



**3-line filters
for converters and power electronics**

520/300 V, 50/60 Hz, 35 ... 230 A, 50 °C

Ordering code:

B84143A*R410, B84143B*R410

Date:

2009-08-03

Version:

02



B84143A*R410, B84143B*R410

3-line filters

for converters and power electronics

Construction

- 3-line filter
- Metal case
- Book size

Features

- High insertion loss
- Easy to install
- Compact design
- Degree of protection IP 20 ¹⁾
- Design complies with IEC 60939, UL 1283, CSA 22.2 No.8
- Optimized for long motor cable and operation under full load
- B84143A*R410: UL- and cUL approval

Applications

- Frequency converters and regenerative frequency converters (AFE) for motor drives, e.g.
 - elevators
 - machine tool building
 - pumps
 - traction systems
 - conveyor systems
 - HVAC systems (heating, ventilation and air conditioning)

Terminals

- Finger-save terminal blocks

Marking

- Marking on component:
manufacturer's logo, ordering code, rated voltage, rated frequency, rated current, rated temperature, climatic category, date code
- Minimum marking on packaging:
manufacturer's logo, ordering code, date code, quantity



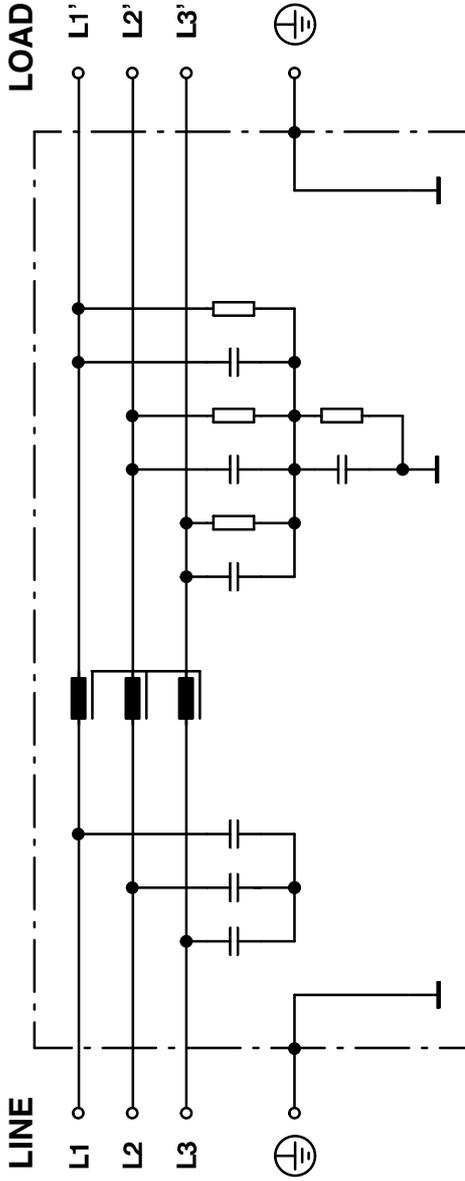
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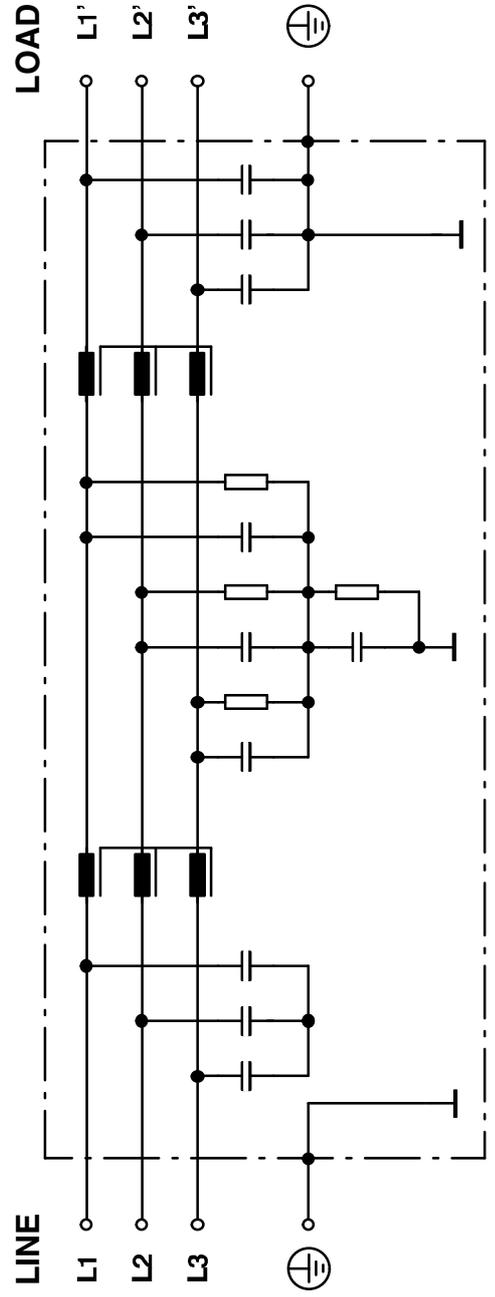
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[查询"B84143B0200R410"供应商](#)

