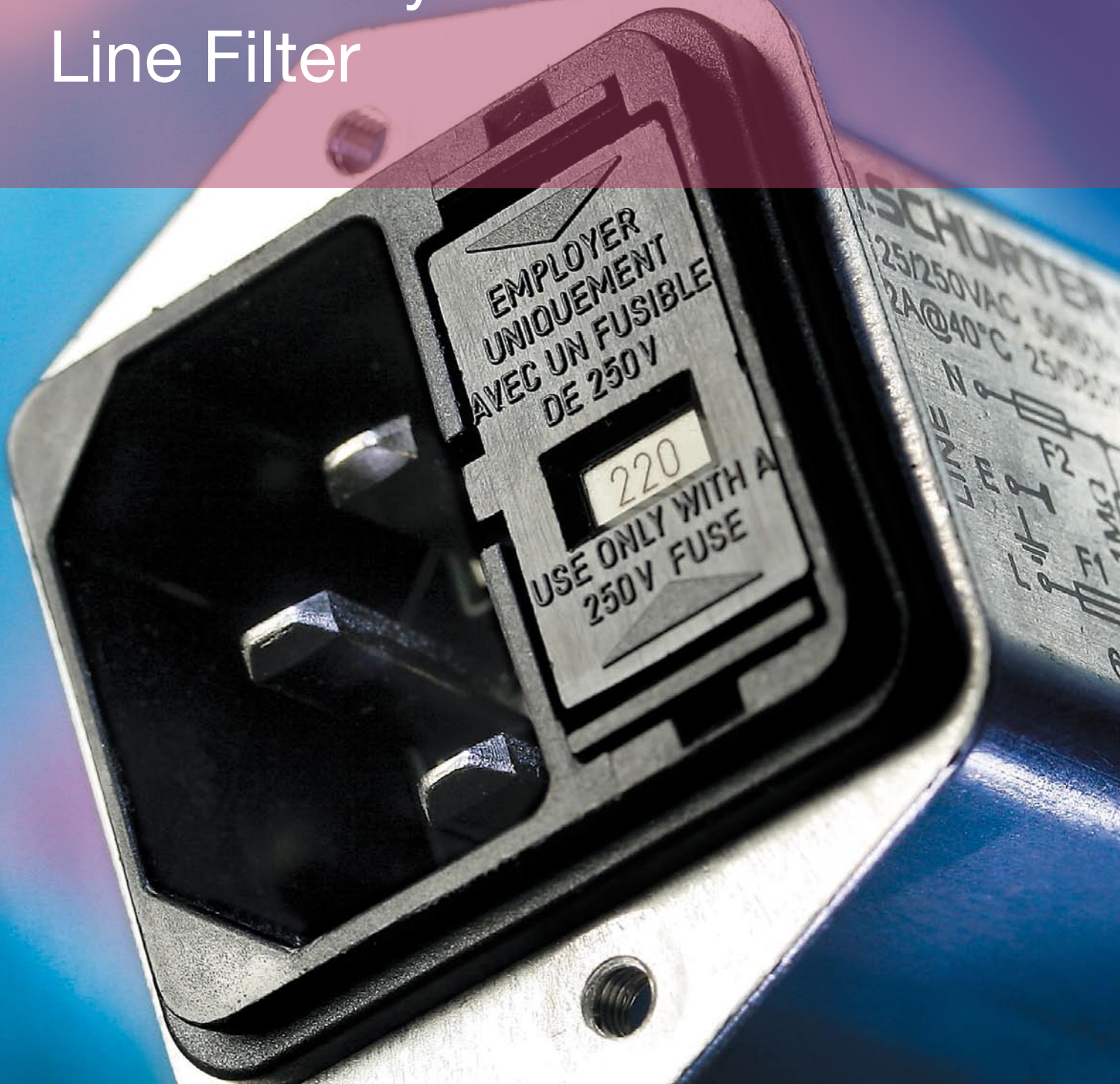
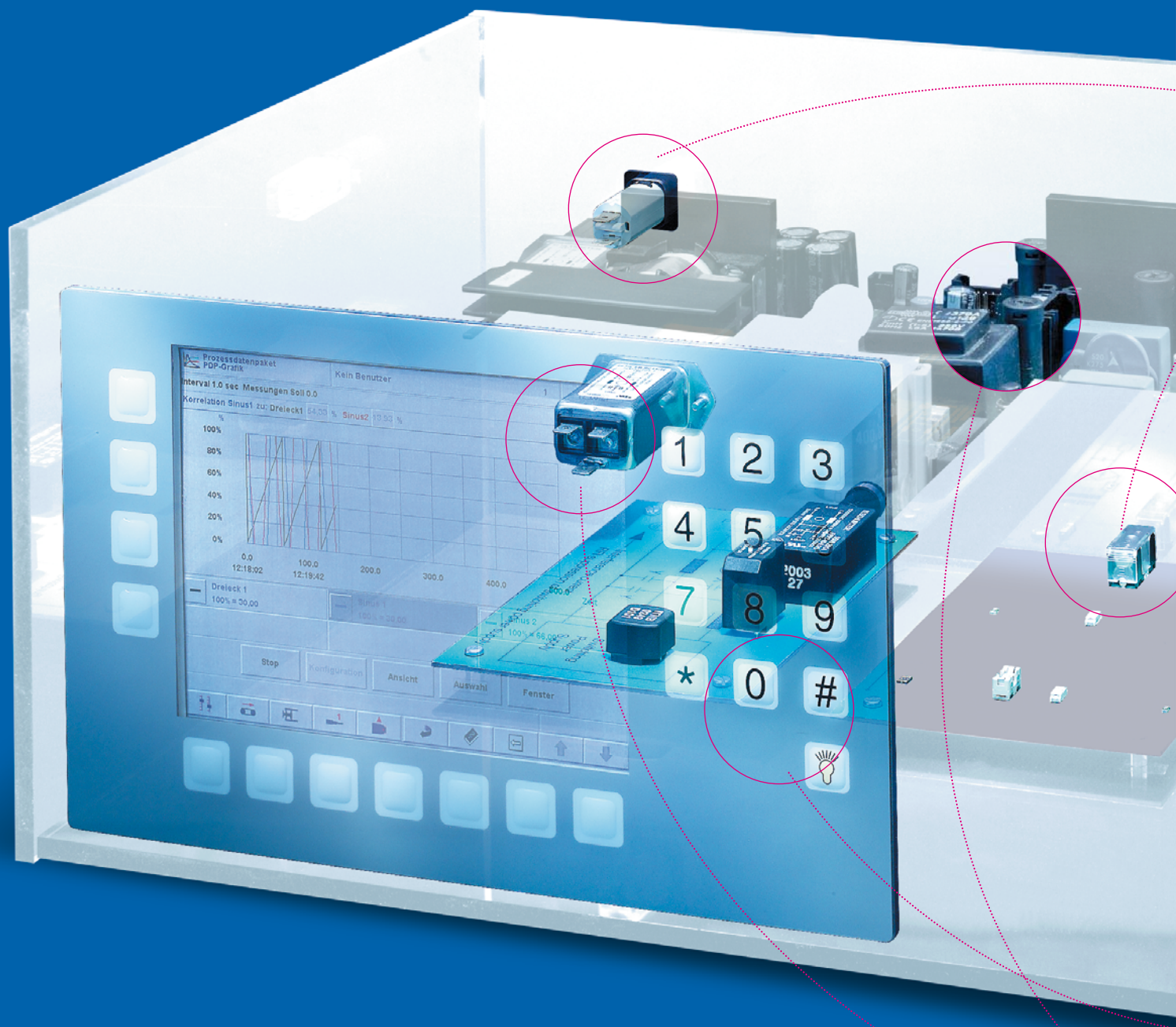


Power Entry Modules with Line Filter



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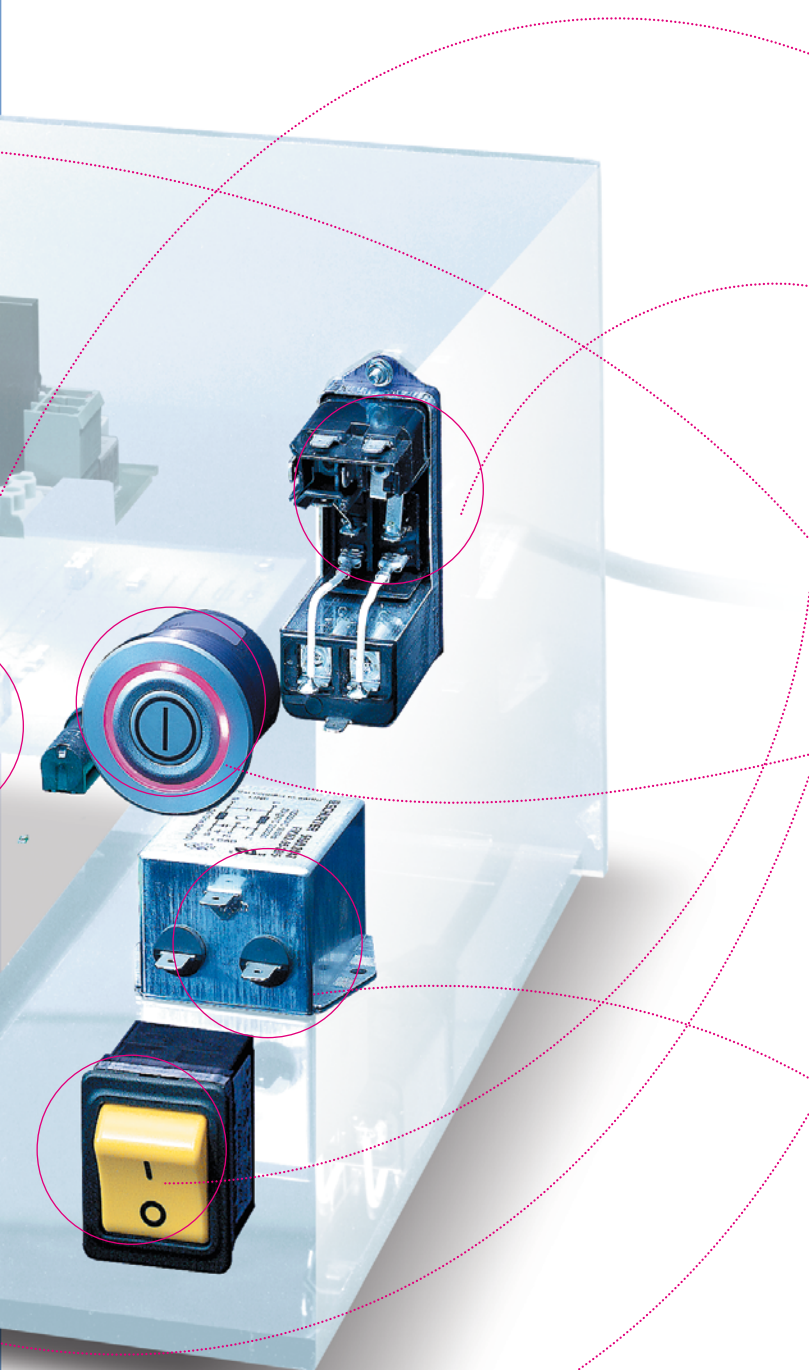


"We rely on reliability and flexibility; that is why we produce your products by our qualified and motivated employee."

Battista Filippini, CEO Ticomel SA (a member of the SCHURTER Group)

> the Schurter Range at the Glance

SCHURTER is a progressive innovator and manufacturer of fuses, connectors, circuit breakers, input systems, EMC products and manufacturing services for the electronics industry. We focus on components that ensure safe supply of power and make the interface between human and machine easier.



