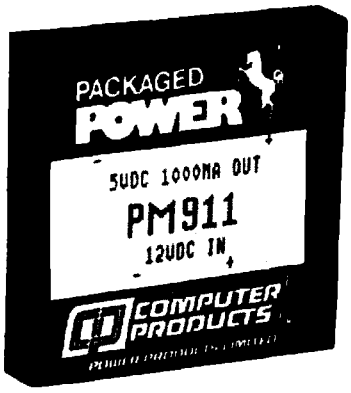
PM900 SERIES

Single and dual output

Recommended for new design-ins

- **High performance**
- **65% efficiency**
- **Pi input filter**
- **No derating**
- **Short circuit protection**
- **Meets VDE0871 level B**



2 YEAR WARRANTY

The PM900 Series of 5 and 6 Watt DC/DC converters is a broad line of high performance modules with many important features and specifications as standard. All models contain Pi-type input filters to minimize reflected ripple current. They are packaged in low profile 2.0 x 2.0 x 0.4 inch cases with standard and two alternate pin-outs designed for direct PC card mounting. The units also feature output current limiting, short circuit protection and input/output isolation of 500VDC. Other pertinent specifications include: an efficiency of 65%; line regulation of ±0.02%; load regulation of ±0.04% for single output models and ±0.05% for dual output models; low ripple and noise (10mV pk-pk for single output models and 6mV pk-pk for dual output models); and an output voltage accuracy of ±1.0%. PM900 Series DC/DC converter are intended for a wide variety of general industrial applications, especially where low noise performance is needed.

SPECIFICATION

ALL SPECIFICATIONS ARE TYPICAL AT NOMINAL INPUT, FULL LOAD AND 25 C UNLESS OTHERWISE STATED

Voltage accuracy		±1.0%, max.
Line regulation	NL to FL	±0.02%
Load regulation	FL-NL, Single outputs FL-NL, Dual outputs	±0.04% ±0.05%
Cross regulation (Voltage balance)	Dual outputs	±0.5%, max
Ripple and noise 20MHz BW	Single output Dual output	10mV pk-pk, typical, 50mV pk-pk, max. 6mV pk-pk, typical, 35mV pk-pk, max.
Transient recovery time to 0.1% of final value	NL-FL, all outputs FL-NL, single output FL-NL, Dual output	10µs 200µs 20µs
Temperature coefficient	Single output Dual output	±0.02%/°C ±0.01%/°C
Current limit		130% to 180% Iout
Short circuit protection	See Note 4	Thermal limit
INPUT		
Input voltage range		See table on facing page
Input filter	See Note 3	Pi network

Conducted noise	EN55022, EN55011, FCC	Level B
GENERAL		
Efficiency	Single output Dual output	61%, min. 62%, min.
Isolation voltage		500VDC, min.
Switching frequency	Fixed	20kHz, min.
Case material		Non-conductive black plastic
Weight		57g (2oz)
MTBF		680,000 hours
ENVIRONMENTAL		
Thermal performance	Operating ambient Non-operating amb. Case Derating Cooling	–25°C to +71°C –40°C to +125°C +95°C, max None required Free-air convection
Relative humidity	Non-condensing	20% to 95% RH
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.
Vibration		2.4G rms (approx.) 5Hz to 500Hz

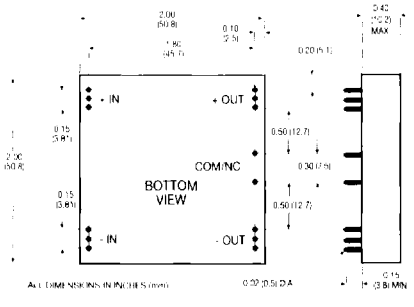
5 to 6 Watt
Nominal input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		REFLECTED RIPPLE CURRENT [1]	LINE REGULATION	LOAD REGULATION	PIN-OUT [2]	MODEL NUMBER
			NO LOAD	FULL LOAD					
5VDC	5VDC	1000mA	125mA	1.54A	54mA	±0.02%	±0.04%	B	PM901
5VDC	12VDC	470mA	140mA	1.73A	61mA	±0.02%	±0.04%	A, B	PM903
5VDC	15VDC	400mA	150mA	1.84A	64mA	±0.02%	±0.04%	B	PM904[5]
5VDC	±12VDC	±230mA	130mA	1.65A	58mA	±0.02%	±0.05%		PM951
5VDC	±15VDC	±190mA	135mA	1.7A	60mA	±0.02%	±0.05%	A	PM952
12VDC	5VDC	1000mA	50mA	0.64A	22mA	±0.02%	±0.04%		PM911
12VDC	±12VDC	±230mA	55mA	0.69A	24mA	±0.02%	±0.05%	A, B	PM961[5]
12VDC	±15VDC	±190mA	55mA	0.71A	25mA	±0.02%	±0.05%		PM962
24VDC	5VDC	1000mA	25mA	0.32A	22mA	±0.02%	±0.04%	A, B	PM921
24VDC	±12VDC	±230mA	25mA	0.34A	24mA	±0.02%	±0.05%	A, B	PM971
48VDC	5VDC	1000mA	13mA	0.16A	22mA	±0.02%	±0.04%	A, B	PM941[5]
48VDC	±12VDC	±230mA	14mA	0.17A	24mA	±0.02%	±0.05%	A, B	PM991[5]

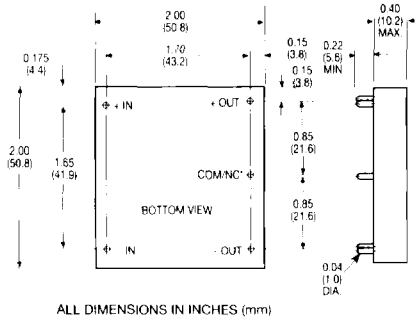
Notes
1 Figures are peak-to-peak.
2 Alternate pin-out versions, if available are designated by the suffixes shown. For example, model PM901 is available in two alternate pin-out versions, e.g. PM901A and PM901B. See case drawings below.
3 Fixed frequency design provides for easier input filtering and better noise performance.
4 Short circuit protection is achieved using a thermal limit at 130°C, max. An extended short circuit of >8 hours will affect the units reliability.
5 Standard pin configuration not available.

NOM. INPUT VOLTAGE	RANGE		
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

Alternate Pin Configuration - Suffix A

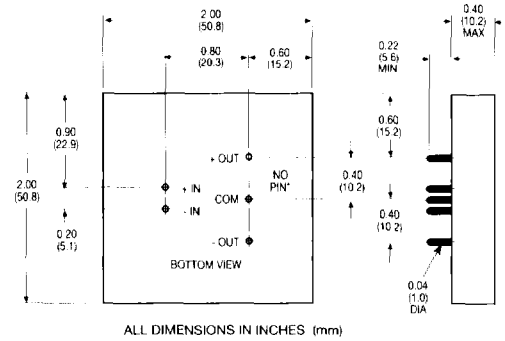


Alternate Pin Configuration-Suffix B



ALL DIMENSIONS IN INCHES (mm)

CASE G
Standard Pin Configuration



ALL DIMENSIONS IN INCHES (mm)

* On single output models this pin is either not present or should not be connected.

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