FMBD EP

2-stage filter for 3-phase systems

new





See below:
Approvals and Compliances

Description

- Terminals for three phases, neutral conductor and ground
- 2 stage
- Very high attenuation
- Industrial or low leakage current versions

Unique Selling Proposition

- Compact design with small footprint
- Double-stage filter for high attenuation
- Light weight design
- Wide temperature range

Applications

- Voltage rating 520 or 760 VAC for various applications
- Protection against interference voltage from the mains
- Especially designed for industrial applications such as: Frequency Converters, Stepper Motor Drives, UPS-Systems, Inverters
- Variants Machine Safety suitable for machine applications according to IEC 60204-1
- Suitable for use in equipment according to IEC/UL 62368-1

Weblinks

pdf data sheet, html datasheet, General Product Information, Approvals, Distributor-Stock-Check, Detailed request for product, Microsite

Technical Data

Rated Current	16 - 230 A
Rated voltage	520/760 VAC, 50/60 Hz
Approval for	16 - 230 A @ 40 °C / 520/760 VAC; 50/60 Hz
Overload Current	1.5 x Ir for 1 minute, per hour
Dielectric Strength	> 520V / 2.25 kVDC between L-L > 520V / 2.75 kVDC between L-PE
	> 760V / 3.27 kVDC between L-L > 760V / 3.20 kVDC between L-PE Test voltage 2 sec
Number of Filter Stages	2-stage
Weight	1 - 5.9 kg
Material: Housing	Metal
Sealing Compound	UL 94V-0

Mounting	Screw-on mounting on chassis
Terminal	Screw clamps
Operating Temperature	-40 °C to 100 °C
Climatic Category	40/100/21 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: FMBD

Approval Logo	Certificates	Certification Body	Description
	VDE Approvals	VDE	Certificate Number: 40053230
	UL Approvals	UL	UR File Number: E495089

Product standards

Product standards that are referenced

Organization	Design	Standard	Description
IEC	Designed according to	IEC 60939	Passive filters for suppressing electromagnetic interference
UL	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
IEC	Suitable for applications acc.	IEC/UL 62368-1	Audio/video, information and communication technology equipment - Part 1: Safety requirements

