Series AME25-CVZ

25 Watt | AC-DC / DC-DC Converter

Picture Coming Soon

FEATURES:

- I/O Isolation 4000VAC
- Operating Temp: -40˚C to +85˚C
- Input: 85-264VAC, 47-63Hz, or 120-370VDC
- Over current, Over Voltage Protection
- Continuous Short circuit protection
- Energy Star compliant
- Compact package
- Efficiency up to 87%

RoHS

Models

Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (µF)	Efficiency 230VAC (%)
AME25-3.3SCVZ	85-264/47-63	120-370	3.3	4.1	48000	74
AME25-5SCVZ	85-264/47-63	120-370	5	4.1	12240	79
AME25-9SCVZ	85-264/47-63	120-370	9	2.5	5600	81
AME25-12SCVZ	85-264/47-63	120-370	12	2.1	5400	83
AME25-15SCVZ	85-264/47-63	120-370	15	1.6	2400	84
AME25-24SCVZ	85-264/47-63	120-370	24	1.1	1440	85
AME25-48SCVZ	85-264/47-63	120-370	48	0.5	600	87

Note: Add suffix “-ST” for optional screw terminal bottom plate or “-STD” for optional DIN Rail screw terminal bottom plate.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		600	mA
	230 VAC		340	mA
Inrush current <2ms (cold start)	115 VAC	20		A
	230 VAC	40		A
External fuse	Recommended slow blow type	3.15		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	3.3VDC output	±3		%
	Other output	±2		
Line regulation	Full load, main output	±0.5		%
Load regulation (single output)	0-100% load	±1		%
Minimum load		0		%
Ripple & Noise *		50	100	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	10		ms
	230VAC, 20MHz bandwidth	60		ms

*Ripple and Noise are measured at 20MHz bandwidth & 230VAC with the recommended Application Circuit.

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
Protection class	Class I			
Over current protection		≥140		% of Iout
Over voltage protection	Zener diode clamp			
Short circuit protection	Continuous, Auto recovery			
Operating temperature	See derating curve	-40 to +85		ºC
Storage temperature		-40 to +85		ºC

General Specifications(Cont.)

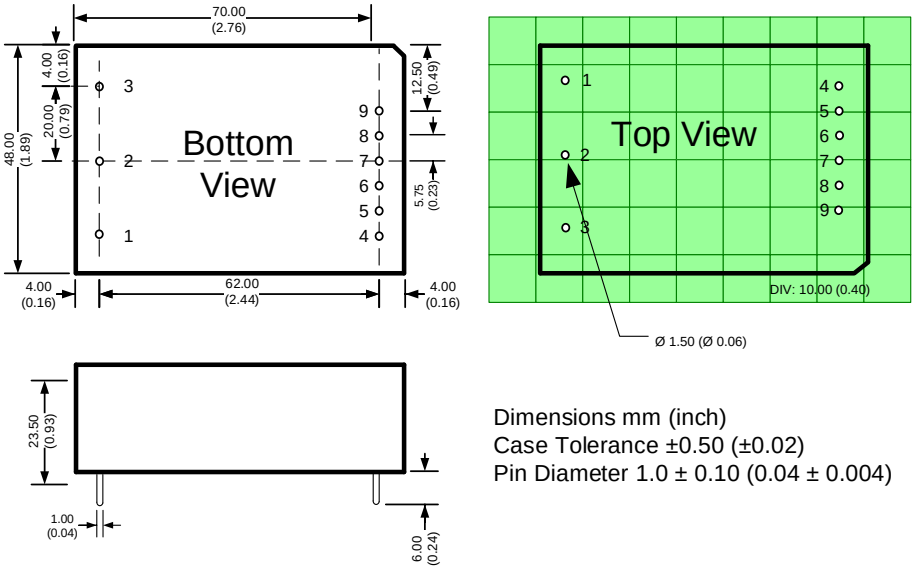
Parameters	Conditions	Typical	Maximum	Units
Switching Frequency		65		kHz
Maximum Case temperature			100	ºC
Temperature coefficient		±0.02		% / ºC
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material	Plastic (flammability to UL 94V-0)			
Weight	PCB mountable model: With optional -ST mounting plate: With optional -STD mounting plate:	120 170 210		g
Dimensions (L x W x H)	PCB mountable model: With optional -ST mounting plate: With optional -STD mounting plate:	2.44 x 1.77 x 0.93 inches (70.00 x 48.00 x 23.50mm) 3.78 x 2.13 x 1.26 inches (96.10 x 54.00 x 32.00 mm) 3.78 x 2.12 x 1.44 inches (96.10 x 54.00 x 36.60 mm)		
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25ºC)/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.

