



### 3-Line Filters

B84143-A\*-R

### for Converters and Power Electronics

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

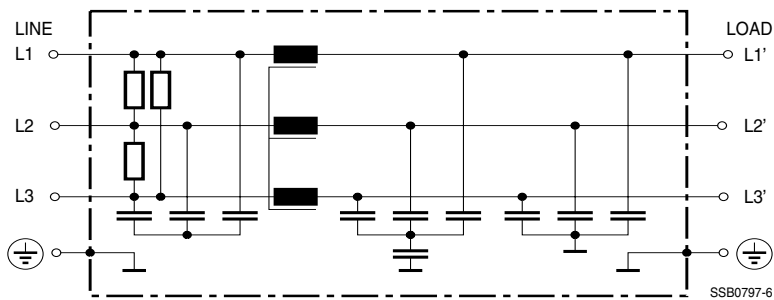
Minimum marking on packaging:  
Manufacturer's logo, ordering code



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 <sup>2</sup>	$I_{leak}$ 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.



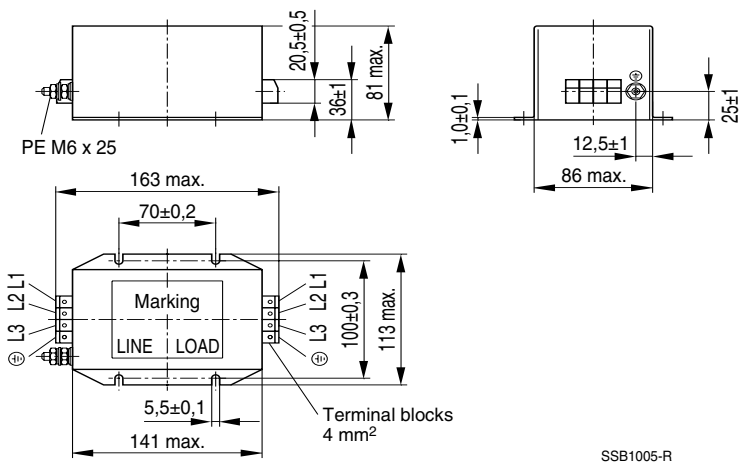
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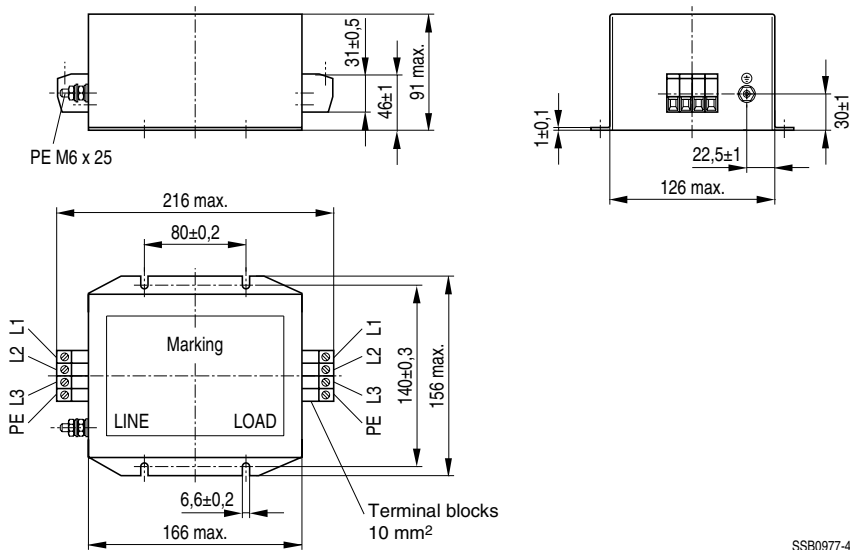
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Dimensional drawings