■ fuses

- non resettable fuses
- telecom fuses
- resettable fuses
- fuseholders
- fuseholders blocks & clips

■ connectors

- power entry modules without line filter
- power entry modules with line filter
- appliance couplers
- cord connectors (rewireable)
- distribution units
- cord sets

■ circuit breakers

- thermal (t- and ta-line)
- thermal-magnetic (tm- and as-line)
- undervoltage protection
- power entry modules with CBE

■ input systems

- printmount switches
- frontpanel switches
- public transport switch
- metal line switches
- sensor switches
- membrane keypads
- sensor keypad
- metal line keypads
- touch panel / touch screen
- housing systems and front panels

■ EMC products

- power entry modules with line filter
- 1-phase line filters
- 3-phase line filters
- chokes
- pulse transformers
- power stage driver modules

■ other products

- voltage selector
- test jacks & probes
- indicators
- data & signal, audio, dc/ din connectors

■ EMS

- Electronic Manufacturing Services

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
-----------------------	--	----------------------------	------------------------------	-------------------------	-----------------------

MAX. RATED CURRENT 15 A



new

DC-inlet filter, ECO design, front- or rear side mounting



- Snap-in/screw-on
- Front-/Rear-Side
- Quick-Connect

5003
18

MAX. RATED CURRENT 10 A



Inlet filter, front side mounting



- Snap-in/screw-on
- Front-Side
- Quick-Connect
- prewired



5110
23



new

Inlet filter, ECO design, front- or rear side mounting, protection class I or II



- Snap-in/screw-on
- Front-/Rear-Side
- Quick-Connect



5120
28



new

Inlet with high frequency filter, X2Y technology, ECO design, front- or rear side mounting



- Screw-on
- Front-/Rear-Side
- Quick-Connect



5150
34



Inlet filter, front side mounting



- Screw-on
- Front-Side
- Quick-Connect
- prewired



KFS
38

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance- Inlet/-Outlet	Web Reference or Type
 Inlet filter, front or rear side mounting 	- Snap-in/screw-on - Front-/Rear-Side - Quick-Connect/ Wire (braid) - prewired	-	-	C14  70° C	FGS 41
 Inlet filter, front side mounting 	- Screw-on - Front-Side - Quick-Connect - prewired	-	-	C14  70° C	KFX 45
 Inlet filter, rear side "lock and shield" mounting 	- Snap-in - Rear-Side - Quick-Connect - prewired	-	-	C14  70° C	GRF2 48
 Inlet filter, rear side "lock and shield" mounting 	- Snap-in - Rear-Side - Quick-Connect - prewired	-	-	C14  70° C	GRF4 51
 "Lock and shield" mounting, line switch, fuseh. 5x20 mm with/without voltage sel. (series-parallel) 	- Snap-in - Rear-Side - Quick-Connect - prewired	- 5 x 20 - 1 or 2 pole	- Rocker switch - 2-pole - jumper - optional	C14  70° C	GRM2 56



Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
Filter for backpack mounting to KP01 	- Sandwich/rear-side - Rear-Side - Solder - unwired	-	-	-	KPF 59

MAX. RATED CURRENT 16 A



Inlet C20 with filter, ECO design, front or rear side mounting 	- Snap-in/screw-on - Front-/Rear-Side - Quick-Connect - prewired	-	-	 70° C	5130 62
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Inlet filter, front or rear side mounting 	- Snap-in/screw-on - Front-/Rear-Side - Solder/quick connect/wire - prewired	-	-	 70° C	C20F 67
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For customer specific solutions, please contact us. www.schurter.com/contact
General Product Information see IEC Connector page 238



Best performance at low cost

The power entry modules series 5120 offer optimal safety regarding EMC emission and immunity. Refined for optimal performance at lowest price, the compact filter is particularly suited for power supplies used in Industrial equipment, Information technology and Medical Devices.

The series is dimensioned as a 1-stage filter for rated currents from 1 to 15 A at 250 VAC. The unit has an outstanding wide-band absorption in the frequency range from 100 kHz to 30 MHz. The series offers several mounting options. Besides the standard type we offer versions for protection class 2, for enhanced voltage withstand as well as versions for optimized attenuation.



DC filter provide optimal performance in data critical equipment

The filtered power entry modules series 5003 are specially designed for DC applications particularly for DC supply of Information Technology Equipment.

The 5003 features a standard DC connector, offered in two different connector styles. The connector is encased with a 1-stage filter for currents up to 15A at 125 VDC. It provides an outstanding wide-band absorption rate in frequencies ranging from 100kHz to 30 MHz. The unit offers different mounting options.

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
MAX. RATED CURRENT 8 A					
 Inlet with filter, IP65, front or rear mounting, fuseholder 5x20 mm, protection class I or II 	- Screw-on - Front-/Rear-Side - Quick-Connect	- 5 x 20 - 1 or 2 pole	-	C18  70° C	5707 72
MAX. RATED CURRENT 10 A					
 Inlet filter, front side mounting, fuseholder 5x20 mm 	- Snap-in/screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 1 pole	-	C14  70° C	5200 78
 Inlet filter, front side mounting, fuseholder 5x20 mm 	- Snap-in/screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 2-pole	-	C14  70° C	5220 83
 With fuseholder 5x20 mm, with or without voltage selector (step switch) 	- Snap-in/screw-on - Front-/Rear-Side - Quick-Connect/ Wire (braid) - prewired	- 5 x 20 - 1 or 2 pole	- step - optional	C14  70° C	KFA 88
 With fuseholder 5x20 mm / 6.3x32 mm, with or without voltage selector (step switch) 	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- step - optional	C14  70° C	KFC 95

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance- Inlet/-Outlet	Web Reference or Type
 Front side mounting, fuseh. 5 x 20 mm/6.3x32 mm, with or without voltage selector (series-parallel) 	- Screw-on - Front-Side - Quick-Connect - partially wired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- series-parallel	C14  70° C	CE 100
 new Inlet filter, front- or rear side mounting, line switch 1-/2-pole 	- Snap-in/screw-on - Front-/Rear-Side - Quick-Connect - prewired	-	- Rocker switch - 1 or 2 pole	C14  70° C	DC12 105
 Inlet filter, front side mounting, line switch 1-pole  	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - 1 pole	C14  70° C	KFB1 112
 Inlet filter, front side mounting, line switch 2-pole  	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - 2-pole	C14  70° C	KFB2 116
 new Inlet filter, PCB mounting, line switch 1-/2-pole 	- Screw-on - Rear-Side - PCB - prewired	-	- Rocker switch - 1 or 2 pole	C14  70° C	DC22 120



Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
Inlet filter, front side mounting, recessed circuit breaker TA45 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - Circuit Breaker for Equipment - TA45 - 2-pole	C14  70° C	DF12 125



Inlet filter, front side mounting, circuit breaker TA45 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - Circuit Breaker for Equipment - TA45 - 2-pole	C14  70° C	5145 131
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MAX. RATED CURRENT 16 A



Inlet filter, front side mounting, line switch 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - 2-pole	C20  70° C	EC12 137
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Inlet filter, front side mounting, recessed circuit breaker TA45 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	-	- Rocker switch - Circuit Breaker for Equipment - TA45 - 2-pole	C20  70° C	EF12 141
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For customer specific solutions, please contact us. www.schurter.com/contact
General Product Information see IEC Connector page [238](#)



A simple solution for gigahertz applications

The series 5150 is a breakthrough product, providing simple and universal EMC for high frequency applications, using X2Y® filter technology. The series possesses broadband suppression properties to 1 GHz and combines them with the most simple and universal power input.

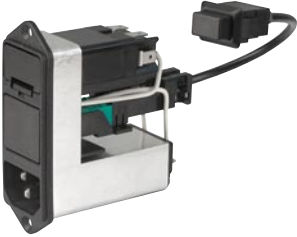
The X2Y® filter technology combines the X and Y capacitors into a component that is in contact with the filter enclosure over a broad surface. The leads connecting the capacitors are thereby eliminated and parasitic impedances are reduced to a minimum. This results in broadband suppression into high frequency ranges. X2Y® technology has been established for quite some time in the area of signal processing. SCHURTER has now integrated this concept into safety relevant power input.



Details makes the Difference

“Nevertheless, it’s also the details that count. Features like a recessed switch and robust housing were really helpful in selling the product.”

Leonard Overholser

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
MAX. RATED CURRENT 6 A					
 Line switch with/without bowden cable, fuseh. 5x20/6.3x32 mm, voltage selector  	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- Switch for bow-dencable - 2-pole - step - optional	C14  70° C	CD-Bowden-cable 148
 With fuseholder 5x20 mm/6.3x32 mm, voltage sel. (series-parallel)  	- Screw-on - Front-Side - Quick-Connect - partially wired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- Switch for bow-dencable - 2-pole - series-parallel	C14  70° C	CG-Bowden-cable 153
MAX. RATED CURRENT 10 A					
 Inlet filter, modular assembling  	- Snap-in - Front-Side - Solder/quick-connect - prewired	- 5 x 20 - 1 or 2 pole	- Rocker switch - 2-pole	C14  70° C	Felcom 54 158
 Inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm  	- Snap-in - Front-Side - Quick-Connect - prewired	- 5 x 20 - 1 or 2 pole	- Rocker switch - 2-pole	C14  70° C	KMF 165
 Inlet with filter for front side mounting, fuse 1-/2-pole, line switch 2-pole   new	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 1 or 2 pole	- Rocker switch - 2-pole	C14  70° C	DD12 170



new

Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
Inlet with filter for PCB mounting, fuse 1-/2-pole, line switch 2-pole 	- Screw-on - Rear-Side - PCB - prewired	- 5 x 20 - 1 or 2 pole	- Rocker switch - 2-pole	C14  70° C	DD22 175
1-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 1-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 1 pole	- Rocker switch - 2-pole	C14  70° C	FKH 180
1-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 2-pole	- Rocker switch - 2-pole	C14  70° C	FKI 185
2-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 1-pole 	- Screw-on - Front-Side - Quick-Connect	- 5 x 20 - 1 pole	- Rocker switch - 2-pole	C14  70° C	FKHD 190
2-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 2-pole 	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 - 2-pole	- Rocker switch - 2-pole	C14  70° C	FKID 194



Description Approvals	Mounting Style Mounting Side Terminals	Fuseholder Dimension Poles	Line Switch Voltage selector	Appliance-Inlet/-Outlet	Web Reference or Type
Line switch with/without bowden cable, fuseh. 5x20/6.3x32 mm, voltage selector 	- Screw-on - Front-Side - Quick-Connect - prewired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- Rocker switch - 2-pole - step - optional	 70° C	CD 198
Line switch with/without bowden cable, fuseh. 5x20/6.3 x 32 mm, voltage sel. (series-parallel) 	- Screw-on - Front-Side - Quick-Connect - partially wired	- 5 x 20 or 6.3 x 32 - 1 or 2 pole	- Rocker switch - 2-pole - series-parallel	 70° C	CG 203

For customer specific solutions, please contact us. www.schurter.com/contact
General Product Information see IEC Connector page [238](#)



Power Entry Module with Extra-Safe Fuse Drawer

The power entry module KFA with line filter and a 1- or 2-pole fuseholder is designed for rated currents from 1 to 10 A. The use of an Extra-Safe fuse drawer allows the use of the component for medical appliances according to IEC 60601-1.

The product KFA offers a wide range of different variants. Different mounting styles are available as well as a version with voltage selector. The type with metal flange is extra effective regarding EMC protection.



Customised filters for system integration

Open frame filters are sub-systems that are engineered exactly to our OEM customers' specifications. Alongside suppression properties, filter geometry and system connection play a central role. Very often the area of application renders the filter housing superfluous. Additional material cost savings are thus possible.

The open frame filters are available in single- or three-phase versions. The method of electrical connection ranges from simple quick connect terminals through to completely assembled cable looms.

