

Series AME2-JZ

2 Watt | AC-DC / DC-DC Converter



FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -25°C to +70°C
- Input: 85-305VAC, 47-63Hz, or 120-430 VDC
- Over current, Short Circuit Protection
- Class II Power supply
- Energy Star compliant
- Ultra-small package



Models Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Temperature range (°C)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive Load (μF)	Efficiency (%)
							230 VAC
AME2-3.3SJZ	85-305/47-63	120-430	-25 to +70	3.3	600	4000	65
AME2-5SJZ	85-305/47-63	120-430	-25 to +70	5	400	4000	70
AME2-9SJZ	85-305/47-63	120-430	-25 to +70	9	222	2200	72
AME2-12SJZ	85-305/47-63	120-430	-25 to +70	12	167	2200	76
AME2-15SJZ	85-305/47-63	120-430	-25 to +70	15	133	1000	76
AME2-24SJZ	85-305/47-63	120-430	-25 to +70	24	83	680	78

Add suffix “-ST” for optional screw terminal bottom plate or “-STD” for optional DIN Rail screw terminal bottom plate.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		44	mA
	230 VAC		25	mA
Inrush current <2ms (cold start)	115 VAC	5		A
	230 VAC	11		A
Leakage current			0.15	mA
External fuse	Recommended slow blow type	1		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load, nominal input	±6		%
Line regulation	LL-HL, Full Load	±2		%
Load regulation	10% - 100% load, nominal input	±5		%
Minimum load		10		%
Ripple & Noise	20MHz bandwidth, 115/230VAC, Full Load	100	200	mV p-p

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 Current protection	Auto recovery		≥110%		
Short circuit protection	Auto recovery				
Operating temperature	With derating above 55°C	-25 to +70			°C
Storage temperature		-40 to +85			°C
Maximum Case temperature			100		°C
Humidity	Non condensing	20 ~ 90			% RH
Case material	Plastic resin (flammability to UL 94V-0)				
Weight	PCB mountable models		20		g
	With optional -ST mounting plate:		40		
	With optional -STD mounting plate:		60		
Cooling	Free air convection				
Dimensions (L x W x H)	PCB mountable models		1.33 x 0.87 x 0.71 inches (33.70 x 22.20 x 18.00mm)		

	With optional -ST mounting plate:	2.99 x 1.24 x 1.06 inches	76.00 x 31.50 x 26.80 mm
	With optional -STD mounting plate:	2.99 x 1.24 x 1.24 inches	76.00 x 31.50 x 31.40 mm
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25oC)/Full Load		

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.

