

Series AM10T-NZ

10 Watt | DC-DC Converter

FEATURES:

- Short Circuit, OC & OVP Protection
- DIP 24 Package
- output short circuit protection
- Wide 2:1 input range
- Meets EN55032 Class A without external circuit
- Operating temperature -40°C to + 85°
- Input under-voltage protection
- over-current, over-voltage protection
- Low ripple and noise
- Input/output Isolation voltage 1500VDC

Picture coming soon

Models

Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive Load, max(uf)	Efficiency (%)
AM10T-1212SNZ	9-18	12	833	470	87
AM10T-1215SNZ	9-18	15	667	330	87
AM10T-1224SNZ	9-18	24	416	100	88
AM10T-2412SNZ	18-36	12	833	470	87
AM10T-2415SNZ	18-36	15	667	330	87
AM10T-2424SNZ	18-36	24	416	100	88
AM10T-4812SNZ	36-75	12	833	470	87
AM10T-4815SNZ	36-75	15	667	330	87
AM10T-4824SNZ	36-75	24	416	100	88

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive Load, max(uf)	Efficiency (%)
AM10T-1205DNZ	9-18	±5	±1000	1000	83
AM10T-1212DNZ	9-18	±12	±416	470	87
AM10T-1215DNZ	9-18	±15	±333	330	87
AM10T-2405DNZ	18-36	±5	±1000	1000	83
AM10T-2412DNZ	18-36	±12	±416	470	87
AM10T-2415DNZ	18-36	±15	±333	330	87
AM10T-4805DNZ	36-75	±5	±1000	1000	83
AM10T-4812DNZ	36-75	±12	±416	470	87
AM10T-4815DNZ	36-75	±15	±333	330	87

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	Nominal	Typical	Maximum	Units
Voltage range	12 24 48	9-18 18-36 36-75		VDC
Input current (Full load/No load)	12 24 48		1028/15 515/12 258/8	
Filter	Capacitor			
Input reflected ripple Current	12 24 48	50 40 30		
Absolute Maximum Rating	12 Vin 24 Vin 48 Vin		25 50 100	VDC
Permissible absolute maximum duration			1	S

Input Specifications(Continued)

Parameters	Nominal	Typical	Maximum	Units
Remote On/Off Control	On	3.5-12VDC or leave open 0-1.2VDC or connect to GND, idle current 6-10mA		
	Off			
	Input Current when Off	6	10	mA

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		2000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Positive Output	±0.5		%
	Negative Output	±1		
Short Circuit protection	Continuous			
Short Circuit restart	Auto recovery			
Over voltage protection	Zener diode clamp	>110%		VDC
Line voltage regulation LL-HL	Positive Output	±0.2		%
	Negative Output	±0.5		
Load voltage regulation	5% – 100% full load	±0.5		%
	0% – 5% load	±5		%
Temperature coefficient	Full load	±0.03		%/°C
Transient recovery time	25% load step change,	0.3	0.5	mS
Transient recovery deviation	25% load step change	±3	±5	%
Ripple & Noise	20Mhz bandwidth, 5%-100% load	40		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	350		KHz
Operating temperature	Derating above +71 °C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Cooling	Free air convection			
Humidity			95	%
Case material		Aluminum Alloy		
Weight		14		g
Dimensions (L x W x H)	Tolerance ±0.02 inch, ±0.5mm	1.26 x 0.78 x 0.42 inches	32.00 x 20.00 x 10.80 mm	
MTBF	1000 K hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

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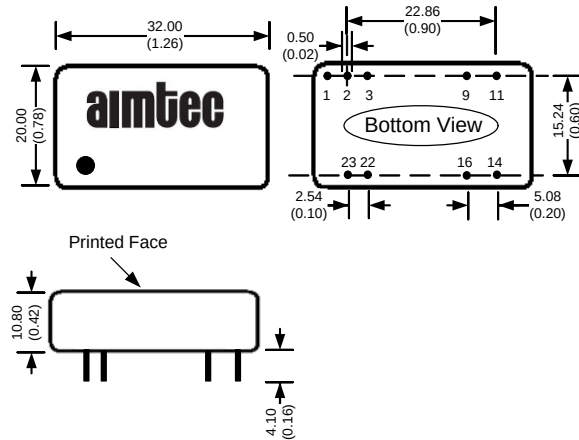
Safety Specifications

