ARTESYN TECHNOLOGIES

PM900 SERIES

Single and dual output



[2 YEAR WARRANTY]

- **Extremely tight line and load regulation**
- **Short circuit protection**
- **Pi input filter**
- **Low ripple output current**
- **Conducted noise EN55022, EN55011 level B**
- **Linear topology for high output accuracy and regulation**

The PM900 Series of 5 and 6 Watt DC/DC converters are a broad line of high performance modules with many important features and specifications as standard. All models contain Pi-type input filters to minimise 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 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 converters are intended for a wide variety of general industrial applications, especially where low noise performance is required.

SPECIFICATION

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

OUTPUT SPECIFICATIONS		
Voltage accuracy		±1.0%, max.
Line regulation	NL to FL	±0.02%
Load regulation	FL to NL, Single outputs FL to NL, Dual outputs	±0.04% ±0.05%
Cross regulation	Dual outputs (Voltage balance)	±0.5%, max
Ripple and noise 20MHz BW	Single output Dual output	10mV pk-pk, typical, 65mV pk-pk, max. 6mV pk-pk, typical, 35mV pk-pk, max.
Transient recovery time to 0.1% of final value	NL to FL, all outputs FL to NL, single output FL to 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 SPECIFICATIONS		
Input voltage range		See table on facing page
Input filter	See Note 3	Pi network

EMC CHARACTERISTICS		
Conducted emissions	EN55022, EN55011, FCC 15	Level B
GENERAL SPECIFICATIONS		
Efficiency	Single output Dual output	61%, min. 62%, min.
Isolation voltage		500VDC, min.
Switching frequency	Fixed	20kHz, min.
Case material	UL94V-0	Non-conductive black plastic
Weight		57g (2oz)
MTBF		680,000 hours
ENVIRONMENTAL SPECIFICATIONS		
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 cooled
Relative humidity	Non-condensing	20% to 95% RH
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.
Vibration	5Hz to 500Hz	2.4G rms (approx.)

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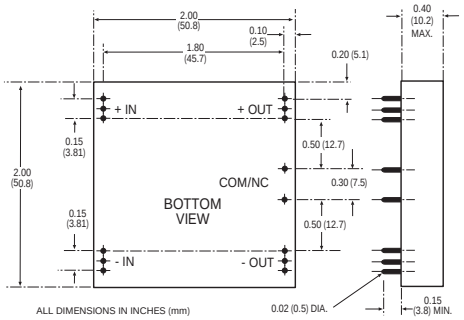
5 to 6 Watt
Nominal input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		REFLECTED RIPPLE CURRENT (1)	REGULATION		ALT. PIN-OUT (2)	MODEL NUMBER
			NO LOAD	FULL LOAD		LINE	LOAD		
5VDC	5VDC	1000mA	125mA	1.54A	54mA	±0.02%	±0.04%	A, B	PM901
5VDC	12VDC	470mA	140mA	1.73A	61mA	±0.02%	±0.04%		PM903
5VDC	15VDC	400mA	150mA	1.84A	64mA	±0.02%	±0.04%		PM904
5VDC	±12VDC	±230mA	130mA	1.65A	58mA	±0.02%	±0.05%	A	PM951
5VDC	±15VDC	±190mA	135mA	1.7A	60mA	±0.02%	±0.05%	B	PM952
12VDC	5VDC	1000mA	50mA	0.64A	22mA	±0.02%	±0.04%		PM911
12VDC	12VDC	470mA	60mA	0.72A	26mA	±0.02%	±0.04%		PM913
12VDC	±12VDC	±230mA	55mA	0.69A	24mA	±0.02%	±0.05%		PM961
12VDC	±15VDC	±190mA	55mA	0.71A	25mA	±0.02%	±0.05%	B	PM962
24VDC	5VDC	1000mA	25mA	0.32A	22mA	±0.02%	±0.04%		PM921
24VDC	12VDC	470mA	30mA	0.36A	25mA	±0.02%	±0.04%		PM923
24VDC	15VDC	400mA	30mA	0.38A	27mA	±0.02%	±0.04%		PM924
24VDC	±12VDC	±230mA	25mA	0.34A	24mA	±0.02%	±0.05%	A	PM971
24VDC	±15VDC	±190mA	30mA	0.35A	25mA	±0.02%	±0.05%	B	PM972
48VDC	5VDC	1000mA	13mA	0.16A	22mA	±0.02%	±0.04%		PM941
48VDC	±12VDC	±230mA	14mA	0.17A	24mA	±0.02%	±0.05%		PM991

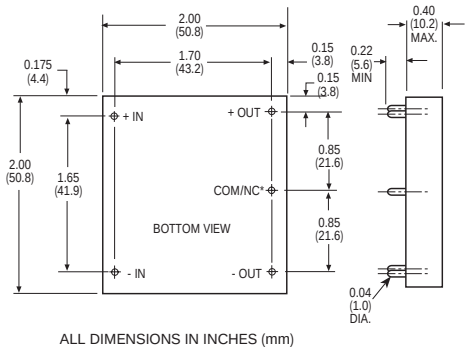
Notes

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, i.e. 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.

Alternate Pin Configuration - Suffix A



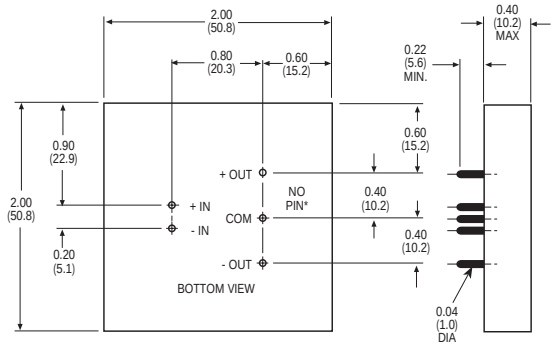
Alternate Pin Configuration-Suffix B



ALL DIMENSIONS IN INCHES (mm)

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

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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