

3 watt dc-dc converters



- REGULATED OUTPUTS
- 24 PIN DIP PACKAGE
- LOW RIPPLE AND NOISE
- HIGH EFFICIENCY UP TO 70%
- CONTINUOUS SHORT CIRCUIT PROTECTION
- INPUT/OUTPUT ISOLATION: 1000, 3000 or 5200VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH OTHER MANUFACTURERS
- LOW PROFILE METAL PACKAGE (FOR ISOLATION 5200VDC - PLASTIC)

GENERAL DESCRIPTION

The AM3N series is a family of cost effective 3W single and dual outputs DC-DC converters. These converters combines miniature package in a 24-pin DIP compatible case with high performance features such as 1000VDC, 3000VDC or 5200VDC input/output isolation voltage, continuous short circuit protection with

automatic restart and tight line/load regulation. Input bus voltage of 5, 12 and 24VDC with producing output voltage levels of 3.3, 5, 7.2, 9, 12, 15, 18, 24, ± 3.3 , ± 5 , ± 7.2 , ± 9 , ± 12 , ± 15 , ± 18 or ± 24 VDC. Full SMD-design and a 100% production test of parameters ensure a high reliability of this product.

ELECTRICAL SPECIFICATIONS

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

Input Specifications:

Voltage range	$\pm 10\%$
Filter	π (Pi) Network

Isolation Specifications:

Rated voltage	1000, 3000 or 5200VDC
Leakage Current	1 mA
Resistance	> 1000M Ω
Capacitance	60pF, typ

General Specifications:

Efficiency	50% to 70%
Switching Frequency	125kHz, typ

Physical Specifications

Dimensions	31.75x20.32x10.16 mm 1.25x0.8x0.4 inches
Weight	14.5 g
Case material	Nickel-Coated Copper

Output Specifications:

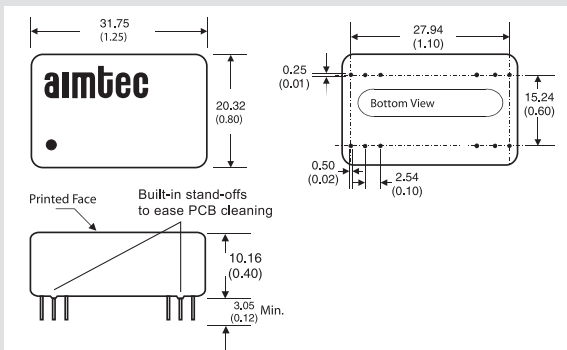
Voltage accuracy	$\pm 2\%$, max
Voltage Balance (dual outputs)	$\pm 1\%$
Ripple and Noise (at 20MHz BW)	75mVp-p, max
Short circuit protection	Continuous
Short circuit restart	Automatic
Line voltage regulation	$\pm 0.5\%$, max
Load voltage regulation	$\pm 0.5\%$, max
Temperature Coefficient	$\pm 0.02\%/^{\circ}\text{C}$

Environmental Specifications:

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

MTBF (MIL-HDBK-217F, Ground Benign, $t=+25^{\circ}\text{C}$): > 954000 hrs (single output), > 1 110 000hrs (dual output)
Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1000 VDC		3000, 5200 VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	+V Input	+V Input
2	N.C.	-V Output	+V Input	+V Input
3	N.C.	Common	Omitted	Omitted
10	-V Output	Common	Omitted	Common
11	+V Output	+V Output	Omitted	Common
12	-V Input	-V Input	-V Output	Omitted
13	-V Input	-V Input	+V Output	-V Output
14	+V Output	+V Output	Omitted	Omitted
15	-V Output	Common	Omitted	+V Output
22	N.C.	Common	Omitted	Omitted
23	N.C.	-V Output	-V Input	-V Input
24	+V Input	+V Input	-V Input	-V Input