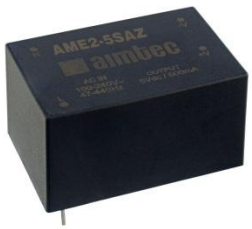
aimtec
Your Power Partner

Series AME2-AZ

2Watt | AC-DC Converter



FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -40˚C to +70˚C
- Input: 90-305VAC, 47-440Hz, or 130-430 VDC
- RoHS compliant
- Energy Star compliant
- Ultra-small package
- Over load, Short Circuit Protection

Models

Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Temperature range (ºC)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive Load (µF)	Efficiency (%)			
							115 VAC	230 VAC	277 VAC	480 VAC
AME2-5SAZ	90-305/47-440	130-430	-40 to +70	5	400	1100	67	66	63	

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		40	mA
	230 VAC		20	mA
	277 VAC		20	mA
Inrush current <2ms (cold start)	115 VAC		10	A
	230 VAC		15	A
	277 VAC		20	A
Leakage current			0.15	mA
External fuse	Recommended slow blow type	1		A
Input Dissipation (No Load)		≦0.3		W

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy*	Full load	±5		%
Line regulation	LL-HL, Full Load	±1.5		%
Load regulation*	0-100% load	±5		%
Transient Recovery Time		200		µs
Transient Response Deviation	25% load step	±2		% of Vout
Minimum load		0		%
Ripple & Noise*	20 MHz Bandwidth, 0.1µF & 220µF E/C in parallel	200		mV p-p

*Measured at 115/230/277 VAC (Typical input) with Full Load

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Isolation Resistance		>1000		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100		KHz
Over Load protection	Auto recovery	>125%		
Short circuit protection	90-305VAC input models	Continuous, Auto-recovery		
Operating temperature	Without derating	-40 to +70		°C
Storage temperature		-40 to +85		°C
Maximum Case temperature			100	°C
Humidity	Non condensing	20 ~ 95		% RH
Case material	Plastic resin + Fiberglass (flammability to UL 94V-0)			
Weight		25		g
Dimensions (L x W x H)	1.40 x 0.92 x 0.76 (35.60 x 23.31 x 19.32mm)			
MTBF	> 400 000 hrs (MIL-HDBK -217F, t=+25°C)			

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, typical input voltages 115/230/277 VAC and at rated output load unless otherwise specified.

Environment Approval

Parameters	Conditions
Shock	Wave form: Half sine wave
	Acceleration amplitude: 5gn
	Bump duration: 30 ms
	Number of bumps: 18 (3 in each direction for every axis)
	Converter operation before and after test, body mounted (on chassis)
Vibrations	Test mode: Sweep sine
	10-100Hz, speed 0.05Hz/s
	Displacement: 1mm
	Acceleration: 3g
	3 loops 30min one cycle, 3h total, every axis tested
	Converter operation before and after test, body mounted (on chassis)

Safety Specifications

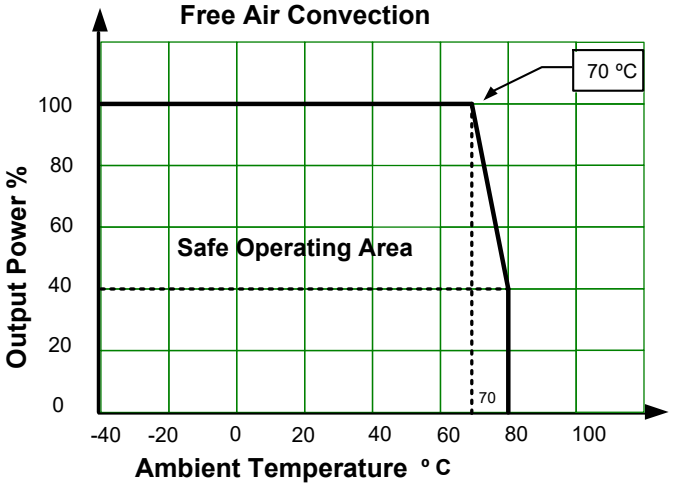
Parameters		
Agency approvals	cULus, CE, CB, FCC	
Standards	Information technology Equipment	IEC/EN/UL 60950-1:2006+A11:2009
	EMI - Conducted and radiated emission	EN55022, class B
	Harmonic Current Emissions	IEC/EN 61000-3-2, Class A
	Voltage fluctuations and flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity	IEC 61000-4-2
	RF, Electromagnetic Field Immunity	IEC 61000-4-3
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4
	Surge Immunity (1KV)	IEC 61000-4-5 (Level 2)
	RF, Conducted Disturbance Immunity	IEC 61000-4-6
	Power frequency Magnetic Field Immunity	IEC 61000-4-8
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11
	FCC part 15 Subpart B, Class B, ANSI C63.4 :2003	