Safety Specifications

Parameters		
Standards	Information technology Equipment	Design to meet IEC/EN/UL 62368
	EMI - Conducted and radiated emission	CISPR32/EN55032, 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, ±4kV with external circuit, Criteria B
	Surge Immunity	IEC 61000-4-5 L to L ±1kV/ L to G ±2kV, L to L ±2kV/L to G ±4kV with external circuit, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0%, 70%, Criteria B

Dimensions

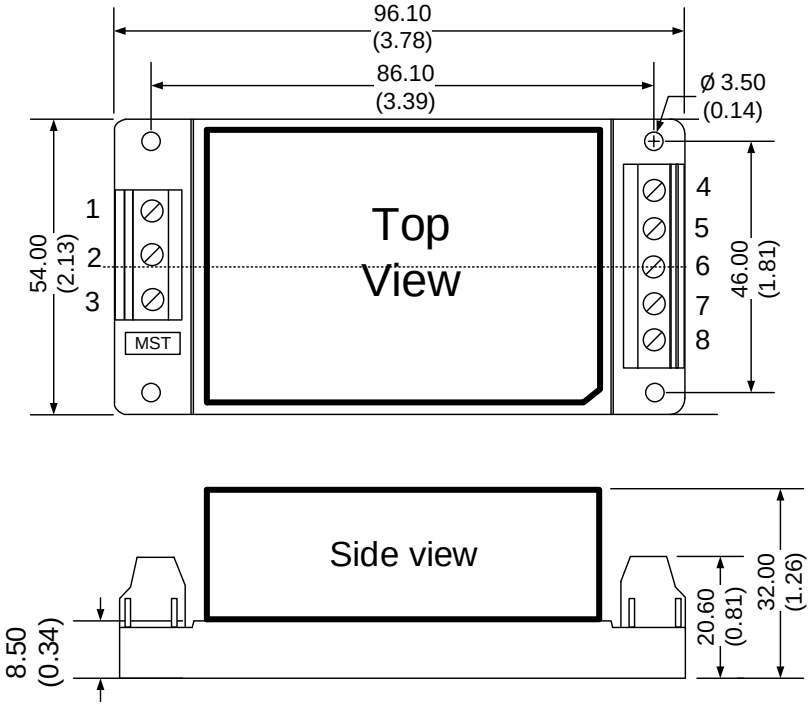


Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

Pin Out Specifications

Pin	Single
1	Gnd
2	AC Input (N)
3	AC Input (L)
4	Trim
5	-V Output
6	No pin
7	No pin
8	No pin
9	+V Output

