

# 96-120 WATT MEDICAL & ITE SWITCHING POWER SUPPLIES

## DESCRIPTION

The PMP120 series of AC/DC switching power supplies are for 96 to 120 watts of continuous output power. They are enclosed in a 94V-1 rated case with an IEC 320/C14 or C18 inlet to mate with interchangeable cord for world-wide use. All models meet EN55011, EN55022 and FCC class B emission limits, and are designed for medical and ITE applications, not for life supporting equipment.

## FEATURES

- Low safety ground leakage current
- Optional output connectors
- 100% burn-in
- Wide input range 90 to 264VAC
- Overvoltage protection
- Overcurrent protection
- Compliant with CEC and Energy Star efficiency level IV requirements
  - \* No load power consumption less than 0.5W
  - \* Average active efficiency  $\geq 85\%$
- Compliant with RoHS requirements

## INPUT SPECIFICATIONS

Input voltage : 90 to 264VAC  
 Input frequency : 47 to 63Hz  
 Input current : 1.60A (rms) for 115VAC  
 0.80A (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 : 120 watts maximum  
 Ripple and noise : 2% peak to peak maximum  
 Overvoltage protection : Provided on output #1 only; set at 112 -140% of its nominal output voltage  
 Overcurrent protection : All outputs protected to short circuit conditions  
 Temperature coefficient : All outputs  $\pm 0.04\%$  / $^{\circ}\text{C}$  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 :  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$   
 Storage temperature :  $-40^{\circ}\text{C}$  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  $+60^{\circ}\text{C}$

## PMP120 SERIES



## Safety Standard Approvals :



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



TÜV EN60601-1



## GENERAL SPECIFICATIONS

Switching frequency : 50KHz ~ 110KHz  
 Power factor : 0.98 typical at 115VAC  
 Efficiency : 85% min.  
 Hold-up time : 15 msec minimum at 115VAC  
 Line regulation :  $\pm 0.5\%$  maximum at full load  
 Inrush current : 60 amps @ 115VAC or 120 amps @ 230VAC, at  $25^{\circ}\text{C}$  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  $25^{\circ}\text{C}$  ambient , calculated per MIL-HDBK-217F  
 EMC Performance (EN60601-1-2: 2001)  
 EN55011/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,  $\pm 8\text{KV}$  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

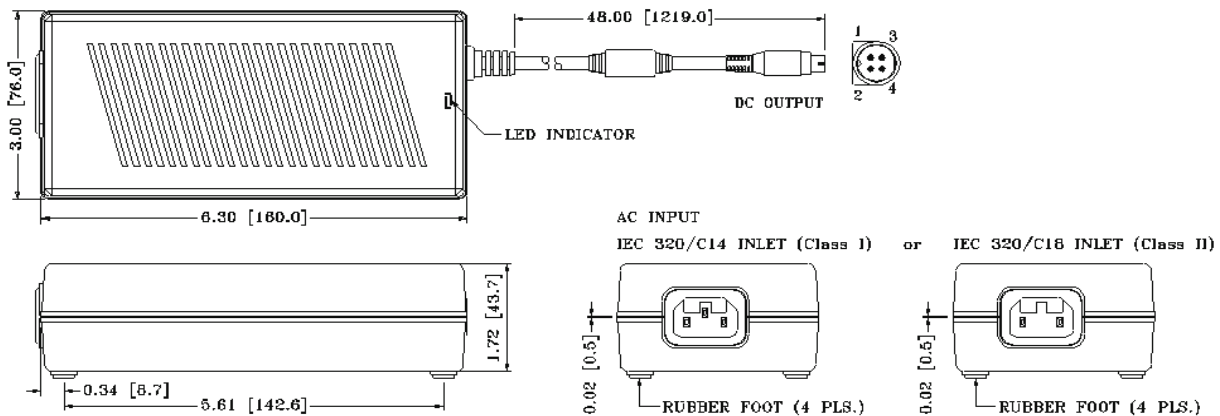
# PMP120 SERIES

## OUTPUT VOLTAGE/CURRENT RATING CHART

MODEL	Vnom.	Output			Tol.	Maximum Output Power
		Imin.	I <sub>max.</sub>			
PMP120-12	12V	0A	8.0A		5%	96W
PMP120-14	24V	0A	5.0A		5%	120W

- NOTES:
1. 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.
  2. To order a model with IEC320/C18 inlet, add suffix "F" to the PMP120, e.g. PMP120F-12.

## MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight: 780 grams approx.
4. See pages 5-1 to 5-2 for optional output connector. Add the suffix assigned for a selected connector to a wanted model number, e.g. PMP120-14-B1, for ordering.
5. PMP120-12 and PMP120-13 output connectors are without lock.

## PIN CHART

MODEL	PIN	1	2	3	4
PMP120-12	PMP120-13	Return	Output +V	Return	Output +V
PMP120-13-1	PMP120-13-2				
PMP120-13-3	PMP120-14				
PMP120-16	PMP120-17				
PMP120-18					