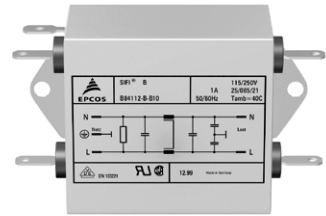


**SIFI-B for enhanced insertion loss**  
**Rated voltage 250 V~, 50/60 Hz**  
**Rated current 1 A to 20 A**

### Construction

- Two-line filter
- Metal case
- Polyurethane potting (UL 94 V-0)



### Features

- Compact design
- Low leakage current
- All relevant approvals
- Cost-optimized construction
- Also for assembly on top-hat rails

### Applications

- Switch-mode power supplies in
  - industrial electronics
  - telecommunications
  - data systems
  - medical engineering

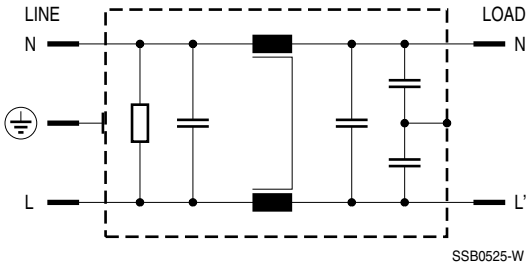
### Case styles and terminal styles





- |              |  |
|--------------|--|
| Case style A | Tab connectors on face ends, lateral mounting tabs.<br>Particularly suitable for mounting on a shielding wall.       |
| Case style B | Tab connectors on face ends, mounting tabs on face ends.   |
| Case style K | IEC connector as per IEC 60320 C 14 on line side,<br>tab connectors on load side, mounting holes with metric thread. |
| Case style L | Litz wires on face ends  |
| Case style P | Pins fitting PCB standard grid   |

### Marking

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

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

**Circuit diagram**

**Technical data**

|                            |   |
|----------------------------|---|
| Rated voltage $V_R$        | 250 V~, 50/60 Hz  |
| Rated current $I_R$        | Referred to 40 °C ambient temperature   |
| Test voltage $V_P$         | 1414 V~, 2 s (line/line)<br>2700 V~, 2 s (lines/case)   |
| Leakage current $I_{leak}$ | < 0,5 mA at 230 V~, 50 Hz   |
| Discharge resistors        | The discharge resistors are rated such that one second after having disconnected the device from the power line, the voltage at the line connector should have dropped to 34 V.   |
| Climatic category          | In accordance with EN 60068-1<br>25/085/21 (- 25 °C/+ 85 °C/21 days damp heat test)   |
| Approvals                  |     |

**Characteristics and ordering codes**

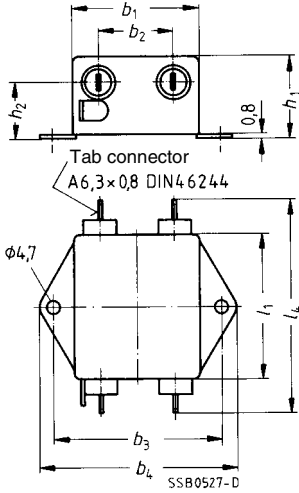
| $I_R$ | $C_R$                                     | $L_R$      | Case style            | Appr. weight g                  | Ordering code  | Mounting plate for top-hat rail (ordering code) |
|-------|---|------------|-----------------------|---------------------------------|--|---|
| A     |   |            |                       |                                 |  |   |
| 1     | 2 × 0,15 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 10 mH  | A<br>B<br>K<br>L      | 110<br>110<br>140<br>110        | B84112-B-A10<br>B84112-B-B10<br>B84112-B-K10<br>B84112-B-L10                 | —<br>C62122-A132-B91<br>—<br>—                  |
| 2     | 2 × 0,15 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 10 mH  | A<br>B<br>L           | 110<br>110<br>110               | B84112-B-A20<br>B84112-B-B20<br>B84112-B-L20                                 | —<br>C62122-A132-B91<br>—                       |
| 3     | 2 × 0,22 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 10 mH  | A<br>B<br>K<br>L<br>P | 140<br>140<br>210<br>140<br>140 | B84112-B-A30<br>B84112-B-B30<br>B84112-B-K30<br>B84112-B-L30<br>B84112-B-P30 | —<br>C62122-A132-B92<br>—<br>—<br>—             |
| 6     | 2 × 0,33 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 3,3 mH | A<br>B<br>K<br>L      | 150<br>150<br>210<br>150        | B84112-B-A60<br>B84112-B-B60<br>B84112-B-K60<br>B84112-B-L60                 | —<br>C62122-A132-B92<br>—<br>—                  |
| 10    | 2 × 0,47 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 1,8 mH | A<br>B<br>L           | 200<br>200<br>200               | B84112-B-A110<br>B84112-B-B110<br>B84112-B-L110                              | —<br>C62122-A132-B92<br>—                       |
| 20    | 2 × 0,68 μF (X2)<br>+<br>2 × 4700 pF (Y2) | 2 × 1,8 mH | A<br>B                | 700<br>700                      | B84112-B-A120<br>B84112-B-B120   | —<br>C62122-A132-B92                            |