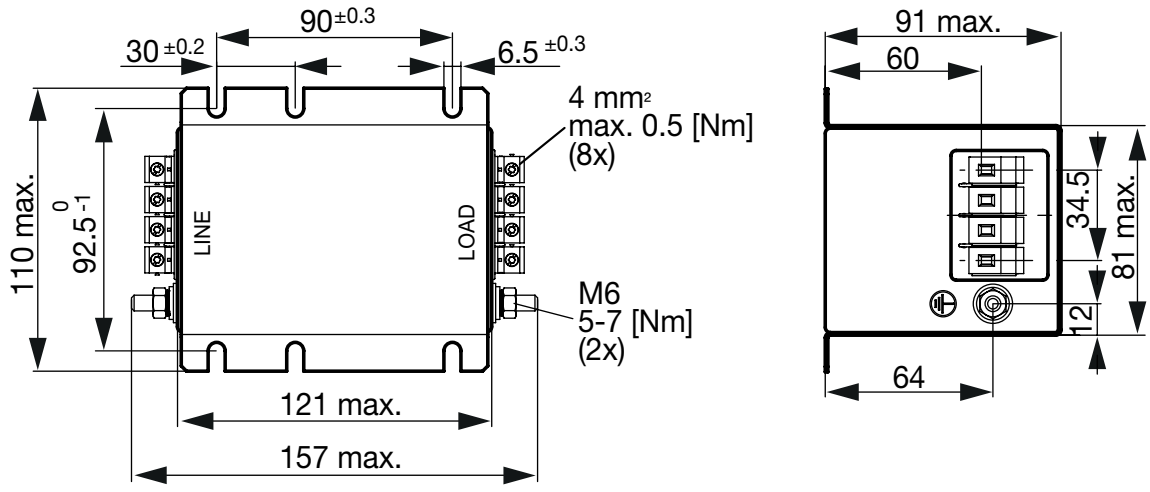
Compliances

The product complies with following Guide Lines

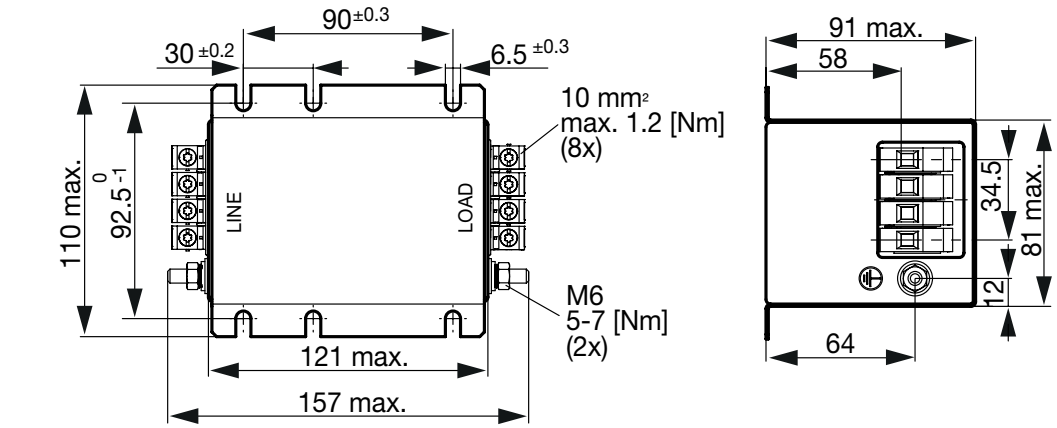
Identification	Details	Initiator	Description
CE	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
UKCA	UKCA declaration of conformity	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	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
China RoHS	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	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]

