

DESCRIPTION

The PMP450 series of AC-DC switching power supplies are for 400~480 watts of continuous output power. They are enclosed in a 94V-0 rated polycarbonate case with an IEC 320/C14 inlet to mate with interchangeable cord for world-wide use. All models meet EN55011 class B emission limits, and are designed for medical applications.

FEATURES

- BF Class insulation
- Operation altitude up to 5000 meters
- Wide input range 90 to 264VAC
- Low safety ground leakage current
- Less than 300 μ A leakage current
- Efficiency greater than 85%
- Overvoltage Protection
- Over temperature Protection
- Short-Circuit Protection
- Acoustic noise less than 36 dBA
- Compliant with RoHs requirements

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	5.2 A (rms) @115 VAC, 60 Hz 2.6 A (rms) @ 230 VAC, 50 Hz
Earth leakage current:	300 μ A max. @ 264 VAC, 63 Hz
Touch current:	100 μ A max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Maximum output power:	See rating chart.
Ripple and noise:	1% peak to peak maximum
Over voltage protection:	Set at 115-140% of nominal output voltage, latching by recycle input to reset
Short circuit protection:	Automatic recovery
Over temperature protection:	Latching by recycle input to reset
Temperature coefficient:	All outputs $\pm 0.04\%$ / $^{\circ}$ C maximum
Transient response:	Maximum excursion of 4%, recovering to 1% of final value within 500 μ s after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-10 $^{\circ}$ C to +60 $^{\circ}$ C
Storage temperature:	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Relative humidity:	5% to 95% non-condensing
Temperature derating:	Derate from 100% at +40 $^{\circ}$ C linearly to 50% at +60 $^{\circ}$ C

