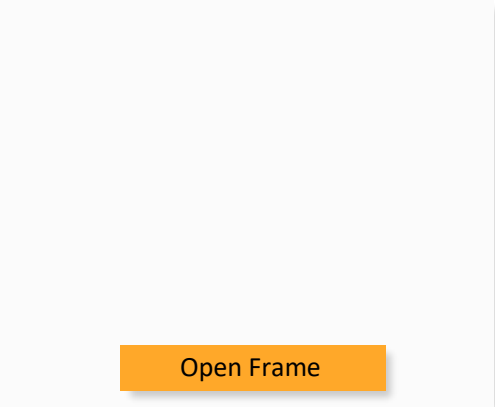




AMEOW10-JZ



Open Frame

The AMEOW10-JZ series is an open frame switched-mode power supply that is designed to accept an ultrawide input voltage range of 57-528VAC or 80-745VDC. This converter can operate with any two wire connections from the three-phase three-wire or four-wire systems thus enhancing its ease of use.

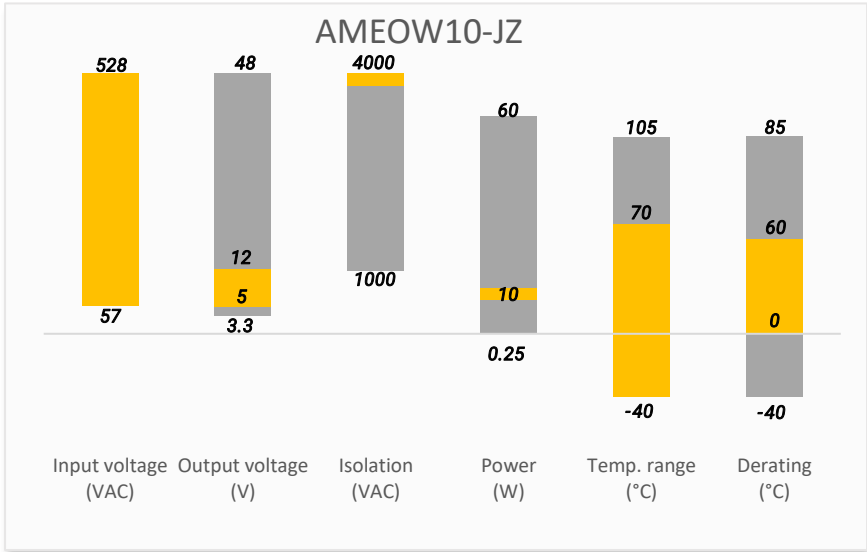
The AMEOW10-JZ series is designed with an isolation voltage of 4000VAC and meets IEC/EN61000 "Burst (4kV)", "Surge (2kV)" and "EN55032 Class B Conduction/Radiation" requirements. The typical applications of this series are meters or industrial equipment that have extremely harsh EMC requirements such as electric-meters that are powered from a three-phase AC supply.

Features

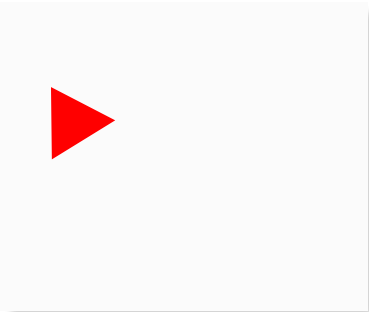


- Input: 57 - 528VAC/80 - 745VDC
- Operating Temp: -40 °C to +70 °C
- High isolation voltage: 4000VAC
- Ripple & noise, 250mV(p-p), max.
- Output short circuit, over-current, over-voltage protection

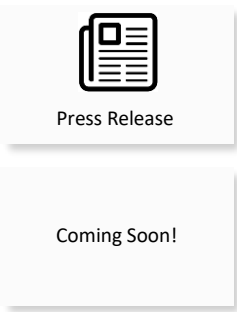
Summary



Training



Product Training Video
(click to open)