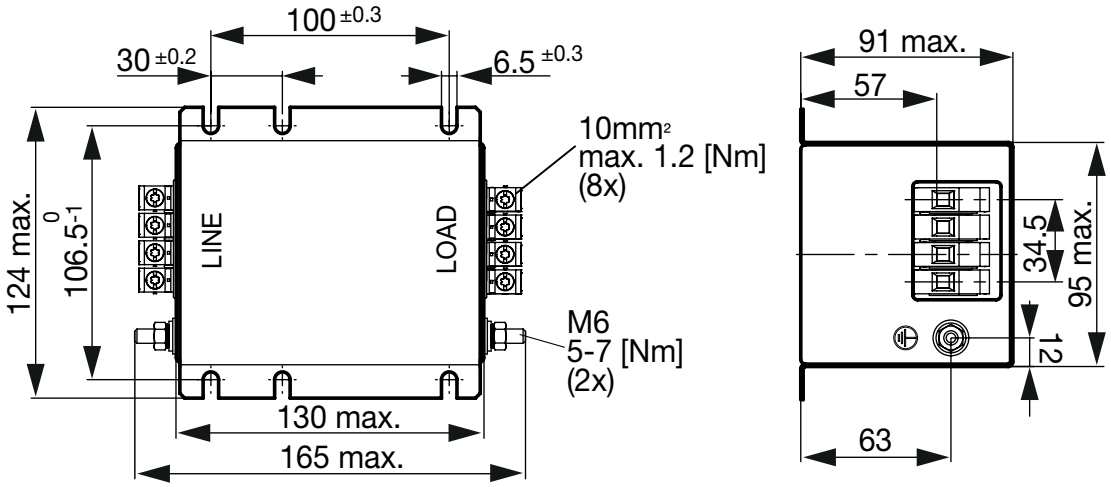
Case 5A-4



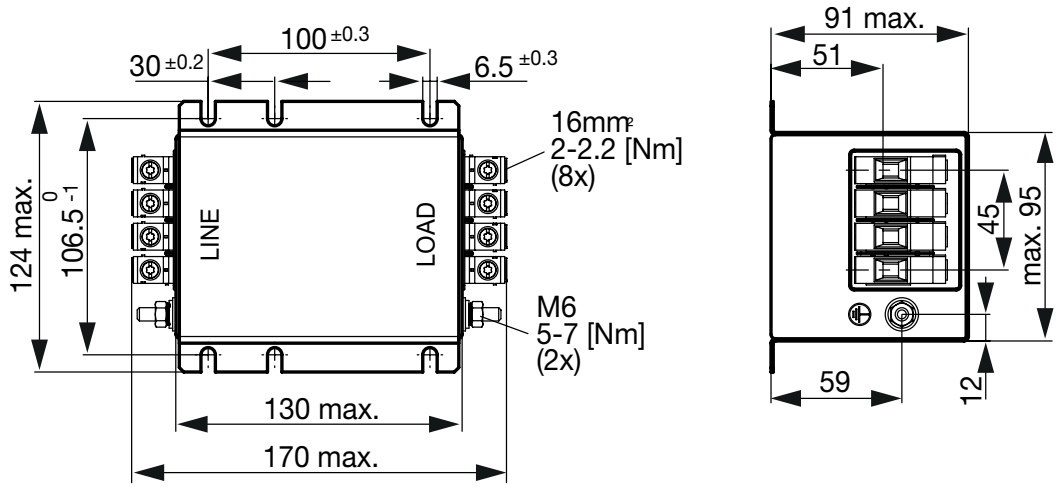
Case 5A-10



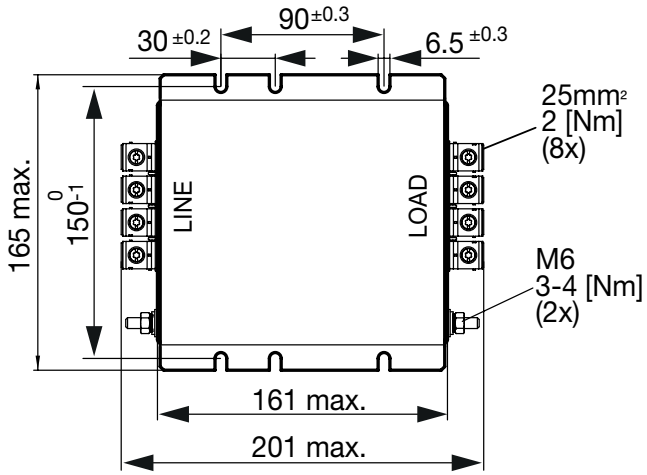
Case 5B-10

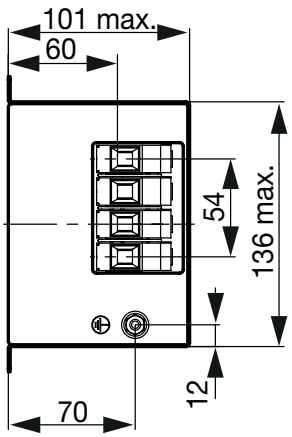


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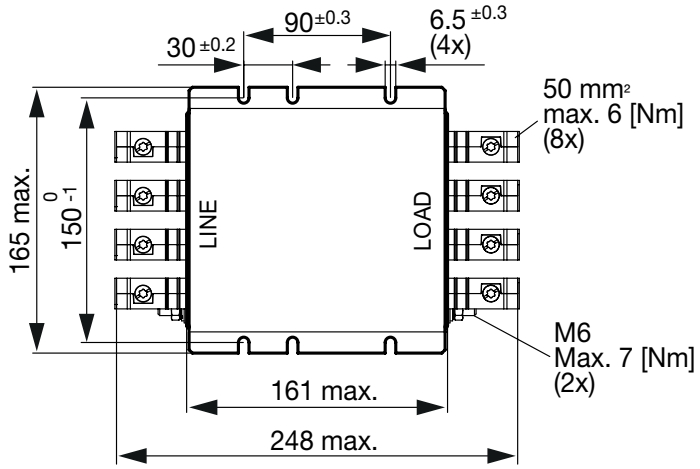


