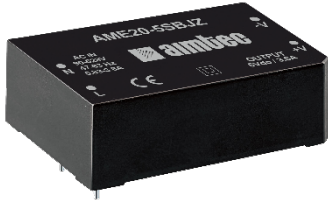


Series AME20-BJZ

20 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 83% 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
AME20-3.3SBJZ	90-528/47-63	100-745	11.88	3.3	3.6	10,000	74
AME20-5SBJZ	90-528/47-63	100-745	18	5	3.6	10,000	78
AME20-9SBJZ	90-528/47-63	100-745	20	9	2.23	7,000	79
AME20-12SBJZ #	90-528/47-63	100-745	20	12	1.66	5,000	82
AME20-15SBJZ	90-528/47-63	100-745	20	15	1.33	3,000	83
AME20-24SBJZ #	90-528/47-63	100-745	20	24	0.833	1,000	83

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		800	mA
	230 VAC		400	mA
Inrush current <2ms (cold start)	115 VAC	35		A
	230 VAC	60		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		160	g
Dimensions (L x W x H)	70.00 x 48.00 x 30.0 mm (2.76 x 1.89 x 1.18 inches)		
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)/ Full Load		

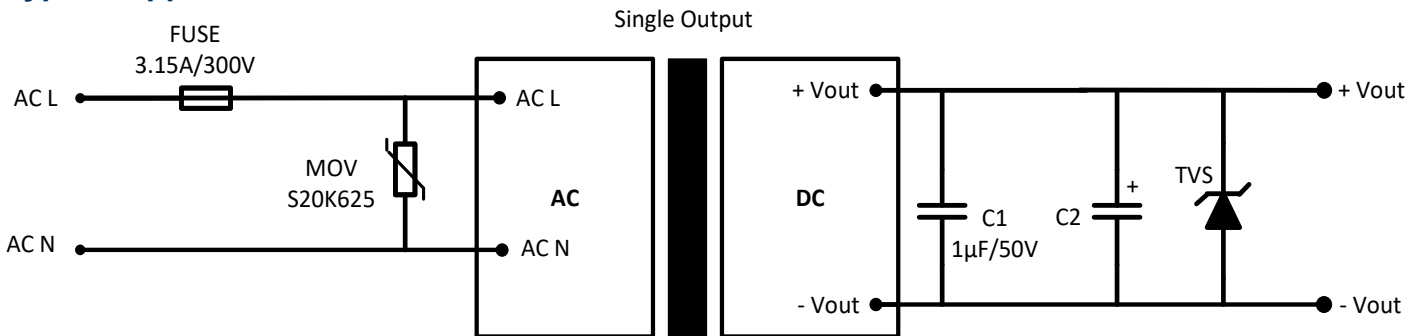
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230VAC) and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Agency approvals	UL 62368-1 (Only for the models marked #)	
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: ±2KV, applying recommended EMC circuit for ±4KV, Criteria B
	Surge Immunity*	IEC 61000-4-5: line to line: ±2KV, applying 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.

