#### Compact 2-stage bookform filter



FMBC BOOK STYLE 2-step filter reclining



#### **Description**

- Very compact and slim filter design

### **Applications**

- Voltage rating 480 VAC for world wide acceptance
- Especially designed for industrial applications such as: Frequency Converters, Stepper Motor Drives, UPS-Systems, Inverters
- Suitable for use in equipment according to IEC/UL 62368-1

#### References

We recommend for new applications the type FMBC EP; FMBC NEO Last order date: 31.01.2024

#### Weblinks

pdf data sheet, html datasheet, General Product Information, Approvals, Distributor-Stock-Check, Detailed request for product, Microsite

| Technical Data |
|----------------|
| Rated Current  |
|                |

| Rated Current           | 10 - 115A @ Ta 40°C                    |
|-------------------------|--|
| Rated voltage           | 480 VAC 50/60 Hz                       |
| Approval for            | 10 - 115 A @ Ta 40 °C / 480 VAC; 50 Hz |
| Overload Current        | 1.5 x Ir for 1 minute, per hour        |
| Leakage Current         | industrial < 5 mA (440 V / 50 Hz)      |
| Dielectric Strength     | 480 VAC:                               |
|                         | 2.25 kVDC between L-L                  |
|                         | 3 kVDC between L-PE                    |
|                         | Test voltage (2 sec)                   |
|                         | between 3 kVDC L-PE                    |
|                         | 50 Hz                                  |
| Number of Filter Stages | 2-stage                                |
| Weight                  | 1.9 - 7.25 kg                          |
| Material: Housing       | Metal                                  |
| Sealing Compound        | UL 94V-0                               |
|                         |  |

| Mounting              | Screw-on mounting on chassis, from      |
|-----------------------|---|
|                       | top                                     |
| Terminal              | Screw clamps / flexible wires           |
| Operating Temperature | -25°C to 100°C                          |
| Climatic Category     | 25/100/21 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         |
|                       |   |

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: FMBC BOOK STYLE

| Approval Logo     | Certificates  | Certification Body | Description                  |
|-------------------|---------------|--------------------|------------------------------|
| <b>1</b> 0        | VDE Approvals | VDE                | Certificate Number: 40004666 |
| <b>. 511</b> ° us | UL Approvals  | UL                 | UR File Number: E72928       |

# **Product standards**

Product standards that are referenced

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

### **Application standards**

Application standards where the product can be used

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

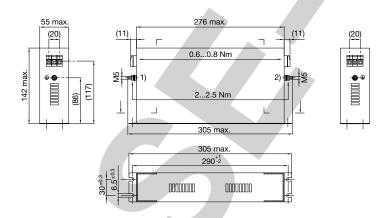
### Compliances

The product complies with following Guide Lines

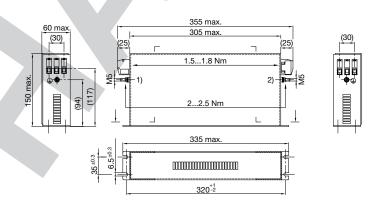
| Identification | Details                        | Initiator   | Description   |
|----------------|--------------------------------|-------------|---|
| C€             | CE declaration of conformity   | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
| UK<br>CA       | UKCA declaration of conformity | 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.  |
| ROHS           | RoHS                           | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863  |
| <b>©</b>       | China RoHS                     | 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.  |
| REACH          | REACH                          | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration,<br>Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as<br>"REACH") entered into force.                         |

