



3-Line Filters

B84143-B*-R110

for Converters and Power Electronics

B84143-B*-R112

Power line filters for three-phase systems
Rated voltage 480/275 and
520/300 V~, 50/60 Hz
Rated current 8 to 200 A



Construction

- Three-line filter
- Metal case
- Book size

Features

- Very high insertion loss
- Low leakage current
- Optimized footprint saves space
- Litz wires on the load side reduce mounting time
- Low weight
- Degree of protection: IP 20¹⁾
- Design based on
EN 133 200, UL 1283, CSA 22.2 No.8 1986
- Optimized for long motor cables
and operation under full load
- UL and CSA approval pending

Applications

- Frequency converters for motor drives, e.g.
 - elevators
 - pumps
 - traction systems
 - conveyor systems
 - HVAC systems (heating, ventilation and air conditioning)
- Wind farms
- Power supplies

Terminals

- Line: Safe-to-touch terminal blocks
- Load: Litz wires

Marking

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

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

1) In accordance with IEC 60529:1989; EN 60529:1991; DIN VDE 0470-1



3-Line Filters

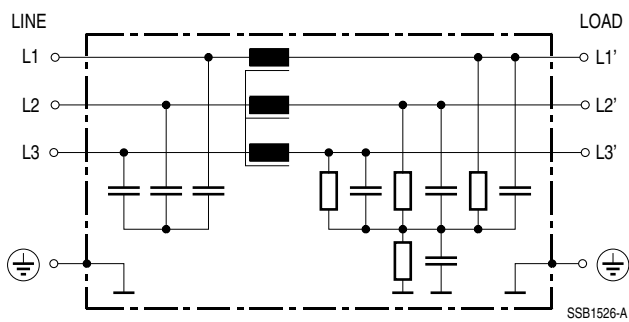
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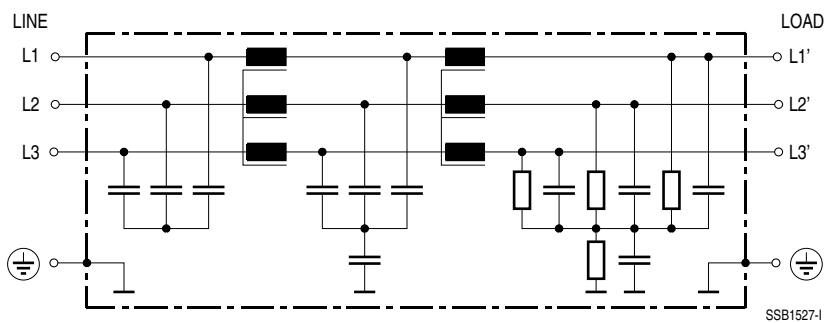
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Typical circuit diagrams

B84143-B8 ... B16-R110



B84143-B25 ... B200-R11*





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Technical data

Rated voltage V_R	480/275 V~, 50/60 Hz (type -R110) 520/300 V~, 50/60 Hz (type -R112)
Rated current I_R	Referred to 40 °C ambient temperature
Test voltage V_P	1770 V~, 2 s (line/line) 2700 V~, 2 s (lines/case)
Overload capability	1,5 · I_R for 3 min per hour or 2,5 · I_R for 30 s per hour
Leakage current I_{leak}	at 480 V~, 50 Hz
Climatic category	25/100/21 (– 25 °C/+ 100 °C/21 days damp heat test) in accordance with EN 60068-1

Characteristics and ordering codes

I_R A	Terminal cross section		I_{leak} typ ¹⁾ mA	R_{typ} mΩ	Approx. weight kg	Ordering code
	line side: terminal blocks mm ²	load side: litz wires mm ²				
8	4	1,5	< 14	26	1,5	B84143-B8-R110
16	4	2,5	< 14	13	1,5	B84143-B16-R110
25	6	4	< 14	10	2,7	B84143-B25-R11*
36	6	6	< 14	6,5	3,2	B84143-B36-R11*
50	16	10	< 14	4,3	3,7	B84143-B50-R11*
66	25	16	< 14	2,7	4,3	B84143-B66-R11*
90	25	25	< 14	2,0	7,7	B84143-B90-R11*
120	50	35	< 14	1,4	8,3	B84143-B120-R11*
150	50	35	< 14	0,9	9,7	B84143-B150-R11*
200	95	70	< 14	0,5	13,5	B84143-B200-R11*