DC-inlet filter, ECO design, front- or rear side mounting

new



Front or rear side mounting

(Mating connector AMP Universal MATE-N-LOK or Molex MLX)



Rear side mounting

(as shown with Mating Connector Molex HCS-125 or mating connector AMP Universal MATE-N-LOK or Molex MLX)



Snap-In Version

Snap-in mounting from front side
(Mating connector AMP Universal MATE-N-LOK or Molex MLX)**Description**

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 2 Functions:
Appliance Inlet, DC line filter in standard version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version 5120 for AC applications

Approvals

- VDE License Number: 40020642
- UL License Number: E72928

Characteristics

- Compact high-performance DC-filter
- Optimal shielding due to completely closed filter case, unpotted
- Applications:
- Mission Critical Ethernet LAN Routers
- High uptime Ethernet LAN Switches
- Fiber Optic WAN Switches
- Fiber Optic WAN Multiplexer

Other versions on request

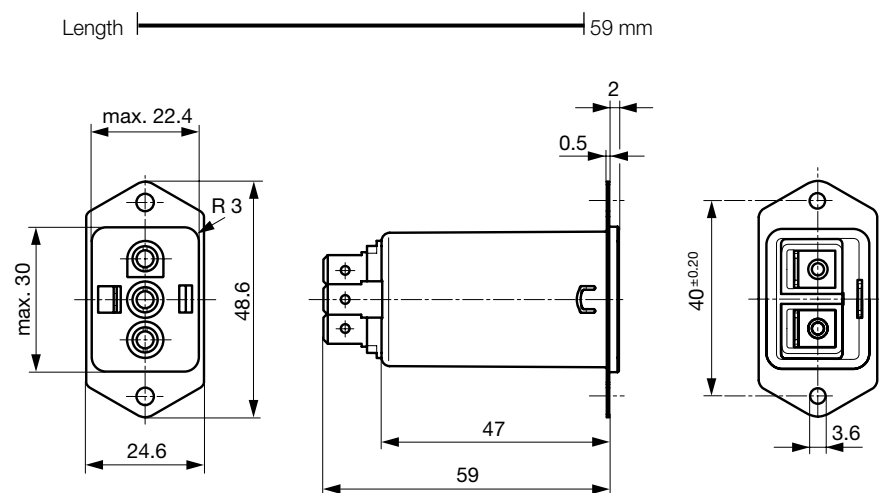
- Snap-in for panel thickness >2mm to 3mm
- Solder terminals
- Quick-connect terminals 4.8 x 0.8 mm
- Capacity CY 5.5 nF
- with long earth pin in connector

References[General Product Information](#)**Weblinks**[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)**Technical Data**

Ratings IEC	15 A / 125VDC
Ratings UL/CSA	3 - 15A @ Ta 40 °C / 125VDC
Dielectric Strength	> 0.5 kVDC between live parts of differential potentials > 1.1 kVDC between protective conductor and live parts Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Protection Class	Suitable for appliances with protection class I
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm Snap-in: 0.8 mm to 2 mm (all steps with one variant)
Material: Housing	Thermoplast / steel tin-plated, black / metallic, UL 94V-0

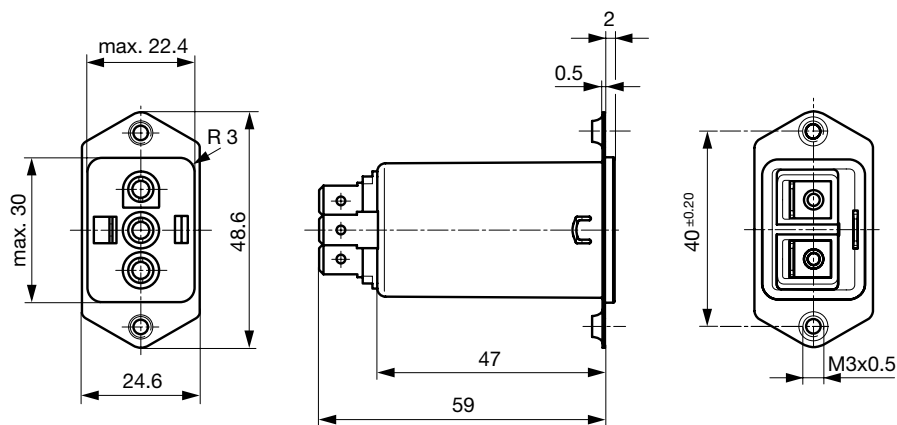
Line Filter	DC Standard Version, UL 1283 Technical details
MTBF	> 3'900'000h acc. to MIL-HB-217 F

Dimensions



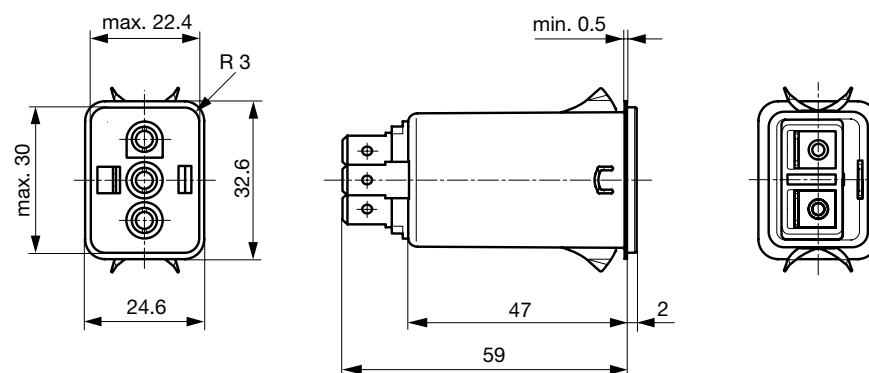
Mating Connector Molex HCS-125

Front- or rear side mounting for screws with nuts or blind rivets



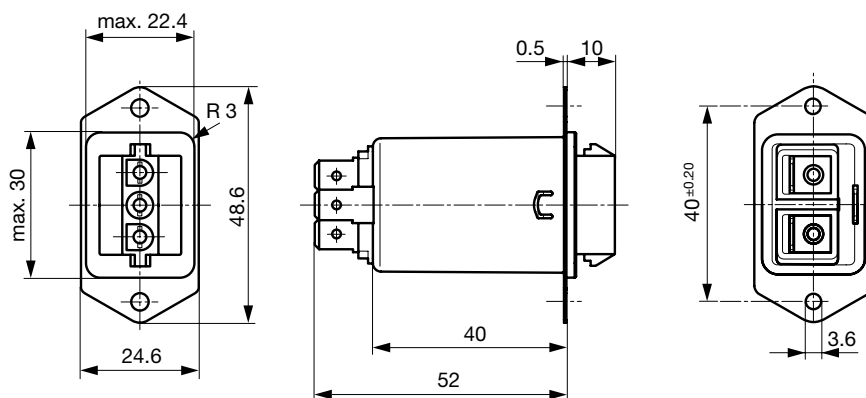
Mating Connector Molex HCS-125

Rear side mounting with pre-formed, threaded holes for M3 screws

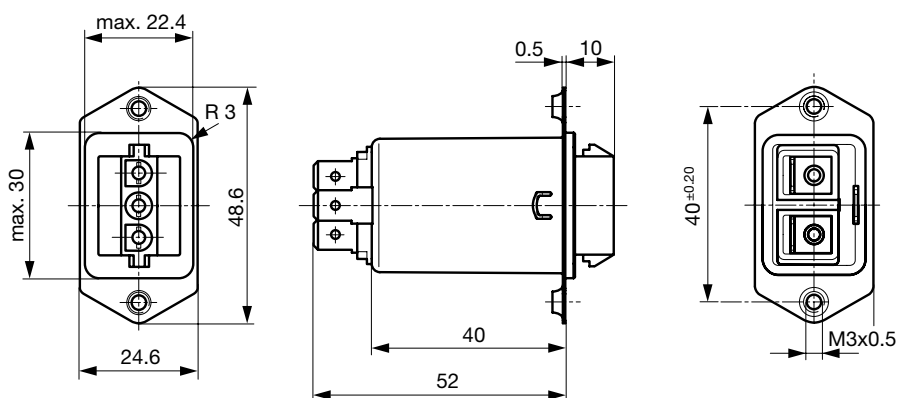


Mating Connector Molex HCS-125

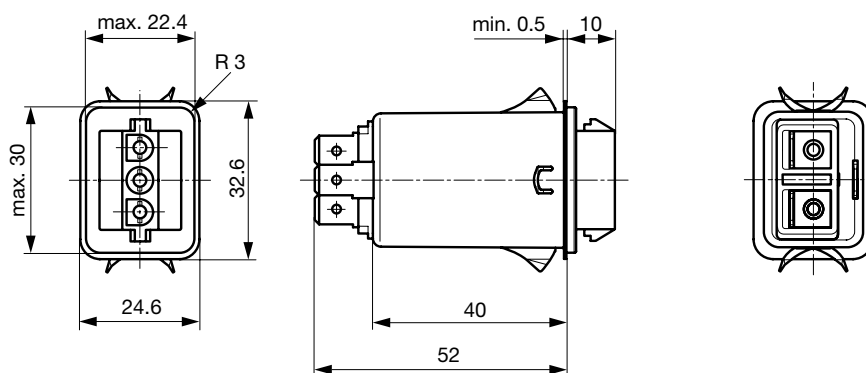
Snap-in mounting from front side



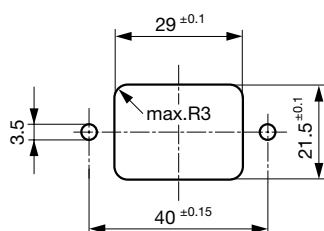
Mating Connector AMP Universal MATE-N-LOK oder Molex MLX
Front or rear side mounting for screws with nuts or blind rivets



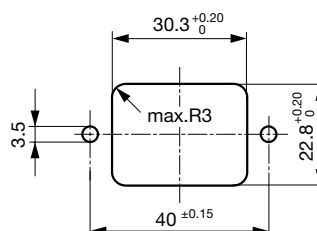
Mating Connector AMP Universal MATE-N-LOK oder Molex MLX
Rear side mounting with pre-formed, threaded holes for M3 screws



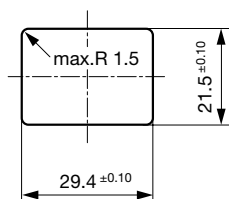
Mating Connector AMP Universal MATE-N-LOK oder Molex MLX
Snap-in mounting from front side



Panel cutout for front side mounting



Panel cutout for rear side mounting



Panel cutout for snap-in mounting

Mating Connector



Molex HCS-125

Housing: Molex no. 03-12-1036

Female terminal (3 needed per housing): Molex no. 18-12-1222



AMP Universal MATE-N-LOK

Housing: AMP no. 1-480700-0

Female terminal (3 needed per housing): AMP no. 926901-1

Molex MLX

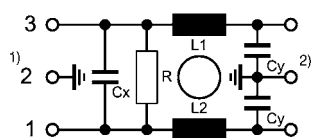
Housing: Molex no. 50-84-1030

Female terminal (3 needed per housing): Molex no. 02-08-1002

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
3	DC Standard Version	2 x 4	100	4.7	1
6	DC Standard Version	2 x 0.8	100	4.7	1
10	DC Standard Version	2 x 0.4	100	4.7	1
15	DC Standard Version	2 x 0.1	100	4.7	1

Diagrams



1) Line

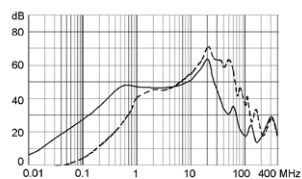
2) Load

Attenuation Loss

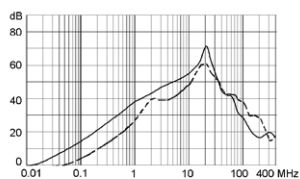
Standard version

- - - differential mode ____ common mode

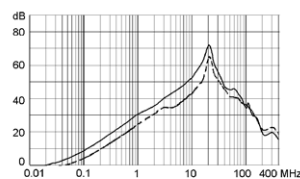
3 A



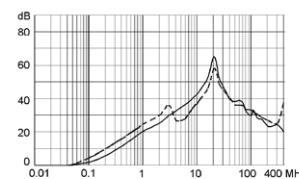
6 A



10 A



15 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Panel mounting	Mounting side	Mating Connector	Order Number
3	Screw-on	Rear-Side	Molex HCS-125	5003.0121.1
6	Screw-on	Rear-Side	Molex HCS-125	5003.0221.1
10	Screw-on	Rear-Side	Molex HCS-125	5003.0321.1
15	Screw-on	Rear-Side	Molex HCS-125	5003.0421.1
3	Screw-on/Rivet	Front-/Rear-Side	Molex HCS-125	5003.0111.1
6	Screw-on/Rivet	Front-/Rear-Side	Molex HCS-125	5003.0211.1
10	Screw-on/Rivet	Front-/Rear-Side	Molex HCS-125	5003.0311.1
15	Screw-on/Rivet	Front-/Rear-Side	Molex HCS-125	5003.0411.1
3	Screw-on	Rear-Side	AMP / Molex MLX	5003.1121.1
6	Screw-on	Rear-Side	AMP / Molex MLX	5003.1221.1
10	Screw-on	Rear-Side	AMP / Molex MLX	5003.1321.1
15	Screw-on	Rear-Side	AMP / Molex MLX	5003.1421.1
3	Screw-on/Rivet	Front-/Rear-Side	AMP / Molex MLX	5003.1111.1
6	Screw-on/Rivet	Front-/Rear-Side	AMP / Molex MLX	5003.1211.1
10	Screw-on/Rivet	Front-/Rear-Side	AMP / Molex MLX	5003.1311.1
15	Screw-on/Rivet	Front-/Rear-Side	AMP / Molex MLX	5003.1411.1