B84143-A8-R ... B84143-A16-R



B84143-A25-R ... A50-R



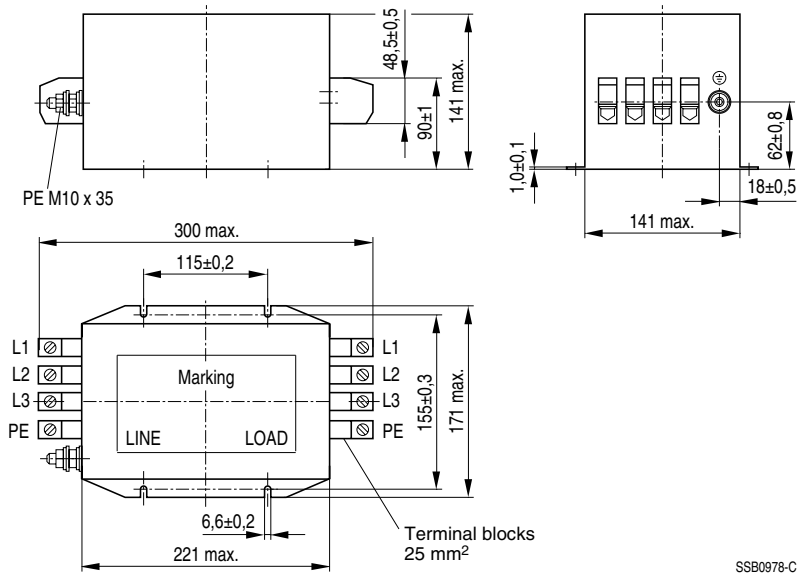


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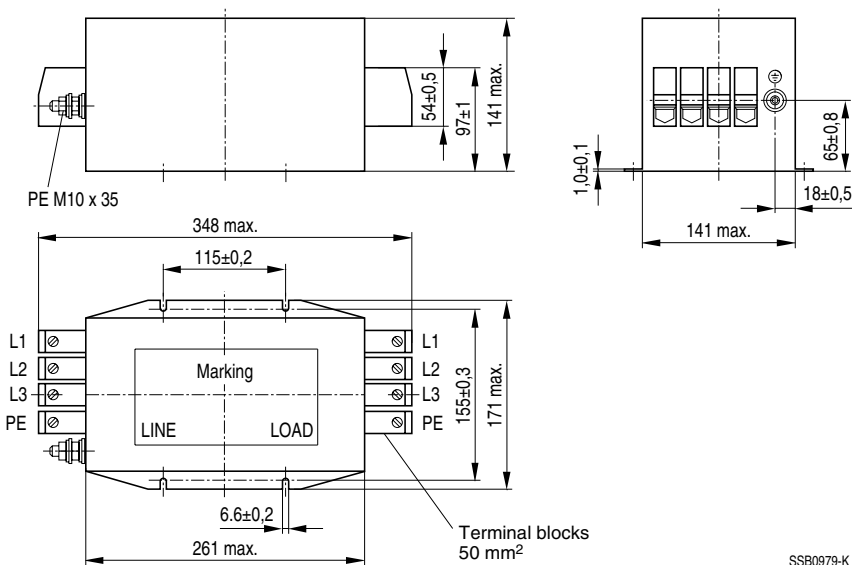
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B84143-A80-R



SSB0978-C

B84143-A120-R, B84143-A150-R



SSB0979-K

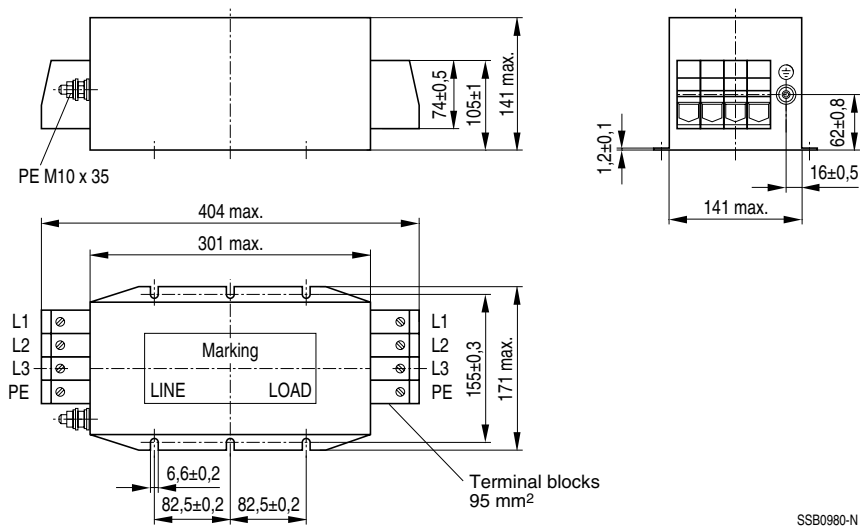


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B84143-A180-R



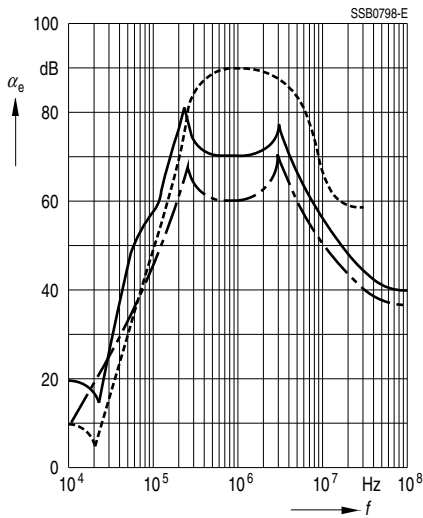
SSB0980-N



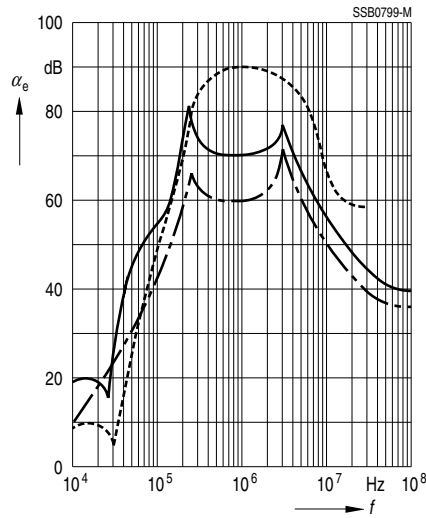
**Insertion loss** (typical values at  $Z = 50 \Omega$ )