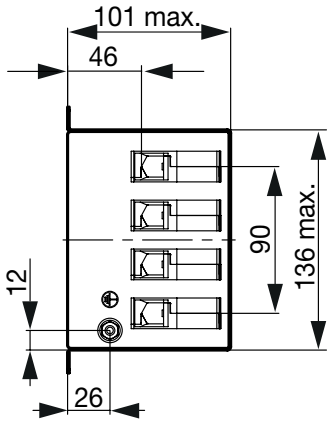
Case 5C-25



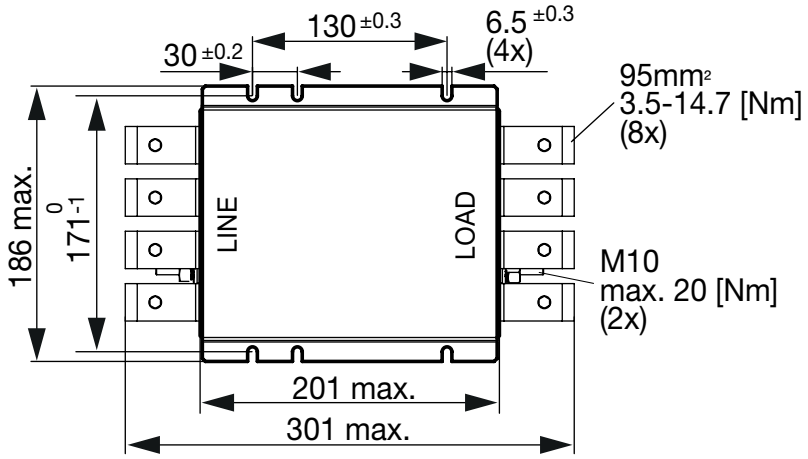


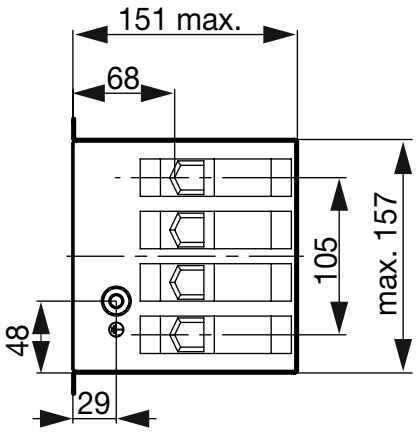
Case 5C-50





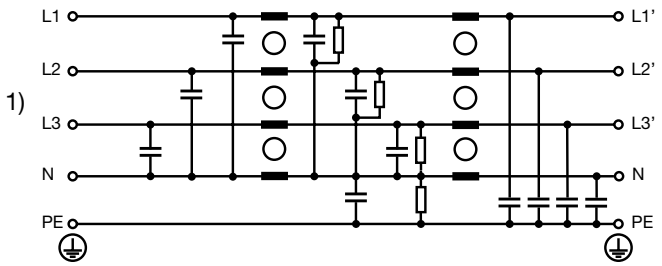
Case 5D-95





Diagrams

Low leakage current version

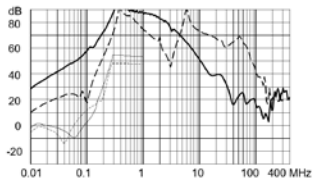


1) Line

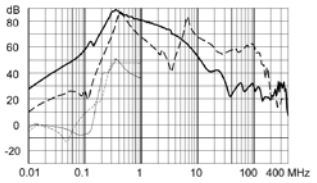
Attenuation Loss . . . . 0.1/100Ω differential mode ..... 100/0.1Ω differential mode - - - - 50Ω differential mode _____ 50Ω common mode