Type for screw on mounting from rear side has pre-threaded holes for M3 screws

Packaging unit

10 Pcs

Accessory

Description



[Assorted Covers](#)
Rear Cover



[Cord retaining kits](#)
Cord retaining strain relieve

Inlet filter, front side mounting

Standard- or Medical-Filter



C14

 70 °C



Description

- Panel Mount:
Snap-in or screw-on mounting from front side
- 2 Functions:
Appliance Inlet Protection class I, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 117118
- UL License Number: E72928
- CSA License Number: 97784

Characteristics

- Ultra-compact design
- All single elements are already wired
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Capacity CX 100 nF
- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

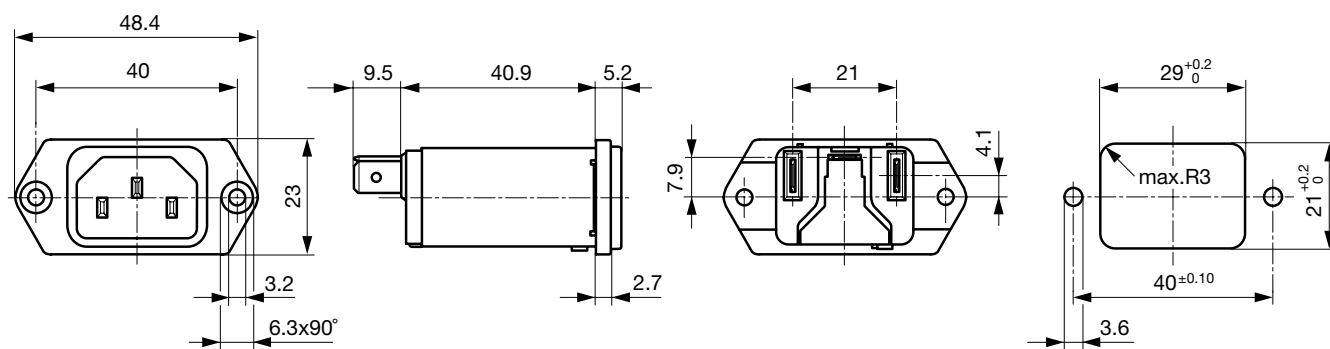
Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 15A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7kVDC between L-N > 2.7kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 5 mm Mounting screw torque max 0.5Nm Snap-in: 0.8mm to 3mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'100'000h acc. to MIL-HB-217 F

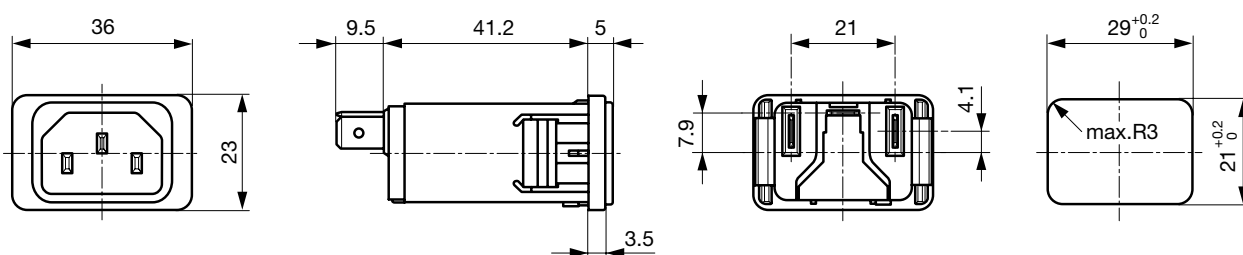
Dimensions

Screw-on mounting

Length | 55.6 mm



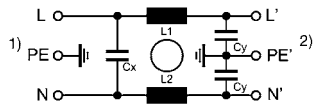
Snap-in mounting

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 11	47	2.2	-
2	Standard Version	2 x 4	47	2.2	-
3	Standard Version	2 x 2.5	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
6	Standard Version	2 x 0.7	47	2.2	-
8	Standard Version	2 x 0.6	47	2.2	-
10	Standard Version	2 x 0.4	47	2.2	-
15	Standard Version	2 x 0.1	47	2.2	-
1	Medical Version (M5)	2 x 11	47	-	1
2	Medical Version (M5)	2 x 4	47	-	1
3	Medical Version (M5)	2 x 2.5	47	-	1
4	Medical Version (M5)	2 x 1.6	47	-	1
6	Medical Version (M5)	2 x 0.7	47	-	1
8	Medical Version (M5)	2 x 0.6	47	-	1
10	Medical Version (M5)	2 x 0.4	47	-	1
15	Medical Version (M5)	2 x 0.1	47	-	1

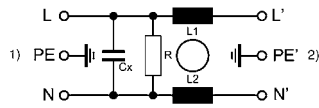
Diagrams

Standard version



1) Line
2) Load

Medical version

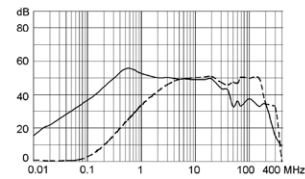


1) Line
2) Load

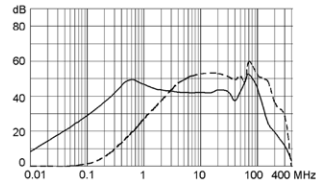
Attenuation Loss

Standard version

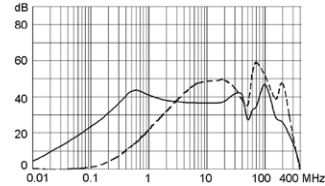
1 A



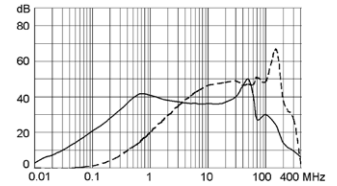
2 A



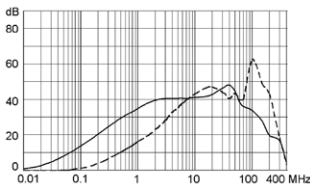
3 A



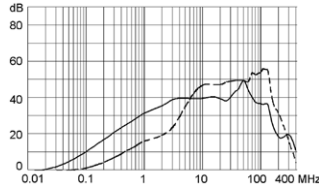
4 A



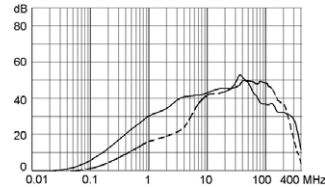
6 A



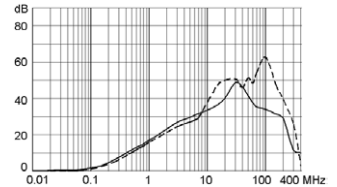
8 A



10 A

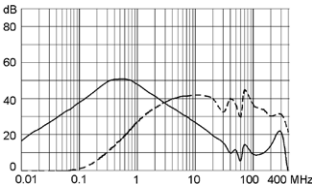


15 A

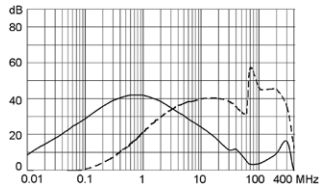


Medical version (M5)

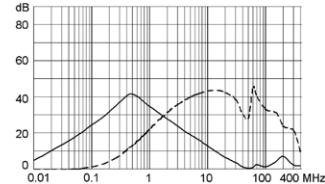
1 A



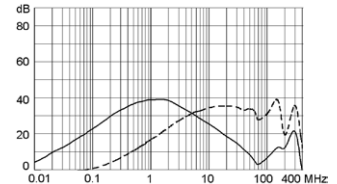
2 A



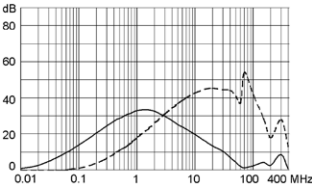
3 A



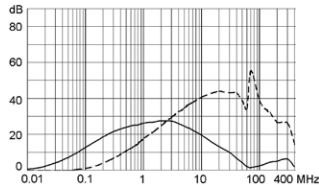
4 A



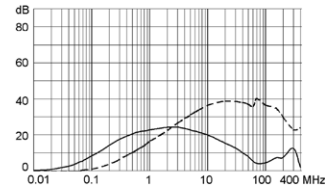
6 A



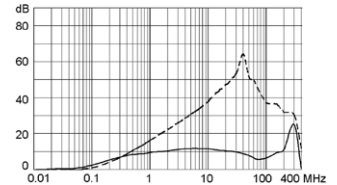
8 A



10 A



15 A



Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Variants

Rated Current [A]	Filter-Type	Panel mounting	Order Number
1	Standard Version	Screw-on	5110.0133.1
2	Standard Version	Screw-on	5110.0233.1
3	Standard Version	Screw-on	5110.0333.1
4	Standard Version	Screw-on	5110.0433.1
6	Standard Version	Screw-on	5110.0633.1
8	Standard Version	Screw-on	5110.0833.1
10	Standard Version	Screw-on	5110.1033.1
15	Standard Version	Screw-on	5110.1533.1
1	Standard Version	Snap-in	5110.0143.1
2	Standard Version	Snap-in	5110.0243.1
3	Standard Version	Snap-in	5110.0343.1
4	Standard Version	Snap-in	5110.0443.1
6	Standard Version	Snap-in	5110.0643.1
8	Standard Version	Snap-in	5110.0843.1
10	Standard Version	Snap-in	5110.1043.1
15	Standard Version	Snap-in	5110.1543.1
1	Medical Version (M5)	Screw-on	5110.0133.3
2	Medical Version (M5)	Screw-on	5110.0233.3
3	Medical Version (M5)	Screw-on	5110.0333.3
4	Medical Version (M5)	Screw-on	5110.0433.3
6	Medical Version (M5)	Screw-on	5110.0633.3
8	Medical Version (M5)	Screw-on	5110.0833.3
10	Medical Version (M5)	Screw-on	5110.1033.3
15	Medical Version (M5)	Screw-on	5110.1533.3
1	Medical Version (M5)	Snap-in	5110.0143.3
2	Medical Version (M5)	Snap-in	5110.0243.3
3	Medical Version (M5)	Snap-in	5110.0343.3
4	Medical Version (M5)	Snap-in	5110.0443.3
6	Medical Version (M5)	Snap-in	5110.0643.3
8	Medical Version (M5)	Snap-in	5110.0843.3
10	Medical Version (M5)	Snap-in	5110.1043.3
15	Medical Version (M5)	Snap-in	5110.1543.3

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, ECO design, front- or rear side mounting, protection class I or II

Standard- or Medical-Filter

new



Snap-in mounting from front side
Protection class II
Snap-in mounting from front side
Protection class II

C14



70° C

C18



70° C

**Description**

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 2 Functions:
Appliance Inlet, protection class I or II, Line filter in standard and medical version Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40016382
- UL License Number: E72928

