

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

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
Rated voltage	520 VAC, 50/60 Hz
Approval for	7 - 180 A @ 50 °C / 520 VAC; 50/60 Hz
Overload Current	1.5 x I _r for 1 minute, per hour
Dielectric Strength	> 2.25 kVDC between L-L > 2.7 kVDC between L-PE 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	-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	> 200'000 h 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: FMBC LL

Approval Logo	Certificates	Certification Body	Description
	VDE Approvals	VDE	Certificate Number: 40040983
	UL Approvals	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

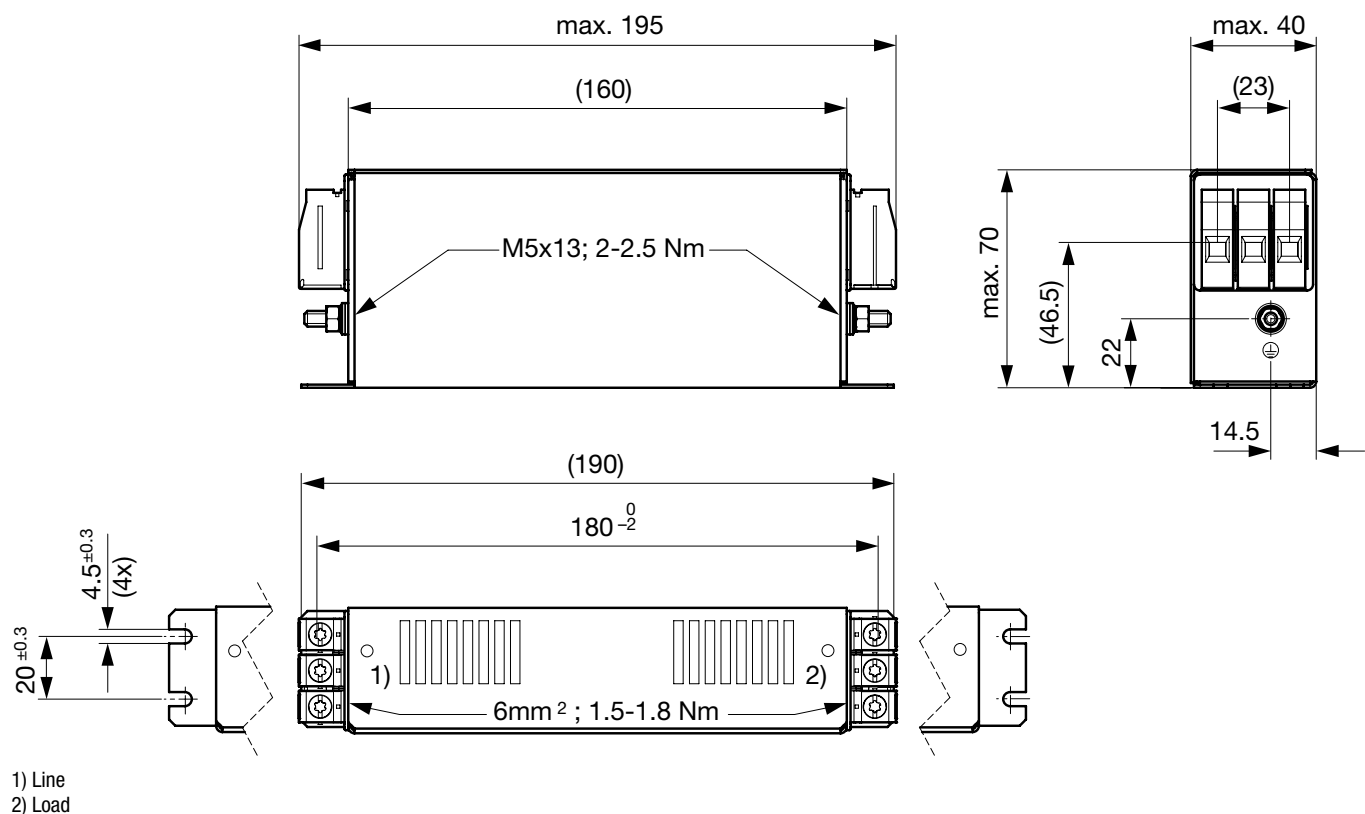
Application standards where the product can be used

