

Ultra compact and efficient 1-stage filter in ECO design for 3-phase systems



### Approvals and Compliances

#### Description

- High attenuation value

#### 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 60950

#### Weblinks

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

#### Technical Data

Rated Current	16 - 150 A @ Ta 40 °C
Rated voltage	480VAC, 50/60 Hz
Approval for	16 - 150A @ Ta 40 °C / 480VAC; 50/60Hz
Overload Current	1.5 x Ir
Leakage Current	< 15 mA (440V / 50Hz)
Dielectric Strength	480 VAC: > 2.25 kVDC between L-L > 3 kVDC between L-PE Test voltage 2 sec
Number of Filter Stages	1-stage
Weight	1 - 7 kg
Material: Housing	Aluminum
Sealing Compound	UL 94V-0

Mounting	Screw-on mounting on chassis, upright or lengthwise
Terminal	Bolts and nuts
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: FMAC ECO

Approval Logo	Certificates	Certification Body	Description
	<a href="#">VDE Approvals</a>	VDE	Certificate Number: 40028851
	<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.

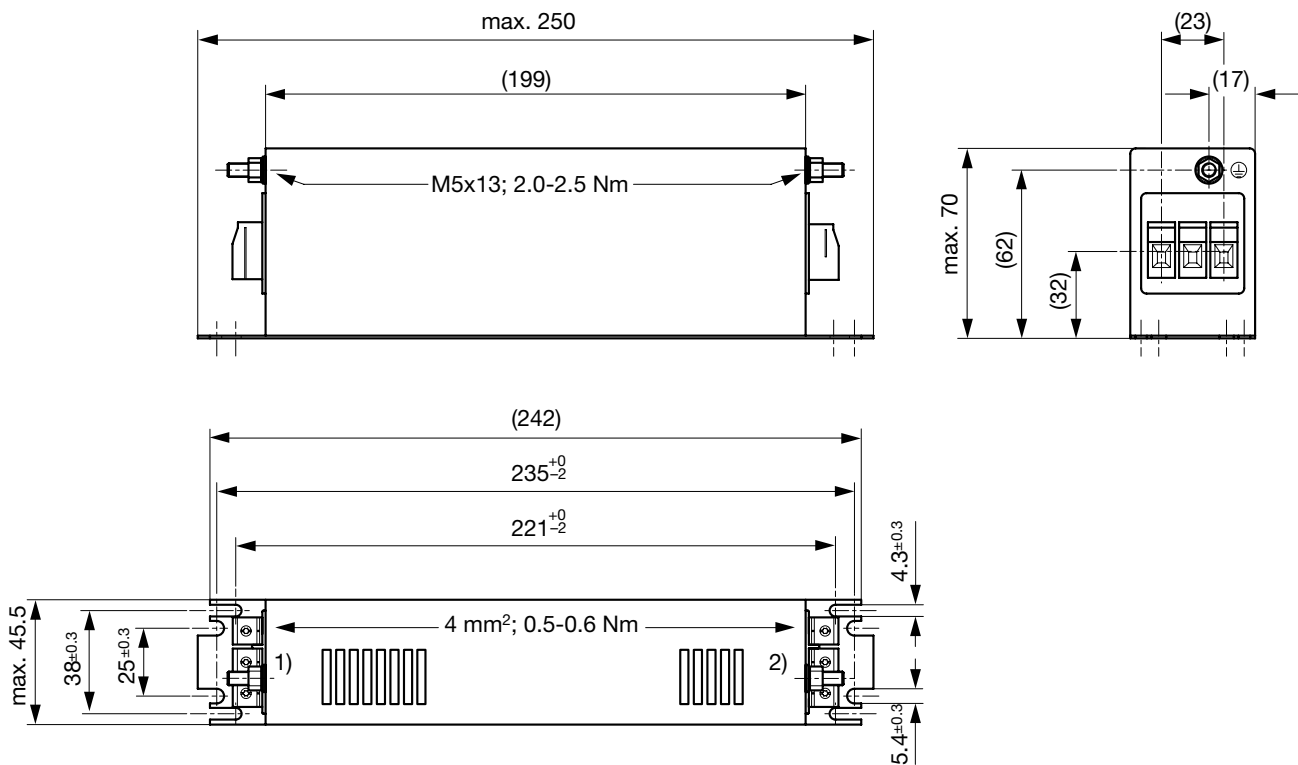
## Compliances

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.

