4-line EMC filters

Series/Type: **B84144***

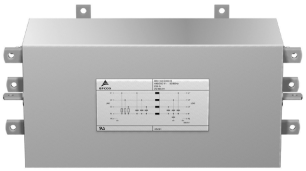
The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B84144G0250S000	B84144B*S120, B84144B*S121	2009-03-13	2009-06-30	2009-09-30
B84144G0500S000	B84144B*S120, B84144B*S121	2009-03-13	2009-06-30	2009-09-30
B84144G1000S000		2009-03-13	2009-06-30	2009-09-30

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B84144G1600S000		2009-03-13	2009-06-30	2009-09-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

Power line filters for 3-phase systems
Rated voltage 440/250 V AC, 50/60 Hz
Rated current 16 to 1600 A



Alternative version

- Series B84144A*R120 and B84144B*S120/S121 offer a low-cost solution.

Construction

- 4-line filter
- Metal case
- Threaded bushes at end faces for RF-tight installation

Features

- Optimized leakage current
- Easy to install
- Degree of protection up to 180 A: IP 20[1)]
- Space-saving design
- Design complies with EN 133200, UL 1283, CSA C22.2 No.8
- UL approval

Applications

- General applications for power electronics
- UPS
- Wind farms
- For machine tools, textile and packaging machines

Terminals

- Finger-safe terminal blocks for filters up to 180 A
- Busbars for filters 250 to 1600 A

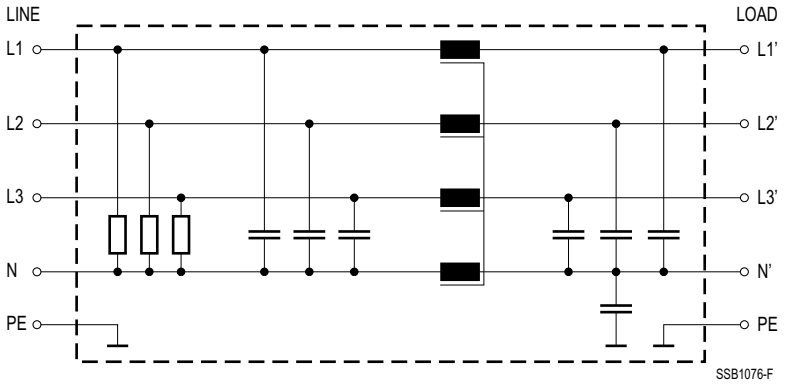
Marking

Marking on component:
Manufacturer's logo, ordering code, rated voltage, rated current, climatic category, date code

Minimum marking on packaging:
Manufacturer's logo, ordering code

1) To IEC 60529

Typical circuit diagram



Technical data and measuring conditions

Rated voltage V_R	440/250 V AC, 50/60 Hz
Rated current I_R	Referred to 40 °C ambient temperature
Test voltage V_{test}	1770 V DC, 2 s (line/line) 2700 V DC, 2 s (lines/case), for 16 … 50 A 2550 V DC, 2 s (lines/case), for 80 …180 A 2121 V DC, 2 s (lines/case), for 250 … 1600 A
Overload capability (thermal)	1.5 · I_R for 3 min per hour or 2.5 · I_R for 30 s per hour
Leakage current I_{leak}	At 400 V AC, 50 Hz
Climatic category (IEC 60068-1)	25/100/21 (–25 °C/+100 °C/21 days damp heat test)
Approvals	UL 1283

