

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 264 VAC
- 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 264 VAC
Input frequency :	47 to 63 Hz
Input current :	0.80A (rms) for 115VAC 0.50A (rms) for 230VAC
Earth leakage current (Touch current) :	0.47mA max. @ 115VAC, 60Hz 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 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$
Storage temperature :	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Relative humidity :	5% to 95% non-condensing
Derating :	Derate from 100% at +50 $^{\circ}\text{C}$ linearly to 50% at +70 $^{\circ}\text{C}$

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 $^{\circ}\text{C}$ cold start
Withstand voltage :	3000VAC from input to output 500VAC from input to ground 500VAC from output to ground
MTBF :	400,000 hours minimum at full load at 25 $^{\circ}\text{C}$ 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

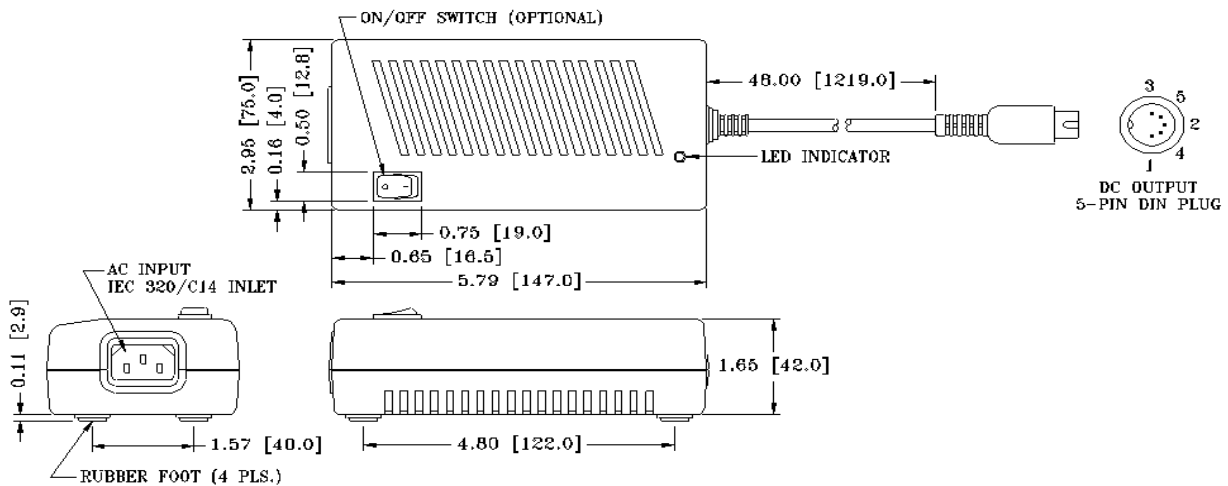
PUP30 SERIES

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%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	25W
PUP30-10-1	6-8V	0A	4.5A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	27W
PUP30-11	9-11V	0A	3.3A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-12	11-13V	0A	2.7A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-13	13-17V	0A	2.3A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-13-1	17-21V	0A	1.7A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-14	21-27V	0A	1.4A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-16	27-33V	0A	1.1A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-17	33-39V	0A	0.9A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-18	48V	0A	0.7A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-23	+5V	0.3A	3.0A	5%	+12V	0.1A	2.0A	5%	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-24	+5V	0.3A	3.0A	5%	+15V	0.1A	1.5A	5%	(N/A)	(N/A)	(N/A)	(N/A)	30W
PUP30-25	+5V	0.3A	3.0A	5%	+24V	0.1A	1.0A	5%	(N/A)	(N/A)	(N/A)	(N/A)	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
PUP30-13	PUP30-13-1	PUP30-14	PUP30-16	RETURN	RETURN	OUTPUT #1
PUP30-17	PUP30-18			COMMON RETURN	COMMON RETURN	OUTPUT #2
PUP30-23	PUP30-24	PUP30-25		COMMON RETURN	COMMON RETURN	OUTPUT #2
PUP30-31	PUP30-32			COMMON RETURN	COMMON RETURN	OUTPUT #2