

Click to
ORDER
samples

AMF48-NZ



Aimtec's EMC filter modules are extremely useful in reducing noise in sensitive analog circuit applications. Filters connected on the input of DC-DC converters can ensure system compliance with EMC requirements according to IEC/EN61000-4 and CISPR32/EN55032 standards.

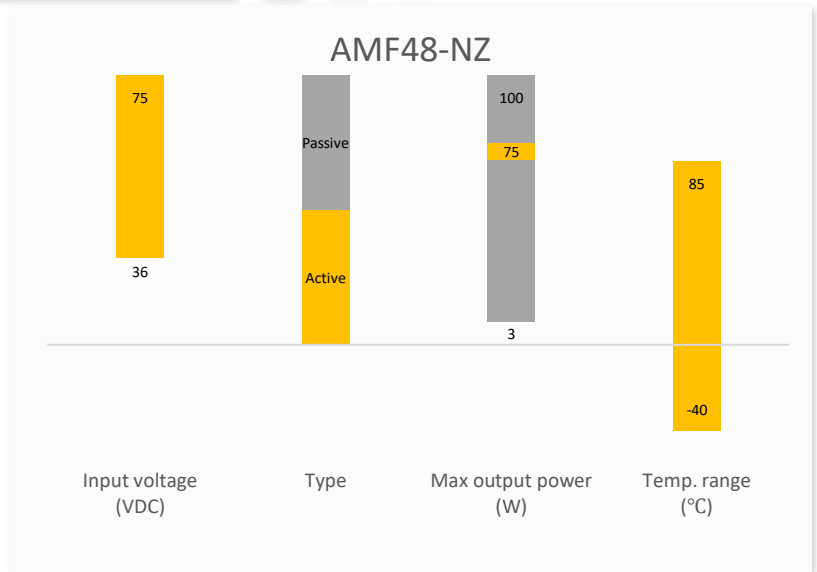
Aimtec's DC-DC converter modules can be paired with the new generation of Aimtec's EMC filters to achieve the required compliance. The Aimtec EMC line can currently offers solutions up to 100W output power.

Features



- Wide Input: 36 - 75VDC
- Operating Temp: -40 °C to +85 °C
- High Isolation Voltage: 500VAC
- Input Reverse Voltage Protection
- Build-in Soft-Start Function

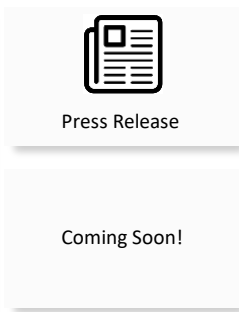
Summary



Training

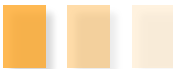


Product Training Video
(click to open)



Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

Models & Specifications

Models		
Model	Input Voltage (VDC)	Max Output Power (W)
AMF48-1.5NZ	36 ~ 75	75

Note: Use suffix "ST" for chassis and suffix "STD" for DIN-Rail mounting (ex. AMF48-1.5NZ -ST is chassis mounting and AMF48-1.5NZ -STD is DIN-Rail mounting version).

Input Specifications				
Parameters	Tested Conditions	Typical	Maximum	Units
Input Voltage		48	75	VDC
No-load Current	48VDC		5	mA

Output Specifications				
Parameters	Tested Conditions	Typical	Maximum	Units
Max Output Voltage Limit	Input voltage is not more than 100V	82		VDC

NOTE: Continuous operation of the filters at their Max. Output voltage Limit may cause failures or permanent damage.

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Efficiency	48VDC, Full load	97		%
Operating temperature		-40 to +85		°C
Storage temperature		-55 to +125		°C
Case temperature rise	48VDC, Full load		+70	°C
Isolation Voltage (+Vin / GND ; -Vin / GND)	1 min, < 5mA leakage current		500	VAC
Storage Humidity		95		%RH
Case material	Heat resistant black Plastic (flammability to UL 94V-0)			
Weight	PCB mountable models	50		g
	With optional -ST mounting plate	70		
	With optional -STD mounting plate	90		
Dimensions (L x W x H)	PCB mountable models	2.12 x 1.13 x 0.75 inches (53.80 x 28.80 x 19.00mm)		
	With optional -ST mounting plate	2.99 x 1.24 x 1.09 inches (76.00 x 31.50 x 27.80mm)		
	With optional -STD mounting plate	2.99 x 1.24 x 1.28 inches (76.00 x 31.50 x 32.40mm)		
MTBF	>1,000,000 hrs (MIL-HDBK -217F, t=+40°C)			

