Schaffner's New Common Mode Choke Delivers Superior Performance Within Same Size

June 19th, 2024

Schaffner has announced the launch of a new common mode choke for industrial applications which delivers higher performance than previous versions while retaining the same mechanical volume.

Based on nanocrystalline core technology, the addition to Schaffner's popular RT series will include the RT8121, RT8131, RT8521 and RT8531. The new *RT series N* achieves up to 15 dB higher attenuation performance than its ferrite-based predecessor across relevant frequency bands of the electromagnetic compatibility (EMC) frequency spectrum.

By filtering electromagnetic common mode noise on the grid side of an electrical device, the *RT series N* eliminates the problem of electromagnetic interference (EMI) directly on a PCB. The choke is the same 65mm in diameter as Schaffner's existing series but will provide designers with more power while having to work within tight space restrictions and reduces the need to use an external EMC filter.

With rated currents from 25 A to 63 A at 60°C and operational voltages up to 600 VAC and 450 VDC, the new choke is particularly suited for use at frequencies from 10 MHz to 30 MHz. Ensuring cost-effective PCB designs for up to 100 A with forced cooling, the choke is available in horizontal and vertical PCB mounting options to suit specific design requirements. Other features include a broad range of inductance ratings (3 mH to 13 mH), low magnetic leakage flux and superior winding insulation.

Offering a choice of 2-wire and 3-wire configurations for DC, 2-line AC and 3-phase applications, the new common mode choke will be of particular interest to machine and electronics manufacturers that have power demand for their applications from 10 kW to 80 kW. Ideal for use in power supplies that are used in EV charging stations and robotics, the high-quality choke features an approved UL insulation system which enables customizations to be achieved with ease.

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Other typical applications include photovoltaic inverters, converters, uninterruptible power supplies (UPSs) and switch mode power supplies, LED lighting, communication devices and medical/laboratory equipment. While not all applications will require the extra power provided by the new *RT series N*, designers will be able to use the choke as a safety option to improve EMC levels should a measurement fail.

Felix Wedel, Strategic Product Manager at Schaffner says: “As a global leader in power quality, we are excited to be offering our customers this new core technology option for the RT choke series. With new regulations in preparation for EMC compliance measured at 9 kHz, our new offering provides designers with a fallback solution with higher performance and same dimensions.”

“The new chokes not only deliver excellent impedance throughout relevant parts of the EMC frequency band while retaining a compact footprint, but they also simplify the design process. They achieve this by offering different mounting options combined with much greater performance levels than have ever been possible before.”

Users can obtain samples or learn more about the new cores via the Schaffner website schaffner.com.

Schaffner plays a vital role in building a sustainable future in the new era of electrification. Headquartered in Switzerland and with subsidiaries around the world, Schaffner is a global leader in electromagnetic solutions that ensure the efficient and reliable operation of electronic systems. The Schaffner Group are experts in EMC filter solutions, harmonic filters, electromagnetic components and electromagnetic solutions. Our passionate and knowledgeable employees empower our customers to develop reliable electronic devices and systems that meet compliance standards and deliver increased energy efficiency.

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