AME5-VZ

Click to ORDER samples



Encapsulated

The new AME5-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 AME5-VZ is perfect for street lighting controls, grid power, LED, instrumentation, industrial controls, communication and civil applications.

Features

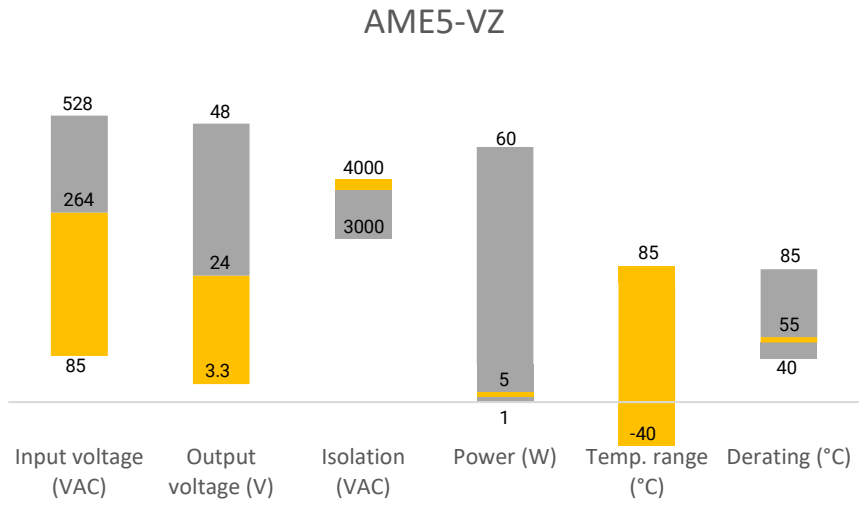
- Universal Input: 85 - 264VAC/100 - 370VDC
- Operating Temp: -40 °C to +85 °C
- High isolation voltage: 4000VAC
- Output short circuit, over-current, over-voltage protection
- EMI performance meets CISPR32/EN55032 CLASS B Meets IEC62368, UL62368, EN62368 standards

c UL us

RoHS

3yr Warranty

Summary



Training



Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

IoT

Industrial

Telecom

Portable Equipment

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
AME5-3.3SVZ	85-264/47-63	100-370	3.3	1.25	8100	70
AME5-5SVZ	85-264/47-63	100-370	5	1	6800	75
AME5-9SVZ	85-264/47-63	100-370	9	0.55	1200	77
AME5-12SVZ	85-264/47-63	100-370	12	0.42	1000	79
AME5-15SVZ	85-264/47-63	100-370	15	0.330	680	80
AME5-24SVZ	85-264/47-63	100-370	24	0.23	270	82

Input Specifications					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Current (full load)	115 VAC			125	mA
	230 VAC			80	mA
Inrush current <2ms (cold start)	115 VAC		10		A
	230 VAC		20		A
External fuse	Recommended slow blow type		1		A
Leakage Current	230VAC/50Hz			0.3	mA
Input Voltage	VAC	85		264	V
	VDC	100		370	V

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full Load	±0.5		%
Load regulation	0%-100% load	±1		%
Ripple & Noise*		50	150	mV p-p
Hold-up time (minimum)	115VAC,20MHz Bandwidth 230VAC,20MHz Bandwidth	15 80		ms

*Ripple and Noise are measured at 20MHz bandwidth by using the referenced Application circuit.

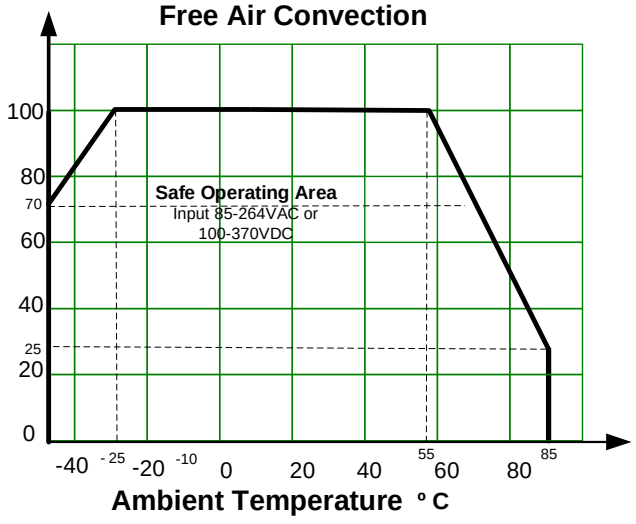
Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec	4000		VAC
Isolation Resistance		>1000		MΩ