Industrial version

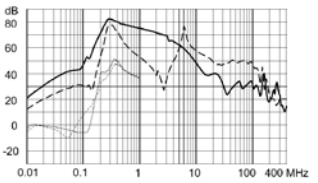
16 A / 520 V



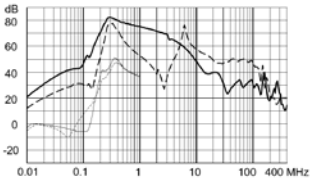
25 A / 520 V



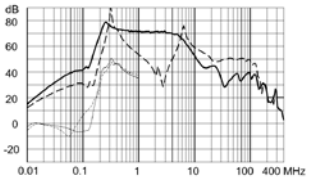
36 A / 520 V



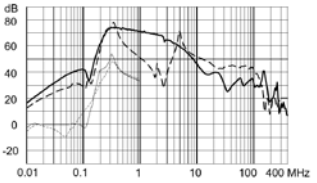
50 A / 520 V



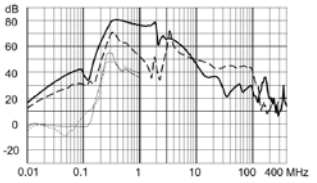
64 A / 520 V



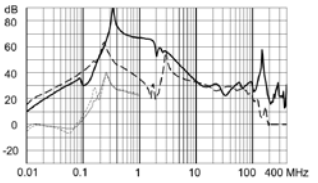
80 A / 520 V



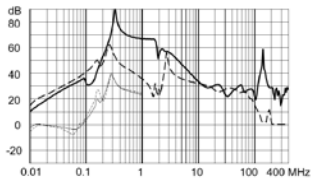
110 A / 520 V



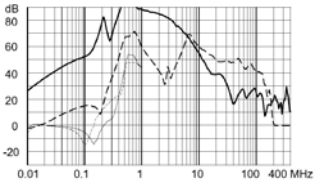
180 A / 520 V



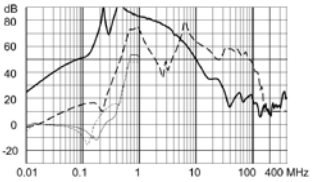
230 A / 520 V



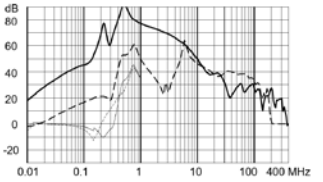
16 A / 760 V



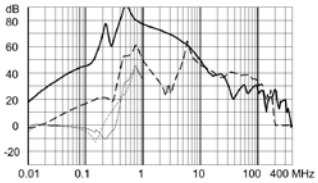
25 A / 760 V



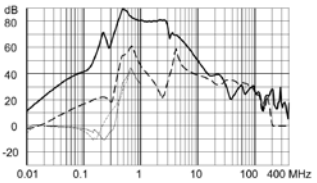
36 A / 760 V



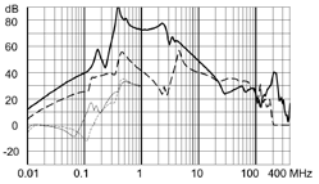
50 A / 760 V



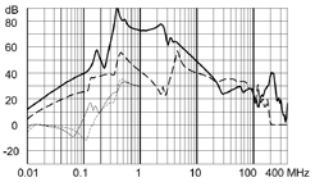
64 A / 760 V



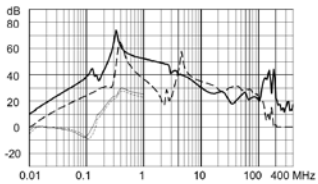
80 A / 760 V



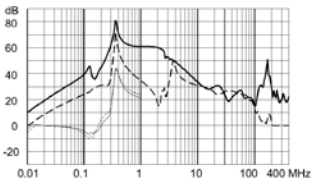
110 A / 760 V



180 A / 760 V

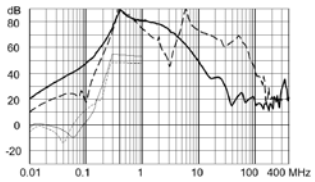


230 A / 760 V

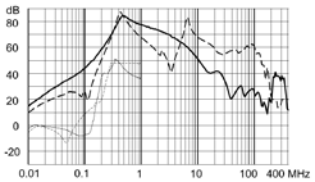


Low leakage current version

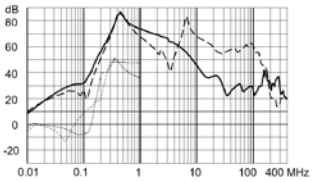
16 A / 520 V



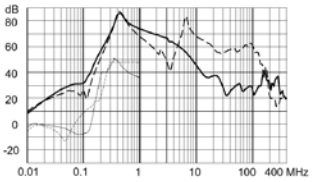
25 A / 520 V



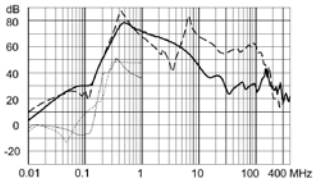
36 A / 520 V



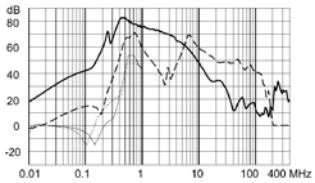
50 A / 520 V



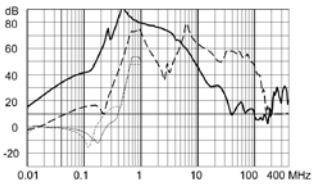
64 A / 520 V



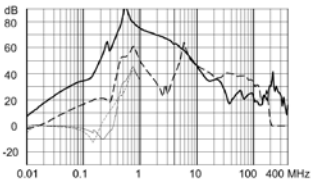
16 A / 760 V



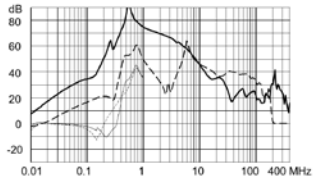
25 A / 760 V



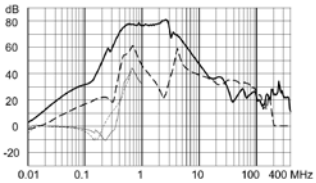
36 A / 760 V



50 A / 760 V



64 A / 760 V



