

2-stage filter for 3-phase systems with low leakage current



**Description**

- Terminals for three phases and ground
- High symmetrical and asymmetrical attenuation
- In the frequency range from 10kHz up to 300MHz

**Standards**

- IEC 60939
- UL 1283, Edition 5, CSA 22.2 No. 8-M1986, @ Ta 50 (40) °C

**Approvals**

- VDE Certificate Number: 40040983
- UL File Number: E72928

**Applications**

- Suitable for applications with RCDs
- Protection against interference voltage from the mains
- Especially designed for industrial applications such as: Frequency Converters, Stepper Motor Drives, UPS-Systems, Inverters

**Weblinks**

[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

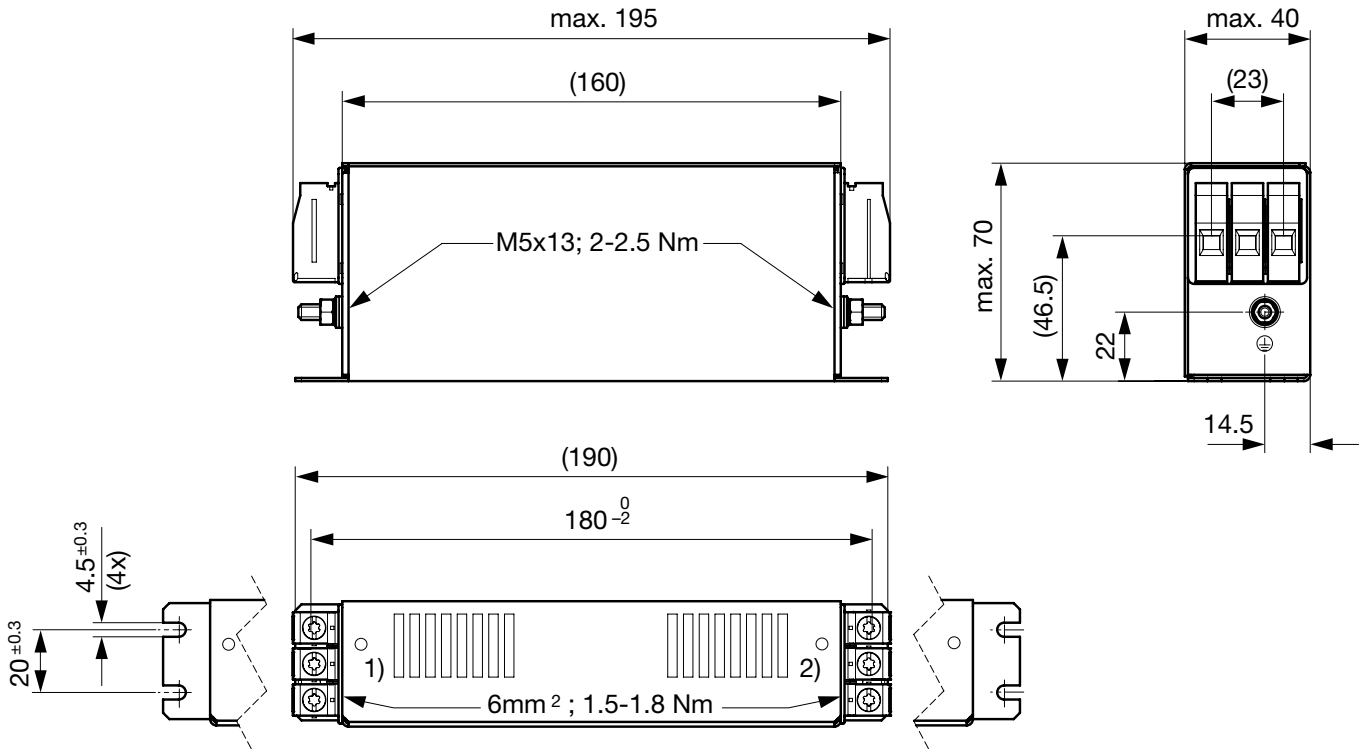
**Technical Data**

|                         |  |
|-------------------------|--|
| Rated Current           | 7 - 180A   |
| Rated voltage           | 520VAC, 50/60 Hz   |
| Approval for            | 7 - 180A @ 50 °C / 520VAC; 50/60Hz                                     |
| Overload Current        | 1.5 x I <sub>r</sub> for 1 minute, per hour                            |
| Dielectric Strength     | > 2.25kVDC between L-L<br>> 2.7kVDC between L-PE<br>Test voltage 2 sec |
| Number of Filter Stages | 2-stage  |
| Weight                  | 0.75 - 9.4 kg  |
| Material: Housing       | Metal  |
| Sealing Compound        | UL 94V-0   |

