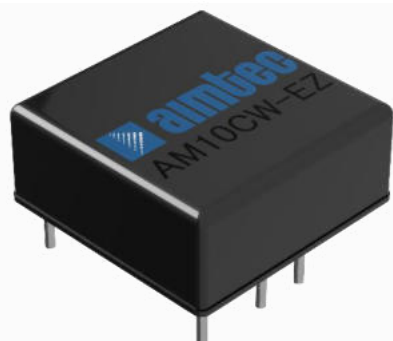


Click to
ORDER
samples

AM10CW-EZ



1" x 1"

The AM10CW-EZ is a 10W DC/DC converter that offers a regulated output which contributes to a more stable and reliable output performance. It features a wide 4:1 input voltage range of 9-75VDC, which will benefit your new system design.

This series offers great operating temperatures, from -40°C to +87°C with full power up to 65°C. It also features an isolation of 1500VDC for improved reliability and system safety.

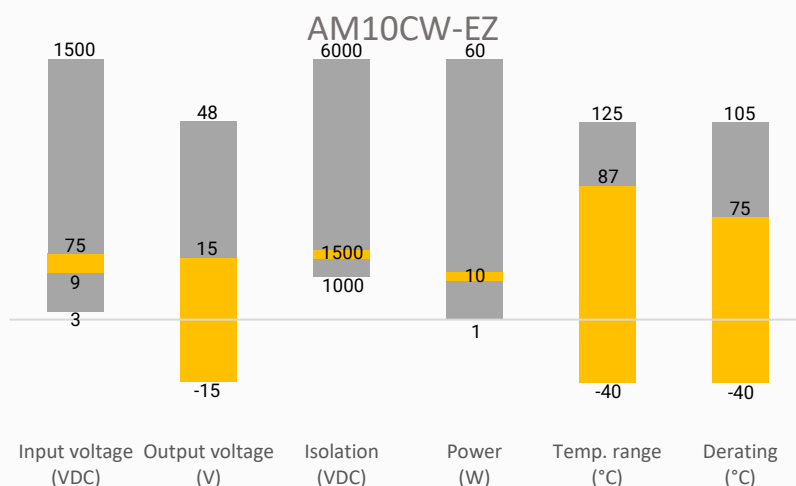
The AM10CW-EZ is great for distributed power supply systems, industrial controls, power grid, instruments and communications applications.

Features

- Operating Temp: -40 °C to +87 °C
- High isolation voltage: 1500VDC
- Low ripple & noise, 100mV (p-p), typ.
- Regulated Output
- 1" x 1" package
- Output short circuit protection
- Made in Taiwan



Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

Models & Specifications

Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Input Current (mA TYP)		Output Current Max (mA) Full Load	Efficiency Full Load Typ. (%)
			No Load	Full Load		
AM10CW-2403SEZ	24 (9-36)	3.3	50	393	2400	84
AM10CW-2405SEZ	24 (9-36)	5	40	496	2000	84
AM10CW-2412SEZ	24 (9-36)	12	20	483	830	86
AM10CW-2415SEZ	24 (9-36)	15	20	474	660	87
AM10CW-4803SEZ	48 (18-75)	3.3	30	196	2400	84
AM10CW-4805SEZ	48 (18-75)	5	40	248	2000	84
AM10CW-4812SEZ	48 (18-75)	12	10	241	830	86
AM10CW-4815SEZ	48 (18-75)	15	10	237	660	87

Dual Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Input Current Max (mA)		Output Current Max (mA) Full Load	Efficiency (%) Full Load Typ.
			No Load	Full Load		
AM10CW-2412DEZ	24 (9-36)	±12	20	483	±415	86
AM10CW-2415DEZ	24 (9-36)	±15	20	474	±330	87
AM10CW-4812DEZ	48 (18-75)	±12	10	241	±415	86
AM10CW-4815DEZ	48 (18-75)	±15	10	237	±330	87

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage Types			4:1	%
Filter	Pi Filter			
Protection	Fuse Recommended			
On/Off control	ON - open or pulled high (3.5 - 12 VDC) OFF - pulled low to GND (0 - 1.2 VDC), idle current 10mA max.			