Characteristics

- Compact high performance filter
Optimal shielding due to completely closed filter case, unpotted
- Designed for standard and medical applications
Suitable for assembly in metal plated plastic housings
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Snap-in for panel thickness >2mm to 3mm
- Solder terminals
- Class X1 capacitor for enhanced surge withstand voltage
- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

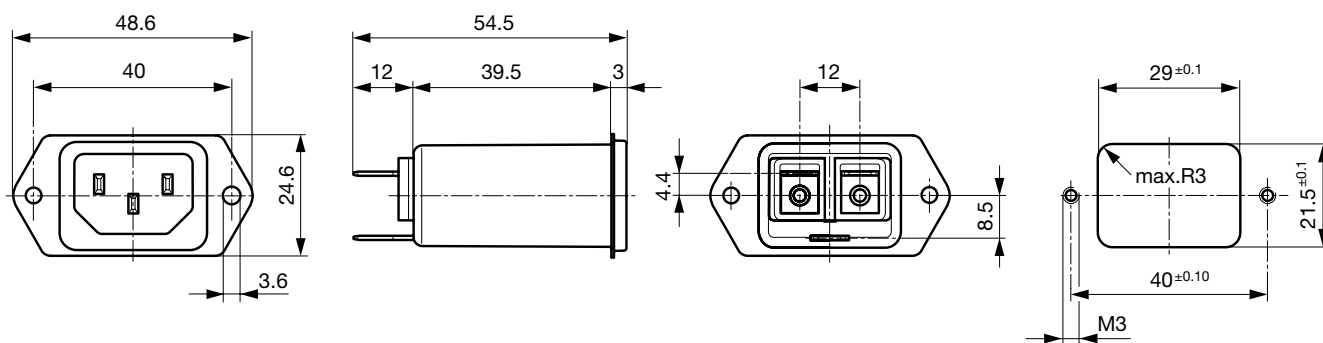
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 15A @ Ta 40 °C / 250VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I or II acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm Snap-in: 0.8mm to 2 mm (all steps with one variant)
Material: Housing	Thermoplast / steel tin-plated, black / metallic, UL 94V-0

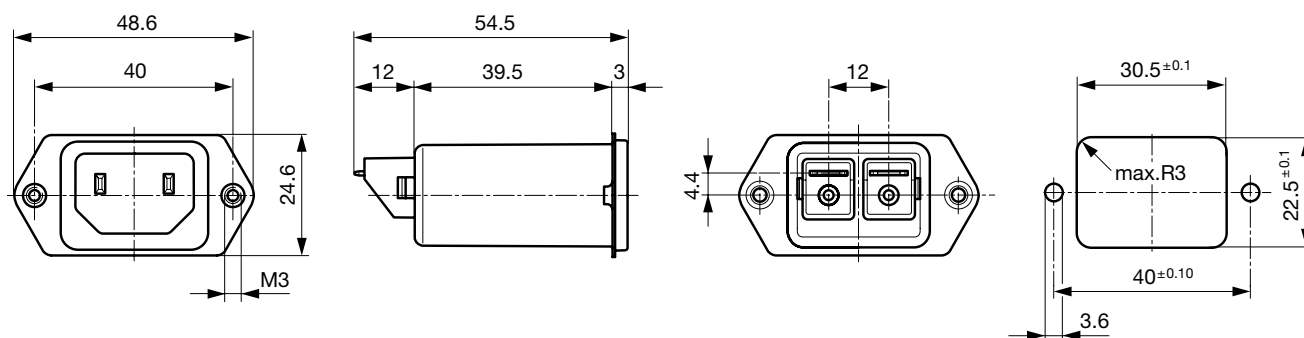
Appliance-Inlet/-Outlet	C14/C18 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I or II
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'000'000h acc. to MIL-HB-217 F

DimensionsLength  54.5 mm

Front or rear side mounting for screws with nuts or blind rivets (panel cutout for frontside mounting)

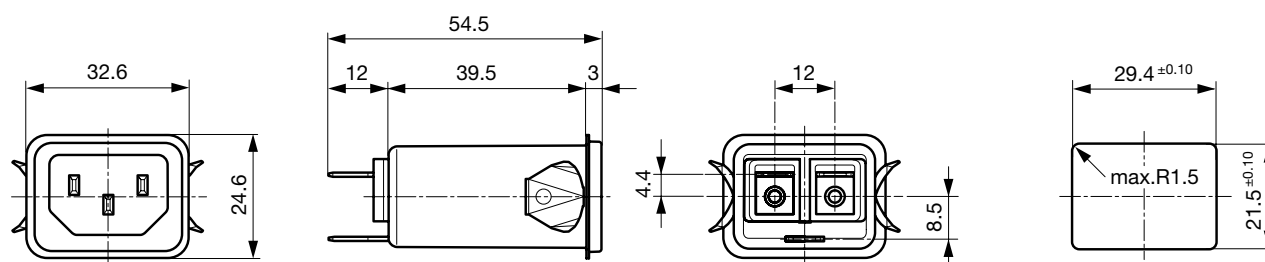


Rear side mounting with pre-formed, threaded holes for M3 screws (panel cutout for rear side mounting)



Dimensions for class II version also apply to class I

Snap-in mounting from front side



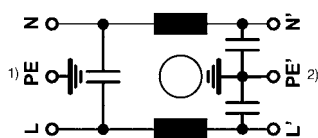
Dimensions for class I version also apply class II

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 12	100	2.2	-
2	Standard Version	2 x 5.2	100	2.2	-
4	Standard Version	2 x 2	100	2.2	-
6	Standard Version	2 x 0.8	100	2.2	-
10	Standard Version	2 x 0.4	100	2.2	-
15	Standard Version	2 x 0.1	100	2.2	-
1	Medical Version (M5)	2 x 12	100	-	1
2	Medical Version (M5)	2 x 5.2	100	-	1
4	Medical Version (M5)	2 x 2	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
10	Medical Version (M5)	2 x 0.4	100	-	1
15	Medical Version (M5)	2 x 0.1	100	-	1
1	Bleed Resistor Version	2 x 12	100	2.2	1
2	Bleed Resistor Version	2 x 5.2	100	2.2	1
4	Bleed Resistor Version	2 x 2	100	2.2	1
6	Bleed Resistor Version	2 x 0.8	100	2.2	1
10	Bleed Resistor Version	2 x 0.4	100	2.2	1
15	Bleed Resistor Version	2 x 0.1	100	2.2	1

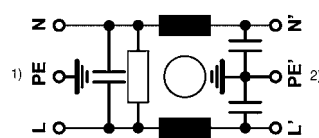
Diagrams

Standard version



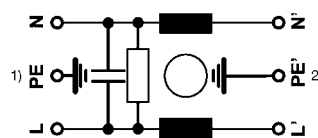
1) Line
2) Load

Bleed resistor version



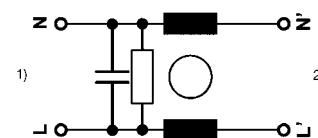
1) Line
2) Load

Medical version M5



1) Line
2) Load

Medical version M5, prot. class II



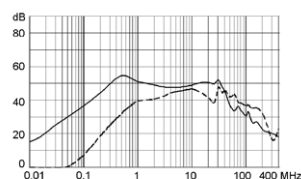
1) Line
2) Load

Attenuation Loss

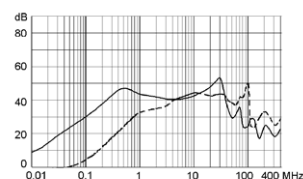
--- differential mode ____ common mode

Standard version

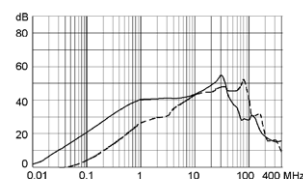
1 A



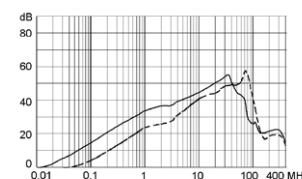
2 A



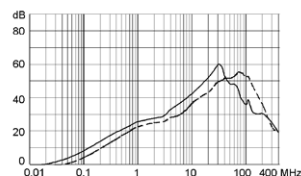
4 A



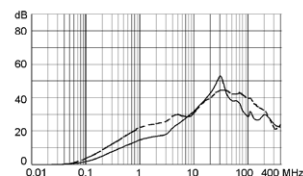
6 A



10 A

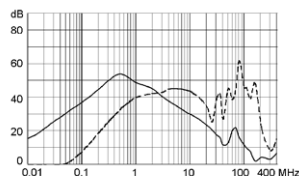


15 A

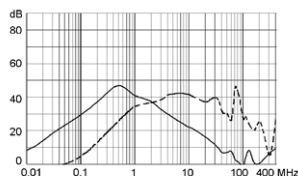


Medical version (M5)

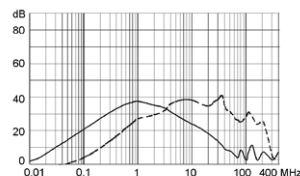
1 A



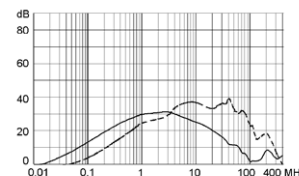
2 A



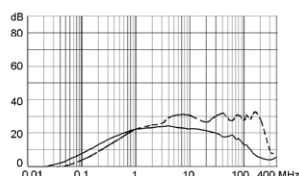
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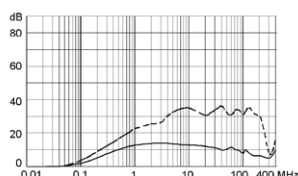
6 A



10 A



15 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Protection Class	Order Number
1	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0000.0
2	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0001.0
4	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0003.0
6	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0004.0
10	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0006.0
15	Standard Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0007.0
1	Standard Version	Screw-on	Rear-Side	I	5120.1000.0
2	Standard Version	Screw-on	Rear-Side	I	5120.1001.0
4	Standard Version	Screw-on	Rear-Side	I	5120.1003.0
6	Standard Version	Screw-on	Rear-Side	I	5120.1004.0
10	Standard Version	Screw-on	Rear-Side	I	5120.1006.0
15	Standard Version	Screw-on	Rear-Side	I	5120.1007.0
1	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0300.0
2	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0301.0
4	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0303.0
6	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0304.0
10	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0306.0
15	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	I	5120.0307.0
1	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1300.0
2	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1301.0
4	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1303.0
6	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1304.0
10	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1306.0
15	Medical Version (M5)	Screw-on	Rear-Side	I	5120.1307.0
2	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	II	5120.0301.1
4	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	II	5120.0303.1
6	Medical Version (M5)	Screw-on/Rivet	Front-/Rear-Side	II	5120.0304.1
1	Medical Version (M5)	Screw-on	Rear-Side	II	5120.1300.1
2	Medical Version (M5)	Screw-on	Rear-Side	II	5120.1301.1
4	Medical Version (M5)	Screw-on	Rear-Side	II	5120.1303.1
6	Medical Version (M5)	Screw-on	Rear-Side	II	5120.1304.1
10	Medical Version (M5)	Screw-on	Rear-Side	II	5120.1306.1
1	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0200.0
2	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0201.0
4	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0203.0

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Protection Class	Order Number
6	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0204.0
10	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0206.0
15	Bleed Resistor Version	Screw-on/Rivet	Front-/Rear-Side	I	5120.0207.0
1	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1200.0
2	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1201.0
4	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1203.0
6	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1204.0
10	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1206.0
15	Bleed Resistor Version	Screw-on	Rear-Side	I	5120.1207.0

- 15 A version only according UL/CSA

- Type for screw-on mounting from rear side has pre-threaded holes for M3 screws

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet with high frequency filter, X2Y technology, ECO design, front- or rear side mounting

Standard- or Medical-Filter

new



Screw-on or rivet mounting
from front or rear side

Screw-on mounting from rear side (integrated
thread)



C14



70° C



Description

- Panel Mount:
Screw-on version from front or rear side
- 2 Functions:
Appliance Inlet, High frequency line filter as standard, industrial and medical version, Protection class I
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40023426
- UL License Number: E72928

