

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



See below:

**Approvals and Compliances**

**Description**

- Terminals for three phases and ground

**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

**References**

**Weblinks**

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

**Technical Data**

Rated Current	7 - 180 A	Mounting	Screw-on mounting on chassis
Rated voltage	520VAC, 50/60 Hz	Terminal	Screw clamps
Approval for	7 - 180 A @ 50 °C / 520 VAC; 50/60Hz	Operating Temperature	-25 °C to 100 °C
Overload Current	1.5 x I <sub>r</sub> for 1 minute, per hour	Climatic Category	25/100/21 acc. to IEC 60068-1
Dielectric Strength	> 2.25 kVDC between L-L	Degree of Protection	IP20 acc. to IEC 60529
	> 2.7 kVDC between L-PE	Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
	Test voltage 2 sec	MTBF	> 200'000h acc. to MIL-HB-217 F
Number of Filter Stages	2-stage		
Weight	0.75 - 9.4 kg		
Material: Housing	Metal		
Sealing Compound	UL 94V-0		

**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: FMBC LL

Approval Logo	Certificates	Certification Body	Description
	<a href="#">VDE Approvals</a>	VDE	Certificate Number: 40040983
	<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

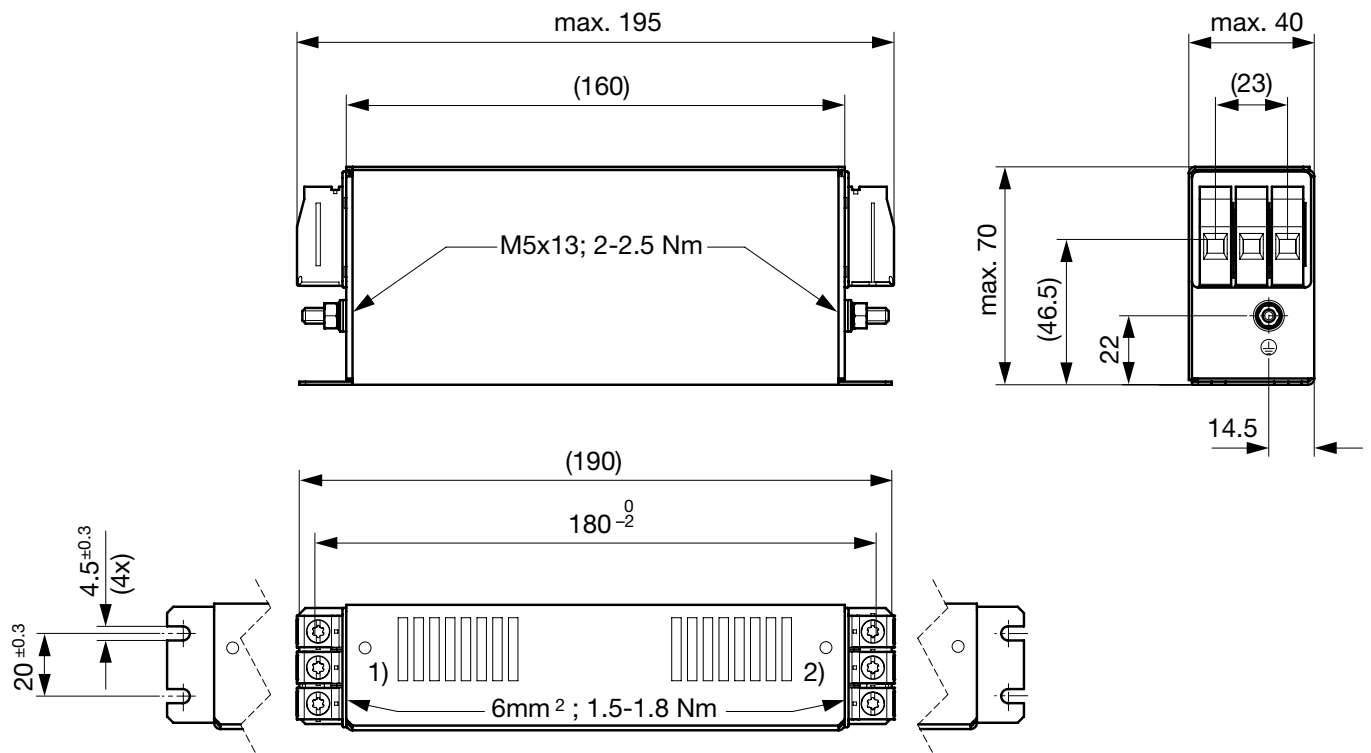
**Compliances**

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.
	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
	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	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.

