

2-stage filter for 3-phase systems with neutral conductor



## Approvals and Compliances

### Description

- Terminals for three phases, neutral conductor and ground

### Applications

- Voltage rating 520 VAC for world wide acceptance
- 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](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Microsite](#)

### Technical Data

Rated Current	8 - 200 A
Rated voltage	300/520 VAC, 50/60 Hz
Approval for	8 - 200 A @ 50 (75) °C / 300/520 VAC; 50/60 Hz
Overload Current	1.5 x I <sub>r</sub>
Dielectric Strength	300/520 VAC: 2.25 kVDC between L-L 1.7 kVDC between L-N 2.75 kVDC between L-PE 2.75 kVDC between N-PE Test voltage 2 sec
Number of Filter Stages	2-stage
Weight	1.1 - 8.6 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	IP 20 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](#)

### Approvals



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

Approval Reference Type: FMBD NEO

Approval Logo	Certificates	Certification Body	Description
	<a href="#">VDE Approvals</a>	VDE	Certificate Number: 40031052
	<a href="#">UL Approvals</a>	UL	UL 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	Electromagnetic interference filters





Application standards

Application standards where the product can be used

Organization	Design	Standard	Description
	Designed for applications acc.	IEC/UL 60950	IEC 60950-1 includes the basic requirements for the safety of information technology equipment.

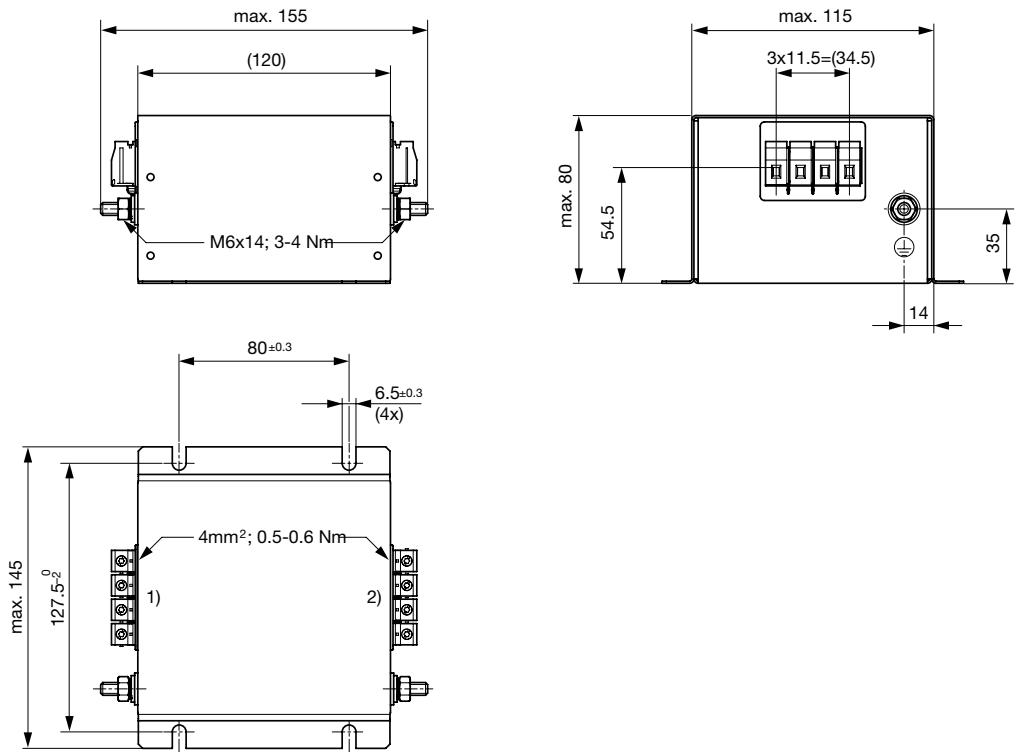
Compliances

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.
	RoHS	SCHURTER AG	EU Directive RoHS 2011/65/EU
	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.