**Case styles and dimensions**

| Case style | Ordering code<br>B84112- | Dimensions in mm        |       |       |       |       |       |       |       |       |       |                         |               |
|------------|--------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------------|---------------|
|            |                          | $b_1$                   | $b_2$ | $b_3$ | $b_4$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $h_1$ | $h_2$ | Litz<br>mm <sup>2</sup> | Style<br>1015 |
| A          | -B-A10                   | 45                      | 26,5  | 60,4  | 70    | 50    | —     | —     | 76,5  | 28,6  | 20    | —                       | —             |
| B          | -B-B10                   | 45                      | 26,5  | —     | —     | 50    | 60,4  | 70    | 76,5  | 28,6  | 20    | —                       | —             |
| K          | -B-K10                   | 51                      | —     | —     | —     | 63,5  | —     | —     | —     | 32    | —     | —                       | —             |
| L          | -B-L10                   | 45                      | —     | —     | —     | 50    | 60,4  | 70    | —     | 28,6  | —     | 0,82                    | AWG18         |
| A          | -B-A20                   | 45                      | 26,5  | 60,4  | 70    | 50    | —     | —     | 76,5  | 28,6  | 20    | —                       | —             |
| B          | -B-B20                   | 45                      | 26,5  | —     | —     | 50    | 60,4  | 70    | 76,5  | 28,6  | 20    | —                       | —             |
| L          | -B-L20                   | 45                      | —     | —     | —     | 50    | 60,4  | 70    | —     | 28,6  | —     | 0,82                    | AWG18         |
| A          | -B-A30                   | 50,8                    | 31,5  | 60,4  | 70    | 63,5  | —     | —     | 89,5  | 28,6  | 20    | —                       | —             |
| B          | -B-B30                   | 50,8                    | 31,5  | —     | —     | 63,5  | 74,7  | 84,5  | 89,5  | 28,6  | 20    | —                       | —             |
| K          | -B-K30                   | 50,8                    | —     | —     | —     | 79,5  | —     | —     | —     | 32    | —     | —                       | —             |
| L          | -B-L30                   | 50,8                    | —     | —     | —     | 63,5  | 74,7  | 84,5  | —     | 28,6  | —     | 0,82                    | AWG18         |
| P          | -B-P30                   | see dimensional drawing |       |       |       |       |       |       |       |       |       |                         |               |
| A          | -B-A60                   | 50,8                    | 31,5  | 60,4  | 70    | 63,5  | —     | —     | 89,5  | 28,6  | 20    | —                       | —             |
| B          | -B-B60                   | 50,8                    | 31,5  | —     | —     | 63,5  | 74,7  | 84,5  | 89,5  | 28,6  | 20    | —                       | —             |
| K          | -B-K60                   | 50,8                    | —     | —     | —     | 79,5  | —     | —     | —     | 32    | —     | —                       | —             |
| L          | -B-L60                   | 50,8                    | —     | —     | —     | 63,5  | 74,7  | 84,5  | —     | 28,6  | —     | 0,82                    | AWG18         |
| A          | -B-A110                  | 50,8                    | 31,5  | 60,4  | 70    | 63,5  | —     | —     | 89,5  | 38,1  | 28    | —                       | —             |
| B          | -B-B110                  | 50,8                    | 31,5  | —     | —     | 63,5  | 74,7  | 84,5  | 89,5  | 38,1  | 28    | —                       | —             |
| L          | -B-L110                  | 50,8                    | —     | —     | —     | 63,5  | 74,7  | 84,5  | —     | 38,1  | —     | 1,35                    | AWG16         |
| A          | -B-A120                  | see dimensional drawing |       |       |       |       |       |       |       |       |       |                         |               |
| B          | -B-B120                  | see dimensional drawing |       |       |       |       |       |       |       |       |       |                         |               |

