

Series AME20-VZ

20 Watt | AC-DC / DC-DC Converter

FEATURES:

Picture Coming Soon

- I/O Isolation 4000VAC
- Operating Temp: -40 °C to +85 °C
- Input: 85-264VAC, 47-63Hz, or 120-370VDC
- Over current, Over Voltage Protection
- Continuous Short circuit protection
- Energy Star compliant
- Compact package
- Efficiency up to 84%

Models

Single output



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
AME20-3.3SVZ	85-264/47-63	120-370	3.3	3.5	36000	73
AME20-5SVZ	85-264/47-63	120-370	5	3.1	12240	77
AME20-9SVZ	85-264/47-63	120-370	9	2.1	5600	79
AME20-12SVZ	85-264/47-63	120-370	12	1.6	5000	81
AME20-15SVZ	85-264/47-63	120-370	15	1.3	3000	82
AME20-24SVZ	85-264/47-63	120-370	24	0.85	900	84

Note: Add suffix "-ST" for optional screw terminal bottom plate or "-STD" for optional DIN Rail screw terminal bottom plate.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		600	mA
	230 VAC		340	mA
Inrush current <2ms (cold start)	115 VAC	20		A
	230 VAC	30		A
External fuse	Recommended slow blow type	2		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	3.3VDC output	±3		%
	Other output	±2		
Line regulation	Full load, main output	±0.5		%
Load regulation (single output)	0-100% load	±1		%
Minimum load		0		%
Ripple & Noise *		50	100	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	15		ms
	230VAC, 20MHz bandwidth	80		ms

*Ripple and Noise are measured at 20MHz bandwidth & 230VAC with the recommended Application Circuit.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		4000	VAC
Isolation Resistance		>1000		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Protection class		Class II		
Over current protection		≥110		% of Iout
Over voltage protection		Zener diode clamp		
Short circuit protection		Continuous, Auto recovery		
Operating temperature	See derating curve	-40 to +85		°C
Storage temperature		-40 to +105		°C

General Specifications(Cont.)

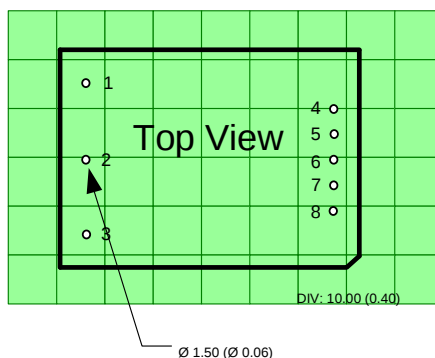
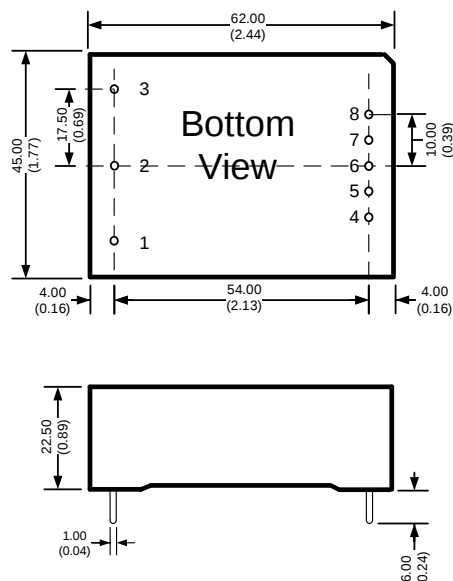
Parameters	Conditions	Typical	Maximum	Units
Maximum Case temperature			100	°C
Temperature coefficient		±0.02		% / °C
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material	Plastic (flammability to UL 94V-0)			
Weight	PCB mountable model:	95		g
	With optional -ST mounting plate:	145		
	With optional -STD mounting plate:	185		
Dimensions (L x W x H)	PCB mountable model:	2.44 x 1.77 x 0.89 inches (62.00 x 45.00 x 22.50mm)		
	With optional -ST mounting plate:	3.78 x 2.13 x 1.22 inches (96.10 x 54.00 x 31.00 mm)		
	With optional -STD mounting plate:	3.78 x 2.13 x 1.40 inches (96.10 x 54.00 x 35.60 mm)		
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 and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Standards	Information technology Equipment	Design to meet IEC/EN/UL 62368
	EMI - Conducted and radiated emission	CISPR32/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, ±4kV with external circuit, Criteria B
	Surge Immunity	IEC 61000-4-5 L to L ±1kV, L to L ±2kV/L to G ±4kV with external circuit, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0%, 70%, Criteria B

