220 WATT SWITCHING POWER SUPPLIES

DESCRIPTION

The PUP220 series of AC/DC switching power supplies are for 220 watts of continuous output power. They are enclosed in a 94V-1 rated polyphenylene-oxide case with an IEC320/C14 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, TUV and CE requirement.

PUP220 SERIES

CE (LVD)

RoHS

FEATURES

- High Efficiency
- Overvoltage protection
- Short-circuit protection
- Overpower protection
- Over temperature protection
- Compliant with CEC and Energy Star Efficiency level V requirements
  * No load power consumption less than 0.5 W
  * Average active efficiency ≧ 87%
- Compliant with RoHS requirement

SAFETY STANDARD APPROVALS

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

TUV EN60950-1

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	50-60 Hz
Input current:	3 A (rms) for 100 VAC 1.3 A (rms) for 240 VAC
Touch current:	250 μA max. @ 264 VAC, 60 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	See rating chart.
Ripple and noise:	380 mV peak to peak maximum
Overvoltage protection:	set at 112-145% of its nominal output voltage.
Overcurrent protection:	All models 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 500 us after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0℃ to +40℃
Storage temperature:	-20℃ to +80℃
Relative humidity:	10% to 90% non-condensing

GENERAL SPECIFICATIONS

Hold-up time:	5 ms minimum at 110 VAC or 240 VAC
Efficiency:	87% minimum at full load
Turn on delay time:	3 seconds maximum at 110 VAC
Inrush current:	No damage
Withstand voltage:	1500 VAC from input to output and ground
MTBF:	100,000 hours at full load at 25℃ ambient, calculated per MIL-HDBK-217F

EMC Performance (EN55022)

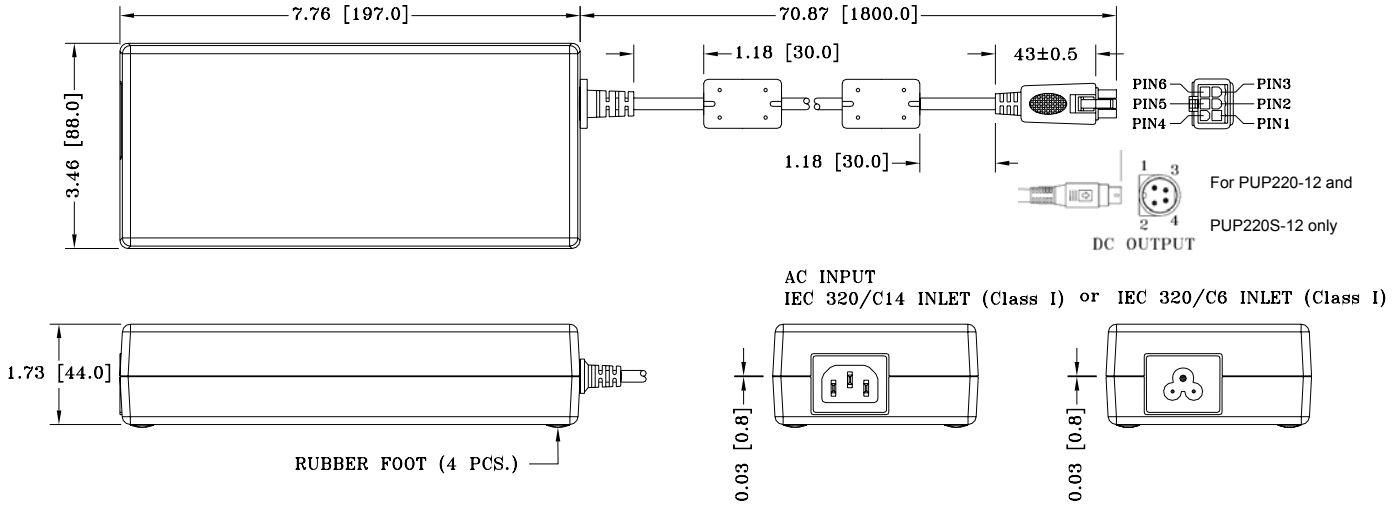
EN55022:	Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±15 KV air and ±8 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±1 KV diff., ±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 >95% reduction for 10 ms

OUTPUT VOLTAGE/CURRENT RATING CHART

Model[2]	Output						Average Active efficiency (typical) @ 115 / 230 Vac
	V1	Min. Current	Max. Current	Tol.	Ripple & Noise[1]	Max. Power	
PUP220-12	12 V	0 A	15.00 A	5%	380 mV	180 W	88 / 90 %
PUP220S-12	12 V	0 A	15.00 A	5%	380 mV	180 W	88 / 90 %
PUP220-13-2	19 V	0 A	11.57 A	5%	380 mV	220 W	90 / 92 %
PUP220-14	24 V	0 A	9.16 A	5%	380 mV	220 W	88 / 90 %
PUP220-18	48 V	0 A	4.58 A	5%	480 mV	220 W	92 / 93 %

NOTES: 1. 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 electrolytic capacitor in parallel with a 0.1 µF ceramic capacitor across the output.
2. PUP220 models are equipped with IEC320/C14 inlet, and PUP220S models with IEC320/C6 inlet.

MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions shown in inches [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 1.0 Kg (2.2 lbs.) approx.
4. The length of output cable for PUP220-13-2 is 37.4 [950.0]
5. Output connector for PUP220-12 and PUP220S-12 is 4-pin plug without lock (molding type), mating with 4-pin socket, Kycon P/N KPJX-4S-S or equivalent.
6. Output connector for PUP120-13-2, PUP220-14 and PUP220-18 is Molex Mini - Fit receptacle, P/N: 39-01-2060 with female terminal #5556 or equivalent, mating with Molex plug 39-01-2066 and male terminal #5558 or equivalent. It also mates with Molex headers #5566, #5569, or equivalent.

PIN CHART

PIN / MODEL	1	2	3	4	SHELL OF CONNECTOR
PUP220-12 PUP220S-12	+V1		V1 Return & AC Ground		

PIN / MODEL	1	2	3	4	5	6
PUP220-13-2 PUP220-14 PUP220-18	V1 Return & AC Ground			+V1		