Compliances

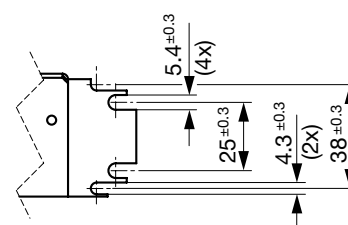
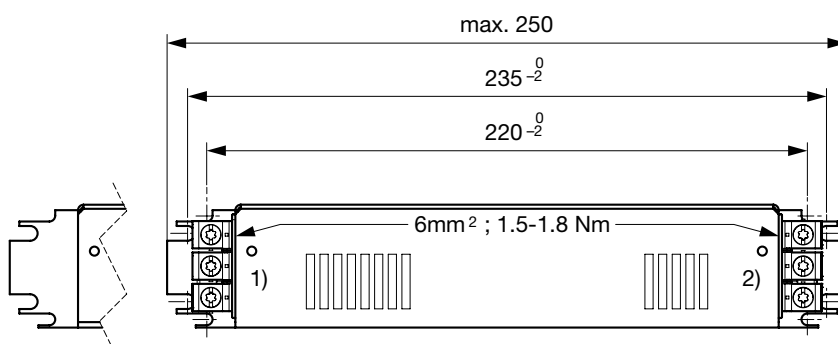
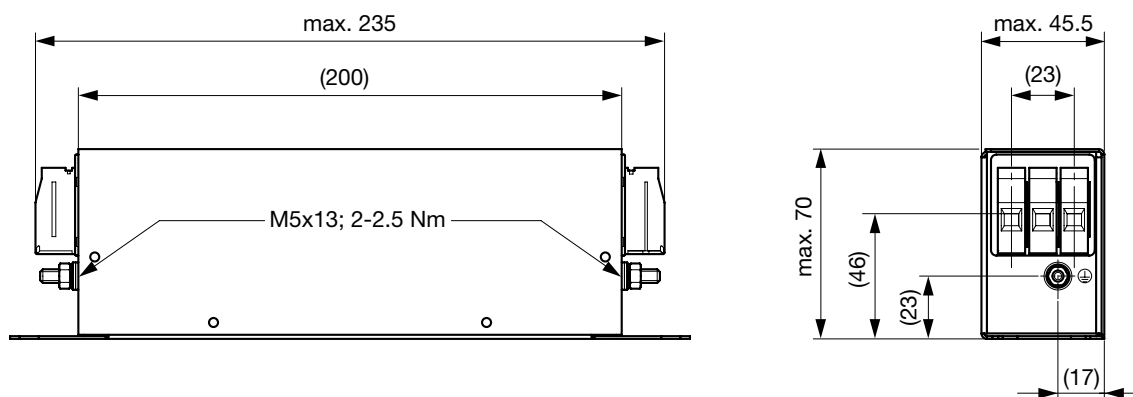
The product complies with following Guide Lines

Dimension [mm]

