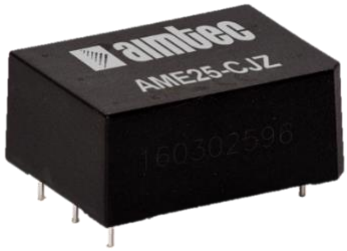
Series AME25-CJZ

25 Watt | AC-DC / DC-DC Converter



FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -25˚C to +70˚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%

Models

Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (µF)	Efficiency 230VAC (%)
AME25-3.3SCJZ	85-264/47-63	120-370	3.3	4.1	48000	73
AME25-5SCJZ	85-264/47-63	120-370	5	4.1	12240	74
AME25-9SCJZ	85-264/47-63	120-370	9	2.5	5600	78
AME25-12SCJZ	85-264/47-63	120-370	12	2.1	5400	82
AME25-15SCJZ	85-264/47-63	120-370	15	1.6	2400	83
AME25-24SCJZ	85-264/47-63	120-370	24	1.1	1440	85
AME25-48SCJZ	85-264/47-63	120-370	48	0.5	500	87

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	16		A
	230 VAC	30		A
Leakage current	230VAC/50Hz		0.3	mA
External fuse	Recommended slow blow type	3.15		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load, main output	±0.5		%
	Full load, auxiliary output	±1.5		%
Load regulation (single output)	10-100% load	±1		%
Load Regulation (dual output)	10-100% Balanced load	±2		%
Load Regulation (triple & asymmetric separated output)	10-100% Balanced load, main output	±3		
	10-100% Balanced load, auxiliary output	±5		
Minimum load	Single output	0		%
	Others	10		%
Ripple & Noise *		50	150	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	15		ms
	230VAC, 20MHz bandwidth	80		ms
Voltage adjustment range			±10	% of Vout

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Isolation voltage between Main and Auxiliary output	60 sec		500	VDC
Isolation Resistance		>1000		MΩ

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General Specifications

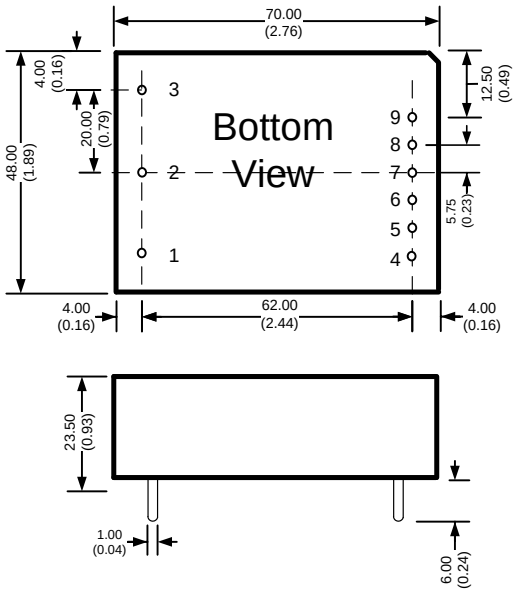
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		KHz
Protection class	Class I			
Over current protection		≥110		% of Iout
Over voltage protection	Zener diode clamp			
Short circuit protection	Continuous, Auto recovery			
Operating temperature	See derating curve	-25 to +70		ºC
Storage temperature		-25 to +105		ºC
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	Pin mountable	120		g
Dimensions (L x W x H)	Pin mountable	2.76 x 1.89 x 0.93 inches	70.0 x 48.0 x 23.5 mm	
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25ºC)/Full Load			

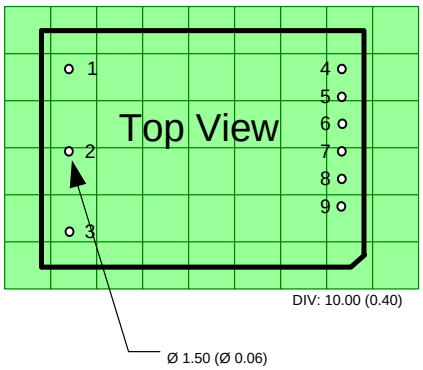
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Agency approvals	cULus, CE	
Standards	Information technology Equipment	IEC/EN/UL 60950-1
	EMI - Conducted and radiated emission	EN55022, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Level 3
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 Level 3
	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 3
	Power frequency Magnetic Field Immunity	IEC 61000-4-8 Level 3
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 Class 2