Characteristics and ordering codes

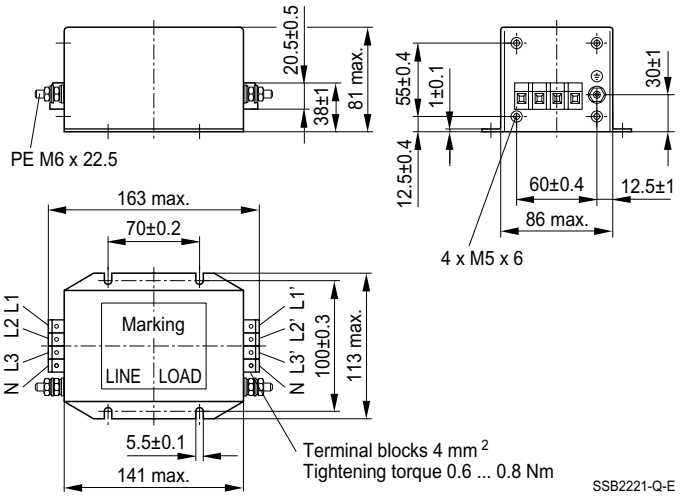
V_R AC V	I_R A	Terminal cross section mm^2	I_{leak} mA	R_{typ} mΩ	Approx. weight kg	Ordering code	Approvals
440/250	16	4	< 3.5	10	2.2	B84144A0016R000	×
	25	10	< 3.5	6	3.7	B84144A0025R000	×
	36	10	< 3.5	3.5	3.7	B84144A0036R000	×
	50	10	< 6	1.3	4.0	B84144A0050R000	×
	80	25	< 6	0.7	9.5	B84144A0080R000	×
	120	50	< 6	0.5	10	B84144A0120R000	×
	150	50	< 6	0.35	10	B84144A0150R000	×
	180	95	< 6	0.25	13	B84144A0180R000	×
	250	Busbars	< 6	0.095	32	B84144G0250S000	×
	500		< 6	0.060	53	B84144G0500S000	–
	1000		< 6	0.030	140	B84144G1000S000	–
	1600		< 6	0.020	185	B84144G1600S000	–

× = approval granted

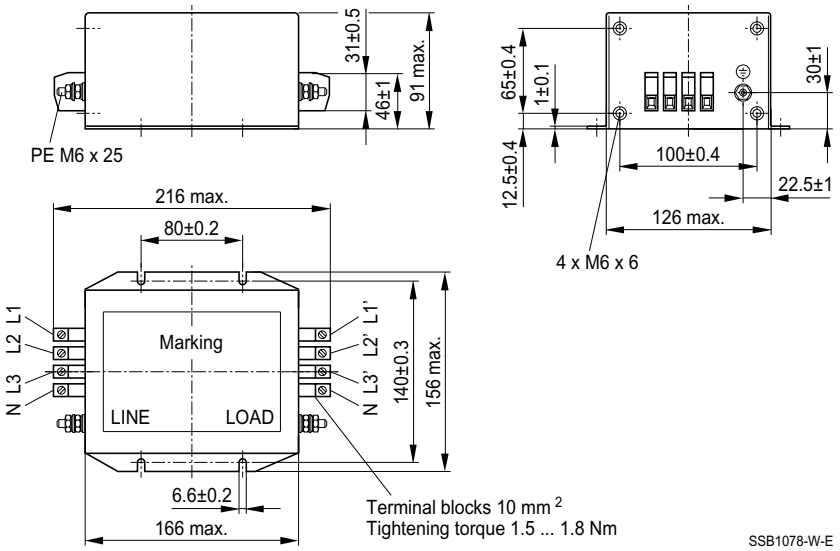
Not for new design. Substitute B84144B*S120/S121.

Dimensional drawings

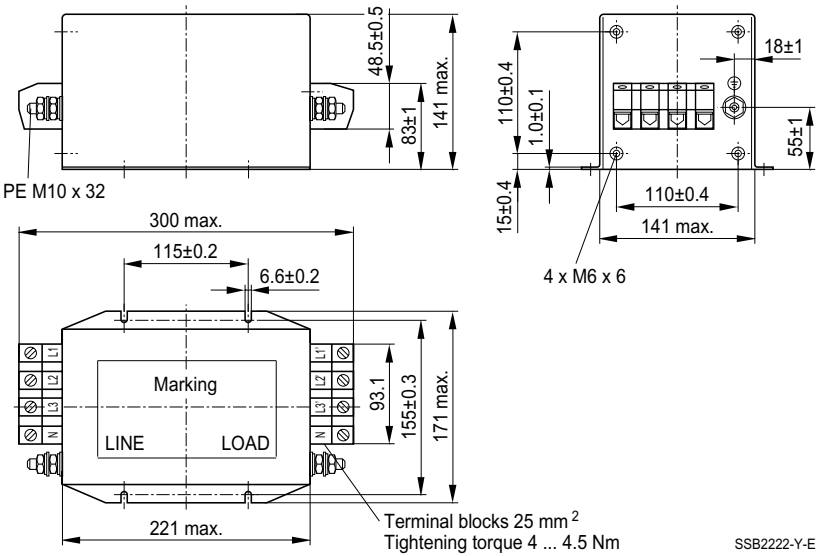
B84144A0016R000 (16 A)