Typical circuit diagram of B84143A0035R410, B84143A0200R410, B84143A0230R410



Typical circuit diagram of B84143A0050R410, B84143A0080R410, B84143A0110R410, B84143A0150R410





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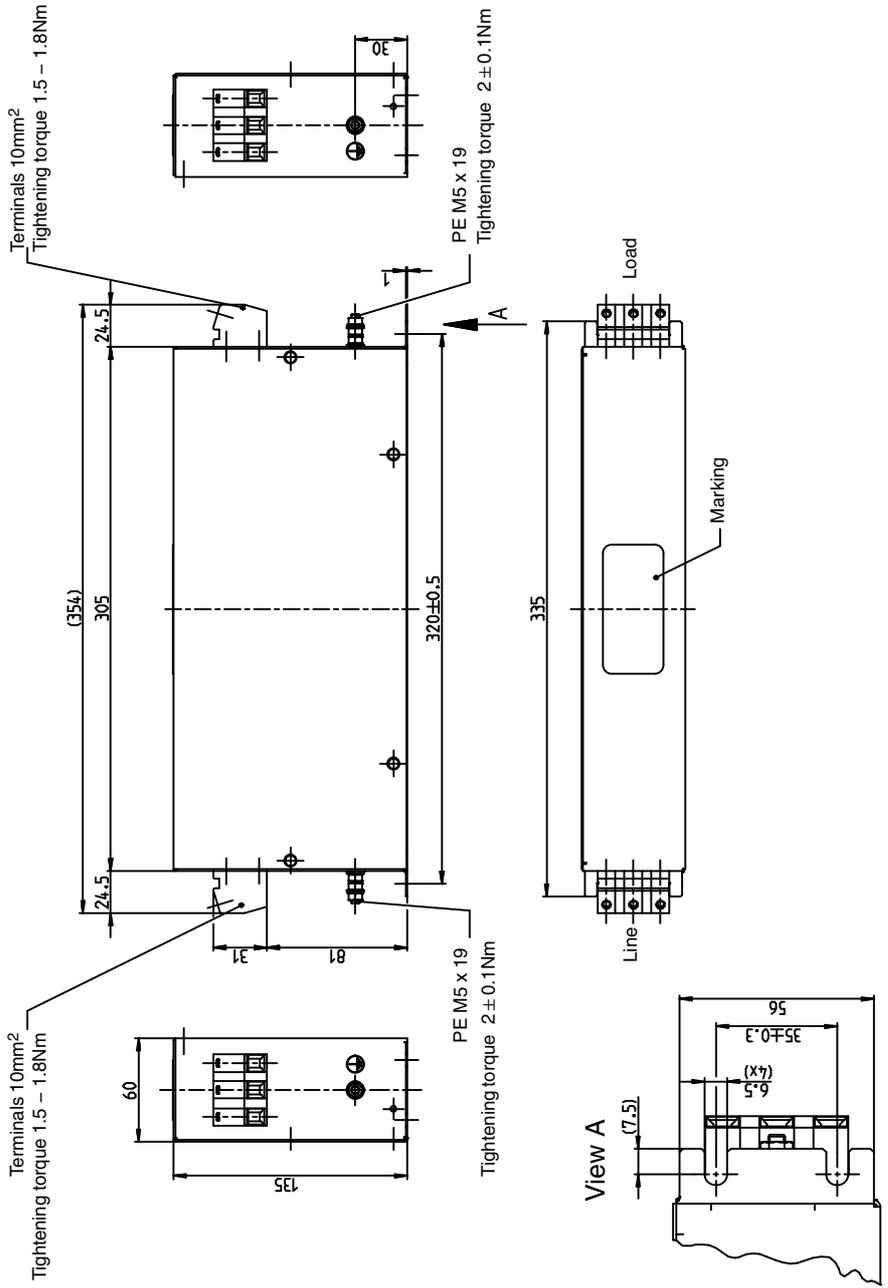
Technical data and measuring conditions

