AM30OW-VZ

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Open Frame

The new AM30OW-VZ is an ultra-wide input DC/DC converter that offers 4:1 input voltage range and dual isolated output channels also leading to improved reliability and performance. This series will offer many benefits to your new system design for several voltage supply rails in just one component.
This series offers great operating temperatures, from -40°C to +85°C with full power up to 55°C. It also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a high MTBF of 1,000,000h, output short circuit protection (OSCP), output over-current protection (OCP), output over-voltage protection (OVP) and input under-voltage protection (UVLO) come standard with the series.
The AM30OW-VZ is great for electricity distribution networks, relay protection, data transmission devices, telecommunication devices, distributed power supply systems, hybrid module systems, remote control systems, industrial robot fields & more.

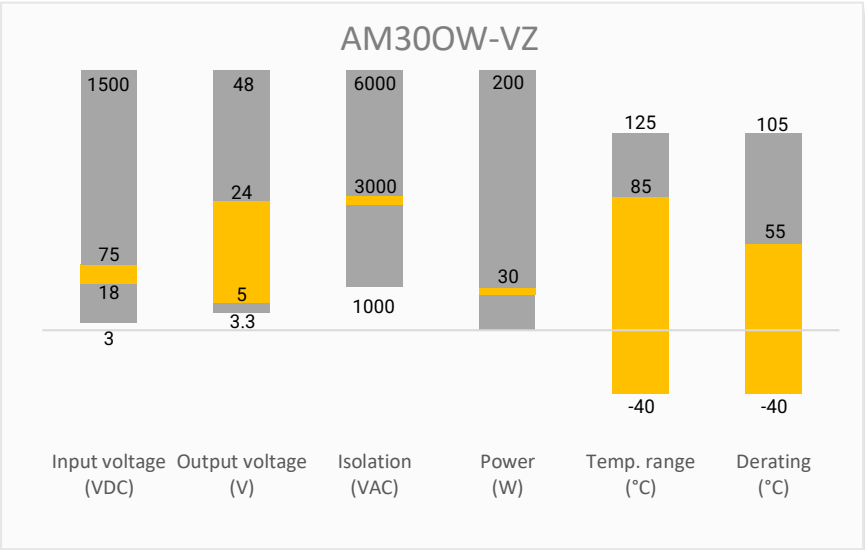
Features

- Operating Temp: -40 °C to +85 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 50mV (p-p), typ.
- Regulated dual Output
- Open frame package
- Output short circuit, over-current, over-voltage, input under-voltage protection

RoHS

3yr Warranty

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid

Industrial

Telecom

Instrumentation

Models & Specifications

Dual Output										
Model	Input Voltage (VDC)	Output Voltage (VDC)		Input Current Max (mA)		Output Current Max (mA)		Maximum Capacitive Load (µF)		Efficiency (%) Full Load Typ.
		Vo1	Vo2	No Load	Full Load	Io1	Io2	Vo1	Vo2	
AM30OW-480524DH30VZ	48 (18-75)	5	24	80	763	4000	417	3000	100	84

Input Specification				
Parameters	Conditions	Typical	Maximum	Units
Input voltage		18 - 75	80	VDC
Input reflected ripple current	Nominal input	40		mA
Absolute maximum rating	1s		100	VDC
Start-up voltage			18	VDC
Shut down voltage		≤12		VDC
Start-up time	Nominal input, Constant resistance load	20	50	ms

Isolation Specification				
Parameters	Conditions	Typical	Maximum	Units
Tested isolation voltage	Input / output 60 sec, ≤ 5mA	3000		VAC
	Output 1 / output 2 60 sec, ≤ 5mA	3000		
Resistance	500VDC	≥1000		MΩ