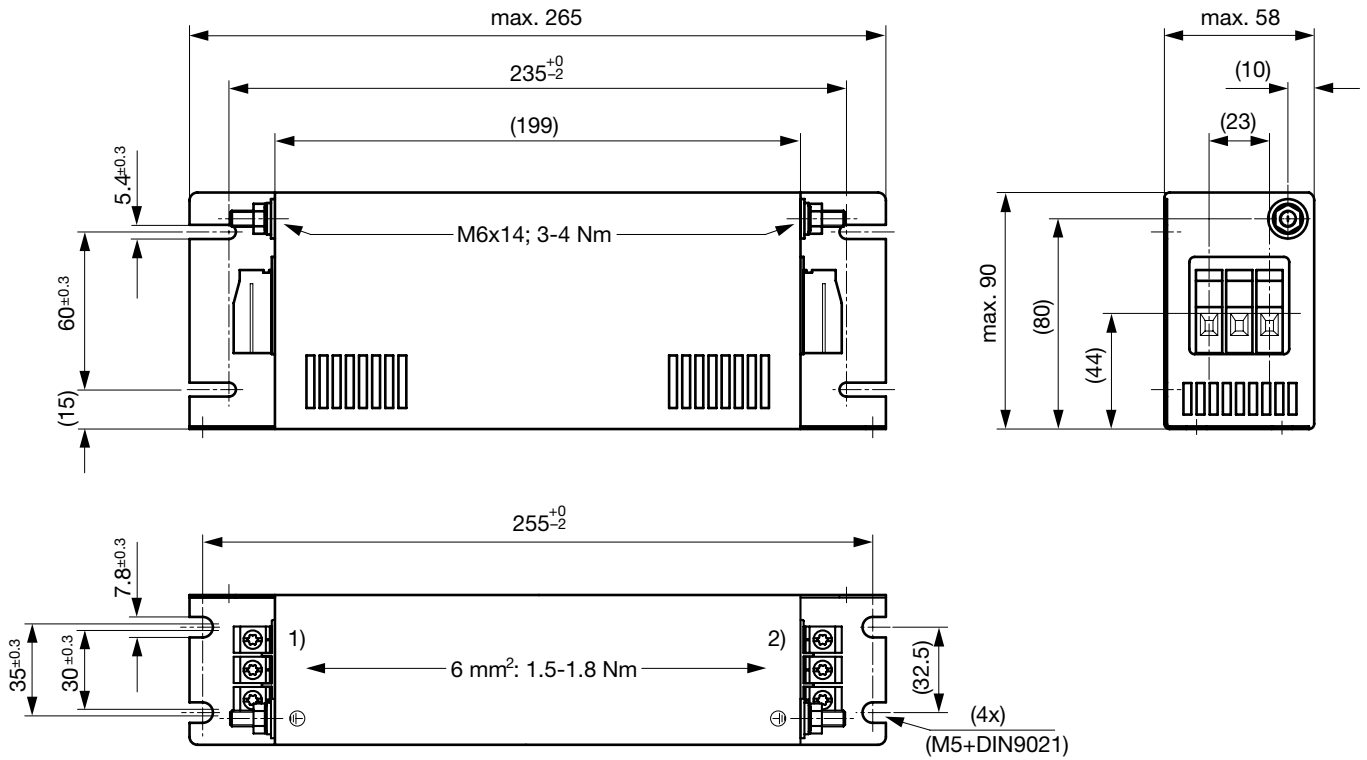
## Dimension [mm]

