

6 watt dc-dc converters



- 24PIN DIL PACKAGE
- LOW PROFILE METAL PACKAGE
- HIGH EFFICIENCY UP TO 79%
- WIDE 4:1 INPUT RANGE
- INPUT/OUTPUT ISOLATION: 1500 or 3500VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH OTHER MANUFACTURERS
- CONTINUOUS SHORT CIRCUIT PROTECTION

GENERAL DESCRIPTION

The AM6TW series is a family of cost effective 6W single and dual outputs DC-DC converters. These converters combine nickel-coated copper package in a 24-pin DIL compatible case with high performance features such as 1500VDC or 3500VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Wide range de-

vices operate over 4:1 input voltage range providing stable output voltage. Devices are encapsulated using flame retardant resin. Input voltages of 24 and 48VDC with output voltages of 3.3, 5, 7.2, 9, 12, 15, 18, 24, ± 3.3 , ± 5 , ± 7.2 , ± 9 , ± 12 , ± 15 , ± 18 or ± 24 VDC. High performance features include high efficiency operation up to 79% and output voltage accuracy of $\pm 1\%$ maximum.

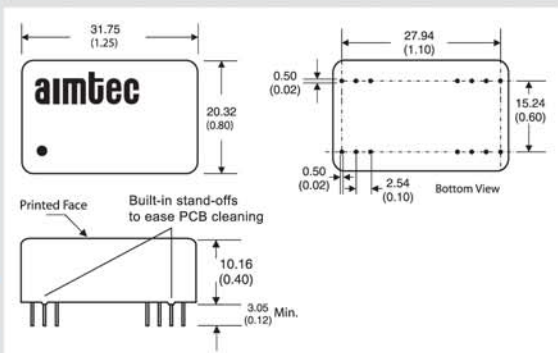
ELECTRICAL SPECIFICATIONS

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

Input Specifications:		Output Specifications:	
Voltage range	24VDC, 9~36VDC 48VDC, 18~72VDC	Voltage accuracy	$\pm 1\%$, max
Filter	π (Pi) Network	Voltage balance (dual outputs)	$\pm 1\%$
Isolation Specifications:		Ripple and noise (at 20MHz BW)	60mVp-p, max
Rated voltage	1500, 3500VDC	Short circuit protection	Continuous
Leakage current	1mA	Short circuit restart	Automatic
Resistance	> 1000 MOhm	Line voltage regulation	$\pm 0.5\%$, max
Capacitance	80pF, typ	Load voltage regulation	$\pm 0.5\%$, max
General Specifications:		Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$
Efficiency	75% to 79%	Environmental Specifications:	
Switching frequency	250KHz, typ	Operating temperature(ambient)	-40°C ... +85°C
Physical Specifications		Storage temperature	-55°C ... +125°C
Dimensions	31.75x20.32x10.16mm 1.25x0.80x0.40inches	Derating	None required
Weight	26g	Humidity (non-condensing)	Up to 90%
Case material	Nickel-Coated Copper	Cooling	Free-air Convection

MTBF: > 1003000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)
Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1500VDC		3500VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	Omitted	Omitted
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	Omitted	Omitted	N.C.	Common
10	-V Output	Common	Omitted	Omitted
11	+V Output	+V Output	N.C.	-V Output
12/13	-V Input	-V Input	Omitted	Omitted
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	Omitted	Omitted
16	Omitted	Omitted	-V Output	Common
22	N.C.	Common	+V Input	+V Input
23	N.C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	Omitted	Omitted

MODELS

Single output

Model		Input voltage	Output voltage	Output current max.
Isolation 1500VDC	Isolation 3500VDC			
AM6TW-2403S	AM6TW-2403SH35	9VDC - 36VDC	3.3VDC	1400mA
AM6TW-2405S	AM6TW-2405SH35		5VDC	1200mA
AM6TW-2407S	AM6TW-2407SH35		7.2VDC	833mA
AM6TW-2409S	AM6TW-2409SH35		9VDC	667mA
AM6TW-2412S	AM6TW-2412SH35		12VDC	500mA
AM6TW-2415S	AM6TW-2415SH35		15VDC	400mA
AM6TW-2418S	AM6TW-2418SH35		18VDC	333mA
AM6TW-2424S	AM6TW-2424SH35		24VDC	250mA
AM6TW-4803S	AM6TW-4803SH35	18VDC - 72VDC	3.3VDC	1400mA
AM6TW-4805S	AM6TW-4805SH35		5VDC	1200mA
AM6TW-4807S	AM6TW-4807SH35		7.2VDC	833mA
AM6TW-4809S	AM6TW-4809SH35		9VDC	667mA
AM6TW-4812S	AM6TW-4812SH35		12VDC	500mA
AM6TW-4815S	AM6TW-4815SH35		15VDC	400mA
AM6TW-4818S	AM6TW-4818SH35		18VDC	333mA
AM6TW-4824S	AM6TW-4824SH35		24VDC	250mA

Dual output

Model		Input voltage	Output voltage	Output current max.
Isolation 1500VDC	Isolation 3500 VDC			
AM6TW-2403D	AM6TW-2403DH35	9VDC - 36VDC	±3.3VDC	±700mA
AM6TW-2405D	AM6TW-2405DH35		±5VDC	±600mA
AM6TW-2407D	AM6TW-2407DH35		±7.2VDC	±417mA
AM6TW-2409D	AM6TW-2409DH35		±9VDC	±334mA
AM6TW-2412D	AM6TW-2412DH35		±12VDC	±250mA
AM6TW-2415D	AM6TW-2415DH35		±15VDC	±200mA
AM6TW-2418D	AM6TW-2418DH35		±18VDC	±167mA
AM6TW-2424D	AM6TW-2424DH35		±24VDC	±125mA
AM6TW-4803D	AM6TW-4803DH35	18VDC - 72VDC	±3.3VDC	±700mA
AM6TW-4805D	AM6TW-4805DH35		±5VDC	±600mA
AM6TW-4807D	AM6TW-4807DH35		±7.2VDC	±417mA
AM6TW-4809D	AM6TW-4809DH35		±9VDC	±334mA
AM6TW-4812D	AM6TW-4812DH35		±12VDC	±250mA
AM6TW-4815D	AM6TW-4815DH35		±15VDC	±200mA
AM6TW-4818D	AM6TW-4818DH35		±18VDC	±167mA
AM6TW-4824D	AM6TW-4824DH35		±24VDC	±125mA

INPUT CURRENT

No Load / Full Load

24 Vin models
48 Vin models

18 / 324mA, typ
18 / 158mA, typ