

Power line filters for three-phase systems
Rated voltage 440/250 V~, 50/60 Hz
Rated current 8 A to 180 A

Construction

- Three-line filter
- Metal case

Features

- High insertion loss
- Low leakage current
- Easy to install
- Degree of protection: IP 20¹⁾
- Space-saving design
- Design complies with
EN 133200, 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

- Safe-to-touch terminal blocks

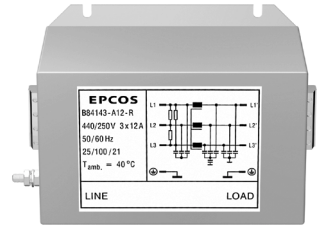
Marking

Marking on component:

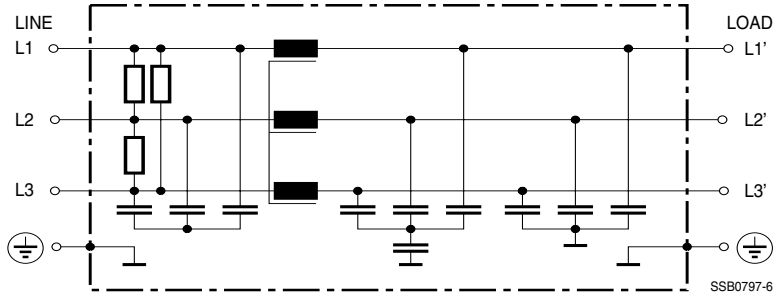
Manufacturer's logo, ordering code,
 rated voltage, rated current,
 rated temperature, climatic category,
 date code

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 diagram

Technical data

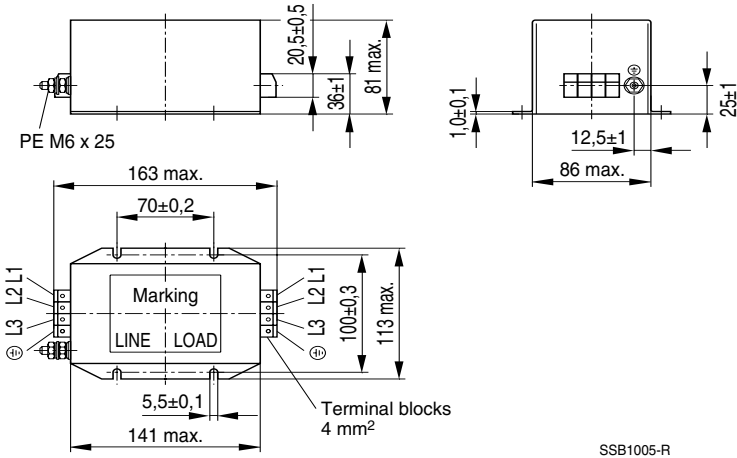
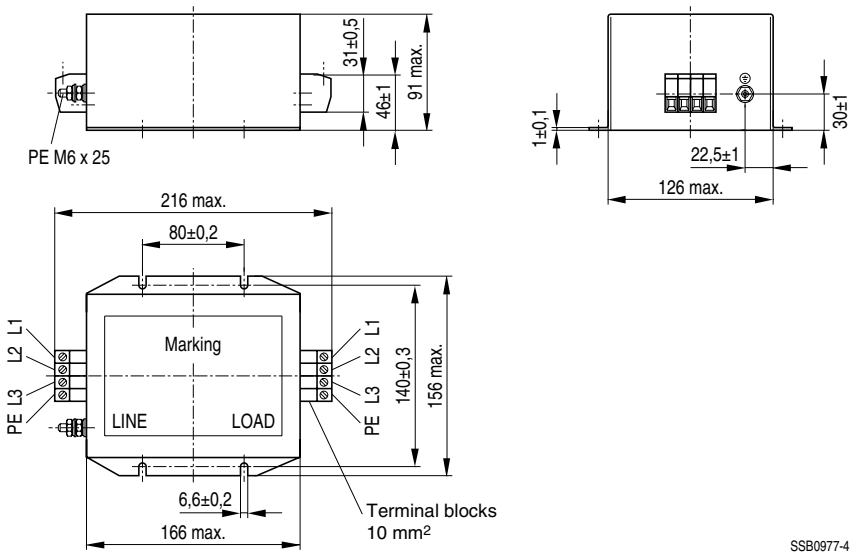
Rated voltage V_R	440/250 V~, 50/60 Hz
Rated current I_R	Referred to 40 °C ambient temperature
Test voltage V_P	1770 V~, 2 s (line/line) 2700 V~, 2 s (lines/case)
Overload capability	1,5 · I_R for 3 min per hour or 2,5 · I_R for 30 s per hour
Leakage current I_{leak}	at 400 V~, 50 Hz
Climatic category	25/100/21 (– 25 °C/100 °C/21 days damp heat test) in accordance with EN 60068-1