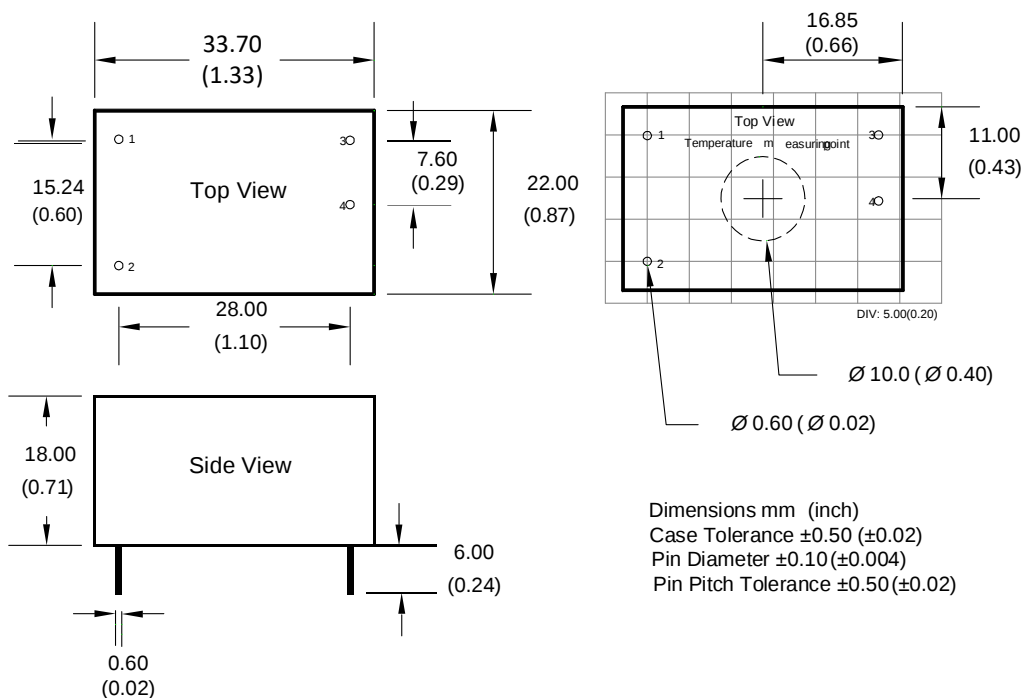
Safety Specifications

Parameters		
Approvals	cULus, CE	
Standards	Information technology Equipment	IEC/EN/UL 60950-1:2006+A11:2009
	EMI - Conducted and radiated emission	EN55022, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2, Contact: ±4KV/Air: ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3, 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4, ±2KV, Criteria B, with EMC recommended circuit
	Surge Immunity(1KV)	IEC 61000-4-5, ±1KV/±2KV, Criteria B, with EMC recommended circuit
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 10Vrms, Criteria A
	Power frequency Magnetic Field Immunity	IEC 61000-4-8, 10A/m, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11, 0-70%, Criteria B

