

2-stage filter for 3-phase systems



### Approvals and Compliances

#### Description

- Terminals for three phases and ground

#### Applications

- Voltage rating 480 and 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
- Suitable for use in equipment according to IEC/UL 60950

#### Weblinks

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

#### Technical Data

Rated Current	7 - 180 A
Rated voltage	480/520 VAC, 50/60 Hz
Approval for	7 - 180 A @ 50 (75) °C / 480/520 VAC; 50/60 Hz
Overload Current	1.5 x I <sub>r</sub> for 1 minute, per hour
Dielectric Strength	480/520 VAC: > 2.25 kVDC between L-L > 2.75 kVDC between L-PE Test voltage 2 sec
Number of Filter Stages	2-stage
Weight	0.8 - 8 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	> 200'000h 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](#)

#### 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 NEO

Approval Logo	Certificates	Certification Body	Description
	<a href="#">VDE Approvals</a>	VDE	Certificate Number: 40029853
	<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.

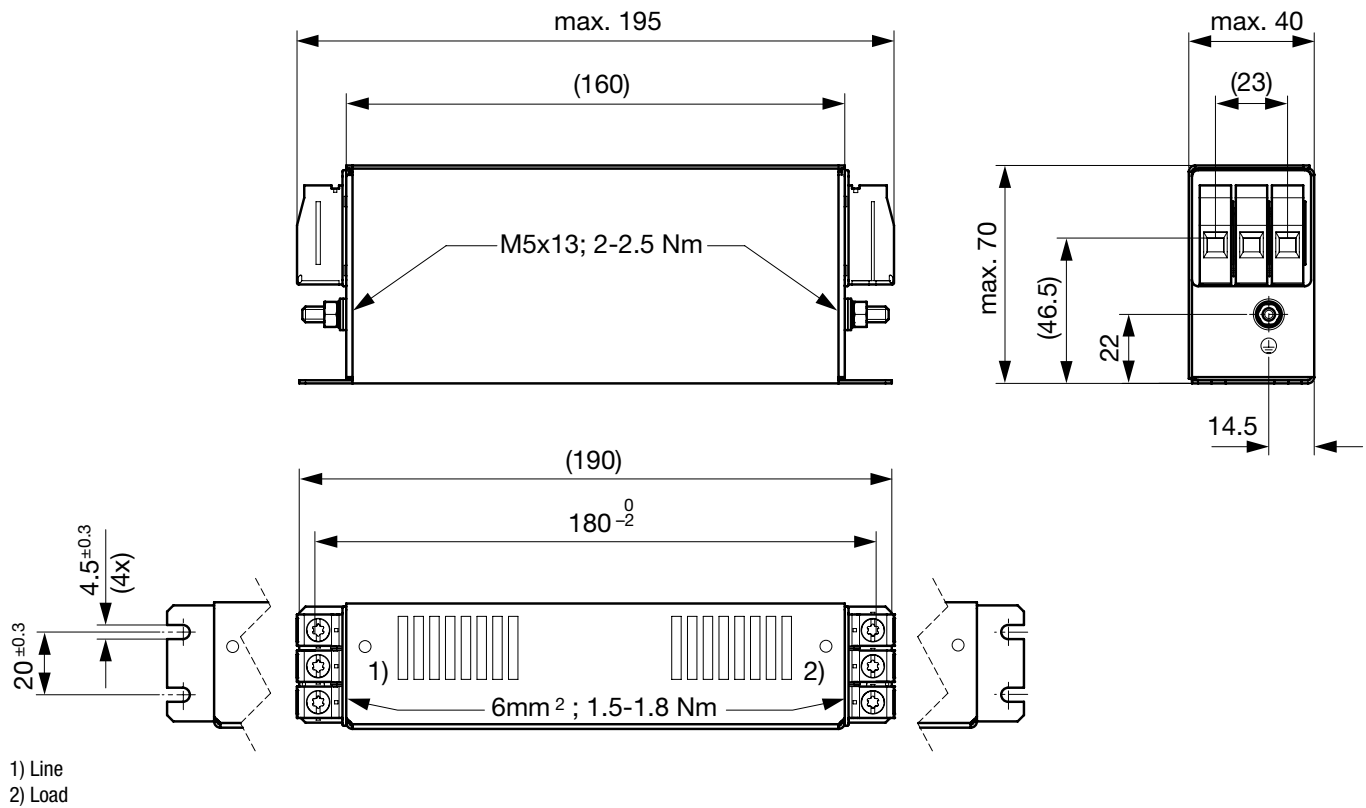
**Compliances**

The product complies with following Guide Lines

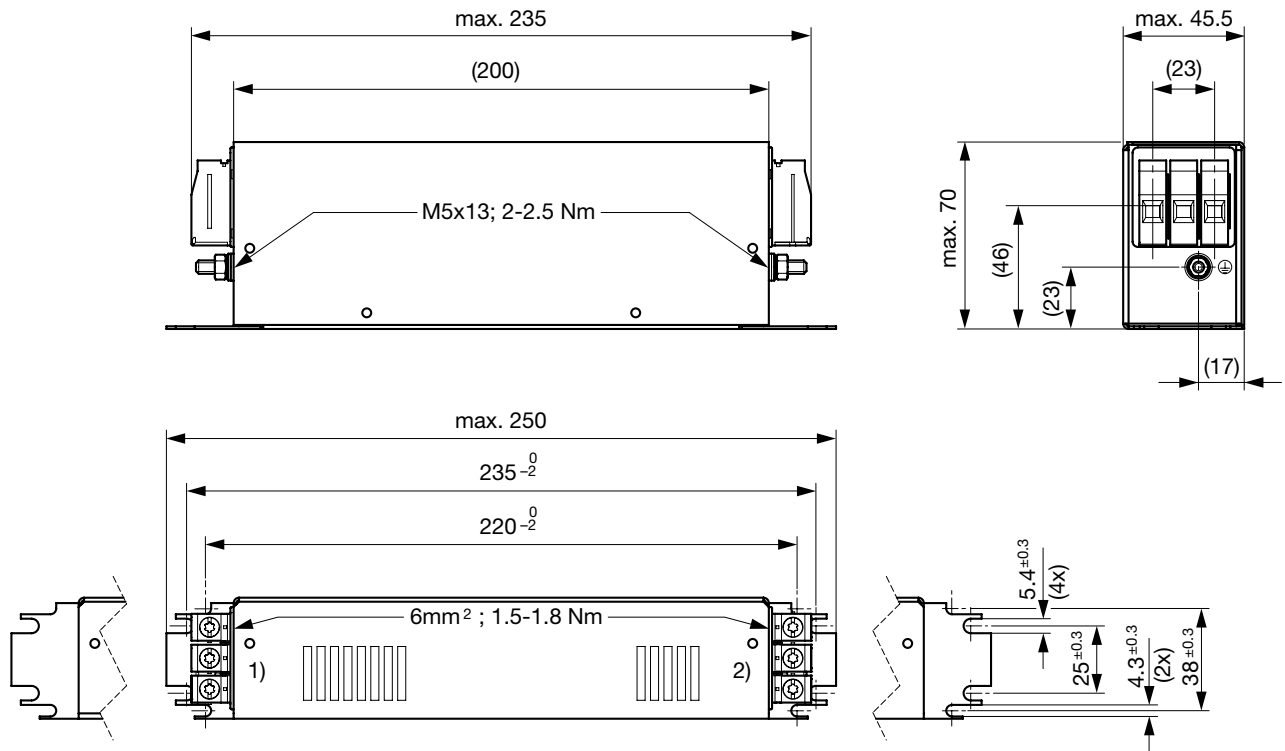
Identification	Details	Initiator	Description
	<a href="#">CE declaration of conformity</a>	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
	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]**