Case 1C

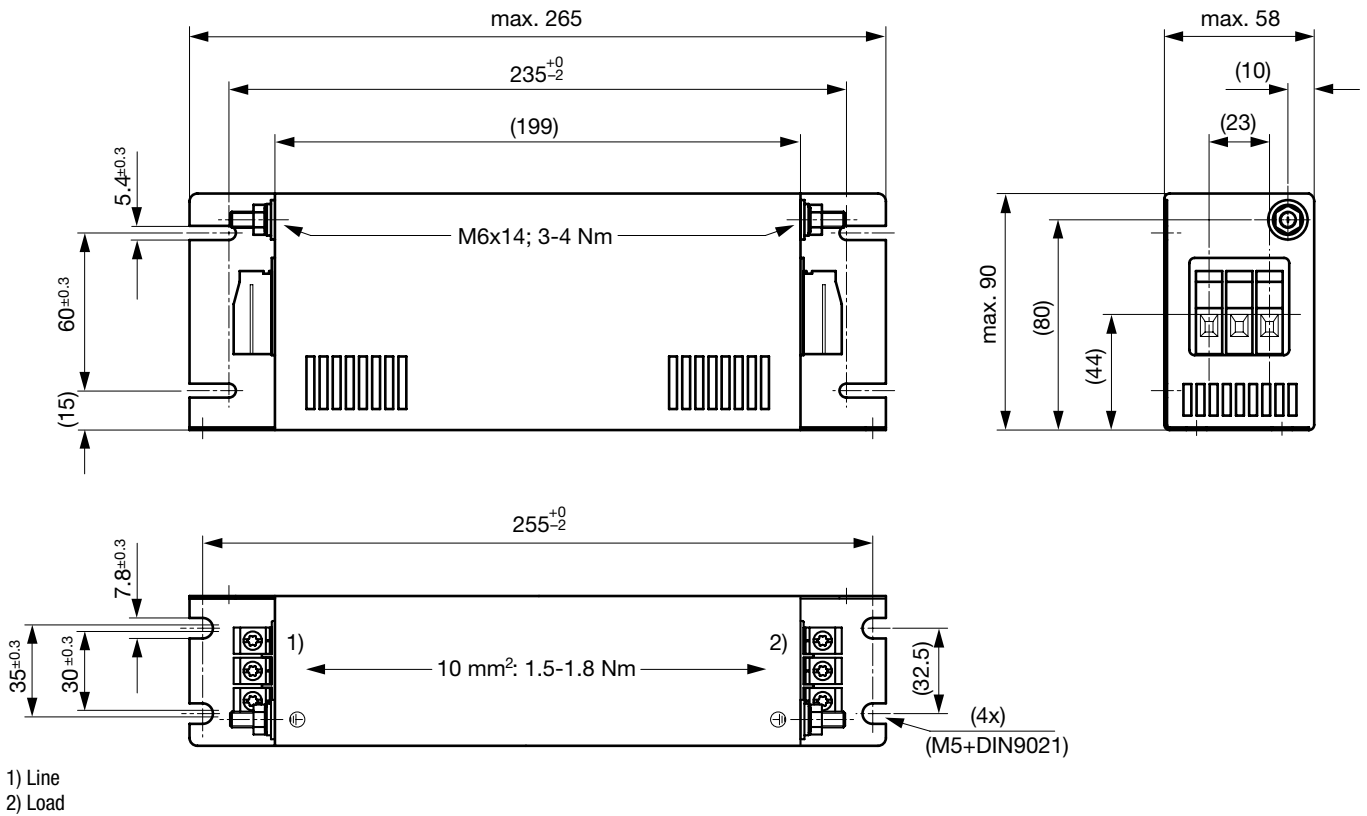


- 1) Line
- 2) Load

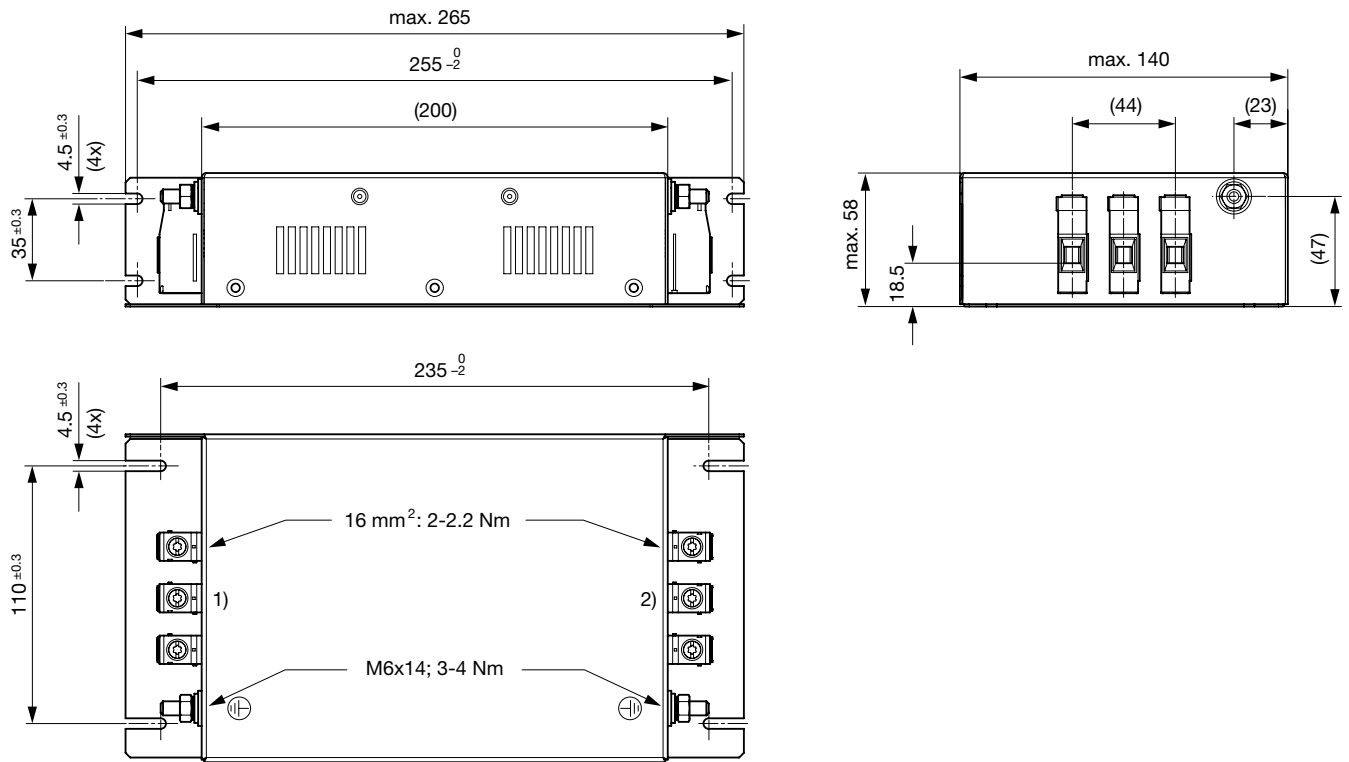
