

## DESCRIPTION

The PM150 series of AC-DC switching power supplies in a package of 2 x 4 x 1.3 inches are capable of delivering 100-150 watts of continuous power at 7.5 CFM forced air cooling or 100 watts at convection cooling. The units are constructed on a printed circuit board. They are specially designed for medical applications, but not for life-supporting equipment. The units are certified also to IEC /EN /UL /CSA 60950-1 and suitable for data networking, computer and telecommunication applications.

## FEATURES

- \* BF Class insulation
- \* Operation up to 5000 meters
- \* 2 x 4 inch footprint with 1.3 inch low profile
- \* Less than 275  $\mu$ A leakage current
- \* High efficiency 89% typical
- \* Compliant with RoHS requirements
- \* Meet EN55011 /55022 and FCC Class B
- \* 100-240 VAC input with active PFC
- \* No load power consumption less than 0.5W without PFD or 1W with PFD
- \* Power Fail Detect (PFD) signal (option)
- \* 100% burn-in at full load

## INPUT SPECIFICATIONS

Input Range:	90-264 Vac
Input Frequency:	47-63 Hz
Input Current:	1.7 A (rms) for 115 VAC 0.85 A (rms) for 230 VAC
Earth Leakage Current:	275 $\mu$ A max. @ 264 VAC, 63 Hz

## OUTPUT SPECIFICATIONS

Output Voltage/Current:	see rating chart.
Max. Output Power:	see rating chart.
Ripple & Noise:	see rating chart.
Remote sense:	Compensation for cable loss up to 0.5 V
Over Voltage Protection:	Set at 112-140% of nominal output voltage
Over Current Protection:	Protected to output short circuit conditions
Temperature coefficient:	All outputs $\pm$ 0.04% / °C maximum
Transient response:	Maximum excursion of 4% , recovering to 1% of final value within 500 us after a 25% step load change
Fan power:	12 V at 0.5 A maximum (isolated)

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:	0°C to +70°C
Storage Temperature:	-40°C to +85°C
Relative Humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50 °C linearly to 50% at +70 °C, applicable to convection and forced-air cooling conditions

## INTERFACE SIGNALS

PFD: TTL logic high for normal operation and TTL logic low upon loss of input power. This signal appears at least 1ms prior to V1 output dropping 5% below its nominal value. This signal also provides a minimum delay of

## OUTPUT RATING CHART

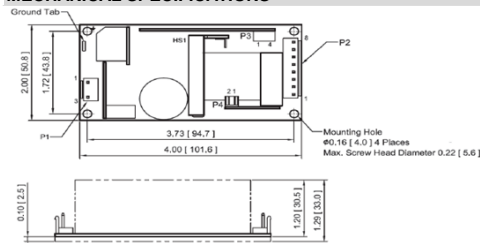
Model Name	Output							Average Active Efficiency (typical)		Max. Output Watt.
	V1	Min. load	Min. Current	Max. Current at 7.5CFM	Peak Current	Tol.	Ripple & Noise	Max. Power at convection 115/230 Vac	Max. Power at 7.5 CFM 115/230 Vac	
PM150-12A	12.0 V	0.0 A	8.35 A	12.50 A	14.00 A	$\pm$ 2%	120mV	87 /89%	86 /88%	100 W /150 W
PM150-13A	15.0 V	0.0 A	6.70 A	10.00 A	11.00 A	$\pm$ 2%	150mV	87 /89%	86 /88%	100 W /150 W
PM150-13-1A	18.0 V	0.0 A	5.56 A	8.34 A	9.20 A	$\pm$ 2%	180mV	87 /89%	86 /88%	100 W /150 W
PM150-14A	24.0 V	0.0 A	4.20 A	6.25 A	7.00 A	$\pm$ 2%	240mV	87 /89%	86 /88%	100 W /150 W
PM150-16A	30.0 V	0.0 A	3.34 A	5.00 A	5.60 A	$\pm$ 2%	300mV	87 /89%	86 /88%	100 W /150 W
PM150-17A	36.0 V	0.0 A	2.78 A	4.17 A	4.60 A	$\pm$ 2%	360mV	87 /89%	86 /88%	100 W /150 W
PM150-18A	48.0 V	0.0 A	2.10 A	3.13 A	3.50 A	$\pm$ 2%	480mV	87 /89%	86 /88%	100 W /150 W

\*Peak output current with 10% duty cycle maximum for less than 15 seconds, average power not to exceed maximum power rating.

\*The first value of max. power is at convection cooling. The second value is with 7.5 CFM forced air provided by user.

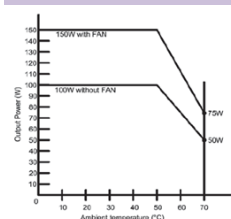
\*Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10  $\mu$ F tantalum capacitor in parallel with a 0.1  $\mu$ F ceramic capacitor across the output.

## MECHANICAL SPECIFICATIONS



- \* Dimension : shown in inches [mm]
- \* Tolerance 0.02 [0.5] maximum
- \* Input connector P1: JST header P/N B3P-VH, mating with JST housing P/N VHR-3N or equivalent.
- \* Output connector P2: JST header P/N B8P-VH, mating with JST housing P/N VHR-8N or equivalent.
- \* Connector P3: JST header B4B-PH-K-S (LF) (SN) , mating with JST housing PHR-4 or equivalent.
- \* FAN connector P4: JST header B2B-PH-K-S (LF) (SN) , mating with JST housing PHR-2 or equivalent.
- \* Ground tab is 0.25 [6.35] x 0.032 [0.8] fast-on connector.
- \* Weight: 200 grams (0.44 lbs.) approx.

## OUTPUT POWER DERATING CURVE



## PIN CHART

Connector	P1			P2							
	PIN NO.	1	2	3	1	2	3	4	5	6	7
Polarity	Neutral	Void	Live	Common Return				+V1			

Connector	P3			P4			
	PIN NO.	1	2	3	4	1	2
Polarity	Common Return	PFD	-Sense	+Sense	Fan Return (Isolated)	+12V Fan	