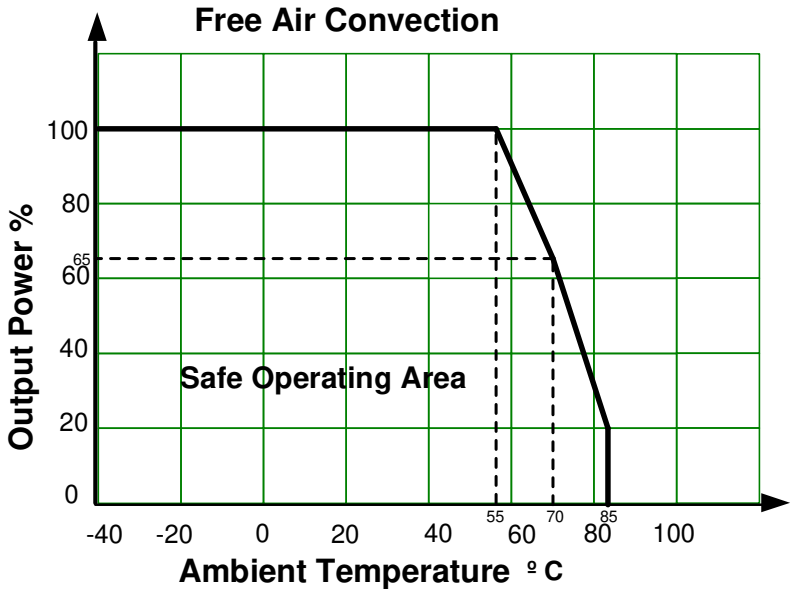
Output Specification					
Parameters	Conditions		Typical	Maximum	Units
Voltage accuracy	5% -100% load		±1	±3	%
	0% -5% load	Output 1	±1	±5	
		Output 2	±3	±5	
Line regulation	LL – HL 100% load	Output 1	±0.2	±0.5	%
		Output 2	±0.5	±1	
Load regulation	5% - 100% load		±0.5	±1	%
	0% - 5% load		±5		
Short circuit protection	Continues, Auto recovery				
Over current protection			≥110	190	% Io
Over voltage protection			≥110	160	% Vo
Transient Recovery Time	Nominal input, 25% load step change		300	500	µs
Transient Response Deviation	Nominal input, 25% load step change	Output 1	±4	±8	%
		Output 2	±3	±5	
Ripple & Noise	20MHz bandwidth, 5% -100% load	Output 1	40	80	mV pk-pk
		Output 2	50	100	

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency*	100% Load	300		KHz
Operating temperature	With derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Soldering temperature	1.5mm distance ≤ 10s		300	°C
Temperature coefficient	100% Load		± 0.03	%/ °C
Cooling	Free air convection			
Humidity	Non-condensing		95	% RH
Weight		50.0		g
Dimensions (L x W x H)	2.76 x 1.89 x 1.02 inches (70.00 × 48.00 × 26.00 mm)			
Vibration	10 – 150Hz, 5G, 90 minutes, along all axels			
MTBF	> 1 000 000 hrs (MIL-HDBK -217F, t=+25°C)			

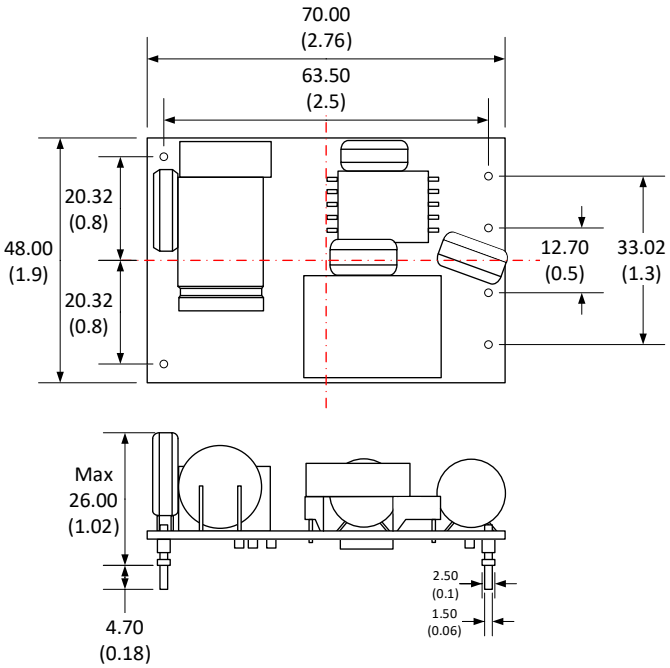
*Switching frequency reduces when load under 50%.
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

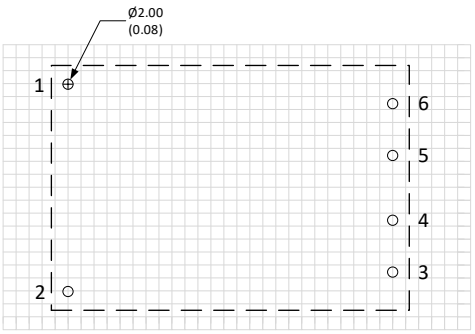
Safety Specifications		
Parameters		
Standards	Design to meet EN62368	
	EMI - Conducted and radiated emission	CISPR32/EN55032 Class B
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2, Contact ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC/EN 61000-4-3, 30V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC/EN 61000-4-4, ±4KV, Criteria B
	Surge Immunity	IEC/EN 61000-4-5, ±2KV, Criteria B
	RF, Conducted Disturbance Immunity	IEC/EN 61000-4-6, 10Vr.m.s, Criteria A

Derating



Dimensions





Grid size: 2.54*2.54mm

Pin Out Specifications	
Pin	Single
1	+V Input
2	-V Input
3	+V Output 1
4	-V Output 1
5	-V Output 2
6	+V Output 2

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

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

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