

Series AMEOW10-NZ

10 Watt | AC-DC / DC-DC Converter



FEATURES:

- Open Frame design
- 4000 VAC Isolation
- 3 or 4 wire three phase input
- Over-voltage protection
- Very wide input range
- Low Ripple & Noise
- High Efficiency
- Low Standby Power < 0.55W

Models

Dual output



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Temperature range (°C)	Output Voltage (V)	Output Current max (A)	Maximum capacitive load (μF)	Efficiency (%)
AMEOW10-5S12S-NZ	65-460 / 47-440	90-650	-40 to +70	5.1	1.2	4000	78
				12	0.4	1200	

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. All specifications are in reference to input voltage Vin=220VAC.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current	Vin=220VAC	100		mA
Inrush current <2ms	Vin=220VAC	25A		A
Leakage current	Vin=220VAC	0.3		mA
External fuse	Slow Blow Type	3.15A 250V		A
Input dissipation	Vin=220VAC, 100% load	13.5		W
Under voltage protection		56		VAC
Input Over Voltage Shutdown			750 ± 50	Vdc

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		Vo1: 5 Vo2: ± 10		%
Line regulation	10 – 100%	Vo1: ± 0.5 Vo2: ± 1.5		%
Load regulation	Balanced Load	Vo1: ± 3 Vo2: ± 5		%
Cross regulation		Vo1: ± 3 Vo2: ± 12		%
Transient recovery time		2000		μs
Transient response deviation	Vin=220VAC	± 100		mV
Ripple & Noise	20MHz Bandwidth		V1: 100 V2: 200	mV p-p
Hold-up time (min)		200		ms
Voltage adjustment range		V1: ± 3 V2: ± 10		%

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60s > 50MΩ		4000	VAC
Output V1 V2 Isolation	4000 VAC	Reinforced isolation		

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		63		KHz
Start up time		500		mS

General Specifications (continue)

Parameters	Conditions	Typical	Maximum	Units
Over current protection	Io1 & Io2 = 100%	110~250%, Auto Recovery		%
Over voltage protection		Clamp Diode		%
Short circuit protection		Continuous		
Short circuit restart		Auto Recovery		
Operating temperature	Altitude < 3000 meters	-40 to +70		°C
Storage temperature		-40 to +85		°C
Cooling		Free Air Convection		
Temperature coefficient			V1: ±0.02 V2: ±0.06	% / °C
Humidity		20 - 90		% RH
Weight		95		g
Dimensions (L x W x H)		3.94 (L) x 1.97 (W) x 1.38 (H) inches 100 (L) x 50 (W) x 35 (H) mm		
MTBF		> 300,000h @25°C		

Environment Approval

Test	Parameters	Conditions
Shock	Acceleration amplitude	196.1 m/s ²
	Bump duration	11 ms
	Number of bumps	Along x, y, z, once each
Vibration	Test mode	10 ~ 55 Hz
	Displacement	3 minutes / cycle
	Acceleration	19.6 m/s ²
	Converter operation	60 minutes

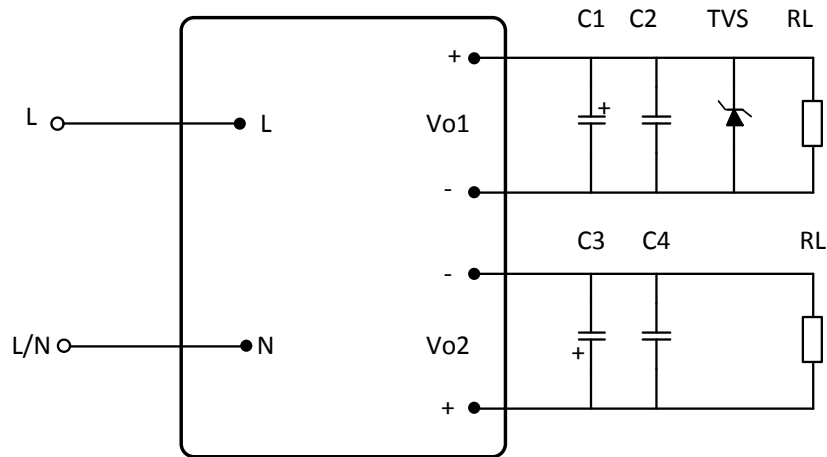
Safety Specifications

Parameters	
Standards	Designed to meet : IEC EN61000-4-4, IEC EN61000-4-5, EN 55022 class B

