

Series AME10-CJZ

10 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 84%

Models Single output



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
AME10-3.3SCJZ	85-264/47-63	120-370	3.3	2	26400	70
AME10-5SCJZ	85-264/47-63	120-370	5	2	9440	76
AME10-9SCJZ	85-264/47-63	120-370	9	1.1	3600	78
AME10-12SCJZ	85-264/47-63	120-370	12	0.9	2400	80
AME10-15SCJZ	85-264/47-63	120-370	15	0.7	1170	81
AME10-24SCJZ	85-264/47-63	120-370	24	0.45	370	82

Models Dual output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
AME10-5DCJZ	85-264/47-63	120-370	±5	±1	±8800	76
AME10-12DCJZ	85-264/47-63	120-370	±12	±0.45	±1970	80
AME10-15DCJZ	85-264/47-63	120-370	±15	±0.35	±1970	81
AME10-24DCJZ	85-264/47-63	120-370	±24	±0.2	±660	84

Models Triple output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Auxiliary Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
AME10-512TCJZ	85-264/47-63	120-370	5	±12	1/±0.2	3200/±260	75
AME10-515TCJZ	85-264/47-63	120-370	5	±15	0.9/±0.2	2160/±80	75

Models Asymmetric Separated Dual output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
AME10-505DCJZ	85-264/47-63	120-370	5/5	1.8/0.2	8000/540	75
AME10-512DCJZ	85-264/47-63	120-370	5/12	1.5/0.2	4400/260	79
AME10-515DCJZ	85-264/47-63	120-370	5/15	1.4/0.2	4400/170	79
AME10-524DCJZ	85-264/47-63	120-370	5/24	1/0.2	4000/170	81

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		260	mA
	230 VAC		160	mA
Inrush current <2ms (cold start)	115 VAC	10		A
	230 VAC	20		A
Leakage current	230VAC/50Hz		0.3	mA
External fuse	Recommended slow blow type	2		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

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

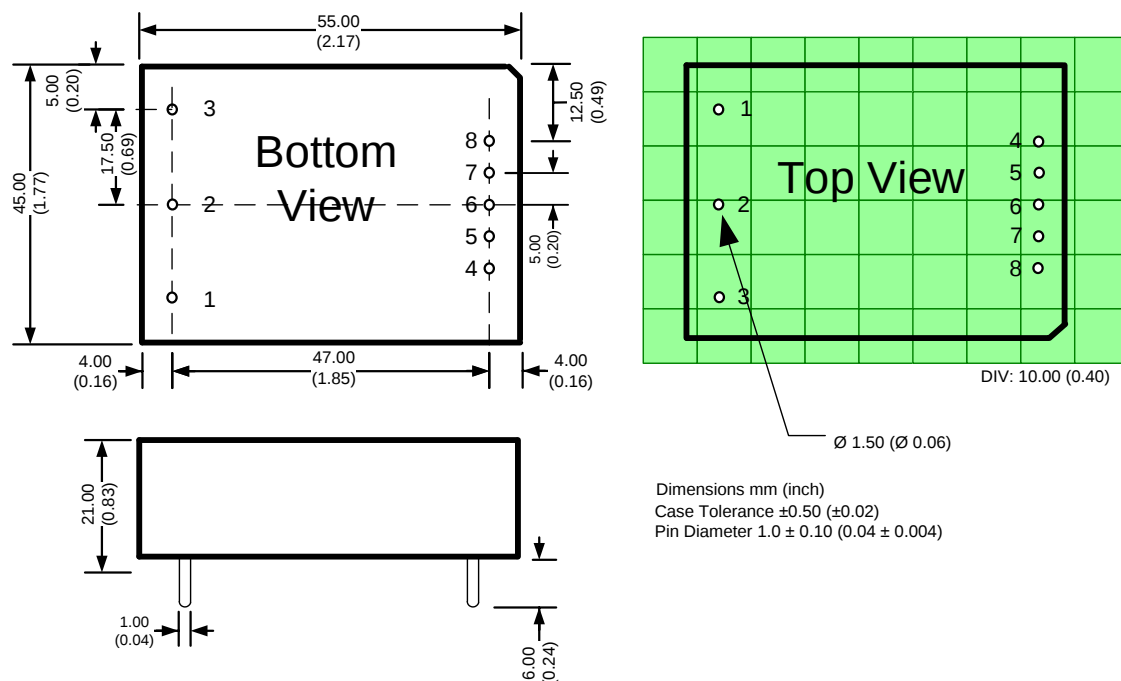
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		KHz
Protection class		Class I		
Over current protection		≥110		% of Iout
Over voltage protection		Zener diode clamp		
Short circuit protection		Continuous, Auto recovery		
Operating temperature	See derating curve	-25 to +70		°C
Storage temperature		-25 to +105		°C
Maximum Case temperature			100	°C
Temperature coefficient		±0.02		% / °C
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material		Plastic (flammability to UL 94V-0)		
Weight	PCB mountable model:	80		g
Dimensions (L x W x H)	PCB mountable model:	2.165 x 1.772 x 0.827 inches (55.00 x 45.00 x 21.00mm)		
MTBF		> 300,000 hrs (MIL-HDBK -217F, t=+25°C)/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 (except triple output models and AME10-1224DCJZ), CE (except triple output models)	
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

