

DKIH: Nanocrystalline common mode chokes for 1- and 3-phase applications mount on PCB

SCHURTER expands its wide range of current compensated chokes with high current types for PCB mounting. The new DKIH series is now available with a nanocrystalline ring core, offering 8 times higher inductance performance than ferrite core versions in the same compact dimension. The new product is designed for single and three phase applications with rated currents from 10 to 50 amperes. Due to its open design, the chokes are light weight and compact, ideally designed to suppress EMI noise caused by power applications on the PCB.



Like all other aspects of electronic design, the power portion is oftentimes built today using discrete components on printed circuit boards. With the trending integration of components, to achieve smaller and smaller form factors, thermal problems and high currents on the PCB can become a challenge. Traditional block filters might well address these challenges, but their larger package size also presents challenges due to the mentioned space constraints; therefore an asymmetrical effective common mode choke and capacitors mounted on the PCB is a better solution.

The new DKIH-1 series is suitable for single phase AC or DC applications from 10 up to 50 amperes. Light weight and compact, the common mode chokes are easily placed on the PCB with through hole technology (THT). They are designed and approved according IEC 60938, UL 1283 and CSA 22.2 no. 8. The voltage rating is 300 VAC (IEC, UL) and 250 VAC (CSA) with an inductance range of 1.6 to 6.9 mH.

The new DKIH-3 series is suitable for three phase AC applications from 10 up to 50 amperes. The common mode chokes are also designed according IEC 60938 and are rated 600 VAC with an inductance range of 0.7 to 10.8 mH, making them suitable for many applications such as UPS systems, switching power supplies, charge stations for electric vehicles and frequency converters for energy storage.

The DKIH-1 and -3 have a wide temperature range of -40 to +100 °C. They are available with a standard pin out or customer specific pin out. Variations in the winding are also available upon request.

Technical data DKIH-1:

- Rated voltage: 300 VAC (UL, ENEC), 250 VAC (CSA), 425 VDC
- Rated currents: 10 to 50 A (ENEC / UL / CSA) at 40 °C
- Rated inductance: ferrite: 0.15 to 0.80 mH, nanocrystalline: 1.4 – 6.9 mH
- Same dimensions and weight for ferrite and nanocrystalline versions
- Other pin outs available on request

Technical data DKIH-3:

- Rated voltage: 600 VAC
- Rated currents: 10 to 50 A at 40 °C
- Rated inductance: ferrite: 0.08 to 1.10 mH, nanocrystalline: 0.7 – 10.8 mH
- Same dimensions and weight for ferrite and nanocrystalline versions
- Other pin outs available on request

Application:

- Frequency converters for photovoltaic or energy storage
- Charge stations for electric vehicles
- UPS-systems
- Switching power supplies

Internet:

[Datasheet DKIH-1](#) [1]

[Datasheet DKIH-3](#) [2]

[Microsite DKIH](#) [3]

Company:

SCHURTER is an internationally leading innovator and manufacturer of electric and electronic components. The company focuses on safe power supply and easy-to-use equipment. Its extensive product portfolio comprises standard solutions in the fields of circuit protection, plugs and connectors, EMV products, switches, input systems and electronic manufacturing services. SCHURTER's global network of representative offices ensures reliable delivery and professional customer service. Where standard products are unsuitable, the company develops client-specific solutions.

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[1]: [http://www.schurter.com/en/datasheet/ DKIH-1](http://www.schurter.com/en/datasheet/DKIH-1)

[2]: [http://www.schurter.com/en/datasheet/ DKIH-3](http://www.schurter.com/en/datasheet/DKIH-3)

[3]: <http://dkih.schurter.com>