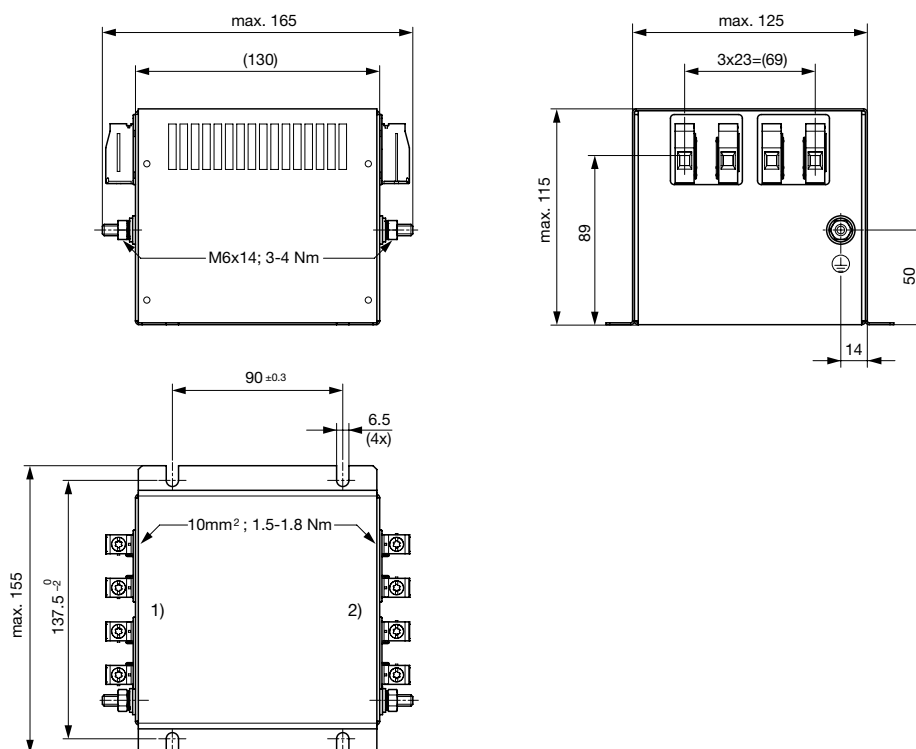
Dimension [mm]

