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AME15-VZ

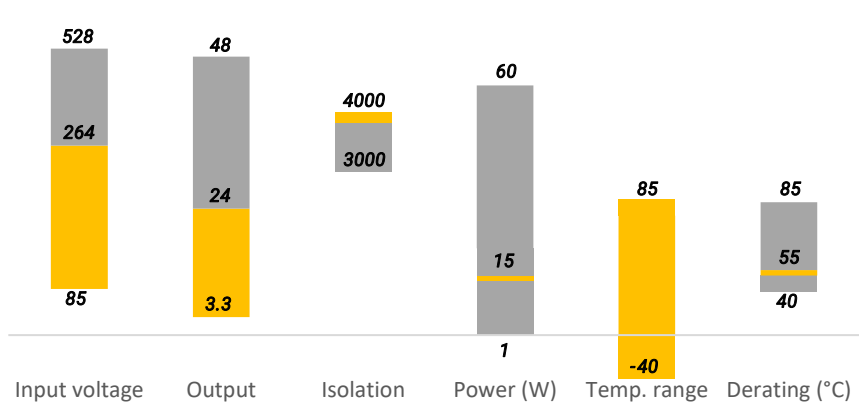
Encapsulated

The new AME15-VZ is a brand-new AC/DC converter that offers much greater cost effectiveness due to material normalization and production automation also leading to improved reliability and performance. Offering a commercial input voltage range of 85-264VAC and an output voltage range from 3.3-24V, this series will offer many benefits to your new system design.
This new series offers great operating temperatures, from -40°C to 85°C with full power up to 55°C. It also features an isolation of 4000VAC for improved reliability and system safety. Furthermore, a higher MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) come standard with the series.
The AME15-VZ is perfect for street lighting controls, grid power, LED, instrumentation, industrial controls, communication and civil applications.

Features

- Universal Input: 85 - 264VAC/120 - 370VDC
- Operating Temp: -40 °C to +85 °C
- High isolation voltage: 4000VAC
- Low ripple & noise, 50mV(p-p), typ.
- Output short circuit, over-current, over-voltage protection
- Efficiency up to 83%

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid | Industrial | Telecom | Instrumentation

Models & Specifications

Single Output						
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (µF)	Efficiency (%)
						230 VAC
AME15-3.3SVZ	85-264/47-63	100-370	3.3	3.0	40000	73
AME15-5SVZ	85-264/47-63	100-370	5	2.8	20000	76
AME15-9SVZ	85-264/47-63	100-370	9	1.6	5800	78
AME15-12SVZ	85-264/47-63	100-370	12	1.25	5200	80
AME15-15SVZ	85-264/47-63	100-370	15	1.0	4500	80
AME15-24SVZ	85-264/47-63	100-370	24	0.625	1000	83

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

Input Specifications					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Current (full load)	115 VAC			370	mA
	230 VAC			220	mA
Inrush current <2ms (cold start)	115 VAC		16		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	10		ms
	230VAC, 20MHz bandwidth	60		ms

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

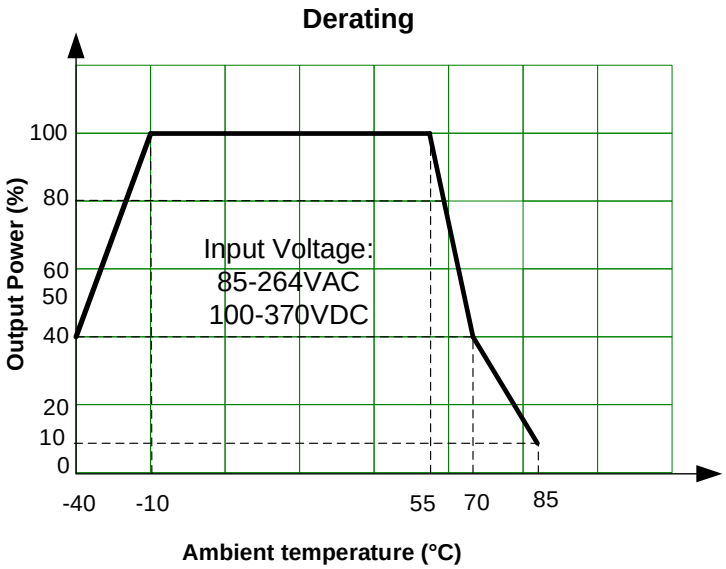
Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		4000	VAC