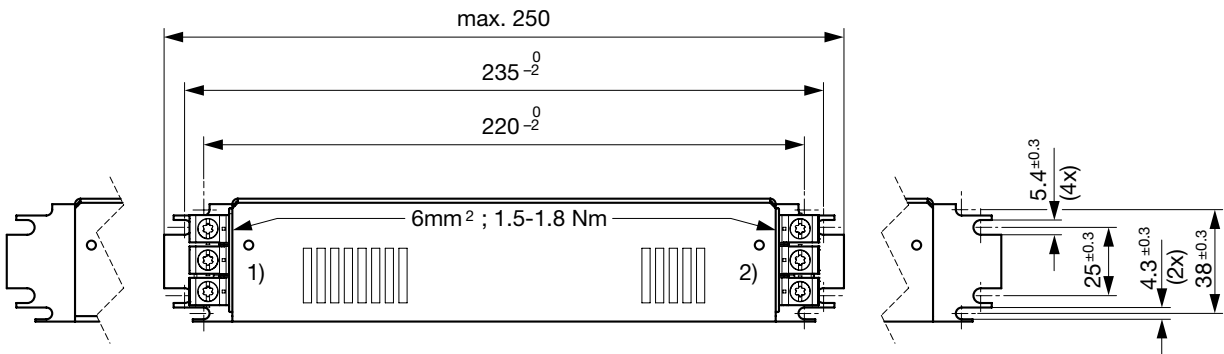
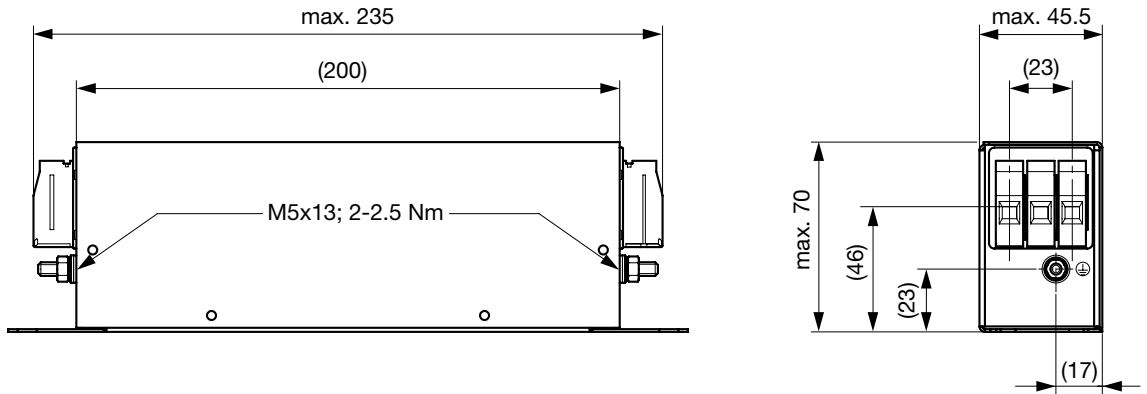
**Dimension [mm]**