Rated voltage	U _R	520/300	V AC
Rated frequency	f _R	50/60	Hz
Test voltage line to line for 2 s	U _{test}	2240	V DC
Test voltage line to case for 2 s	U _{test}	2720	V DC
Rated temperature	T _R	50	°C
Overload capability (thermal) for 3 min per hour or for 30 s per hour		1.5 x I _R 2.5 x I _R	
Climatic category (IEC 60068-1)		25/100/21	

Characteristics and ordering codes

U _R AC	I _R	Terminal cross section	I _{leak} ⁽²⁾	R _{typ}	Approx. weight	Ordering code	Approvals
V	A	mm ²	mA	mΩ	kg		RU
520/300	35	10	14	2.9	2.5	B84143A0035R410	X
	50	25	15	1.6	4.5	B84143A0050R410	X
	80	50	15	0.9	8.5	B84143A0080R410	X
	110	50	15	0.65	9.0	B84143A0110R410	X
	150	95	15	0.6	13.5	B84143A0150R410	X
	200	95	10	0.3	14.0	B84143A0200R410	X
	230	95	10	0.25	14.5	B84143A0230R410	X

Dimensional drawings
B84143A0035R410



All dimensions in mm

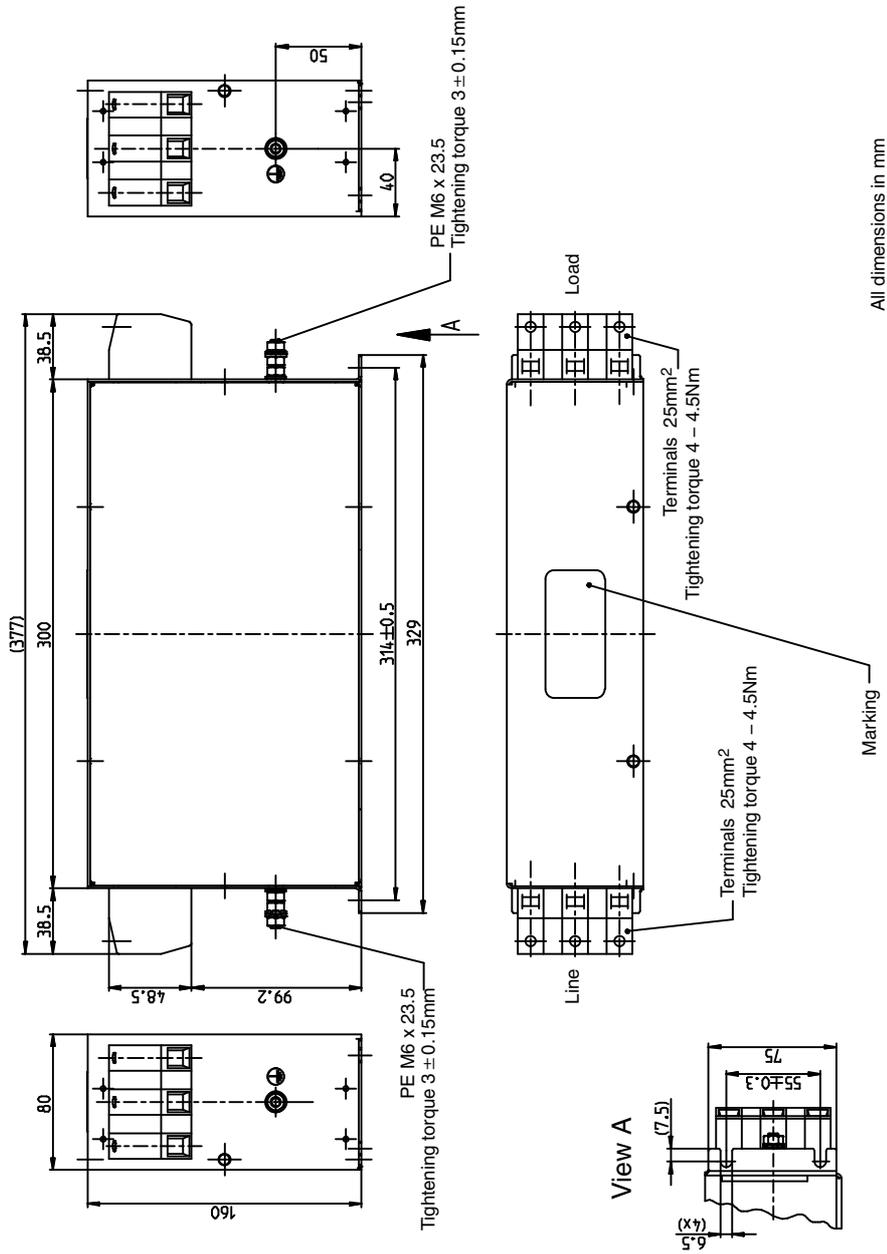


B84143A*R410, B84143B*R410

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B84143A0050R410



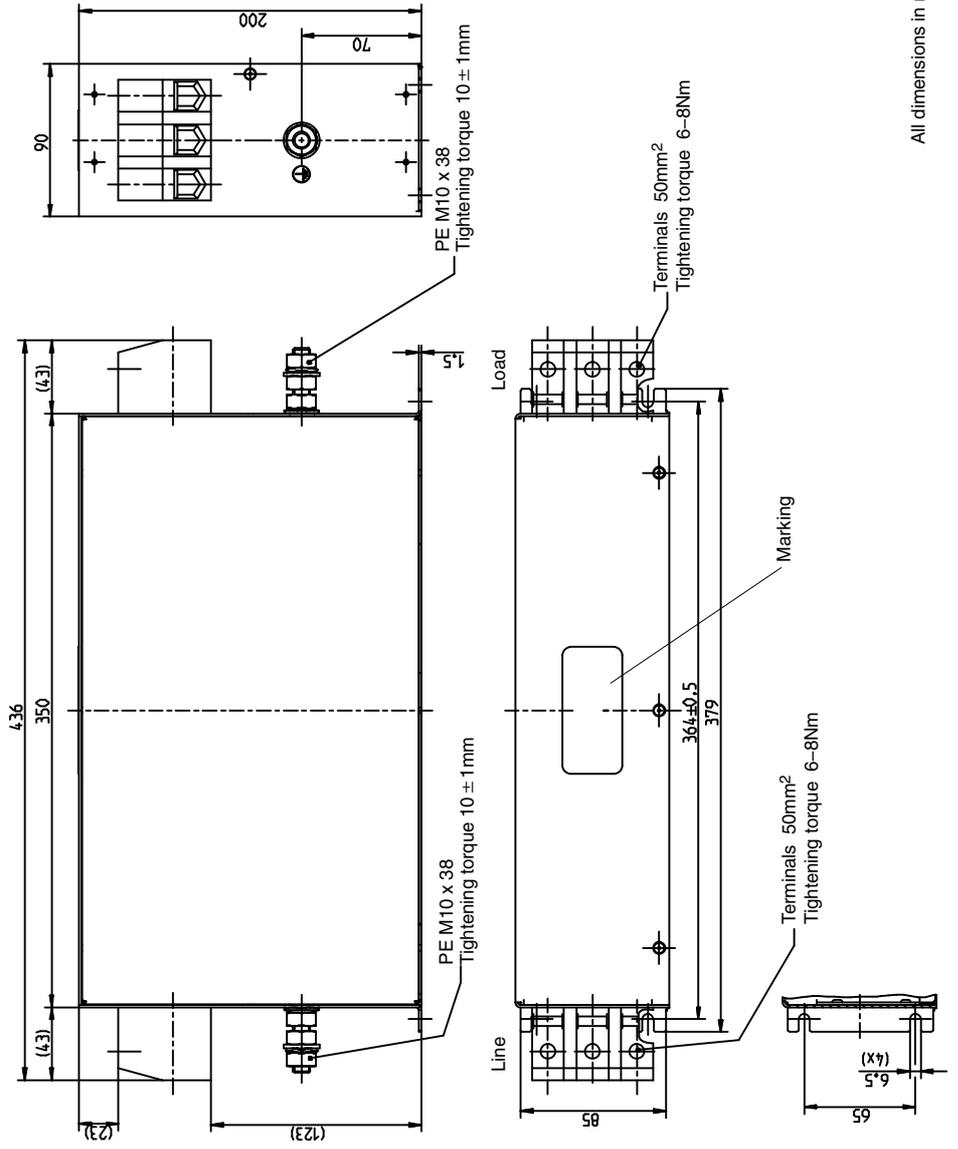


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3-line filters

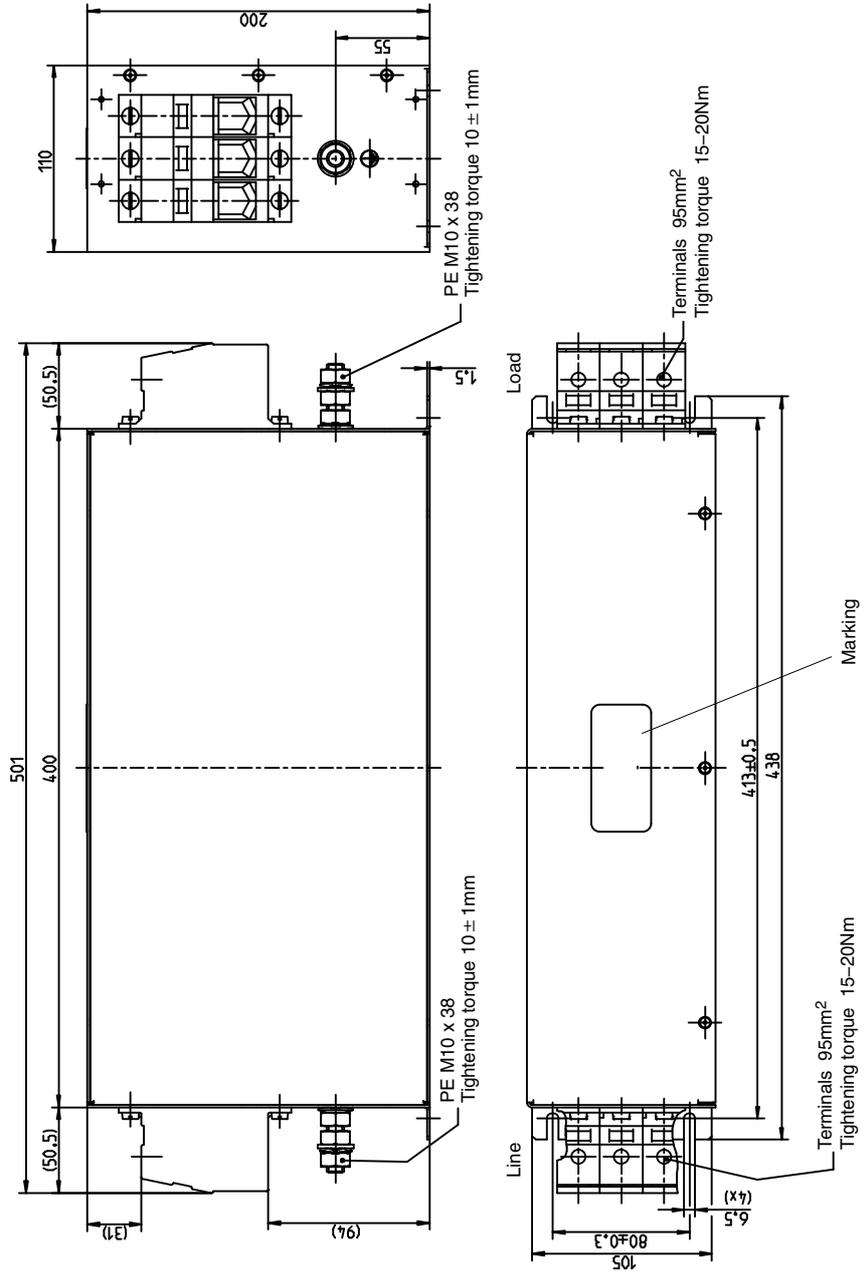
for converters and power electronics

