

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

Models Single output



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (μF)	Efficiency (%)
							230 VAC
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
	230 VAC		230	mA
Inrush current <2ms (cold start)	115 VAC	25		A
	230 VAC	40		A
Leakage current	230VAC/50Hz		0.25	mA
External fuse	Recommended slow blow type	3.15		A
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

*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		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		65		KHz
Over current protection		130 - 400		% of Iout
Over voltage protection		Zener Diode Clamp		
Short circuit protection		Continuous, Hiccup, Auto recovery		
Operating temperature	See derating curve	-40 to +70		°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

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		

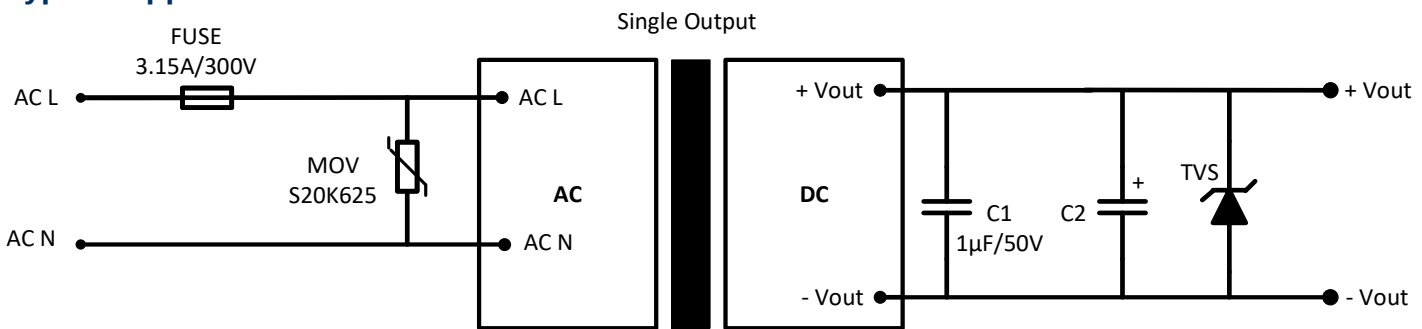
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230VAC) and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Standards	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
	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

* For higher values, external circuit would be required.

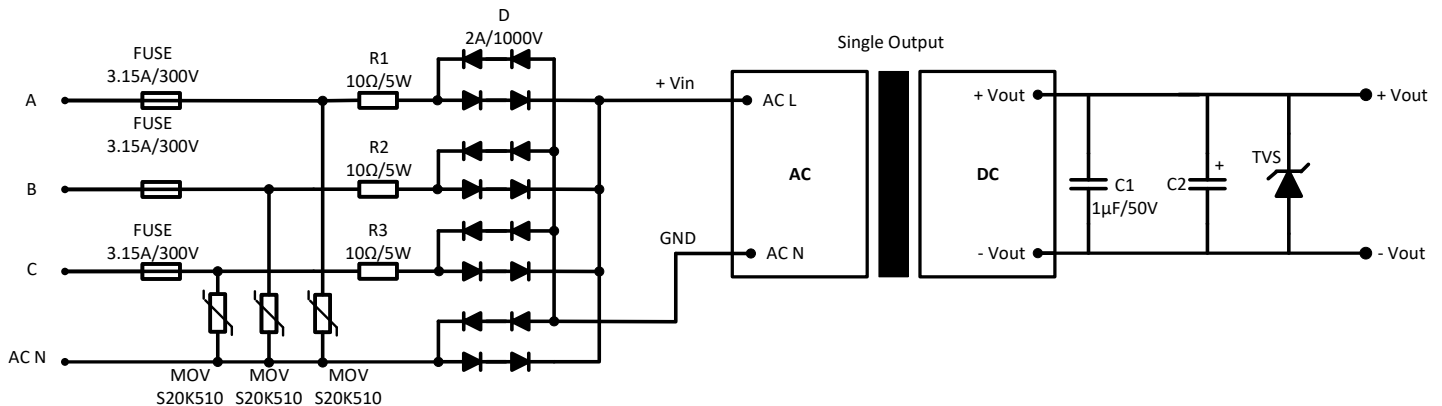
Typical Application circuit



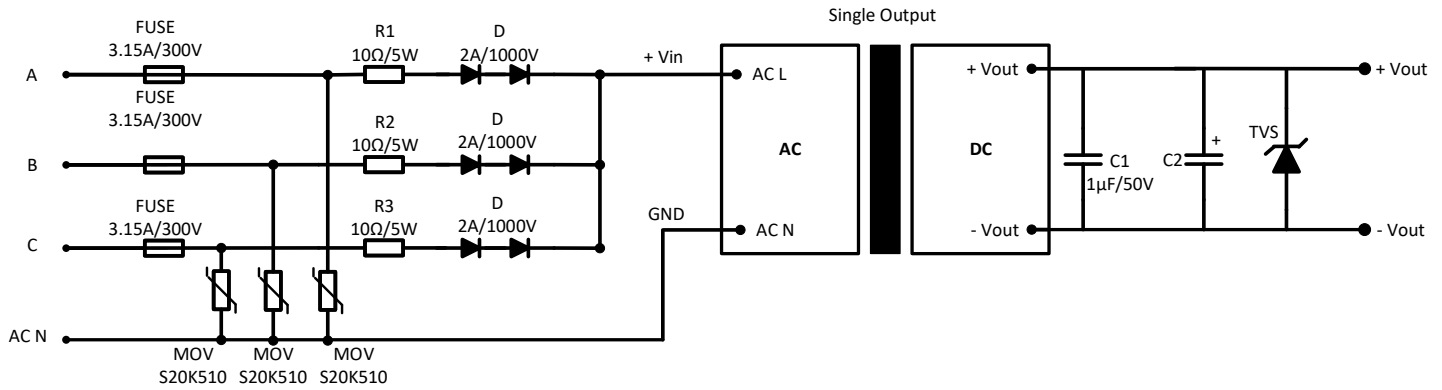
Vout	C2	TVS
3.3 & 5V	330 µF/50V	7A
9V		12A
12V	220 µF/50V	20A
15 & 24V		30A