Pin Out Specifications

Pin	Designation
1	AC Input (L)
2	AC Input (N)
3	Output +12 V
4	Output -12 V
5	Output -5 V
6	Output +5 V

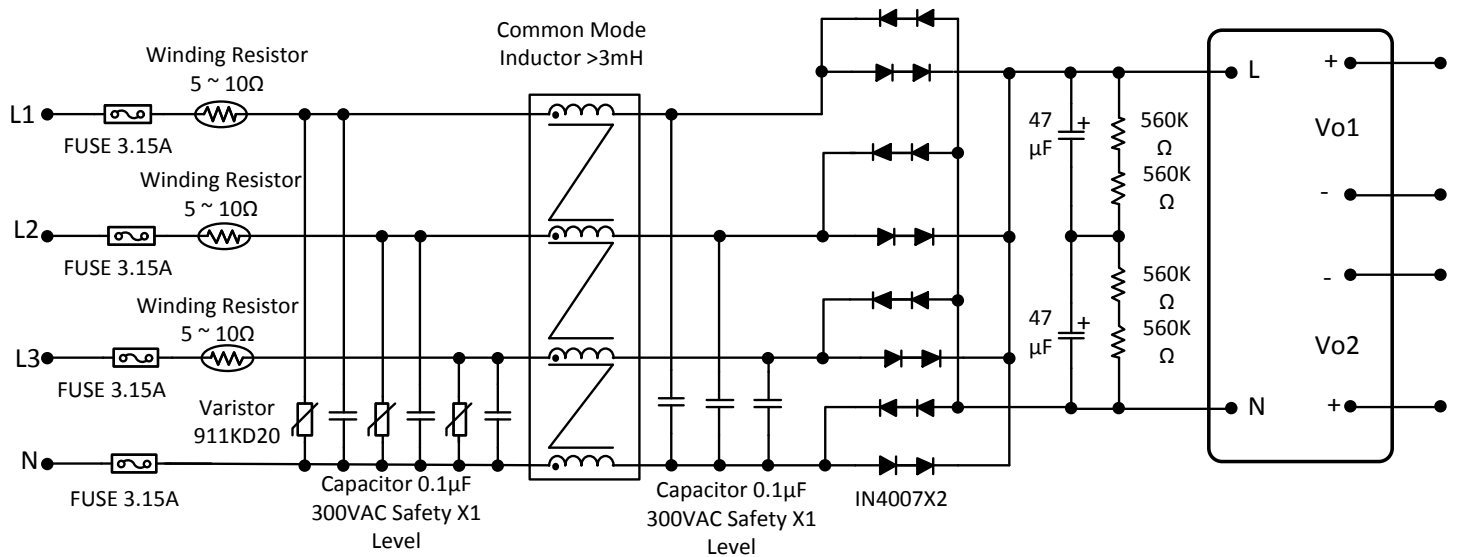
Typical Applications



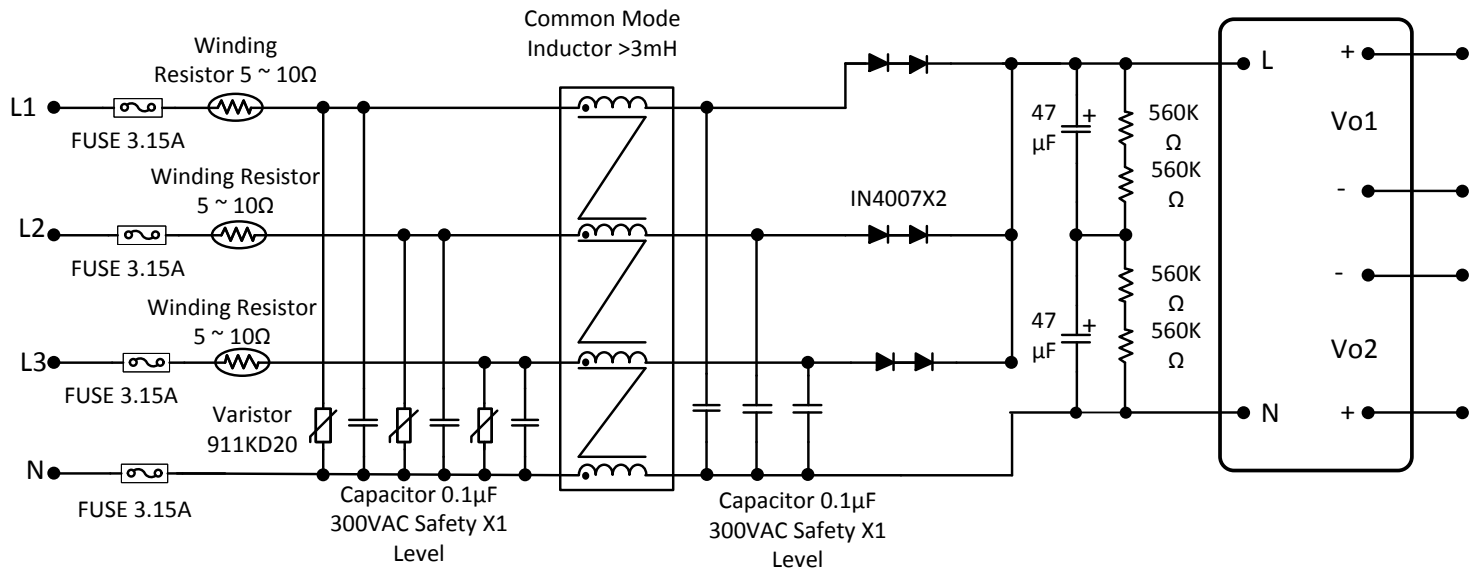
Device	Value
C1	220 μ F / 10V
C2	0.1 μ F / 50V
C3	100 μ F / 25V
C4	0.1 μ F / 50V