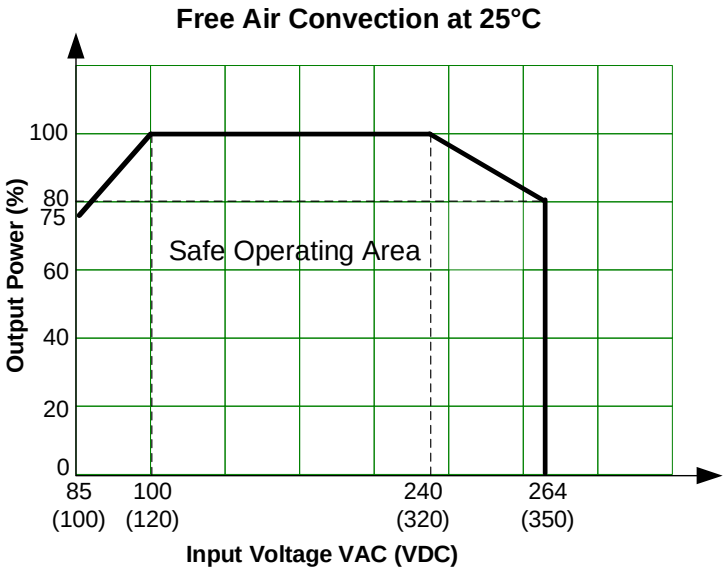
General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Protection class	Class II			
Over current protection		≥150		% of Iout
Over voltage protection	Zener diode clamp	≥110		% of Iout
Short circuit protection	Continuous, Auto recovery			
Operating temperature	See derating curve	-40 to +85		ºC
Storage temperature		-40 to +105		ºC
Maximum Case temperature			100	ºC
Temperature coefficient		±0.02		% / ºC
Cooling	Free air convection			
Humidity	Non-condensing		95	%
Case material	Plastic (flammability to UL 94V-0)		95	% RH
Weight	PCB mountable model: With optional -ST mounting plate: With optional -STD mounting plate:	90 140 180		g
Dimensions (L x W x H)	PCB mountable model: With optional -ST mounting plate: With optional -STD mounting plate:	2.44 x 1.77 x 0.89 inches (62 x 45 x 22.5mm) 3.78 x 2.13 x 1.22 inches (96.1 x 54 x 31 mm) 3.78 x 2.12 x 1.40 inches (96.1 x 54 x 35 mm)		
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25ºC)/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.

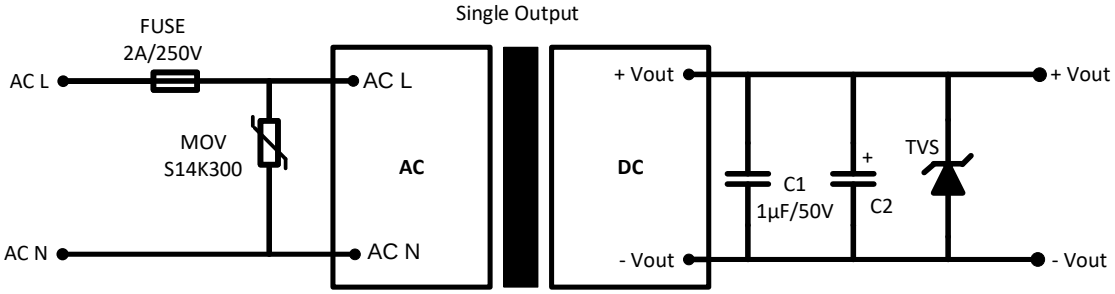
Safety Specifications		
Parameters		
Agency approvals	cULus, CE	
Standards	Information technology Equipment	UL 62368
	EMI - Conducted and radiated emission	CISPR32/EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2, Contact ±6kV/Air ±8kV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 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