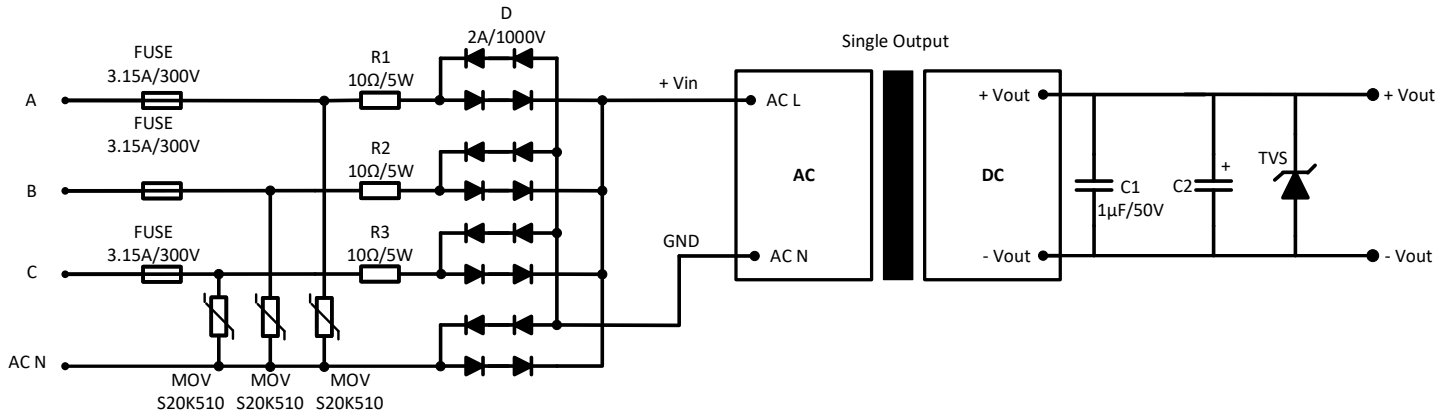
Typical Application circuit



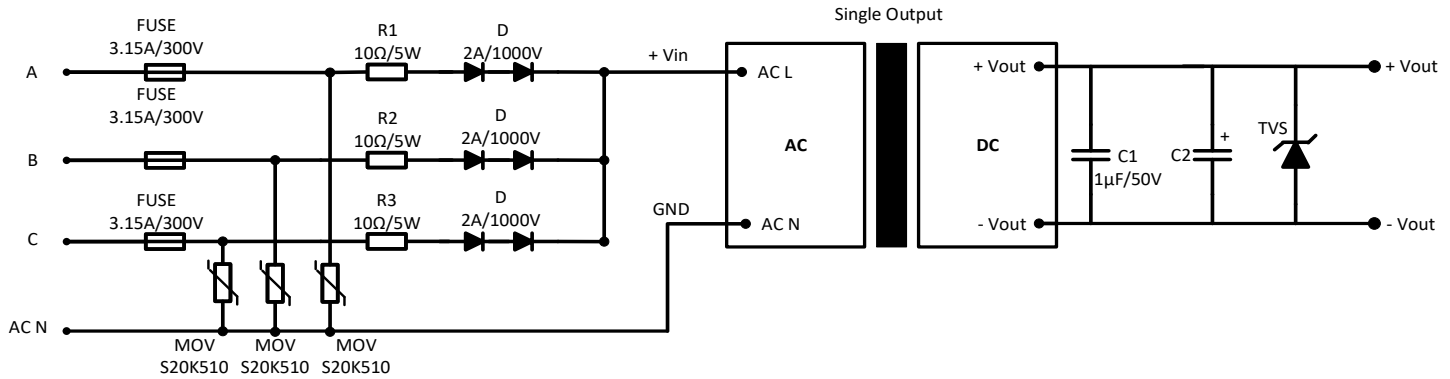
Vout	C2	TVS
3.3 & 5V	330 µF/50V	7A
9V		12A
12V	220 µF/50V	20A
15 & 24V		30A

