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**AMF48-NZ**



Encapsulated

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.

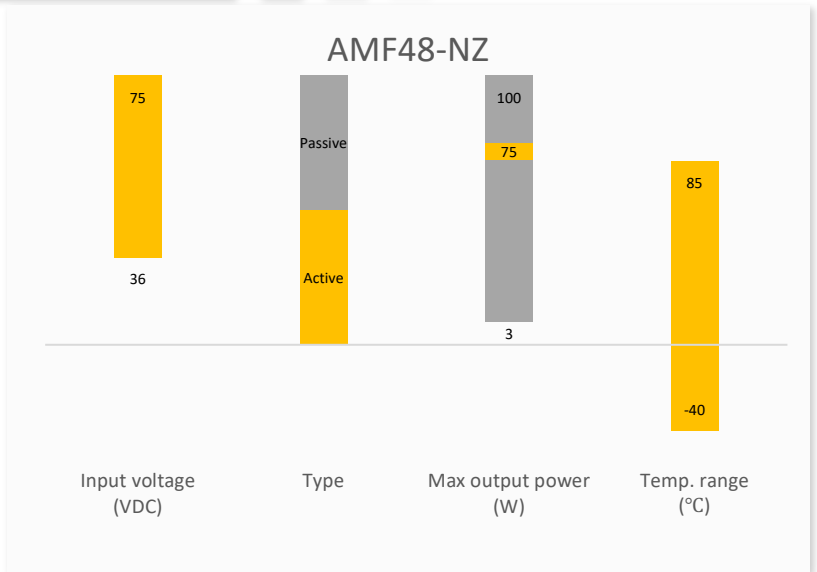
Aimtec’s DC-DC converter modules can be paired with the new generation of Aimtec’s EMC filters to achieve the required compliance. The Aimtec EMC line can currently offers solutions up to 100W output power.

**Features**

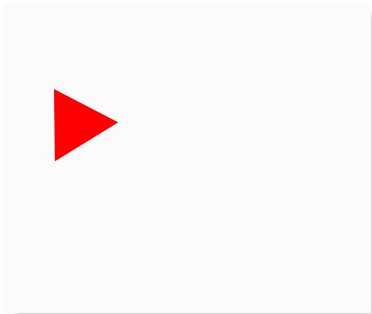


- Wide Input: 36 - 75VDC
- Operating Temp: -40 °C to +85 °C
- High Isolation Voltage: 500VAC
- Input Reverse Voltage Protection
- Build-in Soft-Start Function

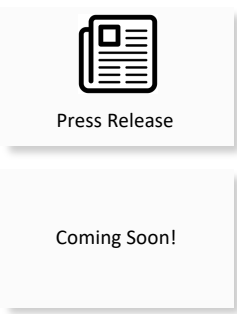
**Summary**



**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)                |   |         |       |

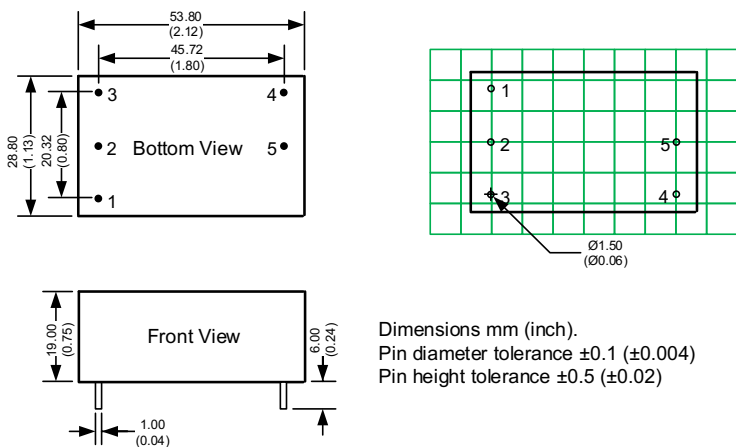
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

## 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 $\pm 2\text{KV}$ ( $2\Omega$ internal) / $\pm 4\text{KV}$ ( $12\Omega$ internal), Criteria B |
|           | RF, Conducted Disturbance Immunity       | IEC 61000-4-6 10Vr.m.s, Criteria A   |

