

Series AM8TW-IZ

8 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Wide 4:1 input range
- Power modules for PCB mounting
- Over Voltage Protection
- Operating temperature -40°C to + 75°C
- Regulated output
- Low ripple and noise
- Input/Output Isolation voltage 1500VDC
- Continuous Short Circuit Protection



Models

Single output

Model	Input Voltage (V)	Input Current FL NL (mA)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load (uF)	Ripple & Noise max (mV p-p)	Efficiency (%)
AM8TW-2403SIZ	9-36	286 40	3.3	1600	2200	80	77
AM8TW-2405SIZ	9-36	433 40	5	1600	1000	80	77
AM8TW-2412SIZ	9-36	402 30	12	660	330	120	82
AM8TW-2415SIZ	9-36	399 30	15	530	220	150	83
AM8TW-4803SIZ	18-75	143 30	3.3	1600	2200	80	77
AM8TW-4805SIZ	18-75	203 30	5	1600	1000	80	82
AM8TW-4812SIZ	18-75	206 20	12	660	330	120	80
AM8TW-4815SIZ	18-75	200 20	15	530	220	150	83
AM8TW-11005SIZ	36-160	230 10	5	1400	2000	80	80
AM8TW-11012SIZ	36-160	230 10	12	580	300	120	80
AM8TW-11015SIZ	36-160	230 10	15	460	300	150	81
AM8TW-11024SIZ	36-160	230 10	24	290	300	240	81

Models

Dual output

Model	Input Voltage (V)	Input Current FL NL (mA)	Output Voltage (V)	Output Current max (mA)	Max. Capacitive Load (uF)	Ripple & Noise max (mV p-p)	Efficiency (%)
AM8TW-2405DIZ	9-36	412 30	±5	±800	±330	80	81
AM8TW-2412DIZ	9-36	423 30	±12	±330	±220	120	78
AM8TW-2415DIZ	9-36	396 30	±15	±260	±100	150	82
AM8TW-4805DIZ	18-75	214 20	±5	±800	±330	80	78
AM8TW-4812DIZ	18-75	196 20	±12	±330	±220	120	84
AM8TW-4815DIZ	18-75	201 20	±15	±260	±100	150	81
AM8TW-11005DIZ	36-160	230 10	±5	±750	2000	80	75
AM8TW-11012DIZ	36-160	230 10	±12	±310	300	120	81
AM8TW-11015DIZ	36-160	230 10	±15	±250	300	150	82

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage range	24 48 110	9-36 18-75 36-160		VDC
Filter	π (Pi) Network			
Absolute Maximum Rating	24 Vin 48 Vin		50 100	VDC
Permissible absolute maximum duration			100	ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		> 1000		MOhm

Capacitance		256		pF
-------------	--	-----	--	----

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Over voltage protection		Zener diode clamp		
Over load protection		Over 110% full load with auto recovery		
Line voltage regulation (Single)	HL-LL	±0.5		%
Line voltage regulation (Dual)	HL-LL	±0.5		%
Load voltage regulation (Single)	10-100%	±0.5		%
Load voltage regulation (Dual)	10-100%	±2		%
Temperature coefficient		±0.05		%/°C

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	Derating above 70	-40 to +75		°C
Storage temperature		-55 to +115		°C
Max Case temperature			95	°C
Derating	Above 70			°C
Cooling		Free air convection		
Humidity			95	%
Case material		Nickel coated copper		
Weight		16		g
Dimensions (L x W x H)	Tolerance ±0.5mm	1.25 x 0.80 x 0.42 inches	31.80 x 20.30 x 10.80 mm	
MTBF		> 800 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