Characteristics

- Very compact filter for frequencies up to 1 GHz
- Patented X2Y Technologie for broadband high frequency filtering
- Double shielding for best filter performance
- One single filter design for the given current range
- Designed for standard, industrial and medical applications
- Suitable for assembly in metal plated plastic housings
- For use in equipment acc. IEC 60950/60601

Other versions on request

- Solder terminals

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

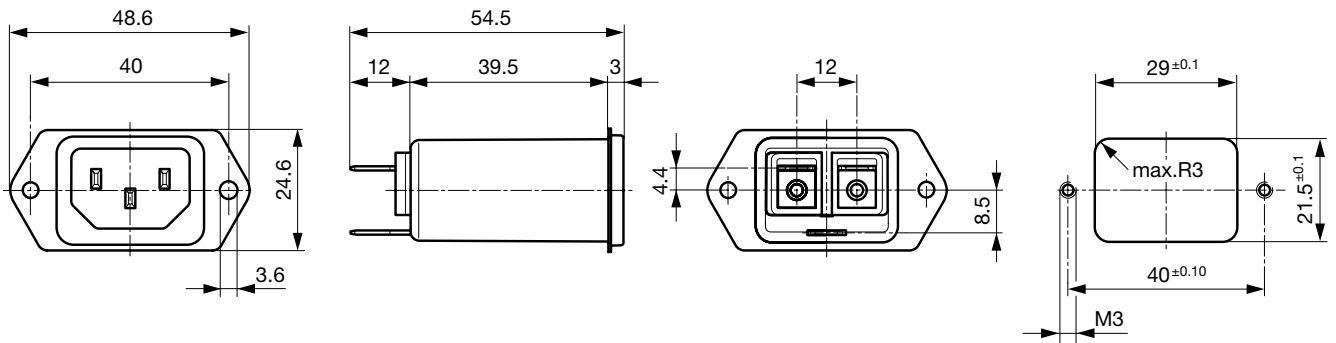
Technical Data

Ratings IEC	10A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	15A @ Ta 40 °C / 250 VAC; 60Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 80 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplast / steel tin-plated, black / metallic, UL 94V-0

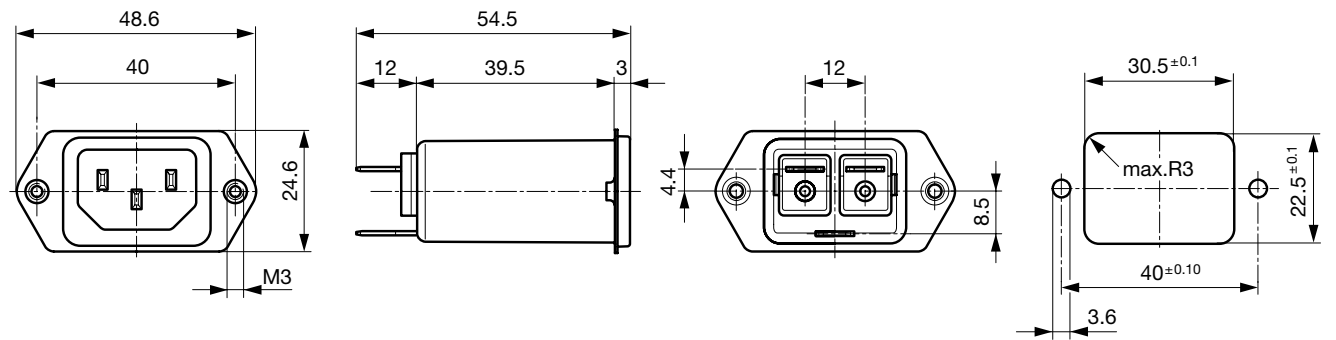
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Line Filter	Standard, medical and industrial version, IEC 60939, IEC 60601-1, UL 1283, UL 544, CSA C22.2 no. 8 Technical details
MTBF	> 3'300'000h acc. to MIL-HB-217 F

DimensionsLength  54.5 mm

Front or rear side mounting for screws with nuts or blind rivets (panel cutout for frontside mounting)



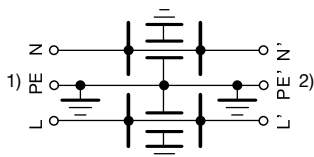
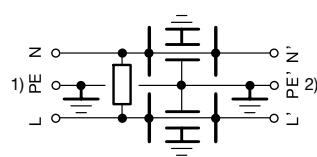
Rear side mounting with pre-formed, threaded holes for M3 screws (panel cutout for rear side mounting)

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
10	Standard Version	1.25	2.5	-
10	Standard Version	1.25	2.5	-
10	Standard Version with Bleed Resistor	1.25	2.5	1
10	Standard Version with Bleed Resistor	1.25	2.5	1
10	Industrial Version	2.35	4.7	-
10	Industrial Version	2.35	4.7	-
10	Medical Version (M80)	0.225	0.45	1
10	Medical Version (M80)	0.225	0.45	1

Diagrams

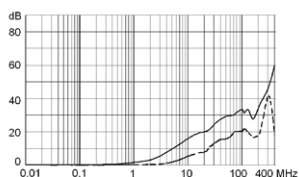
Standard and industrial version

Medical M80 and standard version
with bleed resistor1) Line
2) Load1) Line
2) Load

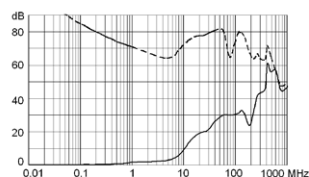
Attenuation Loss

Standard version

CISPR 17 Test Method



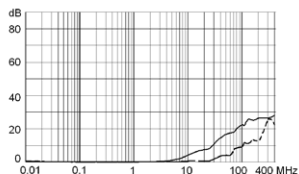
Alternate Test Method



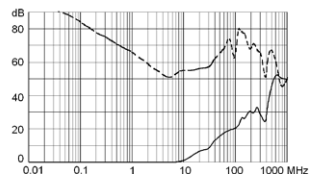
same attenuation loss with bleed resistor

Medical version (M80)

CISPR 17 Test Method

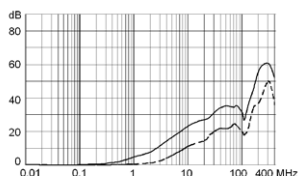


Alternate Test Method

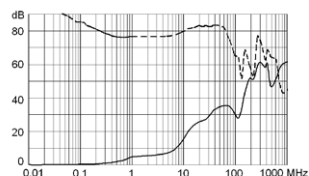


Industrial Version

CISPR 17 Test Method



Alternate Test Method



Comment about alternate test method
see table of variants

Variants
[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel mounting	Mounting side	Order Number
10	15	Standard Version	Screw-on/Rivet	Front-/Rear-Side	5150.0011.0
10	15	Standard Version	Screw-on	Rear-Side	5150.0011.1
10	15	Standard Version with Bleed Resistor	Screw-on/Rivet	Front-/Rear-Side	5150.0021.0
10	15	Standard Version with Bleed Resistor	Screw-on	Rear-Side	5150.0021.1
10	15	Industrial Version	Screw-on/Rivet	Front-/Rear-Side	5150.0041.0
10	15	Industrial Version	Screw-on	Rear-Side	5150.0041.1
10	15	Medical Version (M80)	Screw-on/Rivet	Front-/Rear-Side	5150.0031.0
10	15	Medical Version (M80)	Screw-on	Rear-Side	5150.0031.1

The Alternate Test Method allows the measurement in the GHz frequency range whereas the CISPR 17 method does not cover frequencies above 30MHz. The insertion loss is measured in a throughput method (common mode) and a cross coupled method (differential mode). The differential mode measurement of the alternate test method is not directly comparable to the conventional measurement acc. CISPR 17.

Further information on the X2Y filter technology and on the alternate insertion loss measurement method can be found under www.schurter.com/info_emc

Packaging unit

10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front side mounting



Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 2 Functions:
Appliance Inlet Protection class I, Line-filter in standard version
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

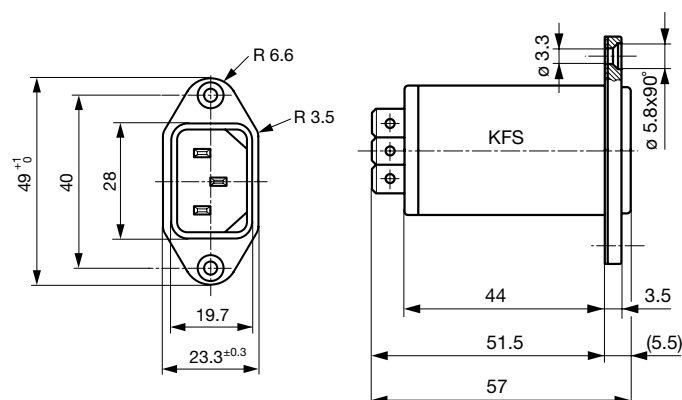
Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Universal line filter for standard applications
- Qualified for use in equipment according IEC/EN 60950

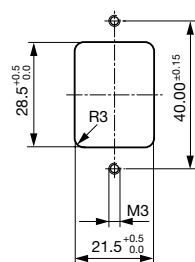
References
[General Product Information](#)
Weblinks
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Impulse Withstand Voltage	> 2.5 kV between L-N (CX2) > 5 kV between L/N-PE
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'100'000h acc. to MIL-HB-217 F

Dimensions

Dimensions

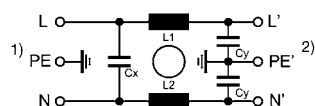


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]
1	Standard Version	2 x 10	47	2.2
2	Standard Version	2 x 4	47	2.2
4	Standard Version	2 x 1.5	47	2.2
6	Standard Version	2 x 0.8	47	2.2
10	Standard Version	2 x 0.3	47	2.2

Diagrams

Standard version

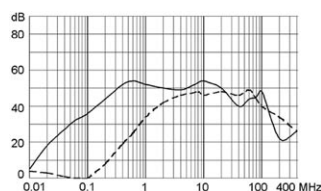


Attenuation Loss

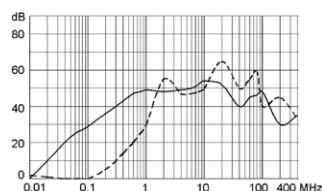
- - - differential mode _____ common mode

Standard version

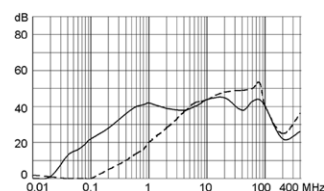
1 A



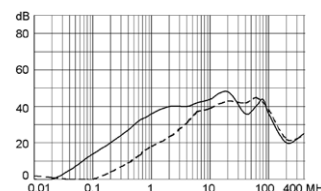
2 A



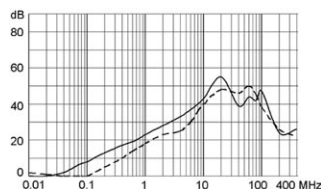
4 A



6 A



10 A



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Type	Rated Current [A]	Filter-Type	CX Class	Order Number
KFS	1	Standard Version	X2	4300.5051
KFS	2	Standard Version	X2	4300.5052
KFS	4	Standard Version	X2	4300.5053
KFS	6	Standard Version	X2	4300.5054
KFS	10	Standard Version	X2	4300.5055

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06
	...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
	...