## Dimension [mm]

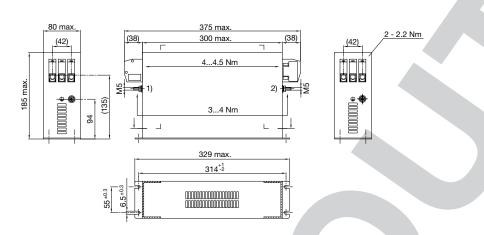
Case 58



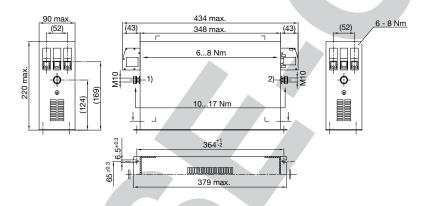
1) Line 2) Load Case 60



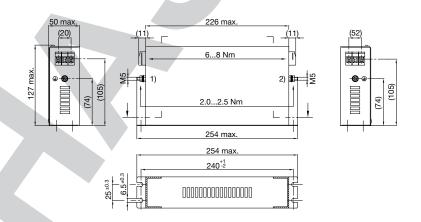
Case 62



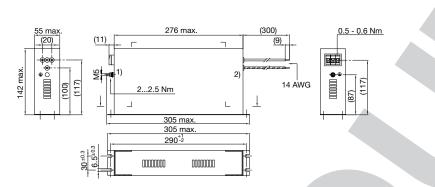
Case 64



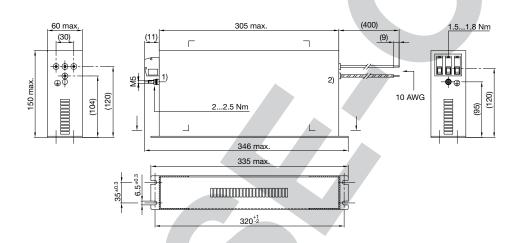
1) Line 2) Load Case 67



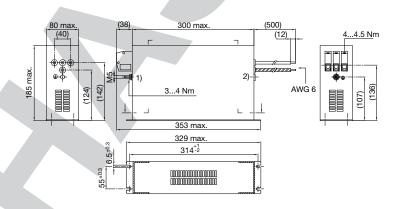
Case 58C



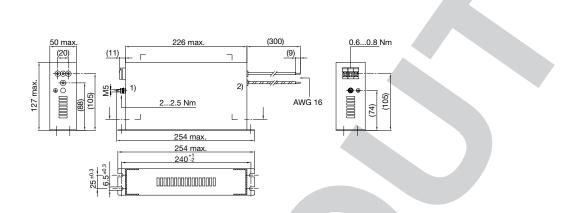
Case 60C



1) Line 2) Load Case 62C



Case 67C

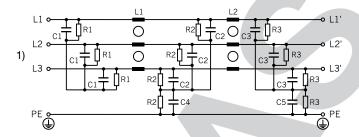


1) Line 2) Load

# Technical data to the filter components

| Rated Cur-<br>rent [A] | Terminal                      | L1 [mH] | L2 [mH] | C1 [µF] | C2 [µF] | C3 [nF] | C4 [nF] | C5 [µF] | <b>R1</b> [MΩ] | <b>R2</b> [MΩ] | <b>R3 [M</b> Ω] |
|------------------------|-------------------------------|---------|---------|---------|---------|---------|---------|---------|----------------|----------------|-----------------|
| 10                     | Screw clamps / flexible wires | 3       | 1.5     | 1.5     | 1.0     | 1.5     | -       | 1.5     | -              | -              | 1               |
| 115                    | Screw clamps / flexible wires | 0.7     | 0.2     | 2.2     | 2.2     | 2.2     | 100     | 2.2     | -              | 1              | 1               |
| 20                     | Screw clamps / flexible wires | 1.8     | 2       | 2.2     | 1.5     | 2.2     | -       | 1.5     | -              | -              | 1               |
| 36                     | Screw clamps / flexible wires | 1.5     | 0.5     | 2.2     | 2.2     | 2.2     | -       | 2.2     | -              | -              | 1               |
| 66                     | Screw clamps / flexible wires | 0.65    | 0.45    | 2.2     | 2.2     | 2.2     | 100     | 2.2     | -              | 1              | 1               |
|                        |                               |         |         |         |         |         |         |         |                |                |                 |

## **Diagrams**



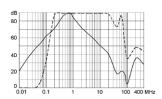
1) Line

### **Attenuation Loss**

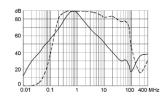
- - - -  $50\Omega$  differential mode \_\_\_\_\_  $50\Omega$  common mode

Industrial version

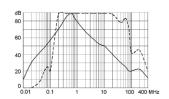




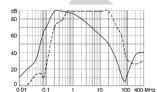
20 A



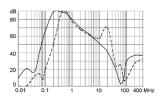
36 A



66 A



115 A



#### **All Variants**

| Rated Current<br>[A] | Terminal                      | Leakage Cur-<br>rent [mA] @ 440V,<br>60Hz 1) | Tripped<br>Power Dissi-<br>pation [W] | Contact Resistance [m $\Omega$ ] | Weight<br>[kg] | Clamps [mm2] | Housing | Order Number   |
|----------------------|-------------------------------|--|---------------------------------------|----------------------------------|----------------|--------------|---------|----------------|
| 10                   | Screw clamps / flexible wires | 4.6  | 9.45                                  | 31.5                             | 1.9 kg         | 4            | 67      | FMBC-0967-1010 |
| 10                   | Screw clamps / flexible wires | 4.6  | 9.45                                  | 31.5                             | 1.65 kg        | 4            | 67C     | FMBC-0967-1060 |
| 115                  | Screw clamps / flexible wires | 7.1  | 48                                    | 1.33                             | 7.25 kg        | 50           | 64      | FMBC-0964-H110 |
| 20                   | Screw clamps / flexible wires | 4.6  | 17.5                                  | 14.6                             | 2.15 kg        | 4            | 58      | FMBC-0958-2010 |
| 20                   | Screw clamps / flexible wires | 4.6  | 17.5                                  | 14.6                             | 2.3 kg         | 4            | 58C     | FMBC-0958-2060 |
| 36                   | Screw clamps / flexible wires | 6.7  | 25.7                                  | 6.6                              | 2.9 kg         | 10           | 60      | FMBC-0960-3610 |
| 36                   | Screw clamps / flexible wires | 6.7  | 25.7                                  | 6.6                              | 3.1 kg         | 10           | 60C     | FMBC-0960-3660 |
| 66                   | Screw clamps / flexible wires | 7.1  | 43                                    | 3.3                              | 4.4 kg         | 25           | 62      | FMBC-0962-6610 |
| 66                   | Screw clamps / flexible wires | 7.1  | 43                                    | 3.3                              | 4.41 kg        | 25           | 62C     | FMBC-0962-6660 |

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

1) Leakage current according IEC 60939-1

Packaging unit

1 Pcs

**EMC Products**