

### 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 20<sup>1)</sup>
- 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

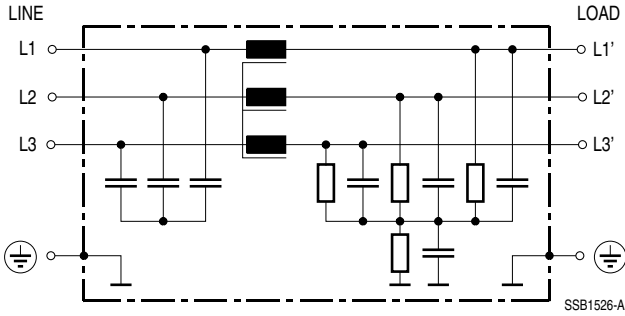
Minimum marking on packaging:

Manufacturer's logo, ordering code

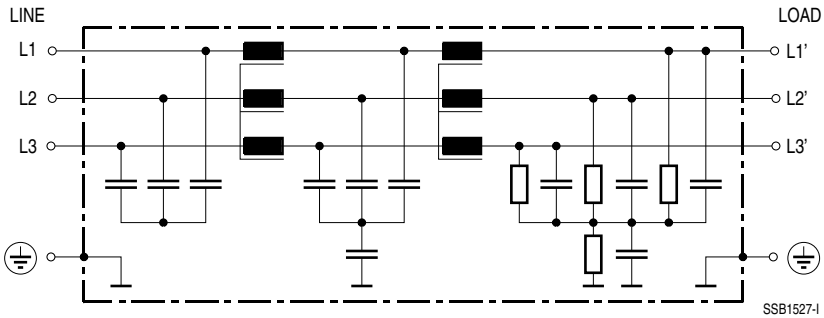
1) In accordance with IEC 60529:1989; EN 60529:1991; DIN VDE 0470-1

Typical circuit diagrams

B84143-B8 ... B16-R110



B84143-B25 ... B200-R11\*



**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	$1,5 \cdot I_R$ for 3 min per hour or $2,5 \cdot I_R$ 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**

$I_R$	Terminal cross section		$I_{leak}$ typ <sup>1)</sup>	$R_{typ}$	Approx. weight	Ordering code
	line side: terminal blocks mm <sup>2</sup>	load side: litz wires mm <sup>2</sup>				
A			mA	mΩ	kg	
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:

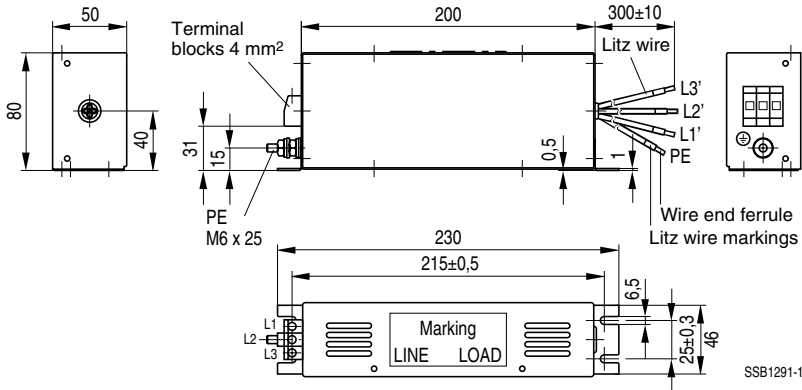
0 = 480 / 275 V

2 = 520 / 300 V

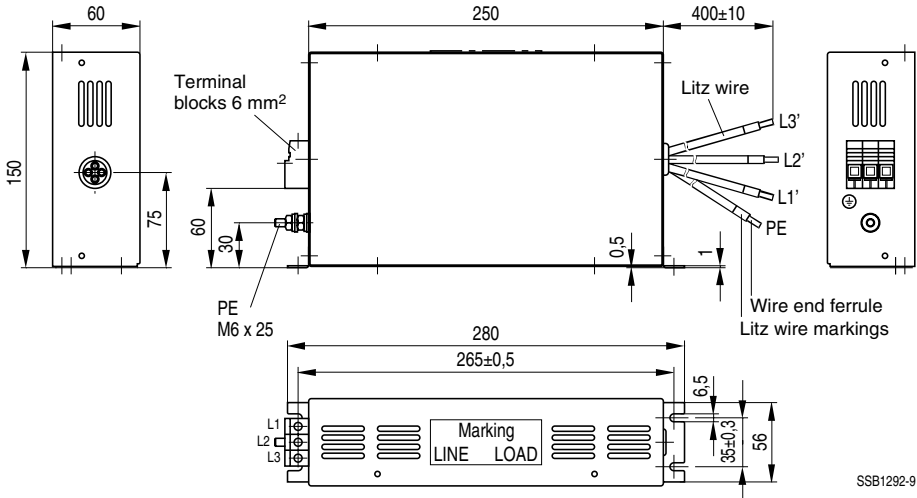
1) At rated operation

Dimensional drawings

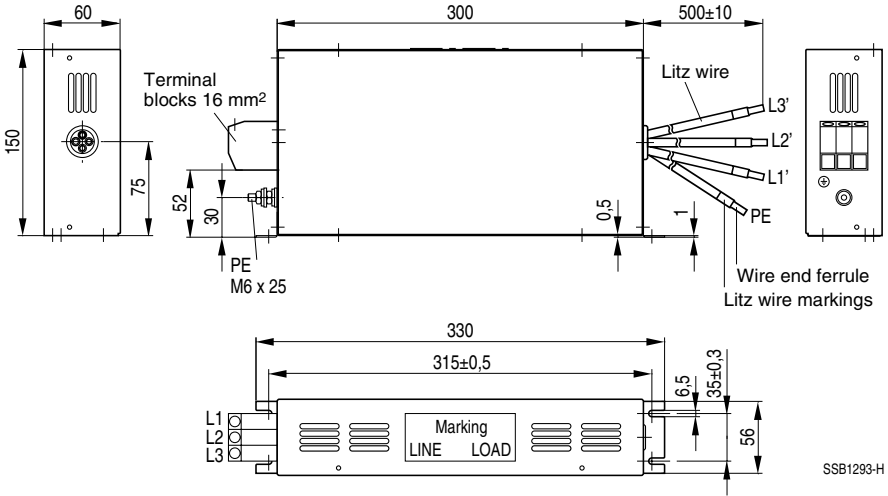
B84143-B8-R110, B84143-B16-R110



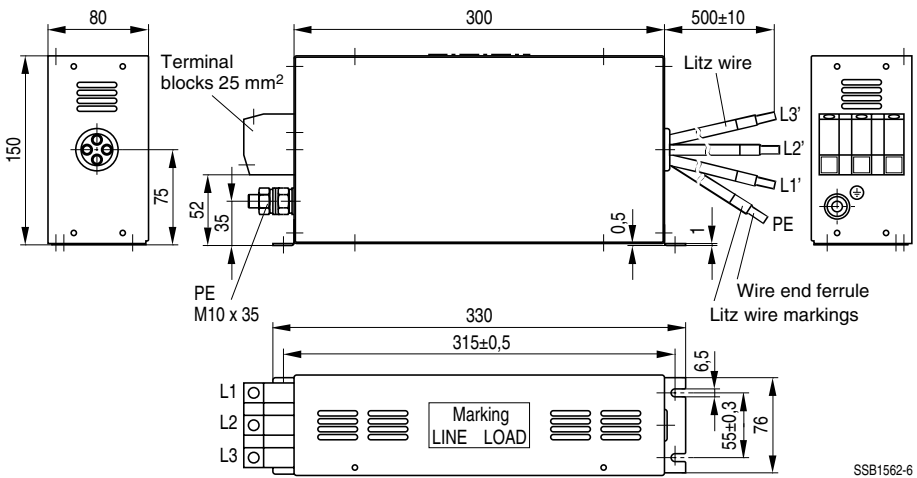
B84143-B25-R111\*, B84143-B36-R111\*



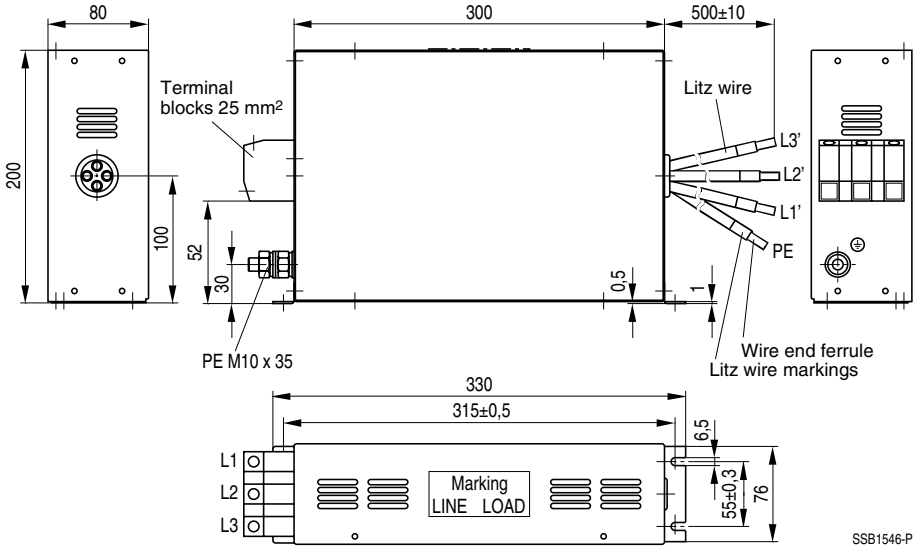
**B84143-B50-R11\***



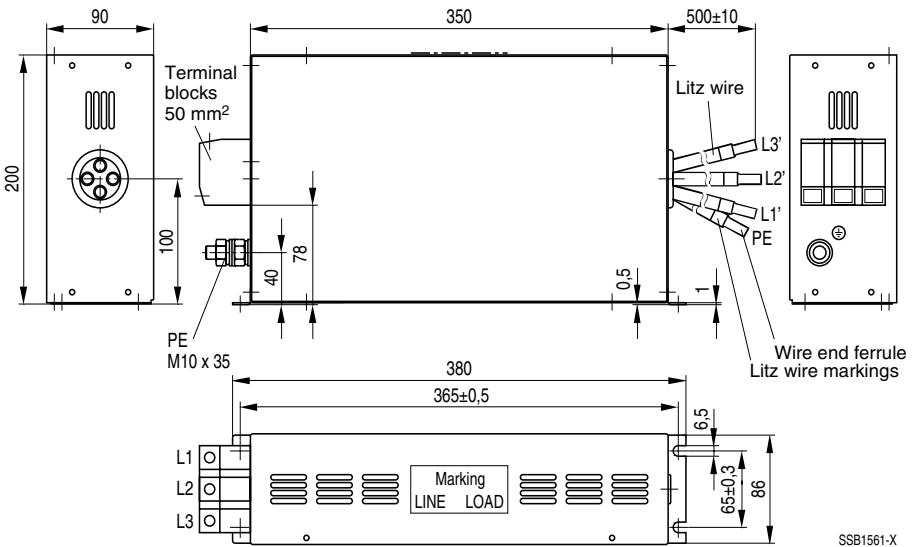
