



### 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
AMEL2-3.3SAZ	90-305/47-440	130-430	-40 to +80	3.3	600	2200	70	68	66	/
AMEL2-5SAZ	90-305/47-440	130-430	-40 to +80	5	400	1100	71	66	64	/
AMEL2-12SAZ	90-305/47-440	130-430	-40 to +80	12	166	680	75	72	69	/
AMEL2-15SAZ	90-305/47-440	130-430	-40 to +80	15	133	560	76	73	70	/
AMEL2-24SAZ	90-305/47-440	130-430	-40 to +80	24	83	470	80	77	75	/
AMEL2-3.3SBAZ	90-528/47-440	130-745	-40 to +80	3.3	600	2200	62	62	61	54
AMEL2-5SBAZ	90-528/47-440	130-745	-40 to +80	5	400	1100	70	70	69	62
AMEL2-12SBAZ	90-528/47-440	130-745	-40 to +80	12	166	680	74	73	71	64
AMEL2-15SBAZ	90-528/47-440	130-745	-40 to +80	15	133	560	76	76	74	65
AMEL2-24SBAZ	90-528/47-440	130-745	-40 to +80	24	83	470	67	67	66	59

### Models Dual 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
AMEL2-5DAZ	90-305/47-440	130-430	-40 to +80	±5	200	1100	70	69	68	/
AMEL2-12DAZ	90-305/47-440	130-430	-40 to +80	±12	83	680	72	72	70	/
AMEL2-15DAZ	90-305/47-440	130-430	-40 to +80	±15	67	330	71	70	69	/
AMEL2-5DBAZ	90-528/47-440	130-745	-40 to +80	±5	200	1100	69	68	67	63
AMEL2-12DBAZ	90-528/47-440	130-745	-40 to +80	±12	83	680	71	71	69	62
AMEL2-15DBAZ	90-528/47-440	130-745	-40 to +80	±15	67	330	70	69	68	61

### Models Dual Asymmetrical 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
AMEL2-512DAZ	90-305/47-440	130-430	-40 to +80	5/12	170/70	1100	66	66	65	/
AMEL2-512DBAZ	90-528/47-440	130-745	-40 to +80	5/12	170/70	1100	65	65	64	56

### Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		60	mA
	230 VAC		30	mA
	277 VAC		25	mA
	480VAC		20	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

### Single Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load (typical)*	±5		%
Line regulation	LL-HL, Full Load	±5		%
Load regulation (single output)	0-100% load (typical)*	±5		%
Transient Recovery Time		100		µs
Transient Response Deviation	25% load step	±2		% of Vout
Minimum load		0		%
Ripple & Noise	3.3V&5V with 680 µF (E/C) + 0.1µF M/C	300		mV p-p
	12V&15V with 220 uF (E/C) + 0.1µF M/C	300		mV p-p
	24V with 470 uF (E/C) + 0.1µF M/C	300		mV p-p

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

### Dual Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Full load	±5		%
Line regulation	LL-HL	±5		%
Load regulation	0-100% load	±5		%
Cross regulation	25% load change	±5		%
Transient Recovery Time		200		µs
Transient Response Deviation	25% load step	±2		% of Vout
Minimum load		0		%
Ripple & Noise	5D/12D/15D with 220uF (E/C) + 0.1µF M/C	200		mV p-p
	512D with 220uF (E/C) + 0.1µF M/C	300		mV p-p

\*Ripple & Noisemeasuredat20MHz bandwidth and 115/230/277/480VAC (typical input) with Full Load.

\*5D/12D/15D Model with symmetric load change and 512D Model with asymmetric load change.

### 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	Fold back	>125%		
Short circuit protection		Auto recovery		
Operating temperature	See de-rating chart	-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		21		g
Dimensions (L x W x H)	90-305VAC	1.10 x 0.90 x 0.57 inches (28.00 x 23.00 x 14.50 mm)		
	90-528VAC	1.10 x 0.90 x 0.67 inches (28.00 x 23.00 x 17.00 mm)		
MTBF		>400 000 hrs (MIL-HDBK -217F, t=+25°C)		

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.

