

## Series AME3-BJZ

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



#### FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -40°C to +70°C
- Input 90-528VAC, 47-63Hz, or 100-745 VDC
- Over current Protection
- Class II Power supply
- Low no load consumption  $\leq 0.5W$
- Continuous Short Circuit Protection



#### Models Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Temperature range (°C)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive Load ( $\mu F$ )	Efficiency (%)
							230 VAC
AME3-3.3SBJZ	90-528/47-63	100-745	-40 to +70	3.3	500	2200	63
AME3-5SBJZ	90-528/47-63	100-745	-40 to +70	5	500	1100	70
AME3-9SBJZ	90-528/47-63	100-745	-40 to +70	9	333	680	73
AME3-12SBJZ	90-528/47-63	100-745	-40 to +70	12	250	680	76
AME3-15SBJZ	90-528/47-63	100-745	-40 to +70	15	200	560	76
AME3-24SBJZ	90-528/47-63	100-745	-40 to +70	24	125	470	76

#### Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		120	mA
	230 VAC		60	mA
	480 VAC		40	mA
Inrush current <2ms (cold start)	115 VAC	9		A
	230 VAC	15		A
	480 VAC	27		A
Leakage current	230VAC/50Hz, rms	0.25		mA
External fuse*	Slow blow type recommended	2		A

\* Fuse is required to meet the safety standards.

#### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	3.3V output	$\pm 6$		%
	Others	$\pm 5$		%
Line regulation	LL-HL, Full Load, 3.3V output	$\pm 2.5$		%
	LL-HL, Full Load, Others	$\pm 1.5$		%
Load regulation	10% - 100% load, nominal input	$\pm 2.5$		%
Ripple & Noise*	20MHz bandwidth, 115/230VAC, Full Load		180	mV p-p
Hold up time	230VAC	40		ms

\*With output filter capacitors referenced in the application circuit.

#### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Isolation Resistance		>1000		M $\Omega$

#### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		65		KHz
Over Current protection	Auto recovery	150-300		% of Iout
No load consumption	230VAC		0.3	W
	528VAC		0.5	W
Short circuit protection	Auto recovery, Continuous			
Operating temperature	See derating curve	-40 to +70		°C
Storage temperature		-40 to +105		°C
Temperature coefficient		$\pm 0.15$		%/°C

Maximum Case temperature			95	°C
Wave soldering temperature	Duration 5 - 10s	260 ± 5		°C
Manual soldering temperature	Duration 5 - 10s	360 ± 10		°C
Humidity	Non-condensing		85	% RH
Case material	Plastic resin (flammability to UL 94V-0)			
Weight		30		g
Cooling	Free air convection			
Dimensions (L x W x H)	2.0 x 1.0 x 0.6 inches 50.80 x 25.40 x 15.16mm			
MTBF	> 300,000 hrs (MIL-HDBK -217F, t <sub>a</sub> =+25°C) at Full Load			

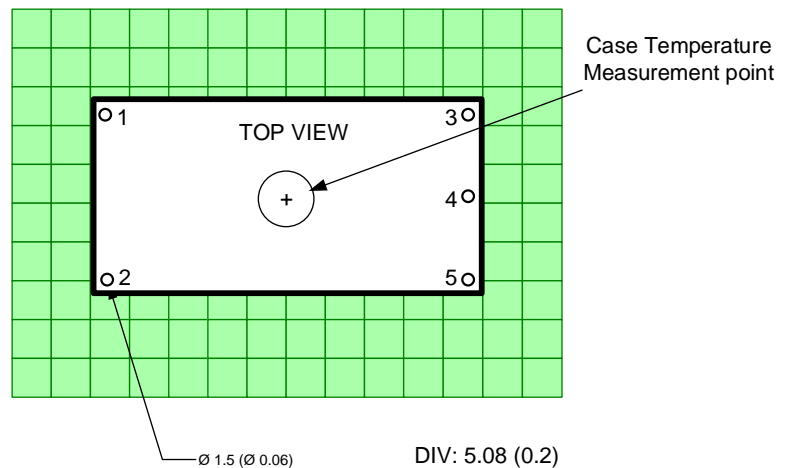
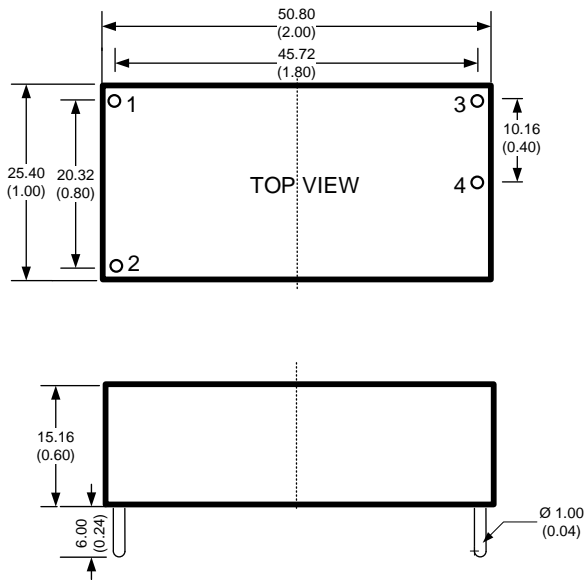
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

