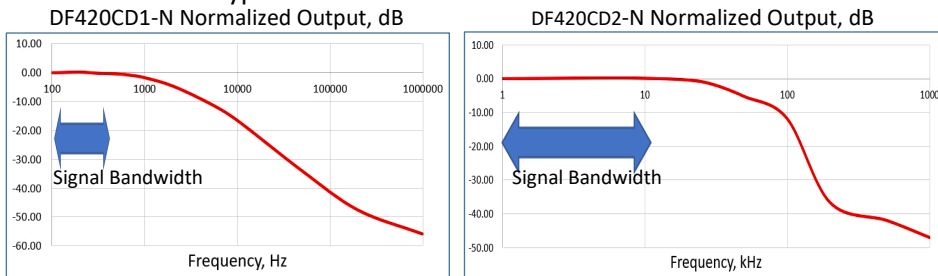


Specification

PARAMETER	VALUE	
Channels	2 Independent	These filters qualify for UL 508A panels as low voltage, low energy circuits
Signal	4...20mA current	
Signal Bandwidth	DFV420CD1 500Hz DFV420CD2 10kHz	
Termination	Removable terminal block inserts	

Typical Data Passbands for Data EMI Filters



Filter Care

Normally, data filters require 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.

Warranty Information and Terms and Conditions of Sale

Our filters come with 3 years limited warranty. See links at the footer at www.onfilter.com

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.



Need panel-mounted filters? Please see DF420CDx filters at www.onfilter.com



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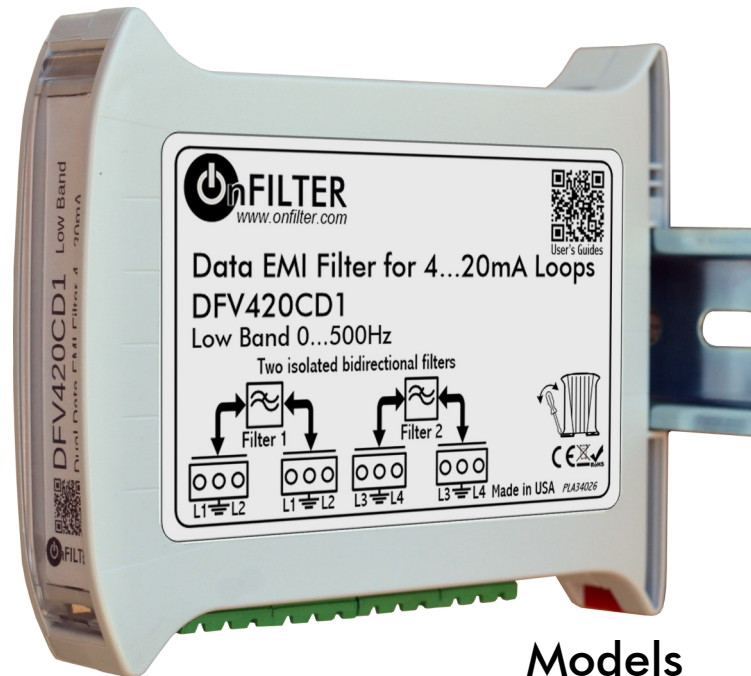


All specifications are subject to change without notice. Patents Pending. Made in U.S.A.

Dual Data EMI Filters

For 4...20mA Current Loops

DIN Rail Mount



Models
DVF420CD1
DVF420CD2

User's Guide



Thank you for buying data EMI filter for 4...20mA loops!

Your new data filter will help to “clean up” your current loop from external noise and provide better data integrity with lower rate of malfunction. For more details on this subject please visit [Library](http://www.onfilter.com) section on our web site www.onfilter.com.

WARNING

- Do not use data EMI filter for anything else other than 4...20mA current loops. The filter will get damaged if exposed to higher voltages and currents
- No serviceable parts inside - do not open.



Brief Summary

Data EMI filters for 4...20mA lines are designed to suppress high-frequency electromagnetic interference (EMI) on current loops while preserving integrity of your data. ONFILTER offers two models of data filters, depending on your data type:

- **DFV420CD1:** slow data, used for most sensors (i.e. analog temperature, level, or pressure sensors)
- **DFV420CD2:** fast data, used only for selected higher-speed sensors such as HART (highway addressable remote transducer or for data communication)

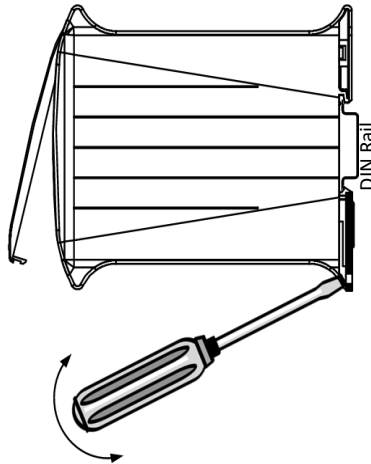
Use of filter designed for a wrong purpose may either cause problem with data communication, or provide insufficient EMI suppression. Do not use these filters for any purpose other than for 4...20mA loops. Contact us if you have any question: info@onfilter.com

Installation

Mounting on DIN Rail

You will need a long small-blade slot screwdriver.