3 Phase 4 Wire EMC recommended circuit

Full-wave Rectification for 4KV differential mode inrush standard



Half-wave Rectification for 4KV differential mode inrush standard



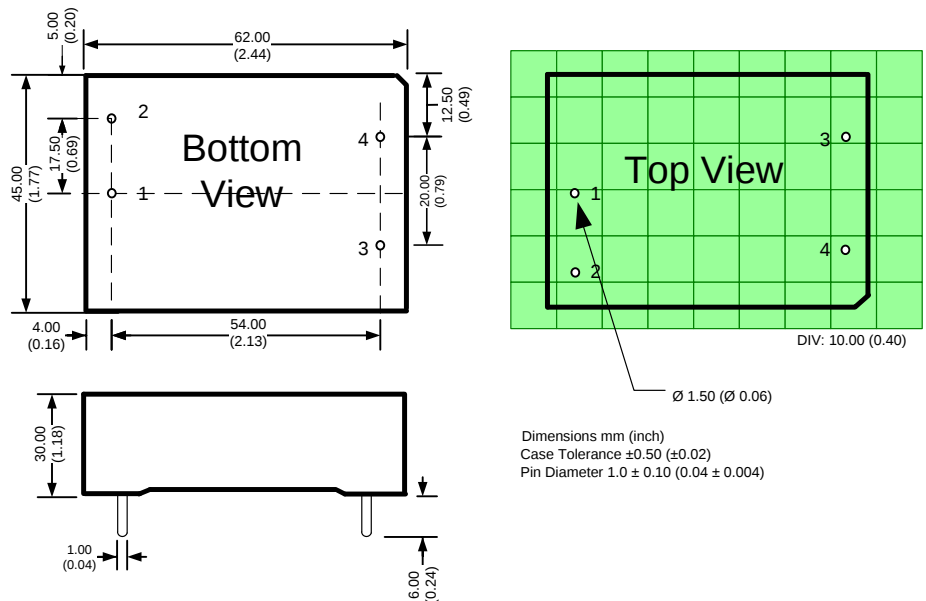
Vout	C2	TVS
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Pin Out Specifications

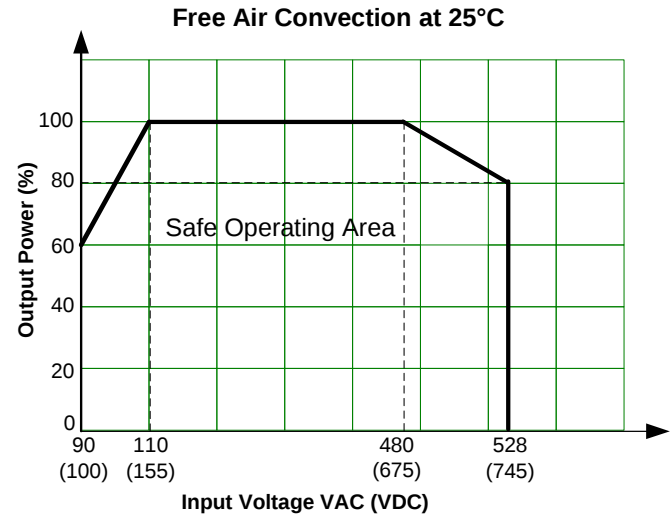
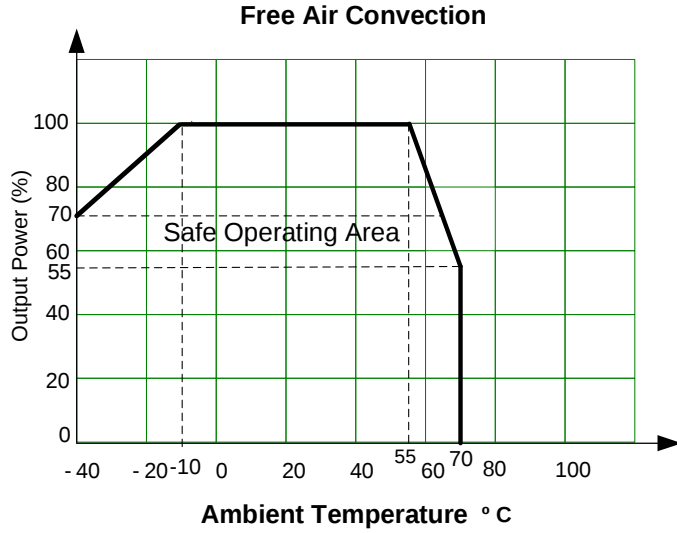
Pin	Single
1*	AC Input (N) or (L1)
2*	AC Input (L) or (L2)
3	- V output
4	+ V output

* 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



Derating



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