|                            |   |
|----------------------------|---|
| Mounting                   | Screw-on mounting on chassis                                      |
| Terminal                   | Screw clamps  |
| Operating Temperature [°C] | -25 °C to 100 °C  |
| Climatic Category          | 25/100/21 acc. to IEC 60068-1                                     |
| Degree of Protection       | IP 20 acc. to IEC 60529   |
| Protection Class           | Suitable for appliances with protection class I acc. to IEC 61140 |
| MTBF                       | > 200'000h acc. to MIL-HB-217 F                                   |

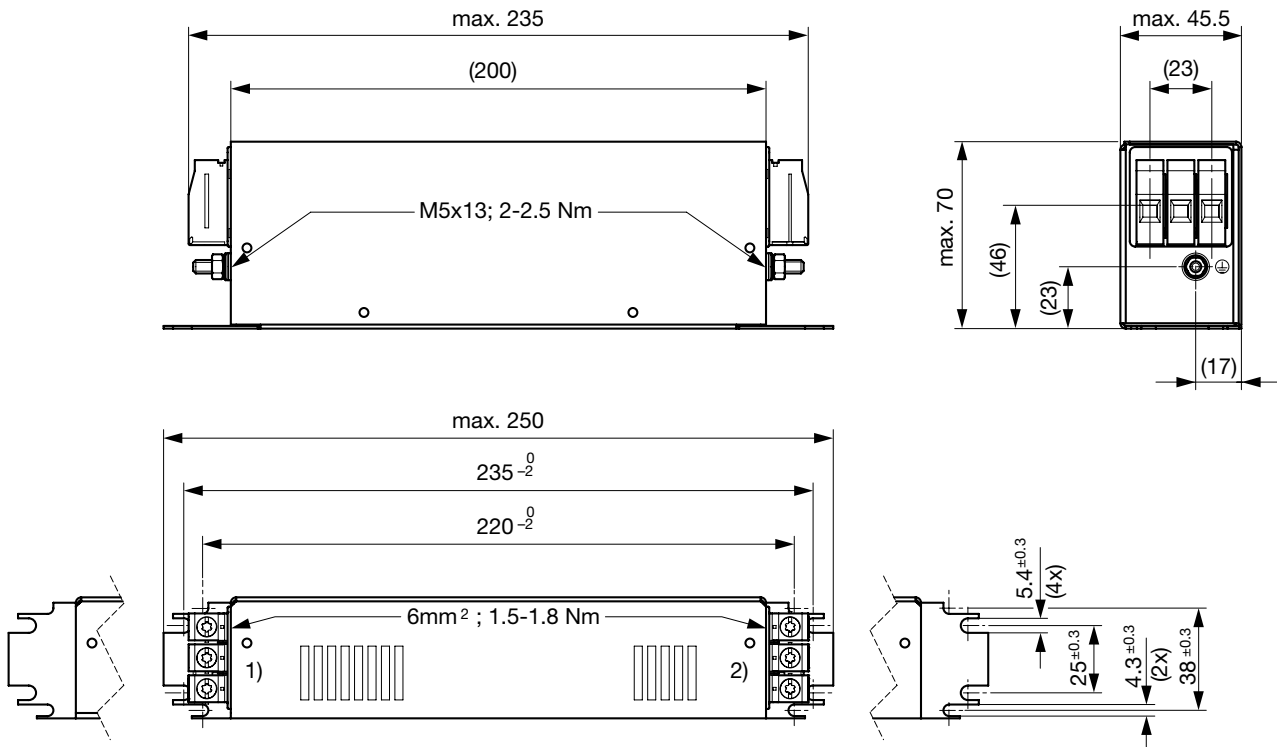
Dimension

Case 1U