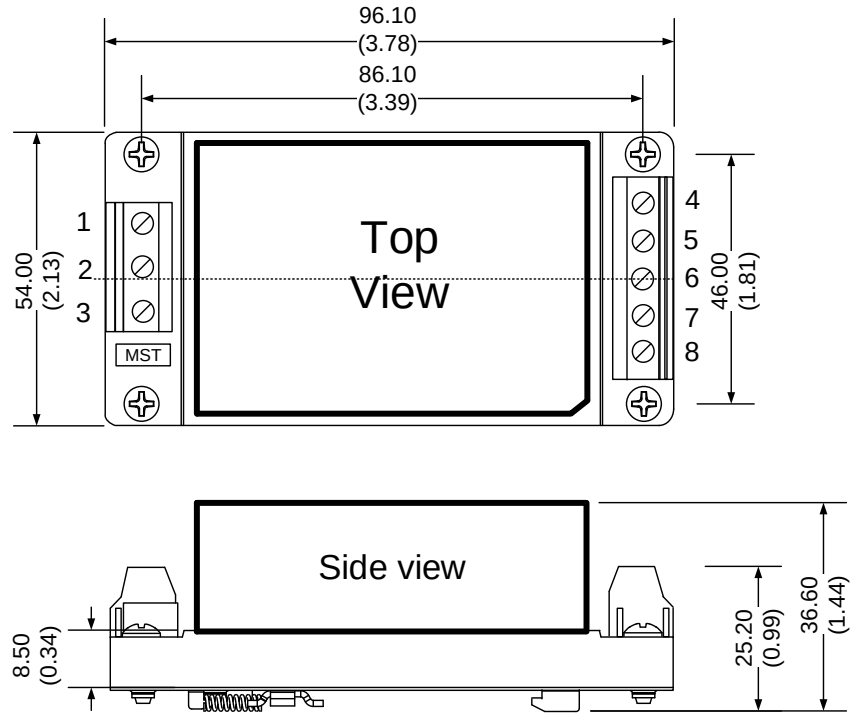
With optional -ST bottom plate



Pin Out Specifications

Pin	Single
1	Gnd
2	AC Input (N)
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4	-V Output
5	No connection
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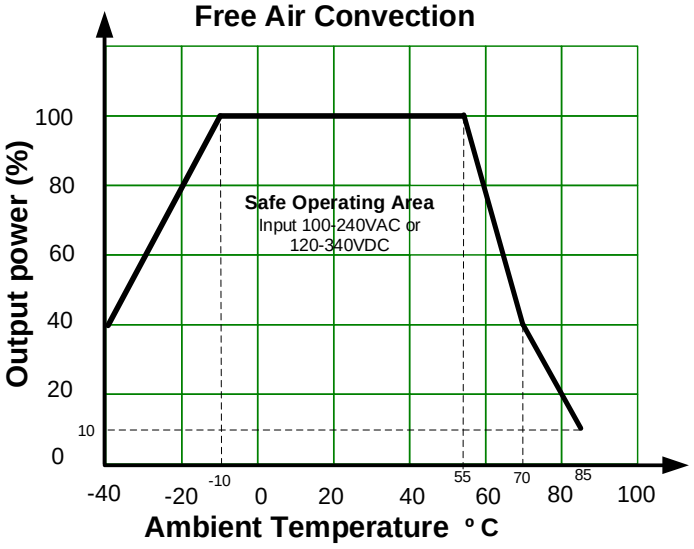
With optional -STD bottom plate