Compilation of ordering code

Replace the asterisk * by the code number for the required version:

0 = 480 / 275 V

2 = 520 / 300 V

1) At rated operation



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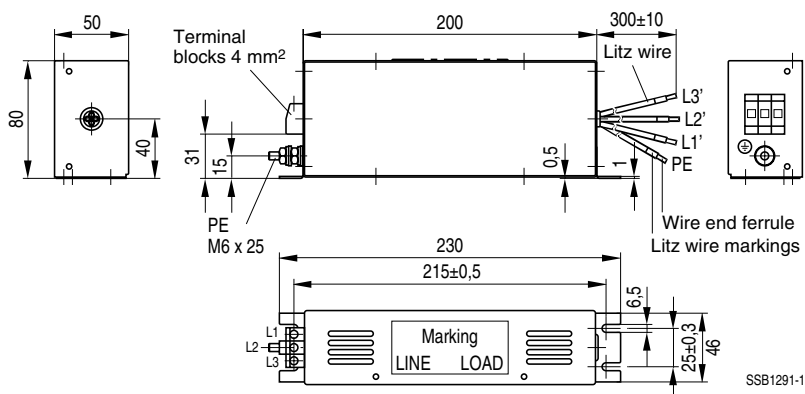
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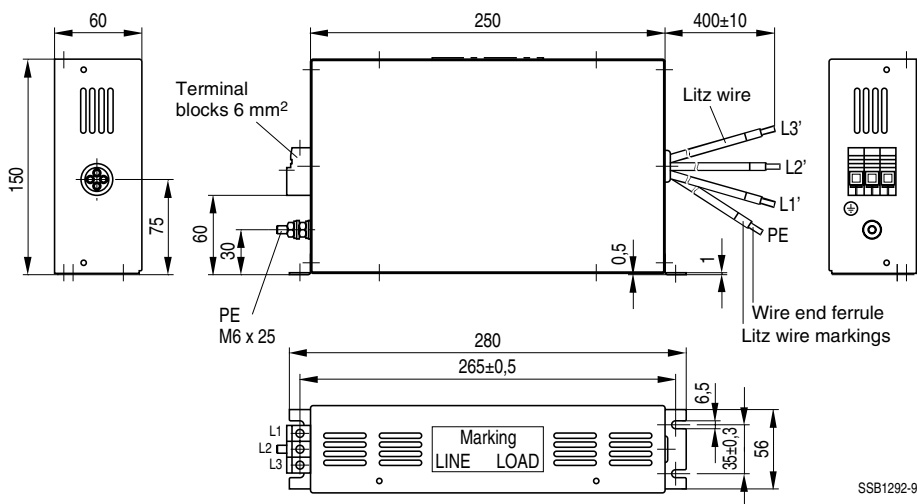
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Dimensional drawings