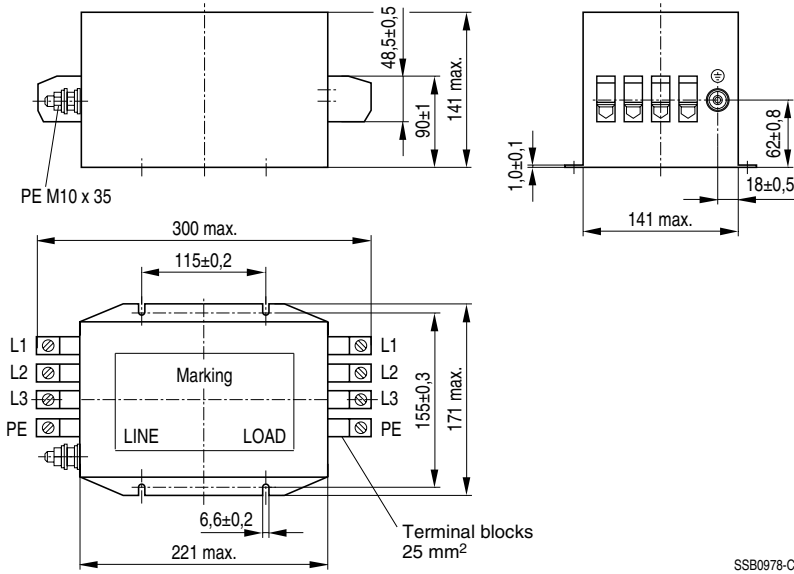
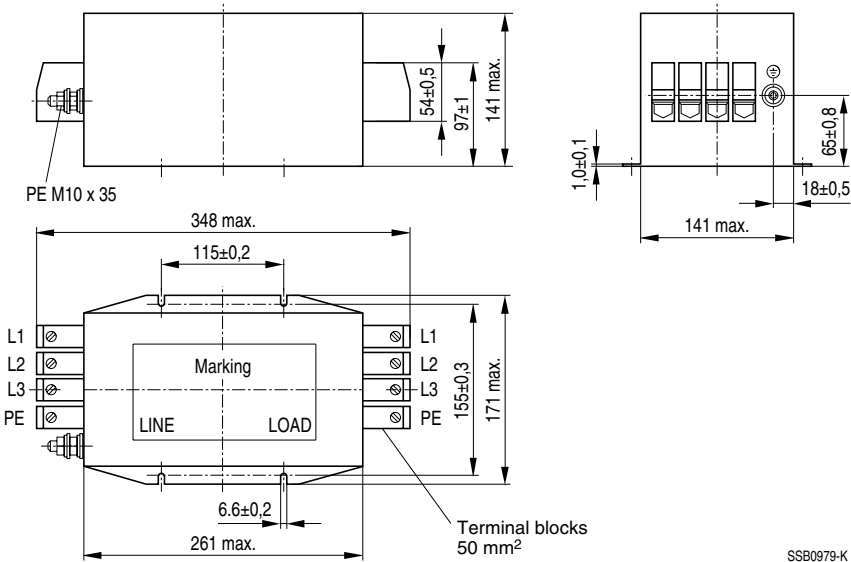
Characteristics and ordering codes