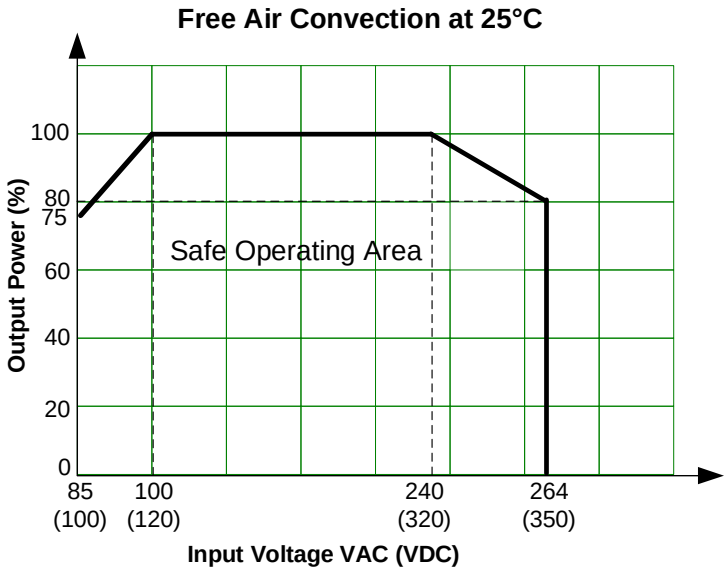


Pin Out Specifications

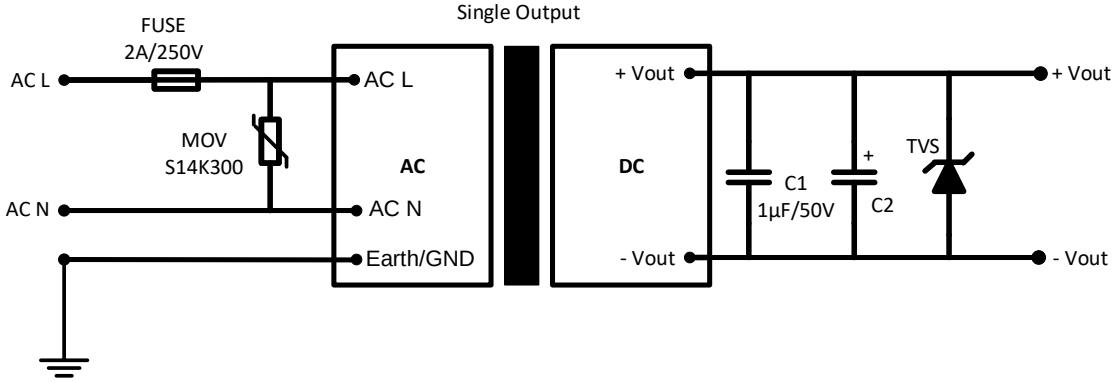
Pin	Single
1	Gnd
2	AC Input (N)
3	AC Input (L)
4	-V Output
5	No connection
6	Trim
7	No connection
8	+V Output

Derating



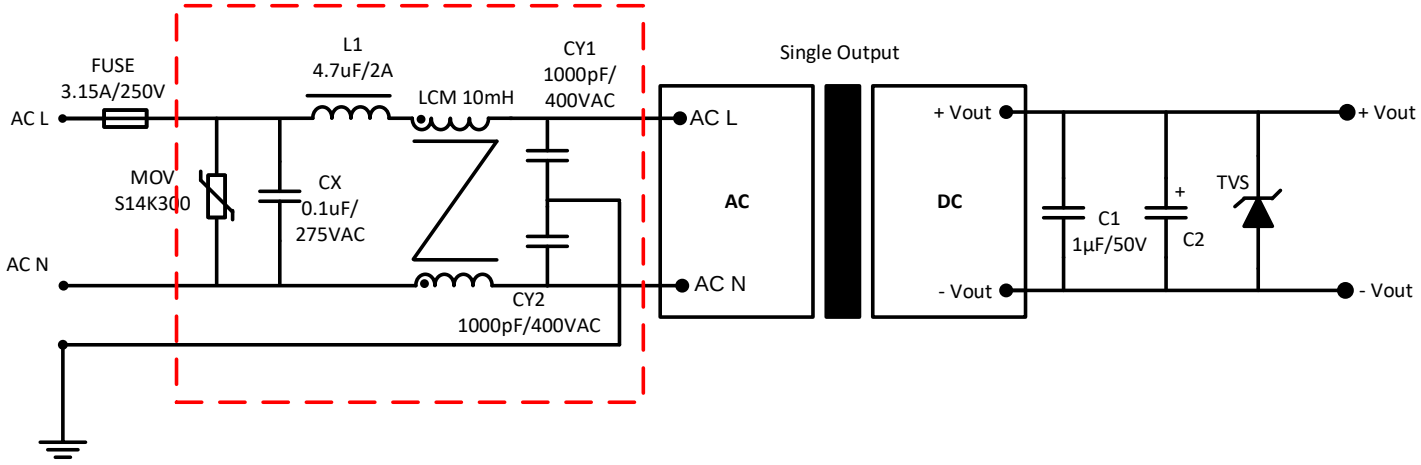


Typical application circuits



EMC recommended circuits

Recommended use AMFE305150-LN22 EMC filter

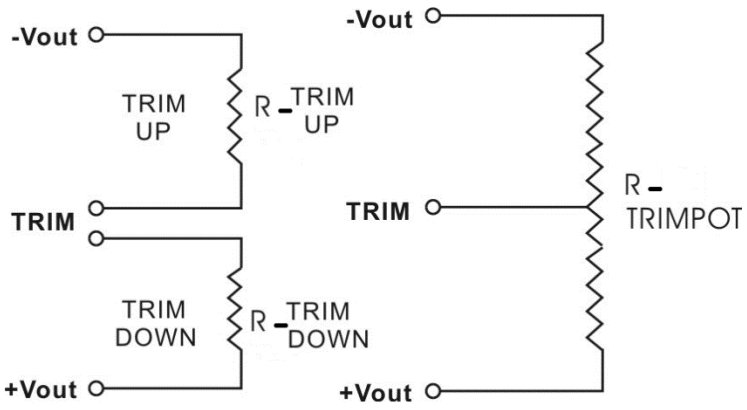


Model	C2	TVS
3.3 Vout	330 µF	7V
5 Vout	330 µF	7V
9 Vout	330 µF	12V
12 Vout	330 µF	20V
15 Vout	330 µF	20V
24 Vout	120 µF	30V
48 Vout	68 µF	64V