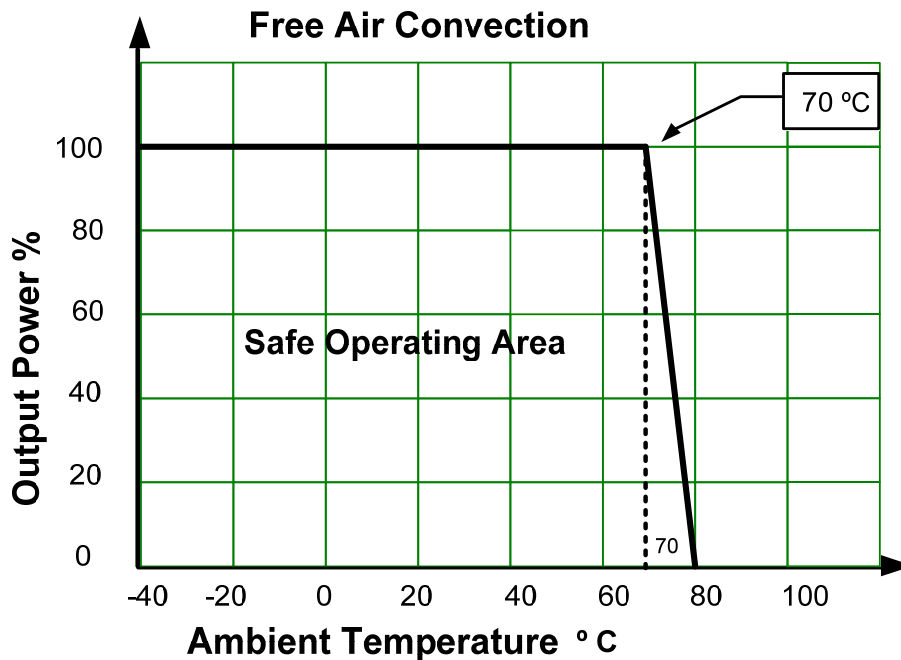
**Environment Approval**

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	
Agency approvals (pending certifications)	cULus, CE, CB
Information technology Equipment	IEC/EN/UL 60950-1:2006+A11:2009
EMI - Conducted and radiated emission	EN55022, class B
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 &DAZ:Level2,SBAZ&DBAZ: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

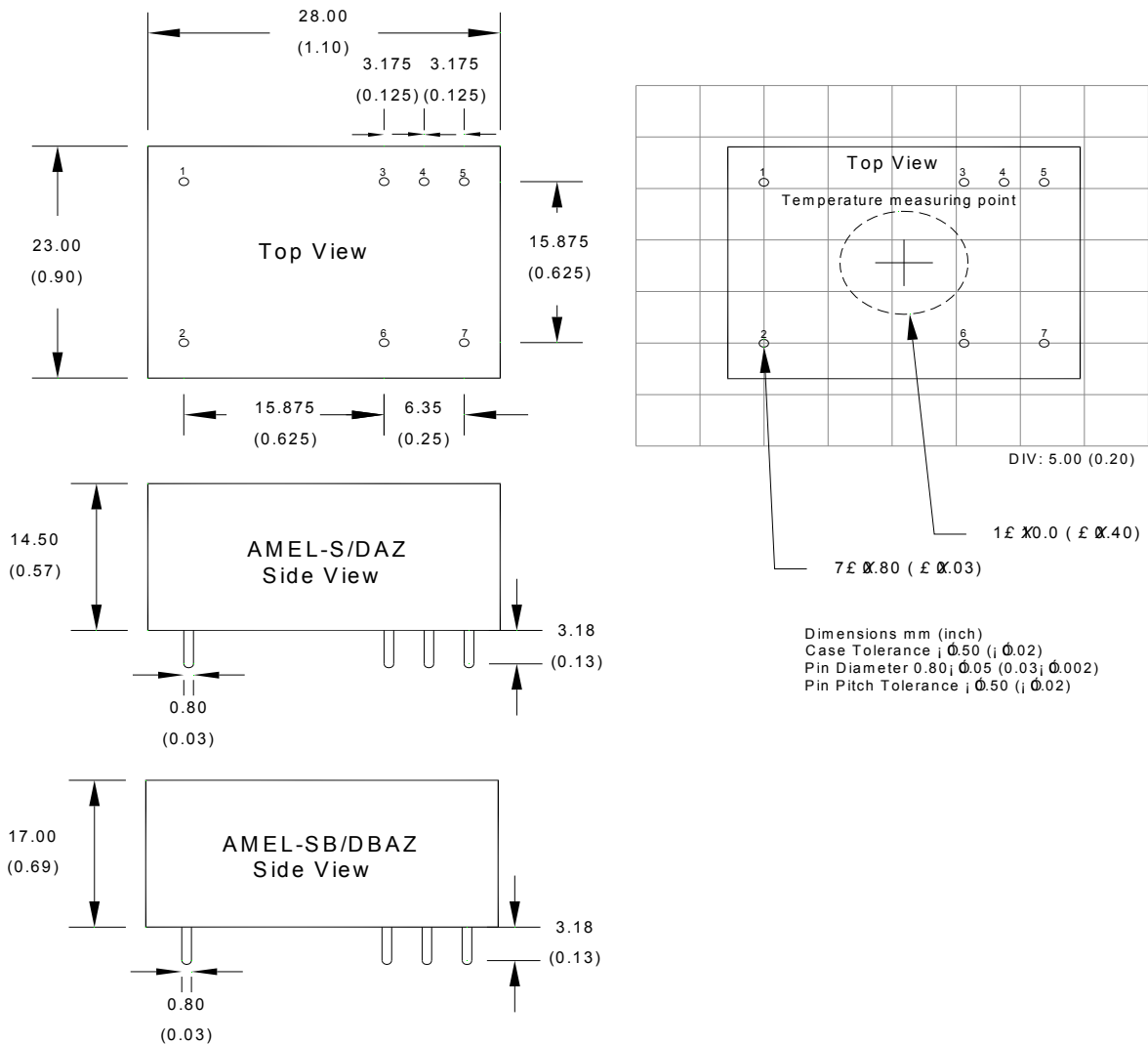
**Derating**



### Pin Out Specifications

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

### Dimensions



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