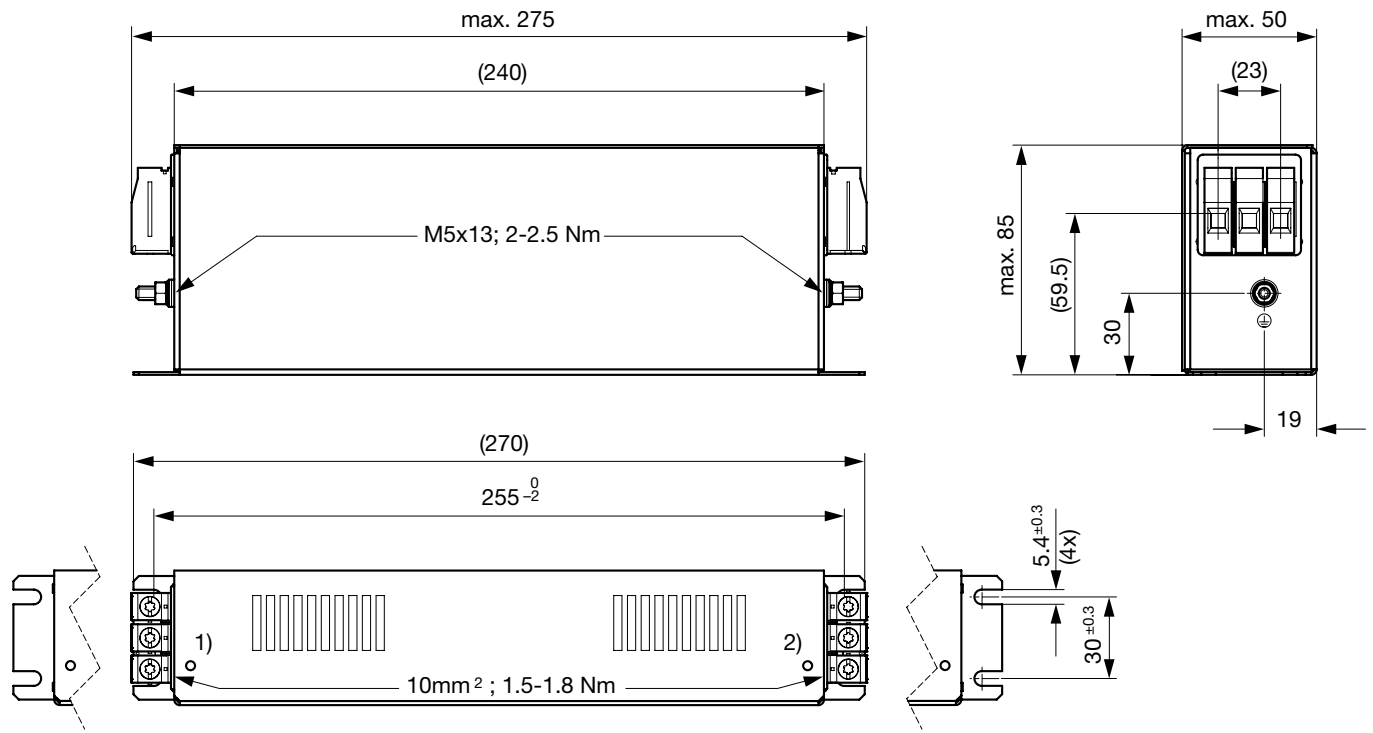
1) Line  
2) Load

Case 1C



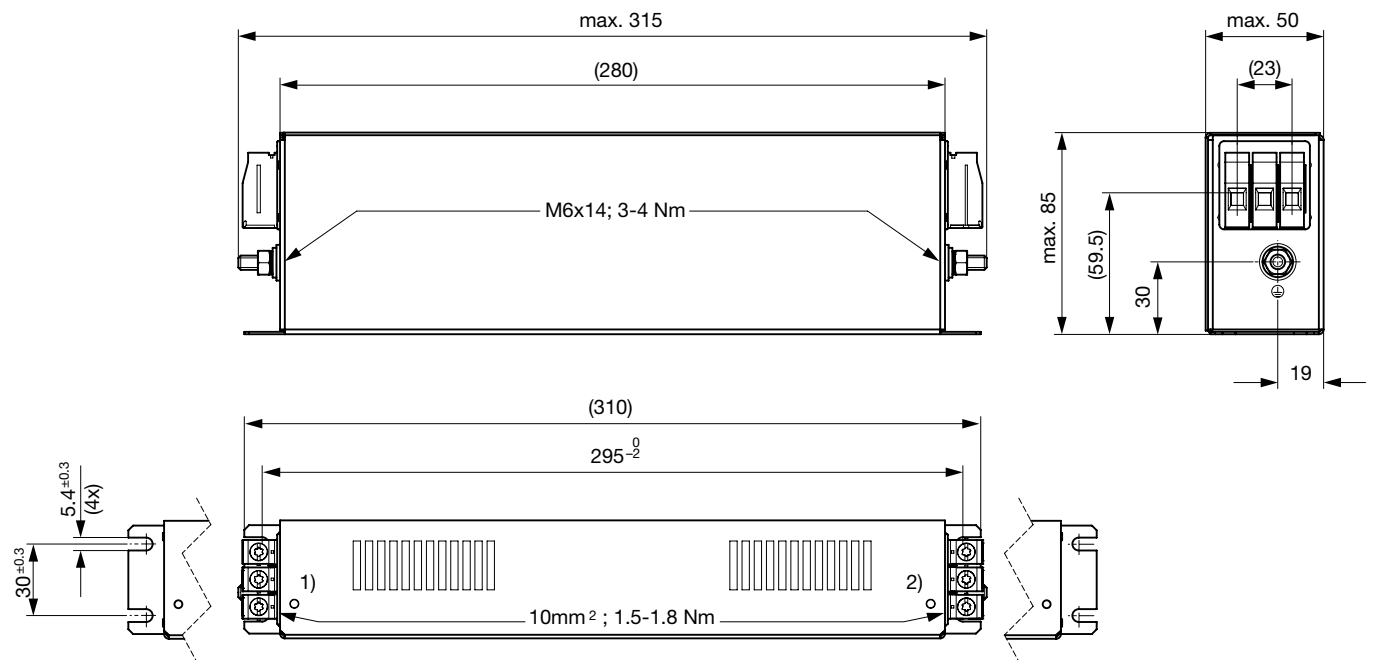
1) Line  
2) Load

Case 1Q



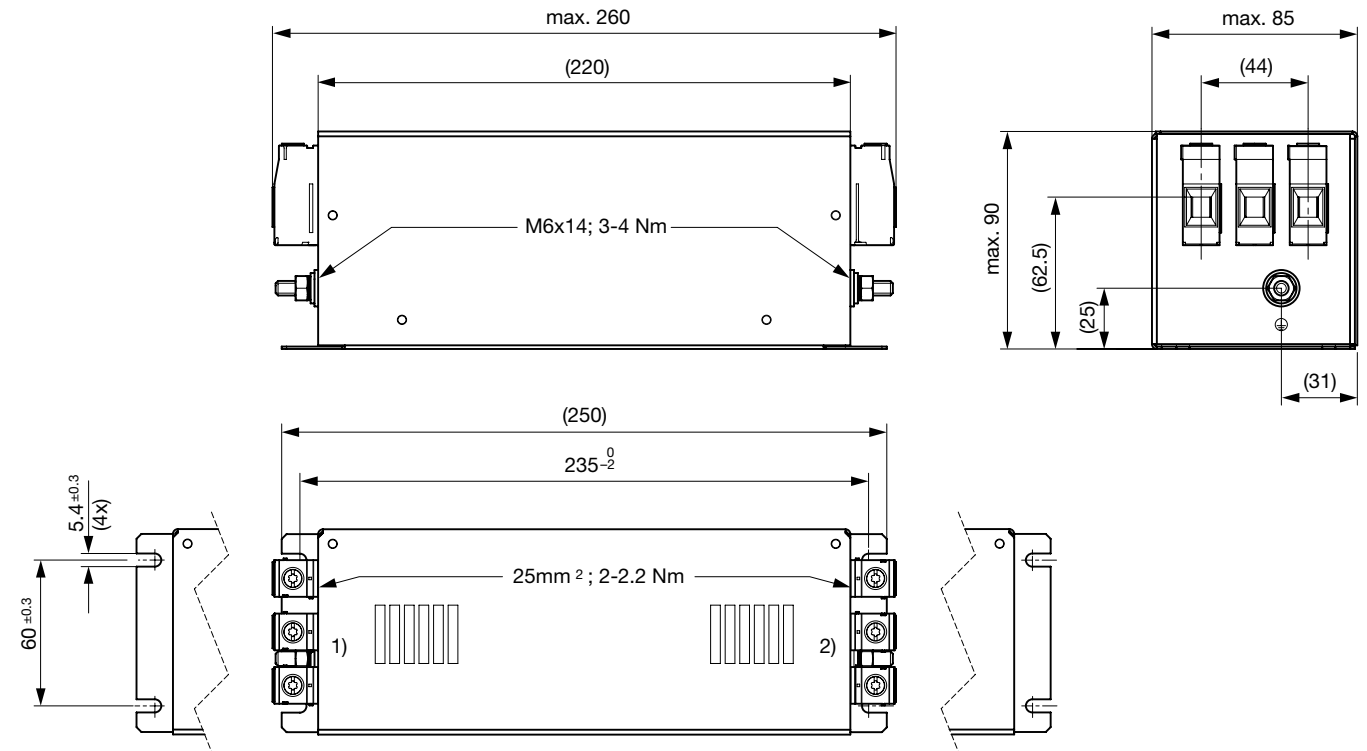
- 1) Line
- 2) Load

Case 1R



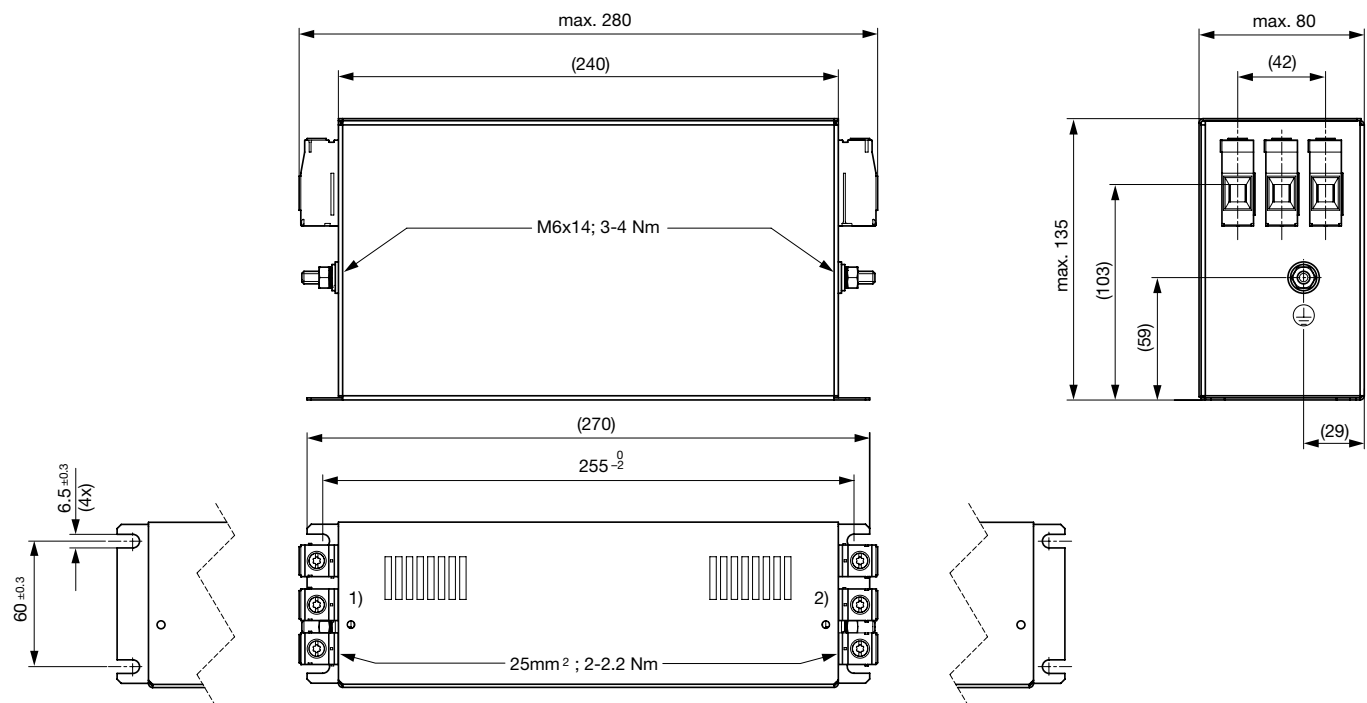
