AM1P Series

1 watt dc-dc converters

- 8PIN DIP PACKAGE
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY UP TO 80%
- INPUT/OUTPUT ISOLATION: 1000 & 3000VDC
- OPERATING TEMPERATURE: -40 C ... +85 C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

GENERAL DESCRIPTION

Our AM1P series is a family of cost effective 1W single, dual, dual separated output isolated DC/DC converters. These converters achieve low cost and ultra-miniature DIP8 pin size without compromising performance and reliability.

Ninety six models operate from input voltages of 5, 12 & 24 VDC; producing output voltage levels of 3.3, 5, 7.2, 9, 12, 15, 18, 24, ±3.3, ±5, ±7.2, ±9, ±12, ±15, ±18, ±24. Full SMD-design and 100 % production test of parameters ensures a high reliability in this product.

ELECTRICAL SPECIFICATIONS

Specifications typical at +25□C, nominal input voltage, rated output current unless otherwise specified

Input Specifications:	
Voltage range	±10%
Filter	Capacitor

Isolation Specifications:	
Rated voltage (60 sec)	1000VDC (all models) 3000VDC (single output)
Resistance	> 1000MOhm
Capacitance	60pF, typ.

Output Specifications:	
Voltage accuracy	±5%, max.
Ripple & noise (at 20MHz BW)	100 mVp-p, max.
Short circuit protection	Momentary
Line voltage regulation	±1.2% / 1.0% of Vin
Load voltage regulation	±8%, load=20~100%
Temperature coefficient	±0.02%/°C, typ.

General Specifications:	
Efficiency	71% to 80%
Switching frequency	80KHz, typ. 100% load

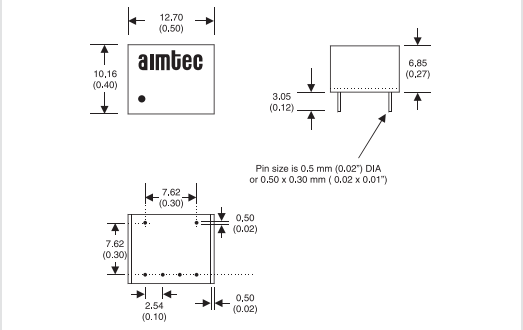
Environmental Specifications:	
Operating temperature (ambient)	-40 °C ... +85 °C
Storage temperature	-55 °C ... +125 °C
Case Temperature	+90°C, max.
Derating	None required
Humidity (non-condensing)	Up to 90%
Cooling	Free-air Convection

Physical Specifications:	
Dimensions	12.7x10.16x6.85mm 0.50x0.4x0.27inches
Weight	1.8g
Case material	Non-conductive black plastic

MTBF: > 1,191,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25 °C)

Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1000 & 3000 VDC		1000VDC
	Single	Dual	Dual Separated
1	-V Input	-V Input	-V Input
4	+V Input	+V Input	+V Input
5	+V Output	+V Output	+V1 Output
6	Omitted	Omitted	-V1 Output
7	-V Output	Common	+V2 Output
8	Omitted	-V Output	-V2 Output

