

## 3-phase high current filter



See below:

## Approvals and Compliances

## Description

- High-power 3 phase filter for rated currents up to 2500 A
- 3-stage
- Very high attenuation
- 520 VAC and 760 VAC versions

## Unique Selling Proposition

- Compact filter for high power
- Three stage filter for highest attenuation
- High voltage versions
- Wide temperature range

## Applications

- High voltage rating 760 VAC for IT mains supply
- Especially designed for high power applications such as: Frequency Converters, UPS-Systems, Inverters for Photovoltaic Systems and Wind Energy
- Suitable for use in equipment according to IEC/UL 62368-1

## Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [Approvals](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Microsite](#)

## Technical Data

|                         |                                                                                |
|-------------------------|--------------------------------------------------------------------------------|
| Rated Current           | 150 - 2500A @ Ta 50 °C                                                         |
| Rated voltage           | 520/760VAC, 50/60 Hz                                                           |
| Approval for            | 150 - 2500A @ Ta 50 °C /<br>520/760/520/760VAC; 50/60Hz                        |
| Overload Current        | 1.5 x Ir for 1 minute, per hour                                                |
| Leakage Current         | < 15mA (440V / 50Hz)                                                           |
| Dielectric Strength     | 520 VAC:<br>2.15kVDC between L-L<br>2.7kVDC between L-PE<br>Test voltage 2 sec |
|                         | 760 VAC:<br>3kVDC between L-L<br>3.1kVDC between L-PE                          |
|                         |                                                                                |
| Number of Filter Stages | 3-stage                                                                        |
| Weight                  | 9 - 67 kg                                                                      |
| Material: Housing       | Metal / Aluminium                                                              |
| Sealing Compound        | UL 94V-0                                                                       |

|                       |                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------|
| Mounting              | Screw-on mounting on chassis, from top                                            |
| Terminal              | Bolt and nut M10 for types up to 250 A and copper bars for types upwards of 320 A |
| Operating Temperature | -40 °C to 100 °C                                                                  |
| Climatic Category     | 40/100/21 acc. to IEC 60068-1                                                     |
| Degree of Protection  | IP20 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                                                   |

## Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

## Approvals

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products.

Approval Reference Type: FMCC SOL

| Approval Logo                                                                       | Certificates                 | Certification Body | Description            |
|-------------------------------------------------------------------------------------|------------------------------|--------------------|------------------------|
|  | <a href="#">UL Approvals</a> | UL                 | UR File Number: E72928 |

Product standards

Product standards that are referenced

| Organization                                                                     | Design                | Standard  | Description                                                  |
|----------------------------------------------------------------------------------|-----------------------|-----------|--------------------------------------------------------------|
|  | Designed according to | IEC 60939 | Passive filters for suppressing electromagnetic interference |
|  | Designed according to | UL 1283   | Passive filters for suppressing electromagnetic interference |

Application standards

Application standards where the product can be used

| Organization                                                                     | Design                         | Standard       | Description                                                                                   |
|----------------------------------------------------------------------------------|--------------------------------|----------------|-----------------------------------------------------------------------------------------------|
|  | Suitable for applications acc. | IEC/UL 62368-1 | Audio/video, information and communication technology equipment - Part 1: Safety requirements |