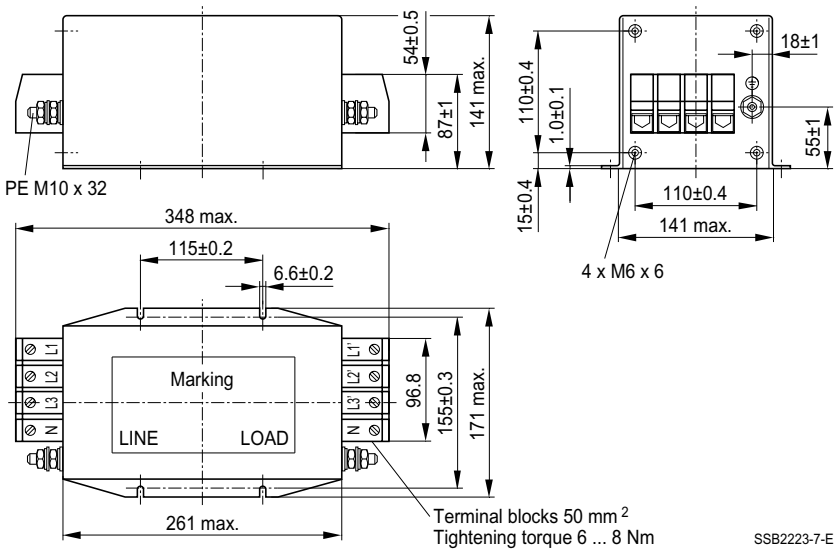
B84144A0025R000, B84144A0036R000, B84144A0050R000 (25 A, 36 A, 50 A)



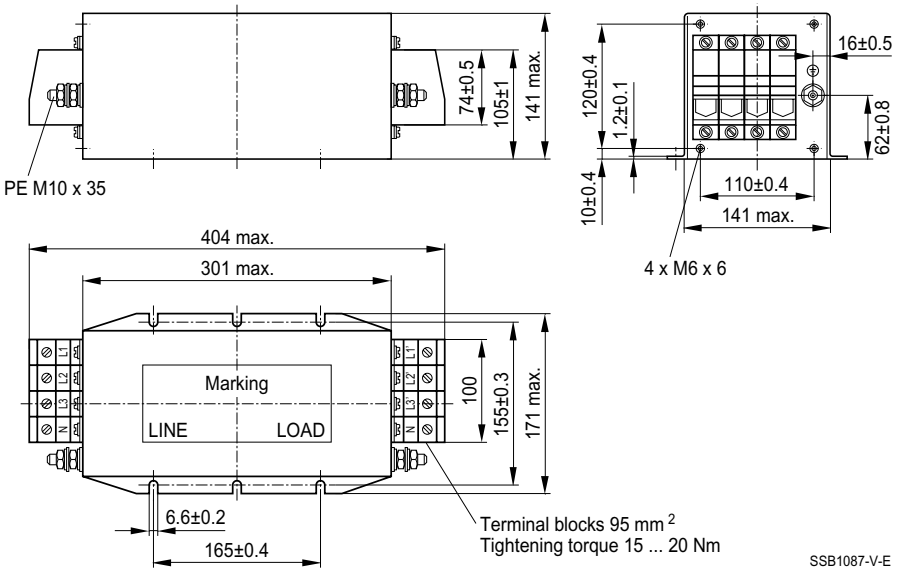
B84144A0080R000 (80 A)



