

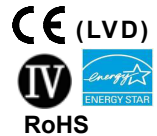


60-90 WATTS MEDICAL SWITCHING POWER SUPPLIES

DESCRIPTION

The PMP90 series of AC/DC switching power supplies are for 60 to 90 watts of continuous output power. They are enclosed in a 94V-1 rated case with an IEC 320/C14 or C18 inlet for medical and ITE applications. All models meet EN55011, EN55022 and FCC class B emission limits, and are designed for medical applications, not for life support equipment.

PMP90 SERIES



FEATURES

- Low safety ground leakage current
- Option IEC320/C14(Class I) or C18(Class II)
- Wide input range 90 to 264VAC
- Optional output connector
- Overvoltage protection
- Overcurrent protection
- 100% burn-in
- Compliant with CEC and Energy Star efficiency level IV requirements
(For all models except PMP90-10, PMP90-10-1 and PMP90-11)
 - * No load power consumption less than 0.5W
 - * Average active efficiency $\geq 85\%$
- Compliant with RoHS requirements

New!!



INPUT SPECIFICATIONS

Input voltage : 90 to 264VAC
 Input frequency : 47 to 63Hz
 Input current : 1.20A (rms) for 115VAC
 0.60A (rms) for 230VAC
 Earth leakage current : 90uA max. @ 115VAC, 60Hz
 150uA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current : See rating chart
 Total output power : See rating chart
 Ripple and noise : 2% peak to peak maximum
 Over voltage protection : Set at 112-140% of its nominal output voltage
 Over current protection : Protected to short circuit conditions
 Temperature coefficient : $\pm 0.04\%$ / $^{\circ}\text{C}$ 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°C to $+60^{\circ}\text{C}$
 Storage temperature : -40°C to $+85^{\circ}\text{C}$
 Relative humidity : 5% to 95% non-condensing
 Derating : Derate from 100% at $+40^{\circ}\text{C}$ linearly to 50% at $+60^{\circ}\text{C}$

Safety Standard Approvals :



UL 60601-1, CSA C22.2 NO. 601.1
File NO. E178020



TÜV EN60601-1
Certificate No. T50088933 for class I
Certificate No. T50088936 for class II



GENERAL SPECIFICATIONS

Switching frequency : 50 KHz - 110 KHz
 Power factor : 0.98 Typical
 Efficiency : 85% min.
 (78% min. for PMP90-10, PMP90-10-1, PMP90-11 and PMP90-12)
 Hold-up time : 15 msec minimum at 110VAC
 Line regulation : $\pm 0.5\%$ maximum at full load
 Inrush current : 60 amps @ 115VAC or 120 amps @ 230VAC, @ 25°C cold start
 Withstand voltage : 4000VAC from input to output
 1500VAC from input to ground
 500VAC from output to ground
 MTBF : 150,000 hours minimum at full load at 25°C ambient, calculated per MIL-HDBK-217F
 EMC Performance (IEC60601-1-2: 2001)
 EN55011: 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 $\pm 6\text{KV}$ contact
 EN61000-4-3: Radiated immunity, 3V/m
 EN61000-4-4: Fast transient/burst, $\pm 2\text{KV}$
 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, 3A/m
 EN61000-4-11: Voltage dips, 30% reduction for 500ms, 60% reduction for 100ms and $>95\%$ reduction for 10ms

UNIVERSAL INPUT

PMP90 SERIES

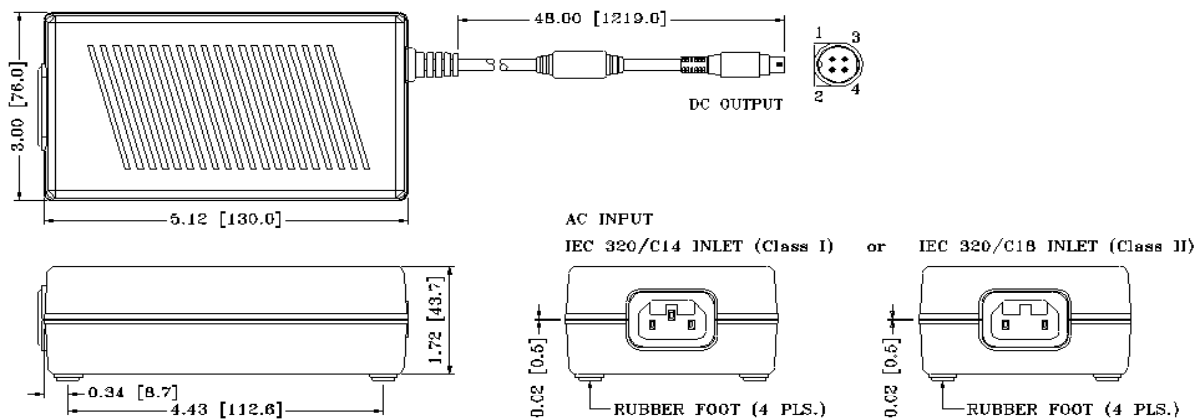
OUTPUT VOLTAGE/CURRENT RATING CHART

MODEL	Vnom.	Output			Maximum Output Power
		Imin.	Imax.	Tol.	
PMP90-10	5V	0A	12.0A	5%	60W
PMP90-10-1	6V	0A	10.0A	5%	60W
PMP90-11	9V	0A	7.78A	5%	70W
PMP90-12	12V	0A	6.67A	5%	80W
PMP90-12-1	13.5V	0A	6.3A	5%	85W
PMP90-13	15V	0A	5.67A	5%	85W
PMP90-13-1	18V	0A	5.0A	5%	90W
PMP90-13-2	19V	0A	4.74A	5%	90W
PMP90-14	24V	0A	3.75A	5%	90W
PMP90-16	30V	0A	3.0A	5%	90W
PMP90-18	48V	0A	1.87A	5%	90W

NOTES:

- Ripple and noise: Peak -to -peak with 20MHz bandwidth and 10uF tantalum capacitor in parallel with a 0.1uF ceramic capacitor at rated line voltage and load ranges.
- To order a model with IEC320/C18 inlet, add suffix "F" to the PMP90, e.g. PMP90F-12.

MECHANICAL SPECIFICATIONS



NOTES:

- Dimensions show in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 658 grams approx.
- See [pages 6-27 to 6-28](#) for the optional output connectors. Add the suffix assigned for a selected connector to a wanted model number, e.g. PMP90-14-B1 for ordering.
- PMP90-10 and PMP90-10-1 output connectors are without lock.

PIN CHART

MODEL	PIN	PIN			
		1	2	3	4
PMP90-10	PMP90-10-1	RETURN	OUTPUT +V	RETURN	OUTPUT +V
PMP90-11	PMP90-12				
PMP90-12-1	PMP90-13				
PMP90-13-1	PMP90-13-2				
PMP90-14	PMP90-16				
PMP90-18					