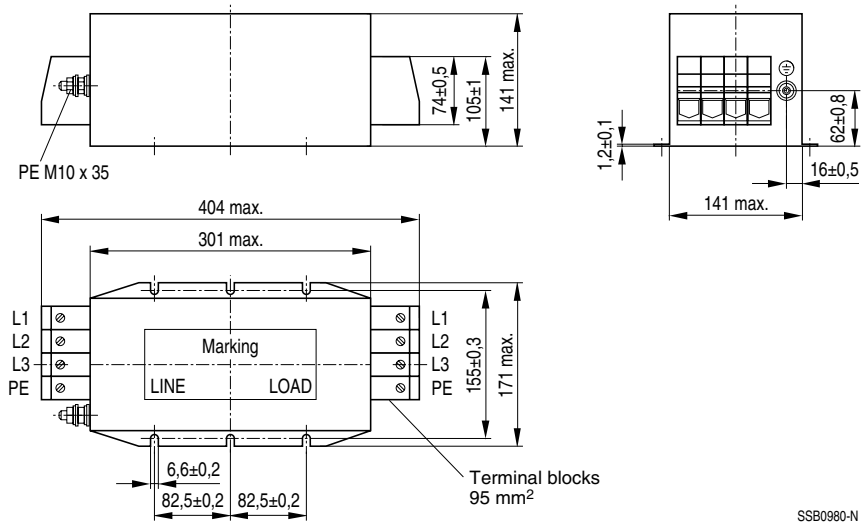
I_R A	Terminal cross section mm ²	I_{leak} mA	R_{typ} mΩ	Approx. weight kg	Ordering code
8	4	< 3,5	40	2,2	B84143-A8-R
12	4	< 3,5	20	2,2	B84143-A12-R
16	4	< 3,5	15	2,2	B84143-A16-R
25	10	< 3,5	8	3,7	B84143-A25-R
36	10	< 3,5	3,8	3,7	B84143-A36-R
50	10	< 6	2,0	4,0	B84143-A50-R
80	25	< 6	1,0	9,5	B84143-A80-R
120	50	< 6	0,75	10	B84143-A120-R
150	50	< 6	0,4	10	B84143-A150-R
180	95	< 6	0,4	13	B84143-A180-R

For filters for higher currents see B84143-B*-S20, [page 255](#).

In comparison with the former series B84143-A*-S these filters are smaller, lower in weight and optimized in price.

Dimensional drawings
B84143-A8-R ... B84143-A16-R

B84143-A25-R ... A50-R


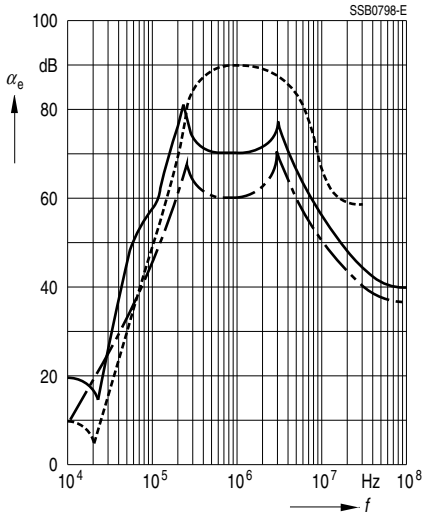
B84143-A80-R

B84143-A120-R, B84143-A150-R


B84143-A180-R


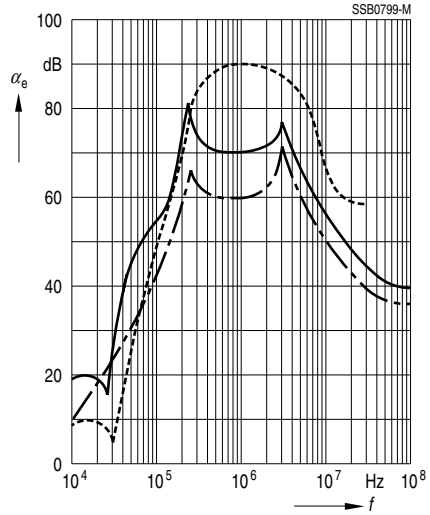
Insertion loss (typical values at $Z = 50 \Omega$)

