

Series AME15-MJZ

15 Watt | AC-DC / DC-DC Converter



FEATURES:

- Isolation 4000VAC
- Operating Temp: -40 °C to +70 °C
- Input: 85-264VAC, 47-440Hz, or 100-370VDC
- Leakage current <100µF
- 2xMOPP compliance
- No load consumption <0.1W
- 5000m altitude compliance
- Efficiency up to 86%

Models Single output



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (µF)	Efficiency 230VAC (%)
AME15-5SMJZ	85-264/47-440	120-370	5	2.8	8000	78
AME15-12SMJZ	85-264/47-440	120-370	12	1.25	4000	83
AME15-15SMJZ	85-264/47-440	120-370	15	1	3000	83
AME15-18SMJZ	85-264/47-440	120-370	18	0.833	2000	84
AME15-24SMJZ	85-264/47-440	120-370	24	0.625	800	86

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.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		370	mA
	230 VAC		220	mA
Inrush current <2ms (cold start)	115 VAC	10		A
	230 VAC	20		A
Leakage current	264VAC/60Hz		0.1	mA
External fuse	Recommended slow fusing	2		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load	±0.5		%
Load regulation	0-100% load	±1		%
Ripple and Noise	20 MHz bandwidth	50	100	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	15		ms
	230VAC, 20MHz bandwidth	80		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, ≤5mA		4000	VAC
Isolation Resistance		>1000		MΩ

General Specifications

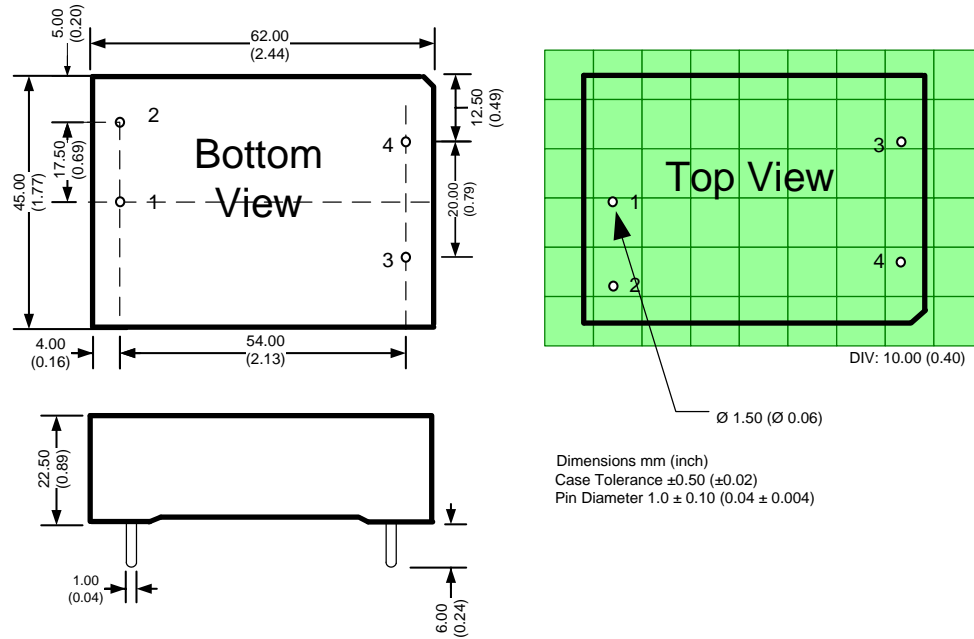
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		KHz
Protection class		Class II		
Over current protection		≥110		% of Iout
Over voltage protection		Zener diode clamp		
Short circuit protection		Continuous, Auto recovery		
Operating temperature	See derating curve	-40 to +70		°C
Storage temperature		-40 to +85		°C
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	85		g
Dimensions (L x W x H)	2.44 x 1.77 x 0.89 inches	62.0 x 45.0 x 22.50 mm	
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25°C)/Full Load		

Safety Specifications

Parameters		
Approvals	CE, cULus	
Standards	Medical Devices and Equipment	IEC/EN/UL 60601-1, 2xMOPP
	EMI - Conducted and radiated emission	EN55022, 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
	Surge Immunity	IEC 61000-4-5, ±1KV, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 10Vrms, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11, 0-70%, Criteria B