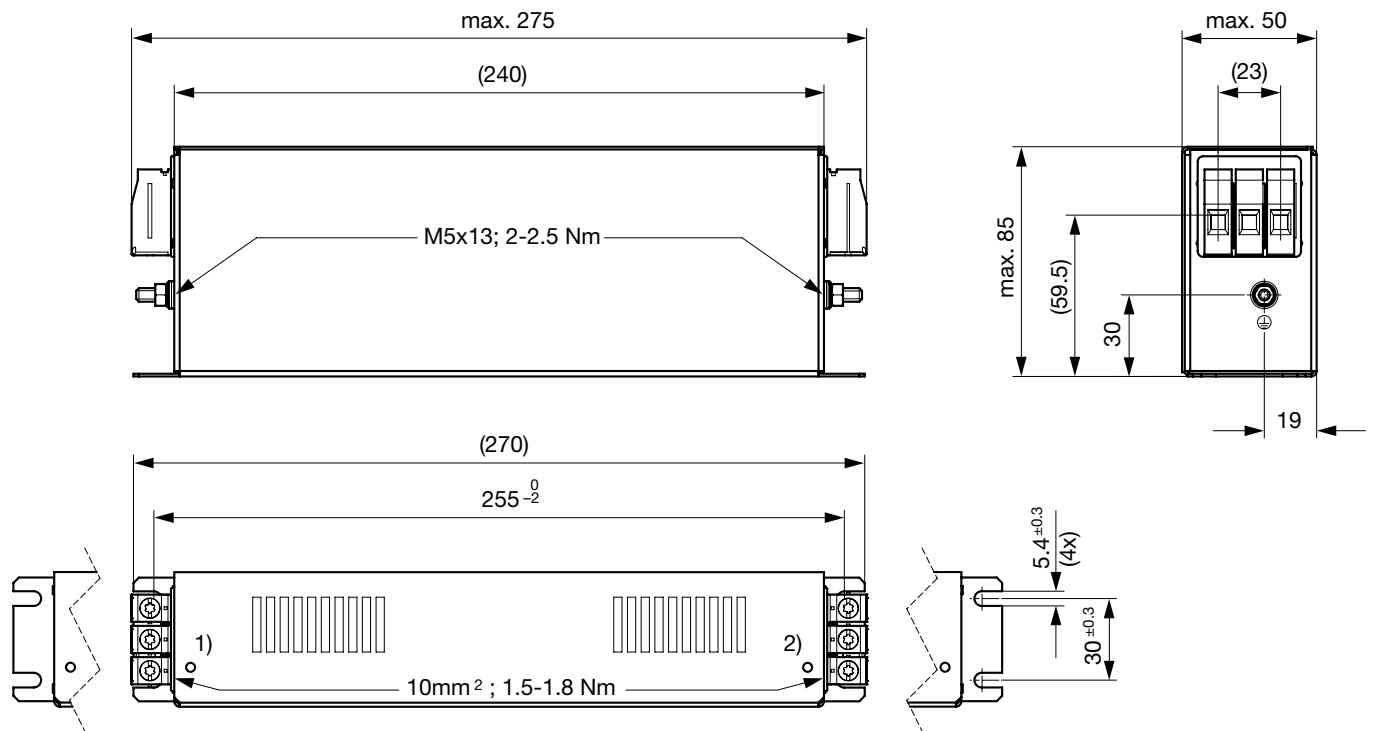
Case 1U



Case 1C



1) Line  
 2) Load  
 Case 1Q

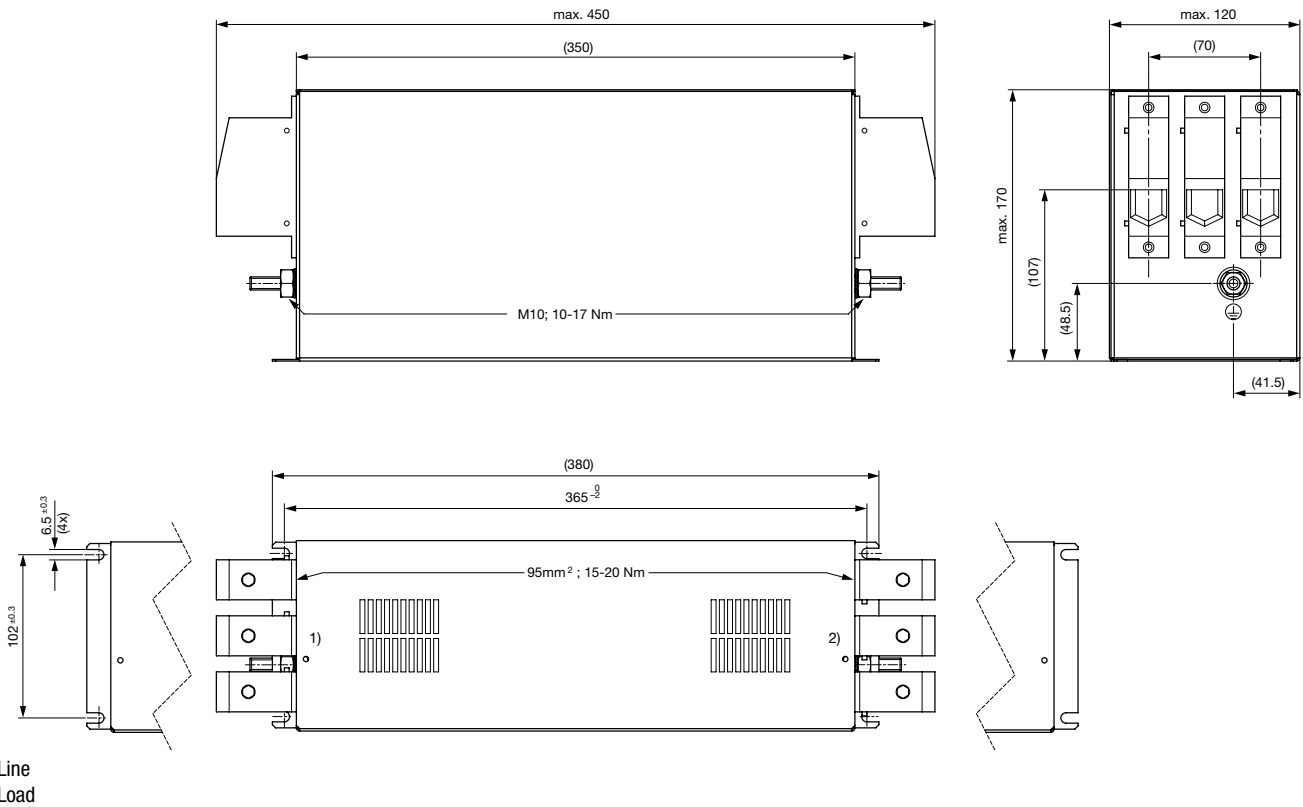


1) Line  
 2) Load





Case 1V

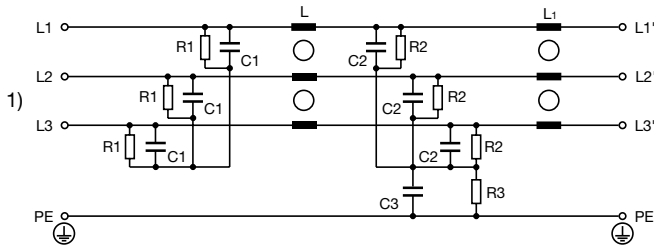


- 1) Line
- 2) Load

Technical data to the filter components

Rated Current @ Ta 50°C (75°C) [A]	L [mH]	L2 [µH]	C1 [µF]	C2 [µF]	C3 [µF]	R1 [MΩ]	R2 [MΩ]	R3 [MΩ]
7 (4.7)	2.7	5	3.3	3.3	3.3	-	1	1
16 (12)	1.9	10	6.6	3.3	3.3	1	1	1
30 (21)	1.9	10	6.8	3.3	3.3	1	1	1
42 (31)	1.3	10	9.9	3.3	3.3	1	1	1
55 (49)	1.8	13	10	3.3	3.3	1	1	1
75 (47)	1.2	13	9.9	3.3	3.3	1	1	1
100 (64)	1.2	13	9.9	3.3	3.3	1	1	1
130 (92)	0.7	26	9.9	3.3	3.3	1	1	1
180 (135)	0.4	31	10	3.3	3.3	1	1	1
7 (4.7)	2.7	5	3.3	3.3	3.3	-	1	1
16 (12)	1.9	10	6.6	3.3	3.3	1	1	1
30 (21)	1.9	10	6.8	3.3	3.3	1	1	1
42 (31)	1.3	10	9.9	3.3	3.3	1	1	1
55 (49)	1.8	13	10	3.3	3.3	1	1	1
75 (47)	1.2	13	9.9	3.3	3.3	1	1	1
100 (64)	1.2	13	9.9	3.3	3.3	1	1	1
130 (92)	0.7	26	9.9	3.3	3.3	1	1	1
180 (135)	0.4	31	10	3.3	3.3	1	1	1

