$ C to +40 $^{\circ}$ C
 Storage temperature : -20 $^{\circ}$ C to +80 $^{\circ}$ C
 Relative humidity : 10% to 95% non-condensing

PUP120 SERIES



Safety Standard Approvals :



UL 60950 3rd, CSA C22.2 NO. 60950 3rd
File No. E137410



Nemko EN60950: 2000
Certificate NO. PO4202683

GENERAL SPECIFICATIONS

Hold-up time : 15 msec minimum at 115VAC
 Turn on delay time : 2 S maximum
 Power Factor : 0.98 typical at 115VAC
 Efficiency : 86% min.
 (80% min. for PUP120-12 & PUP120-13)
 Line regulation : $\pm 0.5\%$ maximum at full load
 Inrush current : 60 amps @ 115VAC or 120 amps @ 230VAC, at 25 $^{\circ}$ C cold start
 Withstand voltage : 3000VAC from input to output
 1500VAC from input to ground
 MTBF : 100,000 hours at full load at 25 $^{\circ}$ C 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, \pm 8KV air and \pm 4KV contact
 EN61000-4-3: Radiated immunity, 3V/m
 EN61000-4-4: Fast transient/burst, \pm 1KV
 EN61000-4-5: Surge, \pm 1KV diff., \pm 2KV com.
 EN61000-4-6: Conducted immunity, 3Vrms
 EN61000-4-8: Magnetic field immunity, 1A/m
 EN61000-4-11: Voltage dips, 30% reduction for 500ms and >95% reduction for 10ms

UNIVERSAL INPUT

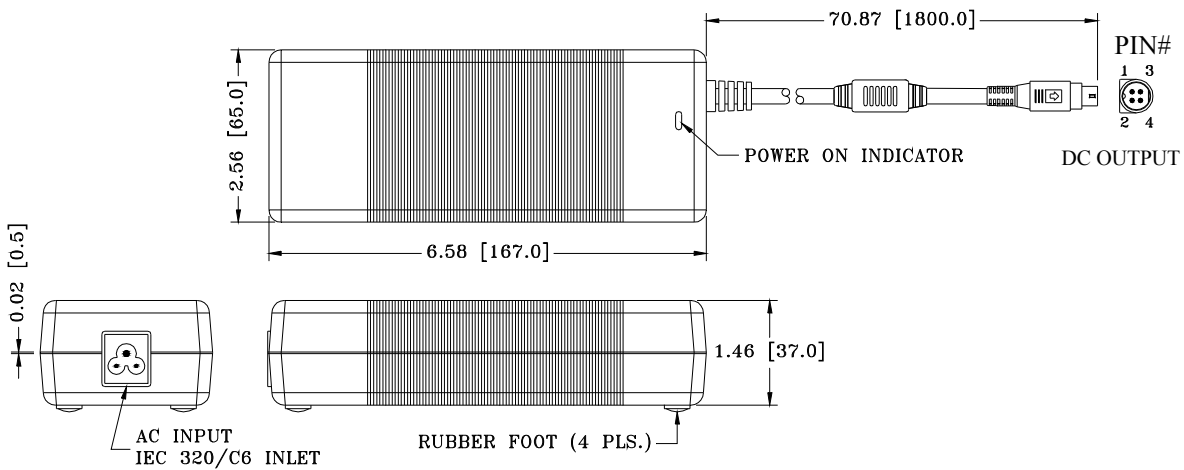
PUP120 SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

<u>MODEL</u>	<u>Vnom.</u>	<u>I_{max.}</u>	<u>Output</u>	<u>I_{min.}</u>	<u>Tol.</u>	<u>Maximum Output Power</u>
PUP120-12	12V	8.0A		0A	5%	96W
PUP120-13	15V	7.0A		0A	5%	105W
PUP120-13-1	18V	6.67A		0A	5%	120W
PUP120-13-2	19V	6.32A		0A	5%	120W
PUP120-13-3	20V	6.0A		0A	5%	120W
PUP120-14	24V	5.0A		0A	5%	120W
PUP120-16	30V	4.0A		0A	5%	120W
PUP120-17	36V	3.34A		0A	5%	120W
PUP120-18	48V	2.5A		0A	5%	120W

NOTE: Ripple and noise: Peak-to-peak with 20MHz bandwidth and 10uF tantalum capacitor in parallel with a 0.1uF ceramic capacitor at rated line voltage and load ranges.

MECHANICAL SPECIFICATIONS



NOTES:

- Dimensions shown in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 621 grams approx.
- See [pages 6-27 to 6-28](#) for optional output connector. 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

<u>MODEL</u>	<u>PIN</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>SHELL OF CONNECTOR</u>
PUP120-12	PUP120-13	Return	Output +V	Return	Output +V	Return
PUP120-13-1	PUP120-13-2					
PUP120-13-3	PUP120-14					
PUP120-16	PUP120-17					
PUP120-18						