

TFS-C and TFD-C Motor-Side Filters (Revision 1)

Common-mode filters for all motor types



Motor-side filters of the C-series are common mode filters with minimized sinus filter stage. These filters can be used with all motor types and come as single-axis (TFS-C) or dual-axis (TFD-C) products.

Common-mode filters are designed to suppress common-mode voltage oscillations, protecting motor bearings and tools from electro-erosion. Furthermore, the suppression of common-mode fluctuations reduces electromagnetic interference, which is key to achieving highest EMC standards.

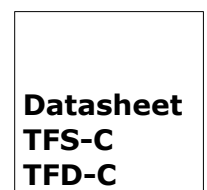
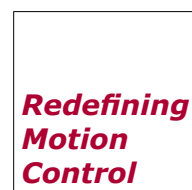
Thanks to a minimized sinus filter stage, these filters ensure common-mode suppression without limiting the current-controller bandwidth.

Properties

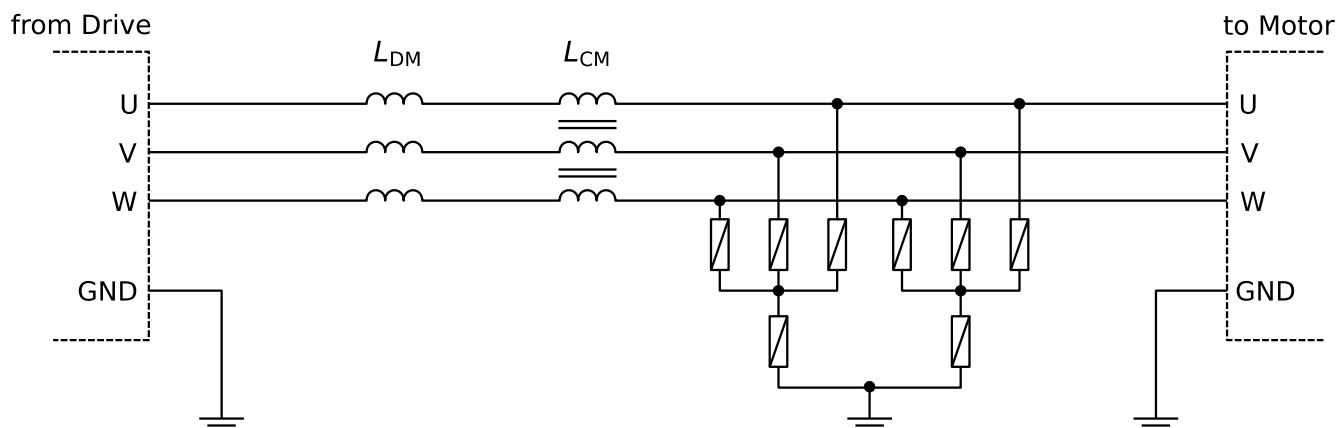
- Common-mode filter with minimized sinus filter
- Can be combined with all motor types
- Designed for 50 to 100 kHz PWM frequencies
TFS-C-560-60-12 designed for 12 kHz PWM

Applications

- Protect motor, tools, and workpieces from electrical arcing and electrochemical erosion
- Meet the highest EMC standards
- Minimal impact on the differential-mode, enabling full use of the controller bandwidth



Schematic Illustration



Specifications

	TFD-C-350-15-50	TFS-C-700-40-50	TFS-C-560-60-12
Axes	2	1	1
Max Voltage	350+10% V _{DC}	700+10% V _{DC}	560+10% V _{DC}
Continuous Current	15 A _{rms} per axis	40 A _{rms}	60 A _{rms}
Min PWM Frequency	50 – 100 kHz	50 – 100 kHz	12 kHz
Dimensions W×H×D	69 × 279 × 303 mm	149 × 310 × 419 mm	149 × 310 × 419 mm
Weight	6.30 kg	14.70 kg	14.20 kg
Cooling	Fan to cool passive elements; requires 24 VDC		

Subject to change without notice.

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Datasheet
TFS-C
TFD-C

Redefining
Motion
Control



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