

# **Series AME5-JZ**

#### 5 Watt | AC-DC / DC-DC Converter

#### **FEATURES:**

- I/O Isolation 3000VAC
- Operating Temp: -40°C to +70°C
- Over current Protection
- Input: 85-305VAC, 47-63Hz, or 100-430VDC
- Low Ripple and Noise
- Over Voltage Protection
- Up to 84% efficiency
- Short Circuit Protection

Models Single output





Model	Input Voltage (VAC/Hz)	Input Voltage	Max Output wattage	Output Voltage	Output Current max	Maximum capacitive load	Efficiency (%)
AME5-3.3SJZ	85-305/47-63	(VDC)	(W)	(V) 3.3	(A) 1.25	(μ <b>F</b> )	230 VAC 72
AME5-5SJZ	85-305/47-63	100-430	5	5	1	4000	77
AME5-9SJZ AME5-12SJZ	85-305/47-63 85-305/47-63	100-430 100-430	5 5	9 12	0.55 0.42	1800 1800	79 81
AME5-15SJZ	85-305/47-63	100-430	5	15	0.33	1500	82
AME5-24SJZ	85-305/47-63	100-430	5	24	0.23	330	84

**Input Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		125	mA
	230 VAC		80	mA
Inrush current <2ms (cold start)	115 VAC	10		Α
	230 VAC	15		Α
Leakage current			0.25	mA
External fuse	Recommended slow blow type	1		Α

**Output Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	(LL-HL)	±0.5		%
Load regulation	10-100% load	±1		%
Ripple & Noise			100	mV p-p
Hold up time	115 VAC	15		ms
Hold-up time	230 VAC	80		ms

**Isolation Specifications** 

Parameters	Conditions	Typical	Rated	Units	
Tested I/O voltage	Input to Output, 60 sec		3000	VAC	
	Input to Ground		2000		
Isolation resistance		>1000		MΩ	

**General Specifications** 

Parameters	Conditions	Typical	Maximum	Units	
Switching frequency		65	132	KHz	
Over current protection		≥110		% of lout	
Over voltage protection	Over voltage shutdown				
Short circuit protection	Auto recovery				
Operating temperature	See derating curve -40 to +70		°C		
Maximum case temperature			100	°C	
Storage temperature		-40 to +105		°C	
Temperature coefficient		±0.02		% / °C	



#### 5 Watt | AC-DC / DC-DC Converter

**General Specifications (continued)** 

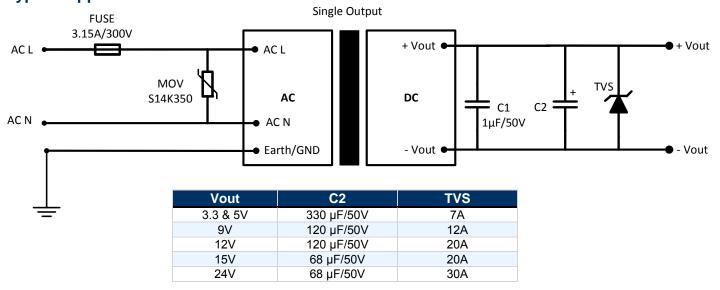
Parameters	Conditions	Typical	Maximum	Units
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material	Plastic (flammability to UL 94V-0)			
Weight	75			g
Dimensions (L x w x H)	55.0 x 45.0 x 21.0 mm (2.17 x 1.77 x 0.83 inches)			
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)/ Full Load			

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

**Safety Specifications** 

Parameters				
Agency approvals	CE, UL			
	Information Technology Equipment	IEC/EN/UL 60950-1		
	EMI - Conducted and radiated emission	EN55022, class B EN55024: 2010		
	Electrostatic Discharge Immunity	IEC 61000-4-2: Contact ±6KV/Air ±8KV, Criteria B		
Standards	RF, Electromagnetic Field Immunity	IEC 61000-4-3: 10V/m, Criteria A		
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4: ±2KV, Criteria B		
	Surge Immunity	IEC 61000-4-5: ±1KV/±2KV, Criteria B		
	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		

### **Typical Application circuit**



## **Pin Out Specifications**

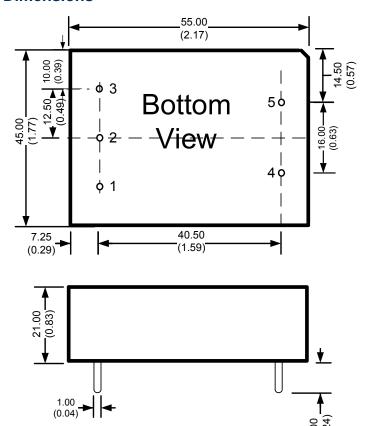
Pin	Single	
1	Earth/Ground	
2	AC Input (L)	
3	AC Input (N)	
4	<ul> <li>V output</li> </ul>	
5	+ V output	

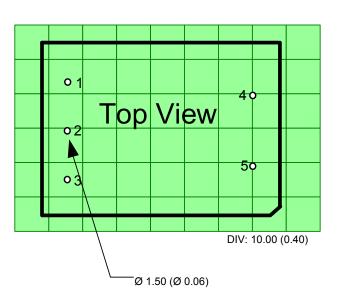
North America only





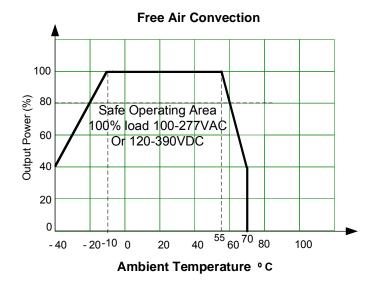
#### **Dimensions**

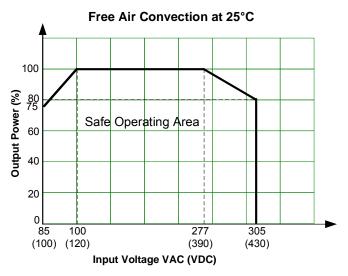




Dimensions mm (inch) Case Tolerance ±0.50 (±0.02) Pin Diameter  $1.0 \pm 0.10 (0.04 \pm 0.004)$ 

### **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 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

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