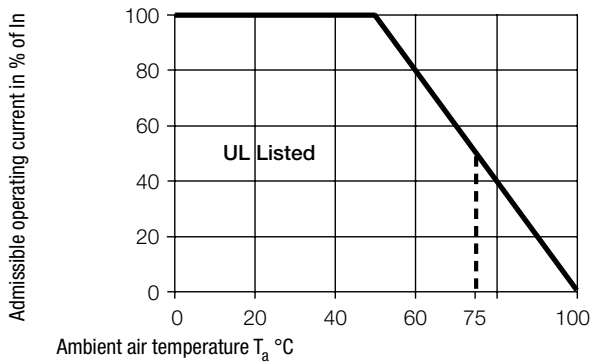
Diagrams



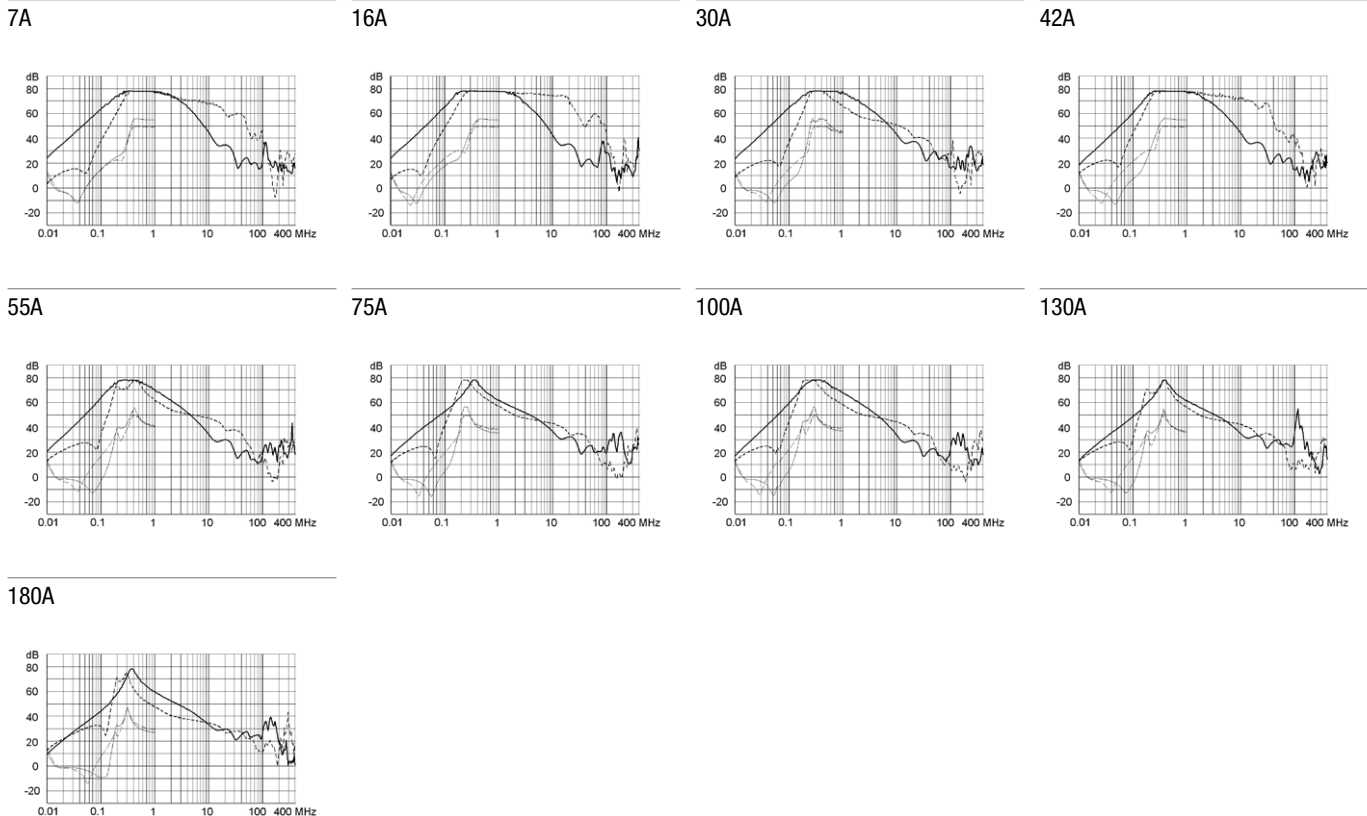
1) Line

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 (75°C) [A]	Rated Voltage [VAC]	Tripped Power Dissipation [W]	Leakage Current [mA] @ 440V, 60Hz <sup>1)</sup>	Contact Resistance [mΩ]	Weight [kg]	Screw clamps [mm <sup>2</sup> ] <sup>2)</sup>	Housings	Packaging unit	Order Number
7 (4.7)	480	1.4	10.2	9.2	0.8kg	6	1U	3	FMBC-A91U-0710
16 (12)	480	4.9	10.2	6.3	1.1 kg	6	1C	3	FMBC-A91C-1610
30 (21)	480	6.8	10.2	2.5	1.5kg	10	1Q	4	FMBC-A91Q-3010
42 (31)	480	13.8	10.2	2.6	1.9kg	10	1R	3	FMBC-A91R-4210
55 (49)	480	12.7	10.2	1.4	2.5kg	25	1S	2	FMBC-A91S-5510
75 (47)	480	16.9	10.2	1	3.8kg	25	1F	1	FMBC-A91F-7510
100 (64)	480	24	10.2	0.8	5 kg	50	1G	1	FMBC-A91G-J010
130 (92)	480	30.5	10.2	0.6	4.8kg	50	1G	1	FMBC-A91G-J310
180 (135)	480	19.5	10.2	0.2	8 kg	95	1V	1	FMBC-A91V-J810
7 (4.7)	520	1.4	10.2	9.2	0.8kg	6	1U	3	FMBC-A91U-0712
16 (12)	520	4.9	10.2	6.3	1.1 kg	6	1C	3	FMBC-A91C-1612
30 (21)	520	6.8	10.2	2.5	1.5kg	10	1Q	4	FMBC-A91Q-3012
42 (31)	520	13.8	10.2	2.6	1.9kg	10	1R	3	FMBC-A91R-4212
55 (49)	520	12.7	10.2	1.4	2.5kg	25	1S	2	FMBC-A91S-5512
75 (47)	520	16.9	10.2	1	3.8kg	25	1F	1	FMBC-A91F-7512
100 (64)	520	24	10.2	0.8	5 kg	50	1G	1	FMBC-A91G-J012
130 (92)	520	30.5	10.2	0.6	4.8kg	50	1G	1	FMBC-A91G-J312
180 (135)	520	19.5	10.2	0.2	8 kg	95	1V	1	FMBC-A91V-J812

Most Popular.

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

1) Nominal leakage current acc. to IEC60950 - 5.2.5. under normal operating conditions. Note: worst case leakage current acc. to IEC60950 - Annex G4 (situation with two interrupted lines) can be much higher.

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)