

## **AM8TW-I Series**



### 8 watt dc-dc converters

- 24PIN DIP PACKAGE
- METAL ENCAPSULATED CASE
- POWER MODULES FOR PCB MOUNTING
- 4:1 WIDE INPUT RANGE

- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- OPERATING TEMPERATURE: -40...+75°C

### GENERAL DESCRIPTION

Our AM8TW-I series is a family of cost effective 8W single and dual output DC-DC converters. These converters are DIP24 compatible metal case with dimensions of 31.8x20.3x10.2mm. The high performance features of our AM8TW-I components include continuous short circuit protection with auto recovery, tight line regulation and a high efficiency operation coefficient up to 84%.

These wide range devices operate over 4:1 input voltage range, providing a continuously stable output voltage. Fourteen models operate from an input voltage range of 24 & 48VDC producing output voltages of 3.3, 5, 12, 15,  $\pm$ 5,  $\pm$ 12 &  $\pm$ 15VDC. The normal operation is specified over the full operating temperature range of -40°C to +75°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.

<b>Input Specifications:</b>		<b>Output Specifications:</b>
Voltage range	24VDC, 9~36VDC	Voltage accuracy
	48VDC, 18~75VDC	Ripple Noise (3.3,5V)
Filter	π (Pi) Network	Ripple Noise other
		Short circuit protection
<b>Isolation Specifications:</b>		Over load protection
Rated voltage	1500VDC	
Resistance	>1000 Mohms	Over Voltage Protection
Capacitance	1000pF, typ.	Line regulation (HL-LL Load regulation (10-1009)
<b>General Specifications:</b>		Temperature coefficient
Efficiency	76% to 84%	•
Switching frequency	300KHz, typ. 100% load	Physical Specifications Dimensions
<b>Environmental Specification</b>	ons:	
Operating temperature	-40°C+75°C	
Storage temperature	-55°C+115°C	Weight
Case temperature	+95°C, max.	Case material

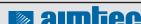
Output Specifications:		
Voltage accuracy	±2%, max.	
Ripple Noise (3.3,5V)	80m Vp-pmax	
Ripple Noise other	1% P-P max	
Short circuit protection	Continuous, auto-recovery	
Over load protection	Over 110% full load	
	and recovers automatically	
Over Voltage Protection	Zener diode clamp protection	
Line regulation (HL-LL)	±0.5%, typ.	
Load regulation (10-100%) single ±0.5%, max., dual ±2%		
Temperature coefficient	±0.05%/°C, max.	
<b>Physical Specifications:</b>		
Dimensions	31.8x20.3x10.2mm,	
	tolerance ±0.5mm	
	1.25x0.8x0.4inches	
Weight	18g	
Case material	Nickel-Coated Copper	

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

Up to 95%

Free-air convection

Specifications are subject to change without notification



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Cooling

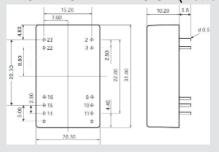
Humidity (non-condensing)

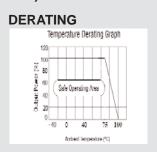


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### **OUTLINE DIMENSIONS & PIN CONNECTIONS**

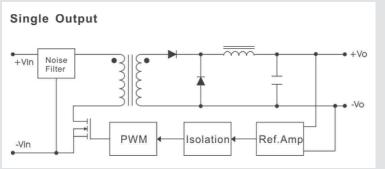
#### **MECHANICAL DIMENSION (Bottom View)**

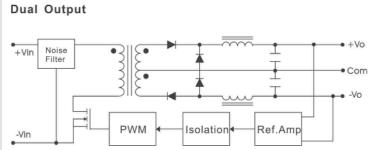




Pin	1500VDC		
	Single	Dual	
2	-V Input	-V Input	
3	-V Input	-V Input	
9	N.C.	Common	
10	N.C.	N.C.	
11	N.C.	-V Output	
14	+V Output	+V Output	
15	N.C.	N.C.	
16	-V Output	Common	
22	+V Input	+V Input	
23	+V Input	+V Input	

#### **BLOCK DIAGRAM**





**MODELS** Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM8TW-2403SI		3.3VDC	1600mA
AM8TW-2405SI	9-36VDC	5VDC	1600mA
AM8TW-2412SI		12VDC	660mA
AM8TW-2415SI		15VDC	530mA
AM8TW-4803SI		3.3VDC	1600mA
AM8TW-4805SI	18-75VDC	5VDC	1600mA
AM8TW-4812SI		12VDC	660mA
AM8TW-4815SI		15VDC	530mA

## **MODELS** Dual output

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