aimtec
Your Power Partner

Series AME15-MAZ

15 Watt | AC-DC / DC-DC Converter



FEATURES:

- 4000VAC I/O Isolation
- Operating temperature: -40 to +85°C
- Over load, Over Voltage, Short Circuit Protection
- Universal input: 90-264VAC, 47-440Hz
- RoHS compliant
- Soft start
- Energy Star compliant
- CE, cULus, CB approvals

RoHS CE cULus E309075 CB

Models
Single output

Model	Input Voltage (VAC/Hz)	Input voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (µF)	Efficiency (%)	
						115 VAC	230 VAC
AME15-3.3SMAZ	90-264/47-440	130-370	3.3	3	4700	73	73
AME15-5SMAZ	90-264/47-440	130-370	5	3	2200	76	78
AME15-12SMAZ	90-264/47-440	130-370	12	1.25	1000	78	79
AME15-15SMAZ	90-264/47-440	130-370	15	1	680	79	82
AME15-24SMAZ	90-264/47-440	130-370	24	0.63	470	82	84

Models
Dual output

Model	Input Voltage (VAC/Hz)	Input voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum Capacitive Load (µF)	Efficiency (%)	
						115 VAC	230 VAC
AME15-5DMAZ	90-264/47-440	130-370	±5	±1.5	±1000	78	79
AME15-12DMAZ	90-264/47-440	130-370	±12	±0.63	±470	81	82
AME15-15DMAZ	90-264/47-440	130-370	±15	±0.5	±330	82	83

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current	115 VAC		350	mA
	230 VAC		180	mA
Inrush current <2ms (Cold Start)	115 VAC		20	A
	230 VAC		30	A
Leakage current	115 VAC		0.1	mA
	264 VAC		0.2	mA
External Fuse (recommend)	slow blow type	2		A
Input Dissipation	110/230Vac	≤ 0.4		W
Under Voltage Protection		85		VAC
Start-up time			1300	ms

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	LL-HL	±1		%
Load regulation (single)	0-100%	±1		%
Cross regulation (dual)**	25% load - 1st out, 100% load – 2nd out	±5		%
Transient Recovery Time		300		µs
Transient Response Deviation	25% load step	±2		% of Vout
Ripple & Noise*	3.3 / 5V Models 12 / 15V Models 24V	75 100 150		mVp-p
Hold-up time	min	20		ms

* Ripple and Noise are measured at 20MHz bandwidth by using a 0.1µF (M/C) and 47µF (E/C) parallel capacitor
** The load of each output should be limited to the maximum rated current of each output.

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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
Switching frequency		132		KHz
Protection class		Class II		
Over load protection	Fold Back	130		%
Over voltage protection		Zener diode clamp		
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Operating temperature	With derating over 55 °C	-40 to +85		°C
Storage temperature		-40 to +100		°C
Max Case temperature			100	°C
Temperature coefficient		±0.02		% / °C
Cooling		Free air convection		
Humidity			95	% RH
Weight		100		g
Dimensions (L x W x H)		2.57 x 1.84 x 0.80 inches 65.4 x 46.8 x 20.4 mm , ±0.2mm		
MTBF		> 400,000hrs (MIL-HDBK -217F, t=+25°C) > 100,000hrs (MIL-HDBK -217F, t=at highest operating temperature)		
Case material		Plastic (flammability to UL 94V-0)		

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.

Environment Approval

Parameters	Conditions
Shock	Wave form: Half sine wave
	Acceleration amplitude: 5gn
	Bump duration: 30 ms
	Number of bumps: 18 (3 in each direction for every axis)
	Converter operation before and after test, body mounted (on chassis)
Vibrations	Test mode: Sweep sine
	10-100Hz, speed 0.05Hz/s
	Displacement: 1mm
	Acceleration: 3g
	3 loops 30min one cycle, 3h total, every axis tested
	Converter operation before and after test, body mounted (on chassis)

Safety & EMC Specifications

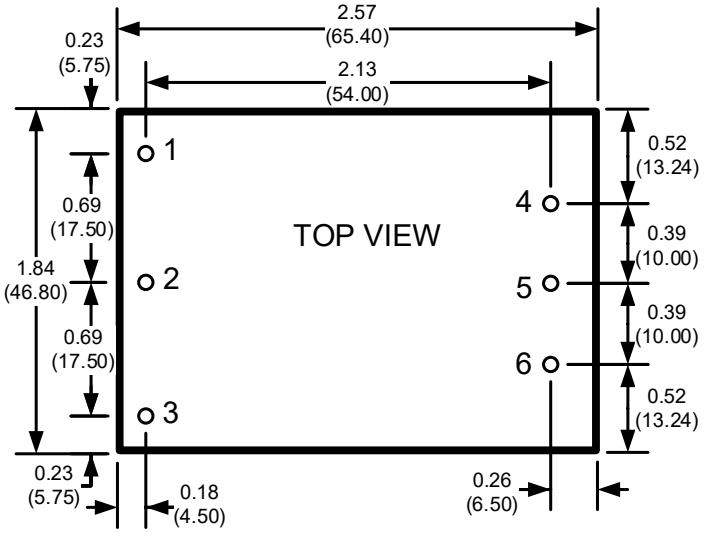
Parameters		
Agency approvals	cULus, CE, CB	
Standards	Medical Electrical Equipment	IEC\EN\UL 60601-1, 2 x MOOP,CSA-C22.2 No. 601.1-M90
	Information technology Equipment	EN 60950-1:2006+A11:2009
	EMI - Conducted and radiated emission	EN55011, class B
	Harmonic Current Emissions	IEC/EN 61000-3-2, Class A
	Voltage fluctuations and flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity	IEC 61000-4-2 Level 3
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 Level 2
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 Level 3
	Surge Immunity	IEC 61000-4-5 Level 3
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 Level 2
	Power frequency Magnetic Field Immunity	IEC 61000-4-8 Level 2
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11