- 1) Line
- 2) Load

Case 1S



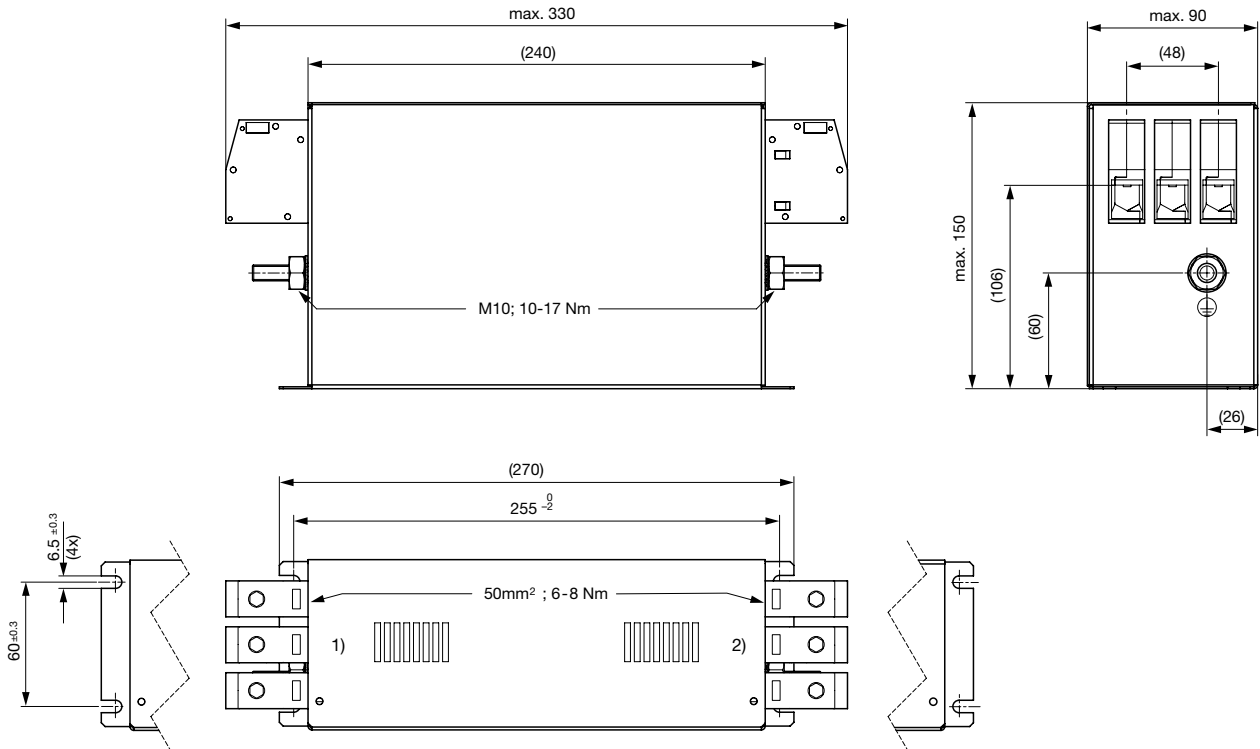
- 1) Line
- 2) Load

Case 1F



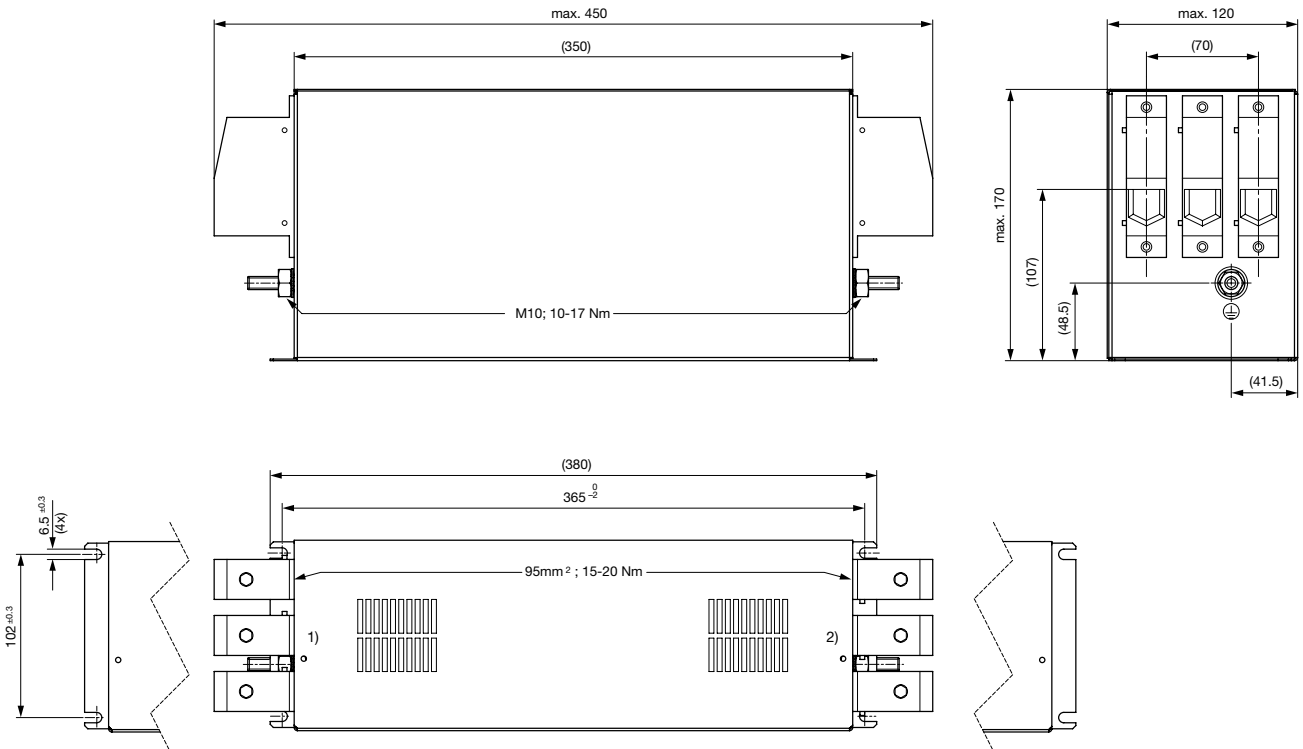
- 1) Line
- 2) Load

Case 1G



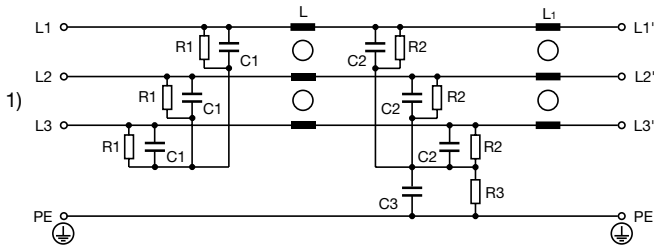
- 1) Line