B84143A0080R410, B84143A0110R410



All dimensions in mm

B84143A0150R410, B84143A0200R410, B84143A0230R410



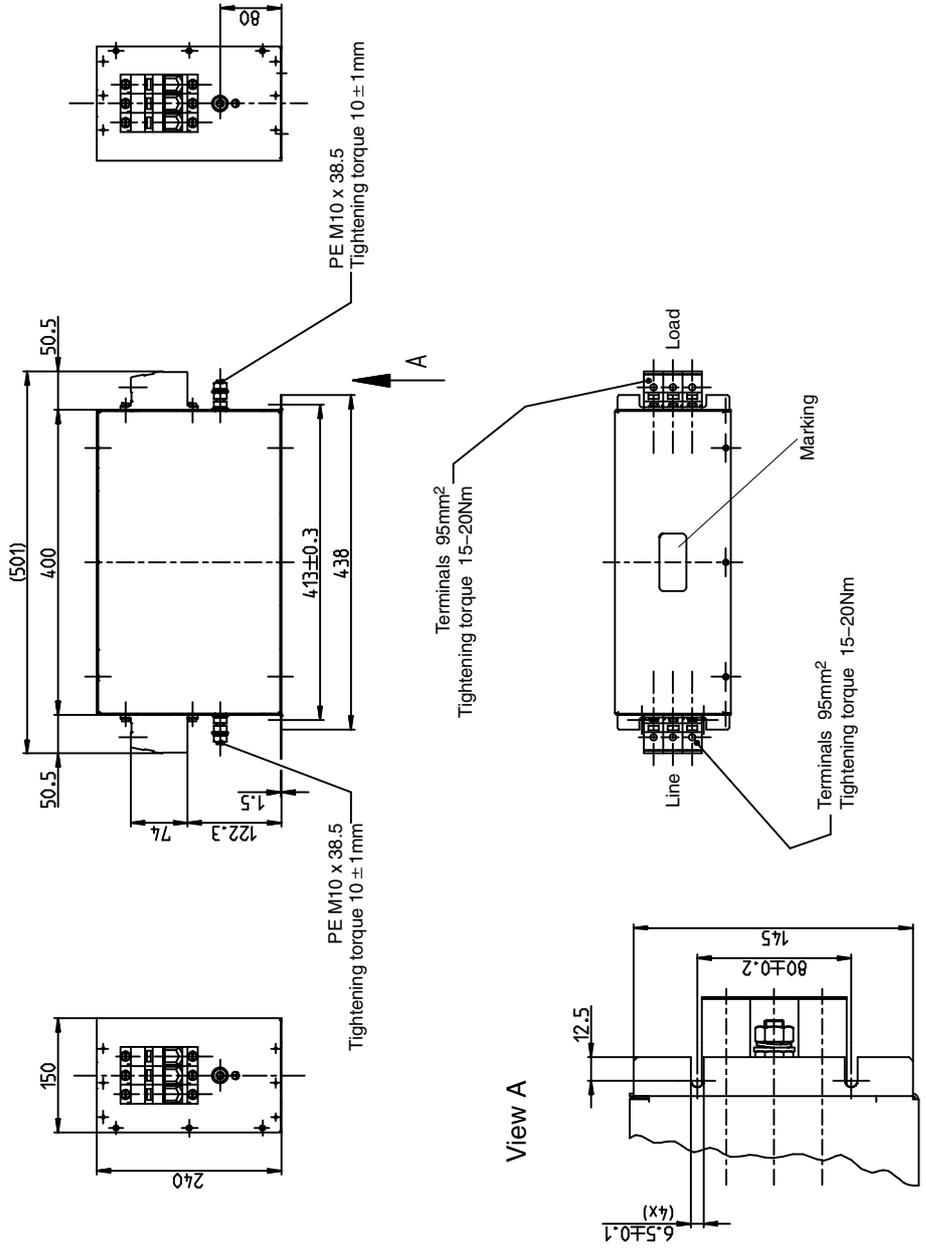


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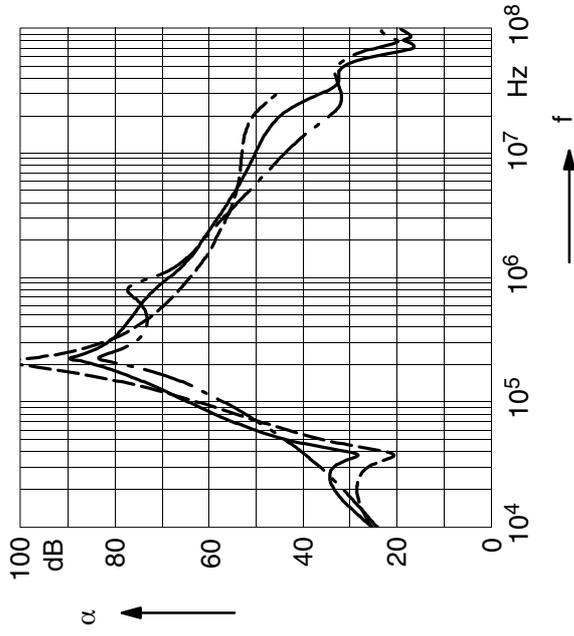
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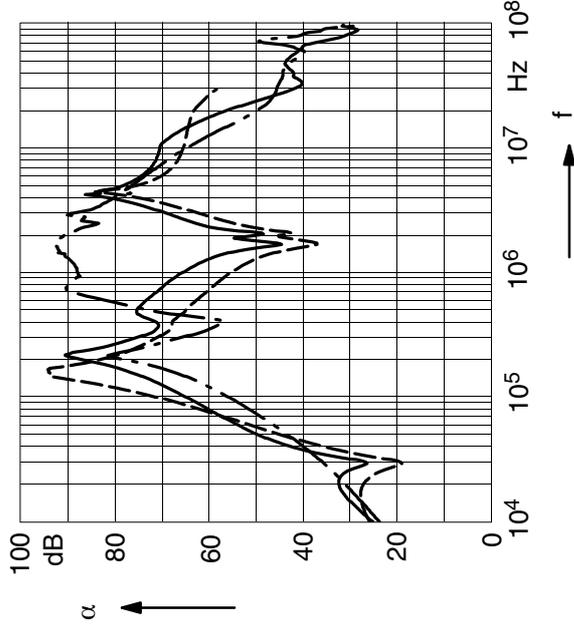
Insertion loss (typical values at $Z = 50 \Omega$)