**B84143-B66-R11\***



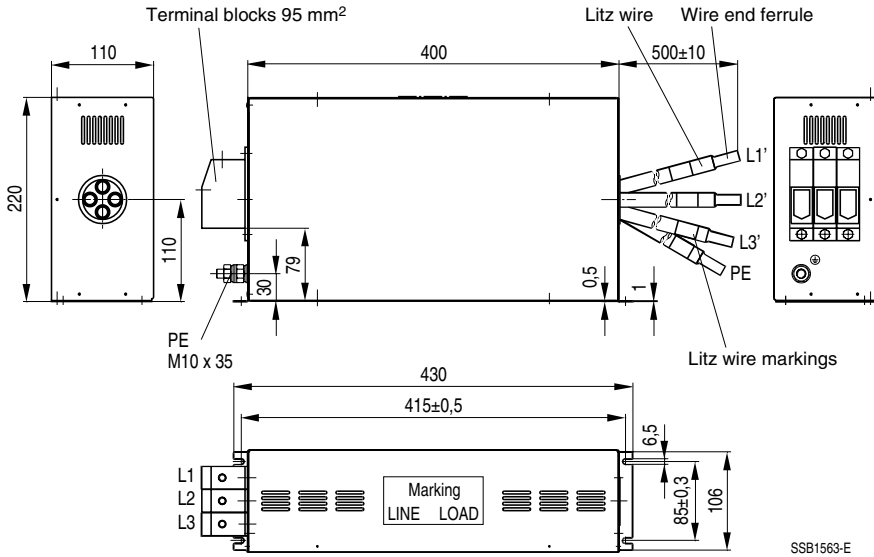
**B84143-B90-R11\***



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



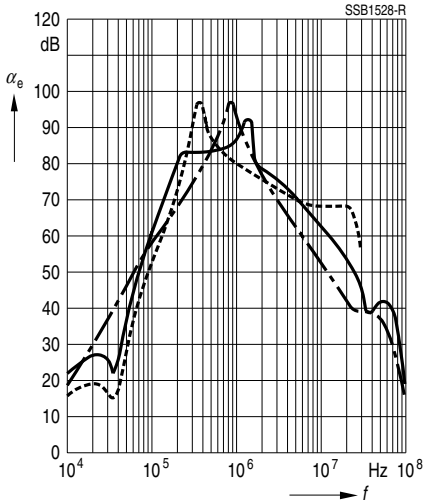
**B84143-B200-R11\***



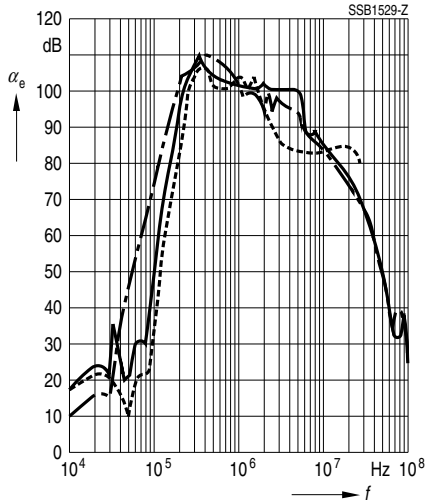
**Insertion loss** (typical values at  $Z = 50 \Omega$ )

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

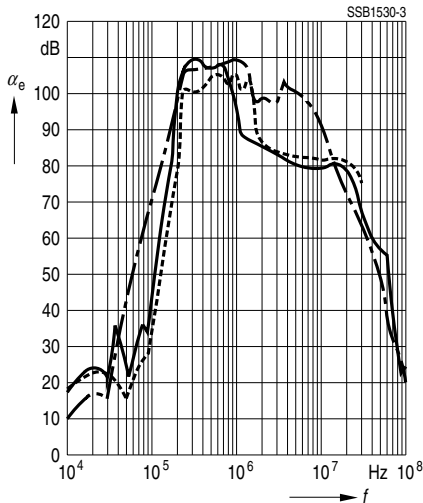
B84143-B8-R110, B84143-B16-R110