Application Notes

Applications



Power Grid



Industrial



Instrumentation



IoT

Models & Specifications

Single Output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Max Output wattage (W)	Output Voltage (Vo1/Vo2)(V)	Output Current max (Vo1/Vo2) (A)	Maximum capacitive load (Vo1/Vo2) (μF)	Efficiency @ 230VAC (%) Typ.
AMEOW10-5S12SJZ	57~528/47~63	80~745	10.92	5.1 / 12	1.2 / 0.4	4000 / 1200	78

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	100VAC Input		400	mA
Inrush current	115VAC Input	25		A
	220VAC Input	40		
Leakage current	220VAC Input	0.3		mA
Input fuse	3.15A Slow-blow type required			

Output Specifications

Parameters	Conditions		Typical	Maximum	Units
Voltage accuracy	Balance load	Output 1	± 2		%
		Output 2	± 10		
Line regulation	100% load	Output 1	± 0.5		%
		Output 2	± 1.5		
Load regulation	10-100% load	Output 1	± 3		%
		Output 2	± 5		
Ripple & Noise*	57-528VAC Input	Output 1		150	mV p-p
		Output 2		250	
	220VAC Input	Output 1	60		
		Output 2	120		
Minimum load			≥10		%
Hold-up time	220VAC Input, 100% load		80		ms

*20MHz bandwidth

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	Input / Output, 60 sec	4000		VAC
	Output / Output, 60 sec	4000		
Insulation resistance		≥100		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Over current protection	Auto recovery	≥ 120	300	% of Iout
Over voltage protection	Output 1		8	V
	Output 2		20	
Short circuit protection	Hiccup, Continuous, Auto recovery			

Operating temperature	-40 to +70			°C
Storage temperature	-40 to +85			°C
No-load power consumption	220VAC Input	0.3	0.5	W
Switching frequency	65			KHz
Temperature coefficient	Output 1	±0.02		% / °C
	Output 2	±0.06		
Derating	-40°C to 0°C	0.5		% / °C
	60°C to 70°C	3		
Altitude				2000
Wave soldering	260±5°C, Duration 5~10 Sec			
Manual soldering	360±10°C, Duration 3~5 Sec			
Safety class	Class II			
Cooling	Free air convection			
Storage Humidity				90
Weight				70
Dimensions (L x W x H)	3.15 x 1.57 x 1.38 inches (80.00 x 40.00 x 35.00mm)			
MTBF	> 300 000 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.

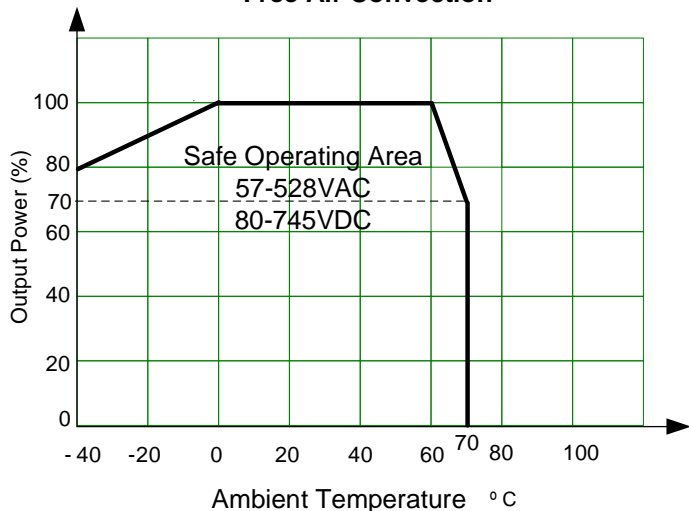
Safety Specifications

Parameters

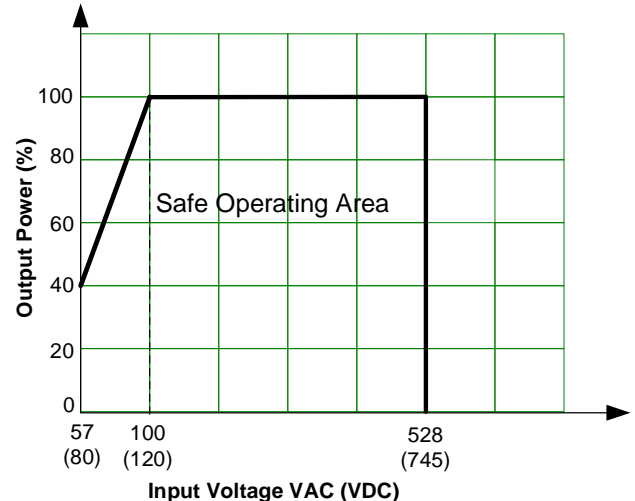
Standards	EMC - Conducted and radiated emission	CISPR22 / EN55022 Class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV/ Air ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±4KV, Criteria B
	Surge Immunity	IEC 61000-4-5 L-L ±2KV, Criteria B
		IEC 61000-4-5 L-L ±4KV with EMC recommended 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	

