



PROTEK POWER

## PUP230N3 AC/DC Switching Power Supply Series

### Features:

- No load power consumption less than 0.15W
- Compliant with DoE level VI requirements
- Meets Energy Star EPS2.0 /ErP EC No 278/2009 (Lot 7)
- Meets 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  $\geq 89\%$
- With PFC circuit
- 100% burn-in at full rated load
- Compliant with RoHS requirement



### 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 inlet of the IEC320/C14 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.

Part Number	Output Voltage	Min. Current	Max. Current	Tolerance	Ripple & Noise	Wattage	Average Efficiency @115/230 Vac
PUP230N3-13-2-1	19.5V	0A	11.79A	$\pm 5\%$	350mV	230W	89/91%
PUP230N3-14	24V	0A	9.58A	$\pm 5\%$	350mV	230W	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  $\mu$ F tantalum capacitor in parallel with a 0.1  $\mu$ F ceramic capacitor across the output.



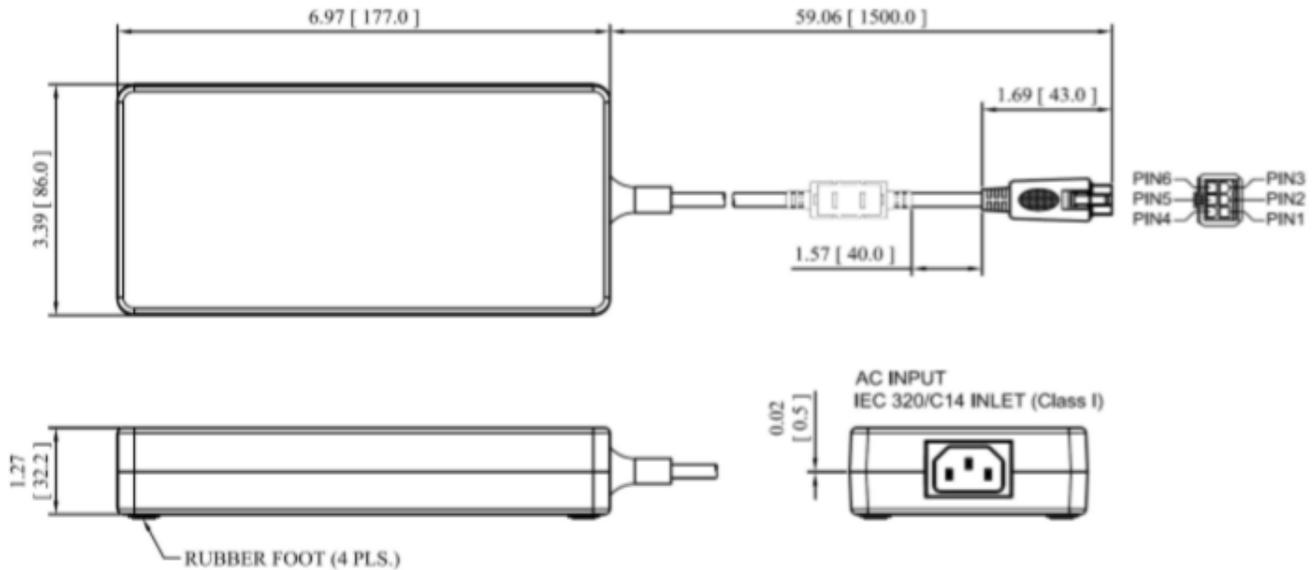
## PUP230N3 AC/DC Switching Power Supply Series

<b>Specifications</b>	
<b>Safety Standards &amp; EMC Specifications</b>	
Safety Standard Approvals	UL 62368-1 File No. E190414 CSA C22.2 No. 62368-1 TÜV EN 62368-1
EMI Standard	EN55032, FCC, and VCCI Class B (radiated and conducted)
EMC Performance	EN61000-3-2: Harmonic distortion, Class D EN61000-3-3: Line flicker EN55024 EN61000-4-2: ESD, ±8 KV air and ± 4KV contact EN61000-4-3: Radiated immunity, 3V/m EN61000-4-4: Fast transient/burst, ±1KV 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 500ms, and >95% reduction for 10ms
*Consult with TT Electronics for information on additional country safety approvals	
<b>Input Specifications</b>	
Input Voltage Range	90 to 264 Vdc
Input Frequency Range	47 to 63Hz
Input Current	2.3 A (rms) for 115 VAC or 1.2 A (rms) for 230 VAC Maximum
Earth Leakage Current	250µA max. @ 264 VAC, 60Hz
<b>Output Specifications</b>	
Output Connection Type	Molex Mini-Fit 39-01-2060 housing with #5556 terminals; Mates with Molex 39-01-2066 with #5558 terminals.
Over Voltage Protection	Set at 125–155% of its nominal output voltage
Over Current Protection	All models are protected to short circuit conditions (auto-recovery)
Temperature Coefficient	All outputs ±0.04%/°C maximum
Transient Response	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 µs after a 25% step load change
<b>Environmental Specifications</b>	
Operating Temperature	0°C → +40°C (41°C to 60°C with derating)
Storage Temperature	-20°C → 80°C
Operating Humidity	20% to 80% non-condensing
Storage Humidity	10% to 90% non-condensing
<b>General Specifications</b>	
Hold-up Time	10ms minimum at 100 VAC
Turn on Delay Time	3s maximum at 100 VAC
Power Factor	0.95 Typical
Line Regulation	±0.5% maximum at full load
Inrush Current	100A @ 115 Vac or 200A @ 230 Vac at 25°C cold start
Withstand Voltage	4242 VDC input to output, 2500 VDC input to ground
MTBF	200,000 hours at full load at 25°C ambient, calculated per SR332



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## Diagrams



### 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

### OUTPUT POWER DERATING CURVE

