

# **Series AME10-BJZ**

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



#### **FEATURES:**

- Input: 90-528VAC, 47-63Hz, or 100-745VDC
- Operating Temp: -40°C to +70°C
- Over current Protection
- I/O Isolation of 4000VAC

- Class II power supply
- Over Voltage Protection
- Up to 80% efficiency
- Short Circuit Protection







Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (µF)	Efficiency (%)
AME10-3.3SBJZ	90-528/47-63	100-745	6.6	3.3	2	15,000	72
AME10-5SBJZ	90-528/47-63	100-745	10	5	2	15,000	76
AME10-9SBJZ	90-528/47-63	100-745	10	9	1.1	10,000	78
AME10-12SBJZ	90-528/47-63	100-745	10	12	0.9	5,000	80
AME10-15SBJZ	90-528/47-63	100-745	10	15	0.7	3,000	80
AME10-24SBJZ	90-528/47-63	100-745	10	24	0.45	1,000	82

**Input Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		400	mA
Current (full load)	230 VAC		230	mA
Inrush current <2ms (cold start)	115 VAC	25		Α
	230 VAC	40		Α
Leakage current	230VAC/50Hz		0.25	mA
External fuse	Recommended slow blow type	3.15		Α
No load consumption			0.75	W

**Output Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2.0	±3.0	%
Line regulation	(LL-HL)	±0.5		%
Load regulation	0-100% load	±1.0		%
Ripple & Noise*	20MHz bandwidth		150	mV p-p
Hold up time	230 VAC	35		ms

<sup>\*</sup>Tested as per the referenced Application Circuit.

**Isolation Specifications** 

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	Input to Output, 60 sec		4000	VAC
Isolation resistance		>1000		ΜΩ

**General Specifications** 

General Specifications					
Parameters	Conditions	Typical	Maximum	Units	
Switching frequency		65		KHz	
Over current protection	130	130 - 400			
Over voltage protection	Zener Diode Clamp				
Short circuit protection	ction Continuous, Hiccup, Auto recove		ecovery		
Operating temperature	See derating curve	-40 to +70 °C		°C	
Maximum case temperature			100	°C	
Storage temperature		-40 to +85		°C	
Temperature coefficient		±0.02		%/°C	
Cooling	Free air convection				
Humidity	Non condensing		95	% RH	



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Case material	Plastic (flammability to UL 94V-0)		
Weight	120	g	
Dimensions (L x W x H)	62.0 x 45.0 x 30.0 mm (2.44 x 1.77 x 1.18 inches)		
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)/ Full Load		

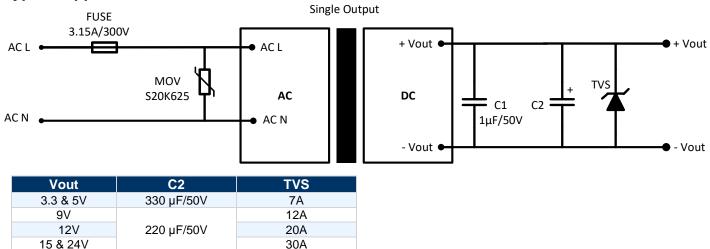
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230VAC) and at rated output load unless otherwise specified.

**Safety Specifications** 

Parameters		
	Information Technology Equipment	Designed to meet IEC/EN/UL 62368-1
	EMI - Conducted and radiated emission	EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2: Contact ±6KV/Air ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3: 10V/m, Criteria A
Standards	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4: ±4KV, Criteria B
	Surge Immunity*	IEC 61000-4-5: line to line: ±2KV, applied recommended EMC circuit for line to line: ±4KV, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6: 10Vrms, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11: 0-70%, Criteria B

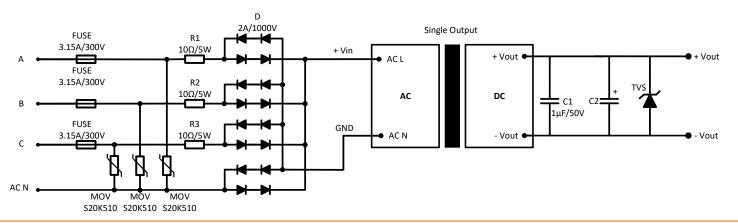
<sup>\*</sup> For higher values, external circuit would be required.

#### **Typical Application circuit**



#### 3 Phase 4 Wire EMC recommended circuit

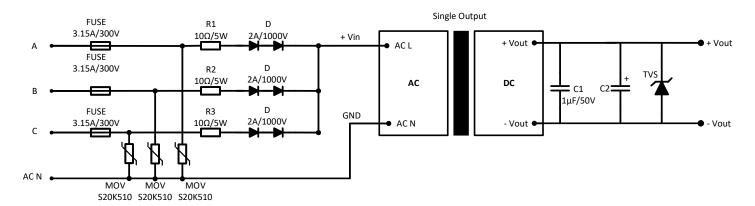
#### Full-wave Rectification for 4KV differential mode inrush standard





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#### Half-wave Rectification for 4KV differential mode inrush standard



Vout	C2	TVS
3.3 & 5V	330 μF/50V	7A
9V		12A
12V	220 μF/50V	20A
15 & 24V		30A

### **Pin Out Specifications**

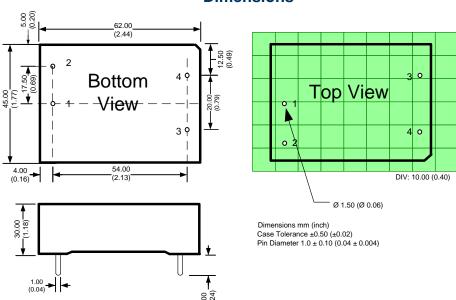
Pin	Single	
1*	AC Input (N) or (L1)	
2*	AC Input (L) or (L2)	
3	- V output	
4	+ V output	

\* 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).

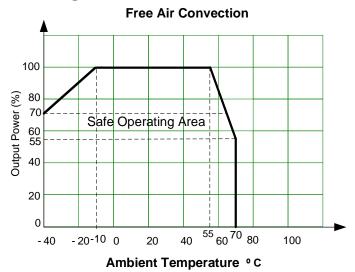
#### **Dimensions**

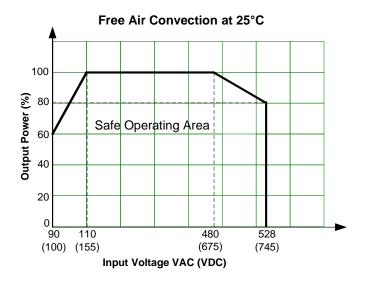




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### **Derating**





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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