

**FEATURES:**

- Ultra Wide 4:1 input range
- Efficiency up to 88%
- Soft start
- Continuous Short Circuit Protection
- Operating temperature -40°C to + 85°C
- Remote on/off control
- Input/Output Isolation 1600VDC
- Over voltage & Over Load Protection

Models

Single output



Model	Input Voltage (V)	Input Current NL FL (mA)	Output Voltage (Vdc)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM10TW-2403SZ	9-36	15 440	3.3	2700	1600	1330	85
AM10TW-2405SZ	9-36	15 480	5	2000	1600	1330	87
AM10TW-2412SZ	9-36	15 475	12	833	1600	288	88
AM10TW-2415SZ	9-36	15 475	15	667	1600	200	88
AM10TW-4803SZ	18-75	15 225	3.3	2700	1600	1330	84
AM10TW-4805SZ	18-75	15 240	5	2000	1600	1330	87
AM10TW-4812SZ	18-75	15 240	12	833	1600	288	87
AM10TW-4815SZ	18-75	15 240	15	667	1600	200	87

Models

Dual output

Model	Input Voltage (V)	Input Current NL FL (mA)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM10TW-2405DZ	9-36	15 495	±5	±1000	1600	±900	85
AM10TW-2412DZ	9-36	15 480	±12	±417	1600	±133	87
AM10TW-2415DZ	9-36	15 480	±15	±330	1600	±90	87
AM10TW-4805DZ	18-75	15 250	±5	±1000	1600	±900	85
AM10TW-4812DZ	18-75	15 240	±12	±417	1600	±133	88
AM10TW-4815DZ	18-75	15 240	±15	±330	1600	±90	88

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.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24	9-36		VDC
	48	18-75		
Filter	π (Pi) Network			
Start up time	Nominal Vin and constant resistive load		20	ms
Absolute Maximum Rating	24 Vin	-0.7-50		VDC
	48 Vin	-0.7-100		
Peak Input Voltage time			100	ms
On/Off control	ON – High (3.0 ... 12Vdc) or open circuit; OFF – Low (0 ... 1.2Vdc) or Short circuit pin1 and pin 2/3 OFF idle current: 5.0 mA typical			
Input reflected ripple current		20		mA pk-pk

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1600	VDC
Tested metal case to Input and Output	60 sec		1600	VDC
Resistance		>1000		MOhm
Capacitance		1500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1.2		%
Cross Regulation (Dual Output)	25% load on one output, 100% load on second	±5		%
Over voltage protection	Zener diode clamp			
Over load protection		170		% of FL
Short Circuit protection	Continuous, hiccup			
Short circuit restart	Auto recovery			
Line voltage regulation	HL-LL		±0.2	%
Load voltage regulation	0% Load to Full Load	3.3V output models	±0.5	%
		Others	±0.2	%
Temperature coefficient		±0.02		%/°C
Ripple & Noise *	20MHz Bandwidth		85	mV p-p

* Measured with 1µF CC.

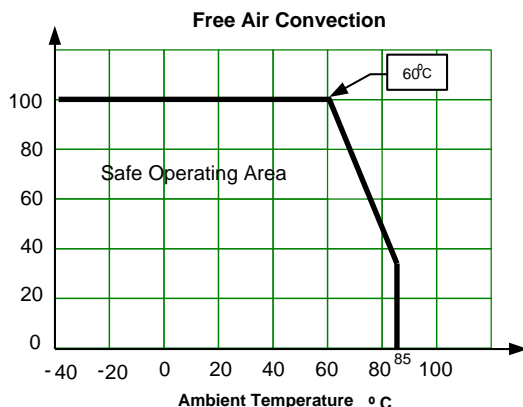
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	270		KHz
Operating temperature	Full Load with derating above 60°C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			105	°C
Derating	Above 60°C	2.5		%/°C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Nickel-coated Copper			
Potting material	UL94V-0 rated			
Weight		18		g
Dimensions (L x W x H)	1.25 x 0.80 x 0.40 inches 31.75 x 20.32 x 10.16 mm			
MTBF	>1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Manual soldering temperature	1.5mm from case for 10 sec		260	°C
Transient recovery time	25% load step (75-50-25% of Iout)	250		µS
Transient recovery deviation	25% load step (75-50-25% of Iout)		±3	%