Set filter so that the top rail fits into the top slot of the enclosure. Gently snap the enclosure on the bottom rail. Don't force it. In case of any problem, use slot screwdriver, insert it into the slot in the red latch at the foot of the enclosure and leverage this latch slightly out. The enclosure should install easily.



Dismounting the Filter from DIN Rail

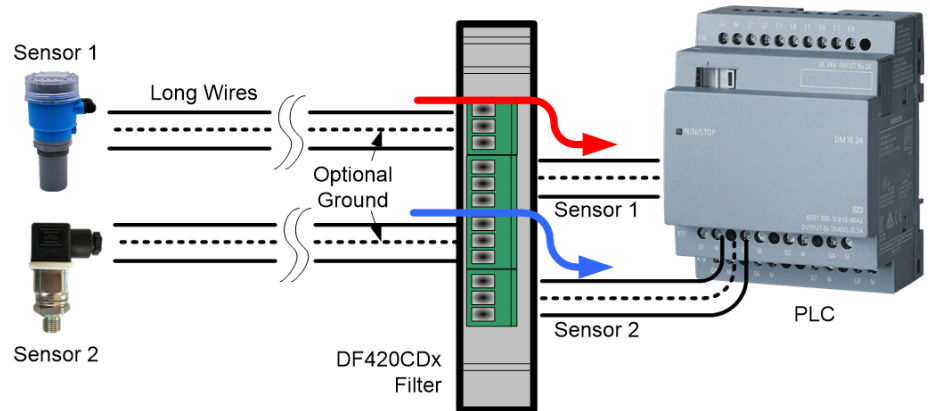
To remove the filter from DIN rail use the flat-head screwdriver, leverage the red latch out, gently pull out the bottom part of the filter away from DIN rail, lift it slightly, and remove it from the top rail.

Connections

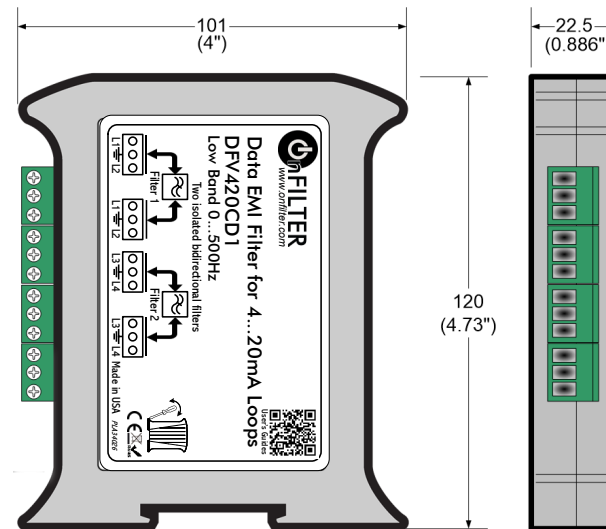
DFV420CDx are dual filters comprised of two completely isolated independent filters. The filters are non-polar—you can use either positive or negative signals. The filters perform similarly in both directions. Functionality of any one of these filters is not affected by the other filter.

Central pin of each connector is ground connected on both ends for each channel. Its connection is optional—there are many ways EMI can infiltrate your signal and in case of strong interference some experimenting may be helpful. We suggest first to connect filter's ground to the ground of the “receiving” equipment first to try. Connection to ground of “sending”

equipment is optional. Should you decide to connect both grounds to the filter first make sure that these two grounds are the same using multimeter and check both resistance and AC/DC voltage between the wires from these two grounds. Close to zero for all parameters is a good indication that both grounds are safe to connect together. At the very least, voltage (AC and DC) and current should be near zero if the remote equipment is not locally grounded.



Connection of data filter between sensor and PLC/data acquisition system. Connection of actuators is similar.



Dimensions of DFV420CDx filters
Removable terminal blocks are of plug-in type. They use wires 14...22 AWG