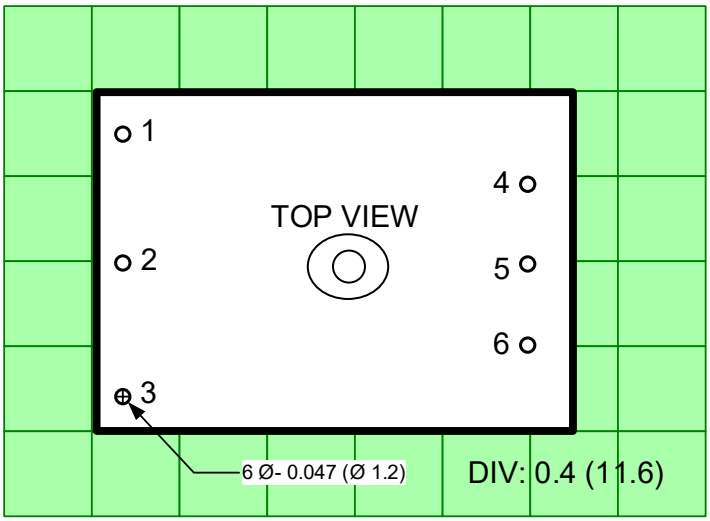
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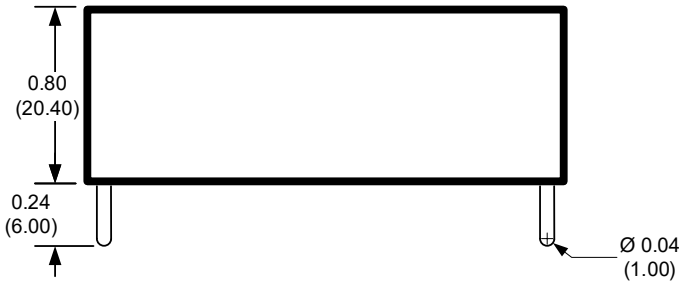
Pin Out Specifications

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

Dimensions (Top View)





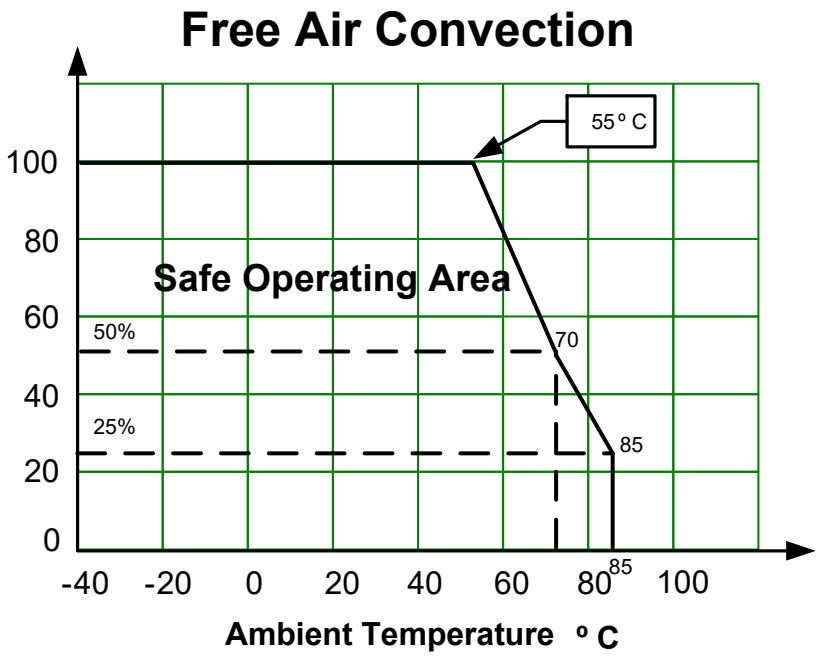


Dimensions: inch (mm)
Case Tolerance:± 0.008 (0.20)
Pin Pitch Tolerance: ± 0.02 (0.50)

 - Case temperature Measurement

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Derating



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