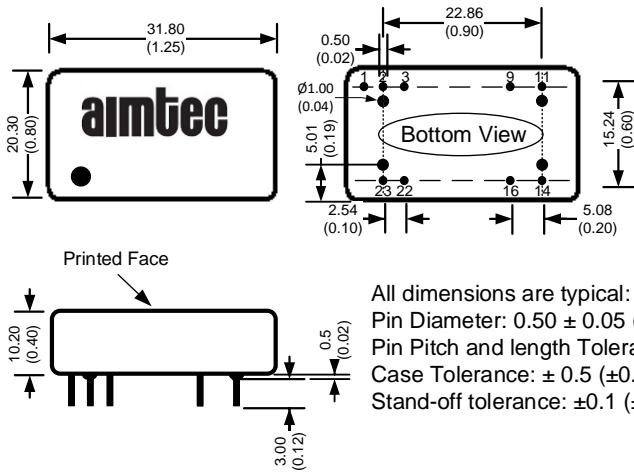
Safety Specifications

Parameters	
Agency approvals	CE, UL
Standards	EN55032 Class A, with recommended circuit
	IEC61000-4-2, Perf. Criteria A
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria A (external 330µF/100V cap required)
	IEC61000-4-5, Perf. Criteria A (external 330µF/100V cap required)
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A
	IEC/EN/UL 60950-1:2001 & IEC/EN/UL 62368-1

Derating



Dimensions



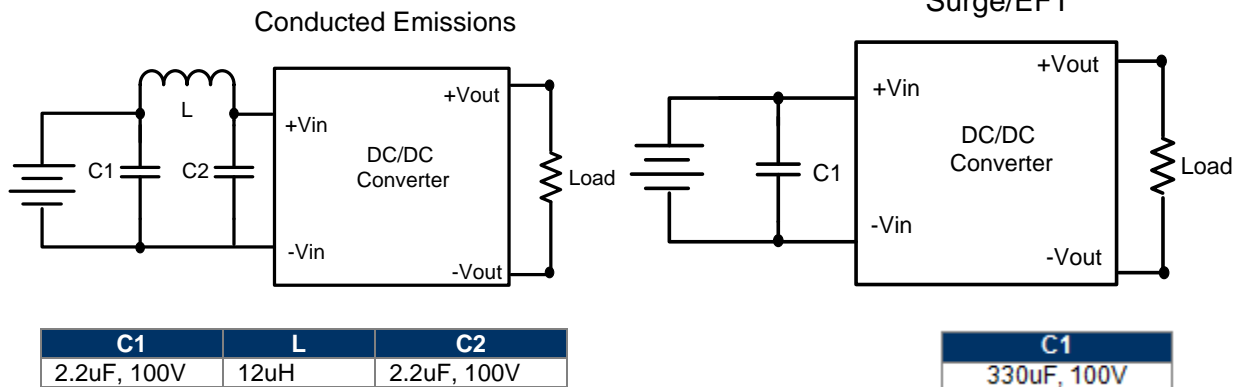
All dimensions are typical: millimeters (inches)
 Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
 Pin Pitch and length Tolerance: ± 0.35 (± 0.014)
 Case Tolerance: ± 0.5 (± 0.02)
 Stand-off tolerance: ± 0.1 (± 0.004)

Pin Out Specifications

Pin	Single	Dual
1	Remote On/Off	Remote On/Off
2	-V Input	-V Input
3	-V Input	-V Input
9	No Pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

N.C.: Not Connected

Recommended 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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.