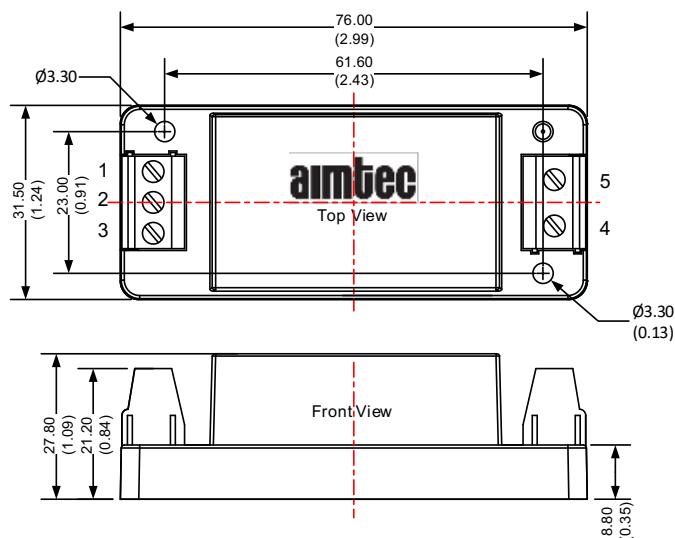
## Dimensions



### Pin Output Specifications

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

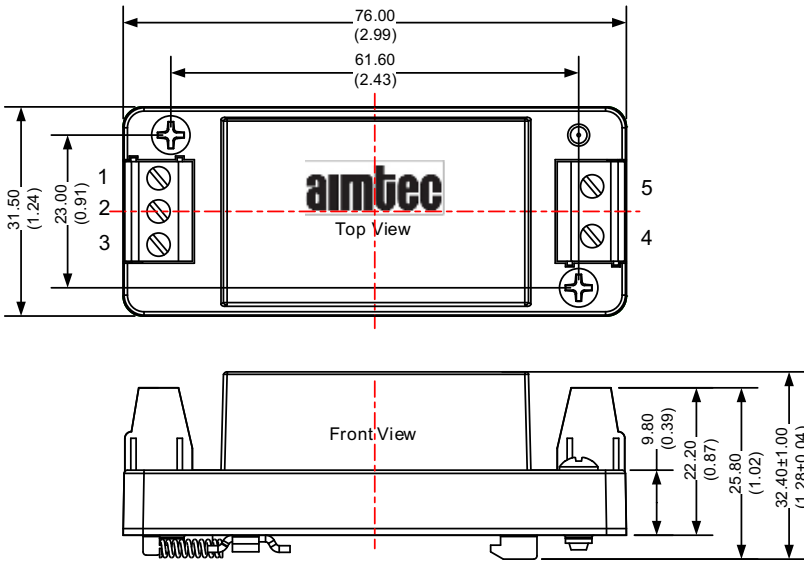
## Dimensions with ST Optional



### Pin Output Specifications

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

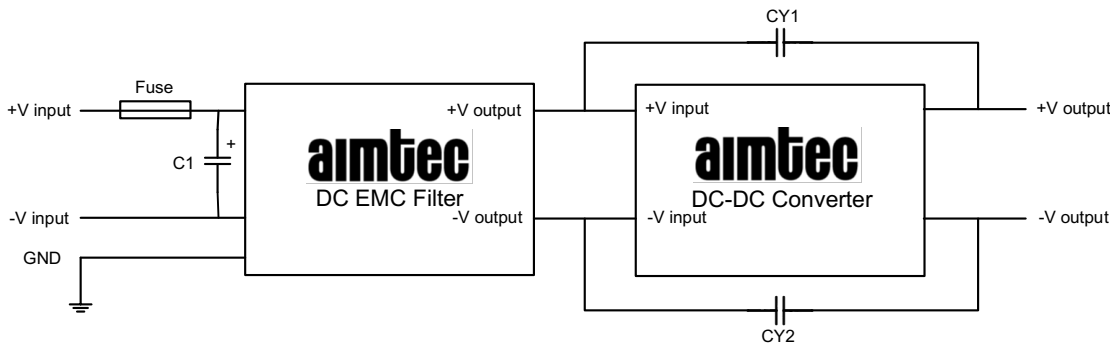
## Dimensions with STD Optional



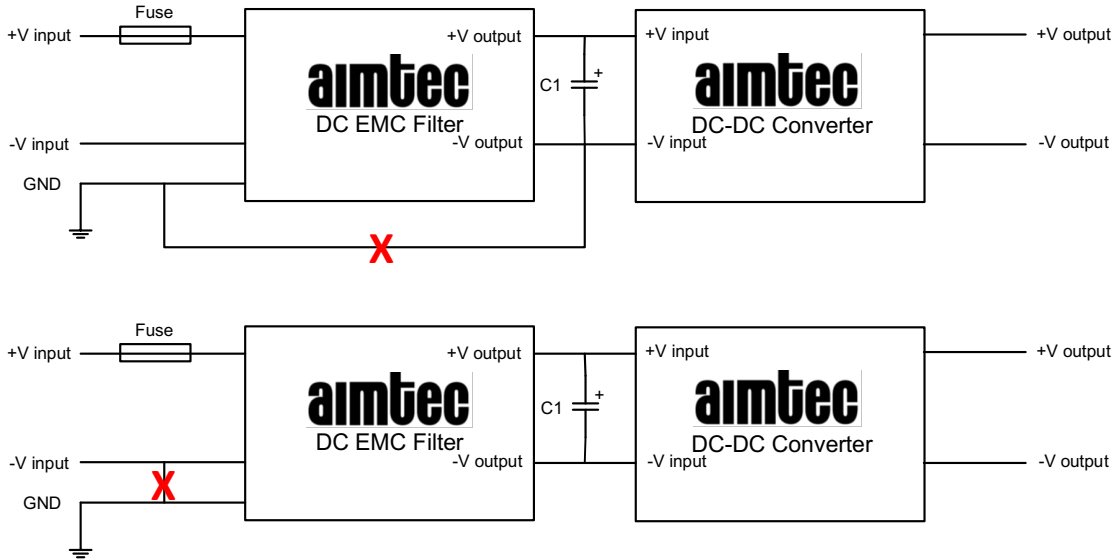
| Pin Output Specifications |           |
|---------------------------|-----------|
| Pin                       | Single    |
| 1                         | GND       |
| 2                         | -V Input  |
| 3                         | +V Input  |
| 4                         | +V Output |
| 5   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

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

## Application Circuit



| Model     | Recommended external circuit parameters   |
|-----------|---|
| C1        | 400uF/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](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).