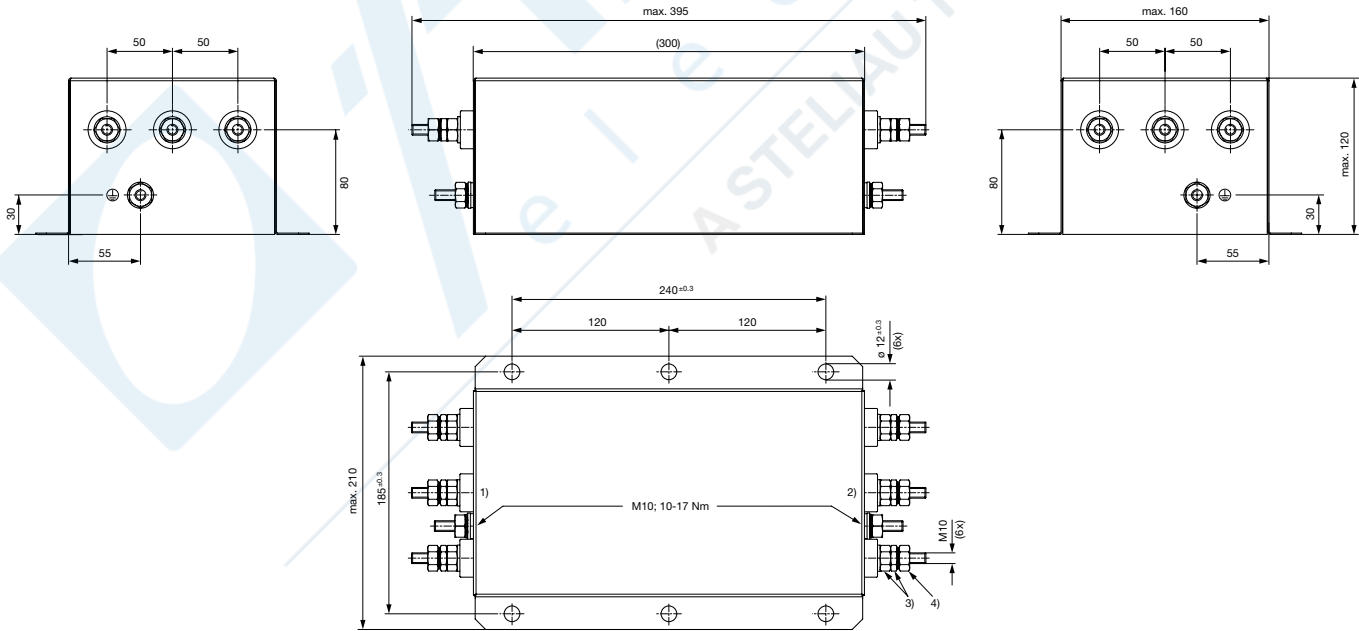
Compliances

The product complies with following Guide Lines

| Identification                                                                     | Details                                        | Initiator   | Description                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <a href="#">CE declaration of conformity</a>   | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|    | <a href="#">UKCA declaration of conformity</a> | SCHURTER AG | The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.                                                  |
|    | <a href="#">RoHS</a>                           | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863                                                                                                                                                    |
|    | <a href="#">China RoHS</a>                     | SCHURTER AG | The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.                                                                                  |
|  | <a href="#">REACH</a>                          | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.                               |

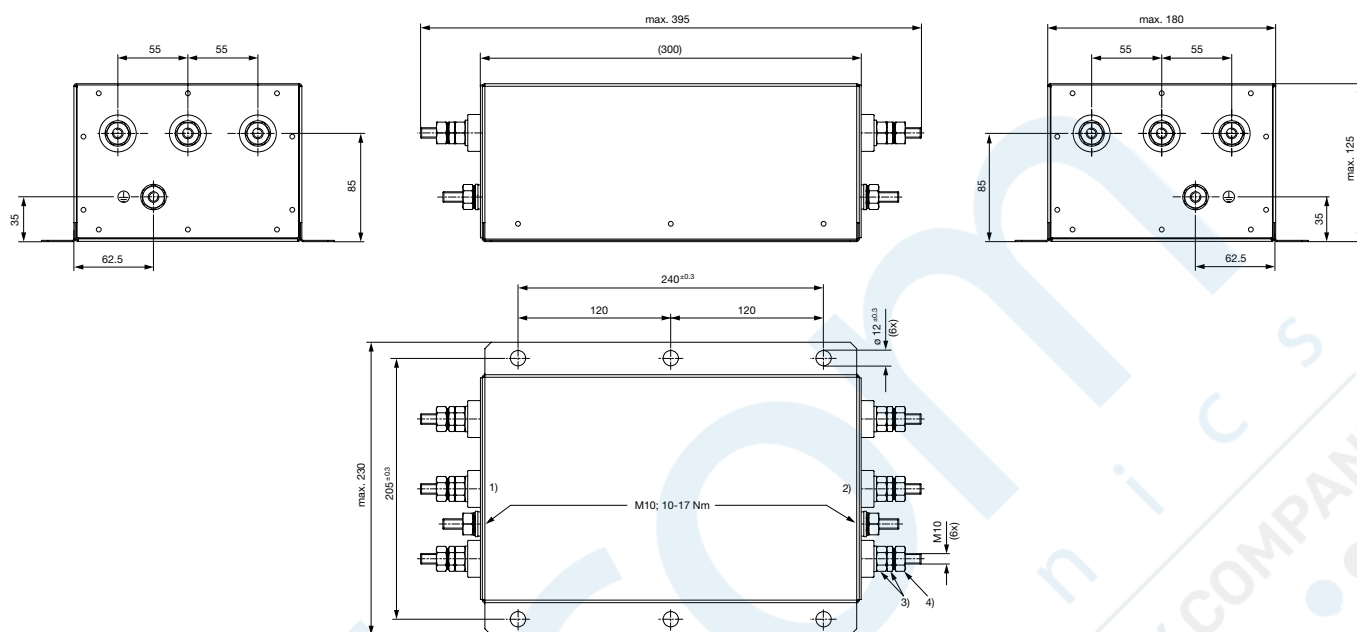
Dimension [mm]

