



## 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.

## 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  $\geq 89\%$
- With PFC circuit
- 100% burn-in at full rated load
- Compliant with RoHS requirements

## 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  $\mu$ A 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  $\pm 0.04\%$  / $^{\circ}$ C 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 $^{\circ}$ C to +40 $^{\circ}$ C  
 Storage temperature: -20 $^{\circ}$ C to +80 $^{\circ}$ C  
 Operating humidity: 20% to 80% non-condensing  
 Storage humidity: 10% to 90% non-condensing

## PUP230N3 SERIES



## SAFETY STANDARD APPROVALS



UL 62368-1, CSA C22.2 No. 62368-1  
File No. E190414



TÜV EN 62368-1

## 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:  $\pm 0.5\%$  maximum at full load  
 Inrush current: 100 A @ 115 Vac or 200 A @ 230 Vac at 25  $^{\circ}$ C 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 $^{\circ}$ C 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,  $\pm 8$  KV air and  $\pm 4$  KV contact  
 EN61000-4-3: Radiated immunity, 3 V/m  
 EN61000-4-4: Fast transient/burst,  $\pm 1$  KV  
 EN61000-4-5: Surge,  $\pm 1$  KV diff.,  $\pm 2$  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

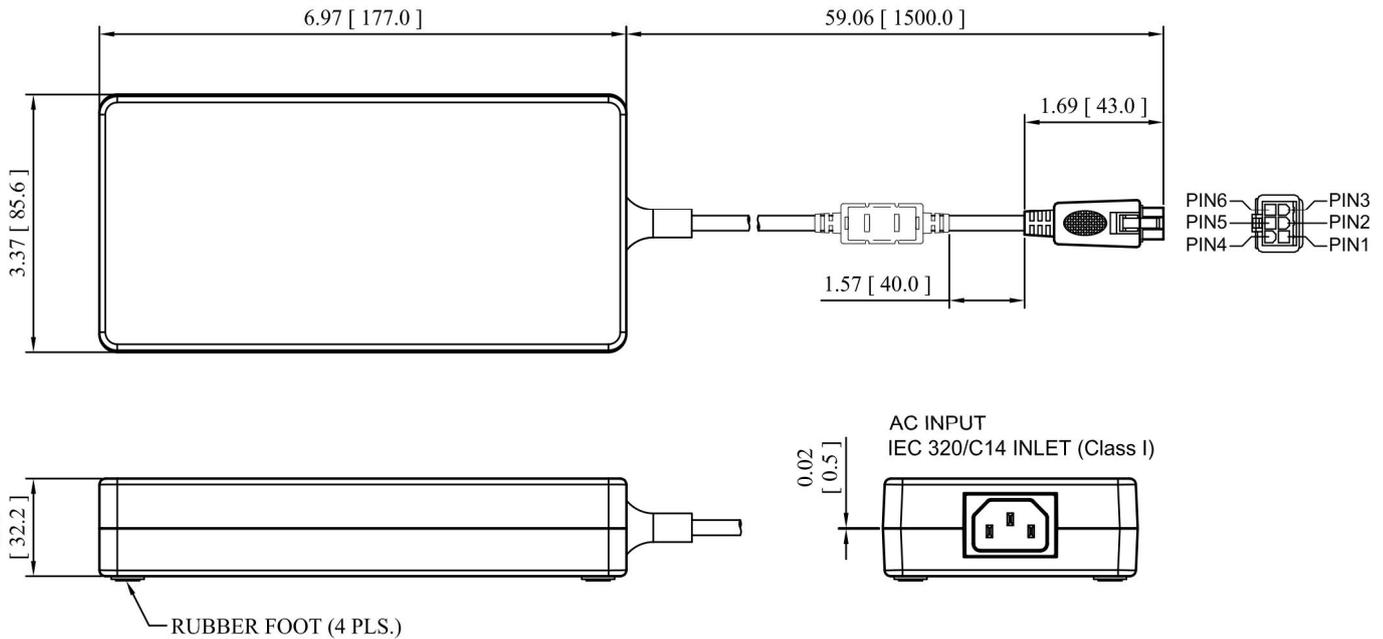
## OUTPUT VOLTAGE/CURRENT RATING CHART

Model <sup>(1)</sup>	Output					Average Active efficiency (typical) @ 115 / 230 Vac	
	V1	Min. Current	Max. Current	Tol.	Ripple & Noise <sup>(2)</sup>		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:**

- PUP230N3 models are equipped with IEC320/C14 inlet.
- 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:**

- Dimensions shown in inches [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 600 grams (1.33 lbs.) approx.
- 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
<b>Polarity</b>	V1 Return	V1 Return	V1 Return	+V1	+V1	+V1

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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