Derating

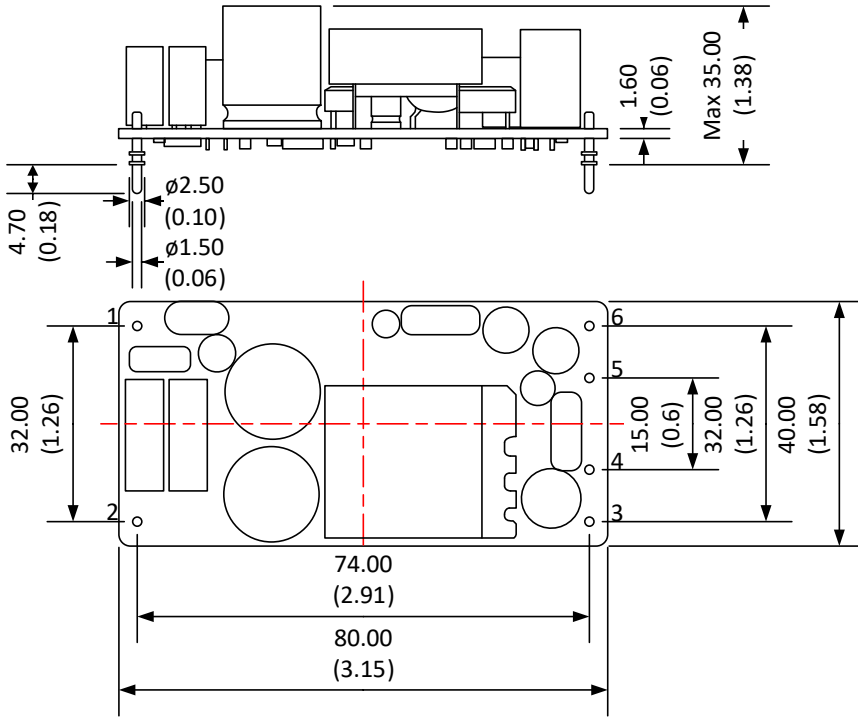
Free Air Convection



Free Air Convection at 25°C



Dimensions



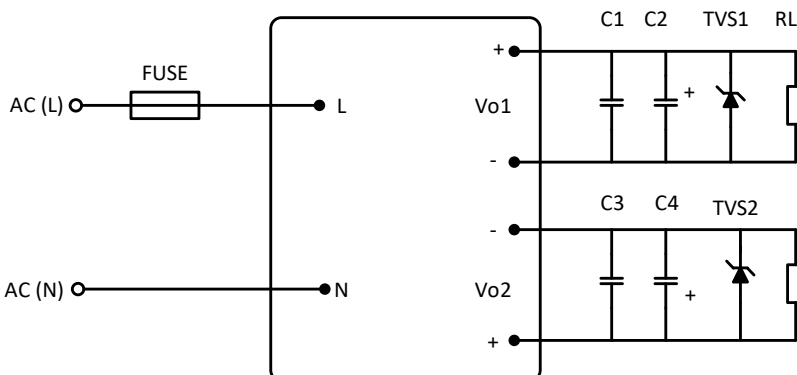
Grid size: 2.54*2.54mm

Note:
 Unit: mm(inch)
 General tolerance: ± 0.5 (± 0.02)
 Pin tolerance: ± 0.1 (± 0.004)