Case 1U

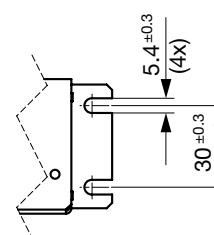
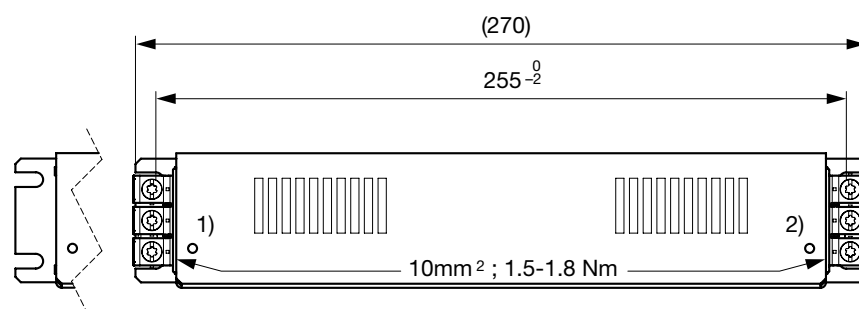
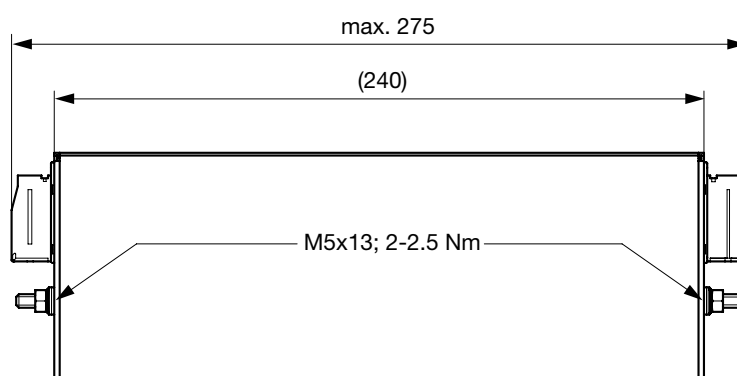


