Series AM10W-NZ

10 Watt | DC-DC Converter

Picture coming soon

FEATURES:

- Super wide 10:1 Input range
- Extremely High Input range up to 1000VDC
- Operating temperature of -40 to +70°C
- Over current and Over Voltage protection
- No minimum load required
- High efficiency of up to 80%
- I/O Isolation of 4000VAC
- Reversed connection protection

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VAC)	Max Capacitive Load(uF)	Efficiency (200VDC) (%)
AM10W-60005S-NZ	100-1000	5	2	4000	6000	72
AM10W-60009S-NZ	100-1000	9	1.11	4000	4000	76
AM10W-60024S-NZ	100-1000	24	0.42	4000	470	80

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.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage range			100-1000	VDC
Input Current	200VDC		75	mA
	600VDC		25	
	1000VDC		16	
Inrush current <2ms	200VDC	7		A
	600VDC	20		
	1000VDC	30		
External fuse	Slow blow	1		A
Startup time	200-1000VDC		1	s

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	1 min	4000		VAC

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1	±2	%
Line voltage regulation	LL-HL	±0.5	±1	% of Vin
Load voltage regulation	0-100% load	±0.5	±1	%
Over voltage protection	Zener diode clamp			
Over current protection			110	% of Iout
Short Circuit protection	Continuous			
Short circuit restart	Auto recovery			
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	100	200	mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load		75	KHz
Operating temperature	With derating	-40 to 70		°C
Storage temperature	-40 to 105			°C
Maximum case temperature			95	°C
Cooling	Natural convection			
Humidity			95	% RH
Case material	Black plastic (UL94-V0)			

General Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Weight		95		g
Dimensions (L x W x H)	2.76 x 1.89 x 0.93 inches 70.00 x 48.00 x 23.50 mm			
MTBF	>300,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5mm from case for 5-10 sec		260	°C

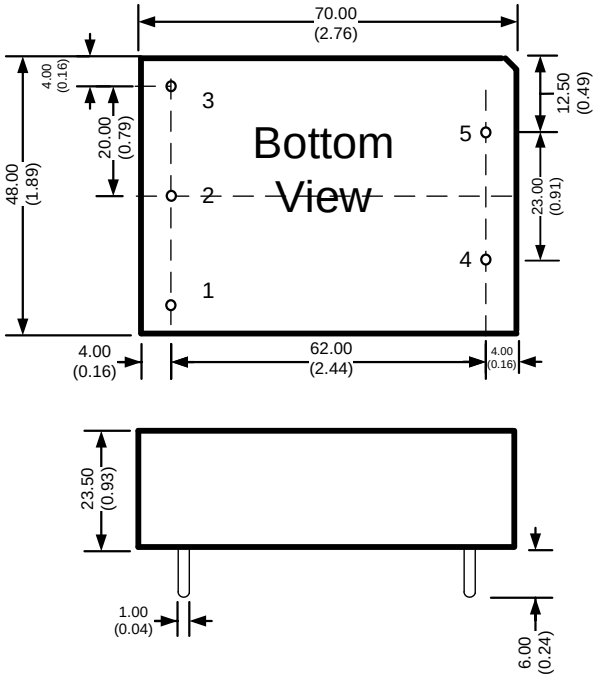
Safety Specifications

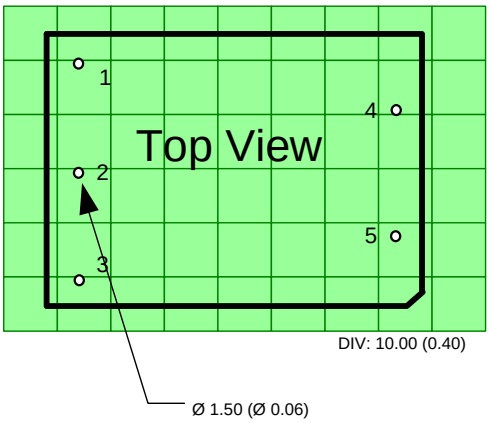
Parameters		
Standards	EMI - Conducted and radiated emission	EN55022, class A (with the recommended EMC circuit) EN55024: 2010
	Electrostatic Discharge Immunity	IEC 61000-4-2: Contact ±6KV/Air ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3: 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4: ±4KV, Criteria B
	Surge Immunity	IEC 61000-4-5: ±2KV, Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6: 10Vrms, Criteria A
	Power frequency Magnetic Field Immunity	IEC 61000-4-8: 10A/m, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11: 0-70%, Criteria B