Dimensions

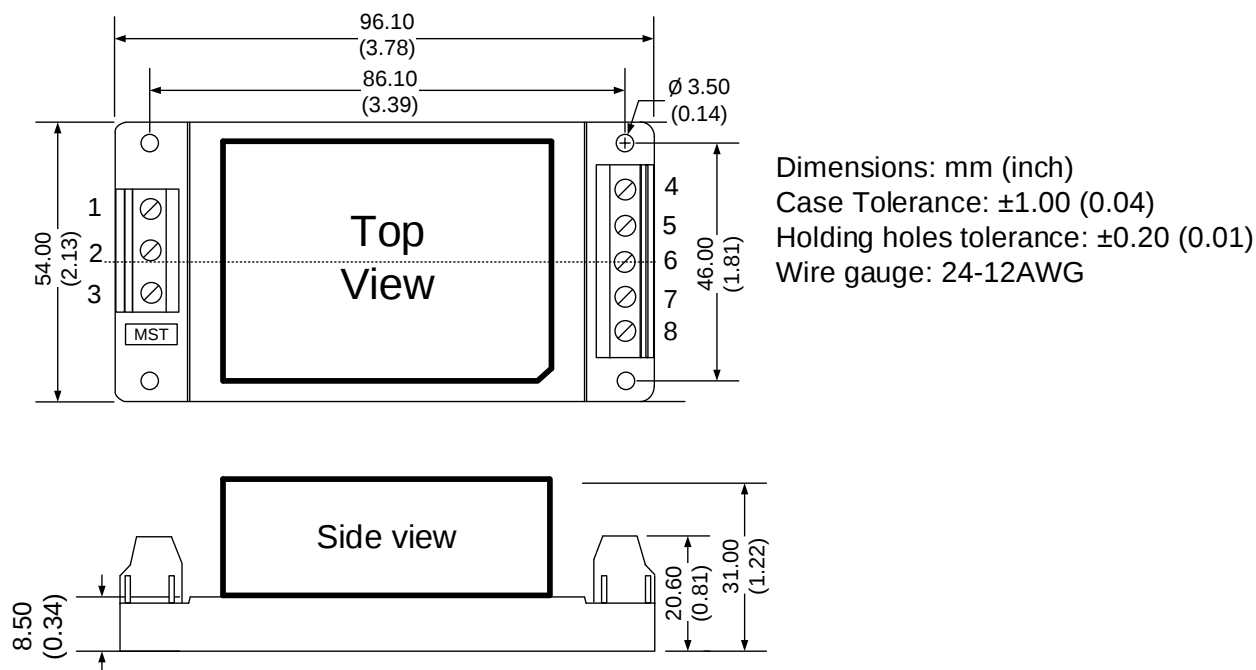


Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

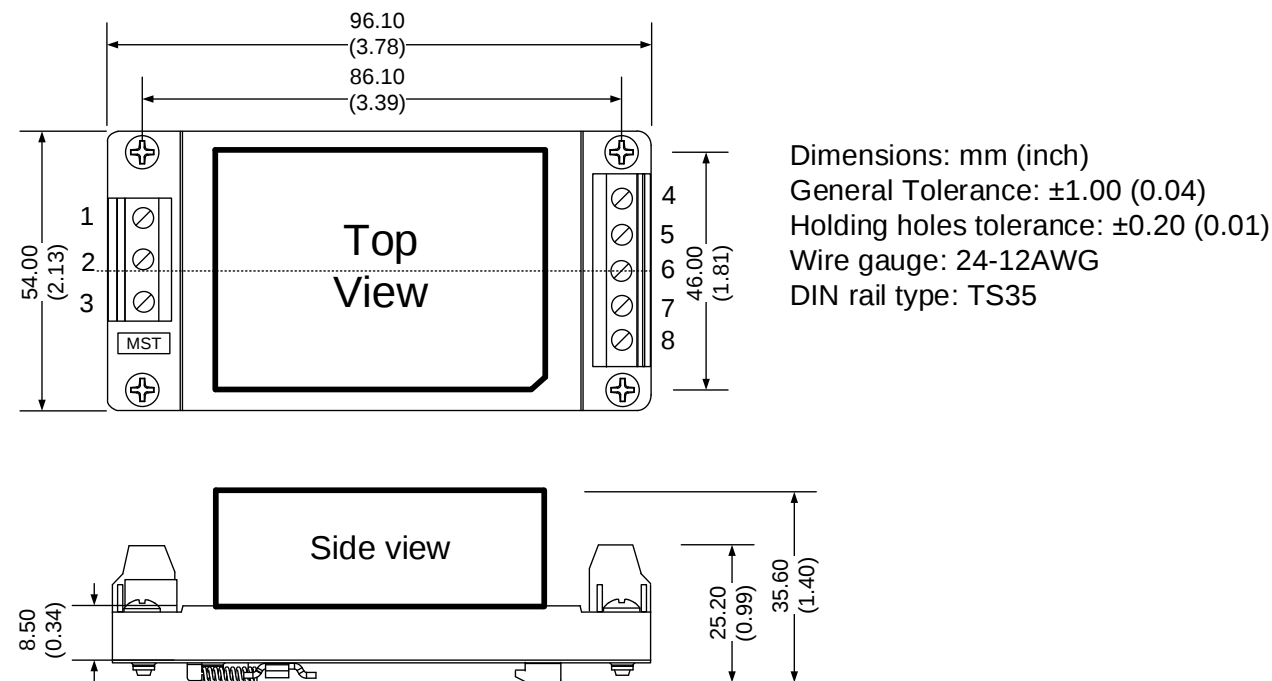
Pin Out Specifications

Pin	Single
1	No pin