### Safety Specifications

#### Parameters

Agency approvals	cULus	
Standards	Information technology Equipment	UL 60950-1, UL 62368-1
	EMI - Conducted and radiated emission	CISPR32, EN55032, FCC part 15 class A; class B with the recommended EMC circuit
	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 with the recommended EMC circuit
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4, ±2KV; ±4KV with the recommended EMC circuit, Criteria B
	Surge Immunity	IEC 61000-4-5, ±1KV; ±2KV with the recommended EMC circuit, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 3Vrms, Criteria A with the recommended EMC circuit
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11, 0-70%, Criteria B with the recommended EMC circuit

### Dimensions



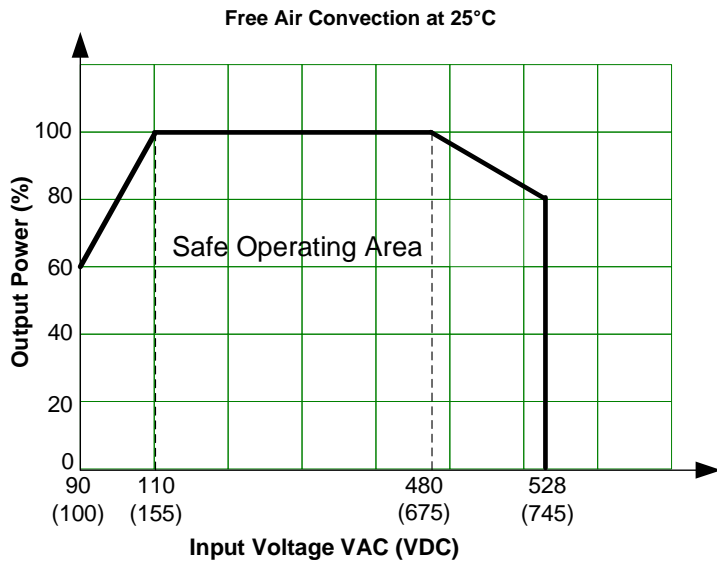
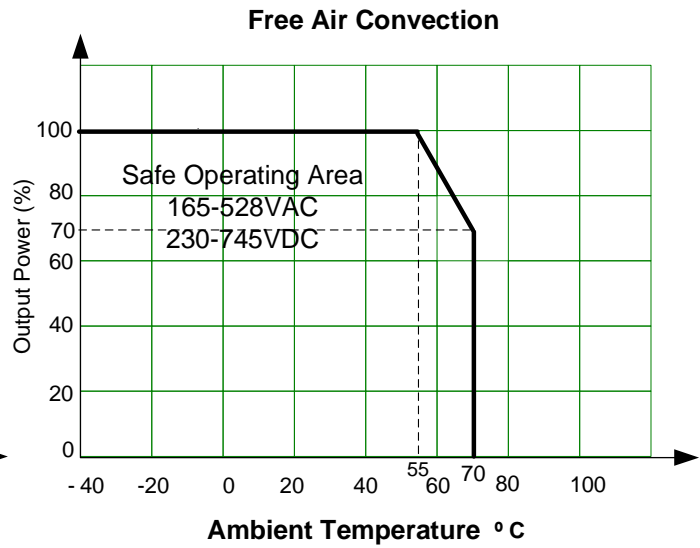
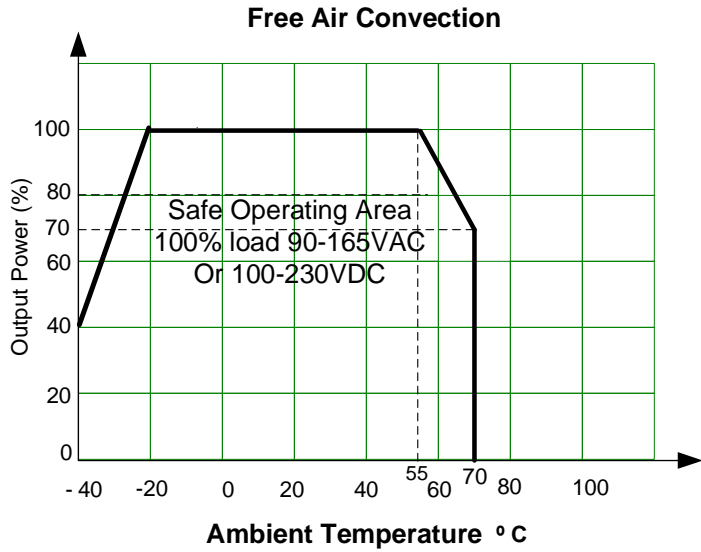
Dimensions: inch (mm)  
 Case Tolerance: ± 0.50 (0.02)  
 Pin Pitch Tolerance: ± 0.10 (0.004)