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



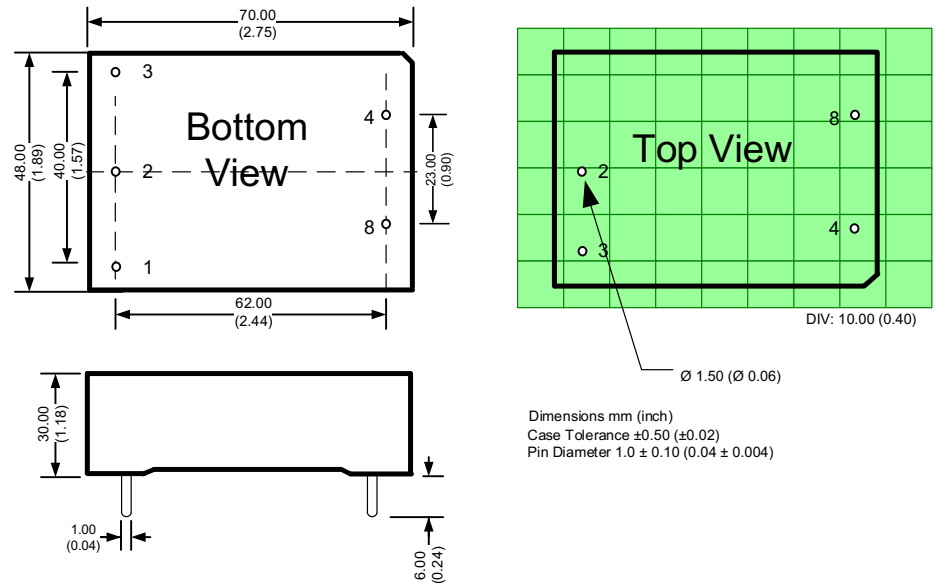
Vout	C2	TVS
3.3 & 5V	330 µF/50V	7A
9V	220 µF/50V	12A
12V		20A
15 & 24V		30A

Pin Out Specifications

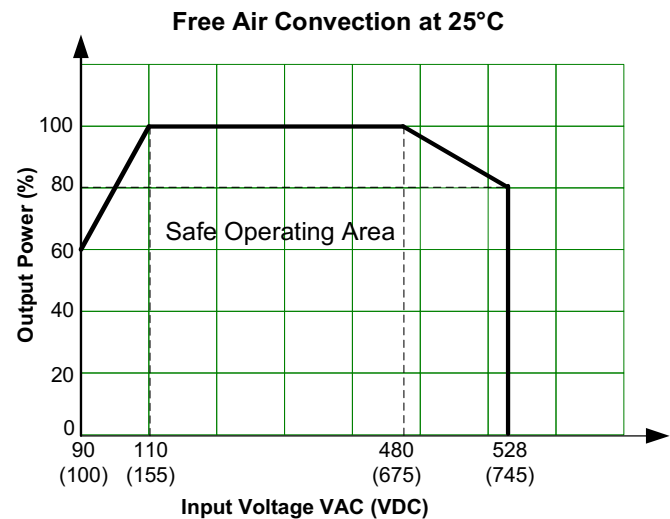
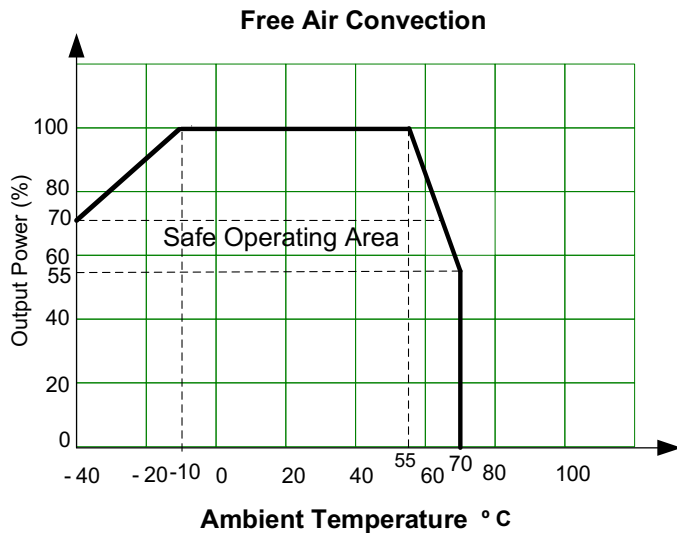
Pin	Single
1	NA (No Pin Present)
2*	AC Input (N) or (L1)
3*	AC Input (L) or (L2)
4	+ V output
5	- V output

* Note: Input Pins 2 and 3 can be "N" and "L" respectively when the input voltage is supplied from a single phase. Input Pins 2 and 3 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



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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.