Case 1D-6



Case 1D-10

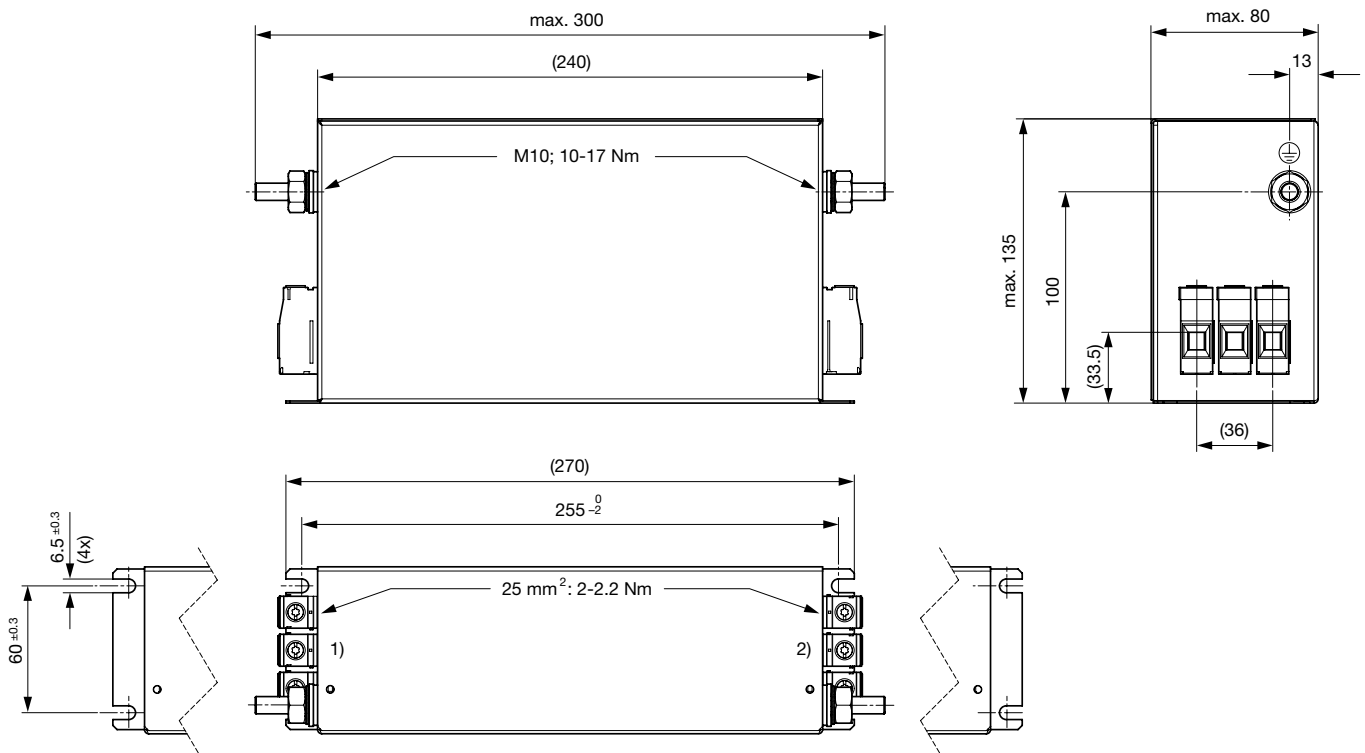


Case 1E



