



AMFW48-JZ



Encapsulated

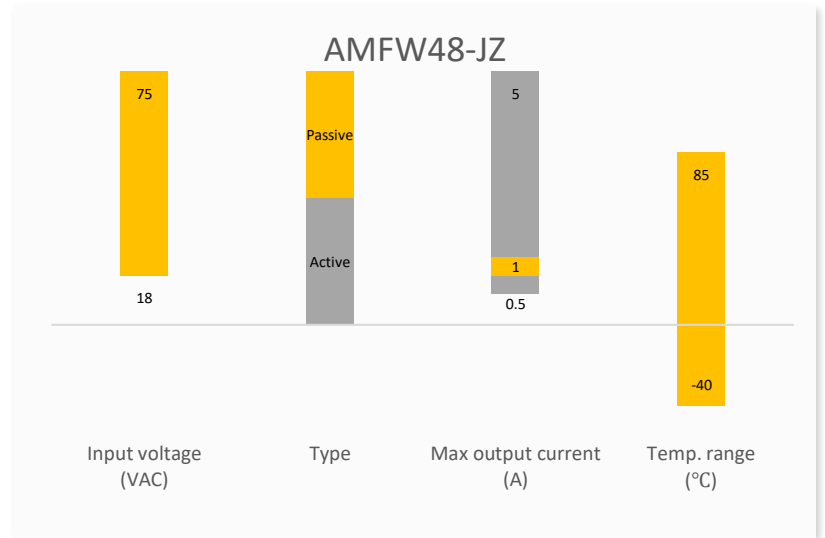
The AMFW48-JZ series of EMC filters are designed for meeting the EMC requirements of noise-sensitive applications. This EMC filter has an input voltage range of 18-75VDC and the operating temperature range from -40 to 85C which enables it to be used in many industrial applications and operating environments.

The typical impedance is of 20 dBΩ for 150KHz to 100MHz frequency range. It is PCB mountable and available in optional chassis and DIN-rail mounting plate options.

Features

- Wide Input Range: 18 - 75VDC
- Operating Temp: -40 °C to +85 °C
- High Isolation Voltage: 1500VAC
- Surge suppress ability: L-N: ±2KV, L-G: ±4KV
- EMI meet CISPR32/EN55032 Class B

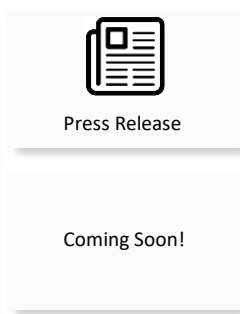
Summary



Training



Product Training Video  
(click to open)



Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

## Models & Specifications

Models			
Model	Input Voltage (VDC)	Max Current (A)	Surge Level (IEC/EN61000-4-5,GB/T17626.5)
AMFW48-1JZ	18 ~ 75	1	L-N: ±2KV (2Ω internal) L-GND: ±4KV (12Ω internal)

Note: Use suffix "ST" for chassis and suffix "STD" for DIN-Rail mounting (ex. AMFW48-1JZ-ST is chassis mounting and AMFW48-1JZ-STD is DIN-Rail mounting version).

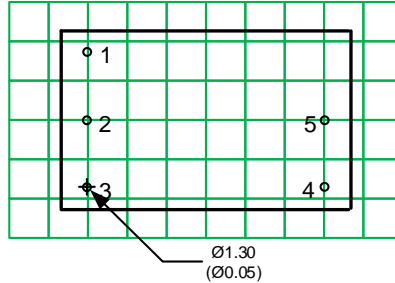
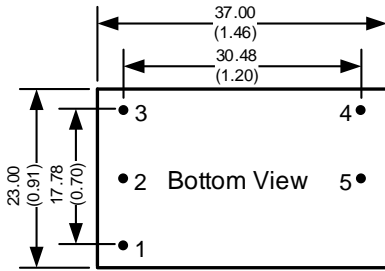
Output Specifications				
Parameters	Tested Conditions	Typical	Maximum	Units
Suppressed Output Peak Voltage	Input surge voltage L-N : 2KV Input surge voltage L-GND : 4KV	1.68 3.29		KV

