DESCRIPTION

The PUP230N3 series of AC/DC switching power supplies are for 230 watts of continuous output power. They are enclosed in a 94V-0 rated plastic case with an IEC320/C14 inlet to mate with interchangeable cord for world-wide use. All models meet EN55032 and FCC class B emission limits, and comply with UL, CSA, IEC and CE requirements.

PUP230N3 SERIES

CE

RoHS

VI

FEATURES

- No load power consumption less than 0.15 W
- Compliant with DoE level VI requirements
- Meet Energy Star EPS2.0 /ErP EC No 278/2009 (Lot 7)
- Meet EU CoC EPS V5 Tier 2
- Operating altitude up to 5000 meters
- Overvoltage protection (latch)
- Short-circuit protection (auto-recovery)
- Overpower protection (auto-recovery)
- Over temperature protection (latch)
- High Efficiency ≧89%
- With PFC circuit
- 100% burn-in at full rated load
- Compliant with RoHS requirements

SAFETY STANDARD APPROVALS

c UL us LISTED — UL 62368-1, CSA C22.2 No. 62368-1
File No. E190414

TÜV Rheinland ZERTIFIZIERT / GS — TÜV EN 62368-1

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	2.3 A (rms) for 115 VAC 1.2 A (rms) for 230 VAC
Earth Leakage current::	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 125-155% of its nominal output voltage
Overcurrent protection:	All models protected to short circuit conditions (auto-recovery)
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℃
Operating humidity:	20% to 80% non-condensing
Storage humidity:	10% to 90% non-condensing

GENERAL SPECIFICATIONS

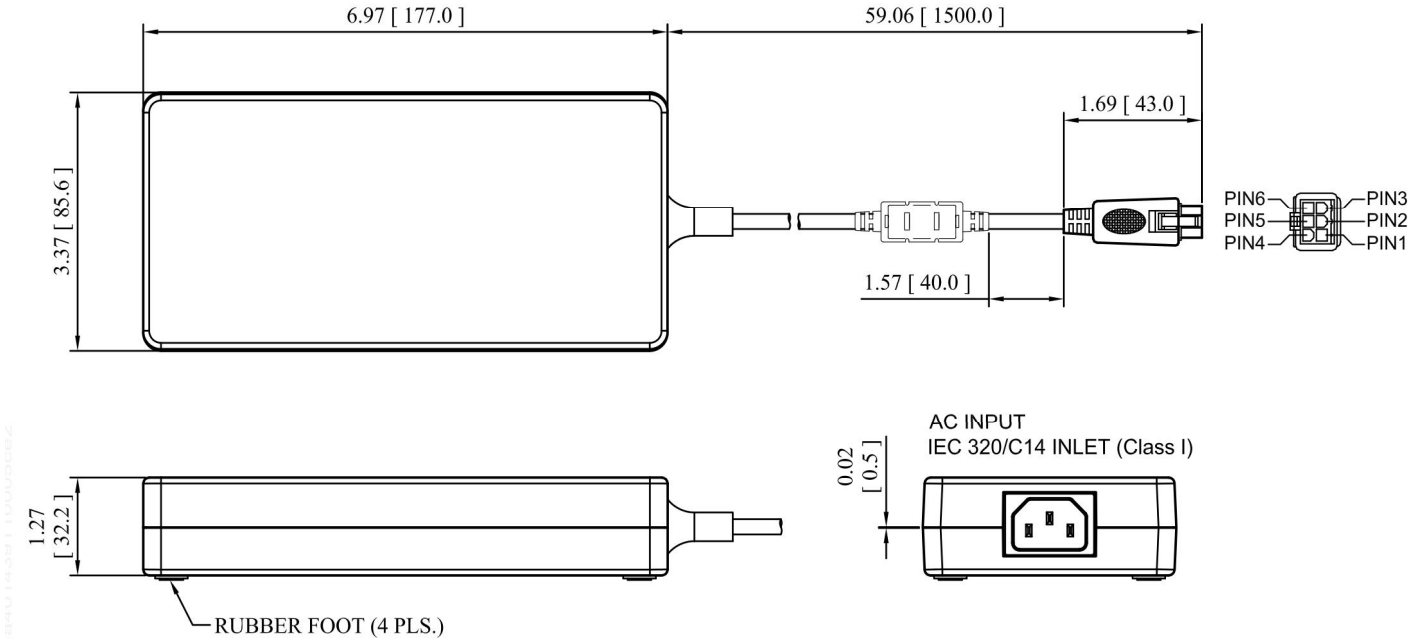
Hold-up time:	10 ms minimum at 100 VAC
Turn on delay time:	3 s maximum at 100 VAC
Power factor:	0.95 typical
Efficiency:	89% minimum at 110 VAC or 240 VAC.
Line regulation:	±0.5% maximum at full load
Inrush current:	100 A @ 115 Vac or 200 A @ 230 Vac at 25 ℃ cold start
Withstand voltage:	4242 VDC from input to output 2500 VDC from input to ground
MTBF:	200,000 hours at full load at 25℃ ambient, calculated per SR332
EMC Performance	
EN55032:	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 D
EN61000-3-3:	Line flicker
EN55024	
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[1]	Output						Average Active efficiency (typical) @ 115 / 230 Vac
	V1	Min. Current	Max. Current	Tol.	Ripple & Noise[2]	Max. Power	
PUP230N3-13-2-1	19.5 V	0 A	11.79 A	±5%	350 mV	230 W	89 /91%
PUP230N3-14	24 V	0 A	9.58 A	±5%	350 mV	230 W	91 /93%

NOTES:
1. PUP230N3 models are equipped with IEC320/C14 inlet.
2. 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 47 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: 600 grams (1.33 lbs.) approx.
4. V1 return (-) is electrically connected to incoming Earth Ground through a 1K ohm resistor as standard.

PIN CHART

PIN NO.	1	2	3	4	5	6
Polarity	V1 Return	V1 Return	V1 Return	+V1	+V1	+V1