

Power line filters for three-phase systems

Rated voltage 480/275 and 520/300 V~, 50/60 Hz


Rated current 8 to 220 A



Construction

- Three-line filter
- Metal case
- Book size

Features

- 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, CSA 22.2 No.8 1986
- Optimized for long motor cables and operation under full load
- UL 1283 approval for type -R110 ,
for -R112 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

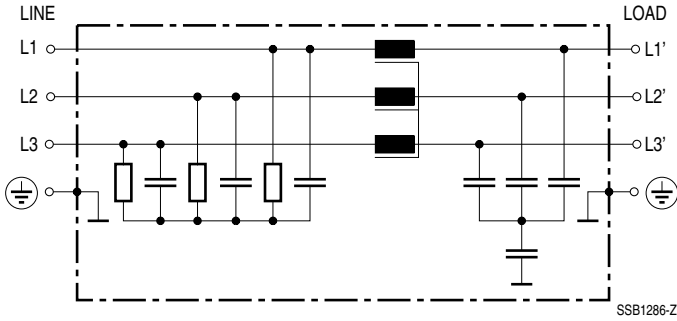
Minimum marking on packaging:

Manufacturer's logo, ordering code

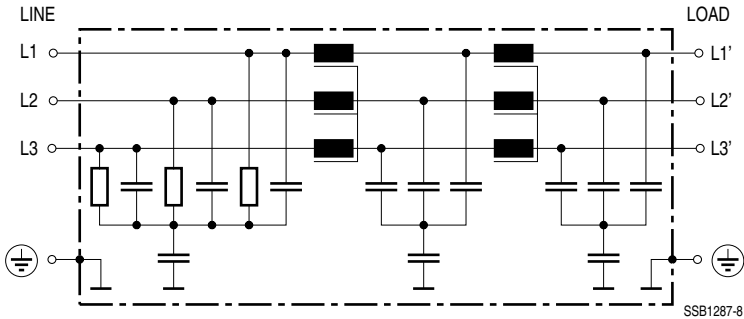
1) In accordance with IEC 60529:1989; EN 60529:1991; DIN VDE 0470-1

Typical circuit diagrams

B84143-G8 ... G20-R110/R112



B84143-G36 ... G220-R110/R112



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. 1)	R_{typ}	Approx. weight	Ordering code
	line side: terminal blocks mm ²	load side: litz wires mm ²				
A			mA	mΩ	kg	
8	4	1,5	< 6	40	1,3	B84143-G8-R11*
20	4	2,5	< 6	10	1,3	B84143-G20-R11*
36	6	6,0	< 16	5,2	2,8	B84143-G36-R11*
50	16	10	< 16	2,4	3,3	B84143-G50-R11*
66	25	16	< 16	1,8	4,4	B84143-G66-R11*
90	25	25	< 16	1,2	4,9	B84143-G90-R11*
120	50	35	< 16	1,0	7,5	B84143-G120-R11*
150	50	35	< 16	0,7	8,0	B84143-G150-R11*
220	95	70	< 16	0,4	11,5	B84143-G220-R11*