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Efficiency	24VDC / 1A	97		%
Operating temperature		-40 to +85		°C
Storage temperature		-55 to +105		°C
Case temperature rise	24VDC / 1A	15		°C
Isolation Voltage (L/PE ; N/PE)	1 min,5mA leakage current	1500		VAC
Case material	Heat resistant black Plastic (flammability to UL 94V-0)			
Weight	PCB mountable models	20		g
	With optional -ST mounting plate	40		
	With optional -STD mounting plate	60		
Dimensions (L x W x H)	PCB mountable models	1.46 x 0.91 x 0.59 inches (37.00 x 23.00 x 15.00mm)		
	With optional -ST mounting plate	2.99 x 1.24 x 0.94 inches (76.00 x 31.50 x 23.80mm)		
	With optional -STD mounting plate	2.99 x 1.24 x 1.12 inches (76.00 x 31.50 x 28.40mm)		

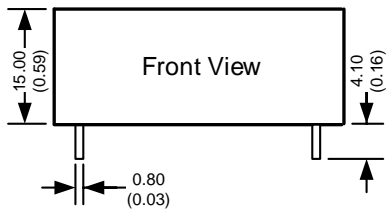
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications		
Parameters		
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±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(2Ω internal) / ±4KV(12Ω internal), Criteria B
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A

## Dimensions

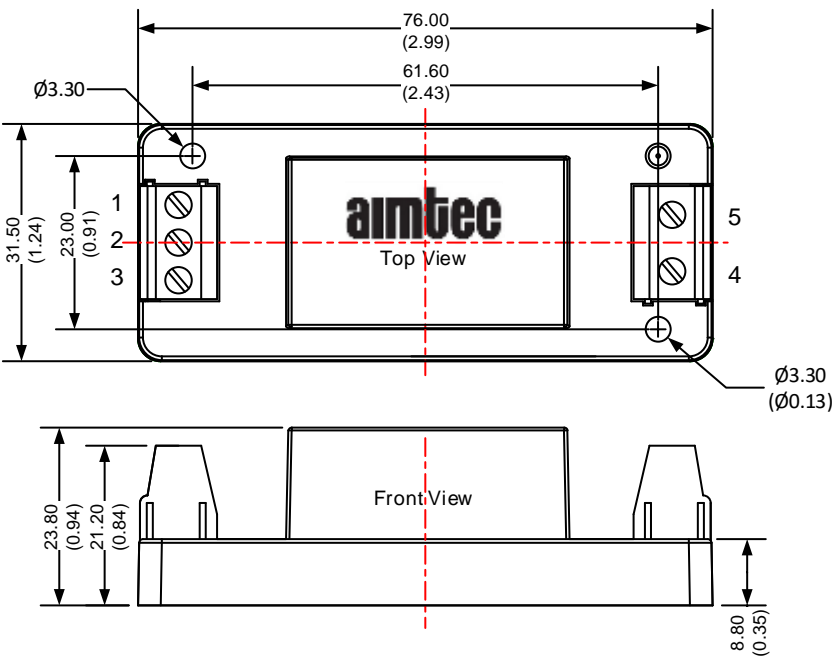


Pin Output Specifications	
Pin	Single
1	GND
2	-V Input
3	+V Input
4	+V Output
5	-V Output



Dimensions mm (inch)  
Pin diameter tolerance  $\pm 0.1$  ( $\pm 0.004$ )  
Pin height tolerance  $\pm 0.5$  ( $\pm 0.02$ )