Parameters	
Standards	Designed to meet IEC/EN/UL60950-1
	EN 55032, class A (without external circuit), EN55032 Class B with EMC recommended circuit
	Electrostatic Discharge Immunity IEC 61000-4-2, Contact ±4KV, Criteria B
	RF, Electromagnetic Field Immunity IEC 61000-4-3, 10V/m, Criteria A
	Electrical Fast Transient / Burst Immunity IEC 61000-4-4, ±2KV, Criteria B (with the recommended EMC circuit)
	Surge Immunity IEC 61000-4-5, ±2KV, Criteria B (with the recommended EMC circuit)
	RF, Conducted Disturbance Immunity IEC 61000-4-6, 10 Vrms, Criteria A
	Voltage dips, Short Interruptions & Voltage variations Immunity IEC 61000-4-29: 0-70%, Criteria B

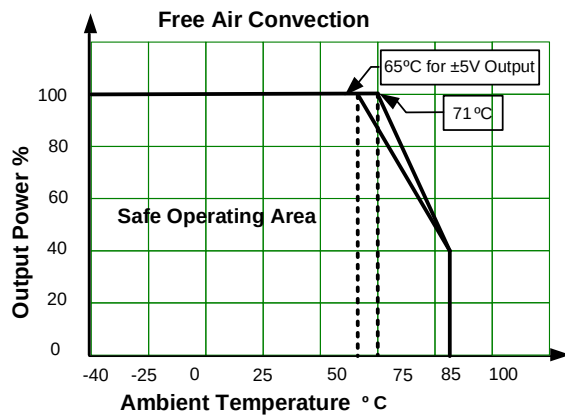
Pin Out Specifications

Pin	Single	Dual
1	Ctrl	Ctrl
2,3	-V Input	-V Input
9	N.C.	Common
10,15	Omitted	Omitted
11	N.C.	-V Output
14	+V Output	+ V Output
16	-V Output	Common
22,23	+V Input	+V Input

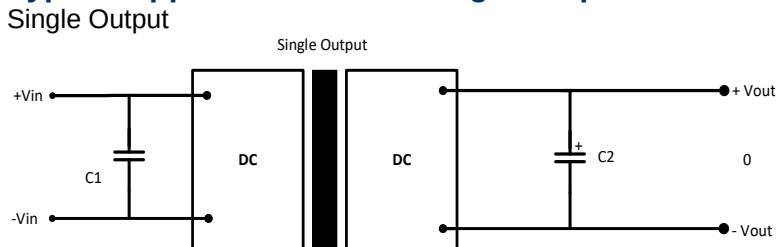
Dimensions



Derating

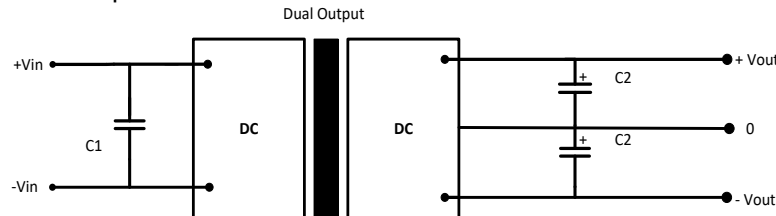


Typical Application Circuit Single Output

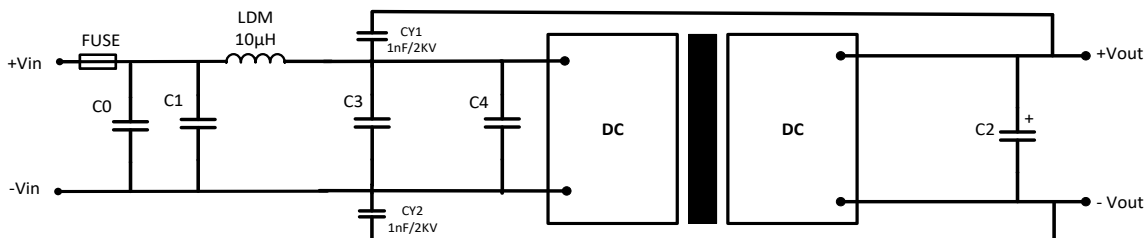


Vin (VDC)	C1	C2
12/24	100μF	10μF
48	10μF~47μF	10μF

Dual Output



EMC Recommended circuit



Vin (VDC)	C0 & C4	C1 & C3	C2	FUSE
12	470µF/35V	10µF/50V	10µF	Choose as per input current
24	330µF/50V	10µF/50V	10µF	
48	330µF/50V	10µF/100V	10µF	

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