2	AC Input (N)
3	AC Input (L)
4	-V Output
5	No pin
6	No pin
7	No pin
8	+V Output

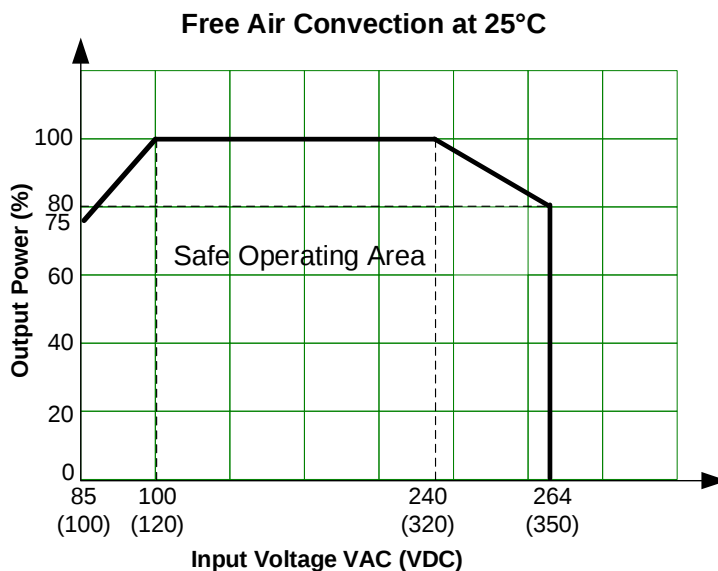
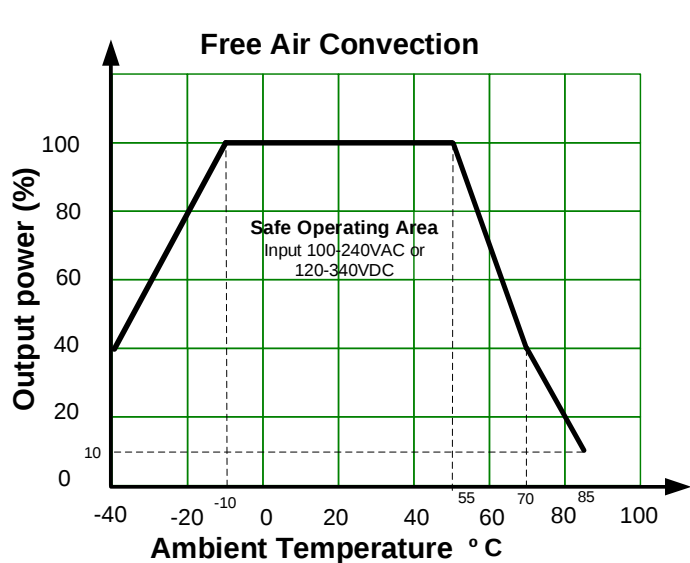
With optional -ST bottom plate