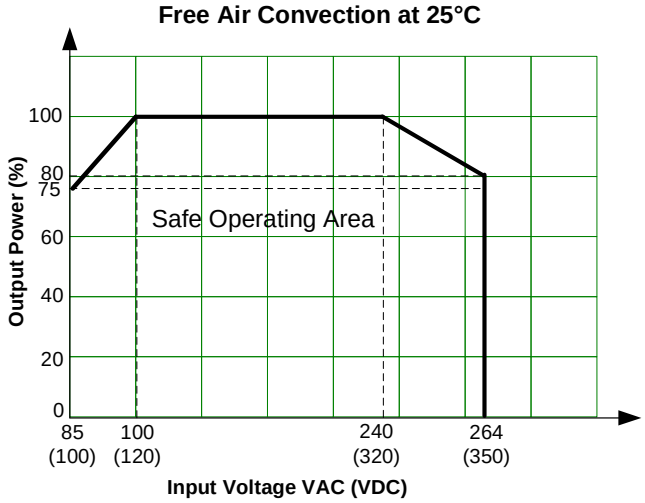
General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Protection class	Class I			
Over Current protection	Auto recovery	150-300		% of Iout
Over voltage protection	Zener diode clamp			
Short circuit protection	Continuous, hiccup, Auto recovery			
Operating temperature	See derating curve	-40 to 85°C	°C	
Storage temperature		-40 to +105	°C	
Temperature coefficient		±0.02		% /°C
Cooling	Free air convection			
Case material	Plastic (flammability to UL 94V-0)			
Weight		55		g
Dimensions (L x W x H)		1.909 x 1.417 x 0.807 inches (48.50 x 36.00 x 20.50mm)		
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.

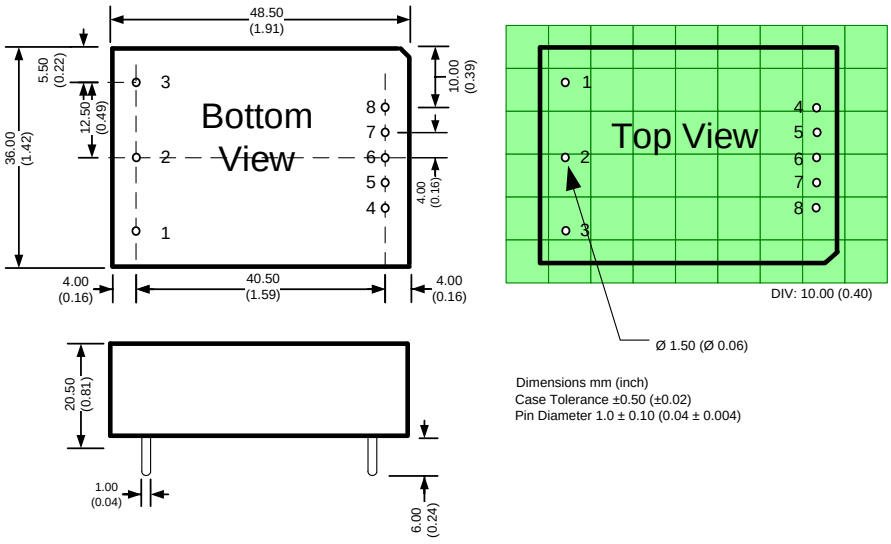
Safety Specifications		
Parameters		
Agency approvals	cULus	
Standards	Information technology Equipment	IEC/UL/EN 62368
	EMI - Conducted and radiated emission	EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2, Contact: ±6KV/Air: ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3, 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4, ±2KV, Criteria B
		IEC 61000-4-4, ±4KV, Criteria B with EMC recommended circuit
	Surge Immunity	IEC 61000-4-5, ±1KV Criteria B
		IEC 61000-4-5, ±2KV, Criteria B with EMC recommended circuit
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 10Vrms, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11, 0-70%, Criteria B

