



EMC filters

Customer-specific filters

Sine-wave output filters for traction applications

Rated current 200 to 500 A

Series/Type: **B84143-TRAC**

Date: January 2006

Sine-wave output filters for 3-phase systems

Rated voltage 400 to 2100 V AC

Rated current 200 to 500 A

Construction

- 3-line output filter
- Stainless-steel frame for underfloor installation (customized matching to vehicle)

Features

- Turns squarewave output voltage of converter into sinusoidal voltage on filter output (voltage between phases)
- Mechanical design optimized by finite element analysis
- Minimized noise level and transmission of structure-borne noise
- Designed to traction requirements
- Verification of static and dynamic loading cases and fatigue strength upon request
- Radial-flow fan for forced cooling with drop-down speed

Applications

- Traction with central onboard power supply

Terminals

- Terminal board with Cu rails for connecting cable lugs
- Optional terminals to customer specification

Marking

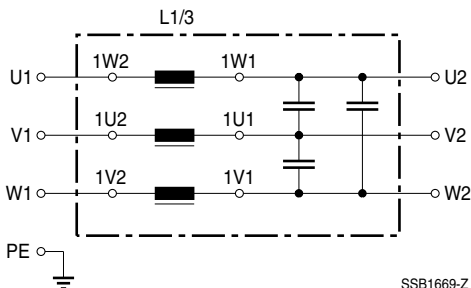
Marking on component:

Manufacturer's logo, ordering code, serial number, rated voltage, rated current, ambient temperature, frequency, inductance, capacitance, weight, volume rate of air flow

Minimum data on packaging:

Delivery note for each filter




Typical circuit diagram

Technical data and measuring conditions

Rated voltage V_R	At 40/50 Hz
Rated current I_R	Referred to 40 °C ambient temperature
Test voltage V_{test}	According to standards and/or customer-specific requirements
Overload capability (thermal)	1.5 · I_R for 3 min per hour or 2.5 · I_R for 30 s per hour
Rated power at filter output	200 ... 1000 kVA
Ambient temperature T_A	-25 °C ... +40 °C
Climatic category (IEC 60721)	5K2
Pollution degree (IEC 60664-1)	3

Characteristics and ordering codes

V_R AC V	I_R A	Approx. weight kg	Ordering code
400 ... 2100	200 ... 500	400 ... 1100	upon request

Important information

Please read all safety and warning notes carefully before installing the EMC filter and putting it into operation (see ). The same applies to the warning signs on the filter. Please ensure that the signs are not removed nor their legibility impaired by external influences.

Death, serious bodily injury and substantial material damage to equipment may occur if the appropriate safety measures are not carried out or the warnings in the text are not observed.

Using according to the terms

The EMC filters may be used only for their intended application within the specified values in low-voltage networks in compliance with the instructions given in the data sheets and the data book. The conditions at the place of application must comply with all specifications for the filter used.

Warnings

- It shall be ensured that only qualified persons (electricity specialists) are engaged on work such as planning, assembly, installation, operation, repair and maintenance. They must be provided with the corresponding documentation.
- Danger of electric shock. EMC filters contain components that store an electric charge. Dangerous voltages can continue to exist at the filter terminals for longer than five minutes even after the power has been switched off.
- The protective earth connections shall be the first to be made when the EMC filter is installed and the last to be disconnected. Depending on the magnitude of the leakage currents, the particular specifications for making the protective-earth connection must be observed.
- Impermissible overloading of the EMC filter, such as impermissible voltages at higher frequencies that may cause resonances etc. can lead to destruction of the filter housing.
- EMC filters must be protected in the application against impermissible exceeding of the rated currents by suitable overcurrent protective.

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