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MODELS

Single output

Models		Input Voltage	Ouput Voltage	Ouput Current max.
Isolation 1000VDC	Isolation 3000VDC			
AM1P-0503S	AM1P-0503SH30	5V±10%	3.3VDC	300mA
AM1P-0505S	AM1P-0505SH30		5VDC	200mA
AM1P-0507S	AM1P-0507SH30		7.2VDC	140mA
AM1P-0509S	AM1P-0509SH30		9VDC	110mA
AM1P-0512S	AM1P-0512SH30		12VDC	83mA
AM1P-0515S	AM1P-0515SH30		15VDC	67mA
AM1P-0518S	AM1P-0518SH30		18VDC	56mA
AM1P-0524S	AM1P-0524SH30		24VDC	42mA
AM1P-1203S	AM1P-1203SH30	12V±10%	3.3VDC	300mA
AM1P-1205S	AM1P-1205SH30		5VDC	200mA
AM1P-1207S	AM1P-1207SH30		7.2VDC	140mA
AM1P-1209S	AM1P-1209SH30		9VDC	110mA
AM1P-1212S	AM1P-1212SH30		12VDC	83mA
AM1P-1215S	AM1P-1215SH30		15VDC	67mA
AM1P-1218S	AM1P-1218SH30		18VDC	56mA
AM1P-1224S	AM1P-1224SH30		24VDC	42mA
AM1P-2403S	AM1P-2403SH30	24V±10%	3.3VDC	300mA
AM1P-2405S	AM1P-2405SH30		5VDC	200mA
AM1P-2407S	AM1P-2407SH30		7.2VDC	140mA
AM1P-2409S	AM1P-2409SH30		9VDC	110mA
AM1P-2412S	AM1P-2412SH30		12VDC	83mA
AM1P-2415S	AM1P-2415SH30		15VDC	67mA
AM1P-2418S	AM1P-2418SH30		18VDC	56mA
AM1P-2424S	AM1P-2424SH30		24VDC	42mA

Dual output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM1P-0503D	5V±10%	±3.3VDC	±150mA
AM1P-0505D		±5VDC	±100mA
AM1P-0507D		±7.2VDC	±70mA
AM1P-0509D		±9VDC	±55mA
AM1P-0512D		±12VDC	±42mA
AM1P-0515D		±15VDC	±34mA
AM1P-0518D		±18VDC	±28mA
AM1P-0524D		±24VDC	±21mA
AM1P-1203D	12V±10%	±3.3VDC	±150mA
AM1P-1205D		±5VDC	±100mA
AM1P-1207D		±7.2VDC	±70mA
AM1P-1209D		±9VDC	±55mA
AM1P-1212D		±12VDC	±42mA
AM1P-1215D		±15VDC	±34mA
AM1P-1218D		±18VDC	±28mA
AM1P-1224D		±24VDC	±21mA

MODELS

Dual output (continued)

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM1P-2403D	24V±10%	±3.3VDC	±150mA
AM1P-2405D		±5VDC	±100mA
AM1P-2407D		±7.2VDC	±70mA
AM1P-2409D		±9VDC	±55mA
AM1P-2412D		±12VDC	±42mA
AM1P-2415D		±15VDC	±34mA
AM1P-2418D		±18VDC	±28mA
AM1P-2424D		±24VDC	±21mA

Dual separate output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM1P-050303D	5V±10%	3.3/3.3VDC	150/150mA
AM1P-050505D		5/5VDC	100/100mA
AM1P-050707D		7.2/7.2VDC	70/70mA
AM1P-050909D		9/9VDC	55/55mA
AM1P-051212D		12/12VDC	42/42mA
AM1P-051515D		15/15VDC	34/34mA
AM1P-051818D		18/18VDC	28/28mA
AM1P-052424D		24/24VDC	21/21mA
AM1P-120303D	12V±10%	3.3/3.3VDC	150/150mA
AM1P-120505D		5/5VDC	100/100mA
AM1P-120707D		7.2/7.2VDC	70/70mA
AM1P-120909D		9/9VDC	55/55mA
AM1P-121212D		12/12VDC	42/42mA
AM1P-121515D		15/15VDC	34/34mA
AM1P-121818D		18/18VDC	28/28mA
AM1P-122424D		24/24VDC	21/21mA
AM1P-240303D	24V±10%	3.3/3.3VDC	150/150mA
AM1P-240505D		5/5VDC	100/100mA
AM1P-240707D		7.2/7.2VDC	70/70mA
AM1P-240909D		9/9VDC	55/55mA
AM1P-241212D		12/12VDC	42/42mA
AM1P-241515D		15/15VDC	34/34mA
AM1P-241818D		18/18VDC	28/28mA
AM1P-242424D		24/24VDC	21/21mA