Case 3A



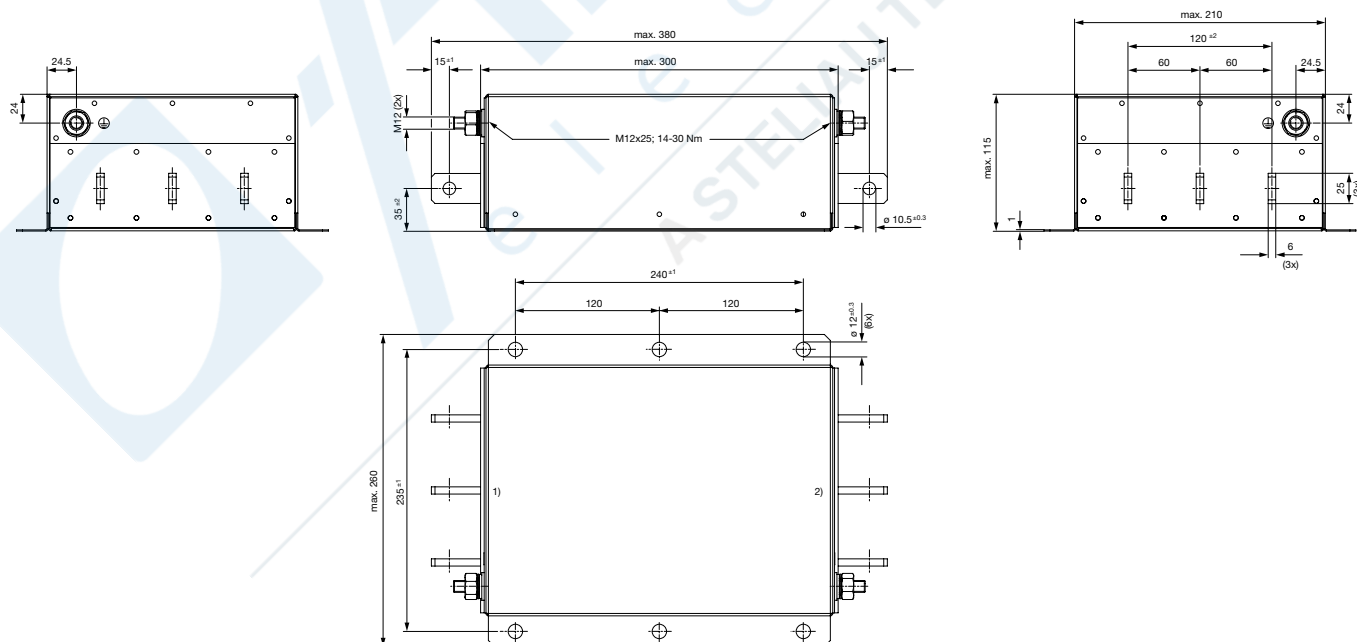
- 1) Line
- 2) Load
- 3) Lock-nut do not unscrew
- 4) Nut torque 10...17 Nm, keep lock-nut fastened