- 2) Load

Case 1V



- 1) Line
- 2) Load

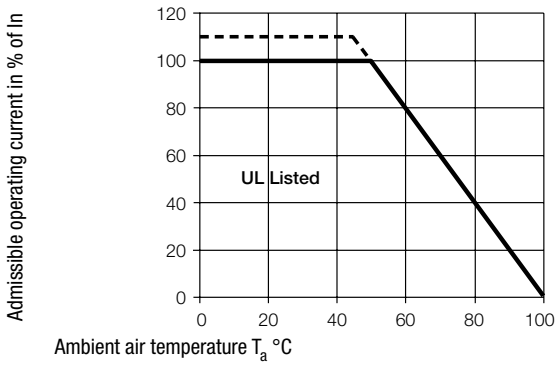
Diagrams



1) Line

Derating Curves

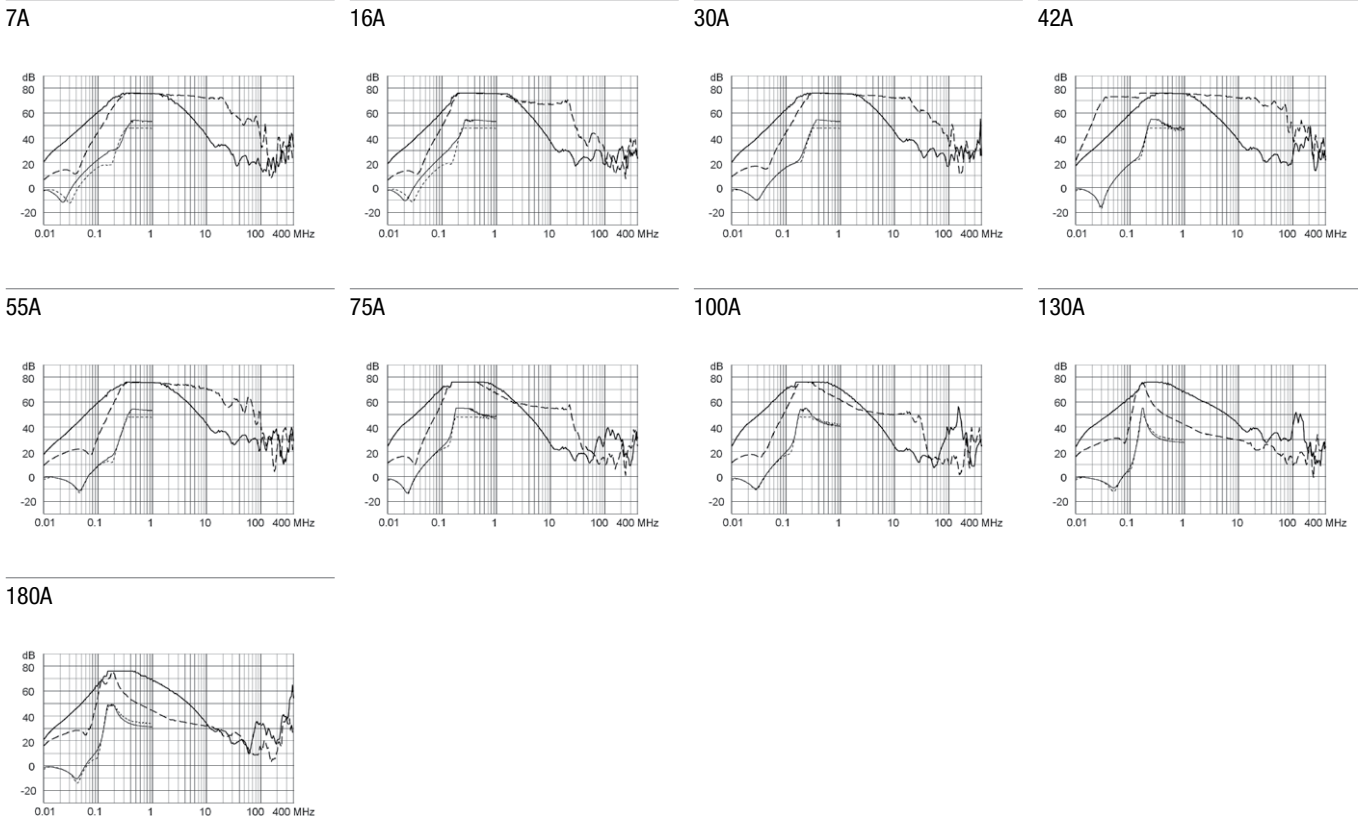
Permissible Working Current as a Function of Ambient Temperature