B84143-B8-R110, B84143-B16-R110



B84143-B25-R11*, B84143-B36-R11*





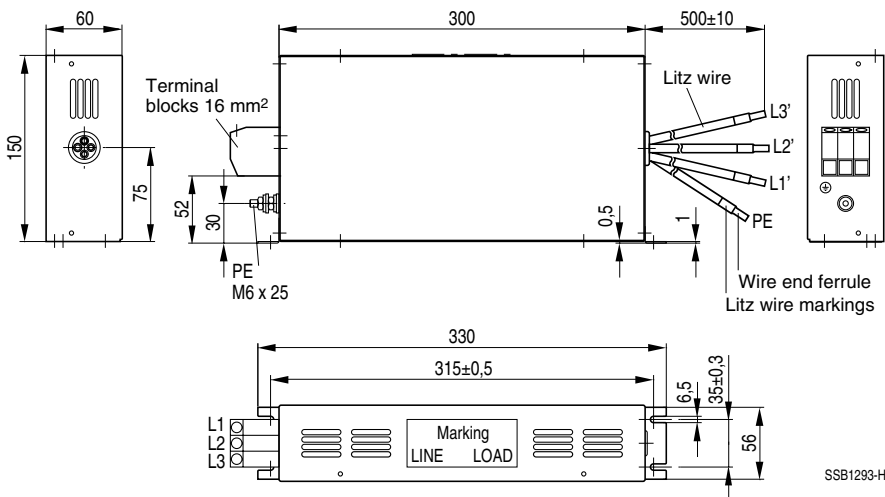
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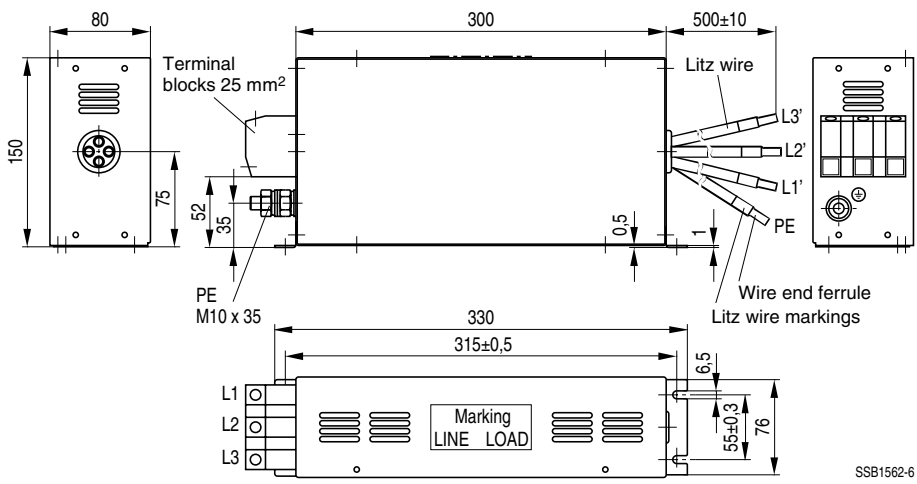
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B84143-B50-R11*



B84143-B66-R11*





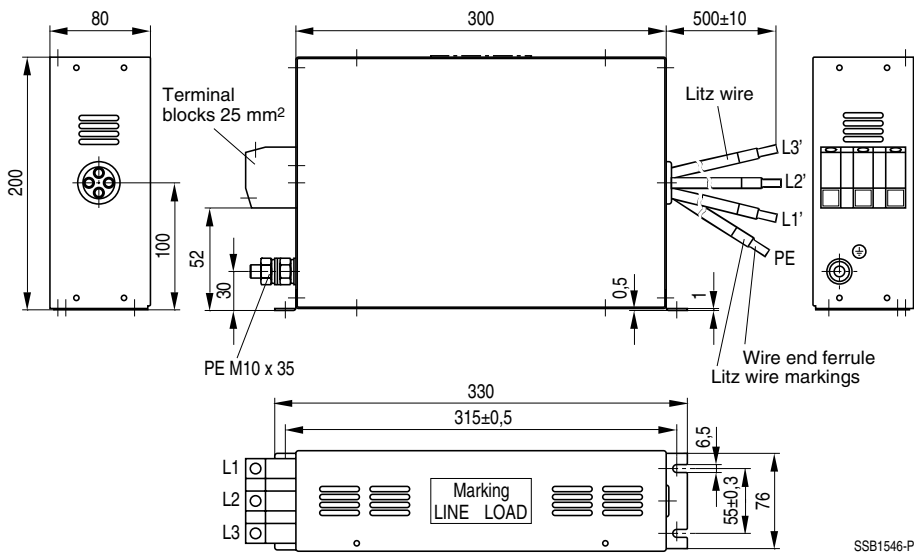
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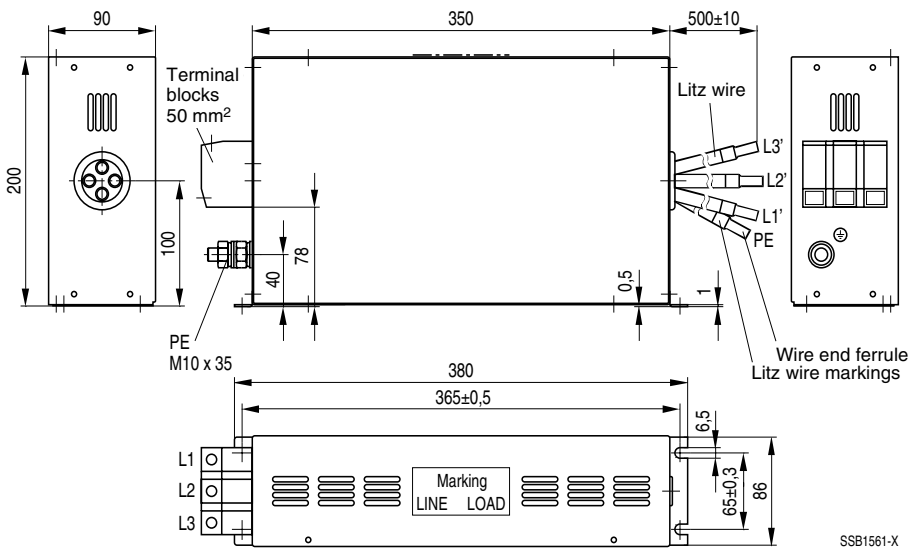
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B84143-B90-R11*



