



25-30 WATT SWITCHING POWER SUPPLIES

DESCRIPTION

The PUP30 series of AC/DC switching power supplies are for 25 to 30 watts of continuous output power. They are enclosed in a 94V-1 rated polyphenylene-oxide case with an IEC 320 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.

PUP30 SERIES



FEATURES

- 15 standard desktop models
- Single, dual or triple outputs
- Optional output connectors
- Optional on/off switch
- 100% burn-in
- Wide input range 85 to 264VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection
- Compliant with RoHS requirements

Safety Standard Approvals :



UL 60950-1, CSA C22.2 NO. 60950-1
File No. E137410



TÜV EN60950-1
Certificate No. S 50098383

INPUT SPECIFICATIONS

Input voltage : 85 to 264VAC
 Input frequency : 47 to 63Hz
 Input current : 0.80A (rms) for 115VAC
 0.50A (rms) for 230VAC
 Earth leakage current : 0.47mA max. @ 115VAC, 60Hz
 (Touch current) 0.85mA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current : See rating chart
 Output power range : 30 watts maximum
 Ripple and noise : 1% peak to peak maximum
 Overvoltage protection : Provided on output #1 only; set at 112-132% of its nominal output voltage
 Overcurrent protection : All outputs protected to short circuit conditions
 Temperature coefficient : All outputs $\pm 0.04/^{\circ}\text{C}$ 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°C to +70°C
 Storage temperature : -40°C to +85°C
 Relative humidity : 5% to 95% non-condensing
 Derating : Derate from 100% at +50°C linearly to 50% at +70°C

GENERAL SPECIFICATIONS

Switching frequency : 30KHz ± 5 KHz
 Efficiency : 70% minimum on single output models with $V_o \geq 12\text{V}$, 65% minimum on the others
 Hold-up time : 10 msec minimum at 110VAC
 Line regulation : $\pm 0.5\%$ maximum at full load
 Inrush current : 15 amps @ 115VAC or 30 amps @ 230VAC, at 25°C cold start
 Withstand voltage : 3000VAC from input to output
 1500VAC from input to ground
 500VAC from output to ground
 MTBF : 400,000 hours minimum at full load at 25°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, $\pm 8\text{KV}$ air and $\pm 4\text{KV}$ contact
 EN61000-4-3: Radiated immunity, 3V/m
 EN61000-4-4: Fast transient/burst, $\pm 1\text{KV}$
 EN61000-4-5: Surge, $\pm 1\text{KV}$ diff., $\pm 2\text{KV}$ 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

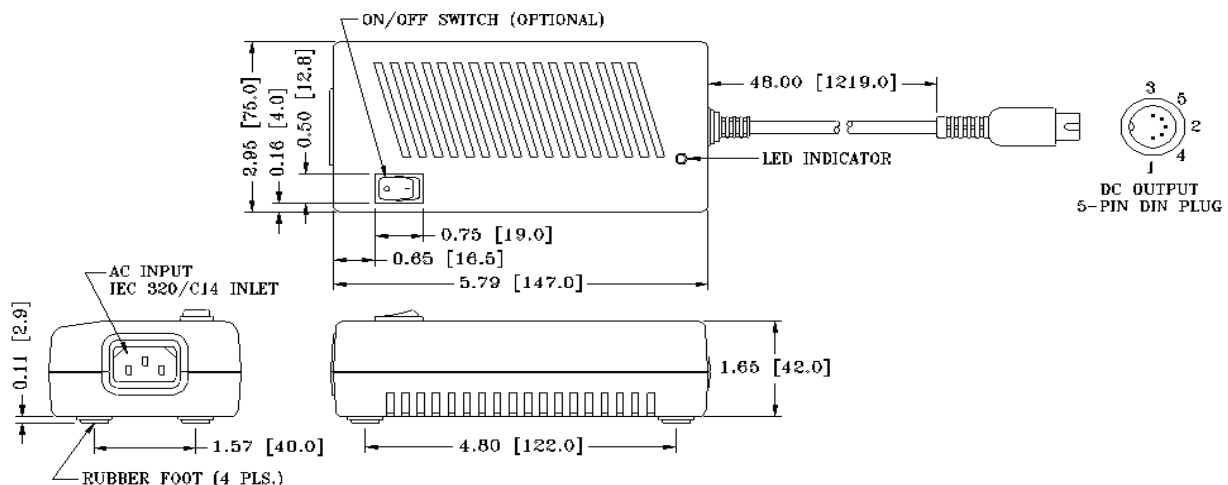
PUP30 SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

(1)(2) MODEL	Output #1				Output #2				Output #3				Maximum Output Power
	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	
PUP30-10	5-6V	0A	5.0A	5%									25W
PUP30-10-1	6-8V	0A	4.5A	2%									27W
PUP30-11	9-11V	0A	3.3A	2%									30W
PUP30-12	11-13V	0A	2.7A	2%									30W
PUP30-13	13-17V	0A	2.3A	2%									30W
PUP30-13-1	17-21V	0A	1.7A	2%									30W
PUP30-14	21-27V	0A	1.4A	2%									30W
PUP30-16	27-33V	0A	1.1A	2%									30W
PUP30-17	33-39V	0A	0.9A	2%									30W
PUP30-18	48V	0A	0.7A	2%									30W
PUP30-23	+5V	0.3A	3.0A	5%	+12V	0.1A	2.0A	5%					30W
PUP30-24	+5V	0.3A	3.0A	5%	+15V	0.1A	1.5A	5%					30W
PUP30-25	+5V	0.3A	3.0A	5%	+24V	0.1A	1.0A	5%					30W
PUP30-31	+5V	0.3A	3.0A	5%	+12V	0A	0.8A	5%	-12V	0A	0.8A	5%	30W
PUP30-32	+5V	0.3A	3.0A	5%	+15V	0A	0.8A	5%	-15V	0A	0.8A	5%	30W

- NOTES: 1. The output voltage of a single output model, except PUP30-18, can be adjusted by user in the stated range, or set by factory to a wanted value in the range at the request of a user when ordering.
2. Output #2 and #3 are with low drop voltage regulators. The output #1 of the multiple output models need a minimum current of 0.3A to support the other outputs at their maximum rated loads to be within voltage tolerance.

MECHANICAL SPECIFICATIONS



NOTES:

- Dimensions shown in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 550 grams approx.
- See [pages 6-1 to 6-8](#) for optional output connectors. Add the suffix assigned for a selected connector to a wanted model number, e.g. PUP30-10-B1, for ordering.

PIN CHART

MODEL	PIN	1	2	3	4	5
PUP30-10 PUP30-10-1 PUP30-11 PUP30-12		RETURN	RETURN	OUTPUT #1	RETURN	OUTPUT #1
PUP30-13 PUP30-13-1 PUP30-14 PUP30-16		RETURN	RETURN	OUTPUT #1	RETURN	OUTPUT #1
PUP30-17 PUP30-18		COMMON RETURN	COMMON RETURN	OUTPUT #1	COMMON RETURN	OUTPUT #2
PUP30-23 PUP30-24 PUP30-25		COMMON RETURN	COMMON RETURN	OUTPUT #1	OUTPUT #3	OUTPUT #2