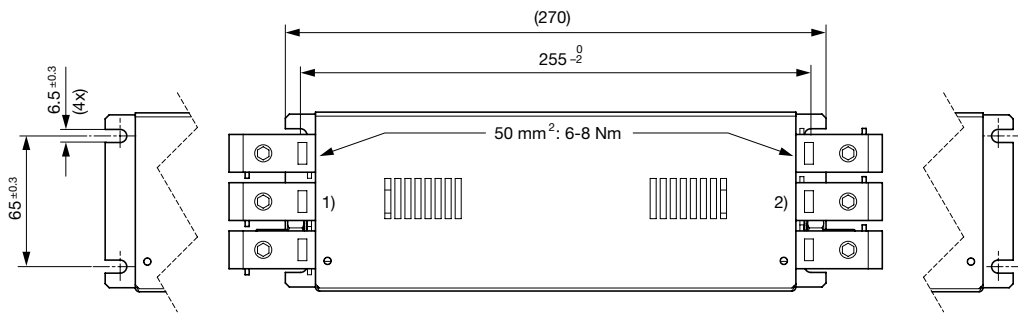
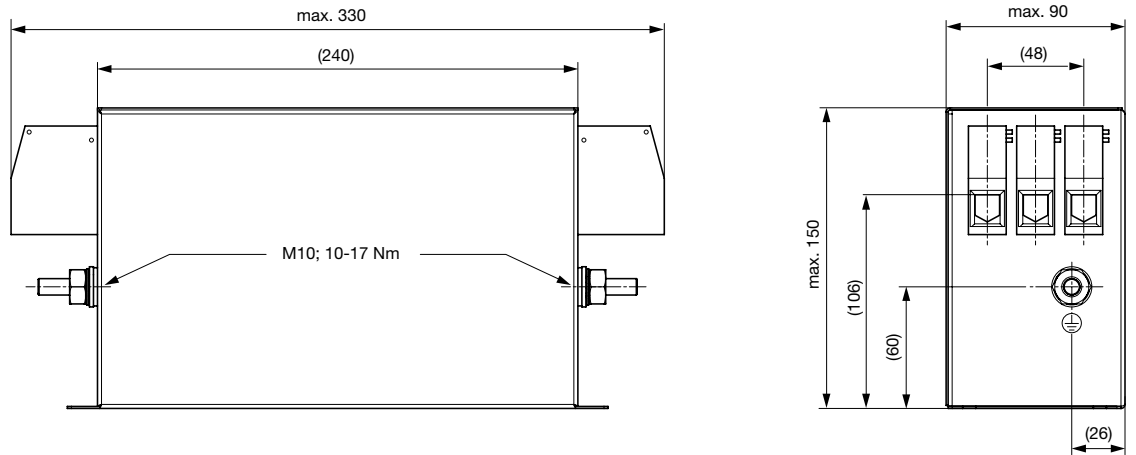
- 1) Line
- 2) Load