Case 1C



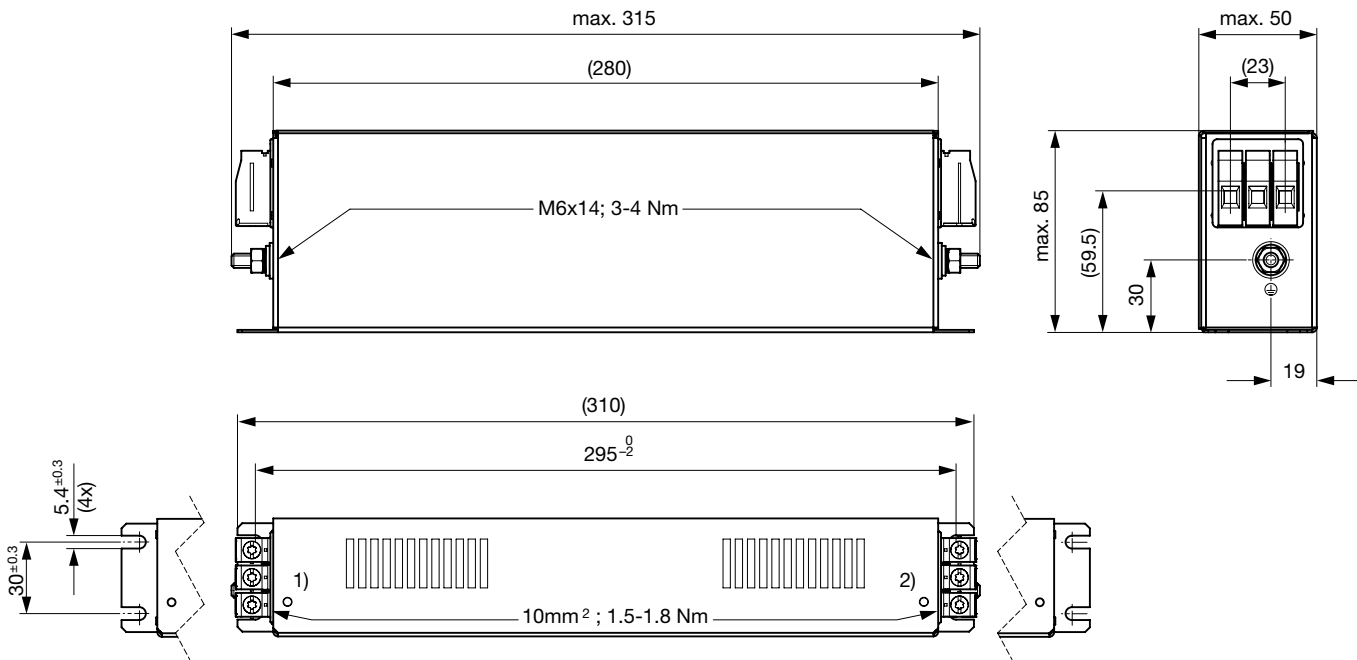
1) Line
 2) Load

Case 1Q



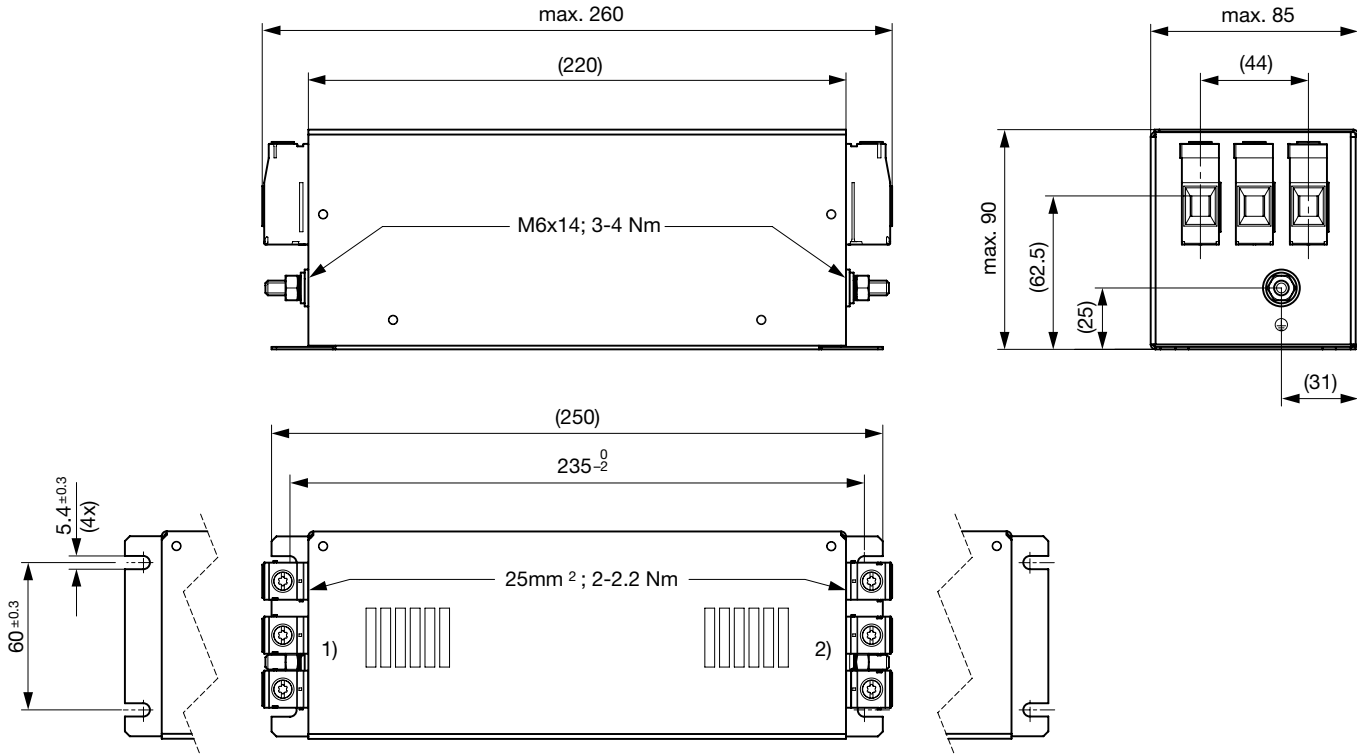
1) Line
 2) Load

Case 1R



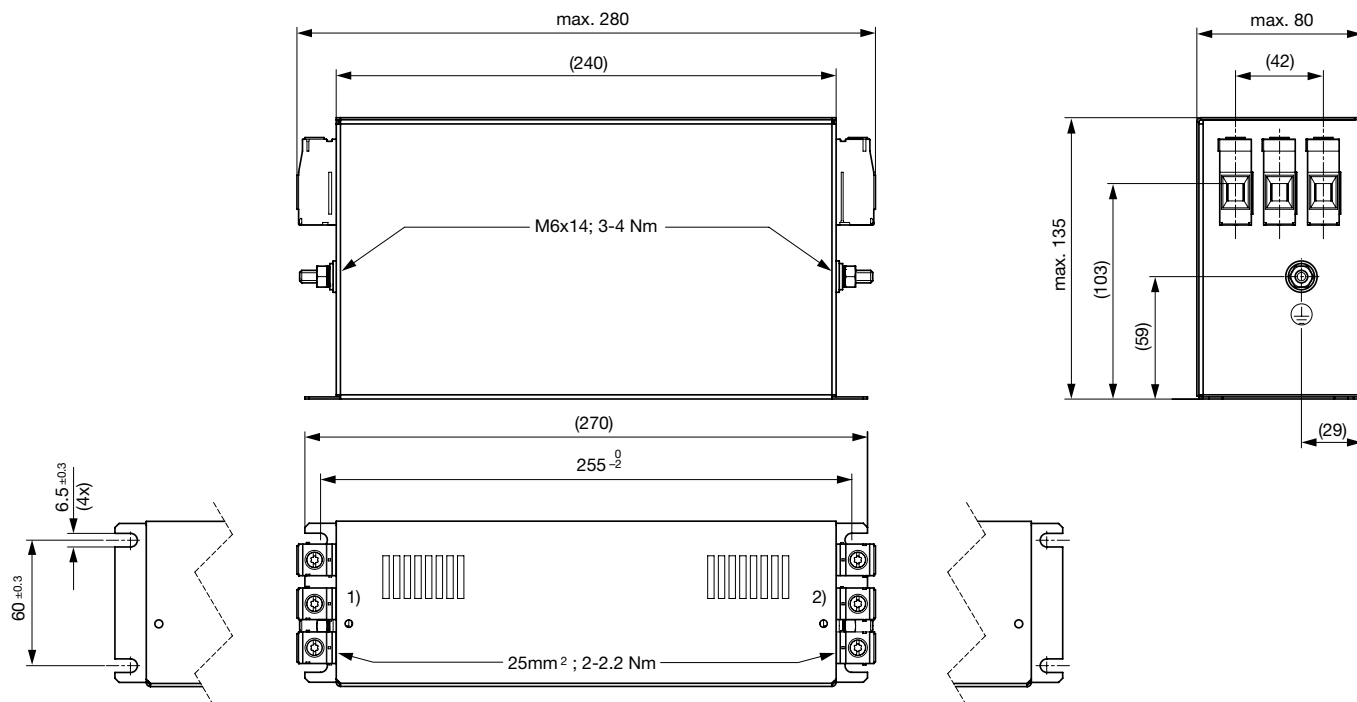
- 1) Line
- 2) Load

Case 1S