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

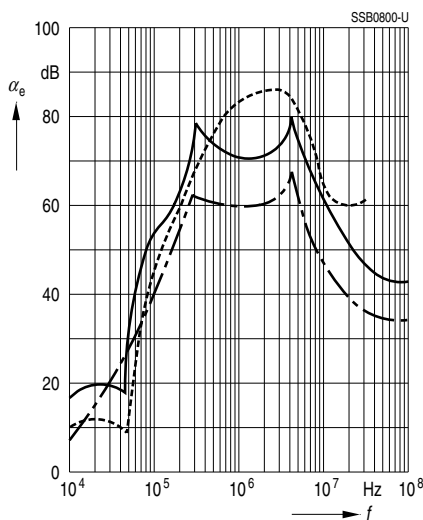
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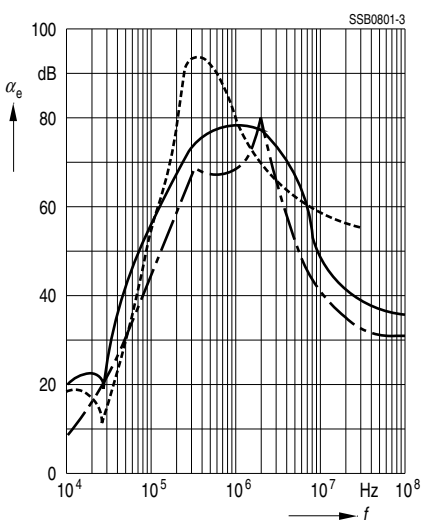
B84143-A12-R



B84143-A16-R



B84143-A25-R

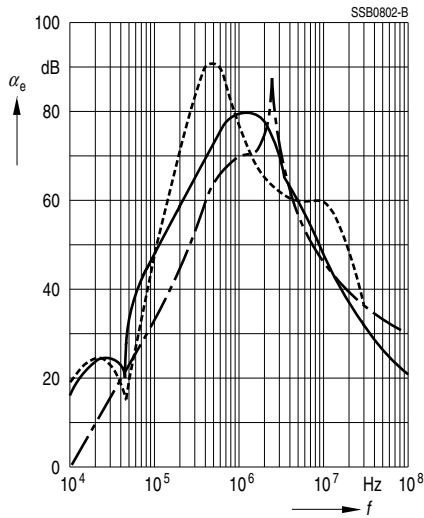




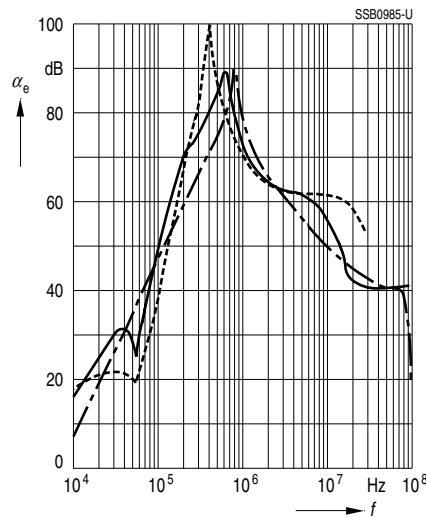
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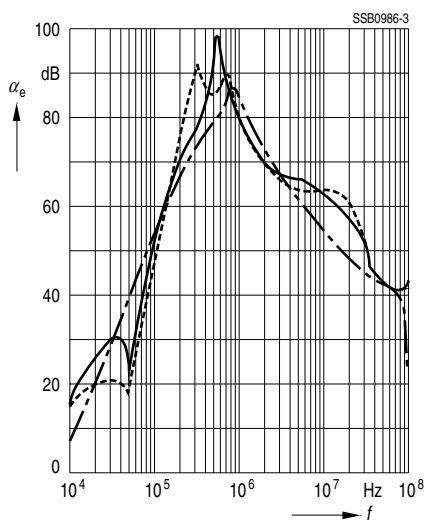
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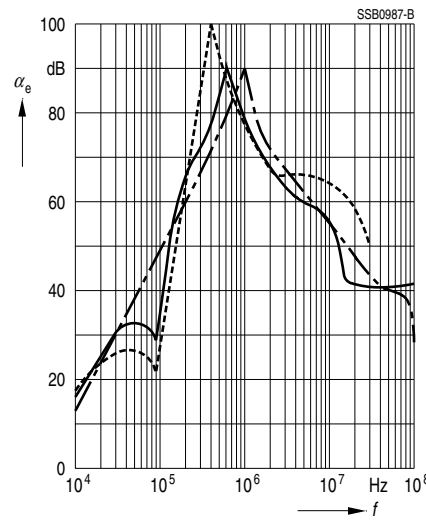
B84143-A50-R



B84143-A80-R



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





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