



**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 72%
- 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(μF)	Efficiency (200VDC) (%)
AM5W-60005S-NZ	100-1000	5	1	4000	6000	72

Add suffix “-ST” for optional screw terminal bottom plate.

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		38	mA
	600VDC		15	
	1000VDC		10	
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	Without 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)		
Weight		95		g

	With optional -ST mounting plate: 150		
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

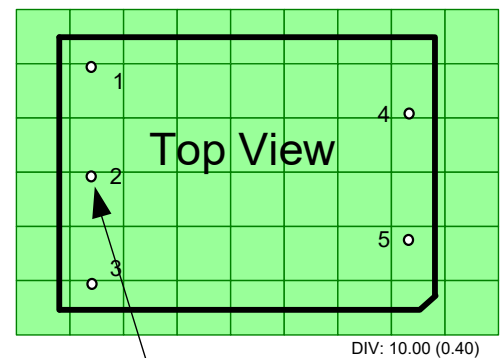
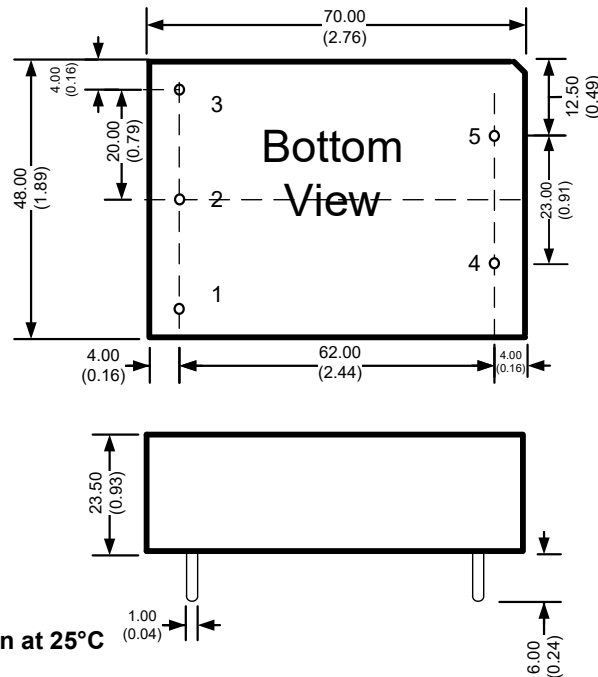
## Safety Specifications

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

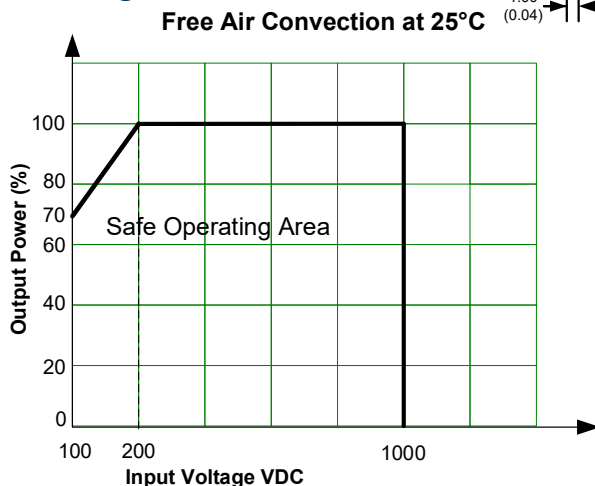
Pin	Single
1	N.C.
2	-Vin
3	+Vin
4	-Vout
5	+Vout