Dimensions

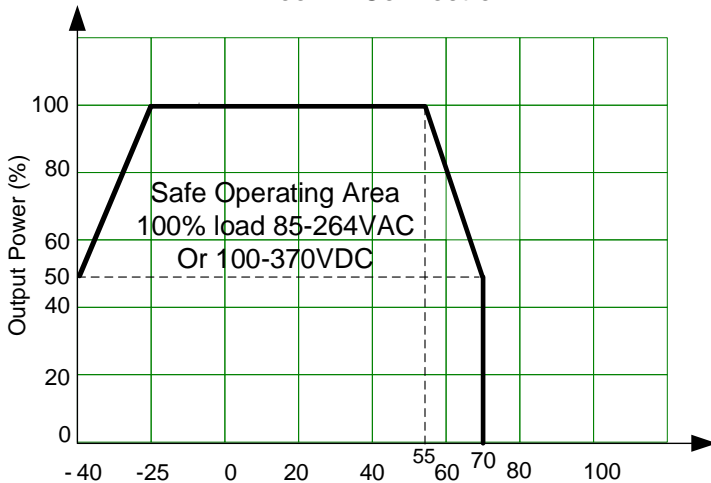


Pin Out Specifications

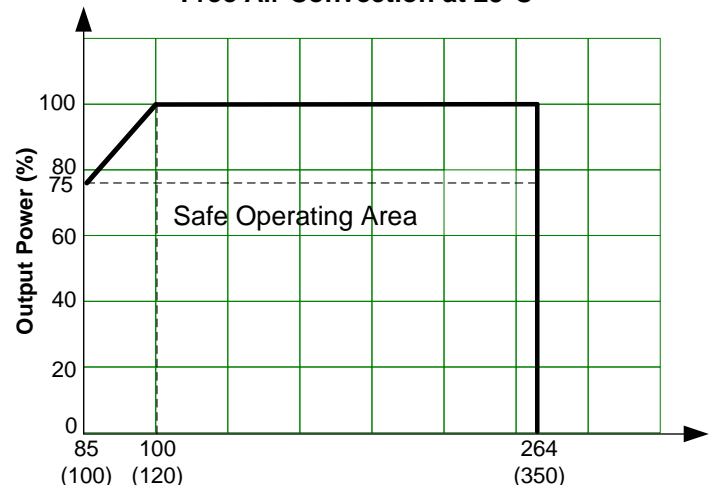
Pin	Single
1	AC Input (N)
2	AC Input (L)
3	-V Output
4	+V Output

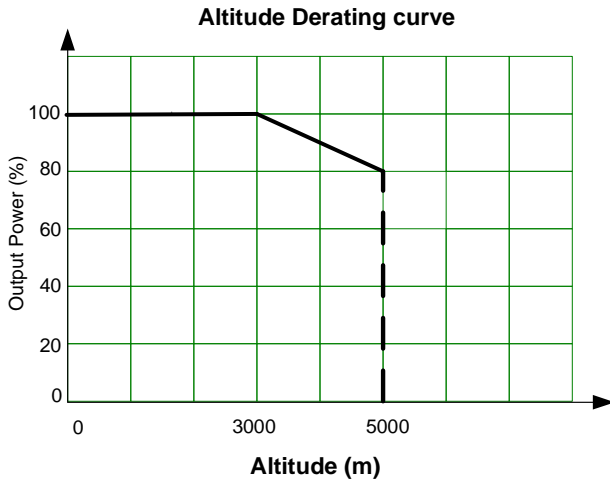
Derating

Free Air Convection

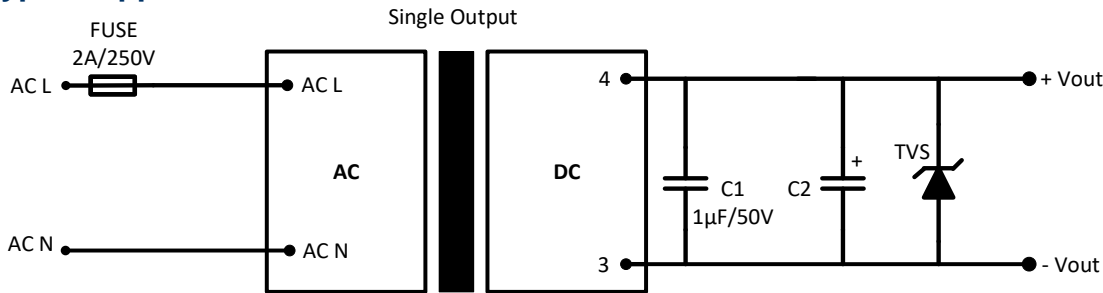


Free Air Convection at 25°C





Typical application circuits



Model	C2	TVS
5 Vout	680 µF / 16V	7V
12 Vout	470 µF / 16V	20V
15 Vout	220 µF / 35V	
18 Vout	68 µF / 35V	30V
24 Vout	68 µF / 35V	

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.