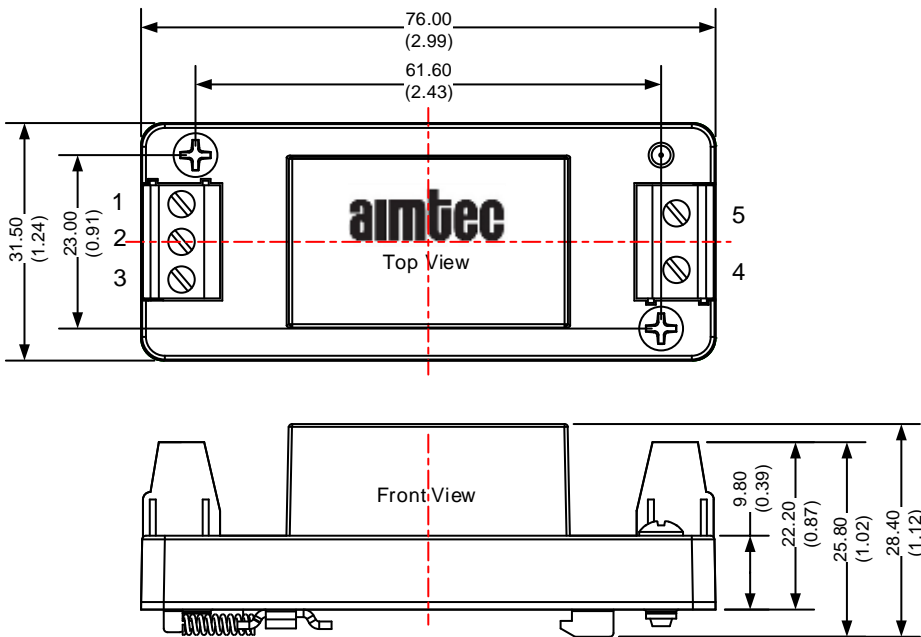
## Dimensions with ST Optional



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

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

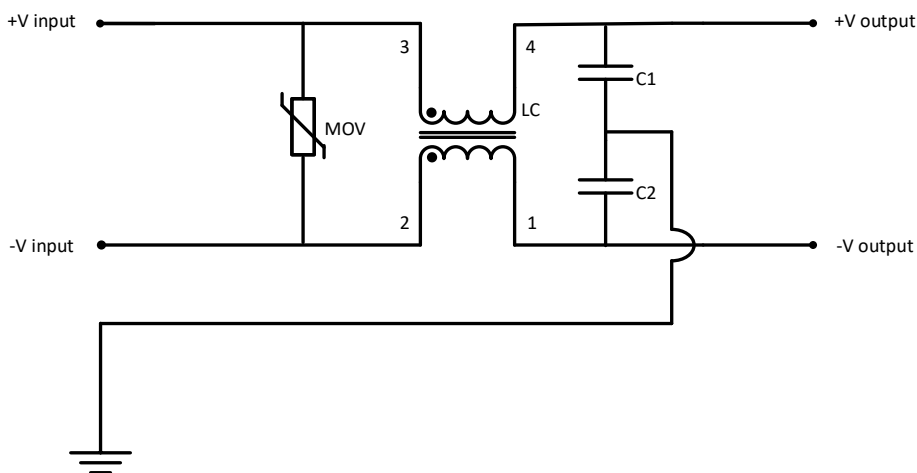
## Dimensions with STD Optional



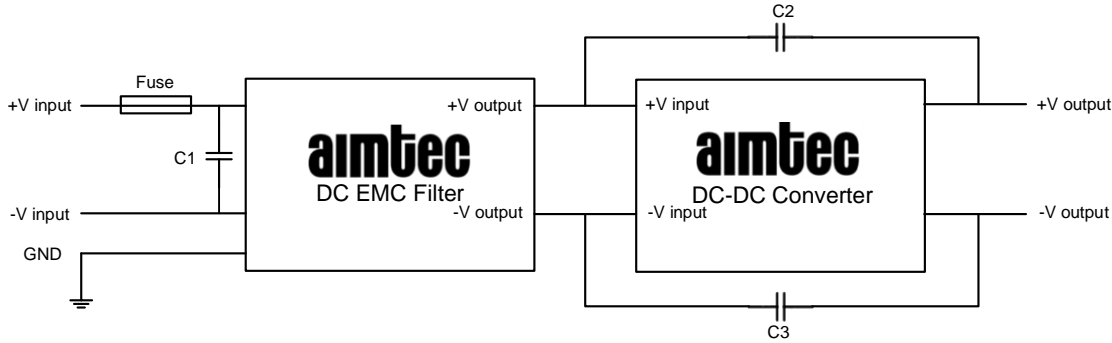
Pin Output Specifications	
Pin	Single
1	GND
2	-V Input
3	+V Input
4	+V Output
5	-V Output