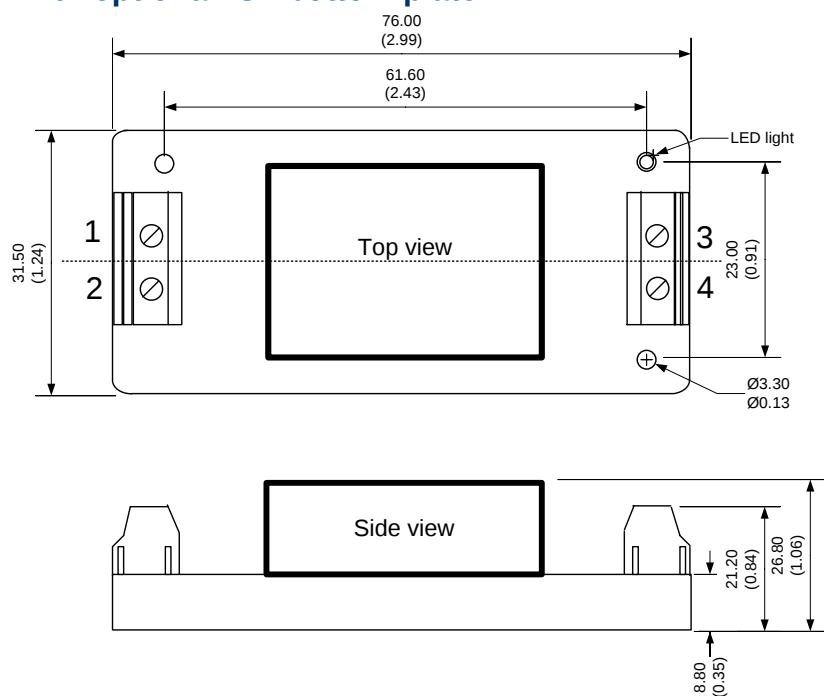
Pin Out Specifications

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

Dimensions



With optional -ST bottom plate

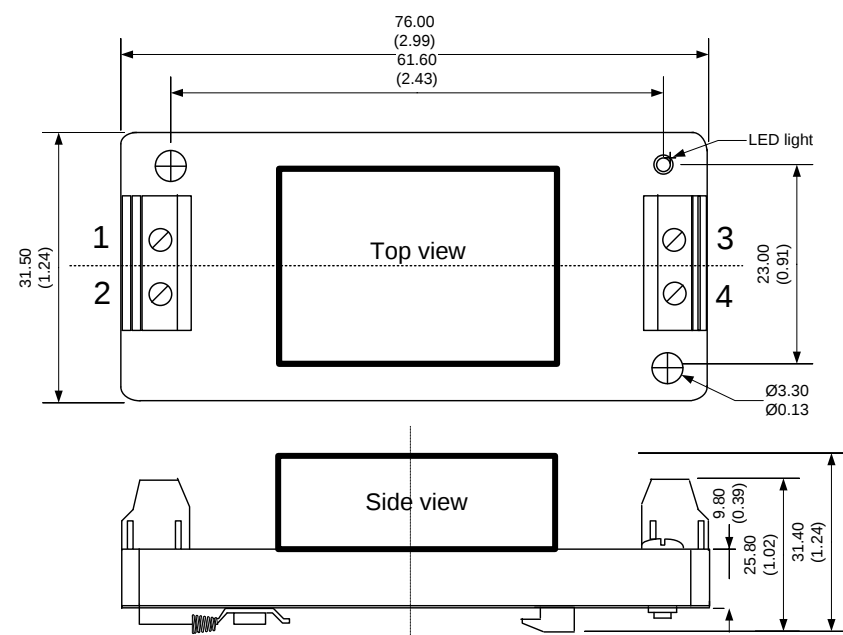


Pin Out Specifications

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

Dimensions: mm (inch)
Case Tolerance: ± 0.50 (0.02)
Wire gauge: 24-12AWG

With optional -STD bottom plate

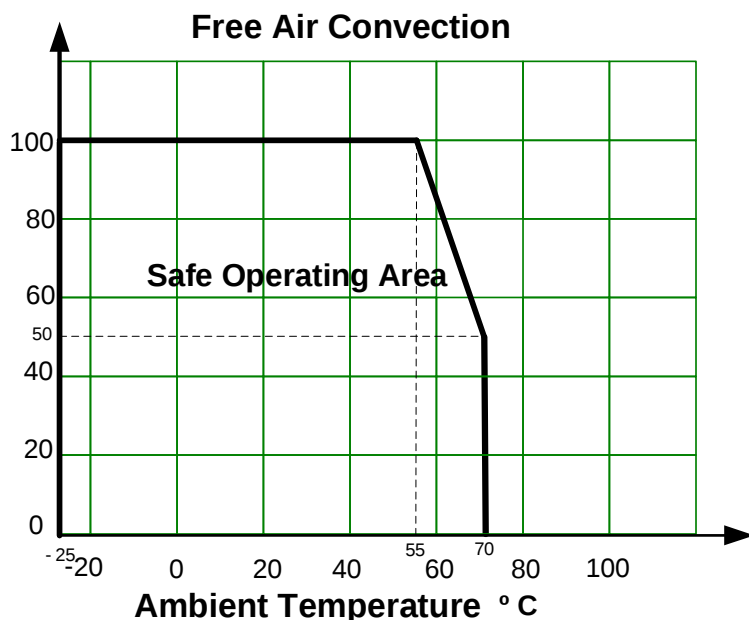


Pin Out Specifications

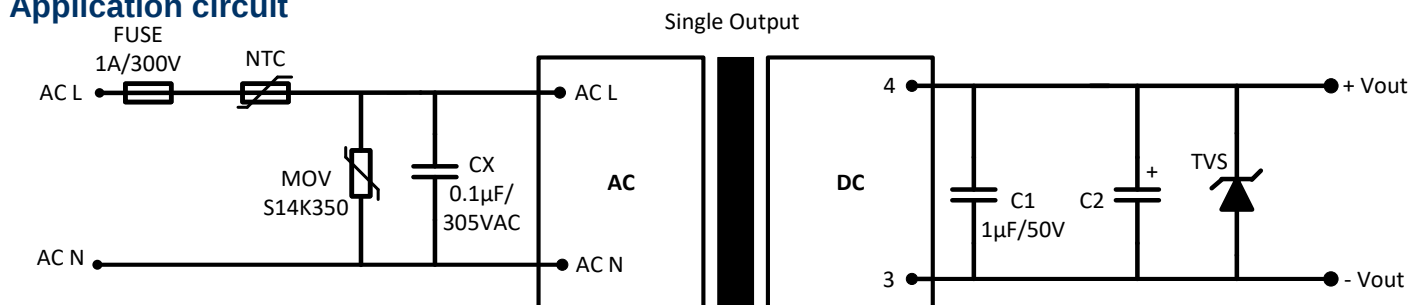
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Dimensions: mm (inch)
Case Tolerance: ± 0.50 (0.02)
Wire gauge: 24-12AWG

Derating

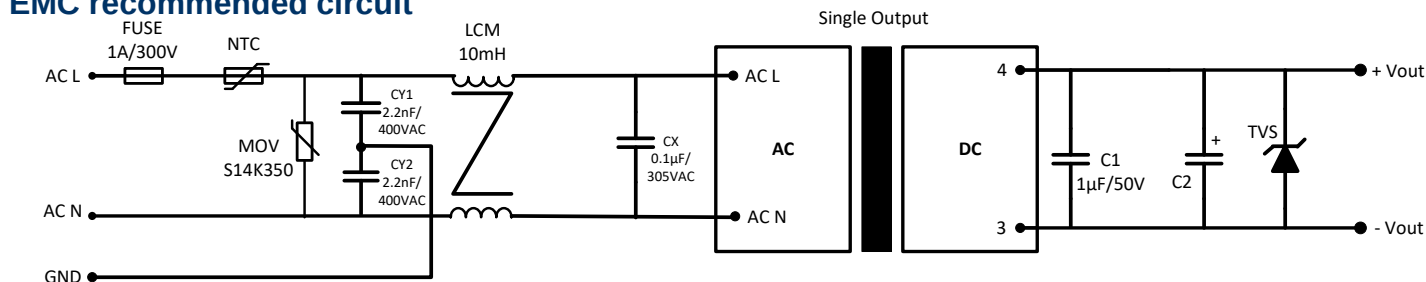


Application circuit



*GND connection not allowed

EMC recommended circuit



Model	C2	TVS
3.3 & 5 Vout	220 µF / 35V	7V
9 Vout	120 µF / 35V	12V
12 & 15 Vout	120 µF / 35V	20V
24 Vout	68 µF / 35V	30V

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.