Case 3B



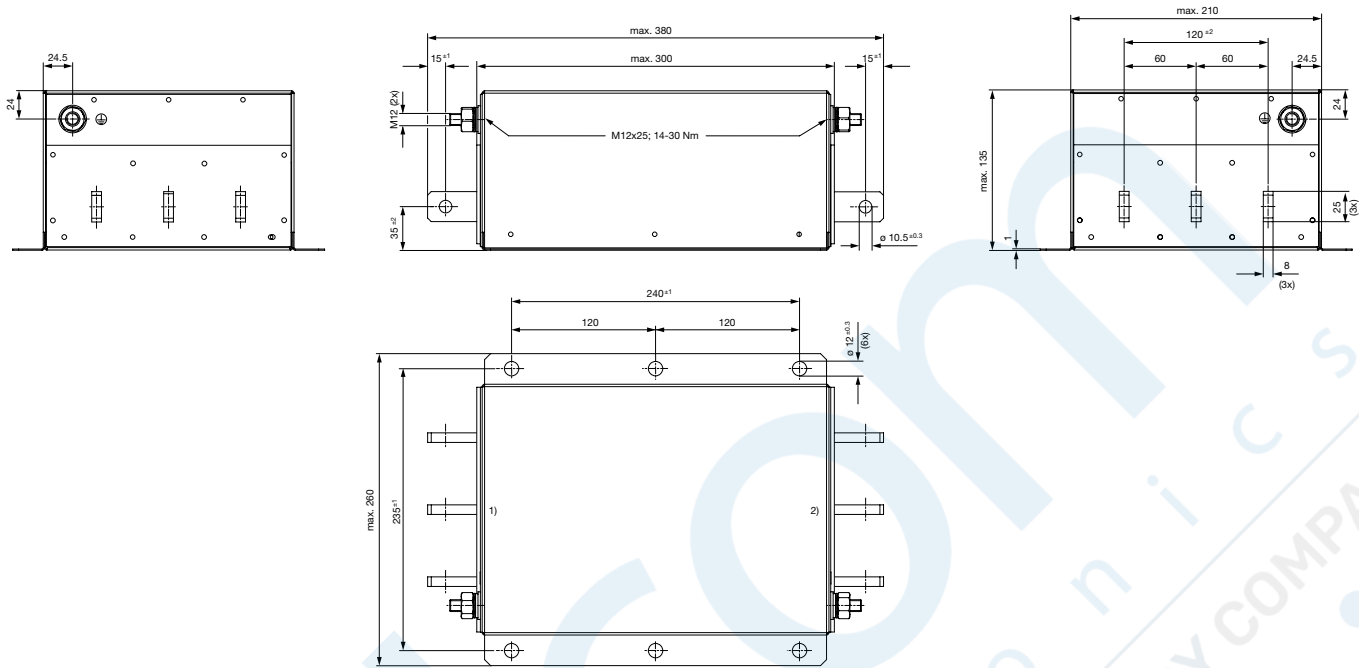
- 1) Line
- 2) Load
- 3) Lock-nut do not unscrew
- 4) Nut torque 10...17 Nm, keep lock-nut fastened