Case 2A



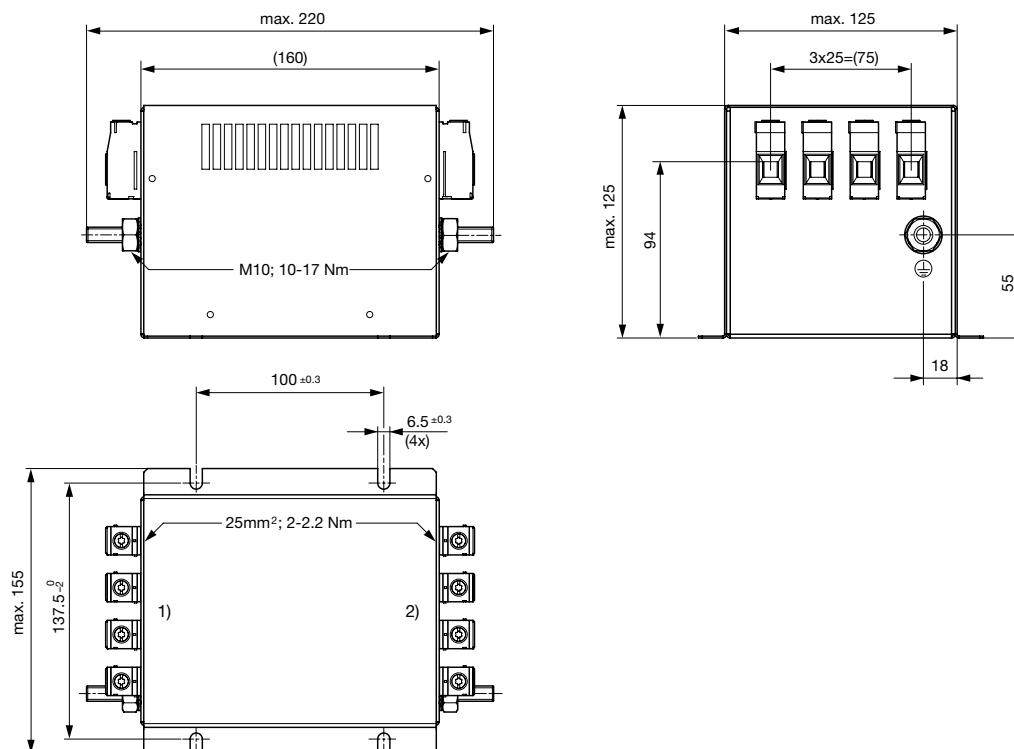
- 1) Line
- 2) Load

Case 2B



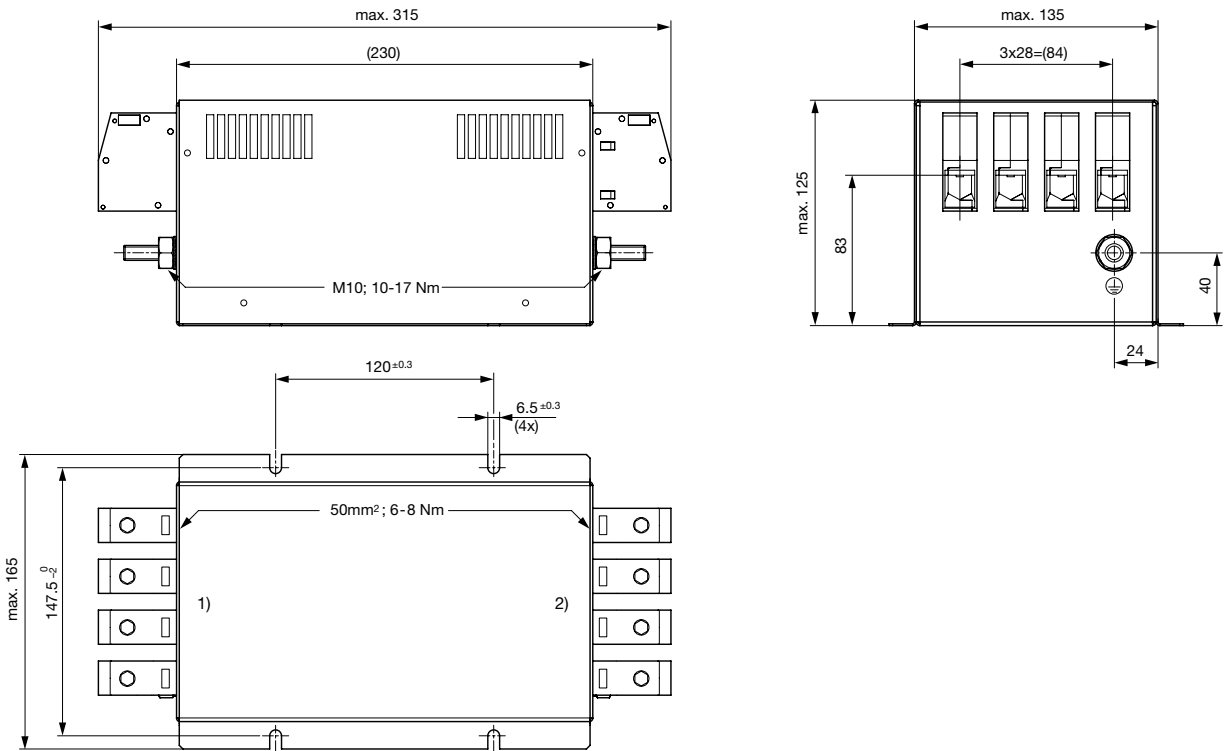
1) Line  
 2) Load

Case 2C



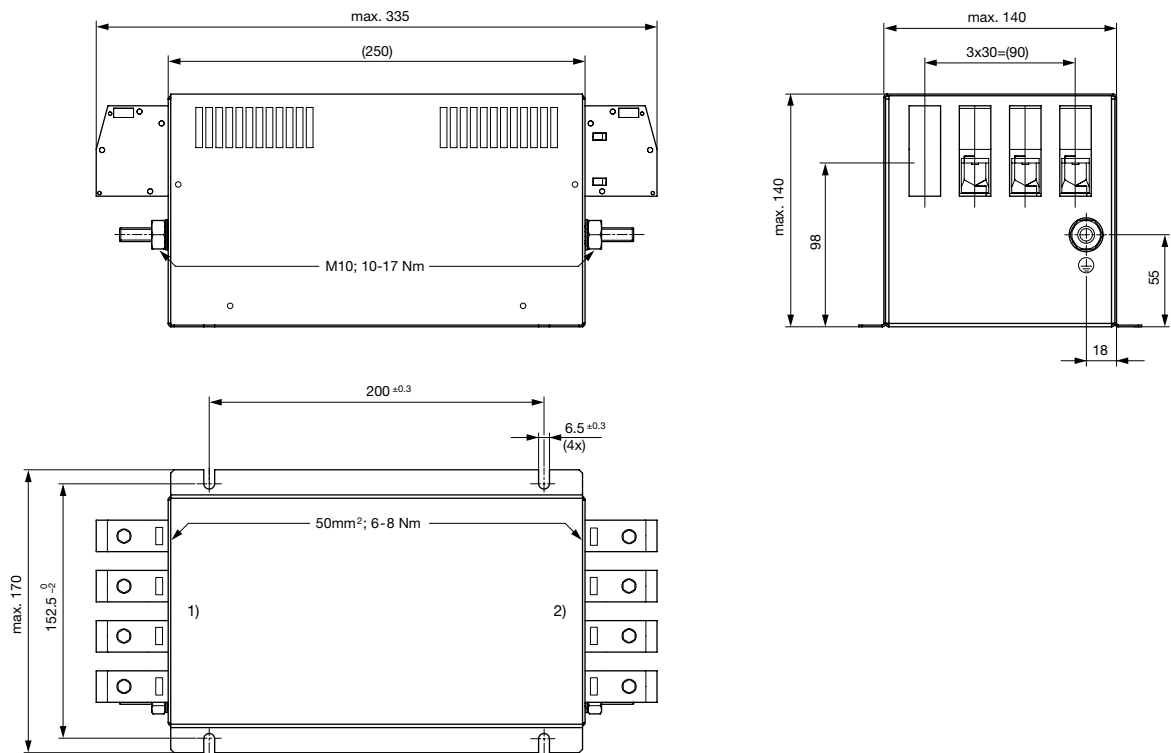
1) Line  
 2) Load

Case 2D



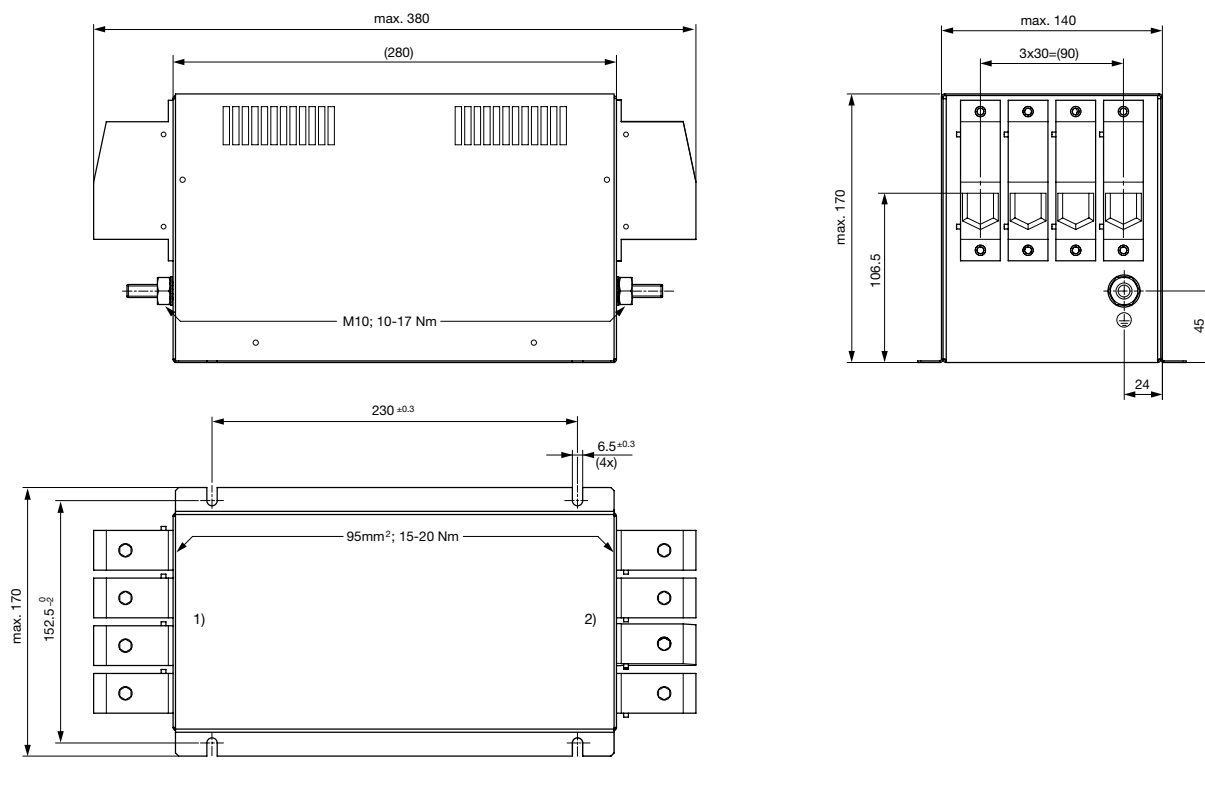
- 1) Line
- 2) Load

