

## DESCRIPTION

The PMP85SF series of AC/DC switching power supplies are for 85 watts of continuous output power. They are enclosed in a 94V-0 rated polycarbonate case with an IEC320/C8 inlet to mate with interchangeable cord for world-wide use. All models meet EN55011 and FCC class B emission limits, and are designed for medical applications, not for life-supporting equipment.

## FEATURES

- High efficiency
- Low safety ground leakage current
- Wide input range 90 to 264 VAC
- 100% burn-in
- Overvoltage protection
- Short-circuit protection
- Overpower protection
- Compliant with CEC and Energy Star Efficiency level V requirements
  - \* No load power consumption less than 0.5 W
  - \* Average active efficiency greater than 87%
- Compliant with RoHS requirements
- Compliant with IPX1

## INPUT SPECIFICATIONS

|                  |                                                      |
|------------------|------------------------------------------------------|
| Input voltage:   | 90-264 VAC                                           |
| Input frequency: | 47-63 Hz                                             |
| Input current:   | 1.70 A (rms) for 115 VAC<br>0.90 A (rms) for 230 VAC |
| Touch current:   | 100 µA 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                                                                                                     |
| Overvoltage protection:  | Provided and set at 112-140% of its nominal output voltage                                                                  |
| Overcurrent protection:  | Protected to short circuit conditions                                                                                       |
| 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 µs after a 25% step load change |

## ENVIRONMENTAL SPECIFICATIONS

|                        |                                                    |
|------------------------|----------------------------------------------------|
| Operating temperature: | 0°C to +60°C                                       |
| Storage temperature:   | -40°C to +85°C                                     |
| Relative humidity:     | 5% to 95% non-condensing                           |
| Derating:              | Derate from 100% at +40°C linearly to 50% at +60°C |

## PMP85SF SERIES



## SAFETY STANDARD APPROVALS



UL ES 60601-1, CSA C22.2 No. 60601-1  
File No. E211696



TÜV EN 60601-1

## GENERAL SPECIFICATIONS

|                      |                                                                           |
|----------------------|---------------------------------------------------------------------------|
| Switching frequency: | 75-100 KHz                                                                |
| Efficiency:          | 87% min.                                                                  |
| Hold-up time:        | 10 ms minimum at 110 VAC                                                  |
| Line regulation:     | ±0.5% maximum at full load                                                |
| Inrush current:      | 40 A @ 115 VAC or 80 A @ 230 VAC, at 25°C cold start                      |
| Withstand voltage:   | 4000 VAC from input to output (2 MOPP)                                    |
| MTBF:                | 150,000 hours at full load at 25°C ambient , calculated per MIL-HDBK-217F |

### EMC Performance (IEC60601-1-2)

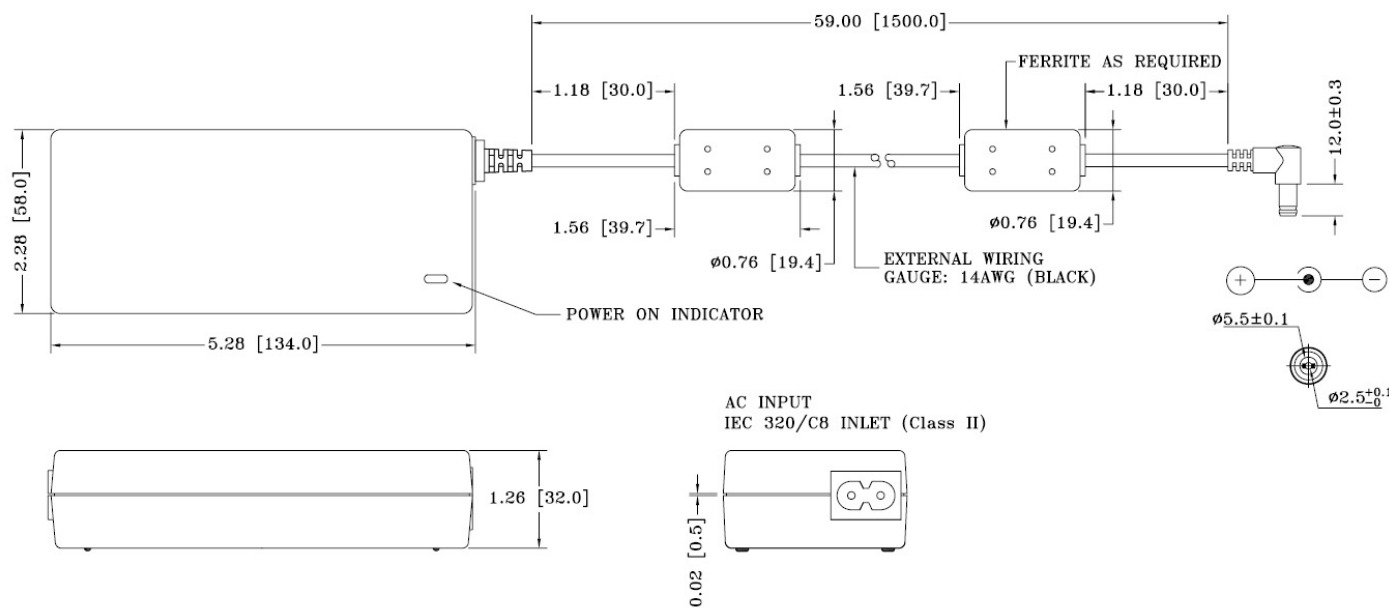
|               |                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------|
| EN55011:      | Class B conducted, class B radiated                                                                    |
| FCC:          | Class B conducted, class B radiated                                                                    |
| VCCI:         | Class B conducted, class B radiated                                                                    |
| EN61000-3-2:  | Harmonic distortion, class A                                                                           |
| 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 dip immunity, 30% reduction for 500 ms, 60% reduction for 100 ms, and >95% reduction for 10 ms |

OUTPUT VOLTAGE/CURRENT RATING CHART

| Model        | Output |              |              |      |                               |            | Average Active Efficiency (typical)<br>@ 115 / 230 Vac |
|--------------|--------|--------------|--------------|------|-------------------------------|------------|--------------------------------------------------------|
|              | V1     | Min. Current | Max. Current | Tol. | Ripple & Noise <sup>(1)</sup> | Max. Power |                                                        |
| PMP85SF-13-1 | 18.0 V | 0 A          | 4.72 A       | ±5%  | 180 mV                        | 85 W       | 88 /89%                                                |
| PMP85SF-13-2 | 19.0 V | 0 A          | 4.47 A       | ±5%  | 190 mV                        | 85 W       | 88 /89%                                                |
| PMP85SF-14   | 24.0 V | 0 A          | 3.54 A       | ±5%  | 240 mV                        | 85 W       | 88 /90%                                                |

- 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.

MECHANICAL SPECIFICATIONS



- NOTES:
1. Dimensions shown in inches [mm]
  2. Tolerance 0.02 [0.5] maximum
  3. Weight: 410 grams (0.906 lbs.) approx.

OUTPUT POWER DERATING CURVE