Dimensions





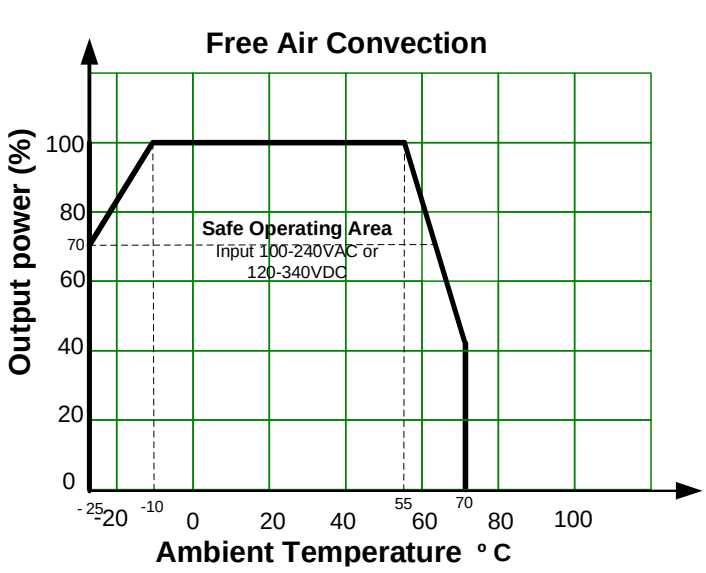
Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