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested isolation voltage	Input / output 60 sec, ≤ 1mA	1500		VDC
Resistance	500VDC	≥1000		MΩ

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage Tolerance	Full load @Vin (nom.)		±2	%
Line regulation			±0.5	%
Load regulation	Single		±0.5	%
	Dual (Balance Load)		±1	%
Short circuit protection	Hiccup, Auto recovery			
Cross Regulation	Dual (25% to 100% Load)		±5	%
Transient response setting time	25% load step change	300		μs

External Trim Adj. Range			±10	%
Ripple & Noise	20MHz bandwidth		100	mV pk-pk

General Specifications

Parameters	Conditions	Minimum	Typical	Maximum	Units
Switching frequency			400		KHz
Operating temperature	With derating	-40		87	°C
Storage temperature		-55		125	°C
Temperature coefficient	100% Load			± 0.03	%/°C
Cooling	Natural Convection (20LFM)				
Humidity	Non-condensing	5		95	% RH
Base material	Nickel coated copper with non-conductive base				
Weight			16.5		g
Dimensions (L x W x H)	1.00 x 1.00 x 0.42 inches (25.40 × 25.40 × 10.60 mm)				
MTBF	> 560 000 hrs (MIL-HDBK -217F, t=+25°C)				

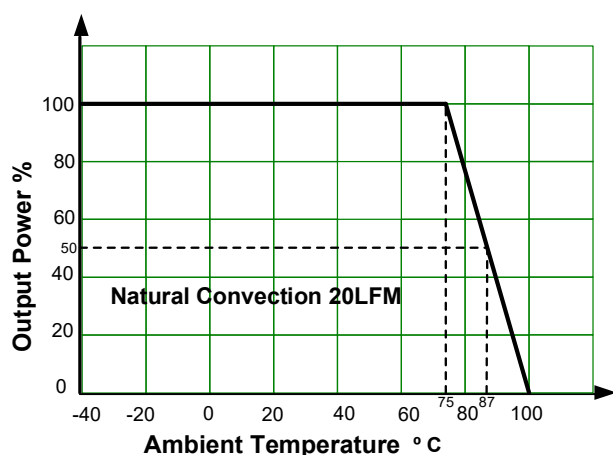
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

Parameters

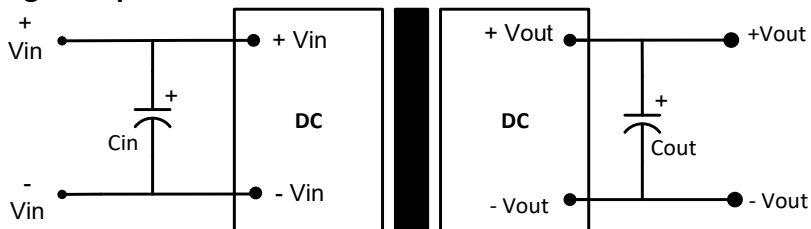
Standards	Designed to meet IEC/UL/EN62368-1	
	EMI - Conducted and radiated emission	CISPR32/EN55032
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2
	RF, Electromagnetic Field Immunity	IEC/EN 61000-4-3
	Electrical Fast Transient/Burst Immunity	IEC/EN 61000-4-4
	Surge Immunity	IEC/EN 61000-4-5