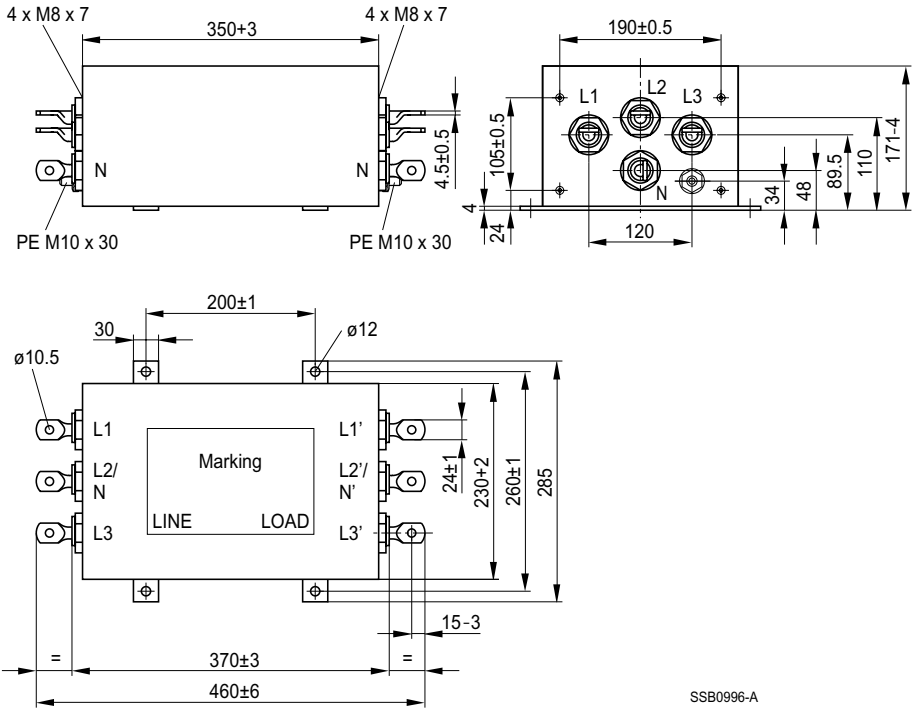
B84144A0120R000, B84144A0150R000 (120 A, 150 A)



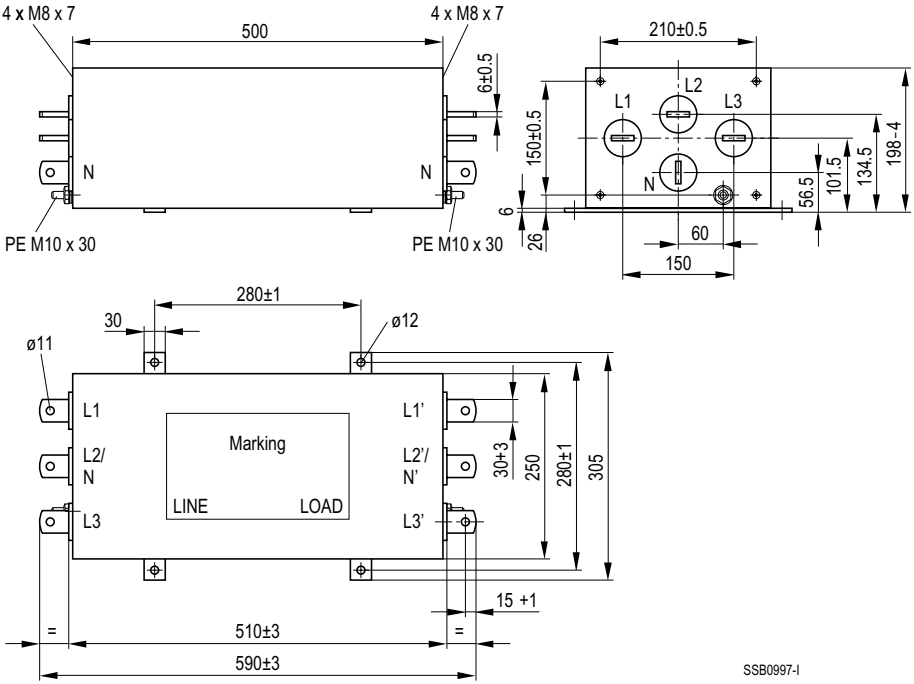
B84144A0180R000 (180 A)