Case 1U



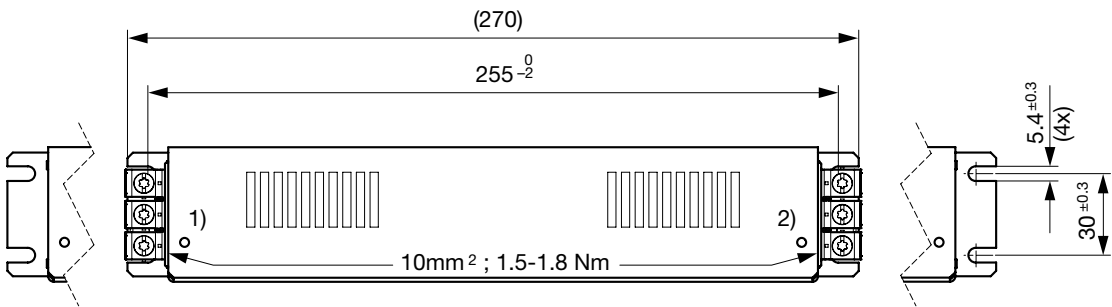
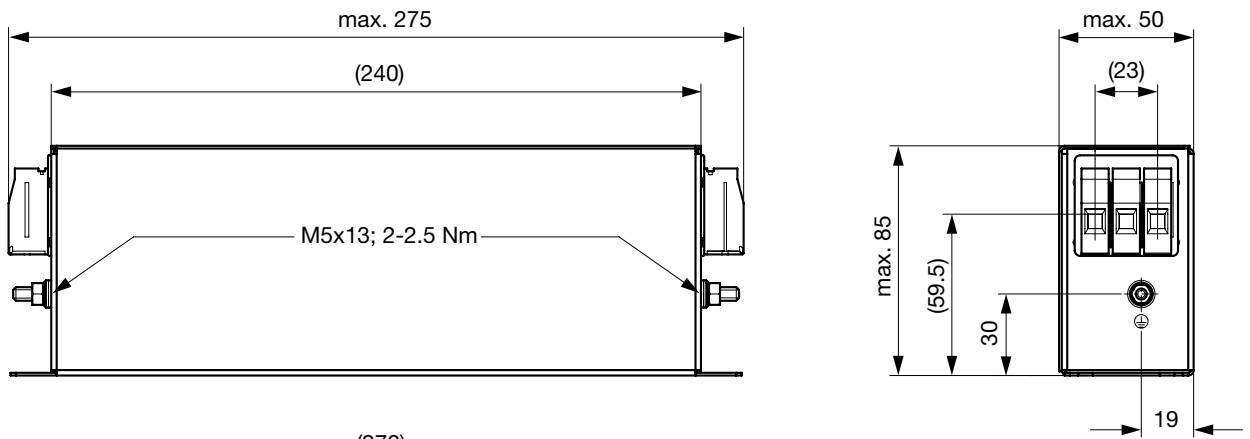
- 1) Line
- 2) Load

