

20-30 WATT MEDICAL POWER SUPPLIES

DESCRIPTION

The PMP30 series of AC/DC wall mount switching power supplies are for 20-30 watts of continuous output power. They are enclosed in a 94V-0 rated polycarbonate case. The PMP30M models are shipped with a selected interchangeable AC plug, and additional types of AC plug can be purchased from the factory. All models meet EN55011 and FCC class B emission limits, and are designed for medical applications.

PMP30 SERIES (E RoHS

FEATURES

- Operation altitude up to 5000 meters
- BF class insulation
- Interchangeable AC plugs for PMP30M models
- Meet IP22 (except PMP30M models)
- Overvoltage protection
- Over temperature protection
- Short-circuit protection
- 100% burn-in at full rated load
- Compliant with DoE efficiency level VI requirements
- Compliant with RoHS requirements

SAFETY STANDARD APPROVALS



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



TÜV EN 60601-1

INPUT SPECIFICATIONS

Input voltage: 80-264 VAC Input frequency: 47-63 Hz

Input current: 1.0 A (rms) for 115 VAC, 0.6 A (rms)

for 230 VAC

Touch current: 100 µA max. @ 264 VAC, 63 Hz

GENERAL SPECIFICATIONS

Hold-up time: 8 ms minimum at 115 VAC
Turn on delay time: 3 s maximum at 115 VAC

Efficiency: Compliant with DoE efficiency level VI

requirements (see rating chart)

Line regulation: ±1% maximum at full load

Inrush current: 60 A @ 115 VAC or 120 A @ 230 VAC at 25° C

cold start

Withstand voltage: 4000 VAC from input to output

MTBF: 300,000 hours at full load at 25℃ ambient,

calculated per MIL-HDBK-217F

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

EN60601-1-2

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.

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, and >95% reduction for 10 ms

OUTPUT SPECIFICATIONS

Output voltage /current:

Maximum output power:

Ripple and noise:

See rating chart.

See rating chart.

See rating chart.

Over voltage protection: Set at 112% to140% of its 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: ±0.04% /°C 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: -20°C to $+60^{\circ}\text{C}$ Storage temperature: -40°C to $+85^{\circ}\text{C}$

Relative humidity: 10% to 90% non-condensing
Temperature derating: Derate from 100% at +40°C linearly

to 50% at +60°C

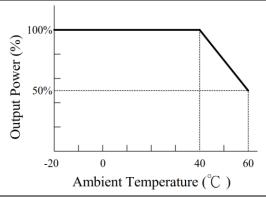
OUTPUT VOLTAGE/CURRENT RATING CHART

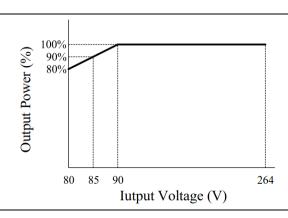
			Output					Average Active	
Model ⁽¹⁾			V1	Min. Current	Max. Current	Tol.	Ripple & Noise ⁽²⁾	Max. Output Power	Efficiency (typical) @ 115 / 230 Vac
PMP30M-10-A	PMP30NP-10	PMP30E-10	5 V	0 A	4.00 A	±5%	100 mV	20 W	83.5 /83.5%
PMP30M-10-2-A	PMP30NP-10-2	PMP30E-10-2	7.5 V	0 A	3.00 A	±5%	100 mV	22.5 W	86.0 /86.0%
PMP30M-11-A	PMP30NP-11	PMP30E-11	9 V	0 A	3.00 A	±5%	100 mV	27 W	87.0 /87.0%
PMP30M-11-1-A	PMP30NP-11-1	PMP30E-11-1	10 V	0 A	2.70 A	±5%	100 mV	27 W	87.0 /87.0%
PMP30M-12-A	PMP30NP-12	PMP30E-12	12 V	0 A	2.50 A	±5%	120 mV	30 W	87.5 /87.5%
PMP30M-13-A	PMP30NP-13	PMP30E-13	15 V	0 A	2.00 A	±5%	150 mV	30 W	87.5 /87.5%
PMP30M-13-1-A	PMP30NP-13-1	PMP30E-13-1	18 V	0 A	1.67 A	±5%	180 mV	30 W	87.5 /87.5%
PMP30M-14-A	PMP30NP-14	PMP30E-14	24 V	0 A	1.25 A	±5%	240 mV	30 W	87.5 /87.5%
PMP30M-16-A	PMP30NP-16	PMP30E-16	30 V	0 A	1.00 A	±5%	300 mV	30 W	87.5 /87.5%
PMP30M-18-A	PMP30NP-18	PMP30E-18	48 V	0 A	0.63 A	±5%	480 mV	30 W	87.5 /87.5%

