Current compensated suppression chokes - CHI 121

Current Compensated Choke (Standard)
CHI 121 A/100/1,3

Description

- Low copper loss
- Low total losses
- High inductance
- Small size
- Standard FIN raster
- Lowest winding capacity
- High attenuation
- Conforming to UL 94 V-0
- Frequency: up to 30 MHz

Suppression of thyristor-controlled equipment and machines, electrical machine controls and electronic switching devices, suppression of electrical components in automobile industries, use in suppression filters.

- Rated voltage: 250 V
- Operating temperature: -40 °C...+115 °C
- Test voltage: UP = 1,5 kV/50 Hz/2 sec. (Winding/Winding)
- Conforming to: EN 138000
- Tolerance of inductance with 10 kHz: +50%...-30%
- Design: open, low-profile (design A) or enclosed, low-profile (design C) or upright (design D)

Technical Data

- Rated Voltage 250 V
- Rated Inductance 1.3 mH
- DC Resistance mOhm
- Rated Current 100 A

<table>
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<tr>
<th>Type</th>
<th>Design</th>
<th>BV-Nr.</th>
<th>Design</th>
<th>BV-Nr.</th>
<th>Design</th>
<th>BV-Nr.</th>
<th>Rated inductance LN (mH) Per winding</th>
<th>Rated current LN (A)</th>
<th>DC-resistor RCU (mOhm) Per winding</th>
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Current compensated suppression chokes

■ Elementary points

Current compensated suppression chokes are an essential part of clocked power supplies, in frequency converters and UPS systems. They mainly serve to attenuate asymmetrical cable conducted disturbances. Their design is determined by the relevant standards (EN 500081; EN 500082) and the specific noise problem.

■ Principle of function

The load current flows through the windings in such a way that the resultant magnetic fields compensate (cancel out). Thus, the load current is attenuated only by the ohmic resistor and the negligible low stray inductance with operating frequency. If asymmetrical interference arises, the rated inductance with a very high impedance works strongly attenuating.
# Dimension Drawing

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<th>B/Da [mm]</th>
<th>T [mm]</th>
<th>H [mm]</th>
<th>X [mm]</th>
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**Circuit**

![Circuit Diagram]

**Principle of function of a current compensated suppression choke**

![Suppression Choke Diagram]
Example of an application

The attenuation characteristics of a current compensated choke are quantified from their impedance course over the interference spectrum. The chokes are particularly suitable for line input filters, however, may also effectively be used in output filters of frequency converters for the dV/dT limitation.