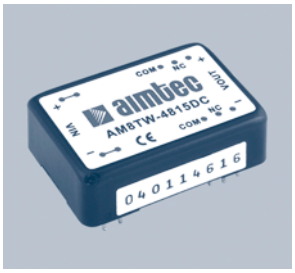
AM8TW-C Series



8 watt dc-dc converters

- 24PIN DIP PACKAGE
- PLASTIC ENCAPSULATED CASE
- POWER MODULES FOR PCB MOUNTING
- 4:1 WIDE INPUT RANGE
- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- OPERATING TEMPERATURE : -25 ... +71°C

CE

GENERAL DESCRIPTION

Our AM8TW-C series is a family of cost effective 8W single and dual output DC-DC converters. These converters are shielded on all six sides and aluminum encapsulated, have a non-conductive base and retain an anodized black DIP24 compatible plastic case and dimensions of 31.8x20.3x10.2mm. The high performance features of our AM8TW-C components include short circuit protection with current limit auto recovery, tight line regulation and a high efficiency operation coefficient up to 82%.

These wide range devices operate over 4:1 input voltage range, providing a continuously stable output voltage. Sixteen models operate from an input voltage range of 24 & 48VDC producing output voltages of 3,3, 5, 12, 15, 24, ±5, ±12 & ±15VDC. The normal operation is specified over the full operating temperature range of -25°C to +71°C with no derating required. Cooling is done by free air convection.

ELECTRICAL SPECIFICATIONS

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Input Specifications:	
Voltage range	24VDC, 9~36VDC 48 VDC, 18~75VDC
Filter	p (Pi) Network

Isolation Specifications:	
Rated voltage	1500VDC
Resistance	>1000 Mohms
Capacitance	1000pF, typ.

General Specifications:	
Efficiency	78% to 82%
Switching frequency	300KHz, typ. 100% load

Environmental Specifications:	
Operating temperature	-25°C …+71°C
Storage temperature	-55°C …+105°C
Case temperature	+95°C, max.
Humidity (non-condensing)	Up to 95%
Cooling	Free-air convection

Output Specifications:	
Voltage accuracy	±2%, max.
Ripple	<0.2% Vout +20mVmax (Vp-p)
Noise	<0.5% Vout +50mVmax (Vp-p)
Short circuit protection	Current limit, auto-recovery
Over current protection	Works over 120% of rating and recovers automatically
Line regulation (HL-LL)	±0.5%, typ.
Load regulation (10-100%)	±2%, typ.
Temperature coefficient	±0.02%/°C, typ.

Physical Specifications:	
Dimensions	31.8x20.3x10.2mm, tolerance ±0.5mm 1.25x0.8x0.4inches
Weight	13g
Case material	Six-side shielded Aluminum with Non-Conductive base, Black Anodize

MTBF: > 800,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25ºC)

Specifications are subject to change without notification

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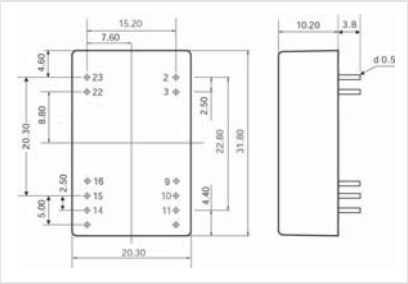
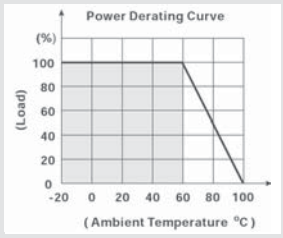
OUTLINE DIMENSIONS & PIN CONNECTIONS

MECHANICAL DIMENSION (Bottom View)



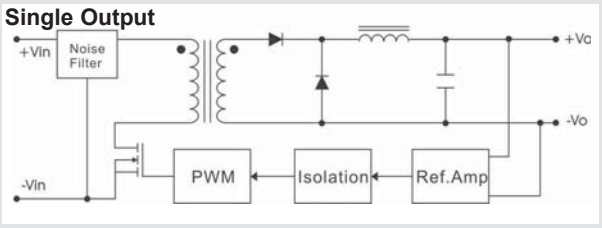
DERATING



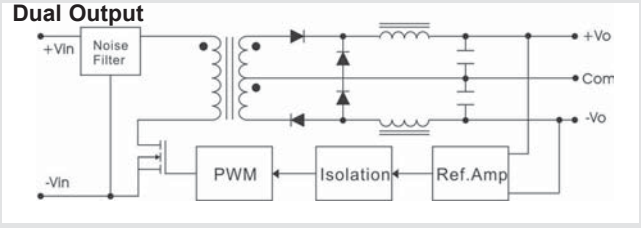
Pin	1500VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	N.C.	Common
10	N.C.	N.C.
11	N.C.	-V Output
14	+V Output	+V Output
15	N.C.	N.C.
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

BLOCK DIAGRAM

Single Output



Dual Output



MODELS

Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM8TW-2403SC	9VDC-36VDC	3.3VDC	2000mA
AM8TW-2405SC		5VDC	1500mA
AM8TW-2412SC		12VDC	660mA
AM8TW-2415SC		15VDC	530mA
AM8TW-2424SC		24VDC	330mA
AM8TW-4803SC	18VDC-75VDC	3.3VDC	2000mA
AM8TW-4805SC		5VDC	1500mA
AM8TW-4812SC		12VDC	660mA
AM8TW-4815SC		15VDC	530mA
AM8TW-4824SC		24VDC	330mA

Dual output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM8TW-2405DC	9VDC-36VDC	±5VDC	±800mA
AM8TW-2412DC		±12VDC	±330mA
AM8TW-2415DC		±15VDC	±260mA
AM8TW-4805DC	18VDC-75VDC	±5VDC	±800mA
AM8TW-4812DC		±12VDC	±330mA
AM8TW-4815DC		±15VDC	±260mA