



50-55 WATT SWITCHING POWER SUPPLIES

DESCRIPTION

The PUP56 series of AC/DC switching power supplies are for 50 to 55 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.

FEATURES

- Optional on/off switch
- Optional output connectors
- 100% burn-in at full rated load
- Wide input range 85 to 264 VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection

INPUT SPECIFICATIONS

Input voltage	85 to 264 VAC
Input frequency	47 to 63 Hz
Input current	1.22A _{rms} for 115VAC 0.76A _{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	55 watts maximum
Ripple and noise	1% peak to peak maximum
Overvoltage protection	Provided on output; set at 112 - 132% of its nominal output voltage
Overcurrent protection	Output protected to short circuit conditions
Temperature coefficient	Output $\pm 0.04\%$ maximum
Transient response	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0% to +60%
Storage temperature	-40% to +85%
Relative humidity	5% to 95% non-condensing
Derating	Derate from 100% at +40% linearly to 50% at +60%

PUP56 SERIES



Safety Standard Approvals



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



TÜV EN60950-1
Certificate No. S9853218

GENERAL SPECIFICATIONS

Switching frequency	83KHz ± 10 KHz
Efficiency	75% minimum on all models
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% 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
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ± 8 KV air and ± 4 KV contact
EN61000-4-3:	Radiated immunity, 3V/m
EN61000-4-4:	Fast transient/burst, ± 1 KV
EN61000-4-5:	Surge, ± 1 KV diff., ± 2 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

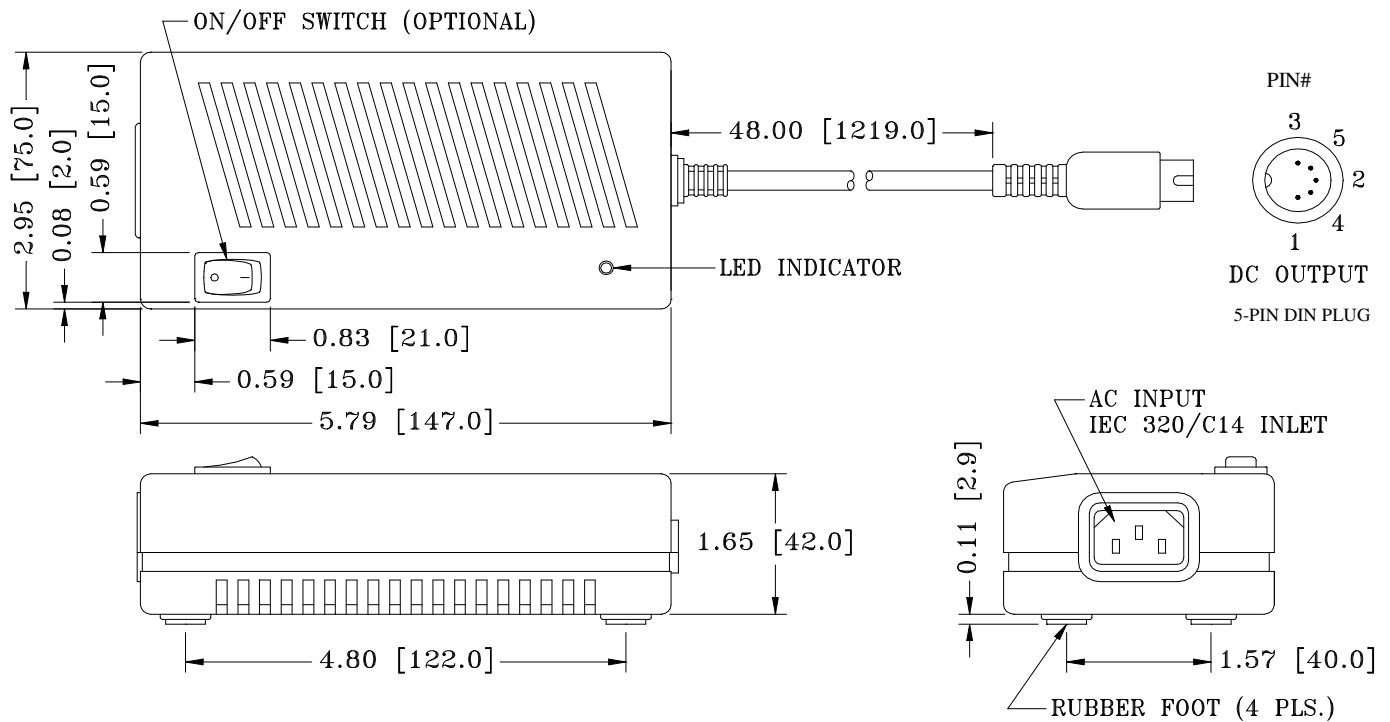
PUP56 SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Vnom.	Imin.	Output Imax.	Tol.	Maximum Output Power
PUP56-12	11-13V	0A	4.2A	3%	50W
PUP56-13	13-17V	0A	3.7A	3%	55W
PUP56-13-1	17-21V	0A	3.1A	3%	55W
PUP56-14	21-27V	0A	2.3A	3%	55W
PUP56-16	27-33V	0A	1.9A	3%	55W
PUP56-17	33-39V	0A	1.6A	3%	55W
PUP56-18	48V	0A	1.2A	3%	55W

Notes: The output voltage of all models, except PUP56-18, can be adjusted by user in the rated range, or set by factory to a wanted value in the range at the request of a user when ordering.

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. PUP56-12-B1, for ordering.

PIN CHART

MODEL \ PIN	1	2	3	4	5
PUP56-12 PUP56-13 PUP56-13-1 PUP56-14	RETURN	RETURN	OUTPUT #1	RETURN	OUTPUT #1
PUP56-16 PUP56-17 PUP56-18	RETURN	RETURN	OUTPUT #1	RETURN	OUTPUT #1