

PM800 SERIES

Single and dual output



- Linear topology for low noise applications
- Tight line and load regulation
- Short circuit protection
- Pi input filter
- Six sided continuous shield
- No derating

The PM800-Series is a comprehensive line of four single output and five dual output DC/DC converters with output power from 10 to 12 Watts. These high performance modules offer excellent regulation with low ripple and noise, and are especially useful in applications where higher output power levels are needed in a compact module. A Pi input filter in all models minimizes reflected ripple current while also providing for input spike attenuation. Six sided continuous shielding, also standard, gives EMI/RFI suppression. All models feature output current limiting, short circuit protection and input/output isolation to 500VDC. Other specifications include: line regulation of $\pm 0.02\%$; load regulation of $\pm 0.05\%$ for single output models and $\pm 0.02\%$ for dual output models; and an output voltage accuracy of $\pm 3.0\%$.

[2 YEAR WARRANTY]

SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS			
Voltage accuracy			$\pm 3.0\%$
Line regulation	Line $\pm 8.0\%$		$\pm 0.02\%$
Load regulation	NL to FL, single outputs		$\pm 0.05\%$
	NL to NL, dual outputs		$\pm 0.02\%$
Cross regulation	Balance - duals (max.)		$\pm 0.5\%$
Ripple and noise 20MHz BW	Single output	0.7mV rms typical, 50mV pk-pk max.	
	Dual output	0.7mV rms typical, 35 mV pk-pk, max.	
Transient response	Singles, NL to FL	300mV typ., 0.1 μ s	
	Duals, FL to NL	400mV typ., 0.1 μ s	
	Singles, NL to FL	50mV typ., 0.1 μ s	
	Duals, FL to NL	50mV typ., 0.1 μ s	
Temperature coefficient	Single output	$\pm 0.02\%/^{\circ}\text{C}$, max.	
	Dual output	$\pm 0.01\%/^{\circ}\text{C}$, max.	
Short circuit protection	Auto-restart, max. 8 hours	130°C thermal protection	
INPUT SPECIFICATIONS			
Input voltage range	See table on facing page		
Input filter	See Note 3	Pi network	

GENERAL SPECIFICATIONS			
Efficiency			65% typical
Isolation voltage			500VDC, min.
Switching frequency			20kHz, min.
Case material	UL94V-0		Non-conductive black plastic
Shielding connection	Single output		To negative output
	Dual output		To output common
Weight			227g (8oz)
MTBF	Single output		330,000 hours
	Dual output		233,000 hours
ENVIRONMENTAL SPECIFICATIONS			
Thermal performance	Operating ambient		-25°C to +71°C
	Case		+90°C, max.
	Non-operating amb.		-40°C to +125°C
	Derating		None required
	Cooling	Free-air convection cooled	
Relative humidity	Non-condensing		20% to 95% RH

10 to 12 Watt Nominal input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		REFLECTED RIPPLE CURRENT (1)	REGULATION		MODEL NUMBER
			NO LOAD	FULL LOAD		LINE	LOAD (2)	
5VDC	5VDC	2000mA	250mA	3080mA	108mA	±0.02%	±0.05%	PM801
5VDC	12VDC	940mA	278mA	3470mA	122mA	±0.02%	±0.05%	PM803
12VDC	±12VDC	±525mA	115mA	1620mA	55mA	±0.02%	±0.02%	PM861
12VDC	±15VDC	±412mA	110mA	1590mA	54mA	±0.02%	±0.02%	PM862
24VDC	5VDC	2000mA	50mA	640mA	32mA	±0.02%	±0.05%	PM821
24VDC	±12VDC	±525mA	55mA	780mA	39mA	±0.02%	±0.02%	PM871
24VDC	±15VDC	±412mA	55mA	770mA	38mA	±0.02%	±0.02%	PM872
48VDC	5VDC	2000mA	26mA	320mA	32mA	±0.02%	±0.05%	PM841
48VDC	±12VDC	±525mA	27mA	390mA	39mA	±0.02%	±0.02%	PM891

Notes

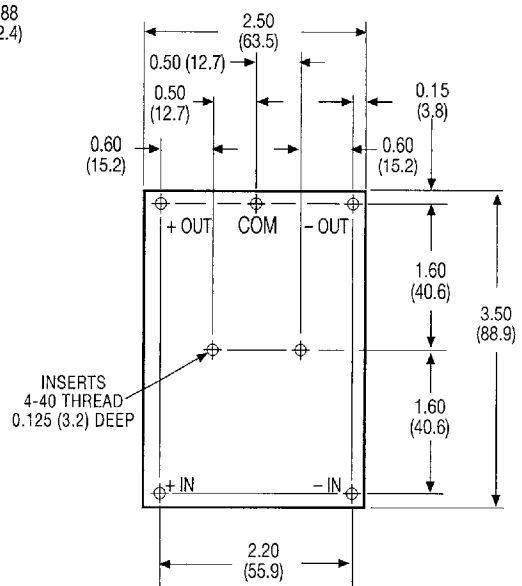
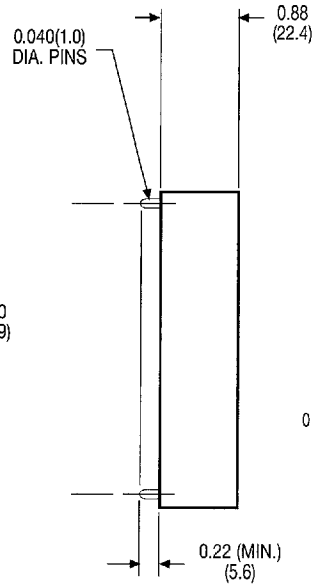
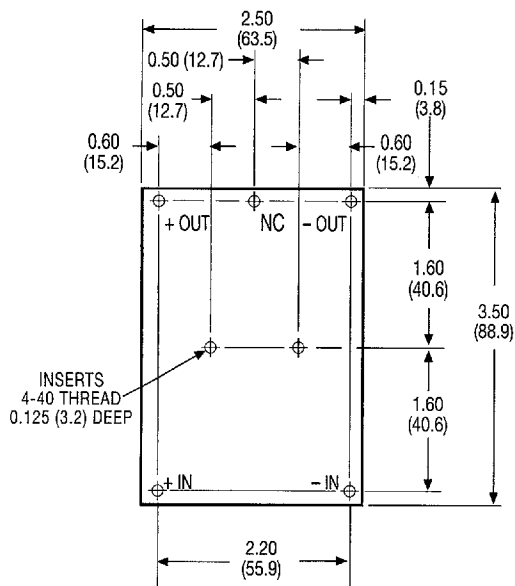
- 1 Figures are peak-to-peak, max.
- 2 Load regulation measured from no load to full load.
- 3 Fixed frequency design provides for easier input filtering and better noise performance.

INPUT VOLTAGE	60% FL	80% FL	100% FL
5V	4.4 to 6.5V	4.5 to 6.0V	4.65 to 5.5V
12V	10.56 to 15.6V	10.8 to 14.4V	11.16 to 13.2V
24V	21.12 to 31.2V	21.6 to 28.8V	22.32 to 26.4V
48V	42.24 to 62.4V	43.2 to 57.6V	44.64 to 52.8V

SINGLE OUTPUT MODELS

CASE B1

DUAL OUTPUT MODELS



ALL DIMENSIONS IN INCHES (mm)