Pin Out Specifications

Pin	Single
1	N.C.
2	-Vin
3	+Vin
4	-Vout
5	+Vout

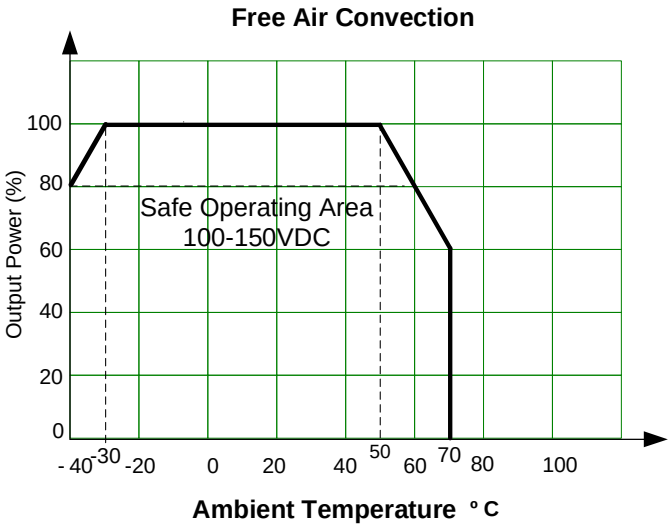
Dimensions

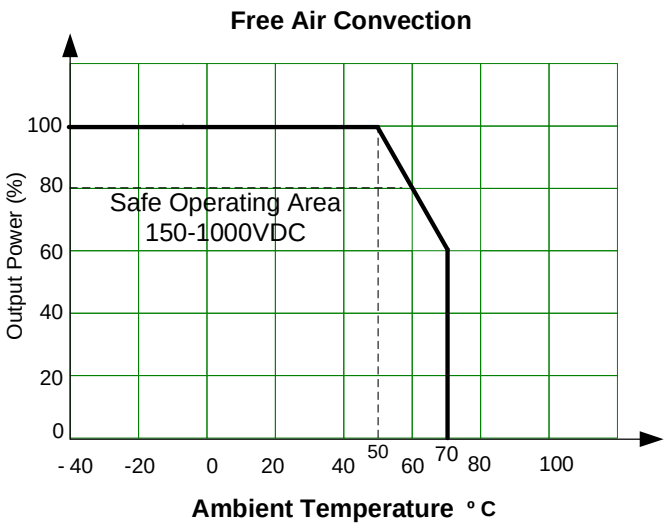


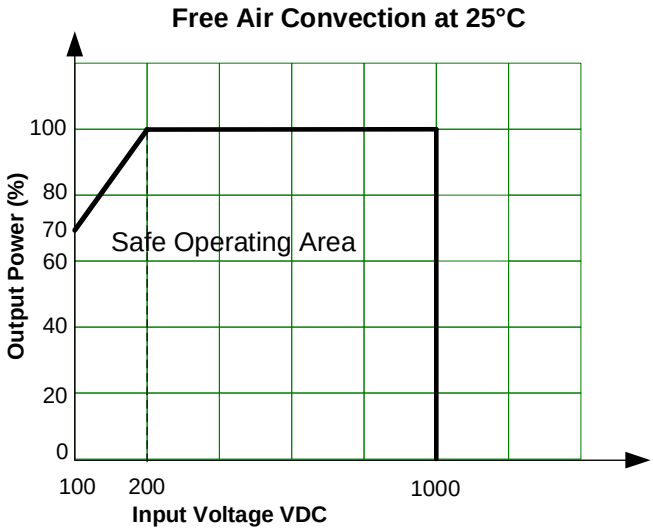


Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter ± 0.10 (± 0.004)

Derating

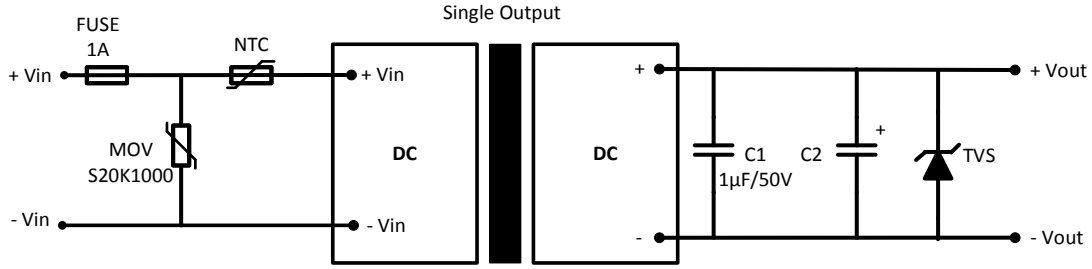






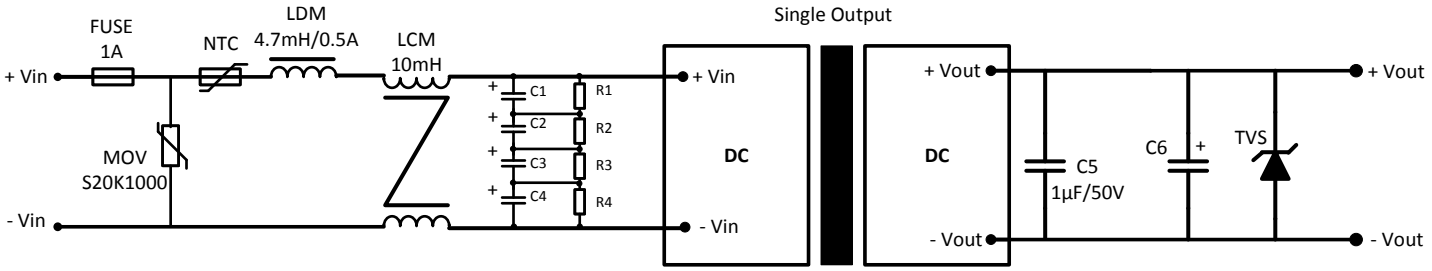
NOTE: 1. Derated Pout = Pout * temp. derating * Vin derating.
2. Sufficient air space for natural air flow around must be considered.

Typical Application circuit



Model	C2	TVS
5 Vout	220 µF / 35V	7V
9 Vout	120 µF / 35V	12V
24 Vout	68 µF / 35V	33V

Recommended EMC Circuit



Model	C1, C2, C3 &C4	R1, R2, R3 & R4	C6	TVS
5 Vout	47 µF/450V	1MΩ / 2W	220 µF / 35V	7V
9 Vout			120 µF / 35V	12V
24 Vout			68 µF / 35V	33V

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.