Derating





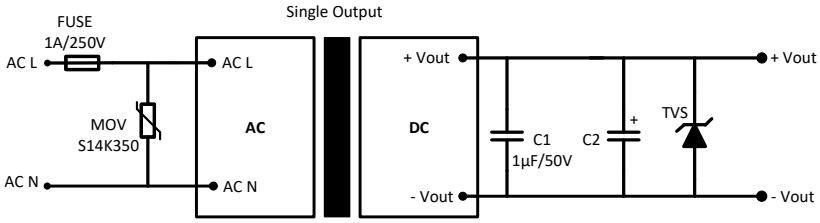
Dimensions



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

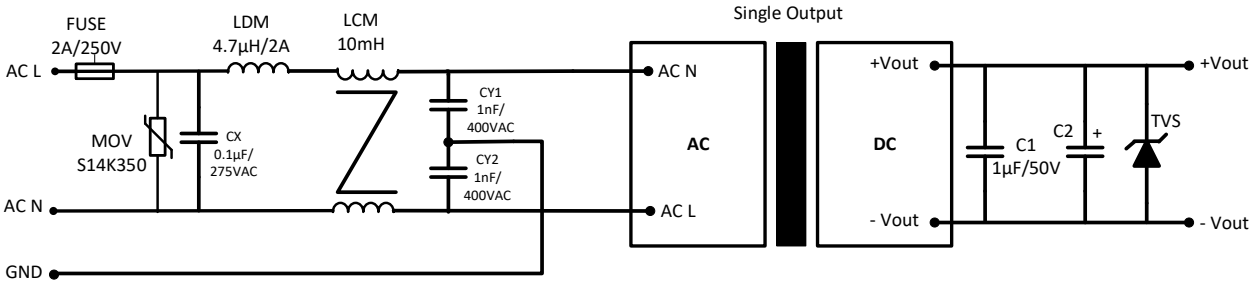
Pin Output Specifications	
Pin	Single
1	Ground
2	AC Input (N)
3	AC Input (L)
4	-V Output
5	No pin
6	No pin
7	No pin
8	+V Output

Typical Application Circuit



Model	C2	TVS
3.3 & 5 Vout	330 µF / 35V	7V
9 Vout	120 µF / 35V	12V
12 Vout	120 µF / 35V	20V
15 Vout	68 µF / 35V	20V
24 Vout	68 µF / 35V	30V

EMC Recommended Circuit



Model	C2	TVS
3.3 & 5 Vout	330 µF / 35V	7V
9 Vout	120 µF / 35V	12V
12 Vout	120 µF / 35V	20V
15 Vout	68 µF / 35V	20V
24 Vout	68 µF / 35V	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.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Aimtec:

AMEPR15D-3650AZ-220D AM1D-1212SH52Z AM1D-0515DH40Z AM1D-0515DH30Z AM1DR-0507SH30Z AM6T-2415SZ AMEL30-3S277HAVZ-B AMER150-50300CAZ-NAF AM1S-2407SH30Z AM1D-1524DH52Z AM1D-2424DH30Z AM1D-2409SH60Z AM1S-2412SH30Z AM6T-4805SZ AMEL30-12S277HAVZ-B AMES150-24S277NZ AM1D-0518DZ AM1D-2412DZ AM1D-0515DZ AM3T-1205SZ AM1S-0503SH30Z AM2D-2403DZ AMEOC40-15SMAZ AM1DS-0505SJZ AMESP200-24S277NZ AM1PS-0505SH30Z AM3A-1203SZ AM1D-2412SH52Z AM2D-0507DH30Z AM2D-0505SH52Z