Case 1C



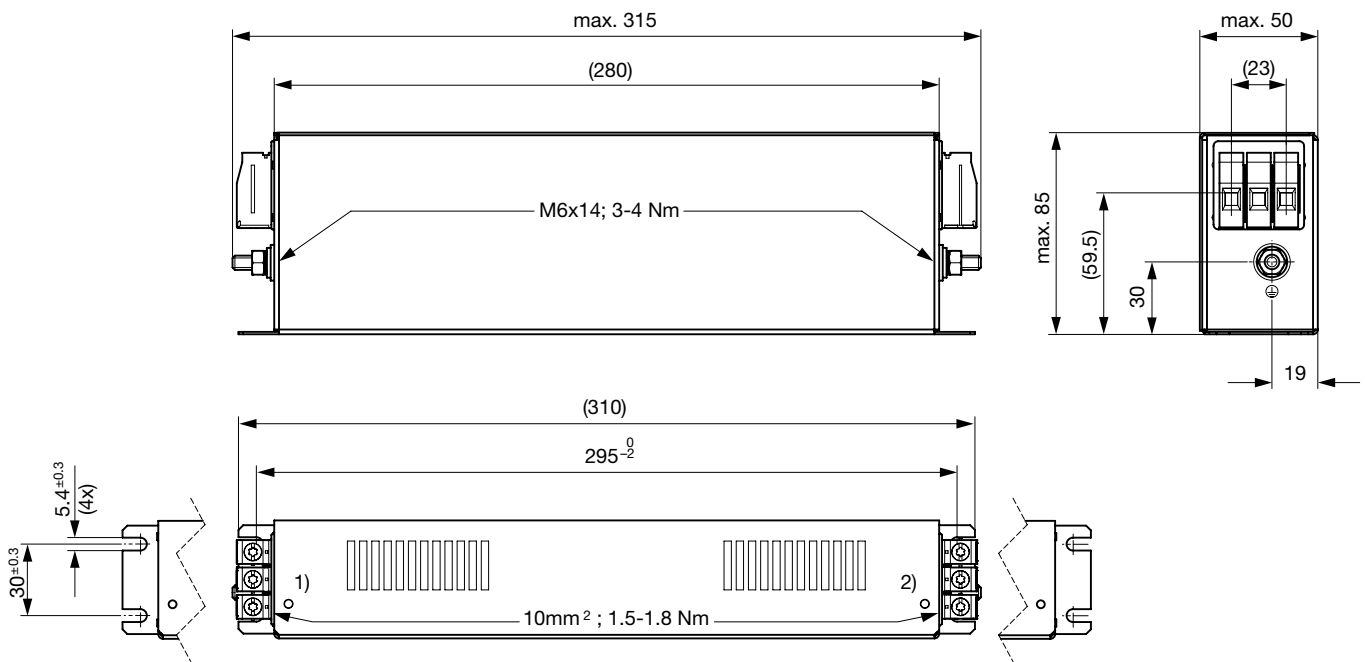
- 1) Line
- 2) Load

Case 1Q



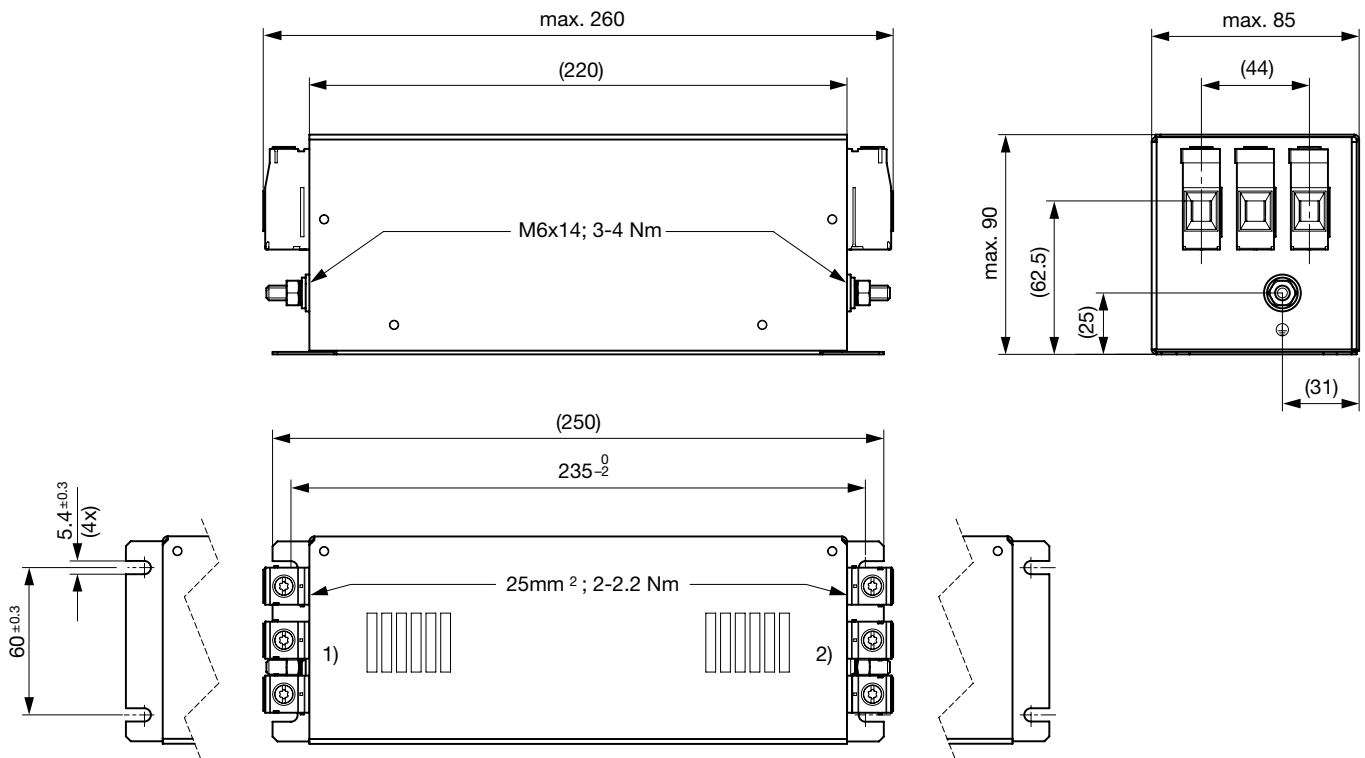
- 1) Line
- 2) Load

Case 1R



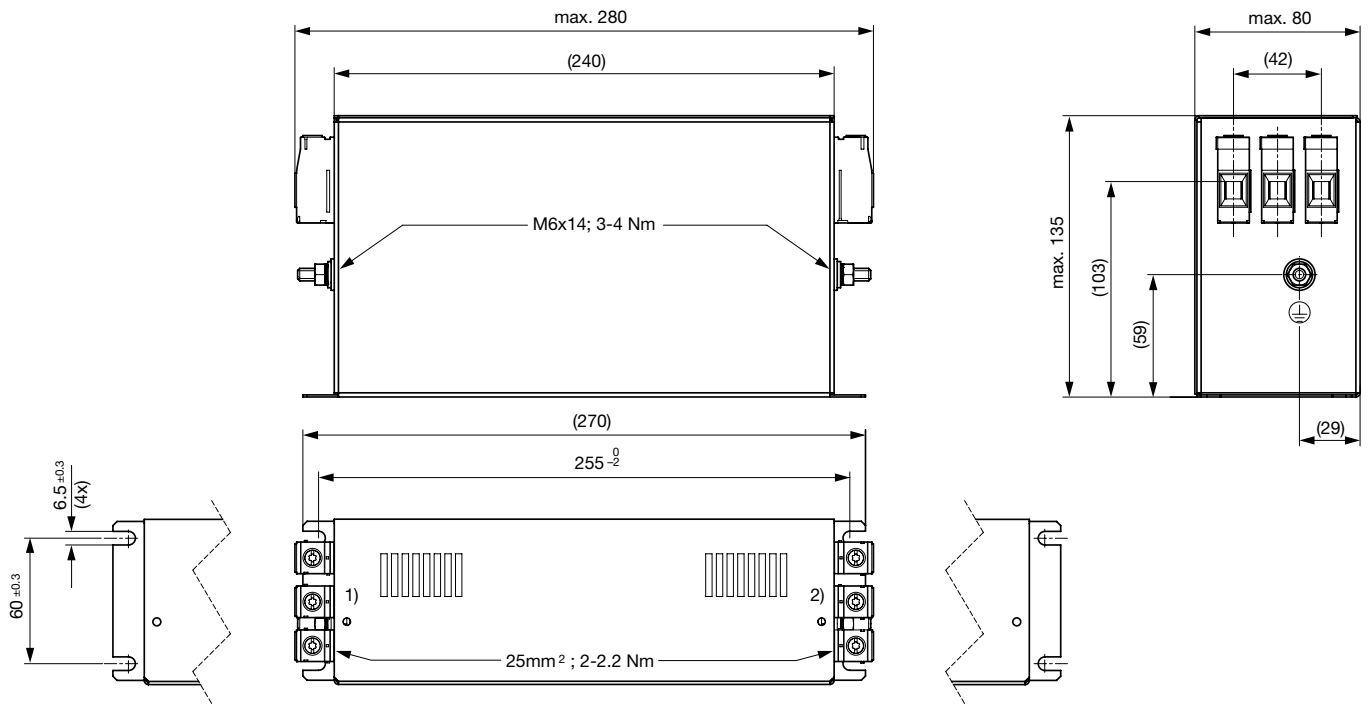
- 1) Line
- 2) Load

Case 1S



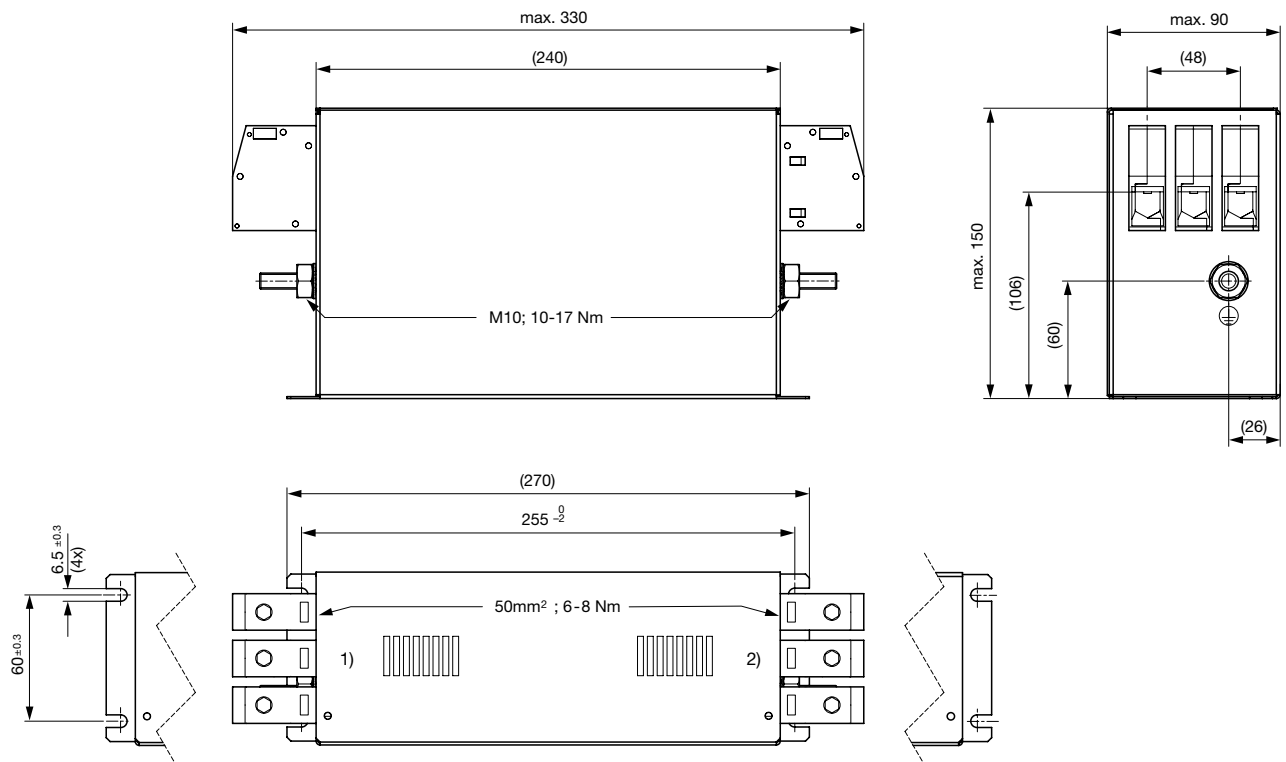