Trimming

Output voltage can be externally trimmed by utilizing the methods as shown below

Fixed Resistor Variable Potentiometer



Leave open if not used.

AME25-3.3SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	3.267	3.234	3.201	3.168	3.135	3.102	3.069	3.036	3.003	2.97
Rt down (KΩ)	167.633	89.553	60.243	44.883	35.428	29.022	24.396	20.897	18.159	15.957
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	3.333	3.366	3.399	3.432	3.465	3.498	3.531	3.564	3.597	3.63
Rt up (KΩ)	154.392	67.966	43.318	31.649	24.844	20.387	17.241	14.902	13.094	11.656

AME25-5SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	4.95	4.9	4.85	4.8	4.75	4.7	4.65	4.6	4.55	4.5
Rt down (KΩ)	160.700	78.200	50.700	36.950	28.700	23.200	19.271	16.325	14.033	12.200
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	5.05	5.1	5.15	5.2	5.25	5.3	5.35	5.4	5.45	5.5
Rt up (KΩ)	164.000	81.500	54.000	40.250	32.000	26.500	22.571	19.625	17.333	15.500

AME25-9SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	8.91	8.82	8.73	8.64	8.55	8.46	8.37	8.28	8.19	8.1
Rt down (KΩ)	389.533	221.430	153.157	116.145	92.924	76.997	65.393	56.562	49.617	44.011
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	9.09	9.18	9.27	9.36	9.45	9.54	9.63	9.72	9.81	9.9
Rt up (KΩ)	328.532	126.639	78.148	56.357	43.975	35.990	30.412	26.297	23.134	20.629

AME25-12SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	11.88	11.76	11.64	11.52	11.4	11.28	11.16	11.04	10.92	10.8
Rt down (KΩ)	183.233	111.590	79.474	61.246	49.499	41.299	35.249	30.602	26.921	23.933
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	12.12	12.24	12.36	12.48	12.6	12.72	12.84	12.96	13.08	13.2
Rt up (KΩ)	211.778	57.030	32.596	22.642	17.238	13.845	11.516	9.819	8.527	7.511

AME25-15SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	14.85	14.7	14.55	14.4	14.25	14.1	13.95	13.8	13.65	13.5
Rt down (KΩ)	616.500	304.000	199.833	147.750	116.500	95.667	80.786	69.625	60.944	54.000
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	15.15	15.3	15.45	15.6	15.75	15.9	16.05	16.2	16.35	16.5
Rt up (KΩ)	124.000	61.500	40.667	30.250	24.000	19.833	16.857	14.625	12.889	11.500

AME25-24SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	23.76	23.52	23.28	23.04	22.8	22.56	22.32	22.08	21.84	21.6
Rt down (KΩ)	471.081	287.942	205.845	159.249	129.221	108.258	92.793	80.914	71.504	63.865
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	24.24	24.48	24.72	24.96	25.2	25.44	25.68	25.92	26.16	26.4
Rt up (KΩ)	239.556	64.606	36.982	25.728	19.619	15.783	13.150	11.232	9.771	8.622

AME25-48SVZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	47.52	47.04	46.56	46.08	45.6	45.12	44.64	44.16	43.68	43.2
Rt down (KΩ)	5501.011	2921.325	1974.775	1483.386	1182.489	979.298	832.871	722.336	635.938	566.549
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	48.48	48.96	49.44	49.92	50.4	50.88	51.36	51.84	52.32	52.8
Rt up (KΩ)	420.217	191.396	123.671	91.211	72.163	59.636	50.773	44.170	39.060	34.990

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.