Inlet filter, front or rear side mounting



Snap-In Version with quick connect terminals
6.3 x 0.8 mm

Screw-On Version with quick connect terminals
6.3 x 0.8 mm

Screw-On Version with flexible wires

C14



70 °C



Description

- Panel Mount:
Snap-in or screw-on mounting from front or rear-side
- 2 Functions:
Appliance Inlet, Line-filter in standard version
- Quick connect terminals or wires

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- For standard applications
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

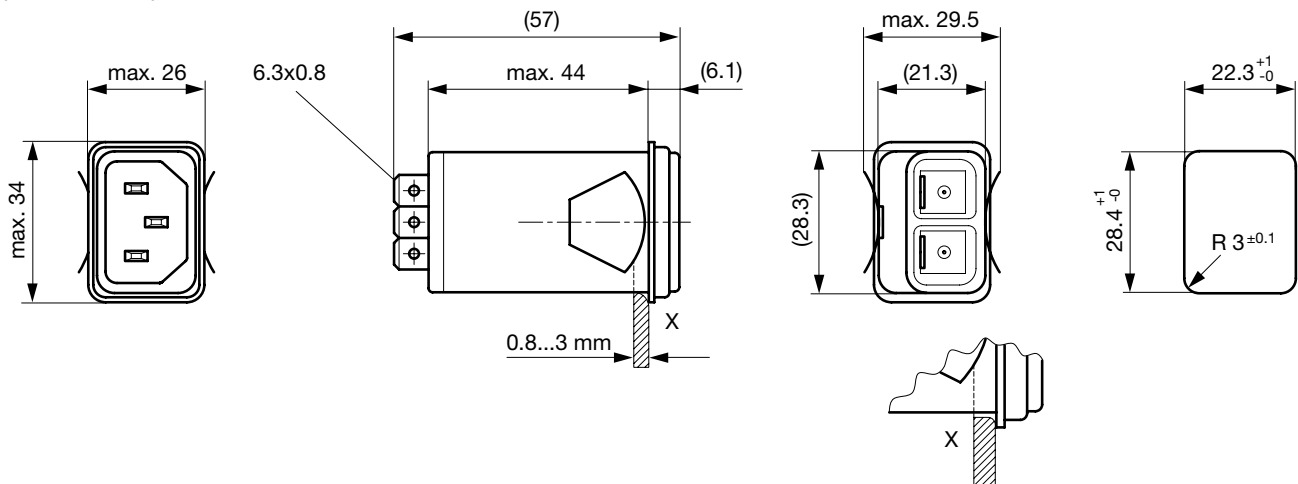
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60 Hz
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Impulse Withstand Voltage	> 2.5 kV between L-N > 5 kV between L/N-PE
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals or wires Quick connect terminals 6.3 x 0.8 mm straight
Panel Thickness s	Screw-on max 8 mm Mounting screw torque max 0.5 Nm Snap-in 1 mm to 3 mm Aluminium 1.5-3 mm, steel 1-3 mm, not suitable for plastic material
Material: Housing	Thermoplastic, black, UL 94V-0

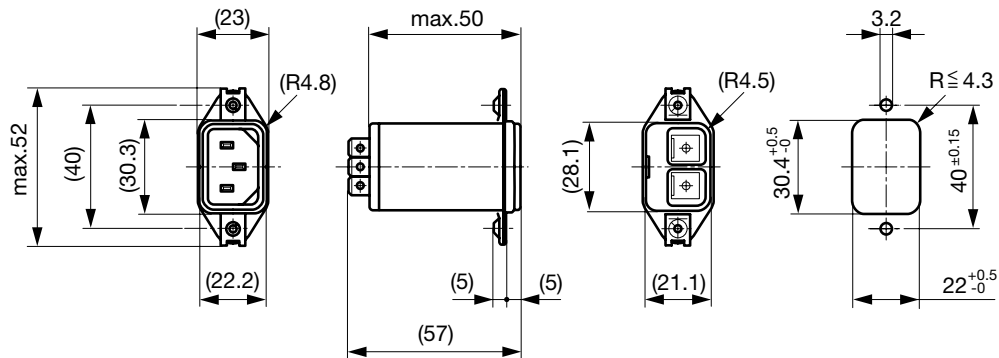
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Line Filter	Standard Version, IEC 60939, UL 1283, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'100'000h acc. to MIL-HB-217 F

Dimensions

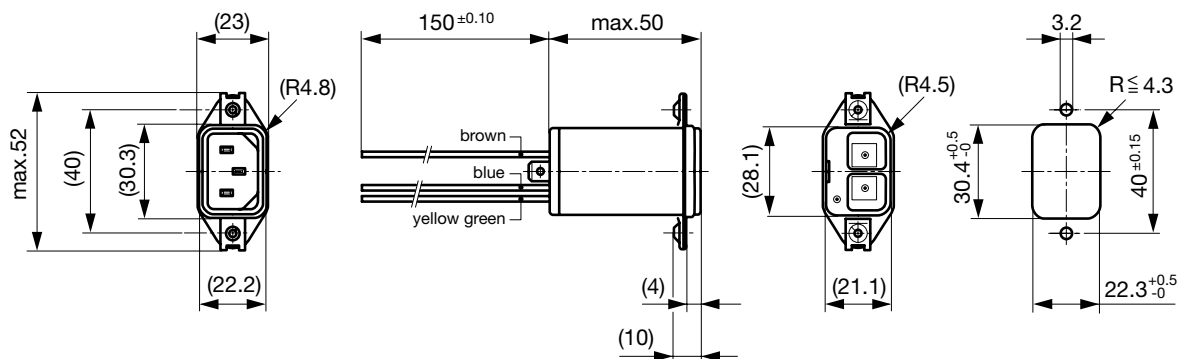
Length | 57 mm
Snap-in, front side, quick connect terminals



Screw-on, rear side, quick connect terminal



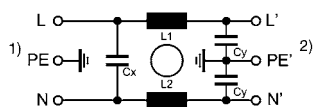
Screw-on, rear side, flexible wires



Technical Data of Filter-Components

Rated Current [A]	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]
1	2 x 10	47	2.2
2	2 x 4	47	2.2
4	2 x 1.5	47	2.2
6	2 x 0.8	47	2.2
10	2 x 0.3	47	2.2

Diagrams

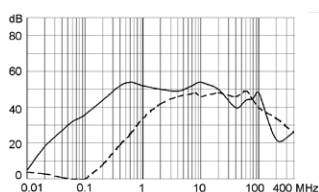


Attenuation Loss

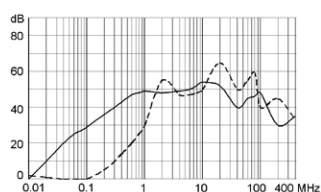
Standard version

- - - differential mode ____ common mode

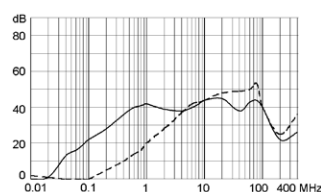
1 A



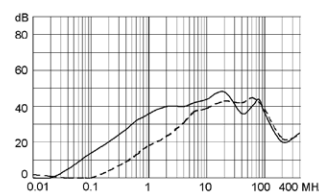
2 A



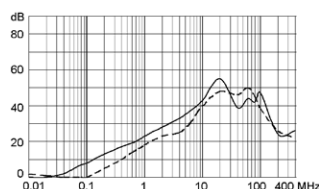
4 A



6 A



10 A



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Rated Current [A]	Mounting style	Panel mounting	Terminal	Order Number
1	Snap-in	Screw-on from front side	Quick connect terminals 6.3 x 0.8 mm	4300.5011
2	Snap-in	Screw-on from front side	Quick connect terminals 6.3 x 0.8 mm	4300.5012
4	Snap-in	Screw-on from front side	Quick connect terminals 6.3 x 0.8 mm	4300.5013
6	Snap-in	Screw-on from front side	Quick connect terminals 6.3 x 0.8 mm	4300.5014
10	Snap-in	Screw-on from front side	Quick connect terminals 6.3 x 0.8 mm	4300.5015
1	Screw-on	Screw-on from rear side	Quick connect terminals 6.3 x 0.8 mm	4300.5091
2	Screw-on	Screw-on from rear side	Quick connect terminals 6.3 x 0.8 mm	4300.5092
4	Screw-on	Screw-on from rear side	Quick connect terminals 6.3 x 0.8 mm	4300.5093
6	Screw-on	Screw-on from rear side	Quick connect terminals 6.3 x 0.8 mm	4300.5094
10	Screw-on	Screw-on from rear side	Quick connect terminals 6.3 x 0.8 mm	4300.5095
1	Screw-on	Screw-on from rear side	Flexible wire 18 AWG	4300.5071
2	Screw-on	Screw-on from rear side	Flexible wire 18 AWG	4300.5072
4	Screw-on	Screw-on from rear side	Flexible wire 18 AWG	4300.5073
6	Screw-on	Screw-on from rear side	Flexible wire 18 AWG	4300.5074
10	Screw-on	Screw-on from rear side	Flexible wire 18 AWG	4300.5075

Packaging unit

10 Pcs

Accessory

Description



Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
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IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front side mounting



Screw-On Version

C14

 70° C



Description

- Panel Mount:
Screw-on from front side
- 2 Functions:
Appliance Inlet Protection class I, Line-filter in standard version
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Universal line filter for standard applications
With enhanced surge withstand voltage
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

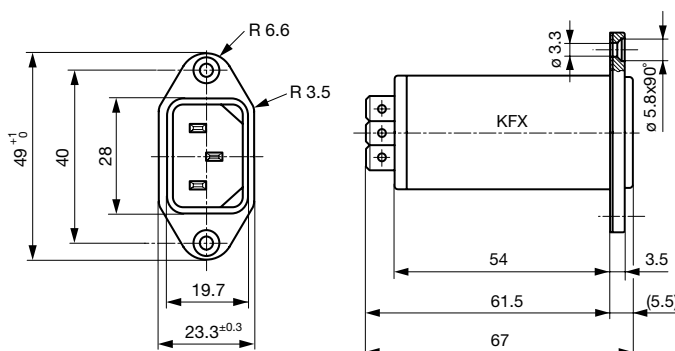
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

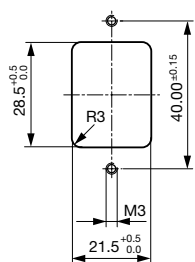
Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Impulse Withstand Voltage	> 4kV between L-N (CX1) > 5kV between L/N-PE
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'100'000h acc. to MIL-HB-217 F

Dimensions



Dimensions

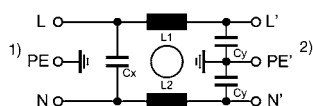


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]
1	Standard Version	2 x 10	47	2.2
2	Standard Version	2 x 4	47	2.2
4	Standard Version	2 x 1.5	47	2.2
6	Standard Version	2 x 0.8	47	2.2
10	Standard Version	2 x 0.3	47	2.2

Diagrams

Standard version



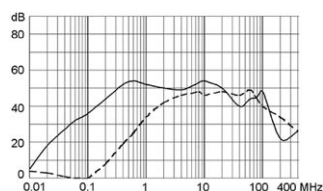
- 1) Line
2) Load

Attenuation Loss

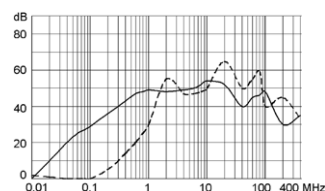
Standard version

--- differential mode ____ common mode

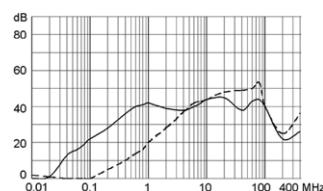
1 A



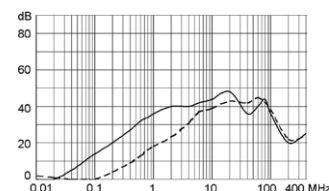
2 A



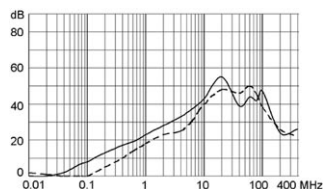
4 A



6 A



10 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Type	Rated Current [A]	Filter-Type	CX Class	Order Number
KFX	1	Standard Version	X1	4300.5061
KFX	2	Standard Version	X1	4300.5062
KFX	4	Standard Version	X1	4300.5063
KFX	6	Standard Version	X1	4300.5064
KFX	10	Standard Version	X1	4300.5065

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
Power Cord with IEC Appliance Connector C15, straight, 120°C	3366

...