NOTES:

- 1. PMP30M models are equipped with an interchangeable AC plug, one of the 4 available types shown in note #5 in Mechanical Specifications below. PMP30M-1X-A models are shipped with North American plug, PMP30M-1X-C models with European plug, and so on, while PMP30M-1X-P designated models are shipped with 4 available plugs, one attached and the rest enclosed. PMP30NP models are with fixed North American AC plug, and PMP30E models with European plug.
- 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 tantalum capacitor in parallel with a 0.1 μF ceramic capacitor across the output.

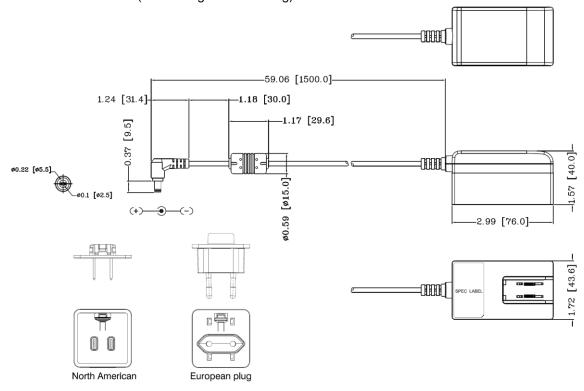
OUTPUT POWER DERATING CURVE



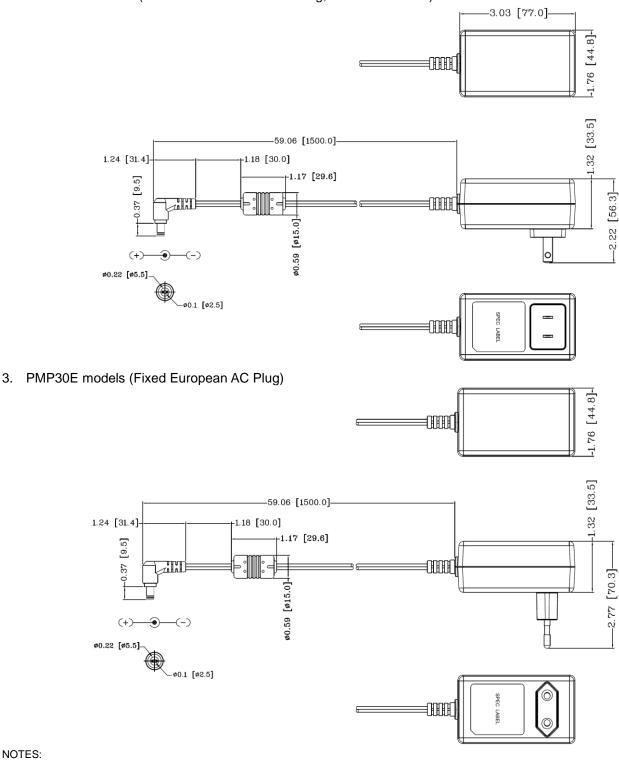


MECHANICAL SPECIFICATIONS

1. PMP30M models (Interchangeable AC Plug)







- Dimensions shown in inches [mm]
- Tolerance 0.02 [0.5] maximum 2.
- Weight: 168 grams (0.37 lbs.) approx. 3.
- Output connector is 5.5 mm O.D., 2.5 mm I.D., 9.5 mm long barrel female 90° connector, center positive voltage.
- Interchangeable AC plugs can be ordered by referring to the following ordering numbers:

Туре	Type A North American plug	Type C European plug	Type G UK plug	Type I Australian plug
Ordering No.	5OE00036	5OE00086	5OE00063	5OE00065
Safety Approval	cULus approved	TÜV approved	None	None