Case 3C

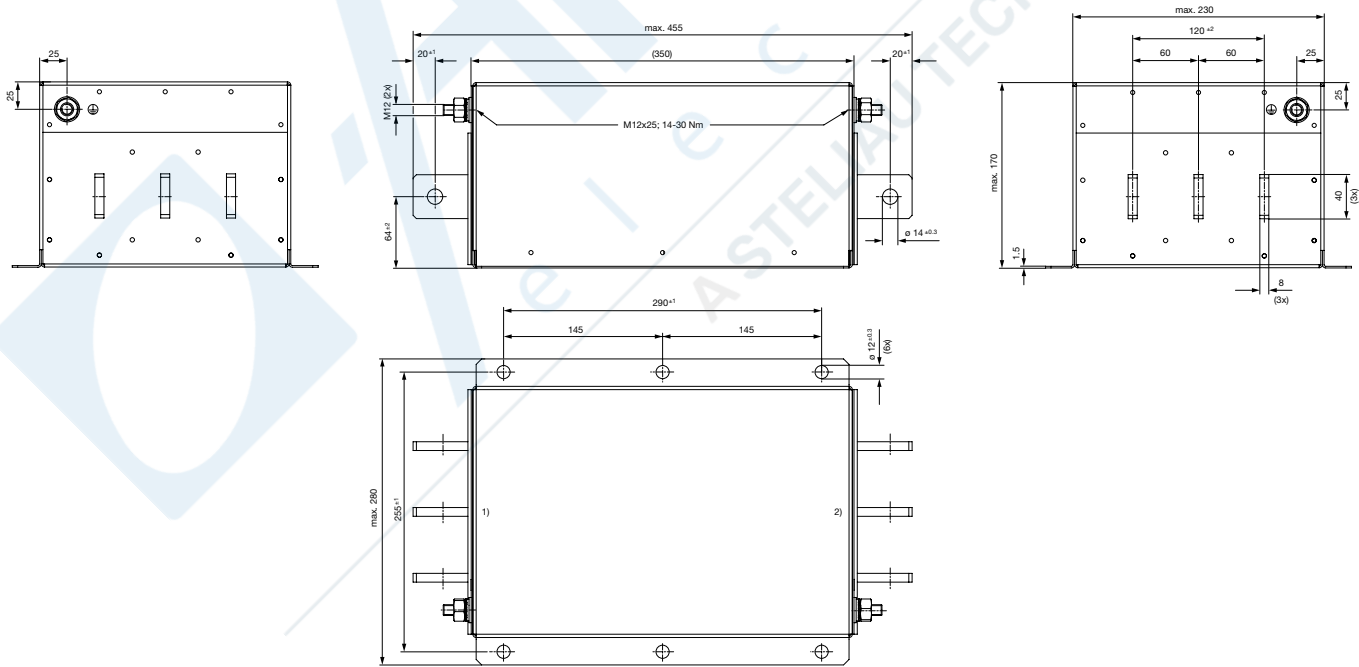


- 1) Line
- 2) Load

Case 3D

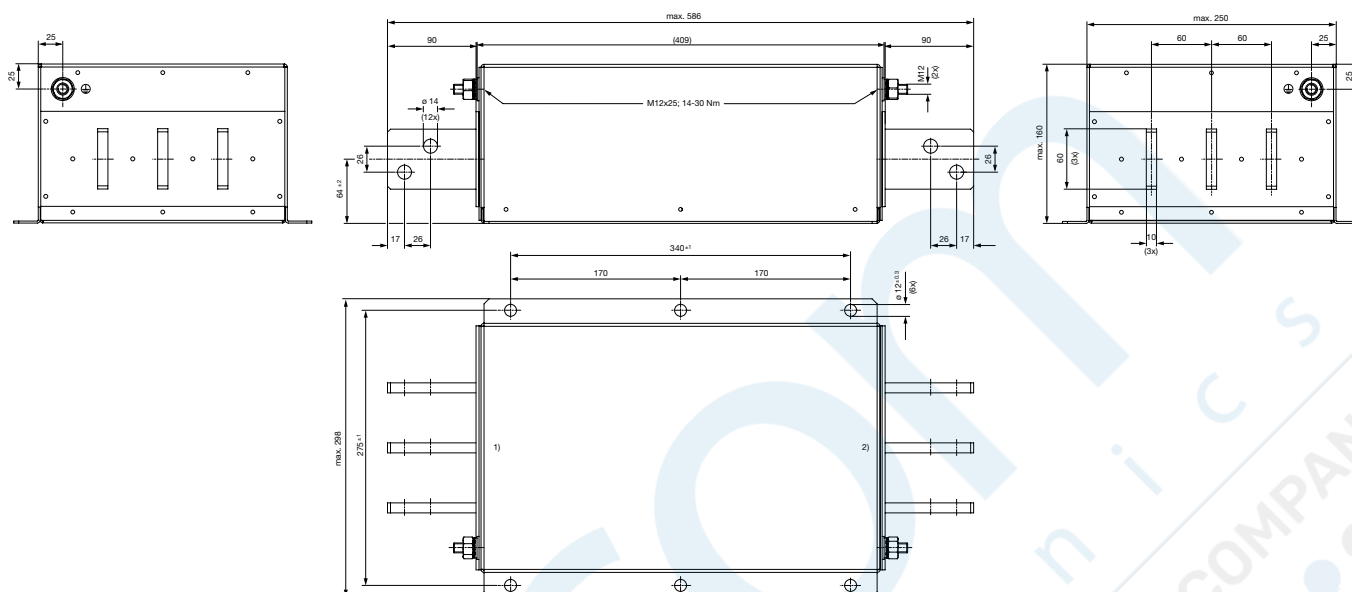


- 1) Line
  - 2) Load
- Case 3E

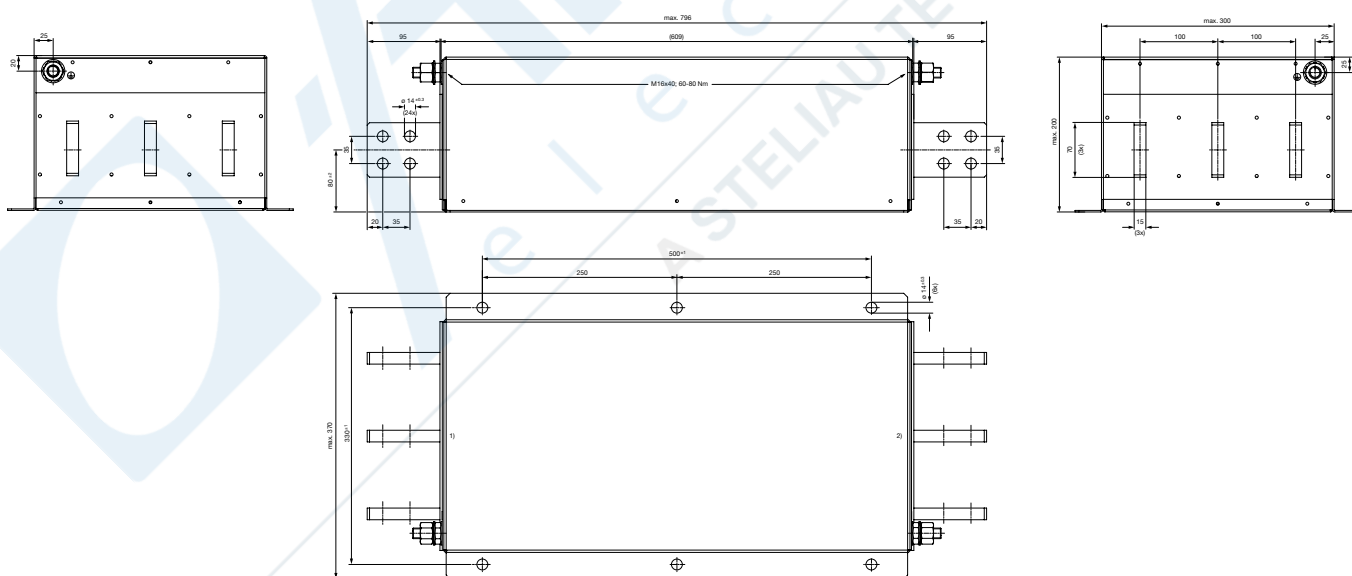


- 1) Line
- 2) Load

Case 3F

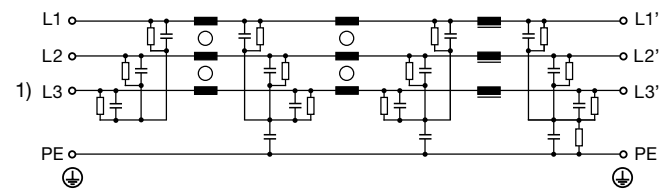


- 1) Line  
 2) Load  
 Case 3G



- 1) Line  
 2) Load

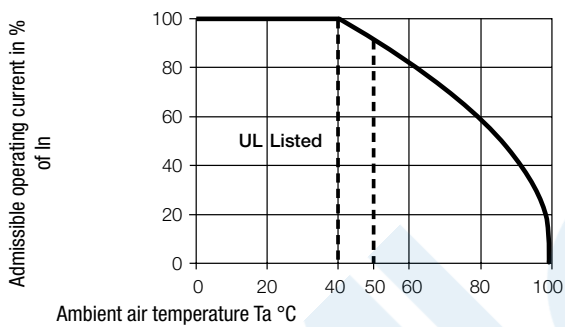
Diagrams



1) Line

Derating Curves

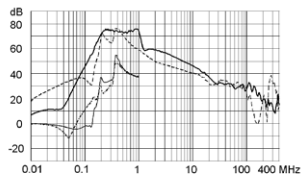
Permissible Working Current as a Function of Ambient Temperature



