

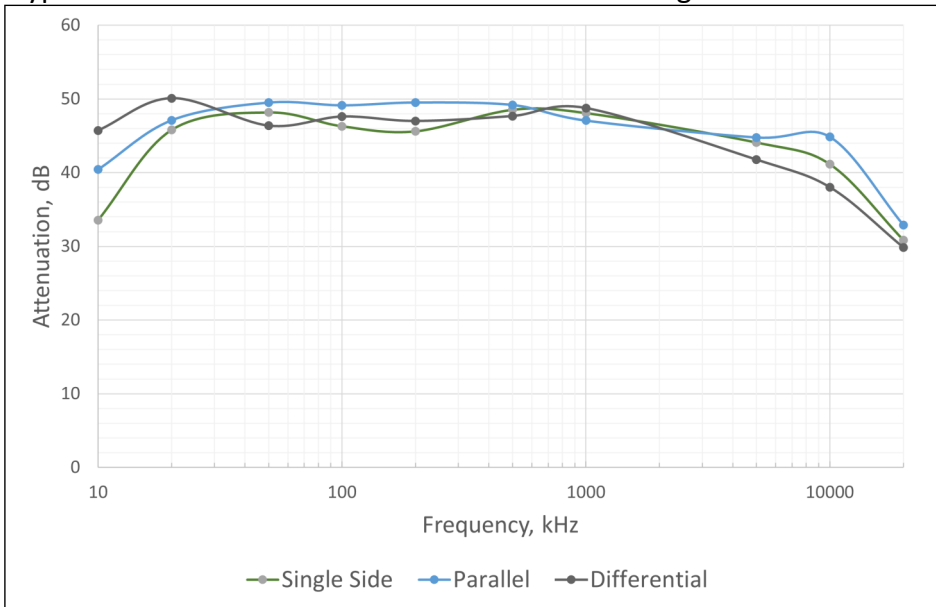
### Filter Care

Normally, filter requires no maintenance and no calibration. It is recommended, though, to periodically inspect whether the wires are tightened properly. For warranty or other repair contact factory or its authorized distributors.

See <https://www.onfilter.com/ordering-information> for warranty information.

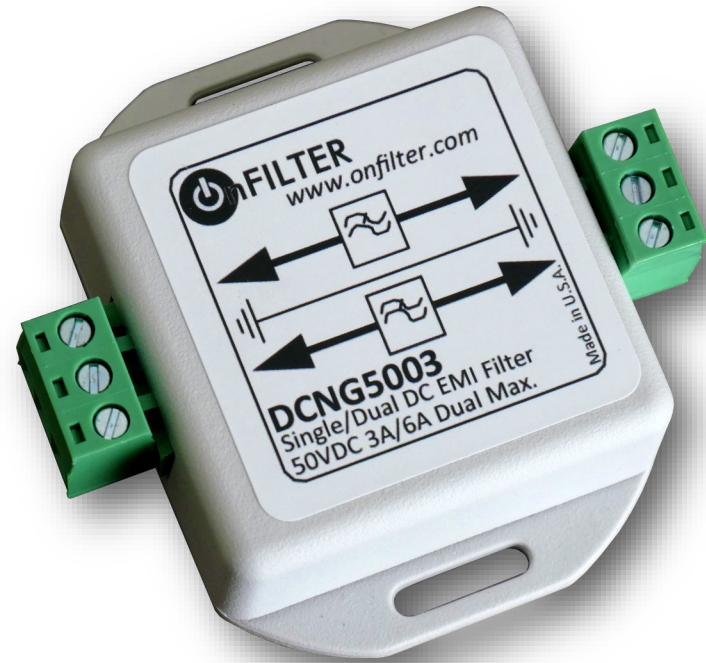
### Specification

Typical Attenuation of DCNG5003 in Different Configurations



# DC EMI Dual Filter

## 2x3A 50V



### Life- and Mission-Critical Applications

**OnFILTER products shall not be used in life-critical or mission-critical applications.** While OnFILTER believes it designs and manufactures very reliable products, many of the vendors that OnFILTER sources components from do not recommend or endorse the use of their products in life- or mission-critical applications. By extension, OnFILTER must adhere to the same business policy. See complete disclaimer at Terms and Conditions of Sale at [www.onfilter.com](http://www.onfilter.com)



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# User's Guide



Thank you for buying DC EMI filter! Your new DC filter will help to “clean up” your DC power from noise generated by your power supply and by other equipment on the DC supply rails.

