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AME3-HAVZ



Encapsulated

Aimtec launches the AME3-HAVZ, a new AC-DC converter Series, which is targeted at smart home and IoT applications. The new AME3-HAVZ series features a compact size, high efficiency and reliability. It is Aimtec's first converter to be designed to meet EN/UL60335, which is required for home appliances.

This series follows our new cost-effective product family and offers multiple safety features such as output short circuit, over current, over voltage protection. It also comes standard with a high 4000VAC isolation for optimal performance.

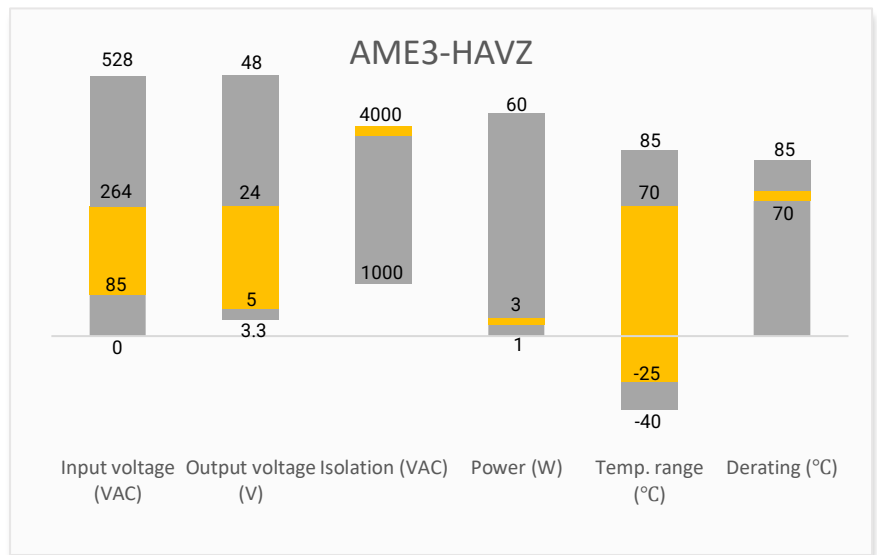
This series is intended for use in industrial electronics devices, test equipment, smart home devices such as kitchen appliances and consumer electronics applications.

Features



- Universal Input: 85 - 264VAC/120 - 370VDC
- Standby power consumption as low as 0.2W
- High isolation voltage up to 4000VAC
- Output short circuit, over current, over voltage protection
- EN/UL62368, EN/UL60335, EN/UL60950
- EMI performance meets CISPR32/EN55032 CLASS B (with internal filter)

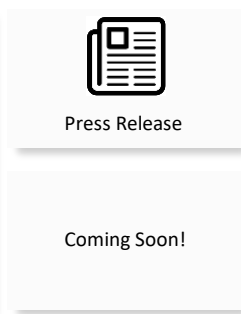
Summary



Training



Product Training Video  
(click to open)



Application Notes

Applications



Industrial



Automation



Test Equipment

## Models & Specifications

Single Output							
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load ( $\mu$ F)	Efficiency @ 230VAC (%)
AME3-05SHAVZ	85~264/47~63	120~373	3.0	5	0.6	470	72
AME3-12SHAVZ	85~264/47~63	120~373	3.0	12	0.25	330	74
AME3-24SHAVZ	85~264/47~63	120~373	3.0	24	0.125	220	75

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input Current	115VAC		150	mA
	230VAC		75	
Inrush current	115VAC	15		A
	230VAC	30		
Leakage Current	240VAC / 50Hz	0.25		mA(RMS)

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load	$\pm 2$		%
Line regulation	Full load	$\pm 0.3$		%
Load regulation	0-100% load	$\pm 0.5$		%
Ripple & Noise*	20MHz bandwidth	5V	100	mV p-p
		12V	150	
		24V	240	
Hold up time	115VAC		5	ms
	230VAC		10	

\* Ripple and Noise are measured at 20MHz bandwidth by using a 0.1 $\mu$ F (M/C) and 47 $\mu$ F (E/C) parallel capacitor.

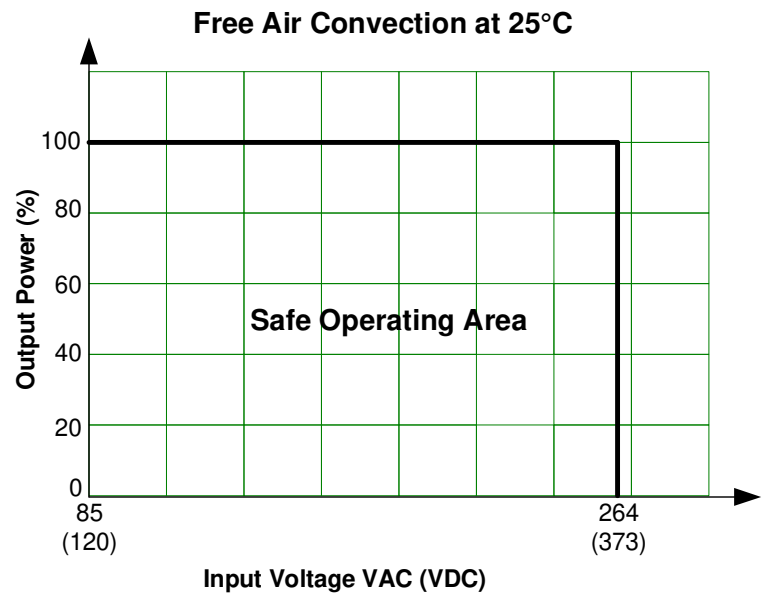
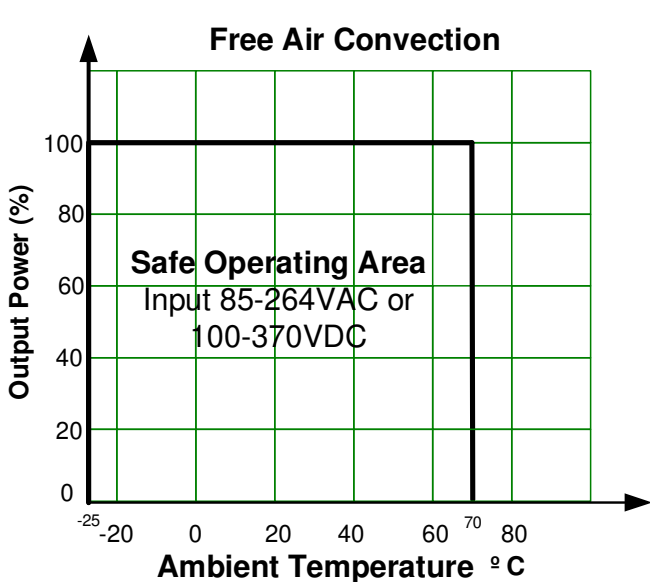
Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		4000	VAC