Derating



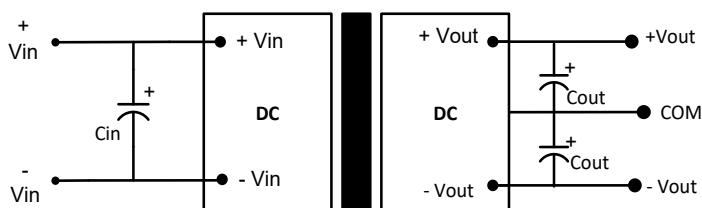
Typical Application Circuit

Single output models



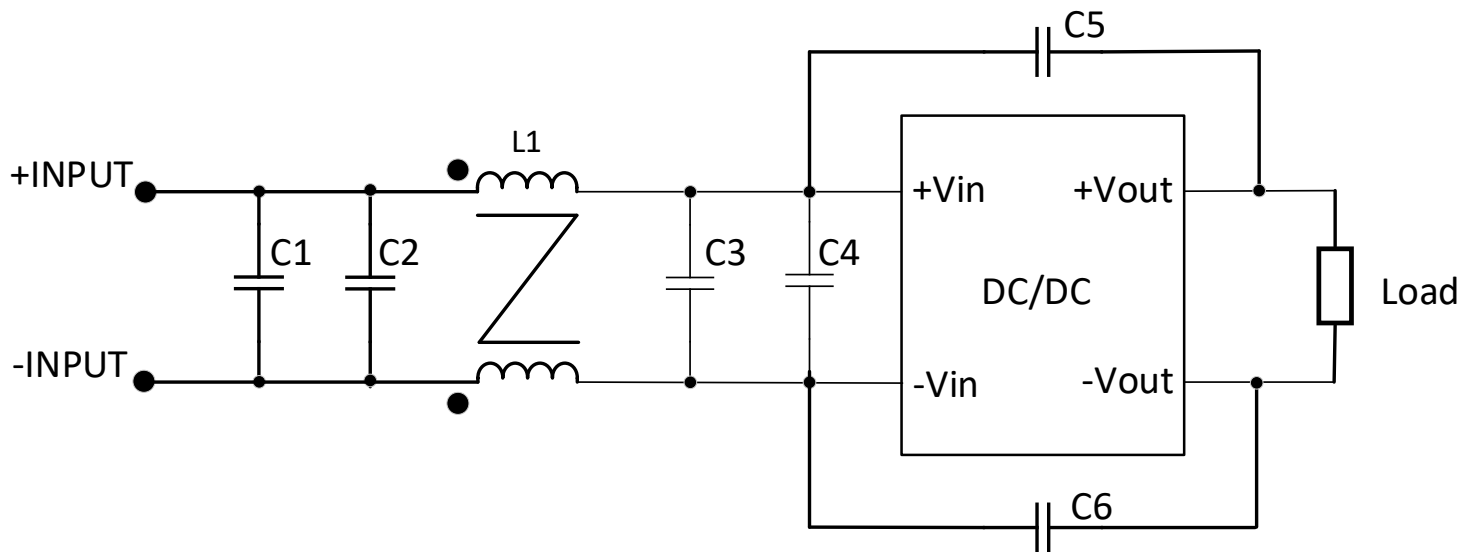
Single Output Models			
Vin	Cin	Vout	Cout
24VDC	10μF/100V	3.3VDC	100μF/25V
48VDC		5VDC	
		12VDC	
		15VDC	

Dual output models



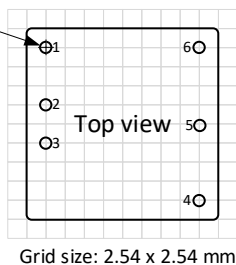
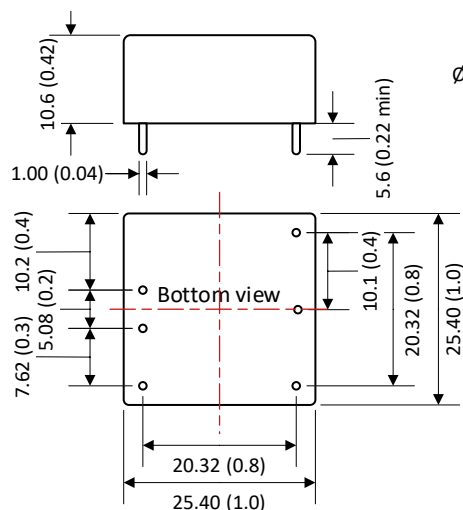
Dual Output Models			
Vin	Cin	Vout	Cout
24VDC	10μF/100V	±12VDC	100μF/25V
48VDC		±15VDC	

EMI Application Circuit



Parameter Description:			
Component	Value	Voltage	Reference
C1	220μF	100V	Electrolytic capacitor
C2, C3	4.7μF	100V	1812 MLCC
C5, C6	1000pF	2KV	1206 MLCC
L1	325μH		Common Mode Choke

Dimensions



Note:
 Unit: mm (inch)
 Pin tolerance: ± 0.05 (0.002)
 General tolerance: ± 0.5 (0.02)

Pin Out Specifications		
Pin	Single	Dual
1	Remote On/Off	Remote On/Off
2	-V Input	-V Input
3	+V Input	+V Input
4	+V Output	+V Output
5	Trim	Com
6	-V Output	-V Output

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.