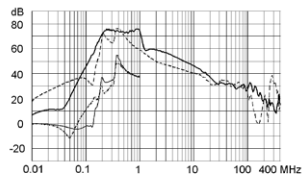
**Attenuation Loss** . . . 0.1/100Ω differential mode ..... 100/0.1Ω differential mode - - - 50Ω differential mode \_\_\_\_ 50Ω common mode

Standard version

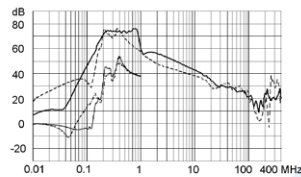
150 A / 520 V



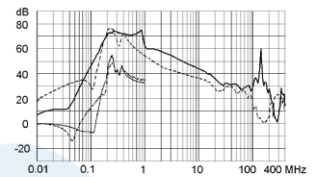
180 A / 520 V



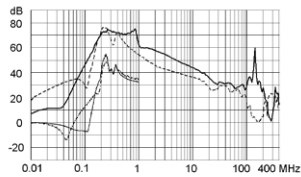
250 A / 520 V



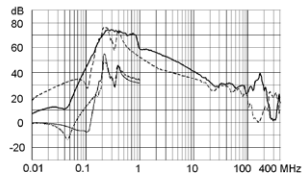
320 A / 520 V



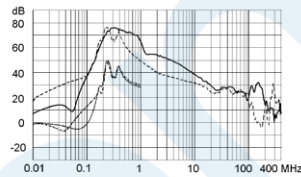
400 A / 520 V



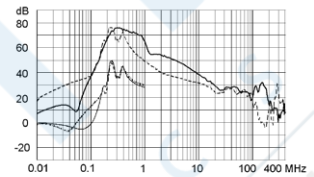
600 A / 520 V



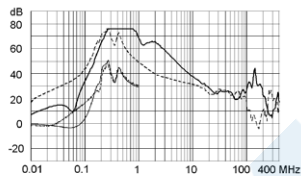
800 A / 520 V



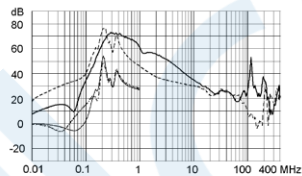
1000 A / 520 V



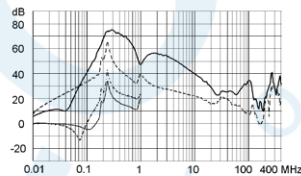
1600 A / 520 V



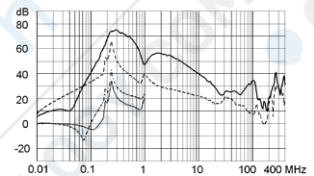
2500 A / 520 V



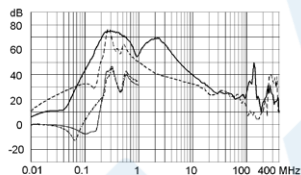
150 A / 760 V



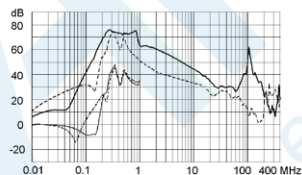
180 A / 760 V



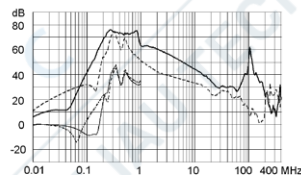
250 A / 760 V



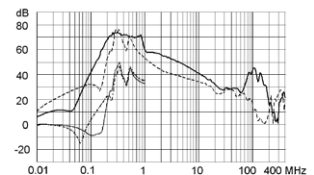
320 A / 760 V



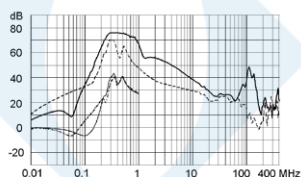
400 A / 760 V



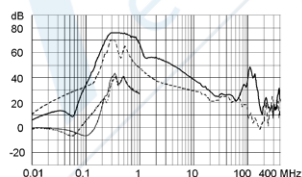
600 A / 760 V



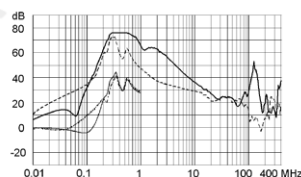
800 A / 760 V



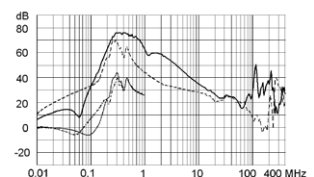
1000 A / 760 V



1600 A / 760 V



2500 A / 760 V



## Variants

| Rated Current @ Ta<br>50°C (40°C) [A] | Rated Voltage [VAC] | Power (kW) | Leakage Cur-<br>rent [mA] @ 440V,<br>60Hz 1) | Power Dissipation<br>[W] | Weight [kg] | Housing | Order Number   |
|---------------------------------------|---------------------|------------|----------------------------------------------|--------------------------|-------------|---------|----------------|
| 150 (164)                             | 520                 | 75         | 14.1                                         | 8                        | 9 kg        | 3A      | FMCC-H93A-J532 |
| 180 (197)                             | 520                 | 90         | 14.1                                         | 11                       | 9 kg        | 3A      | FMCC-H93A-J832 |
| 250 (250)                             | 520                 | 132        | 14.1                                         | 13                       | 11 kg       | 3B      | FMCC-H93B-K532 |
| 320 (350)                             | 520                 | 160        | 14.1                                         | 16                       | 12 kg       | 3C      | FMCC-H93C-L252 |
| 400 (438)                             | 520                 | 220        | 14.1                                         | 25                       | 12 kg       | 3C      | FMCC-H93C-M052 |
| 600 (657)                             | 520                 | 315        | 14.1                                         | 43                       | 14 kg       | 3D      | FMCC-H93D-U052 |
| 800 (876)                             | 520                 | 400        | 14.1                                         | 56                       | 26 kg       | 3E      | FMCC-H93E-Q052 |