Case 2E



- 1) Line
- 2) Load

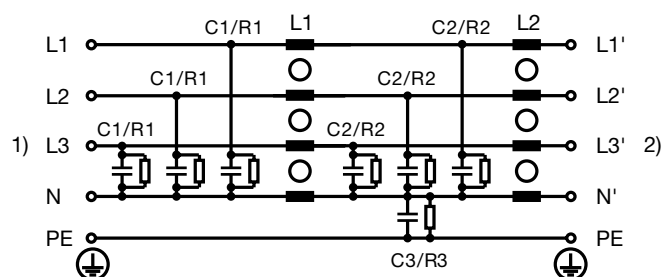
Case 2F



Technical data to the filter components

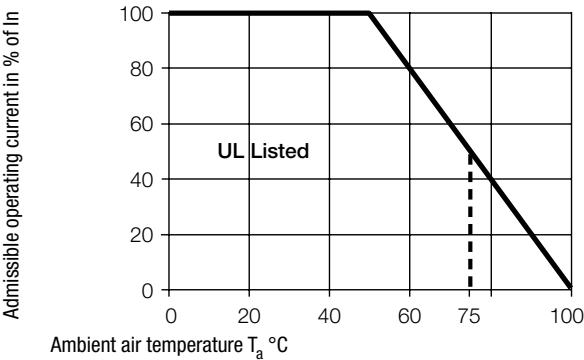
Rated Current @ Ta 50°C (75°C) [A]	L1 [mH]	L2 [μH]	C1 [μF]	C2 [μF]	C3 [μF]	R1 [MΩ]	R2 [MΩ]	R3 [MΩ]
8 (5)	2	4	2.2	2.2	3.4	-	1	2
16 (11)	1.3	12	2.2	2.2	3.4	-	1	2
25 (16)	1.6	12	4.7	4.7	3.4	1	1	2
36 (21)	1	12	4.7	4.7	3.4	1	1	2
64 (40)	0.7	7.5	4.7	4.7	3.4	1	1	2
80 (50)	0.6	9	8.2	8.2	3.4	1	1	2
120 (96)	0.6	9	13.6	13.6	3.4	0.5	0.5	2
160 (100)	0.4	9	13.6	13.6	3.4	0.5	0.5	2
200 (140)	0.3	9	13.6	13.6	3.4	0.5	0.5	2