Case 1T

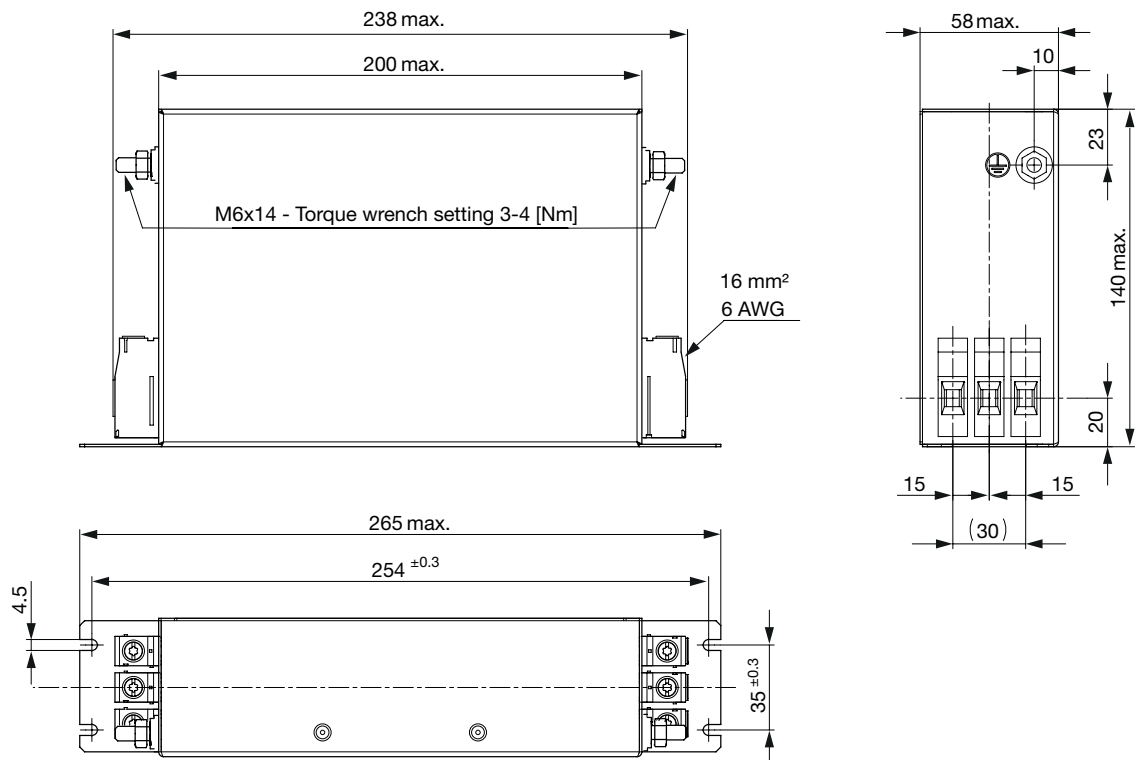


- 1) Line
- 2) Load

Case 1G



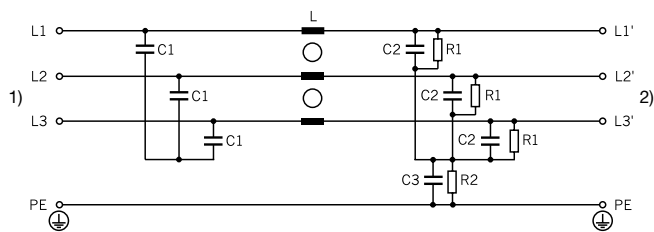
- 1) Line
  - 2) Load
- Case SF



Technical data to the filter components

Rated Current [A]	L [mH]	C1 [μF]	C2 [μF]	C3 [μF]	R1 [MΩ]	R2 [MΩ]	Filter-Type
110	0.55	6.6	6.6	3.3	1	1	Indus-
150	0.48	6.6	6.6	3.3	1	1	Indus-
16	0.55	2.2	2.2	3.3	1	1	Indus-
25	0.45	2.2	2.2	3.3	1	1	Indus-
36	0.57	2.2	2.2	3.3	1	1	Indus-
50	0.65	4.7	3.3	3.3	1	1	Indus-
55	0.75	4.7	3.3	3.3	1	1	Indus-
64	0.55	4.7	3.3	3.3	1	1	Indus-
80	0.55	4.7	4.7	3.3	1	1	Indus-

