



### FEATURES:

- Wide Input Range (4:1)
- 24 Pin DIP Package
- Metal package
- High efficiency up to 82%
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1500 or 3500VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection



### Models

#### Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)
AM5TW-2403S-VZ	9-36	3.3	1200	2200	68
AM5TW-2405S-VZ	9-36	5	1000	1000	73
AM5TW-2412S-VZ	9-36	12	416	470	74
AM5TW-2415S-VZ	9-36	15	333	470	74
AM5TW-4803S-VZ	18-72	3.3	1200	2200	70
AM5TW-4805S-VZ	18-72	5	1000	1000	73
AM5TW-4812S-VZ	18-72	12	416	470	74
AM5TW-4815S-VZ	18-72	15	333	470	76
AM5TW-2403SH35-VZ	9-36	3.3	1200	2200	68
AM5TW-2405SH35-VZ	9-36	5	1000	1000	73
AM5TW-2412SH35-VZ	9-36	12	416	470	74
AM5TW-2415SH35-VZ	9-36	15	333	470	74
AM5TW-4803SH35-VZ	18-72	3.3	1200	2200	70
AM5TW-4805SH35-VZ	18-72	5	1000	1000	73
AM5TW-4812SH35-VZ	18-72	12	416	470	74
AM5TW-4815SH35-VZ	18-72	15	333	470	76

### Models

#### Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)
AM5TW-2405D-VZ	9-36	±5	±500	±1000	77
AM5TW-2412D-VZ	9-36	±12	±208	±220	82
AM5TW-2415D-VZ	9-36	±15	±166	±220	82
AM5TW-4805D-VZ	18-72	±5	±500	±1000	72
AM5TW-4812D-VZ	18-72	±12	±208	±220	75
AM5TW-4815D-VZ	18-72	±15	±166	±220	75
AM5TW-2405DH35-VZ	9-36	±5	±500	±1000	77
AM5TW-2412DH35-VZ	9-36	±12	±208	±220	82
AM5TW-2415DH35-VZ	9-36	±15	±166	±220	82
AM5TW-4805DH35-VZ	18-72	±5	±500	±1000	72
AM5TW-4812DH35-VZ	18-72	±12	±208	±220	75
AM5TW-4815DH35-VZ	18-72	±15	±166	±220	75

### Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage Range	24	9-36		VDC
	48	18-72		VDC
Filter	π (Pi) Network			
Peak Input Voltage time		100		mS
Absolute Max Rating	24 Vin	-0.7-40		VDC
	48 Vin	-0.7-80		VDC
Input Reflected ripple current *		35		mA p-p

\* The input reflected ripple current should be measured with connected 12μH inductor and a 47μF capacitor.

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, H35 model		3500	VDC
	60 sec, other models		1500	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy			±1	%
Short circuit protection	Continuous			
Short circuit restart	Auto Recovery			
Line voltage regulation			±0.5	%
Load voltage regulation			±0.5	%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth		60	mV p-p
Minimum load*		25		%

\* Specifications may not be met if the minimum load is not satisfied.

### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100-400		KHz
Operating temperature	Full Load (see derating chart)	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			100	°C
Derating	Above 71°C	3.45		%/°C
Cooling	Free air convection			
Humidity			95	%
Case material	Nickel coated copper			
Weight		17		g
Dimensions(L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.8 x 0.4inches	31.75 x 20.32 x 10.2mm	
MTBF	>1,000,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