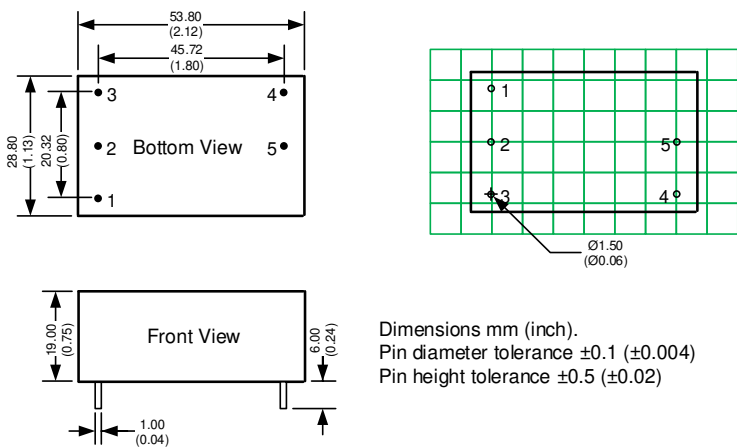
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

Parameters

Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact $\pm 6\text{KV}$ / Air $\pm 8\text{KV}$, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 $\pm 4\text{KV}$, Criteria B
	Surge Immunity	IEC 61000-4-5 $\pm 2\text{KV}$ (2Ω internal) / $\pm 4\text{KV}$ (12Ω internal), Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A