| 1000 (1095)                           | 520                 | 560        | 14.1                                         | 88                       | 26 kg       | 3E      | FMCC-H93E-S052 |

| Rated Current @ Ta<br>50°C (40°C) [A] | Rated Voltage [VAC] | Power (kW) | Leakage Cur-<br>rent [mA] @ 440V,<br>60Hz 1) | Power Dissipation<br>[W] | Weight [kg] | Housing | Order Number   |
|---------------------------------------|---------------------|------------|----------------------------------------------|--------------------------|-------------|---------|----------------|
| 1600 (1600)                           | 520                 | 900        | 14.1                                         | 150                      | 29 kg       | 3F      | FMCC-H93F-S652 |
| 2500 (2500)                           | 520                 | 1320       | 14.1                                         | 286                      | 67 kg       | 3G      | FMCC-H93G-T552 |
| 150 (164)                             | 760                 | 110        | 13.5                                         | 8                        | 9 kg        | 3A      | FMCC-I93A-J534 |
| 180 (197)                             | 760                 | 132        | 13.5                                         | 11                       | 9 kg        | 3A      | FMCC-I93A-J834 |
| 250 (250)                             | 760                 | 200        | 13.5                                         | 13                       | 11 kg       | 3B      | FMCC-I93B-K534 |
| 320 (350)                             | 760                 | 250        | 13.5                                         | 16                       | 12 kg       | 3C      | FMCC-I93C-L254 |
| 400 (438)                             | 760                 | 315        | 13.5                                         | 25                       | 12 kg       | 3C      | FMCC-I93C-M054 |
| 600 (657)                             | 760                 | 500        | 13.5                                         | 43                       | 14 kg       | 3D      | FMCC-I93D-U054 |
| 800 (876)                             | 760                 | 630        | 13.5                                         | 56                       | 26 kg       | 3E      | FMCC-I93E-Q054 |
| 1000 (1095)                           | 760                 | 710        | 13.5                                         | 88                       | 26 kg       | 3E      | FMCC-I93E-S054 |
| 1600 (1600)                           | 760                 | 1320       | 13.5                                         | 150                      | 29 kg       | 3F      | FMCC-I93F-S654 |
| 2500 (2500)                           | 760                 | 2000       | 13.5                                         | 286                      | 67 kg       | 3G      | FMCC-I93G-T554 |

Availability for all products can be searched real-time: <https://www.schurter.com/en/info-center/support-tools/stock-check-distributors>

1) Leakage current according IEC 60939-1

|                |       |
|----------------|-------|
| Packaging unit | 1 Pcs |
|----------------|-------|