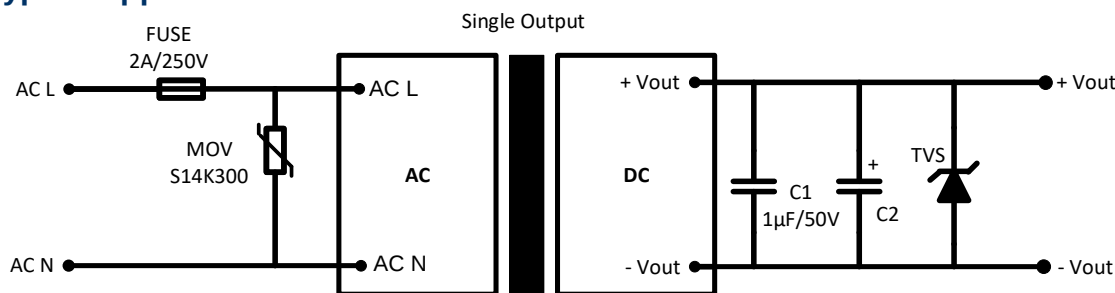
With optional -STD bottom plate



Derating

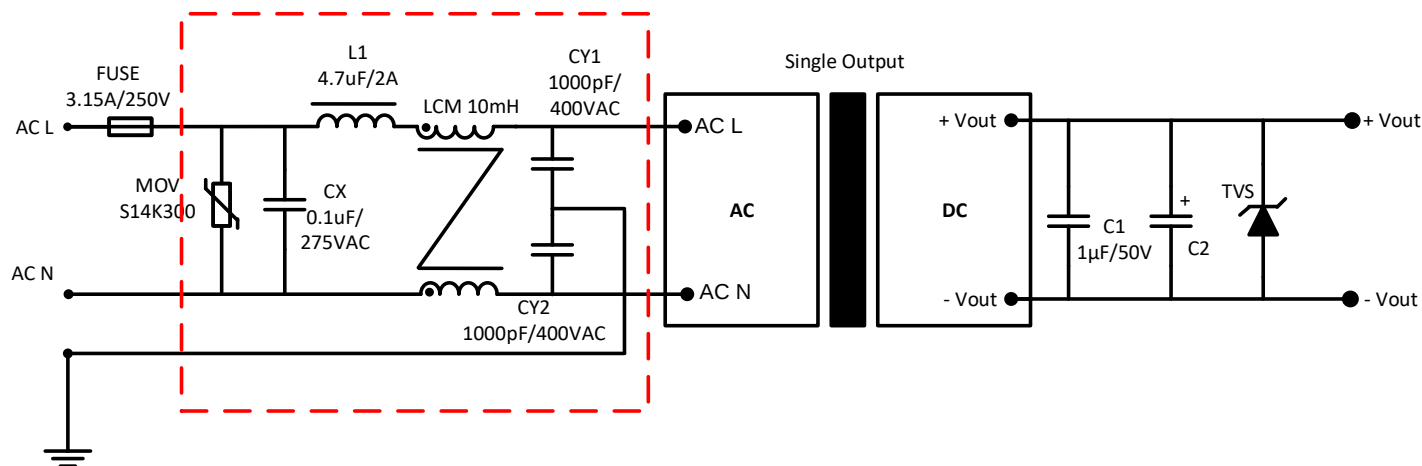


Typical application circuits



EMC recommended circuits

Recommended use AMFE305150-LN22 EMC filter



Model	C2	TVS
3.3 Vout	680 μ F	7V
5 Vout	680 μ F	7V
9 Vout	470 μ F	12V
12 Vout	220 μ F	20V
15 Vout	220 μ F	20V
24 Vout	68 μ F	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 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.