PROTEK POWER

132-150 WATT MEDICAL SWITCHING POWER SUPPLIES

DESCRIPTION

The PMP150 series of AC /DC switching power supplies are for 132-150 watts of continuous output power. They are enclosed in a 94 V-1 rated case with an IEC 320 /C14 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
- Option IEC320/C14(Class I) or C18(Class II)
- Wide input range 90 to 264VAC
- Optional output connectors
- 100% burn-in
- Overvoltage protection
- Overcurrent protection
- Compliant with CEC and Energy Star Efficiency level IV requirements for PMP150-12, PMP150-13 and PMP150-13-2, and level IV for PMP150-14, PMP150-15 and PMP150-18
  * No load power consumption less than 0.5W
  * Average active efficiency ≧85%
- Compliant with RoHS requirements

INPUT SPECIFICATIONS

Input voltage :	90-264 VAC
Input frequency :	47-63 Hz
Input current :	1.63 A (rms) for 115 VAC 0.70 A (rms) for 230 VAC
Earth leakage current :	90 uA max. @ 115 VAC, 60 Hz 150 uA max. @ 230 VAC, 50 Hz

OUTPUT SPECIFICATIONS

Output voltage/current :	See rating chart
Total output power :	See rating chart
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 ±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 +60℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +40℃ linearly to 50% at +60℃

PMP150 SERIES

CE (LVD)
RoHS

SAFETY STANDARD APPROVALS

UL 60601-1, CSA C22.2 No. 601.1
File No. E178020
UL 60950-1
File No. E137410

TÜV EN60601-1

TÜV EN60950-1

GENERAL SPECIFICATIONS

Switching frequency :	30-110 KHz
Power factor :	0.98 Typical at 115 VAC
Efficiency :	85% min.
Hold-up time :	15 msec minimum at 110 VAC
Line regulation :	±0.5% maximum at full load
Inrush current :	60 A @ 115 VAC or 120 A @ 230 VAC, at 25℃ cold start
Withstand voltage :	4000 VAC from input to output 1500 VAC from input to ground 500 VAC from output to ground
MTBF :	150,000 hours at full load at 25℃Cambient , 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, ±8 KV air and ±6 KV contact
EN61000-4-3:	Radiated immunity, 3 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, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 3 A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500 ms, 60% reduction for 100 ms and >95% reduction for 10 ms

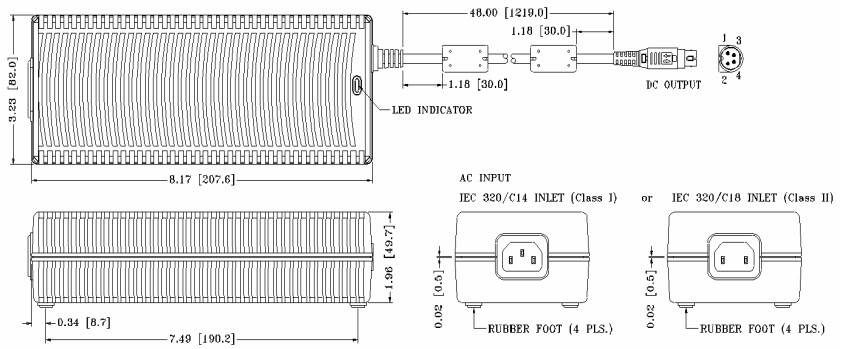
UNIVERSAL INPUT PMP150 MEDICAL SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

MODEL	Vnom.	Output Imin.	Output Imax.	Tol.	Maximum Output Power
PMP150-12	12.0 V	0 A	11.0 A	5%	132 W
PMP150-13	15.0 V	0 A	9.0 A	5%	135 W
PMP150-13-2	19.0 V	0 A	7.90 A	5%	150 W
PMP150-14	24.0 V	0 A	6.25 A	5%	150 W
PMP150-15	27.0 V	0 A	5.56 A	5%	150 W
PMP150-18	48.0 V	0 A	3.13 A	5%	150 W
PMP150-12	12.0 V	0 A	11.0 A	5%	132 W
PMP150-13	15.0 V	0 A	9.0 A	5%	135 W
PMP150-13-2	19.0 V	0 A	7.90 A	5%	150 W
PMP150-14	24.0 V	0 A	6.25 A	5%	150 W
PMP150-15	27.0 V	0 A	5.56 A	5%	150 W

NOTES:
1. Ripple and noise: Peak to peak with 20 MHz bandwidth and 10 uF tantalum capacitor in parallel with a 0.1 uF ceramic capacitor at rated line voltage and load ranges.
2. To order a model with IEC320/C18 inlet, add suffix "F" to the PMP150, e.g. PMP150F-12.

MECHANICAL SPECIFICATIONS



NOTES:
1. Dimensions shown in inches [mm]
2. Tolerance 0.02 [0.5] maximum
3. Weight : 960 grams approx
4 Refer to Section titled "OPTIONAL OUTPUT CONNECTORS". Add the suffix assigned for a selected connector to a wanted model number, e.g. PMP150-14-B1, for ordering.
5.. PMP150-12, -13, -13-2 output connectors are without lock. PMP150-14, -15, -18 output connectors are with lock.

PIN CHART

MODEL \ PIN	1	2	3	4
PMP150-12 PMP150-13 PMP150-13-2 PMP150-14 PMP150-15 PMP150-18	Return	Output +V	Return	Output +V

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