Attenuation Loss

..... 0.1/100Ω differential mode ..... 100/0.1Ω differential mode - - - - differential mode \_\_\_\_ common mode

Industrial version



All Variants

| Rated Current<br>@ Ta 50°C (40°C) [A] | Rated Voltage [VAC] | Power <sub>loss</sub> @ 25°C,<br>50Hz [W] | Leakage<br>Current @<br>400VAC, 50Hz | Weight [kg] | Screw clamps<br>[mm <sup>2</sup> ] <sup>2)</sup> | Housing | Packaging<br>unit | Order Number   |
|---------------------------------------|---------------------|---|--------------------------------------|-------------|--|---------|-------------------|----------------|
| 7 (7.7)                               | 520                 | 1.5                                       | 4.4                                  | 0.75 kg     | 6  | 1U      | 3                 | FMBC-R91C-0712 |
| 16 (17.5)                             | 520                 | 5.4                                       | 4.4                                  | 1.2 kg      | 6  | 1C      | 3                 | FMBC-R91C-1612 |
| 30 (32.9)                             | 520                 | 6.6                                       | 4.4                                  | 1.8 kg      | 10   | 1Q      | 4                 | FMBC-R91Q-3012 |
| 42 (46)                               | 520                 | 10.7                                      | 4.4                                  | 1.8 kg      | 10   | 1R      | 3                 | FMBC-R91R-4212 |
| 55 (60.2)                             | 520                 | 13.3                                      | 4.4                                  | 2.4 kg      | 25   | 1S      | 2                 | FMBC-R91S-5512 |
| 75 (82.2)                             | 520                 | 19.6                                      | 17.5                                 | 4.1 kg      | 25   | 1F      | 1                 | FMBC-R91F-7512 |
| 100 (109.5)                           | 520                 | 26.3                                      | 17.5                                 | 5.4 kg      | 50   | 1G      | 1                 | FMBC-R91G-J012 |
| 130 (142.4)                           | 520                 | 10  | 19.3                                 | 4.6 kg      | 50   | 1G      | 1                 | FMBC-R91G-J312 |
| 180 (197.1)                           | 520                 | 31  | 19.3                                 | 9.4 kg      | 95   | 1V      | 1                 | FMBC-R91V-J812 |

Availability for all products can be searched real-time: <http://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

1) Nominal leakage current acc. to IEC60950 - 5.2.5. under normal operating conditions. Note: worst case leakage current acc. to IEC60950 - Annex G4 (situation with two interrupted lines) can be much higher.

2) Maximum conductor cross section (wire gauge) to be used; a comparative table for AWG and mm<sup>2</sup> values can be found in the general product information [www.schurter.com/emc\\_info](http://www.schurter.com/emc_info)