Variants

Rated Current @ Ta 40°C [A]	Rated Voltage [VAC]	Filter Type	Machine Safety	Power Dissipation [W]	Contact Resistance [mΩ]	Leakage Current [mA] @ 440V, 60Hz 1)	Weight [kg]	Screw clamps [mm2] 2)	Housing	Order Number
16	520	Industrial version		1.3	4.9	6.82	1.1 kg	4	5A-4	3-128-371
25	520	Industrial version		1.6	2.5	9.42	1.2 kg	10	5A-10	3-128-412
36	520	Industrial version		2.1	1.6	9.42	1.4 kg	10	5B-10	3-128-413
50	520	Industrial version		4	1.6	9.42	1.4 kg	10	5B-10	3-128-414
64	520	Industrial version		5	1.2	9.42	1.6 kg	16	5B-16	3-128-415
80	520	Industrial version		7.7	1.2	9.42	2.6 kg	25	5C-25	3-128-416
110	520	Industrial version		15.8	1.3	9.42	3.3 kg	50	5C-50	3-128-417
180	520	Industrial version		13	0.4	8.97	6.1 kg	95	5D	3-128-418
230	520	Industrial version		10.6	0.2	8.97	6.1 kg	95	5D	3-128-419
16	520	Low leakage current version		1.3	4.9	2.55	1.1 kg	4	5A-4	3-128-420
25	520	Low leakage current version		1.6	2.5	2.55	1.2 kg	10	5A-10	3-128-421
36	520	Low leakage current version		2.1	1.6	2.56	1.4 kg	10	5B-10	3-128-422
50	520	Low leakage current version		4	1.6	2.56	1.4 kg	10	5B-10	3-128-423
64	520	Low leakage current version		5	1.2	2.56	1.6 kg	16	5B-16	3-128-424
16	760	Industrial version		1.3	4.9	6.37	1 kg	4	5A-4	3-128-425
25	760	Industrial version		1.6	2.5	6.37	1 kg	10	5A-10	3-128-426
36	760	Industrial version		2.1	1.6	6.37	1.4 kg	10	5B-10	3-128-427
50	760	Industrial version		4	1.6	6.37	1.4 kg	10	5B-10	3-128-428
64	760	Industrial version		5	1.2	6.37	1.6 kg	16	5B-16	3-128-429
80	760	Industrial version		7.7	1.2	8.97	2.6 kg	25	5C-25	3-128-430