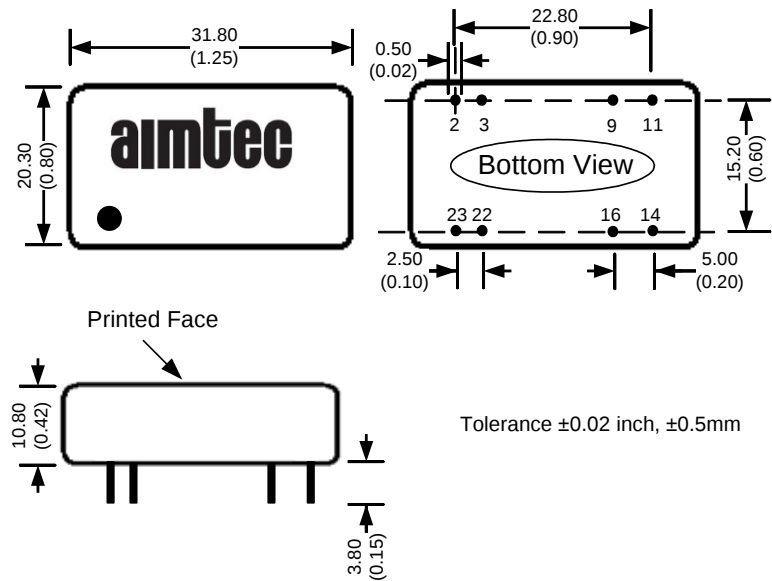
Safety Specifications

Standards	
Agency approvals	CE
Safety	EN 55022: 2006 + A1: 2007, class A, with external circuit
	EN 55024: 1998 + A1:2001 + A2:2003
	IEC 61000-4-2: 2008
	IEC 61000-4-3: 2006 + A1: 2007
	IEC 61000-4-4: 2004, with external circuit
	IEC 61000-4-6: 2008
	IEC 61000-4-8: 2009

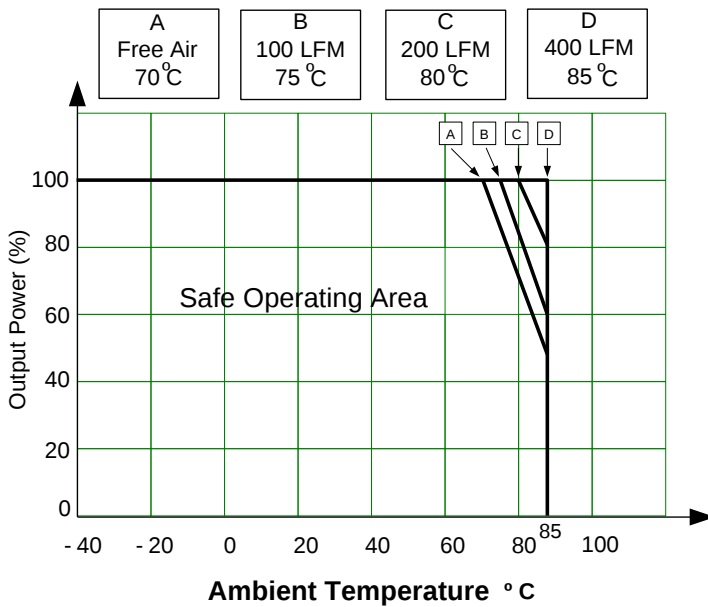
Pin Out Specifications

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

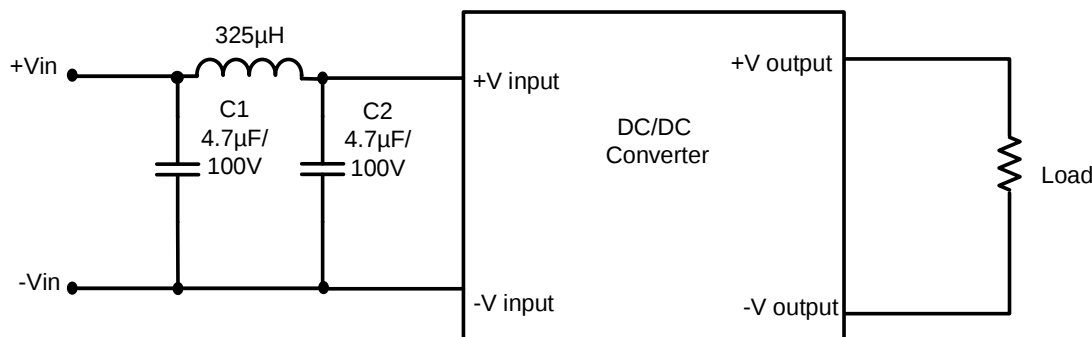
Dimensions



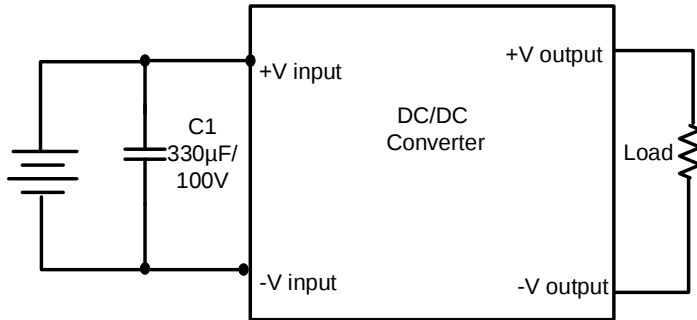
Derating



Recommended EMI external circuit:



Recommended EFT/Surge Protection circuit:



NOTE: **1.** Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.