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

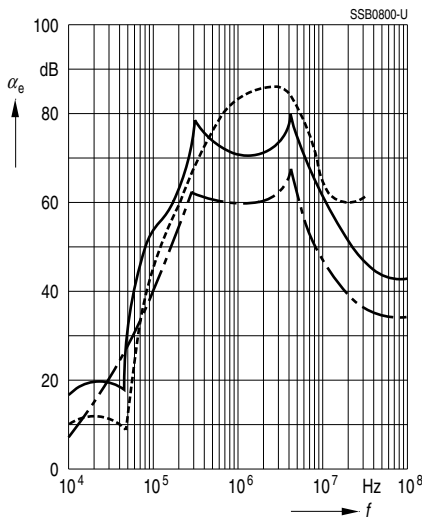
B84143-A8-R



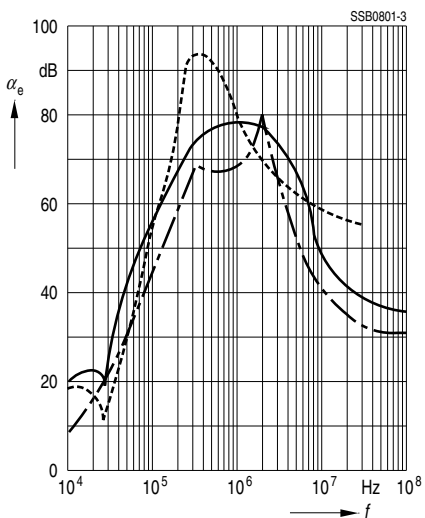
B84143-A12-R



B84143-A16-R



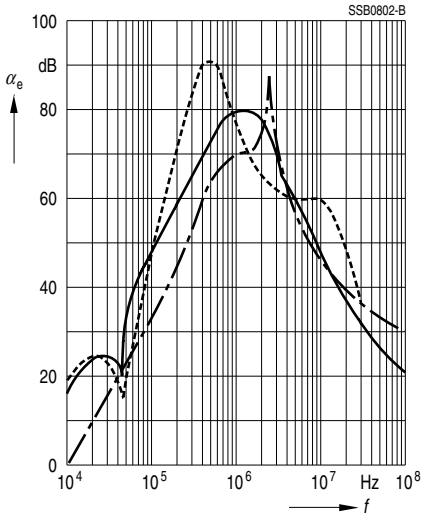
B84143-A25-R



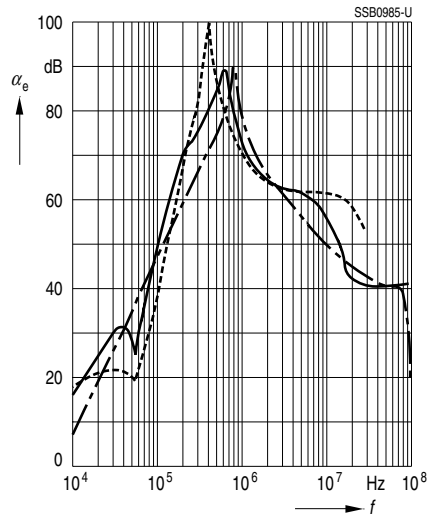
Insertion loss (typical values at $Z = 50 \Omega$)

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

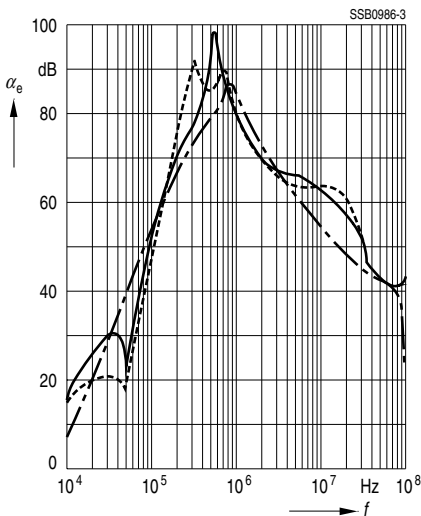
B84143-A36-R



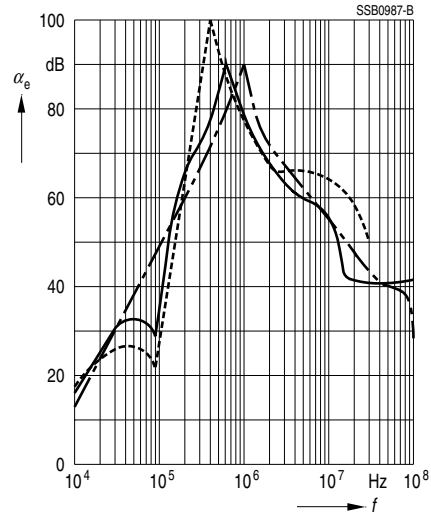
B84143-A50-R



B84143-A80-R



B84143-A120-R ... B84143-A180-R



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