## Dimensions



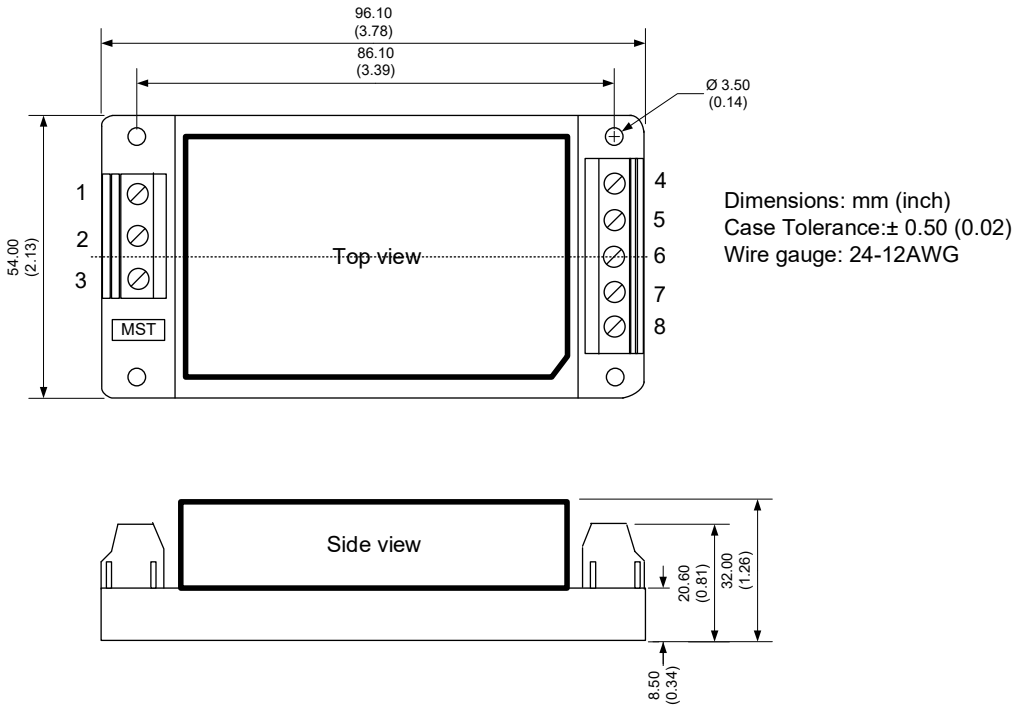
Dimensions mm (inch)  
 Case Tolerance ±0.50 (±0.02)  
 Pin Diameter ± 0.10 (± 0.004)

## Derating



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

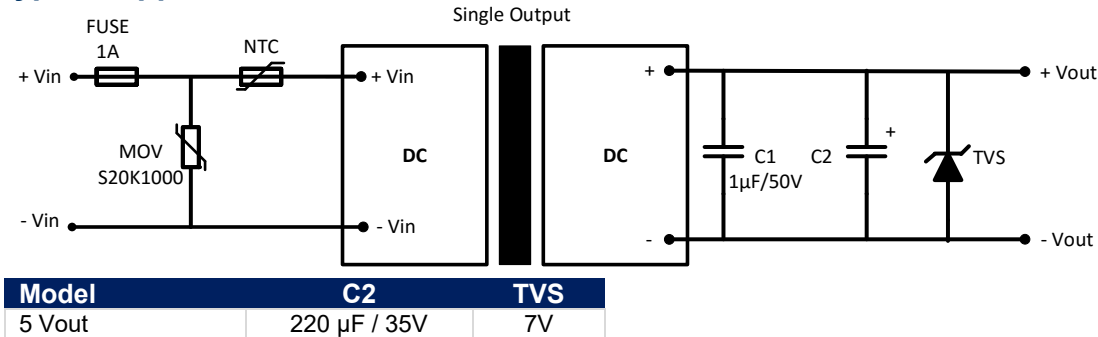
**Optional -ST bottom plate**



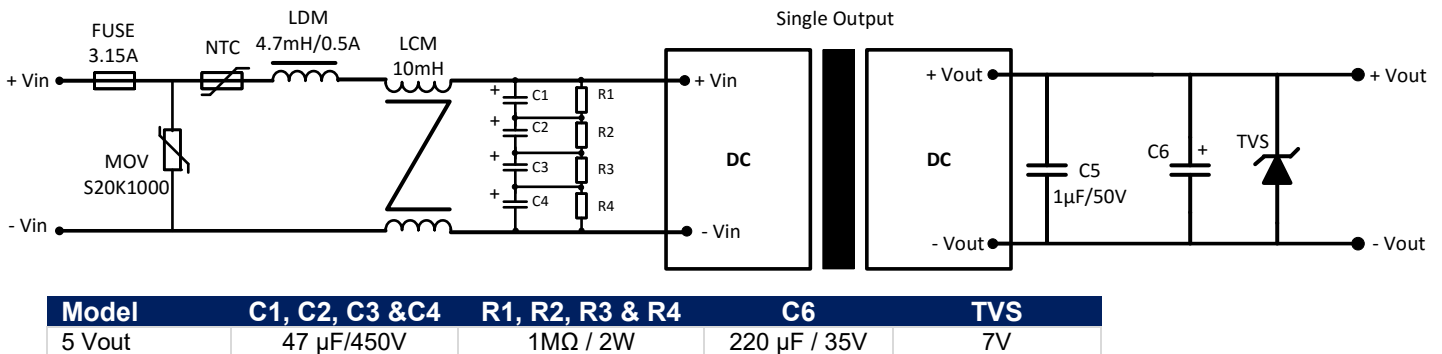
**Pin Out Specifications**

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

**Typical Application circuit**



**Recommended EMC Circuit**



**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](http://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](http://www.aimtec.com).

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