### Pin Out Specifications

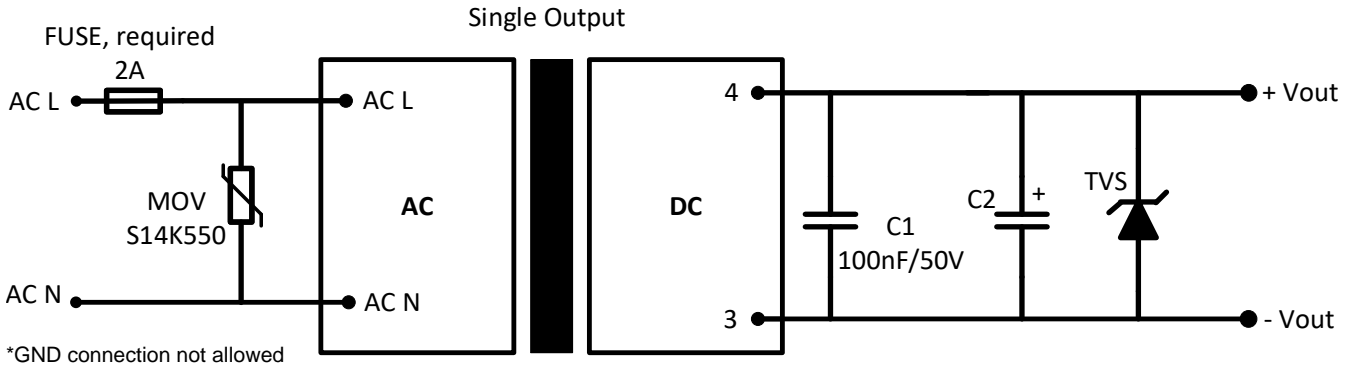
Pin	Single
1*	AC Input (N) or (L1)
2*	AC Input (L) or (L2)
3	+V Output
4	-V Output

\* 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).

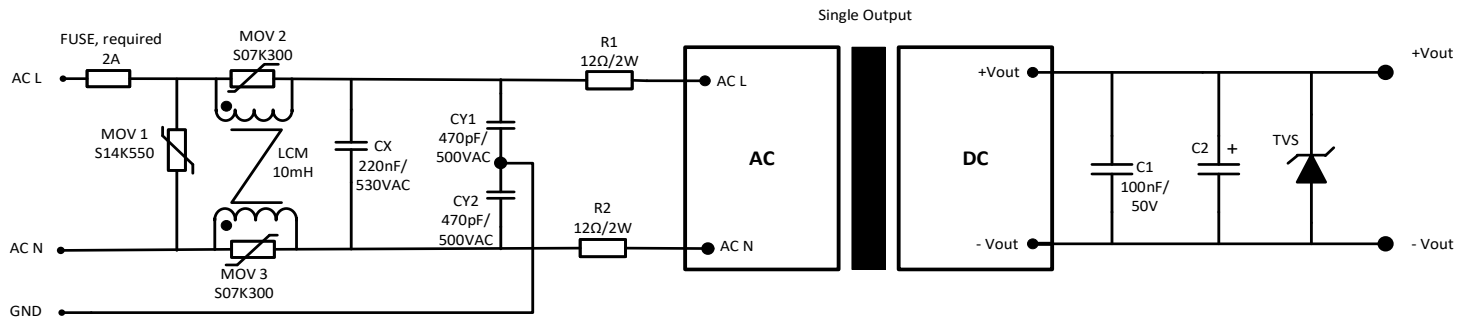
**Derating**



**Application circuit**



**Class B compliance recommended circuit**



Model	C2	TVS
3.3 Vout	100 $\mu$ F / 16V	7V
5 Vout	47 $\mu$ F / 16V	7V
9 Vout	47 $\mu$ F / 35V	12V
12 & 15 Vout		20V
24 Vout		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](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 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).