Diagrams

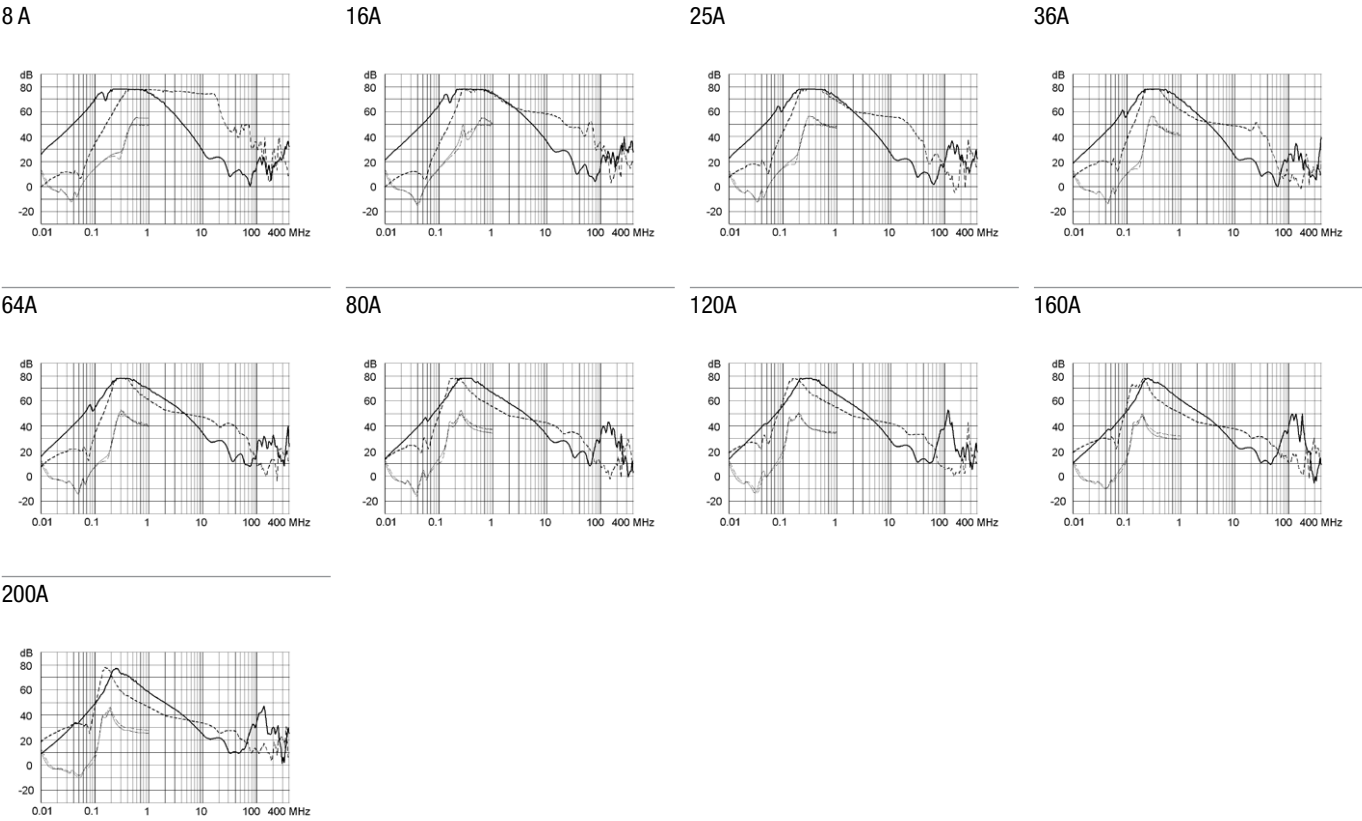


Derating Curves

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



All Variants

Rated Current @ $T_a$ 50°C (75°C) [A]	Tripped Power Dissipation [W]	Contact Resistance [mΩ]	Leakage Current [mA] @ 440V, 60Hz <sup>1)</sup>	Weight [kg]	Screw clamps [mm <sup>2</sup> ] <sup>2)</sup>	Housings	Packaging unit [PCS]	Order Number
8 (5)	3.2	12.5	11.1	1.1 kg	4	2A	2	<a href="#">FMBD-B92A-0812</a>
16 (11)	7	6.8	11.1	1.2 kg	4	2A	2	<a href="#">FMBD-B92A-1612</a>
25 (16)	9.5	3.8	12.7	1.8 kg	10	2B	2	<a href="#">FMBD-B92B-2512</a>
36 (21)	12.5	2.4	12.7	2 kg	10	2B	2	<a href="#">FMBD-B92B-3612</a>
64 (40)	21.3	1.3	12.7	2.8 kg	25	2C	1	<a href="#">FMBD-B92C-6412</a>
80 (50)	22.6	0.88	13.2	5.7 kg	50	2D	1	<a href="#">FMBD-B92D-8012</a>
120 (96)	43.2	0.75	13.6	6.3 kg	50	2E	1	<a href="#">FMBD-B92E-J212</a>
160 (100)	37.9	0.37	13.6	8 kg	95	2F	1	<a href="#">FMBD-B92F-J612</a>
200 (140)	41.6	0.26	13.6	8.6 kg	95	2F	1	<a href="#">FMBD-B92F-K012</a>

Most Popular.

Rated Current @ Ta 50°C (75°C) [A]	Tripped Power Dissipation [W]	Contact Resistance [mΩ]	Leakage Current [mA] @ 440V, 60Hz <sup>1)</sup>	Weight [kg]	Screw clamps [mm <sup>2</sup> ] <sup>2)</sup>	Housings	Packaging unit [PCS]	Order Number
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Availability for all products can be searched real-time: <https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

1) Maximum leakage current under normal operating conditions, assuming that all three phases and the neutral conductor are connected to the supply and the consumer.

Under this condition, the current will mainly return through the neutral line, not as earth leakage.

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)