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

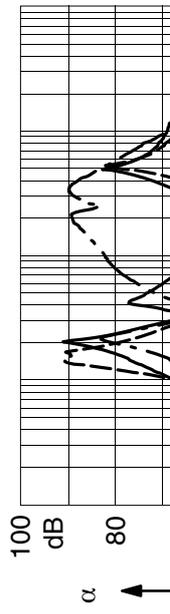
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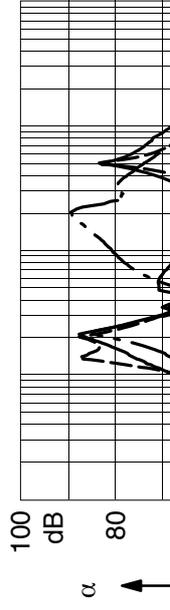
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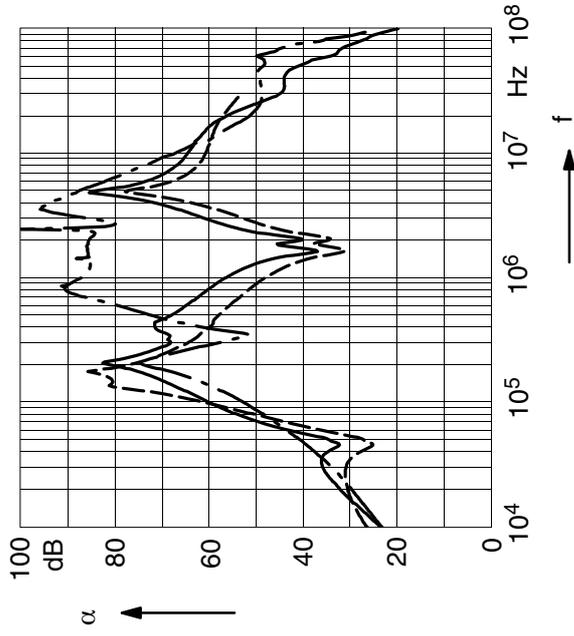
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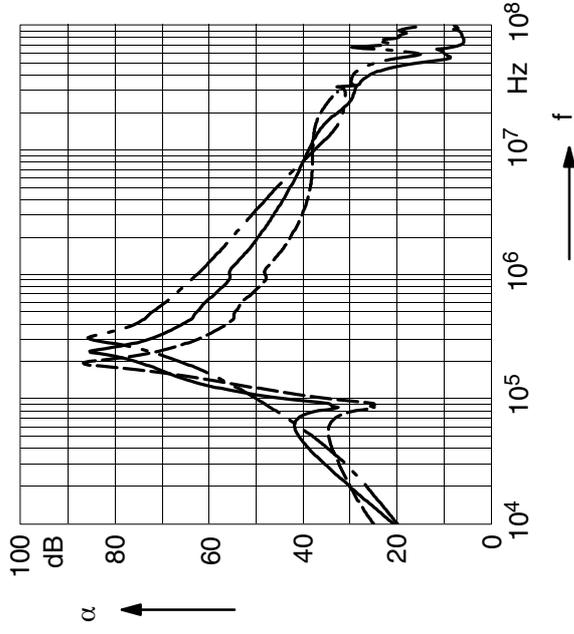
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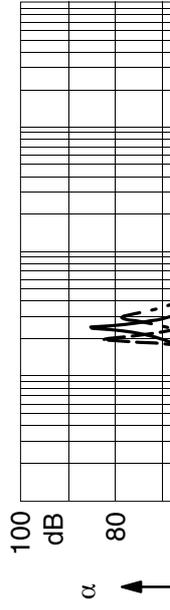
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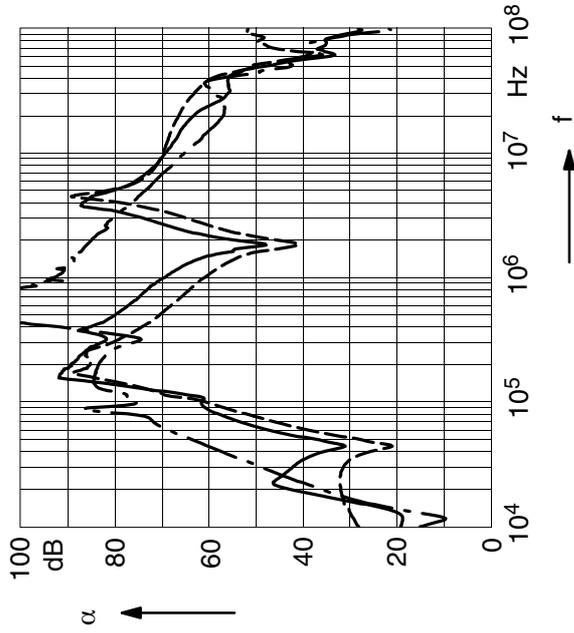
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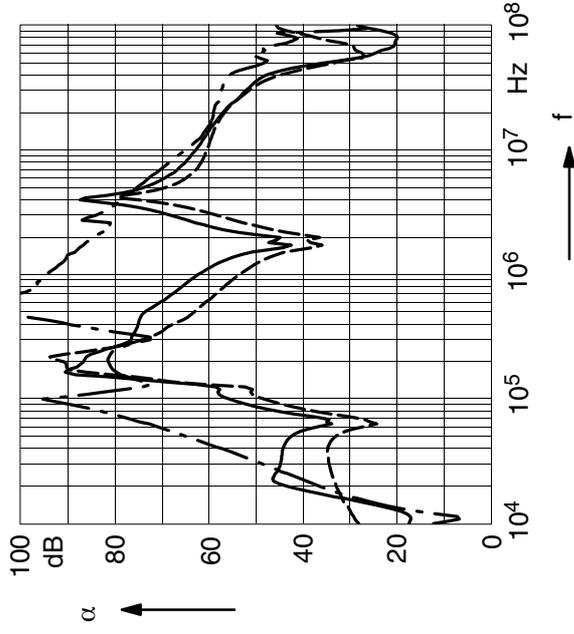
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Caution and warnings

- Please note the advices in our data book “EMC Filters” (latest edition); attention should be paid to the chapter “General safety notes”.
- 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 with circuits able to cause resonances, impermissible voltages at higher frequencies etc. can lead to bodily injury and death as well as cause substantial material damages (e.g. destruction of the filter housing).
- EMC filters must be protected in the application against impermissible exceeding of the rated currents by overcurrent protective.
- In case of leakage currents $> 3.5 \text{ mA}$ you shall mount the PE conductor stationary with the required cross section before beginning of operation and save it against disconnecting. For leakage currents $I_L^{(4)} < 10 \text{ mA}$ the PE conductor must have a KU value ³⁾ of 4.5; for leakage currents $I_L \geq 10 \text{ mA}$ the PE conductor must have a KU value of 6.

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