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Safety class	Class II			
Over Current protection	Auto recovery	$\geq 110$		% of Iout
Over voltage protection	5V Vout		$\leq 9$	VDC
	12V Vout		$\leq 20$	
	24V Vout		$\leq 35$	
Short circuit protection	Hiccup, Continuous			
Short circuit restart	Auto recovery			
Switching Frequency		100		KHz
Operating temperature	-25 to +70			$^{\circ}$ C

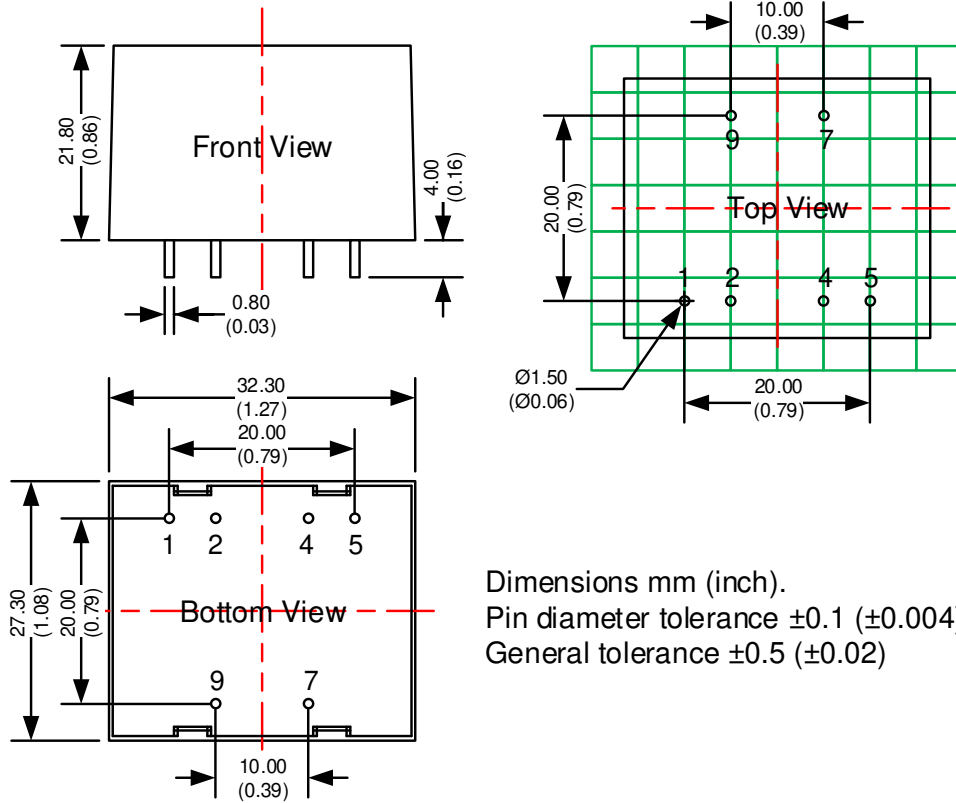
Storage temperature	-40 to +85		°C
Power consumption		0.2	W
Welding temperature	Wave-soldering	260 ± 5 °C ; 5 ~ 10 sec	
	Manual-welding	360 ± 10 °C ; 3 ~ 5 sec	
Temperature coefficient		±0.03	% / °C
Cooling	Free air convection		
Storage Humidity		90	% RH
Case material	Heat resistant black Plastic (flammability to UL 94V-0)		
Weight		26	g
Dimensions (L x W x H)	PCB mountable models	1.27 x 1.07 x 0.86 inches (32.30 x 27.30 x 21.80mm)	
MTBF	> 300 000 hrs (MIL-HDBK -217F, t <sub>a</sub> =+25°C)/Full Load		
<b>NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity&lt;75%, nominal input voltage and at rated output load unless otherwise specified.</b>			

Safety Specifications		
Parameters		
Agency approvals	CE	
Standards	Design to meet EN60335 / EN62368	
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria B
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria B
	Surge Immunity	IEC 61000-4-5 L-L ±1KV, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria B
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0%, 70%, Criteria B

## Derating

Dimensions



Pin Output Specifications	
Pin	Function
1	-V Input (N)
2	No Pin
4	No Pin
5	+V Input (L)
7	+V Output
9	-V Output

Dimensions mm (inch).  
Pin diameter tolerance  $\pm 0.1$  ( $\pm 0.004$ )  
General tolerance  $\pm 0.5$  ( $\pm 0.02$ )

**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](http://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](http://www.aimtec.com).