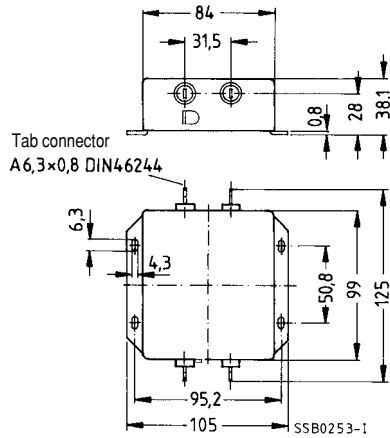
**Case style A**

B84112-B-A10 ...  
B84112-B-A110



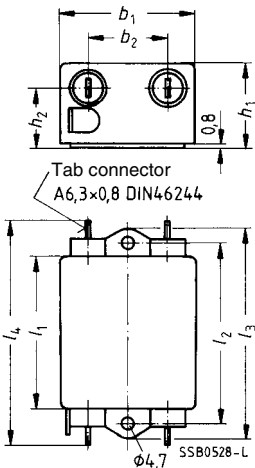
**Case style A**

B84112-B-A120



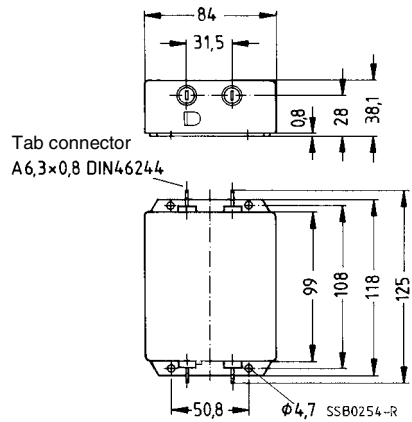
**Case style B**

B84112-B-B10 ...  
B84112-B-B110

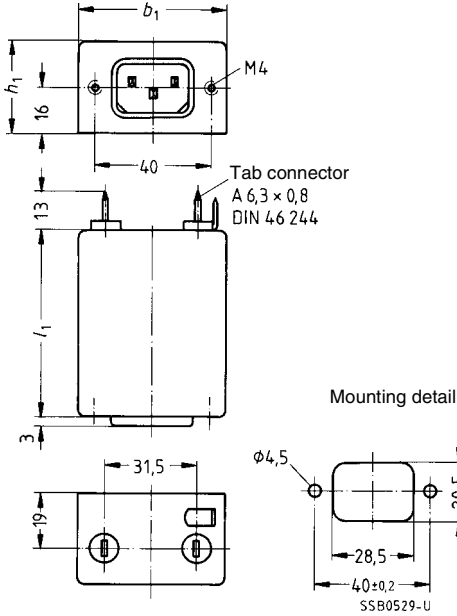


**Case style B**

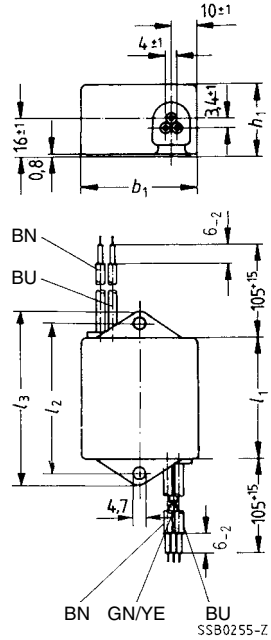
B84112-B-B120



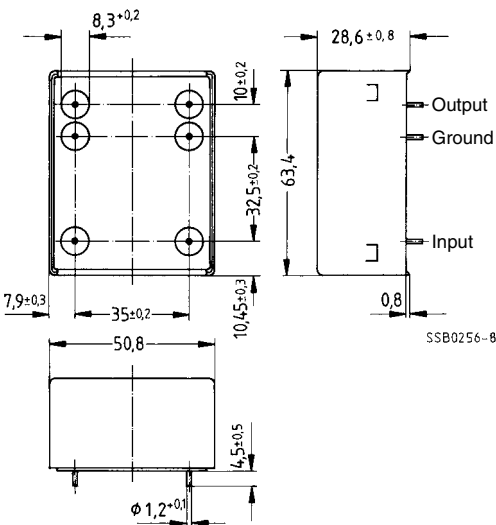
Case style K



Case style L



Case style P

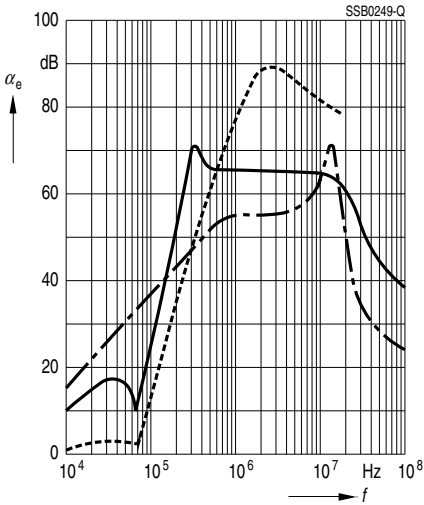