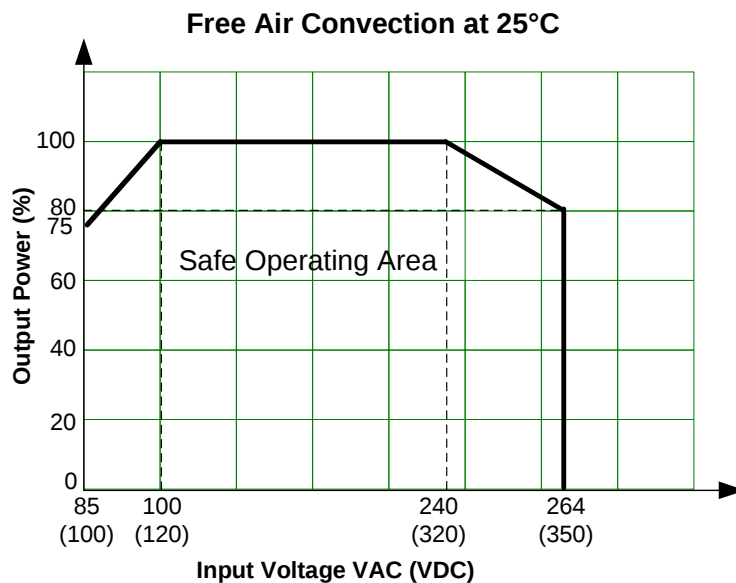
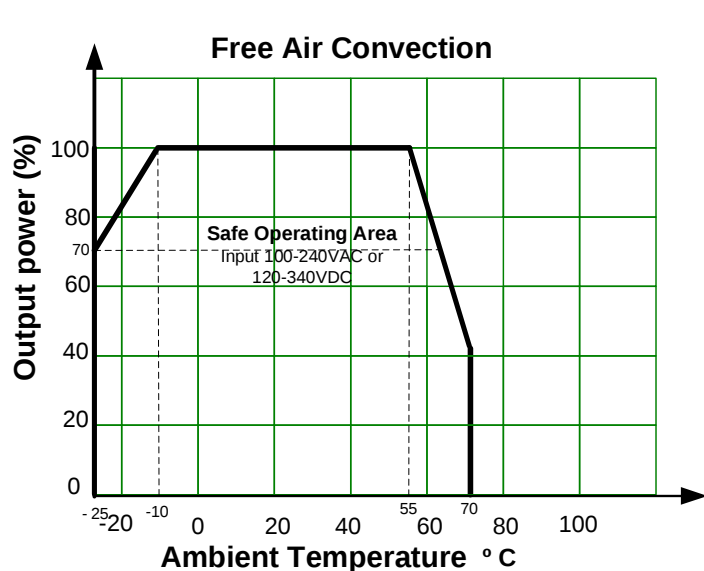
Dimensions