Derating

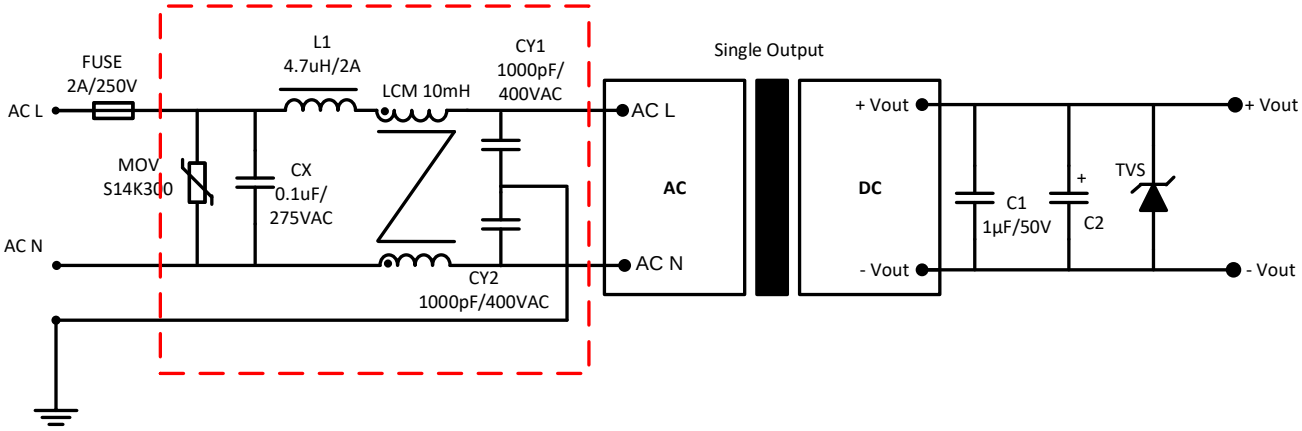




Typical Application Circuit

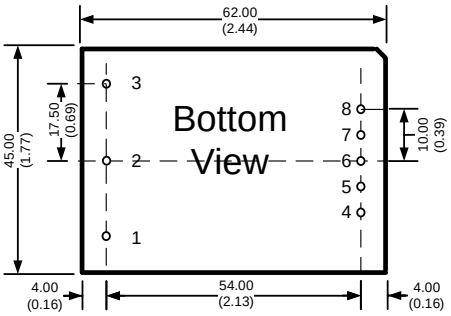


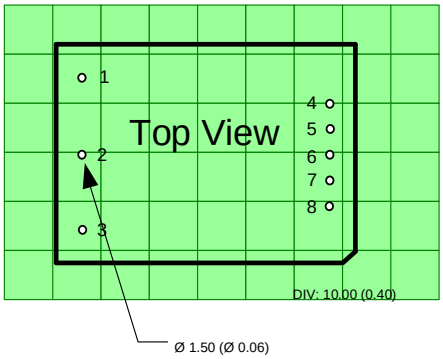
EMC Recommended Circuit

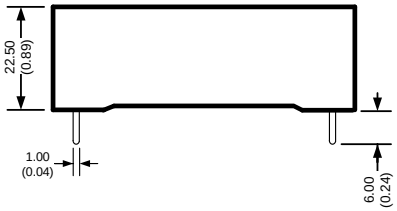


Model	C2	TVS
3.3 Vout	680 µF	7V
5 Vout	680 µF	7V
9 Vout	470 µF	12V
12 Vout	220 µF	20V
15 Vout	220 µF	20V
24 Vout	68 µF	30V

Dimensions



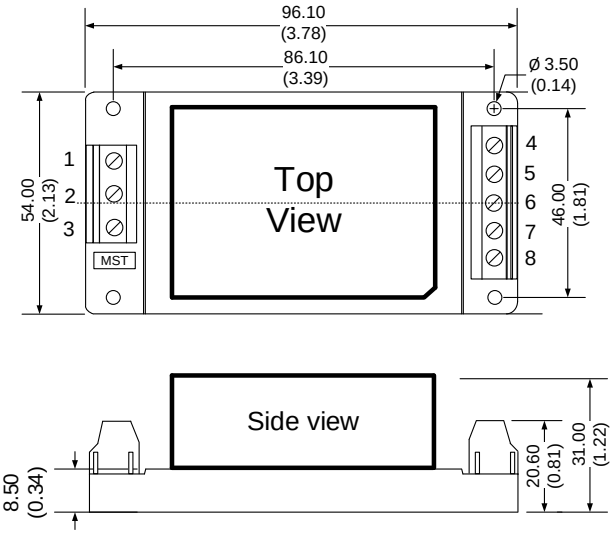




Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

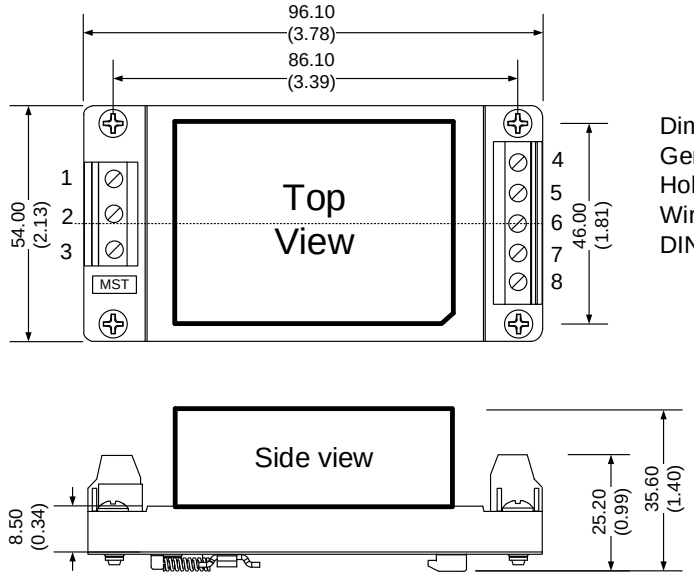
Pin Out Specifications	
Pin	Single
1	No pin
2	AC Input (N)
3	AC Input (L)
4	-V Output
5	No pin
6	No pin
7	No pin
8	+V Output

With optional -ST bottom plate



Dimensions: mm (inch)
Case Tolerance: ±1.00 (0.04)
Holding holes tolerance: ±0.20 (0.01)
Wire gauge: 24-12AWG

With optional -STD bottom plate



Dimensions: mm (inch)
General Tolerance: ±1.00 (0.04)
Holding holes tolerance: ±0.20 (0.01)
Wire gauge: 24-12AWG
DIN rail type: TS35

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