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

CE (LVD+EMC)



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**

Safety Standard Approvals：

UL 60950-1
CSA C22.2 No. 60950-1

TÜV EN60950-1

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
Leakage 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 ±0.04 % / ℃ 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℃ to +70℃
Storage temperature：	-40℃ to +85℃
Relative humidity：	5% to 95% non-condensing
Derating：	Derate from 100% at +50℃ linearly to 50% at +70℃

GENERAL SPECIFICATIONS

Switching frequency：	30KHz ±5KHz
Efficiency：	70% minimum on single output models with Vo ≥ 12V, 65% minimum on the others
Hold-up time：	10 msec minimum at 110VAC
Line regulation：	±0.5% maximum at full load
Inrush current：	15 amps @ 115VAC, or 30 amps @ 230VAC, at 25℃ 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℃ 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, ± 8KV air and ± 4KV contact
EN61000-4-3:	Radiated immunity, 3V/m
EN61000-4-4:	Fast transient/burst, ± 1KV
EN61000-4-5:	Surge, ± 1KV diff., ± 2KV 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

Tumbler Technologies + TRUMPower
3350 Scott Blvd., Bldg. 13, Santa Clara, California 95054, USA
Phone: 408-988-6616 ● sales@trumpower.com ● www.TRUMPower.com

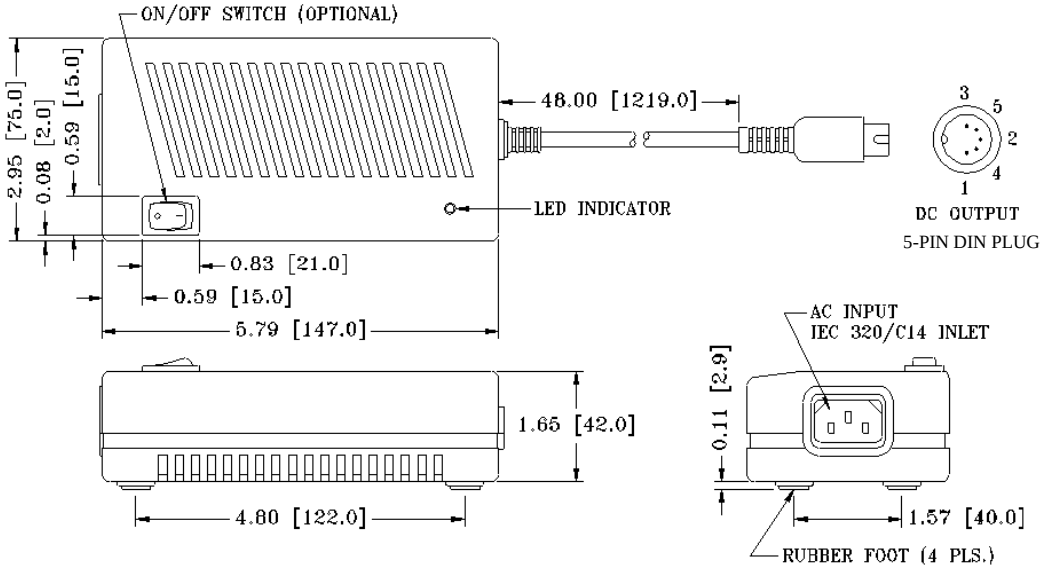
UNIVERSAL INPUT PUP30 SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

(1)(2) Model	Output #1 Vnom.	Imin.	Imiax.	Tol.	Output #2 Vnom.	Imin.	Imax.	Tol.	Output #3 Vnom.	Imin.	Imax.	Tol.	Maximum Output Power
PUP30-10	5-6V	0A	5.0A	5%		(N/A)				(N/A)			25W
PUP30-10-1	6-8V	0A	4.5A	2%		(N/A)				(N/A)			27W
PUP30-11	9-11V	0A	3.3A	2%		(N/A)				(N/A)			30W
PUP30-12	11-13V	0A	2.7A	2%		(N/A)				(N/A)			30W
PUP30-13	13-17V	0A	2.3A	2%		(N/A)				(N/A)			30W
PUP30-13-1	17-21V	0A	1.7A	2%		(N/A)				(N/A)			30W
PUP30-14	21-27V	0A	1.4A	2%		(N/A)				(N/A)			30W
PUP30-16	27-33V	0A	1.1A	2%		(N/A)				(N/A)			30W
PUP30-17	33-39V	0A	0.9A	2%		(N/A)				(N/A)			30W
PUP30-18	48V	0A	0.7A	2%		(N/A)				(N/A)			30W
PUP30-23	+5V	0.3A	3.0A	5%	+12V	0.1A	2.0A	5%		(N/A)			30W
PUP30-24	+5V	0.3A	3.0A	5%	+15V	0.1A	1.5A	5%		(N/A)			30W
PUP30-25	+5V	0.3A	3.0A	5%	+24V	0.1A	1.0A	5%		(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:
1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 550 grams approx.
4. 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

PIN / MODEL	1	2	3	4	5
PUP30-10 PUP30-10-1 PUP30-11 PUP30-12 PUP30-13 PUP30-13-1 PUP30-14 PUP30-16 PUP30-17 PUP30-18	RETURN	RETURN	OUTPUT #1	RETURN	OUTPUT #1
PUP30-23 PUP30-24 PUP30-25	COMMON RETURN	COMMON RETURN	OUTPUT #1	COMMON RETURN	OUTPUT #2
PUP30-31 PUP30-32	COMMON RETURN	COMMON RETURN	OUTPUT #1	OUTPUT #3	OUTPUT #2

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