Pin Out Specifications*

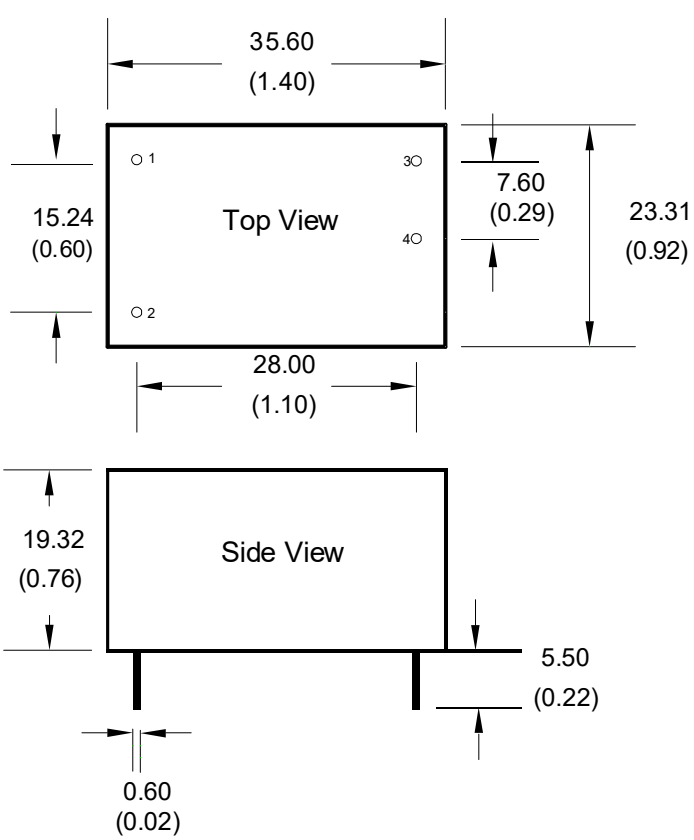
Pin	Single
1*	AC Input (N) or (L1)
2*	AC Input (L) or (L2)
3	-V Output
4	+V Output

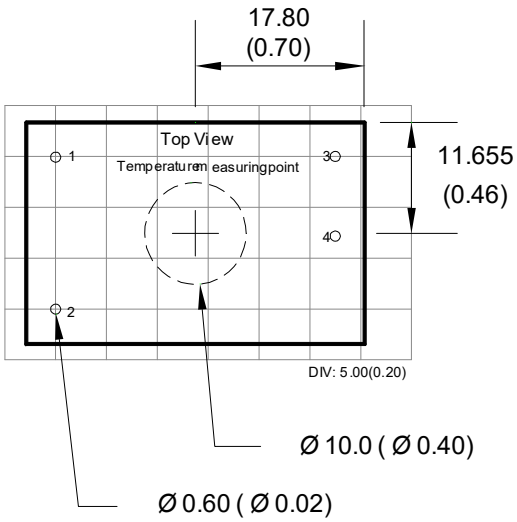
* Note: Input Pins 1 and 2 can be “N” and "L" respectively when the input voltage is supplied from a single phase.
Input Pins 1 and 2 can be “L1” and "L2" respectively when the input voltage is supplied from 3 phase line to line voltage 208-480Vac (208 Y/ 120V 3-phase, 240 Y/ 120V 3-phase, 400 Y/ 230V 3-phase or 480 Y/ 277V 3-phase).

Derating



Dimensions





Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter ±0.05 (±0.002)
Pin Pitch Tolerance ±0.50 (±0.02)

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.