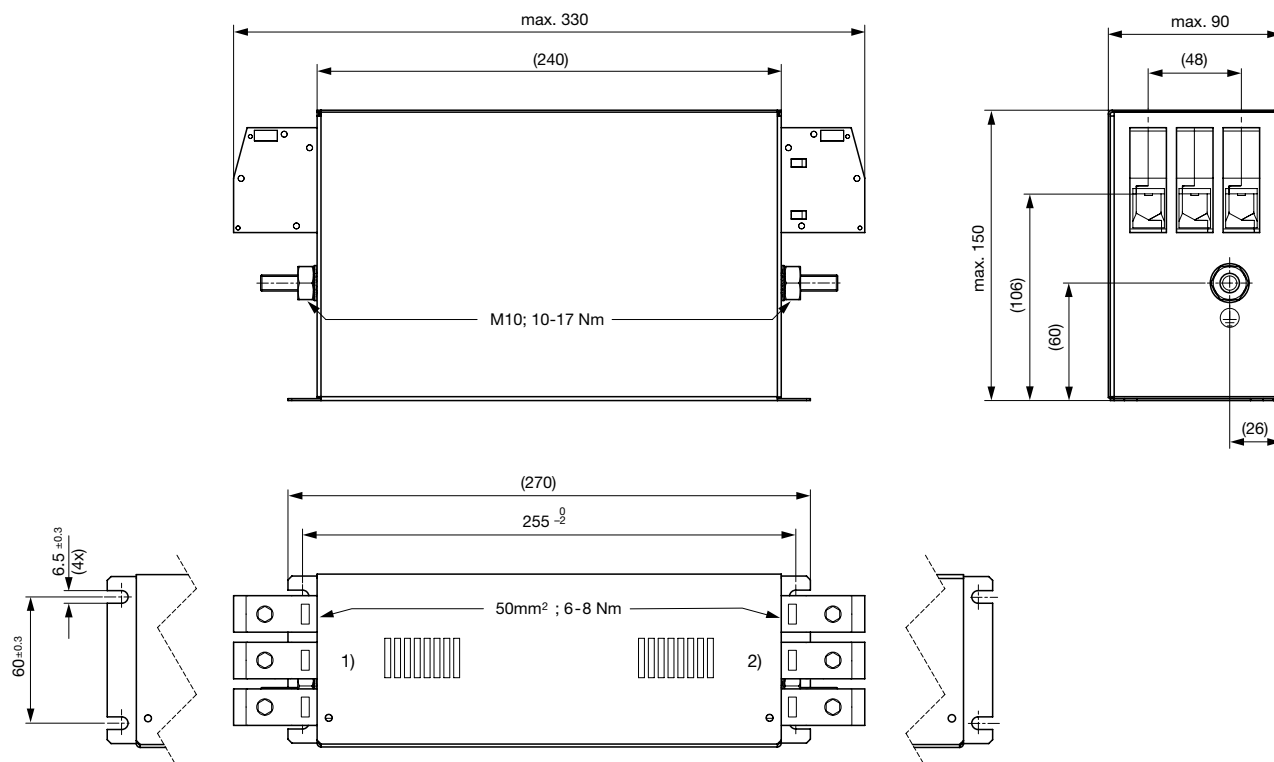
- 1) Line
- 2) Load

Case 1F



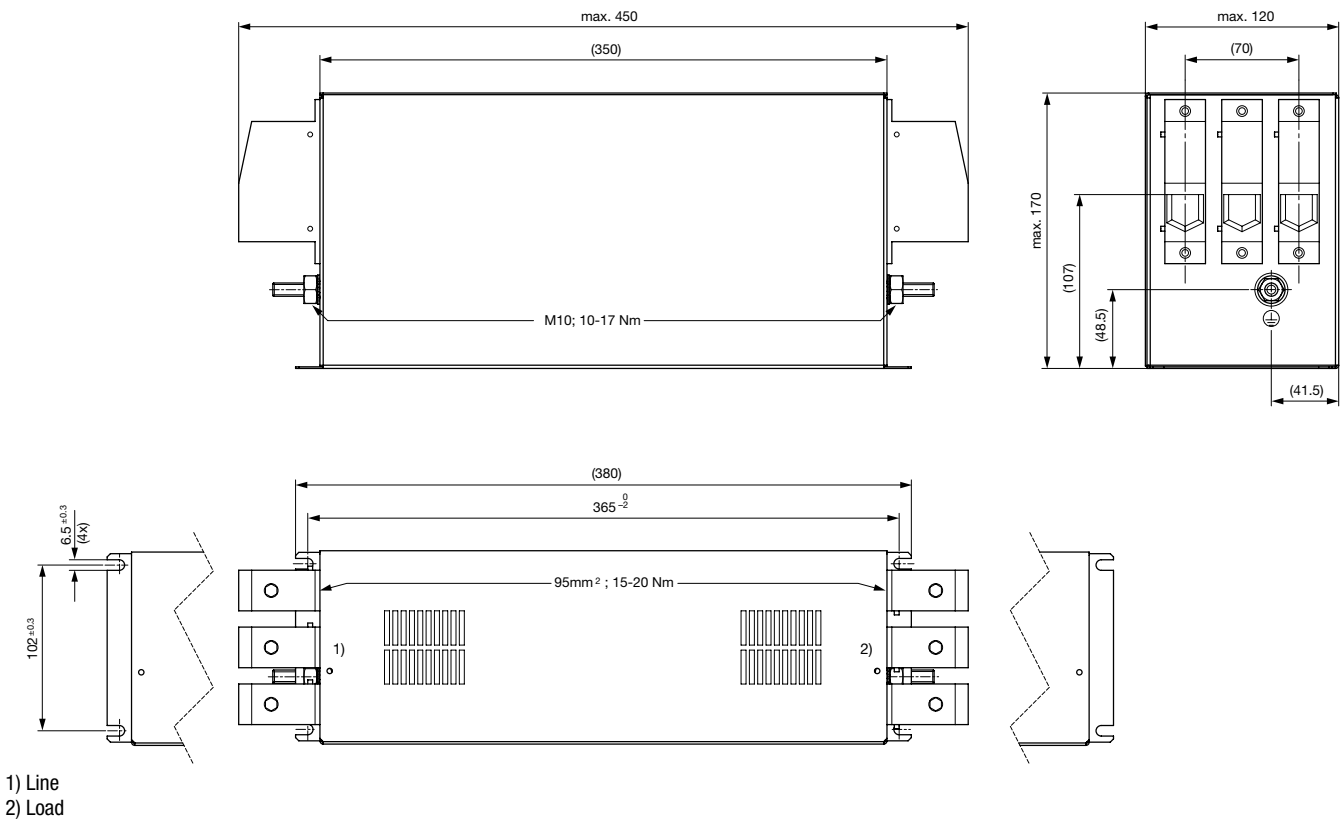
- 1) Line
- 2) Load

Case 1G

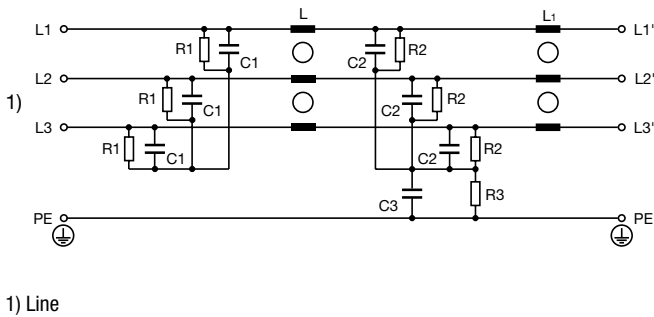


- 1) Line
- 2) Load

Case 1V