Pin Output Specifications

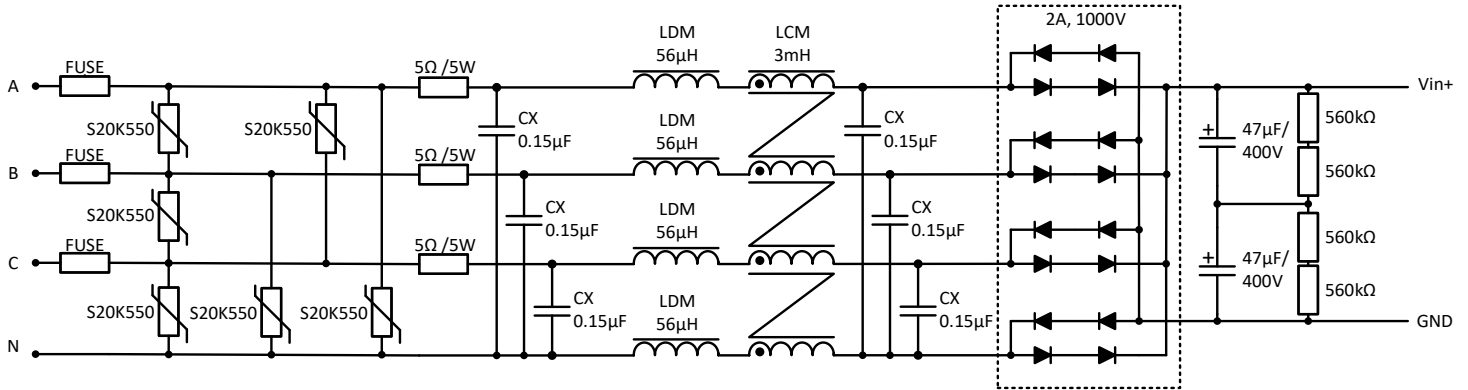
Pin	Function
1	AC Input (L)/ +V
2	AC Input (N)/ -V
3	+V Output2
4	-V Output2
5	-V Output1
6	+V Output1

Typical application circuit

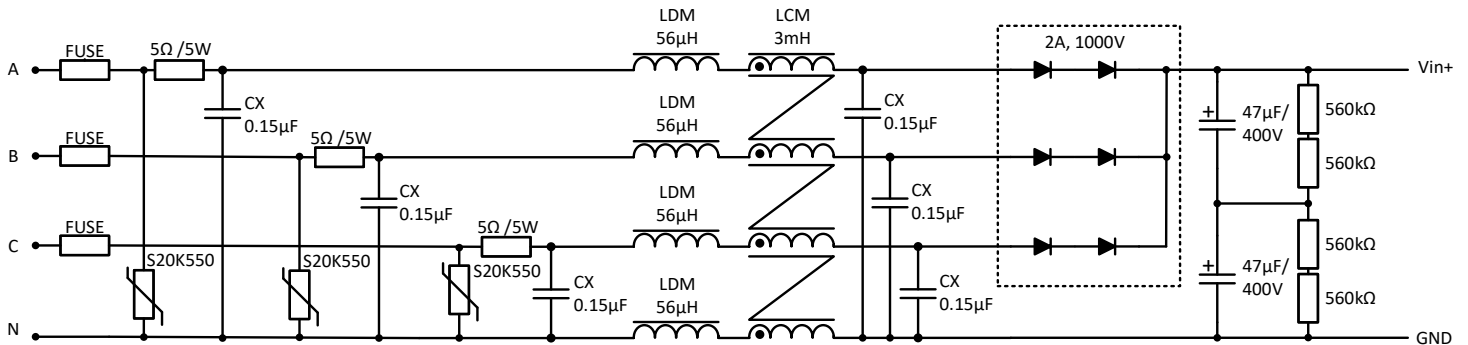


Component	Value
C1	0.1 μ F/50V (Ceramic capacitor)
C2	220 μ F/10V (Electrolytic capacitor)
C3	0.1 μ F/50V (Ceramic capacitor)
C4	100 μ F/25V (Electrolytic capacitor)
TVS1	P6KE6.8A
TVS2	P6KE15A

Recommended EMC circuit (Full-wave Rectification)



Recommended EMC circuit (Half-wave Rectification)



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.