Rated Current @ Ta 40°C [A]	Rated Voltage [VAC]	Filter Type	Machine Safety	Power Dissipation [W]	Contact Resistance [mΩ]	Leakage Current [mA] @ 440V, 60Hz 1)	Weight [kg]	Screw clamps [mm2] 2)	Housing	Order Number
110	760	Industrial version		15.8	1.3	8.97	3.2 kg	50	5C-50	3-128-431
180	760	Industrial version		13	0.4	8.97	6 kg	95	5D	3-128-432
230	760	Industrial version		10.6	0.2	8.97	6 kg	95	5D	3-128-433
16	760	Low leakage current version		1.3	4.9	2.11	1 kg	4	5A-4	3-128-434
25	760	Low leakage current version		1.6	2.5	2.11	1 kg	10	5A-10	3-128-435
36	760	Low leakage current version		2.1	1.6	2.11	1.4 kg	10	5B-10	3-128-436
50	760	Low leakage current version		4	1.6	2.11	1.4 kg	10	5B-10	3-128-437
64	760	Low leakage current version		5	1.2	2.11	1.6 kg	16	5B-16	3-128-438
16	520	Industrial version	●	1.3	4.9	6.82	1.1 kg	4	5A-4	3-138-349
25	520	Industrial version	●	1.6	2.5	9.42	1.2 kg	10	5A-10	3-138-350
36	520	Industrial version	●	2.1	1.6	9.42	1.4 kg	10	5B-10	3-138-351
50	520	Industrial version	●	4	1.6	9.42	1.4 kg	10	5B-10	3-138-352
64	520	Industrial version	●	5	1.2	9.42	1.6 kg	16	5B-16	3-138-353
80	520	Industrial version	●	7.7	1.2	9.42	2.6 kg	25	5C-25	3-138-354
110	520	Industrial version	●	15.8	1.3	9.42	3.3 kg	50	5C-50	3-138-355
180	520	Industrial version	●	13	0.4	8.97	6.1 kg	95	5D	3-138-356
230	520	Industrial version	●	10.6	0.2	8.97	6.1 kg	95	5D	3-138-357
16	520	Low leakage current version	●	1.3	4.9	2.55	1.1 kg	4	5A-4	3-138-358
25	520	Low leakage current version	●	1.6	2.5	2.55	1.2 kg	10	5A-10	3-138-359
36	520	Low leakage current version	●	2.1	1.6	2.56	1.4 kg	10	5B-10	3-138-360
50	520	Low leakage current version	●	4	1.6	2.56	1.4 kg	10	5B-10	3-138-361
64	520	Low leakage current version	●	5	1.2	2.56	1.6 kg	16	5B-16	3-138-362
16	760	Industrial version	●	1.3	4.9	6.37	1 kg	4	5A-4	3-138-363
25	760	Industrial version	●	1.6	2.5	6.37	1 kg	10	5A-10	3-138-364
36	760	Industrial version	●	2.1	1.6	6.37	1.4 kg	10	5B-10	3-138-365
50	760	Industrial version	●	4	1.6	6.37	1.4 kg	10	5B-10	3-138-366
64	760	Industrial version	●	5	1.2	6.37	1.6 kg	16	5B-16	3-138-367
80	760	Industrial version	●	7.7	1.2	8.97	2.6 kg	25	5C-25	3-138-368
110	760	Industrial version	●	15.8	1.3	8.97	3.2 kg	50	5C-50	3-138-369
180	760	Industrial version	●	13	0.4	8.97	6 kg	95	5D	3-138-370
230	760	Industrial version	●	10.6	0.2	8.97	6 kg	95	5D	3-138-371
16	760	Low leakage current version	●	1.3	4.9	2.11	1 kg	4	5A-4	3-138-372
25	760	Low leakage current version	●	1.6	2.5	2.11	1 kg	10	5A-10	3-138-373
36	760	Low leakage current version	●	2.1	1.6	2.11	1.4 kg	10	5B-10	3-138-374
50	760	Low leakage current version	●	4	1.6	2.11	1.4 kg	10	5B-10	3-138-375
64	760	Low leakage current version	●	5	1.2	2.11	1.6 kg	16	5B-16	3-138-376

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

Packaging unit 1 Pcs

03.04.2025

The specifications, descriptions and illustrations indicated in this document are based on current information. All content is subject to modifications and amendments. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability and test each product selected for their own applications.