Series AME25-CJZ

25 Watt | AC-DC / DC-DC Converter

Picture coming soon

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

General Specifications

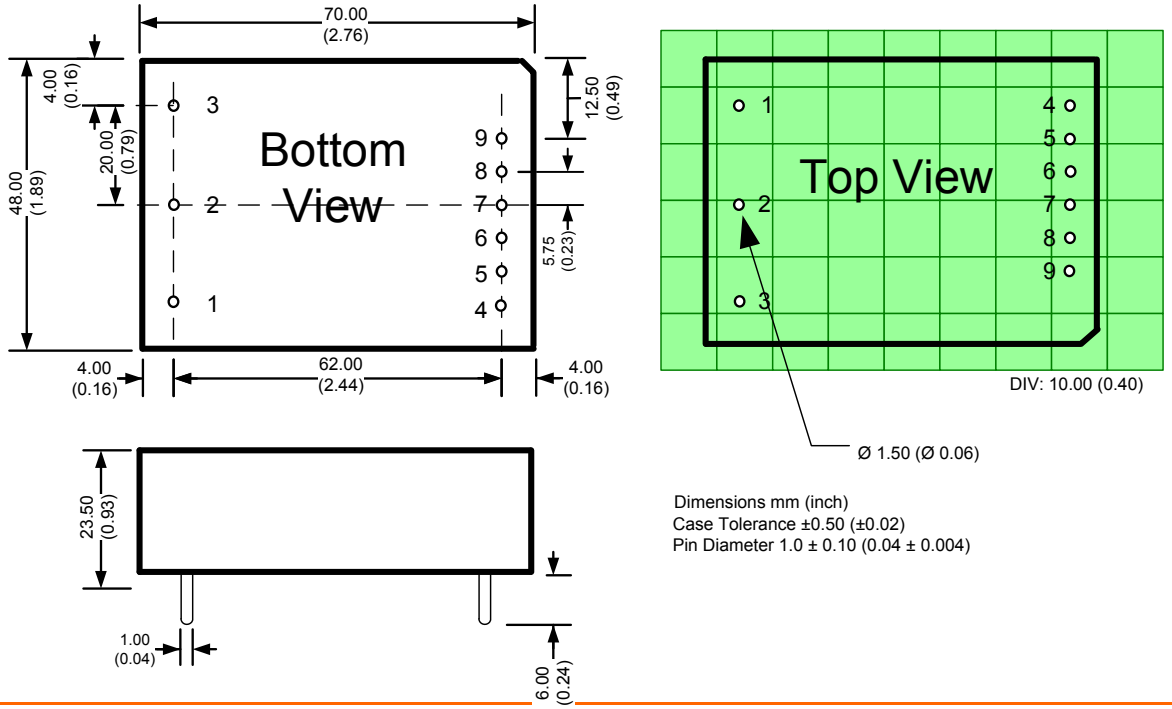
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		KHz
Protection class		Class I		
Over current protection		≥110		% of Iout
Over voltage protection		Zener diode clamp		
Short circuit protection		Continuous, Auto recovery		
Operating temperature	See derating curve	-25 to +70		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		120		g
Dimensions (L x W x H)		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