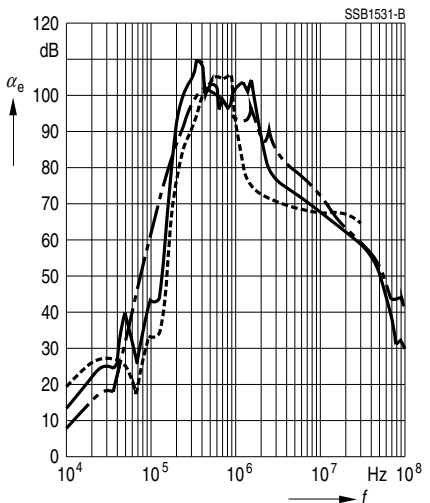
B84143-B25-R111\*, B84143-B36-R111\*



B84143-B50-R111\*



B84143-B66-R111\*



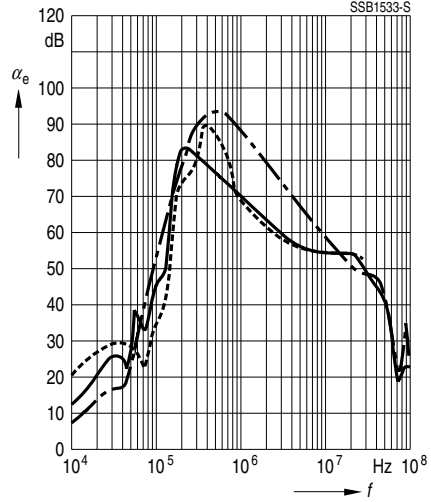
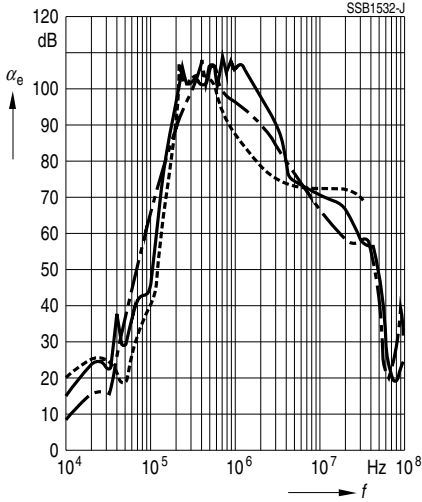


**Insertion loss** (typical values at  $Z = 50 \Omega$ )

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- - - - - 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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