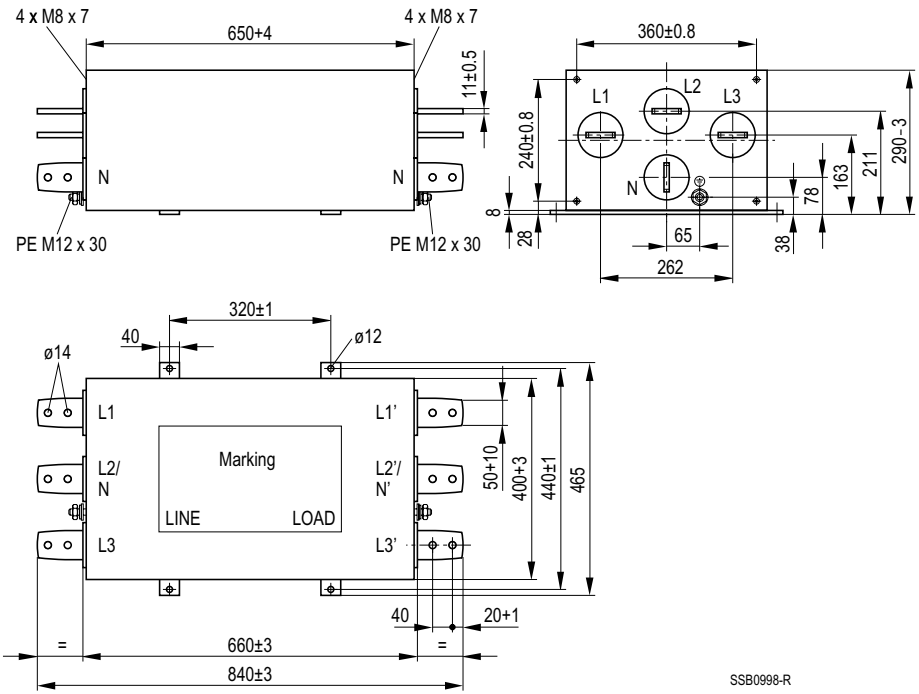
B84144G0250S000 (250 A)



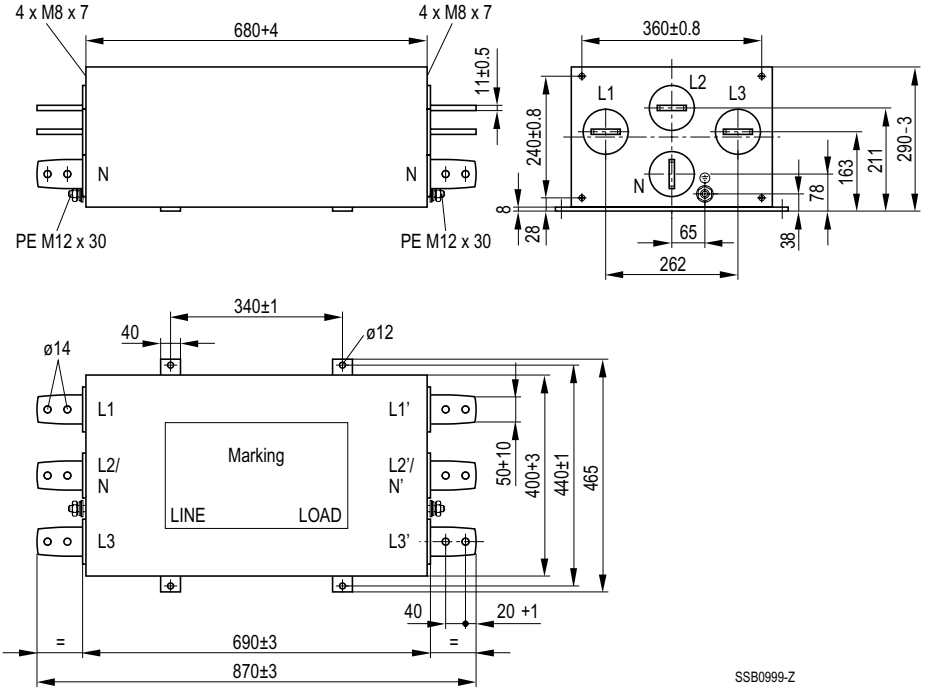
B84144G0500S000 (500 A)



B84144G1000S000 (1000 A)



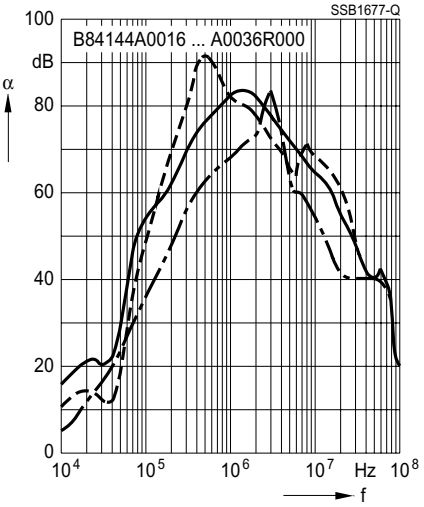
B84144G1600S000 (1600 A)



