



### FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -40°C to +80°C
- Input: 90-305VAC, 47-440Hz, or 130-430 VDC
- Optional 90-528VAC, 47-440Hz, or 130-745 VDC
- Over load, Short Circuit Protection
- RoHS compliant
- Energy Star compliant
- Ultra small package



### Models Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Temperature range (°C)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive Load (µF)	Efficiency (%)			
							115 VAC	230 VAC	277 VAC	480 VAC
AME1-3.3SAZ	90-305/47-440	130-430	-40 to +80	3.3	300	2200	62	59	58	/
AME1-5SAZ	90-305/47-440	130-430	-40 to +80	5	200	1100	58	57	56	/
AME1-12SAZ	90-305/47-440	130-430	-40 to +80	12	83	680	73	68	65	/
AME1-15SAZ	90-305/47-440	130-430	-40 to +80	15	67	560	77	68	70	/
AME1-24SAZ	90-305/47-440	130-430	-40 to +80	24	42	470	79	79	77	/
AME1-3.3SBAZ	90-528/47-440	130-745	-40 to +80	3.3	300	2200	51	51	50	44
AME1-5SBAZ	90-528/47-440	130-745	-40 to +80	5	200	1100	57	57	56	50
AME1-12SBAZ	90-528/47-440	130-745	-40 to +80	12	83	680	62	62	60	51
AME1-15SBAZ	90-528/47-440	130-745	-40 to +80	15	67	560	61	59	58	50
AME1-24SBAZ	90-528/47-440	130-745	-40 to +80	24	42	470	58	58	56	48

### Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		25	mA
	230 VAC		20	mA
	277 VAC		15	mA
	480VAC		5	mA
Inrush current <2ms (cold start)	115 VAC		10	A
	230 VAC		15	A
	277 VAC		20	A
	480 VAC		30	A
Leakage current			0.15	mA
External fuse	Recommended slow blow type	1		A
Input Dissipation (No Load)		≤0.5		W

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load (typical)*	±5		%
Line regulation	LL-HL, Full Load	±1.5		%
Load regulation (single output)	0-100% load (typical)*	±5		%
Transient Recovery Time		200		µs
Transient Response Deviation	25% load step	±2		% of Vout
Minimum load		0		%
Ripple & Noise	3.3/5 VDC With 560µF E/C	200		mV p-p
	12/15 VDC With 220µF E/C	400		mV p-p
	24 VDC With 220µF E/C	500		mV p-p

\*Ripple & Noise measured at 20MHz bandwidth with 0.1µF and 115/230/277/480 VAC (Typical input) with Full Load.

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Isolation Resistance		>1000		MΩ

### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100		KHz
Over Load protection	Auto recovery	>125%		
Short circuit protection		Auto recovery		
Operating temperature	Without derating	-40 to +80		°C
Storage temperature		-40 to +85		°C
Maximum Case temperature			100	°C
Humidity	Non condensing	20 ~ 95		% RH
Case material	Plastic resin + Fiberglass (flammability to UL 94V-0)			
Weight		25		g
Dimensions (L x W x H)	1.327 x 0.874 x 0.71 (33.70 x 22.20 x 18.00mm)			
MTBF	> 400,000 hrs (MIL-HDBK -217F, t <sub>e</sub> +25oC)/Full Load > 100,000 hrs (MIL-HDBK -217F, t <sub>e</sub> at highest operating temperature)/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.

### 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 Specifications

Parameters	Conditions
Agency approvals	cULus, CE, CB (pending), CSA
	Information technology Equipment IEC/EN/UL 60950-1:2006+A11:2009
	EMI - Conducted and radiated emission EN55022, class B (* see note)
	Harmonic Current Emissions IEC/EN 61000-3-2, (EN60555-2)
	Voltage fluctuations and flicker IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity IEC 61000-4-2
	RF, Electromagnetic Field Immunity IEC 61000-4-3
	Electrical Fast Transient/Burst Immunity IEC 61000-4-4
	Surge Immunity(1KV) IEC 61000-4-5(SAZ:Level2,SBAZ:Level 1)
	RF, Conducted Disturbance Immunity IEC 61000-4-6
	Power frequency Magnetic Field Immunity IEC 61000-4-8
	Voltage dips, Short Interruptions Immunity IEC 61000-4-11
	Canadian Safety Agency CAN/CSA-C22.2 NO. 60950-1-07

\* Note: for 528VAC models to meet the EN55022 class B spec an external 0.33uF X capacitor is needed to be installed between AC L and AC N as close as possible to the input of the power supply itself

### Pin Out Specifications\*

Pin	Single
1*	AC Input (N) or (L1)
2*	AC Input (L) or (L2)
3	-V Output
4	+V Output

\* Note: Input Pins 1 and 2 can be "N" and "L" respectively when the input voltage is supplied from a single phase.  
Input Pins 1 and 2 can be "L1" and "L2" respectively when the input voltage is supplied from 3 phase line to line voltage 208-480Vac (208 Y/ 120V 3-phase, 240 Y/ 120V 3-phase, 400 Y/ 230V 3-phase or 480 Y/ 277V 3-phase).