**WARNING**

Failure to follow these warnings may cause equipment damage, personal injury or death

-   Do not exceed maximum rating - it may cause overheating
- Allow sufficient space around this device for ventilation to avoid overheating
-   No serviceable parts inside - do not open.
- High voltage may be present inside

**Introduction**

DC dual EMI filter DCNG5003 is designed to suppress conducted high-frequency electromagnetic interference (EMI) on DC power. DC power is largely produced by switched mode power supplies (SMPS) that operate on pulses. This inherently imposes high-frequency noise on DC power which causes problems for sensitive circuits. Sometimes the circuit itself generates electrical noise polluting DC rail as well—our DC filters help to clean it up.

**Installation**

Proper installation of DC filter helps to assure its continuous operation for a long time. Please follow these requirements for installation:

- Use filter in a dry location away from debris and from the possibility of spillage, including from cleaning
- Ambient temperature at the place of installation should not exceed the range of 5°...40°C
- Preferably fasten filter to a flat surface in a place where it can be observed and allow for easy connectivity
- At currents approaching max. rating the filter will heat up. Please allow for ample space around it and for ventilation. If no adequate spacing around the filter is available for heat exchange, limit current through the filter so that it is not approaching max. rating.
- Filter’s mounting dimensions are shown in Figure 4.

**Connections**

DC filter DCNG5003 is a dual filter comprised of two independent filters with common ground. You can use it as two filters for different supplies, or as one filter with higher current capacity. The filters are non-polar—you can use either positive or negative supplies). The filters are completely symmetrical—it doesn’t matter where is the input and where is the output—performance in either direction is identical.

Figures 1, 2, and 3 show possible connections of DCNG5003. Filter has pluggable terminal blocks—you can remove them for ease of connection and plug them back in.

**Application Examples**

Figure 1. Two Independent EMI Filters—2x3A Capacity

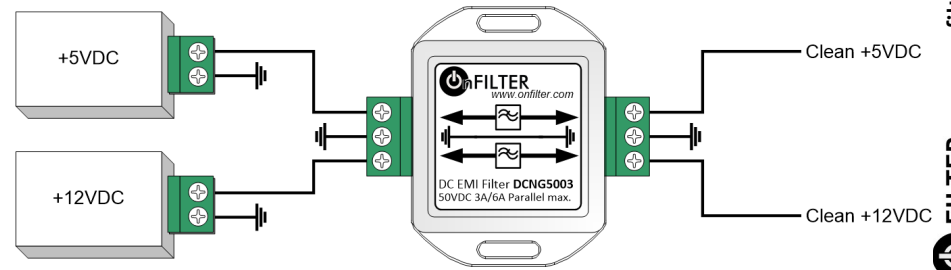


Figure 2. Combined EMI Filter with Higher Current Capacity—6A Capacity

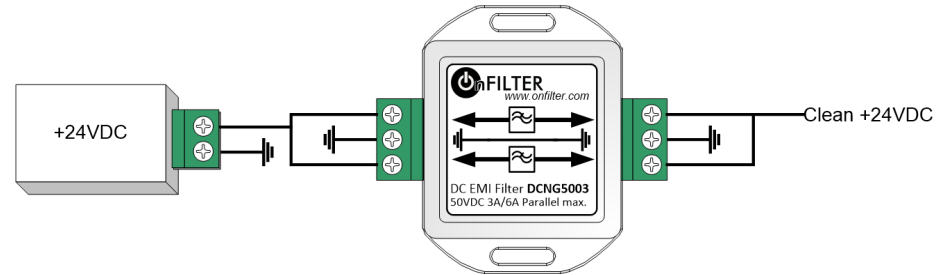


Figure 3. Differential EMI Filter with Both Polarities Filtered—3A capacity

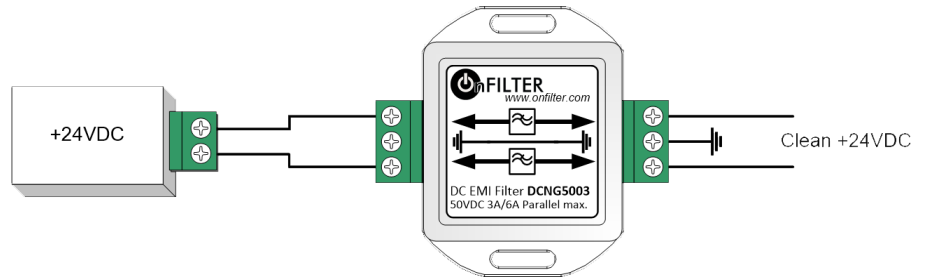


Figure 4. Dimensions of DCNG5003 DC EMI filter

Terminal blocks are of plug-in type. They use wires 14...22 AWG