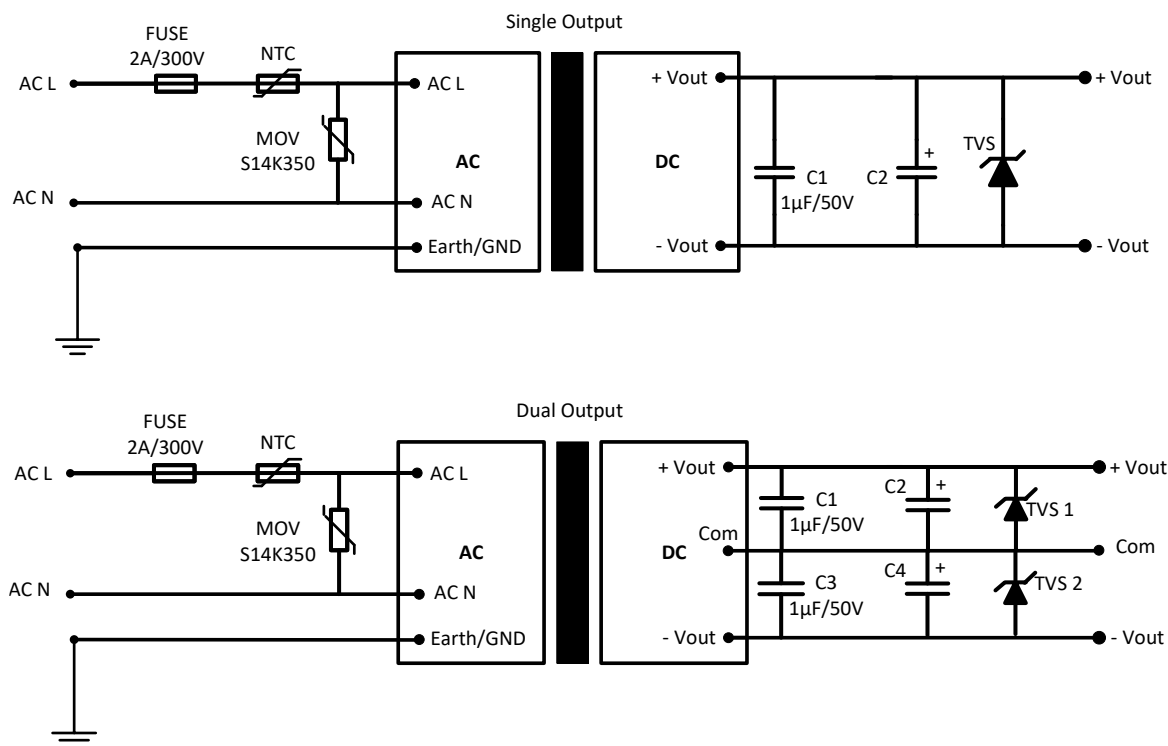
Pin Out Specifications

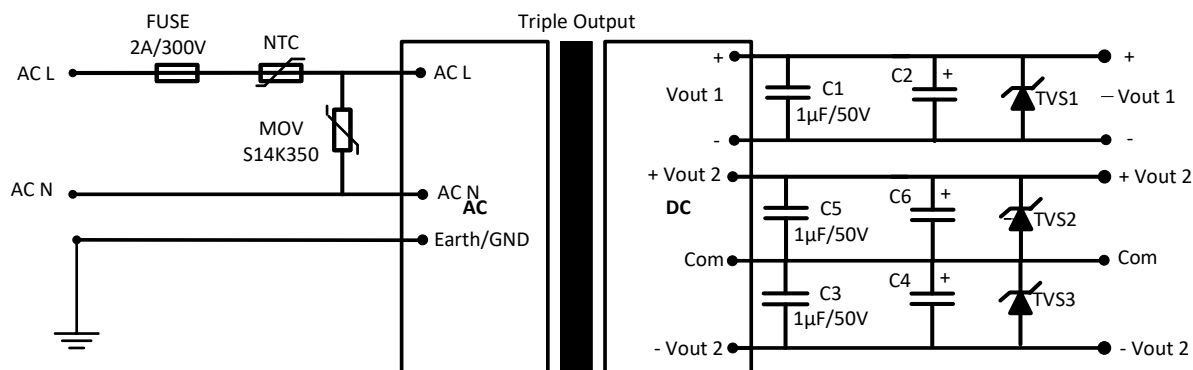
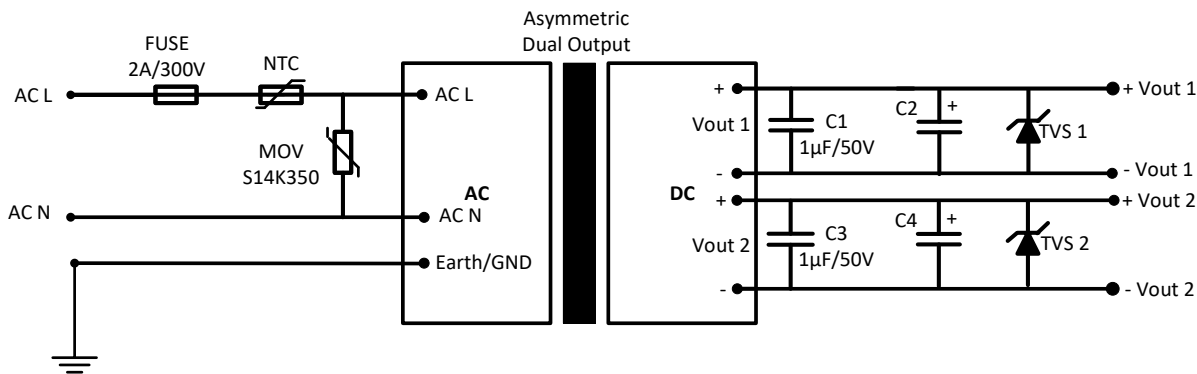
Pin	Single	Dual	Triple	Asymmetric Dual
1	Ground	Ground	Ground	Ground
2	AC Input (N)	AC Input (N)	AC Input (N)	AC Input (N)
3	AC Input (L)	AC Input (L)	AC Input (L)	AC Input (L)
4	-V Output	-V Output	-V Output 1	-V Output 1
5	No pin	No pin	+V Output 1	+V Output 1
6	No pin	Common	-V Output 2	No pin
7	No pin	No pin	Common	-V Output 2
8	+V Output	+V Output	+V Output 2	+V Output 2

Derating



Typical application circuits





Model	C2	C4	C6	TVS1	TVS2	TVS3
Single 3.3 Vout	470 μ F	-	-	7V	-	-
Single 5 Vout	330 μ F	-	-	7V	-	-
Single 9 Vout	120 μ F	-	-	12V	-	-
Single 12 & 15 Vout	120 μ F	-	-	20V	-	-
Single 24 Vout	68 μ F	-	-	30V	-	-
Dual $\pm$ 5 Vout	220 μ F	220 μ F	-	7V	7V	-
Dual $\pm$ 12 Vout	120 μ F	120 μ F	-	20V	20V	-
Dual $\pm$ 15 Vout	47 μ F	47 μ F	-	20V	20V	-
Dual $\pm$ 24 Vout	33 μ F	33 μ F	-	30V	30V	-
Triple 5/ $\pm$ 12 Vout	220 μ F	68 μ F	68 μ F	7V	20V	20V
Triple 5/ $\pm$ 15 Vout	220 μ F	47 μ F	47 μ F	7V	20V	20V
Dual 5/5 Vout	220 μ F	68 μ F	-	7V	7V	-
Dual 5/12 Vout	220 μ F	68 μ F	-	7V	20V	-
Dual 5/15 Vout	220 μ F	47 μ F	-	7V	20V	-
Dual 5/24 Vout	220 μ F	47 μ F	-	7V	30V	-

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.