EMI dV/dt Filter for Servo Motors and VFD

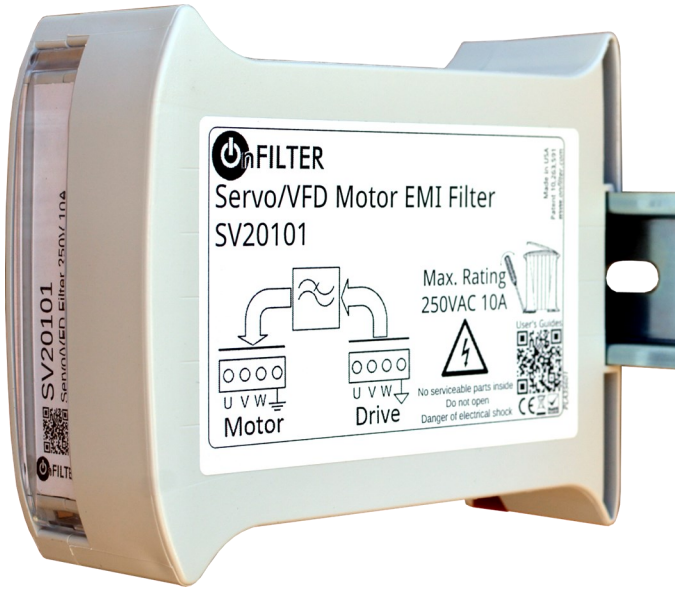
DIN Rail Mounted

- Improve Reliability of Your Motor
- Reduce EMI in Your Equipment
- Reduce EDM-Caused Vibrations
- No Programming Changes Required

Operation of PWM-driven motors - servo and variable frequency drives (VFD) - causes a number of problems in equipment, including damage to the motor's bearings from leakage currents via electrical discharge machining (EDM), as well as resulting vibration. Strong EMI generated by PWM-driven motors causes errors in equipment.

OnFILTER' patented dV/dt SV-series filters are not simple reactors—they are complete EMI filters incorporating common mode, differential mode, and ground filtering, shrinking EMI spectrum and providing reduction of ground currents in a range of typically 50 to 100 times.

SV series motor filters are designed for incorporation into automated equipment containing servo or VFD drives.



Applications

- Industrial robotics
- Automated tools
- Control panel UL 508A
- Semiconductor fabrication
- Electronic assembly
- Reduction of vibration due to bearing damage
- Wherever EMI and EOS are a problem

Features

- Reduction of high-frequency currents
- Compliance with IEC60034-17/-25 and IEC61800-3
- Prevention of EDM (Electrical Discharge Machining)
- Reduction of overall EMI
- Easy plug-in installation
- No mechanical attachments
- No software changes
- Optimized for most PWM motors
- Effective management of rise and fall times of drive pulses

Substantial Reduction of EMI

SF series filters greatly reduce overall EMI in the tool, reducing errors in automated equipment and testers, and improving precision and up-time

Reduction of EDM

High-frequency currents through bearings literally eat into the bearings, irreversibly damaging them and causing vibrations. SF/SV series filters prevent EDM damage by blocking these currents from reaching motors.

IEC60034-25 and IEC61800-3 Compliance

dV/dt filters are required for PWM-driven motors to reduce EMI and to extend life of motors. SF/SV-series patented filters reduce noise from PWM drive pulses beyond capabilities of common reactors, substantially reducing leakage through the motor bearing preventing motor's failure

No Mechanical Attachments

SF/SV series filters require no mechanical attachments to a motor and no maintenance. Unlike mechanical approach, SF/SV-series filters provide complete EMI reduction, addressing PWM noise problem at its core.

No Software Changes

Simply plug-and-play, no changes needed.

SV20101

VFD and Servo Motor EMI Filter 10A 250V DIN Rail Mounted

Suitable for UL 508A Panels

OnFILTER

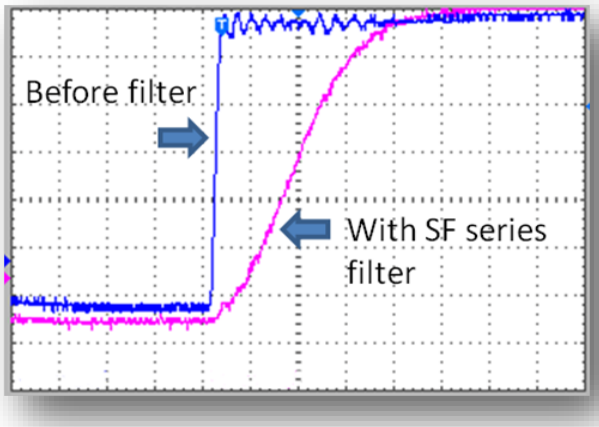
Specification

OnFILTER servo/VFD filters utilize patented and proprietary technology to provide maximum noise suppression and reduce high-frequency currents from servo and variable frequency

Parameter	SV20101
Drive Voltage, max.	250V
Drive Current, max.	10A
Rise/Fall Times, typ.	1.2µS
Ground Current Reduction (typ.)	50...100 times
Nominal DC Resistance	<0.2Ω
DIN Rail Case Width	45mm (1.77")

SV20101 qualifies for UL 508A panels by being certified to UL/IEC 60939

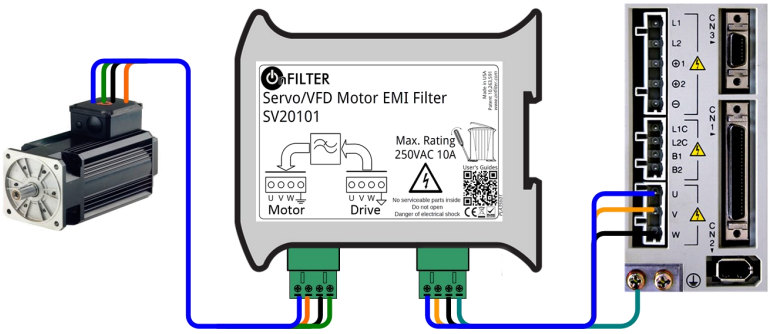
Smooth Pulse Edges



Bearings' Ground Current Reduced 50...100 Times (typ.)

Current is measured with Tektronix' CT1 probe 5mA/mV

Typical Connection



For maximum performance make sure that ground connection from the drive to the motor goes through the filter

Ordering Information

Stepper/VFD EMI Filter

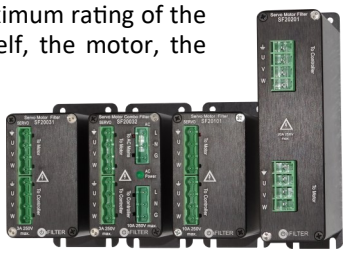
Model	Motor	Mount
SV20101	250V 10A	DIN Rail

OnFILTER' VFD/servo motor EMI filters work with the majority of servo and variable frequency controllers and motors, requiring no programming changes.

You would need to know just two parameters: max. drive voltage and continuous current - both are typically indicated on a label of the motor itself, or on the servo/ VFD drive. Do not exceed specified maximum rating of the filter as this may damage the filter itself, the motor, the motor controller/drive and, possibly, your equipment.

For chassis mount please see our family of SF filters with identical performance.

For stepper motors please see our TF/TV series filters.



Servo/VFD Chassis Mounted Filters

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