**Insertion loss** (typical values at  $Z = 50 \Omega$ )

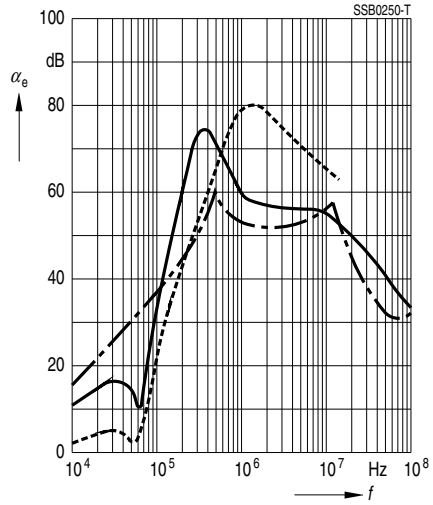
- unsymmetrical, adjacent branches terminated
- - - - - common mode, all branches in parallel (asymmetrical)
- - - - - differential mode (symmetrical)

B84112-B-\*10

B84112-B-\*20

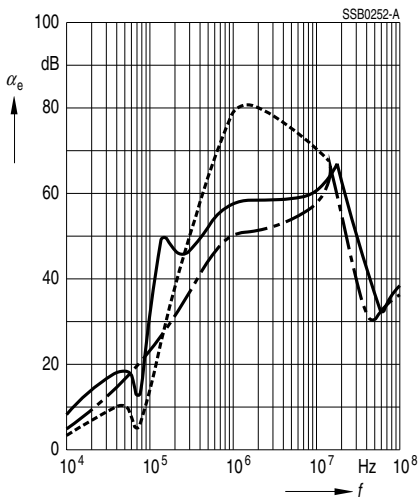


B84112-B-\*30

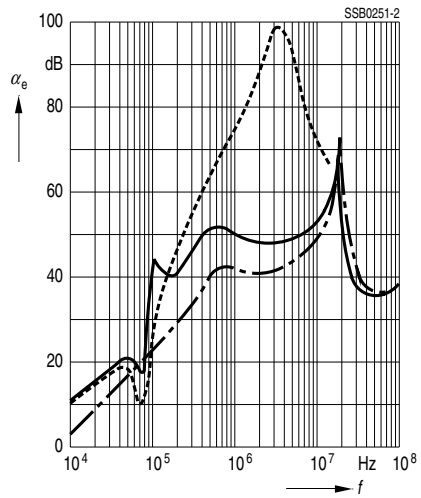


B84112-B-\*60

B84112-B-\*110



B84112-B-\*120



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