

EMC filters

High performance in a very compact design

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TDK Corporation presents a new series of very compact EPCOS 3-line EMC filters for frequency converters. These high-performance filters are suitable for a rated voltage of 530 V AC in 50/60 Hz grids. The B84243A8* series currently comprises seven different types that are designed for currents of between 3 A and 60 A – based on a rated temperature of 50 °C. Furthermore, the filters are characterized by their very compact dimensions: Depending on the exact model, these typically lie between 190 mm x 40 mm x 95 mm and 250 mm x 85 mm x 120 mm. Recessed connections permit optimum access to the mounting bracket, making the filters suitable for installation in switching cabinets or where limited space is available.

The adherence to the EMC limits defined in EN 61800-3 C1 for motor cable lengths of up to 25 m and C2 of up to 50 m has been verified by measurements of various commercially available frequency converters with input rectifier stages.

Apart from their outstanding EMC performance, the new 3-line EMC filters also feature very short discharge times. For example, at currents up to 44 A the filters achieve a residual voltage of <60 V in less than one minute. The 3 A version with a leakage current of less than 2 mA has been specially developed for plug-in devices that must meet low leakage current limits. The other models in the new series have leakage currents of no more than 5.1 mA and can also be operated in environments with sensitive residual current devices (RCDs).

In addition, the new EPCOS filters are designed for a high short-circuit current (SCCR) of 100 kA in accordance with UL 508. Approvals according to UL, CSA and ENEC are pending.

Main applications

- Power line filters for frequency converters

Main features and benefits

- Rated voltage of 530 V AC
- Outstanding EMC performance
- Seven different types for currents of between 3 A and 60 A
- Very compact dimensions of between 190 mm x 40 mm x 95 mm and 250 mm x 85 mm x 120 mm.
- Low leakage currents of just 1.9 mA to 5.1 mA

Key data

Series	Dimensions [mm]	Rated voltage [V AC]	Currents [A]	Leakage currents [mA]
B84243A8*	190 x 40 x 95 to 250 x 85 x 120	530	3, 8, 17, 25, 33, 44, 60	1.9 to 5.1

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes electronic components, modules and systems* marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2014, TDK posted total sales of USD 9.6 billion and employed about 83,000 people worldwide.

* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

You can download this text and associated images from www.epcos.com/pressreleases.

Further information on the products can be found under www.epcos.com/emc_filters.

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