PMP450 SERIES



CE
RoHS

SAFETY STANDARD APPROVALS



UL ES 60601-1, CSA C22.2 No. 60601-1
File No. E178020

CB

IEC 60601-1, EN 60601-1,
BS EN 60601-1

CB

IEC 62368-1, EN 62368-1,
BS EN 62368-1

GENERAL SPECIFICATIONS

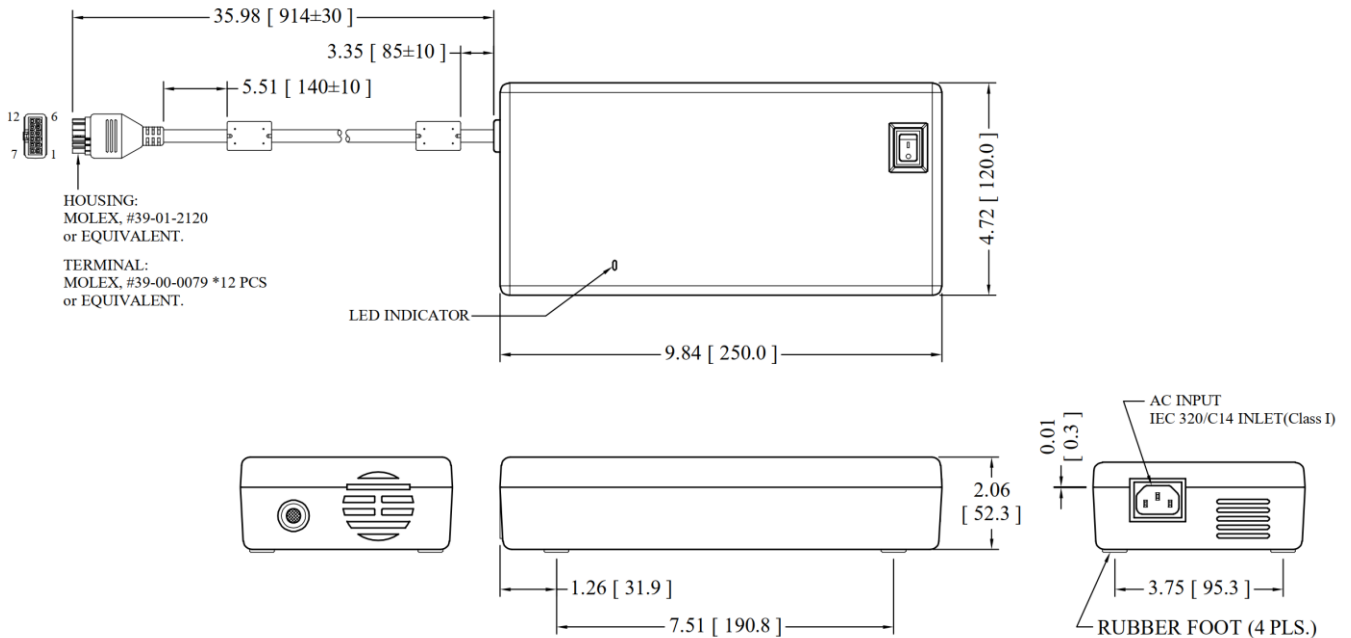
Switching frequency:	55-300 KHz
Efficiency:	85% min. at 115 VAC or 230 VAC
Hold-up time:	12 ms minimum at 110 VAC & 400 W
Line regulation:	$\pm 0.5\%$ maximum at full load
Inrush current:	30 A @ 115 VAC, or 60 A @ 230 VAC, at 25 $^{\circ}$ C cold start
Withstand voltage:	4000 VAC from input to output (2 MOPP) 1500 VAC from input to ground (1 MOPP) 1500 VAC from output to ground
MTBF:	100,000 hours at full load at 25 $^{\circ}$ C ambient, calculated per MIL-HDBK-217F, excluding DC fan
EMC Performance (EN60601-1-2)	
EN55011:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ± 15 KV air and ± 8 KV contact
EN61000-4-3:	Radiated immunity, 9-28 V/m
EN61000-4-4:	Fast transient/burst, ± 2 KV
EN61000-4-5:	Surge, ± 1 KV diff., ± 2 KV com
EN61000-4-6:	Conducted immunity, 10 Vrms
EN61000-4-8:	Magnetic field immunity, 30 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms, 100% reduction for 10 ms

OUTPUT VOLTAGE/CURRENT RATING CHART

Model ⁽²⁾	Output						Efficiency (typical) @ 400 W 115/230 Vac
	V1	Min. Current	Max. Current	Tol.	Ripple & Noise ⁽¹⁾	Max. Output Power	
PMP450-12-S	12 V	0 A	33.34 A	±5%	120 mV	400 W	85 /88%
PMP450-13-S	15 V	0 A	26.67 A	±5%	150 mV	400 W	87 /90%
PMP450-13-1-S	18 V	0 A	25.00 A	±5%	180 mV	450 W	88 /91%
PMP450-14-S	24 V	0 A	18.75 A	±5%	240 mV	450 W	89 /92%
PMP450-15-S	28 V	0 A	16.08 A	±5%	280 mV	450 W	89 /92%
PMP450-17-S	36 V	0 A	12.50 A	±5%	360 mV	450 W	89 /91%
PMP450-18-S	48 V	0 A	10.00A	±5%	480 mV	480 W	90 /92%
PMP450-19-1-S	54 V	0A	8.89A	±5%	540 mV	480 W	92 /94%
PMP450-19-S	57 V	0 A	8.42A	±5%	570 mV	480 W	90 /92%

- 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 10 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.
2. All models are with built-in fan.

MECHANICAL SPECIFICATIONS



NOTES:

- Dimensions shown in inches [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 1.6 Kg (3.5 lbs.) approx.
- Output connector is Molex Mini - Fit receptacle, P/N: 39-01-2120 with female terminal #5557 or equivalent, mating with Molex plug 39-01-2126 and male terminal #5559 or equivalent. It also mates with Molex headers #5566, #5569, or equivalent.

PIN CHART

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12
Polarity	+V1						V1 Return					

OUTPUT POWER DERATING CURVE