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

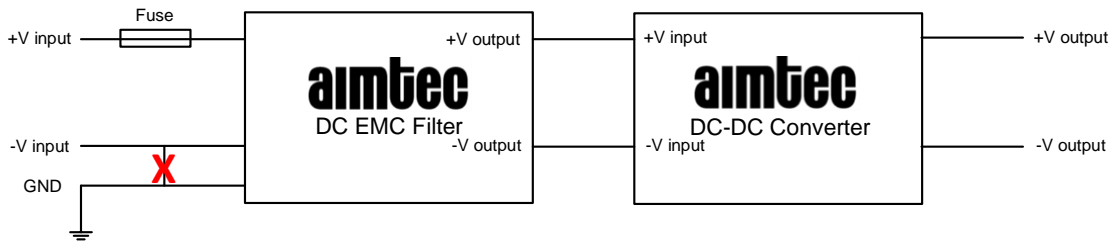
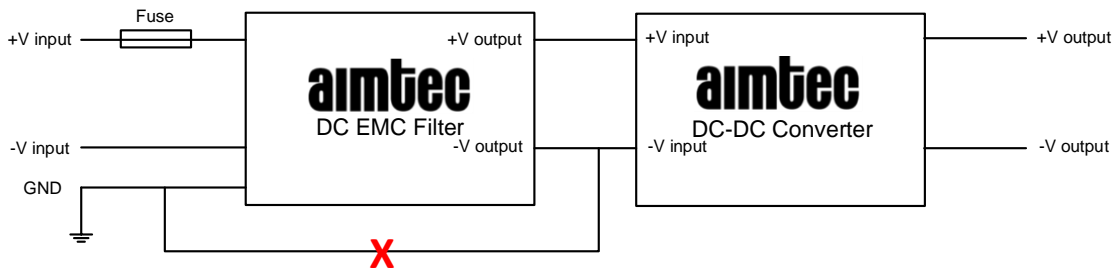
## Inside Schematic

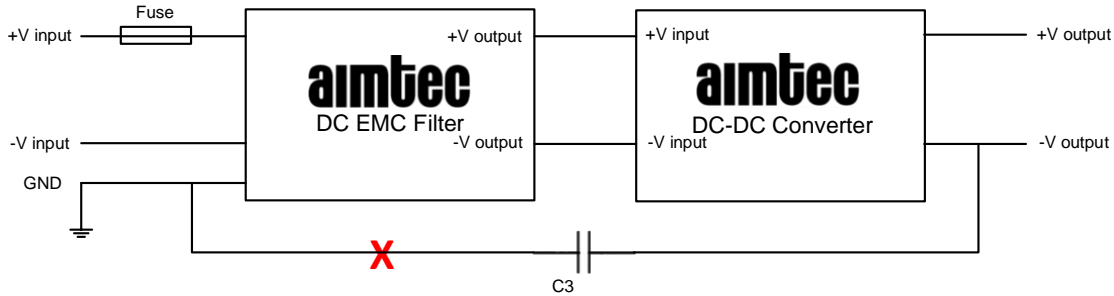


Application Circuit



Model	Recommended external circuit parameters
C1	330uF/100V electrolytic capacitor
C2 / C3	1000pF/400VAC capacitor
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](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).