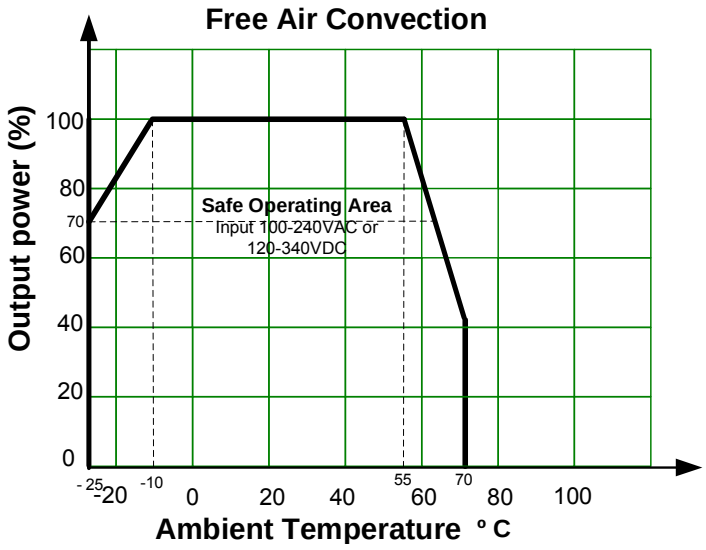


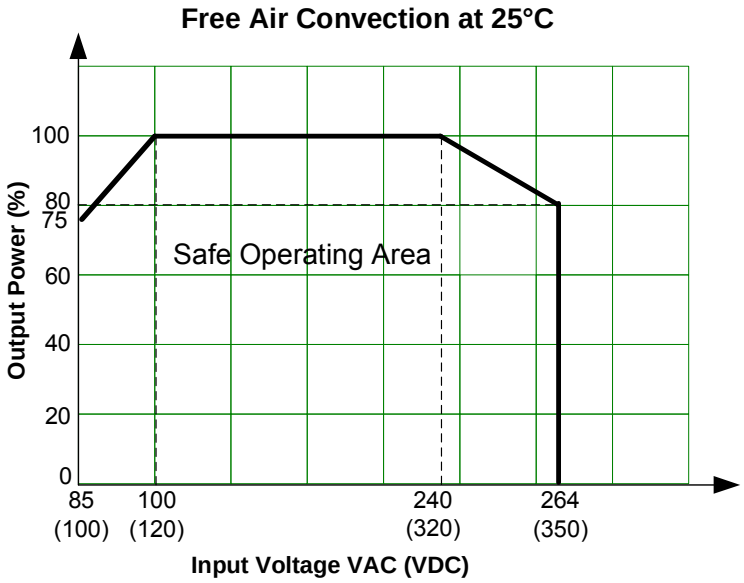
Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

Pin Out Specifications

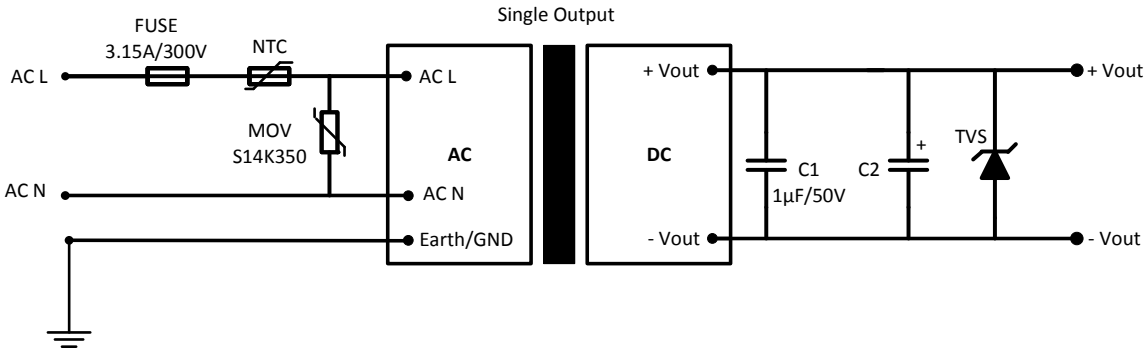
Pin	Single
1	Ground
2	AC Input (N)
3	AC Input (L)
4	Trim
5	-V Output
6	No pin
7	No pin
8	No pin
9	+V Output

Derating





Typical application circuits

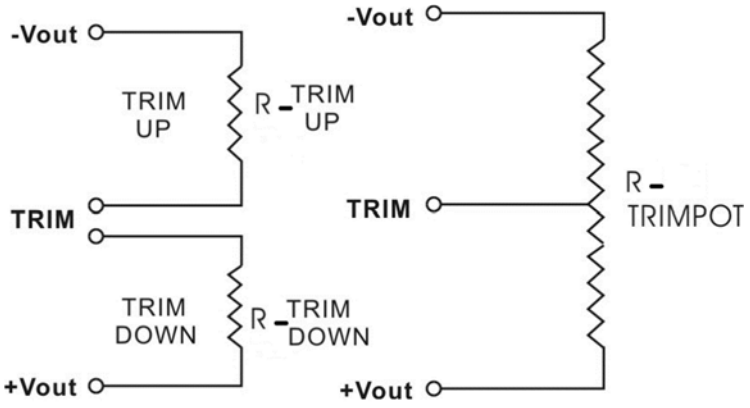


Model	C2	TVS
Single 3.3 & 5 Vout	330 µF	7V
Single 9 Vout	330 µF	12V
Single 12 & 15 Vout	330 µF	20V
Single 24 Vout	120 µF	30V
Single 48 Vout	68 µF	64V

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

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