Diagrams



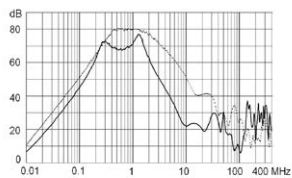
1) Line  
 2) Load

Attenuation Loss

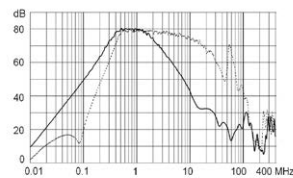
--- 50Ω differential mode \_\_\_\_ 50Ω common mode

Industrial version

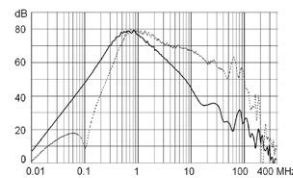
16A (FMAC-091C-1610)



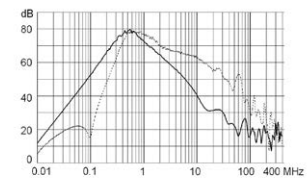
25A (FMAC-091C-2510)



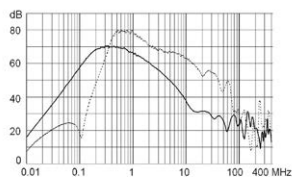
36A (FMAC-091D-3610)



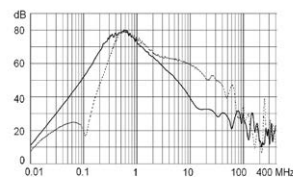
50A (FMAC-091D-5010)



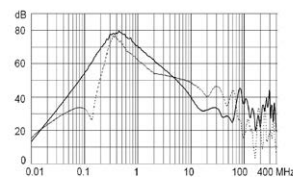
55A (FMAC-091D-5510)



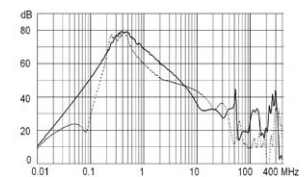
64A (FMAC-091E-6410)



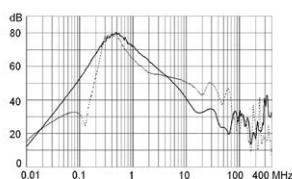
80A (FMAC-091T-8010)



110A (FMAC-091G-H110)



150A (FMAC-091G-H210)



All Variants

Rated Current @ Ta 40°C (75°C) [A]	Characteristic	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	Order Number
16	High attenuation	480	6	8.9	7.6	1 kg	4	1C	<a href="#">FMAC-091C-1610</a>
25	High attenuation	480	8	8.9	4.1	1 kg	4	1C	<a href="#">FMAC-091C-2510</a>
36	High attenuation	480	10	8.9	2.5	1.3 kg	6	1D-6	<a href="#">FMAC-091D-3610</a>
50	High attenuation	480	13	10.2	1.7	1.7 kg	10	1D-10	<a href="#">FMAC-091D-5010</a>
55	High attenuation	480	14	10.2	1.5	1.7 kg	10	1D-10	<a href="#">FMAC-091D-5510</a>
64	High attenuation	480	17	10.2	1.4	2 kg	16	1E	<a href="#">FMAC-091E-6410</a>
110	High attenuation	480	28	11.8	0.8	5.8 kg	50	1G	<a href="#">FMAC-091G-H110</a>
150	High attenuation	480	40	11.8	0.6	7 kg	50	1G	<a href="#">FMAC-091G-H210</a>
80	High attenuation	480	22	11.1	1.1	5.1 kg	25	1T	<a href="#">FMAC-091T-8010</a>
64	High attenuation	480	17	10.2	1.4	2 kg	16	SF	<a href="#">FMAC-3FSF-6410</a>

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)

**Packaging unit** 1 Pcs