Compilation of ordering code

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

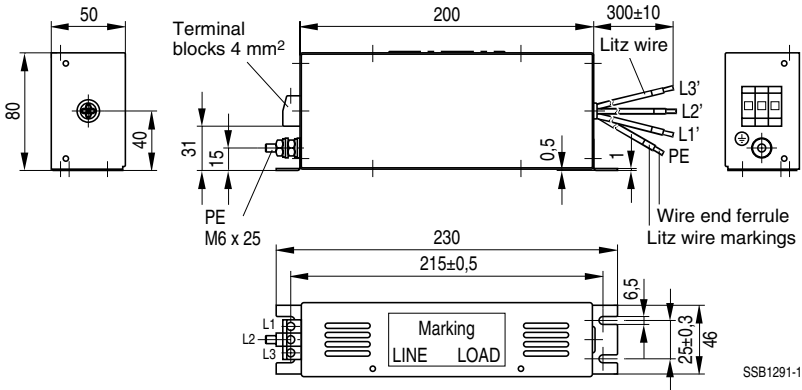
0 = 480 / 275 V

2 = 520 / 300 V

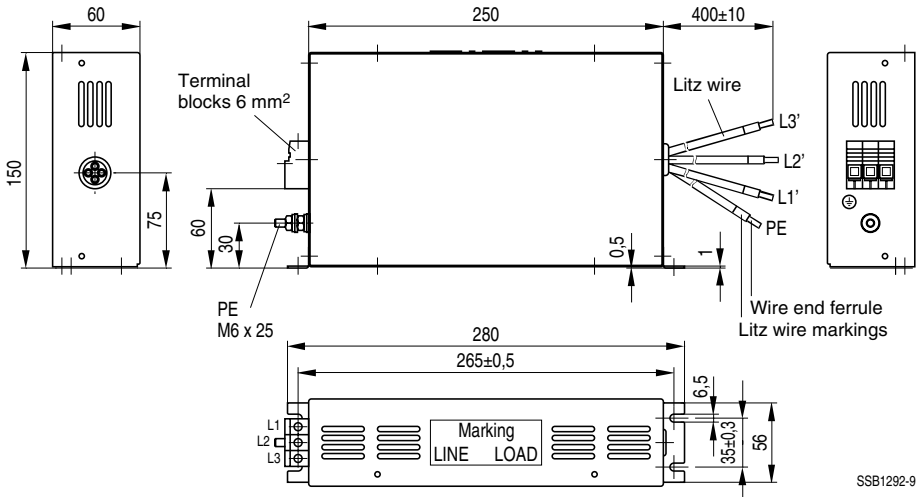
1) At rated operation

Dimensional drawings

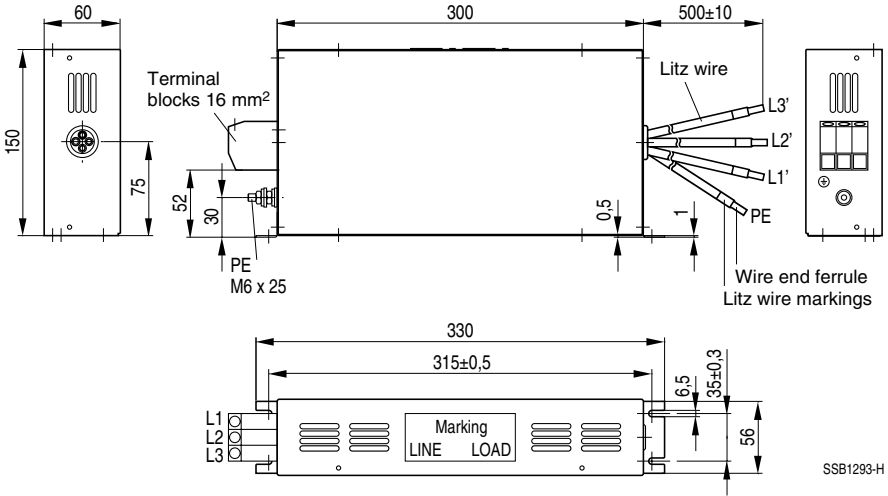
B84143-G8-R11*, B84143-G20-R11*



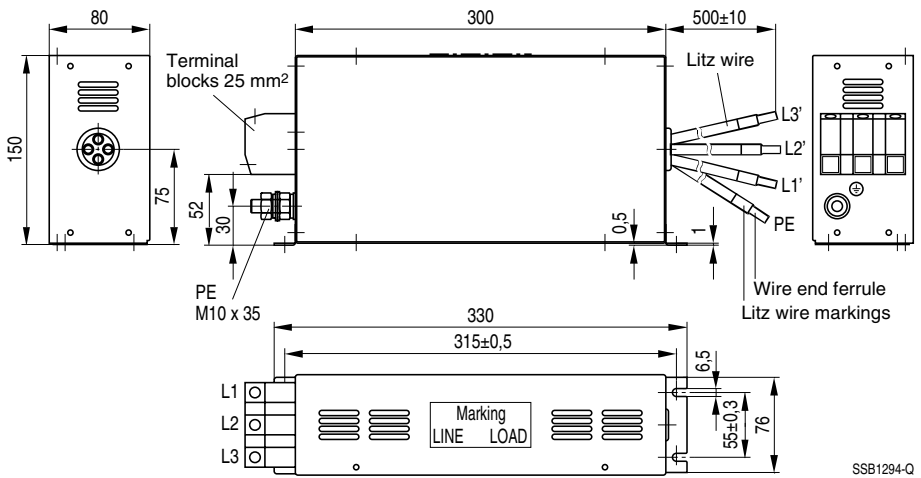
B84143-G36-R11*



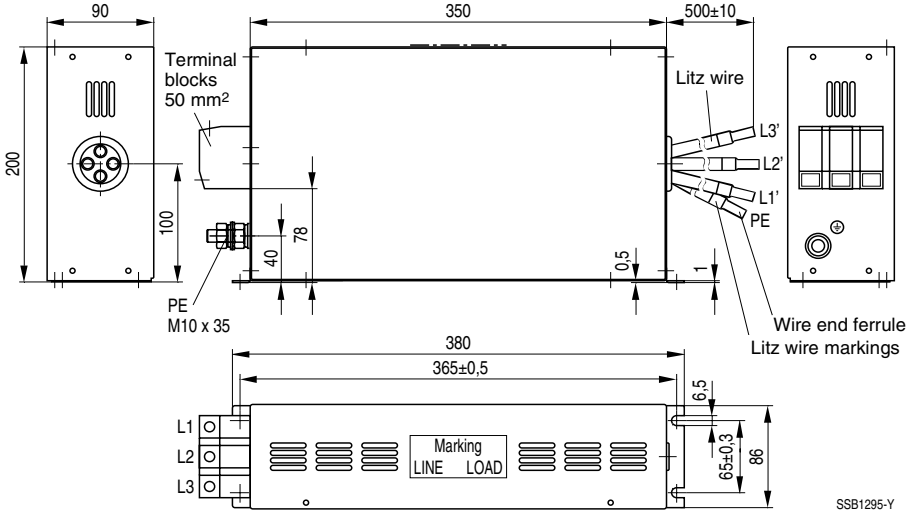
B84143-G50-R11*