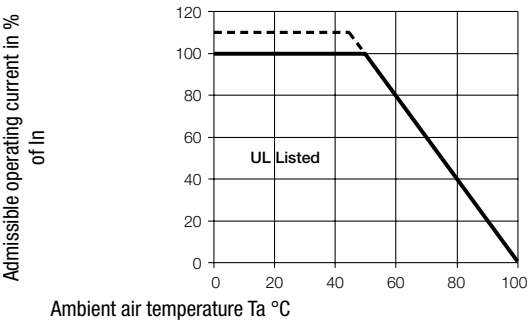


Diagrams

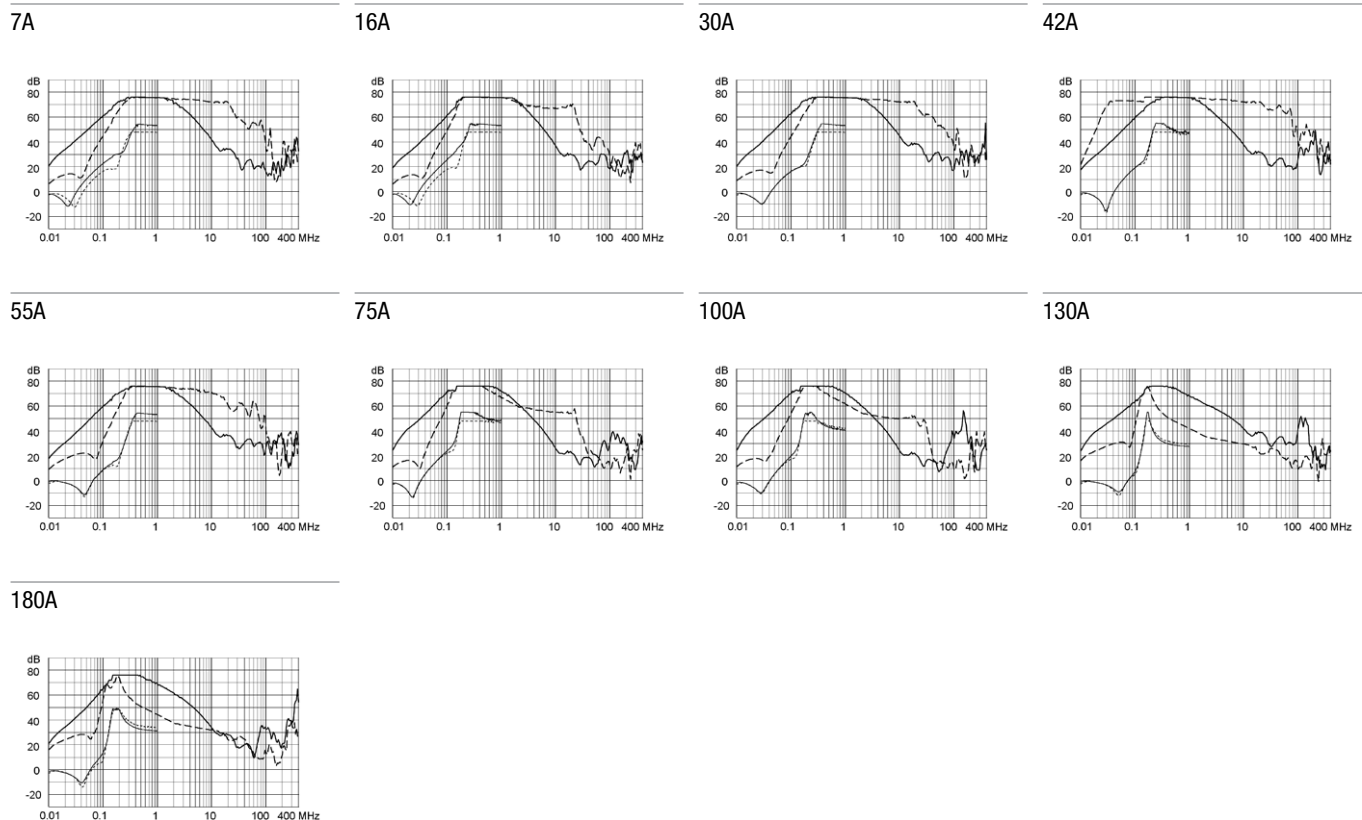


Derating Curves

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



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 [mm2] 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

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 mm² values can be found in the general product information
<https://www.schurter.com/en/FAQ#10>

Mouser Electronics

Authorized Distributor

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[FMBC-R91F-7512](#) [FMBC-R91G-J312](#) [FMBC-R91C-1612](#) [FMBC-R91V-J812](#) [FMBC-R91U-0712](#) [FMBC-R91S-5512](#)
[FMBC-R91Q-3012](#) [FMBC-R91R-4212](#) [FMBC-R91G-J012](#)