TVS	TVS 600W 6.8V UNIDIRECT DO204AC P6KE6.8A

It is recommended that the 5V output adds TVS (transient voltage suppressor) to protect adjacent circuits (if device fails), the 12 V output has TVS protection internally, so not required.

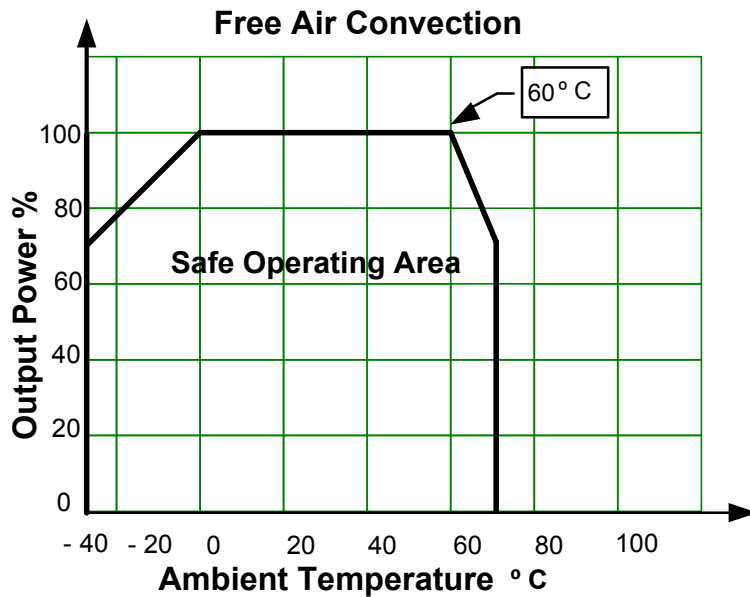
Three phase four wire full wave rectification application:



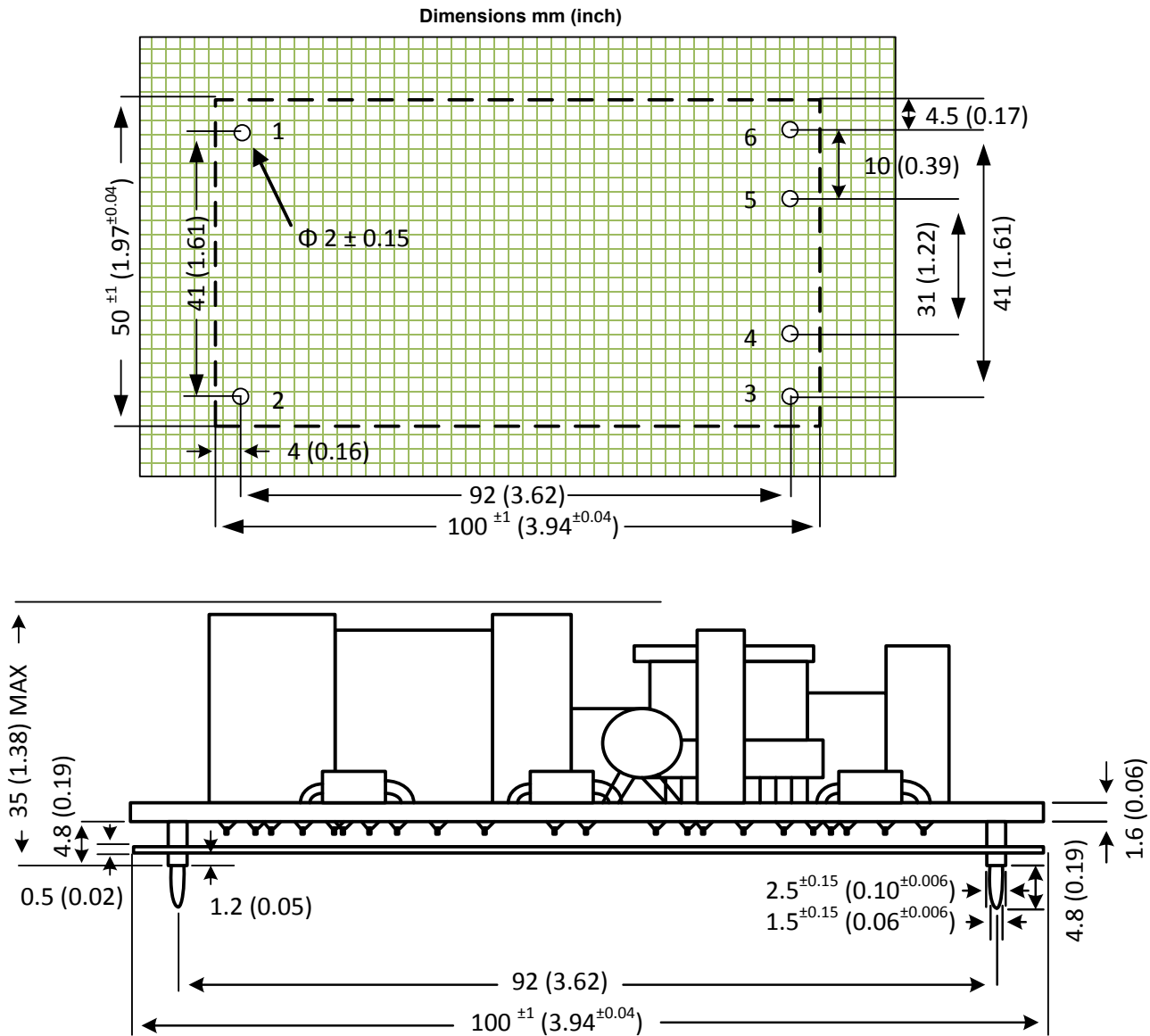
Three phase four wire half wave rectification application:



Derating



Dimensions



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