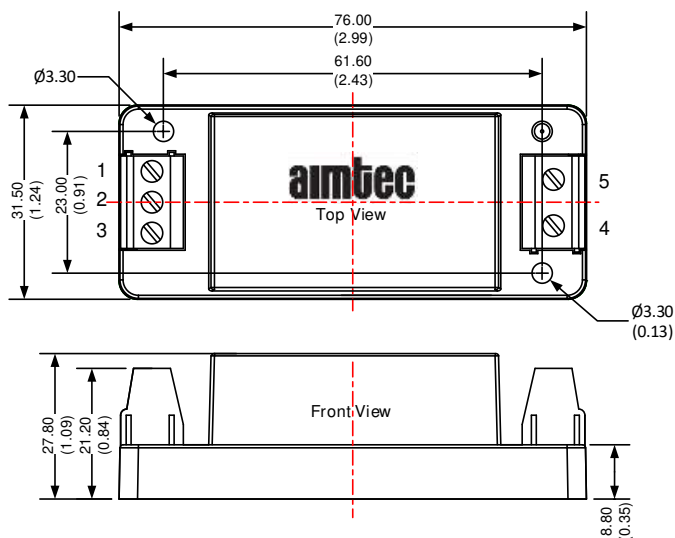
Dimensions



Pin Output Specifications

Pin	Single
1	GND
2	-V Input
3	+V Input
4	+V Output
5	-V Output

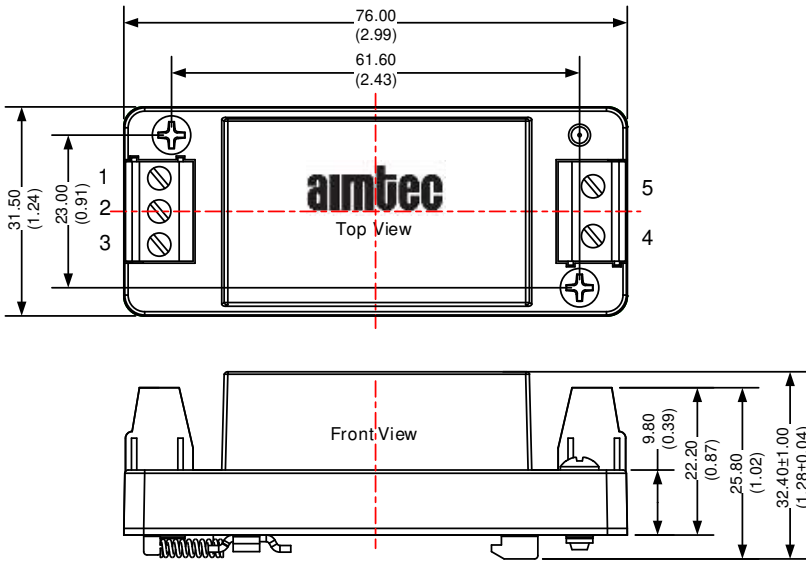
Dimensions with ST Optional



Pin Output Specifications

Pin	Single
1	GND
2	-V Input
3	+V Input
4	+V Output
5	-V Output

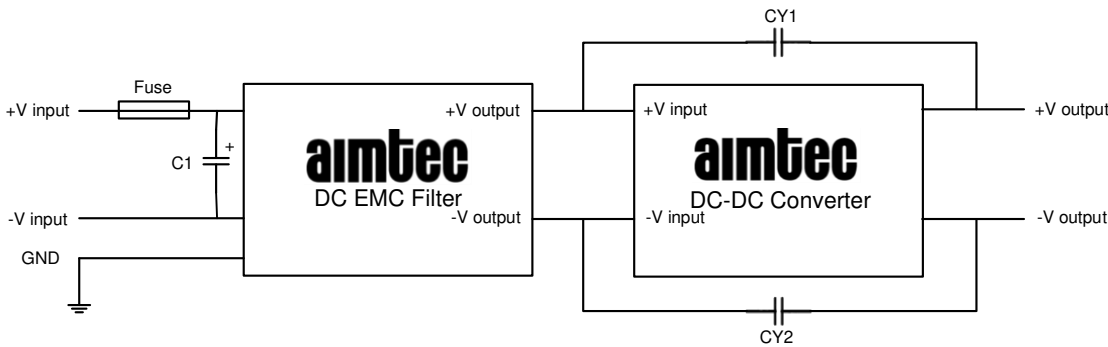
Dimensions with STD Optional



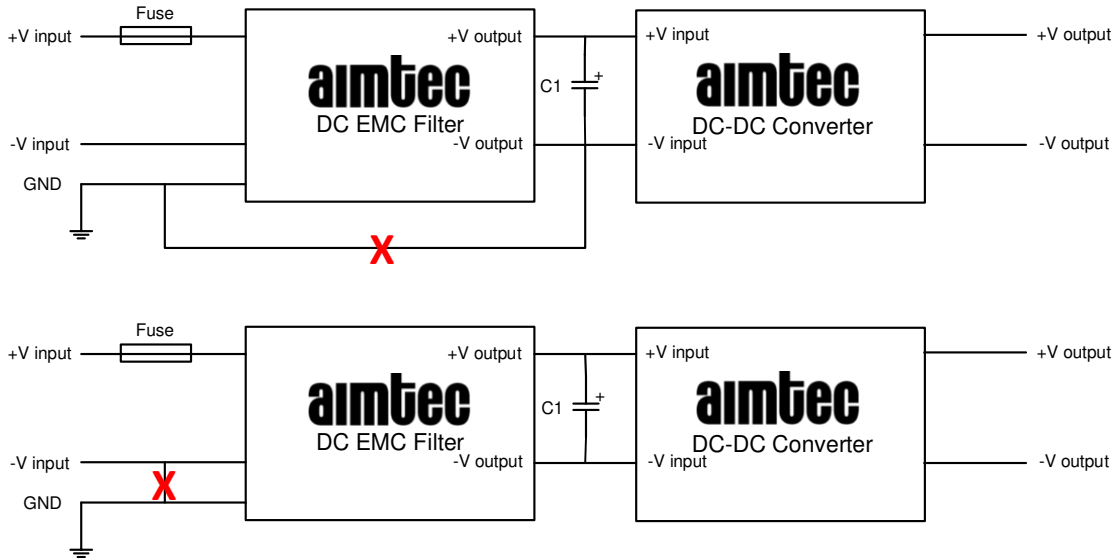
Pin Output Specifications	
Pin	Single
1	GND
2	-V Input
3	+V Input
4	+V Output
5	-V Output

Dimensions mm (inch)
Wire range: 24-12 AWG
General tolerances: ± 0.50 (± 0.02)

Application Circuit



Model	Recommended external circuit parameters
C1	400 μ F/200V electrolytic capacitor
CY1 / CY2	1nF/2KV
Fuse	The fuse value varies with different power modules and must be selected in accordance with the specified input current of the corresponding power converter, but not exceeding the filter specifications.



Note: Connections marked with **X** interfere with this filter modules performance and should therefore not be used

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.