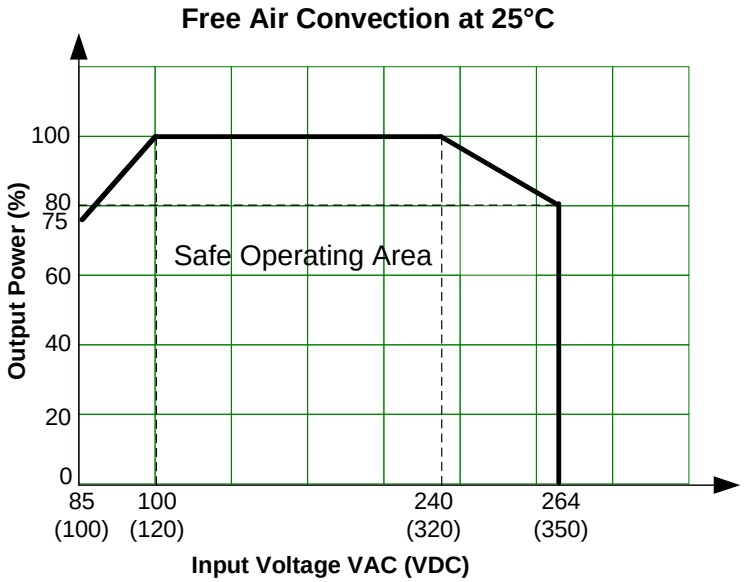
Pin Out Specifications

Pin	Single
1	Ground
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

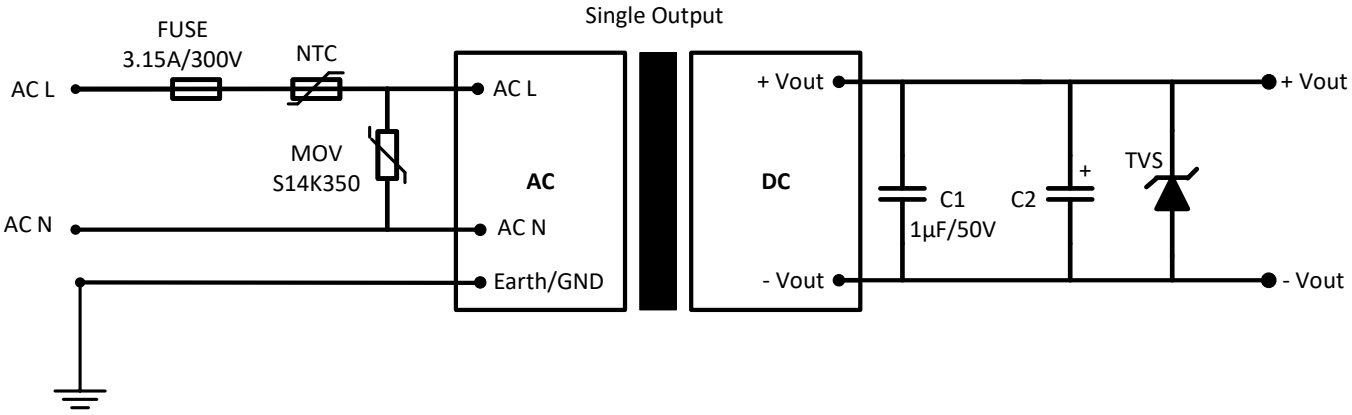
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Derating





Typical application circuits



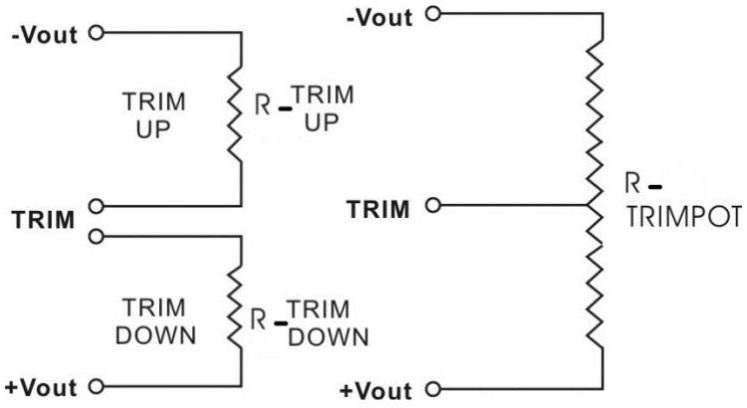
Model	C2	TVS
Single 3.3 & 5 Vout	330 µF	7V
Single 9 Vout	330 µF	12V
Single 12 & 15 Vout	330 µF	20V
Single 24 Vout	120 µF	30V
Single 48 Vout	68 µF	64V

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Trimming

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

Fixed Resistor Variable Potentiometer



Leave open if not used.

AME20-3.3SCJZ

Trim down %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	3.27	3.23	3.2	3.17	3.14	3.1	3.07	3.04	3	2.97
Rt down (KΩ)	181.7	84.657	59.638	45.602	36.62	28.7	24.517	21.275	17.939	15.957
Trim up %	1	2	3	4	5	6	7	8	9	10
Vout (VDC)	3.33	3.37	3.4	3.43	3.47	3.5	3.53	3.56	3.6	3.63
Rt up (KΩ)	174.371	63.611	42.843	32.178	24.053	20.166	17.322	15.153	12.95	11.656

AME20-5SCJZ

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)	160.7	78.2	50.7	36.95	28.7	23.2	19.271	16.325	14.033	12.2
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	81.5	54	40.25	32	26.5	22.571	19.625	17.333	15.5

AME20-9SCJZ

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	221.43	153.157	116.145	92.925	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	35.99	30.412	26.297	23.134	20.629

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AME20-12SCJZ

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	111.59	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	57.03	32.596	22.642	17.238	13.845	11.516	9.819	8.527	7.511

AME20-15SCJZ

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)	616.5	304	199.833	147.75	116.5	95.667	80.786	69.625	60.944	54
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	61.5	40.667	30.25	24	19.833	16.857	14.625	12.889	11.5

AME20-24SCJZ

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	13.15	11.232	9.771	8.622

AME20-48SCJZ

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	44.17	39.06	34.99

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