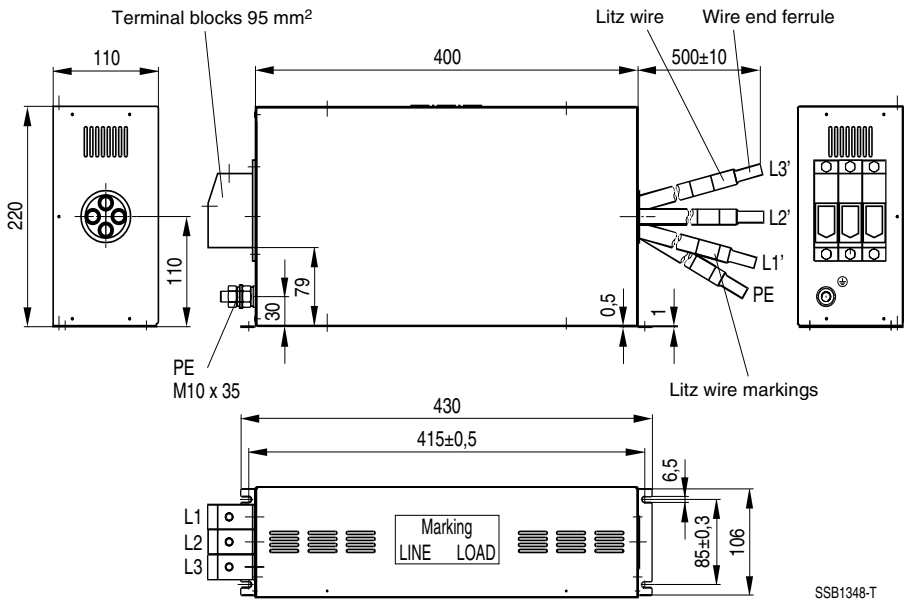
B84143-G66-R11*, B84143-G90-R11*



B84143-G120-R11*, B84143-G150-R11*



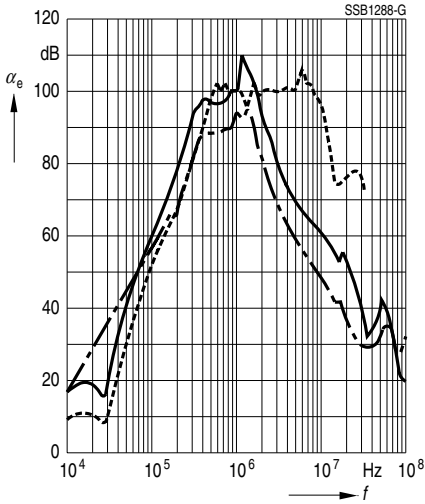
B84143-G220-R11*



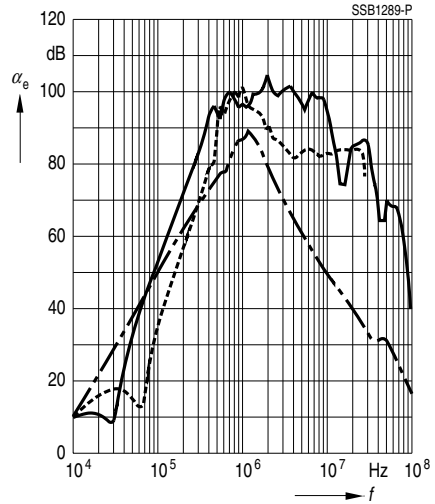
Insertion loss (typical values at $Z = 50 \Omega$)

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

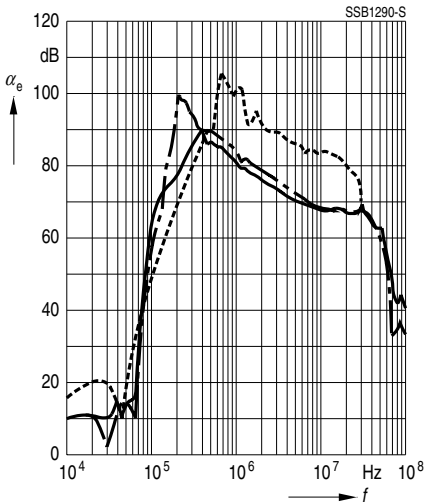
B84143-G8-R11*



B84143-G20-R11*



B84143-G36 ... G220-R11*



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