B84143-B120-R11*, B84143-B150-R11*





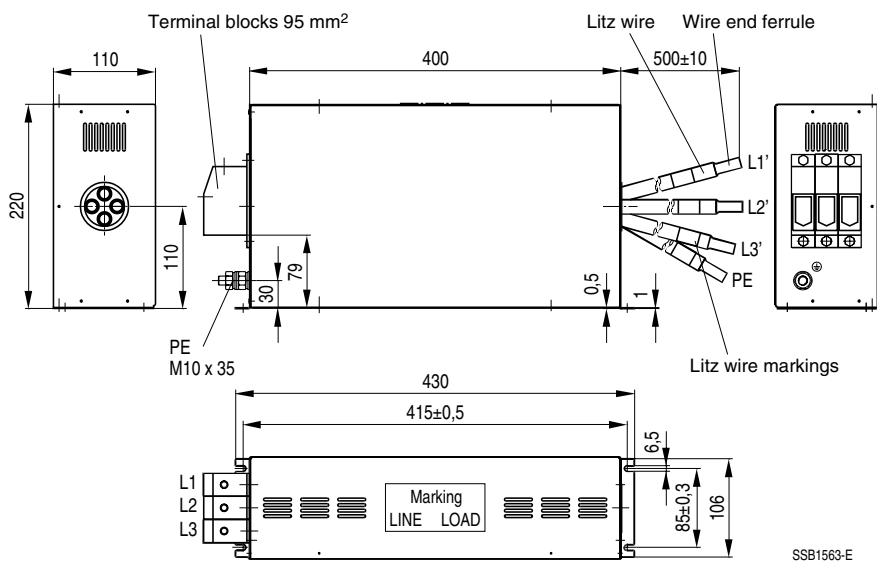
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B84143-B200-R11*



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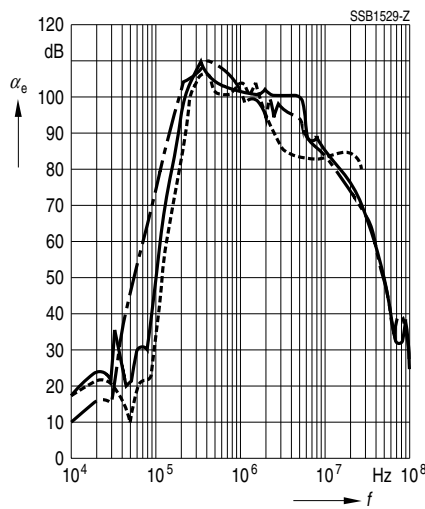
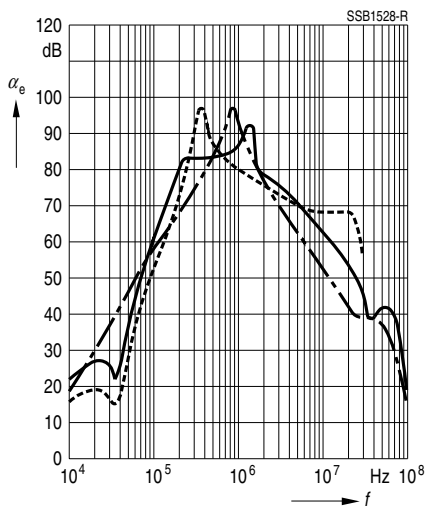
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Insertion loss (typical values at $Z = 50 \Omega$)