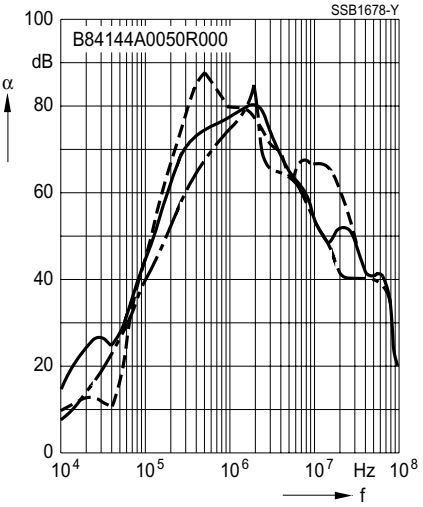
Insertion loss (typical values at Z = 50 Ω)

——————— unsymmetrical, adjacent branches terminated
—·—·—·—·— common mode, all branches in parallel (asymmetrical)
– – – – – – – – differential mode (symmetrical)

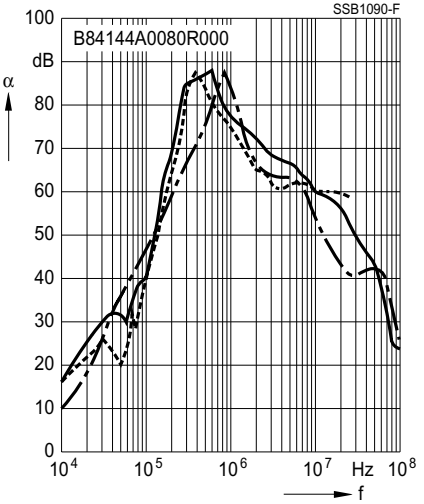
Filters for 16 … 36 A



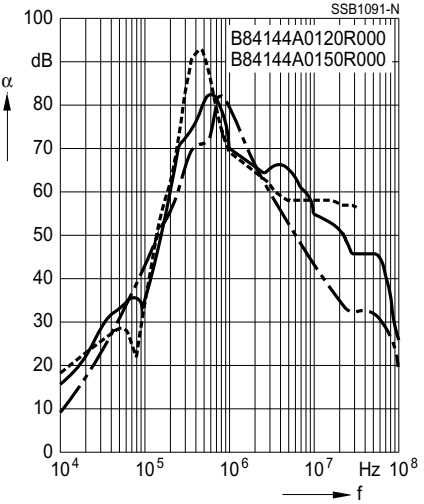
Filters for 50 A



Filters for 80 A



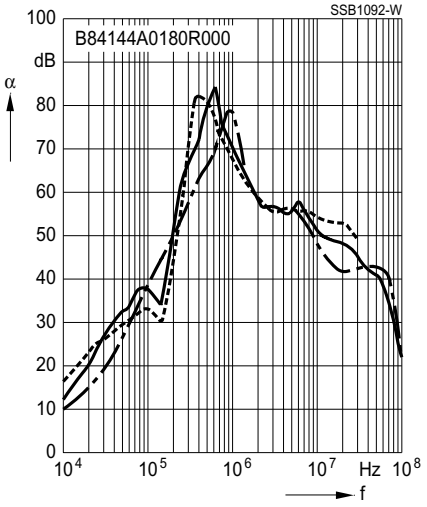
Filters for 120 and 150 A



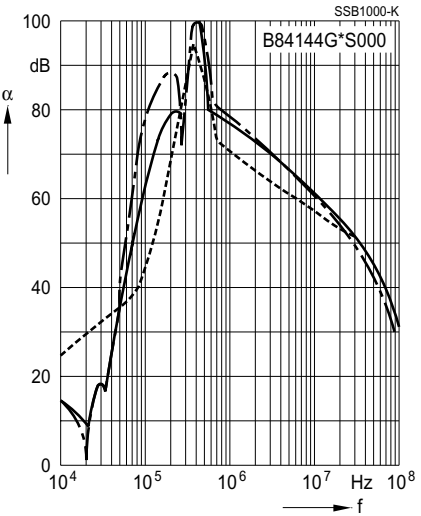
Insertion loss (typical values at Z = 50 Ω)

——————— unsymmetrical, adjacent branches terminated
—·—·—·—·—·— common mode, all branches in parallel (asymmetrical)
– – – – – – – – differential mode (symmetrical)

Filters for 180 A



Filters for 250 to 1600 A



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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