- 1) Line
- 2) Load

Case 1F



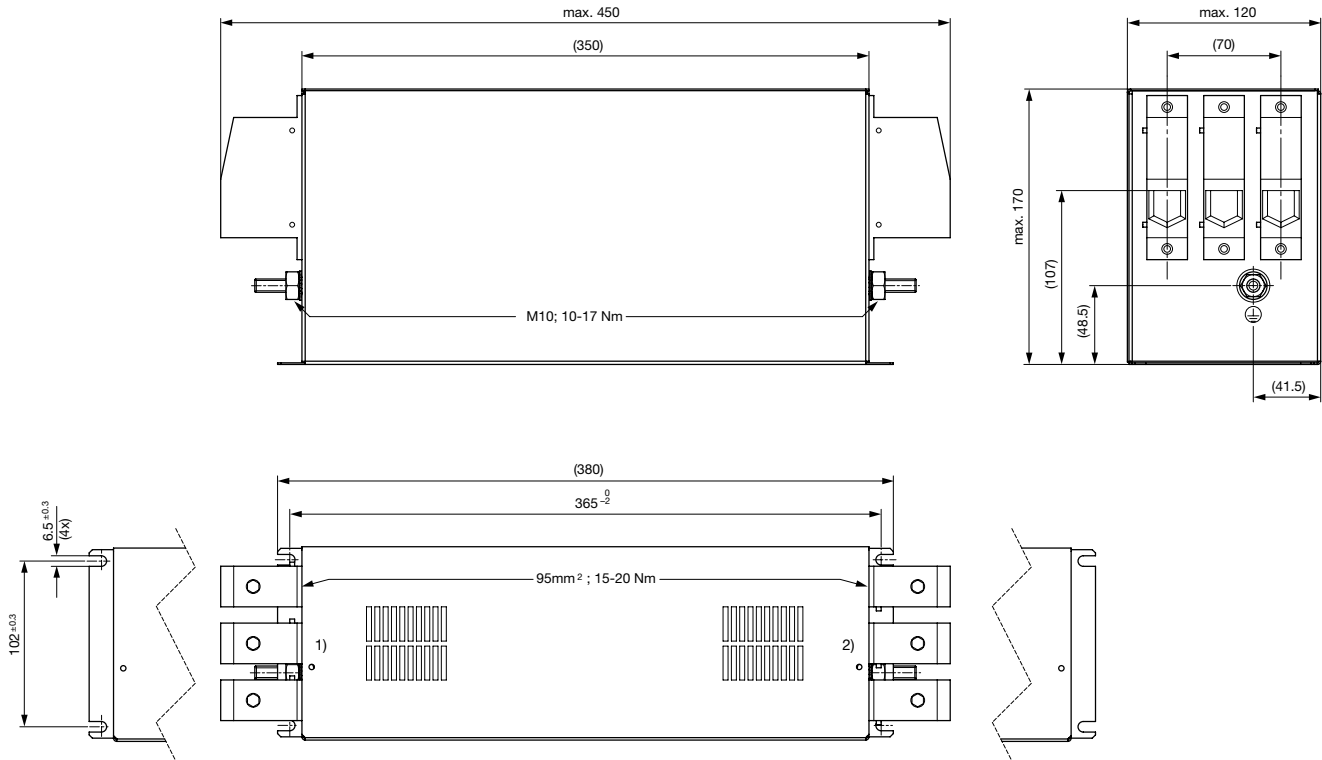
- 1) Line
- 2) Load

Case 1G



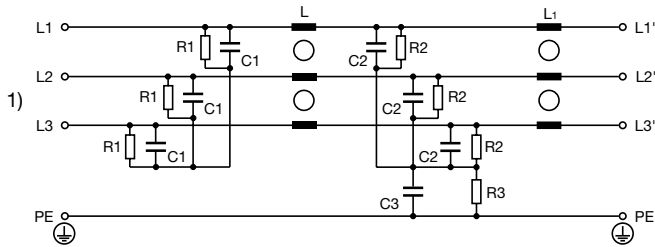
- 1) Line
- 2) Load

Case 1V



- 1) Line
- 2) Load

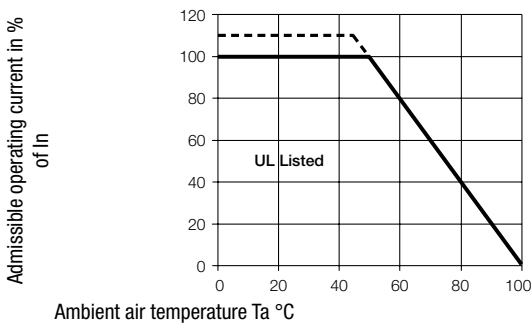
Diagrams



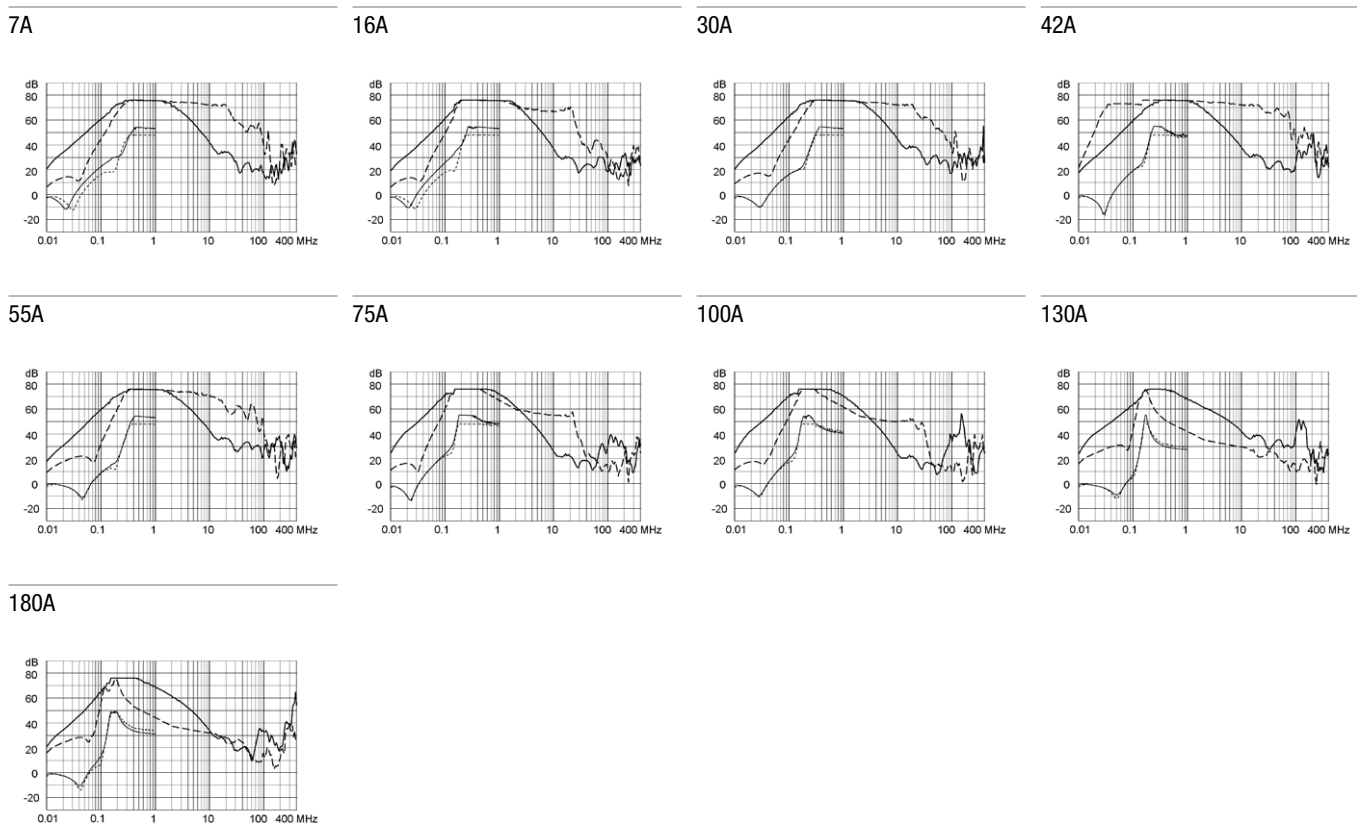
- 1) Line

Derating Curves

Permissible Working Current as a Function of Ambient Temperature



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



**All Variants**

Rated Current @ Ta 50°C (40°C) [A]	Rated Voltage [VAC]	Powerloss @ 25°C, 50Hz [W]	Leakage Current @ 400VAC, 50Hz	Weight [kg]	Screw clamps [mm <sup>2</sup> 2]	Housing	Packaging unit	Order Number
7 (7.7)	520	1.5	4.3	0.75 kg	6	1U	3	FMBC-R91U-0712
16 (17.5)	520	5.4	4.3	1.2 kg	6	1C	3	FMBC-R91C-1612
30 (32.9)	520	6.6	4.3	1.8 kg	10	1Q	4	FMBC-R91Q-3012
42 (46)	520	10.7	4.3	1.8 kg	10	1R	3	FMBC-R91R-4212
55 (60.2)	520	13.3	4.3	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

Most Popular.

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
- 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 <https://www.schurter.com/en/FAQ#10>