### Safety Specifications

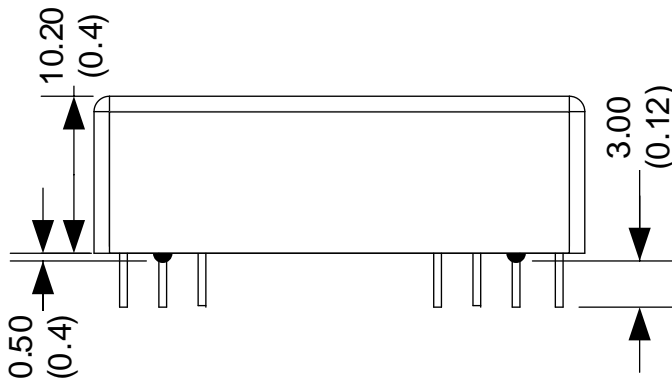
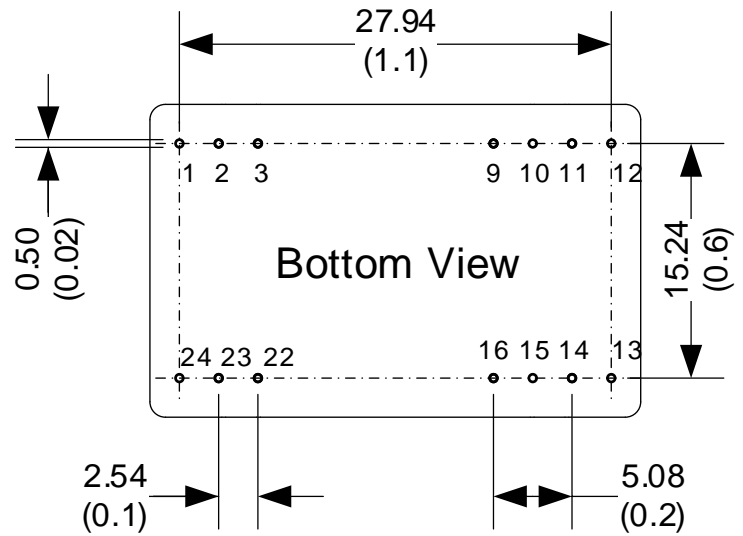
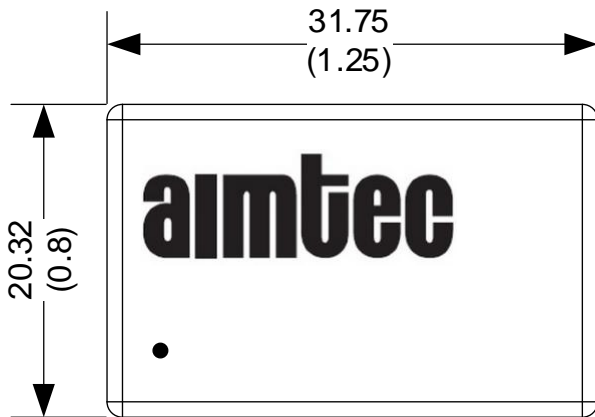
Parameters	
Standards	Designed to meet IEC 60950-1

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.

### Pin Out Specifications

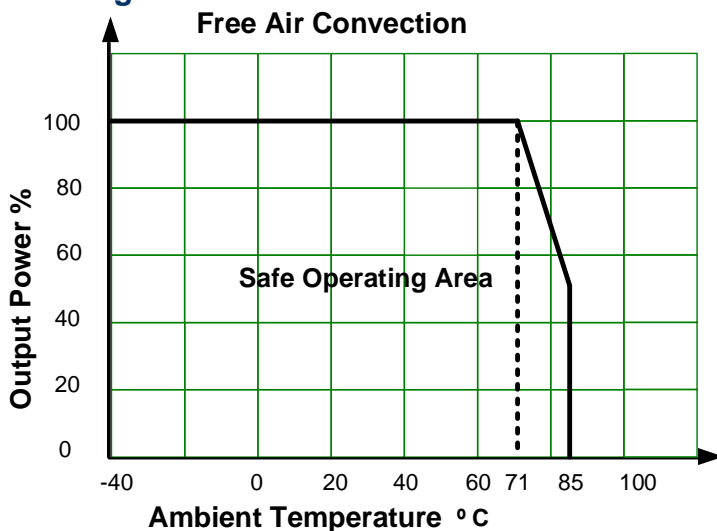
Pin	1500VDC		3500VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	No pin	No pin
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	No pin	No pin	No pin	Common
10	-V Output	Common	No pin	No pin
11	+V Output	+V Output	N.C.	-V Output
12/13	-V Input	-V Input	No pin	No pin
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	No pin	No pin
16	No pin	No pin	-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	No pin	No pin

**Dimensions**



All dimensions are typical: millimeters (inches)  
 Pin Diameter:  $0.50 \pm 0.05$  ( $0.02 \pm 0.002$ )  
 Pin Pitch tolerance:  $\pm 0.35$  ( $\pm 0.014$ )  
 Case tolerance:  $\pm 0.5$  ( $\pm 0.02$ )  
 Stand-off tolerance:  $\pm 0.1$  ( $\pm 0.004$ )

**Derating**



**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](http://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](http://www.aimtec.com).