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

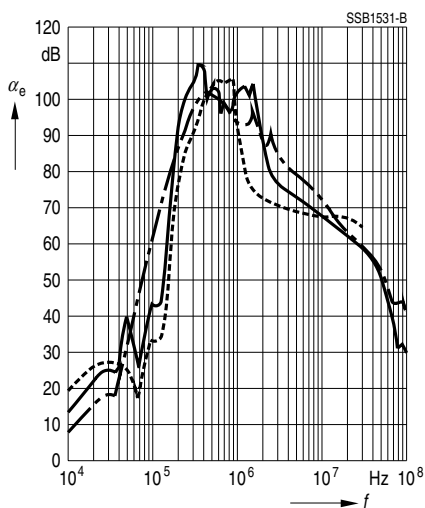
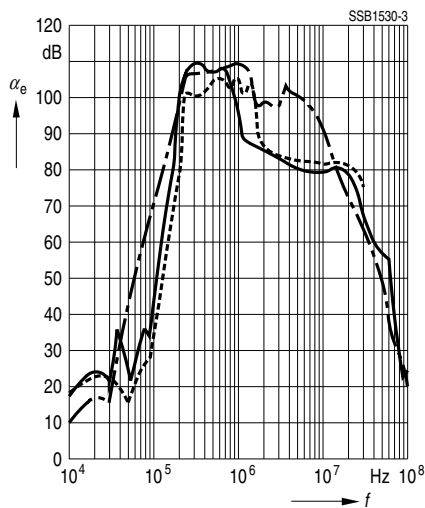
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B84143-B66-R111*





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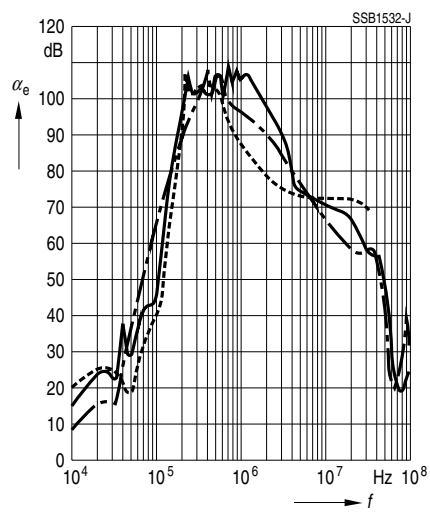
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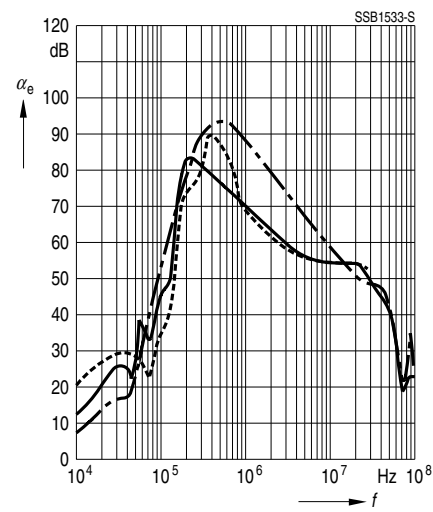
Insertion loss (typical values at $Z = 50 \Omega$)

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

B84143-B90-R11*, B84143-B120-R11*



B84143-B150-R11*, B84143-B200-R11*



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