Inlet filter, rear side "lock and shield" mounting

Standard- or Medical-Filter



Snap-In Version

GRF2: only with shield, without line filter

C14



70° C



Description

- Panel Mount:
Snap-in version from rear-side
- 2 Functions:
Appliance Inlet Protection class I, with EMC-shield
- Alternative: version with line filter

Approvals

- VDE License Number: 40025743
- UL License Number: E96454
- CSA License Number: 38456

Characteristics

- Time saving "Lock and Shield" snap-in design for rear-panel mounting
- All single elements are already wired
- Innovative EMC-shielding with flexible steel segments for an excellent contact to the panel
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- With solder terminals

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

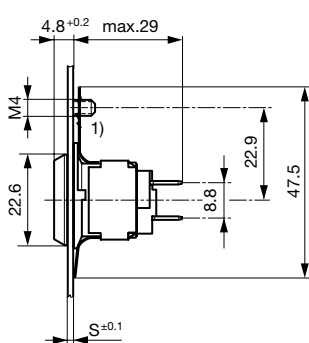
Technical Data

Ratings IEC	10A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	15A @ Ta 40 °C / 125 VAC; 60Hz
Dielectric Strength	> 1.7 kVDC between L-N
	> 2.7 kVDC between L/N-PE
	Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm Solder terminal on request
Panel Thickness s	Snap-in: 1.2/1.5/2 mm
Material: Housing	Thermoplastic, black, UL 94V-0

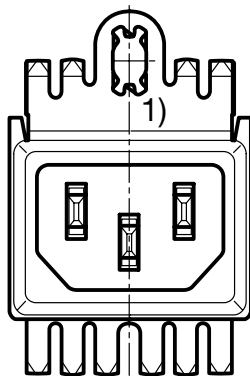
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
MTBF	> 3'300'000h acc. to MIL-HB-217 F

Dimensions

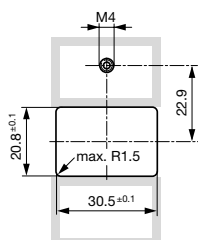
GRF2



1) Terminal for earth screw M4

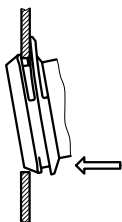


Dimensions



This area must be conductive for optimal shielding. Do not apply paint or coatings.

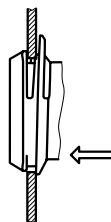
Dimensions



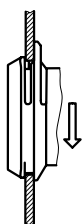
Step 1
Place the socket in the top edge of the panel cut-out



Step 2
Push the socket upwards



Step 3
Push the socket forward into the panel cut-out



Step 4
Release the socket. The component is self adjusting.

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel Thickness s [mm]	Additional ground terminal	Order Number
10	15	without	1.2		GRF2.0212.11
10	15	without	1.2		GRF2.0312.11
10	15	without	1.5		GRF2.0215.11
10	15	without	1.5		GRF2.0315.11
10	15	without	2		GRF2.0220.11
10	15	without	2		GRF2.0320.11

Packaging unit 100 Pcs

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, rear side "lock and shield" mounting

Standard- or Medical-Filter



Snap-In Version
 Snap-In Version
 GRF4: with shield and line filter



Description

- Panel Mount:
Snap-in version from rear-side
- 3 Functions:
Appliance Inlet Protection class I, with EMC-shield, Line filter in standard and medical version
- Alternative: version without line filter [GRF2](#)

Approvals

- VDE License Number: 102348
- UL License Number: E72928
- CSA License Number: 701867

Characteristics

- Time saving "Lock and Shield" snap-in design for rear-panel mounting
- All single elements are already wired
- Innovative EMC-shielding with flexible steel segments for an excellent contact to the panel
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Panel thickness 1.2 mm and 2.0 mm
- With solder terminals

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

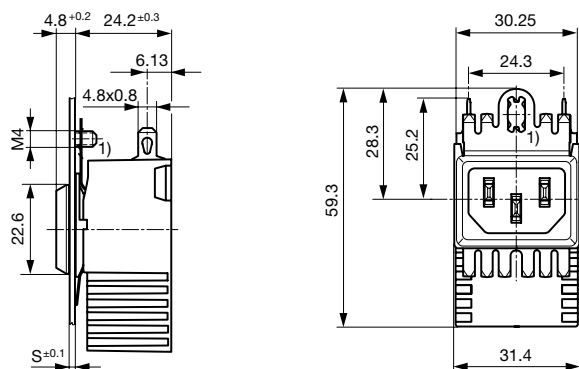
Technical Data

Ratings IEC	0.5 - 10A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	0.5 - 15A @ Ta 40 °C / 125 VAC; 60 Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm Solder terminal on request
Panel Thickness s	Snap-in: 1.5 mm (other on request)
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'300'000 h acc. to MIL-HB-217 F

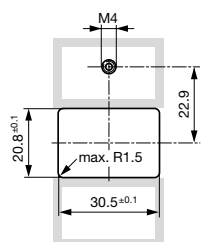
Dimensions

GRF4



1) Terminal for earth screw M4

Dimensions

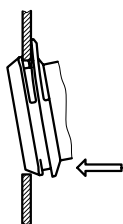


This area must be conductive for optimal shielding. Do not apply paint or coatings.

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
0.5	Standard Version	2 x 24	100	2.2	-
1	Standard Version	2 x 12	100	2.2	-
3	Standard Version	2 x 2.5	100	2.2	-
6	Standard Version	2 x 0.78	100	2.2	-
10	Standard Version	2 x 0.225	100	2.2	-
15	Standard Version	2 x 0.075	100	2.2	-
0.5	Medical Version (M5)	2 x 24	100	-	1
1	Medical Version (M5)	2 x 12	100	-	1
3	Medical Version (M5)	2 x 2.5	100	-	1
6	Medical Version (M5)	2 x 0.78	100	-	1
10	Medical Version (M5)	2 x 0.225	100	-	1
15	Medical Version (M5)	2 x 0.075	100	-	1

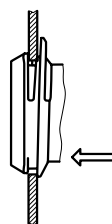
Dimensions



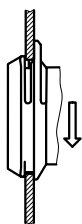
Step 1
Place the socket in the top edge of the panel cut-out



Step 2
Push the socket upwards



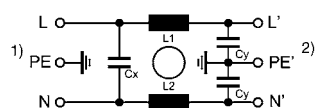
Step 3
Push the socket forward into the panel cut-out

**Step 4**

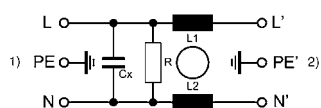
Release the socket. The component is self adjusting.

Diagrams

Standard version

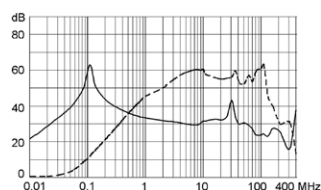


Medical version

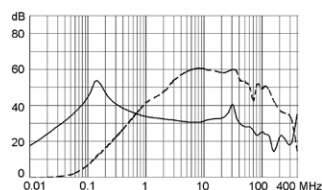
**Attenuation Loss**

Standard version

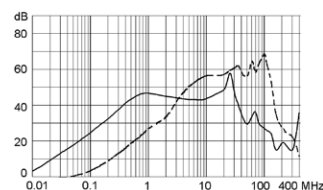
0.5 A



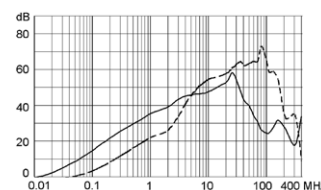
1 A



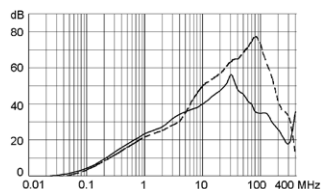
3 A



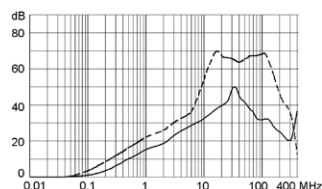
6 A



10 A

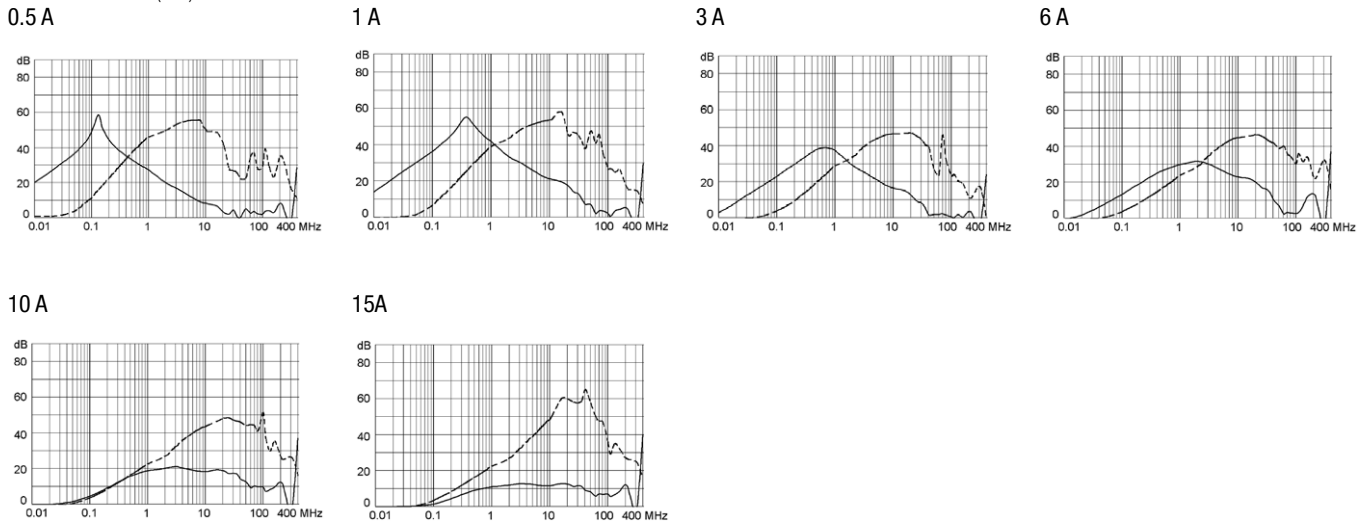


15 A



- - - differential mode ____ common mode

Medical version (M5)



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel Thickness s [mm]	Order Number
0.5	15	Standard Version	-	GRF4.0411.011
1	15	Standard Version	-	GRF4.0412.011
3	15	Standard Version	-	GRF4.0413.014
6	15	Standard Version	-	GRF4.0416.011
10	15	Standard Version	-	GRF4.0417.011
0.5	0.5	Standard Version	1	GRF4.0411.011.C
1	1	Standard Version	1	GRF4.0412.011.C
6	6	Standard Version	1	GRF4.0416.011.C
10	10	Standard Version	1	GRF4.0417.011.C
0.5	0.5	Standard Version	1.5	GRF4.0411.013
0.5	0.5	Standard Version	1.5	GRF4.0411.013.C
1	1	Standard Version	1.5	GRF4.0412.013
1	1	Standard Version	1.5	GRF4.0412.013.C
3	3	Standard Version	1.5	GRF4.0413.013
3	3	Standard Version	1.5	GRF4.0413.013.C
6	6	Standard Version	1.5	GRF4.0416.013
6	6	Standard Version	1.5	GRF4.0416.013.C
10	10	Standard Version	1.5	GRF4.0417.013
10	10	Standard Version	1.5	GRF4.0417.013.C
15	15	Standard Version	1.5	GRF4.0419.013
15	15	Standard Version	1.5	GRF4.0419.013.C
3	3	Standard Version	2	GRF4.0413.014.C
0.5	0.5	Medical Version (M5)	1.5	GRF4.0021.013
0.5	0.5	Medical Version (M5)	1.5	GRF4.0021.013.C
1	1	Medical Version (M5)	1.5	GRF4.0022.013
1	1	Medical Version (M5)	1.5	GRF4.0022.013.C
3	3	Medical Version (M5)	1.5	GRF4.0023.013
3	3	Medical Version (M5)	1.5	GRF4.0023.013.C
6	6	Medical Version (M5)	1.5	GRF4.0026.013
6	6	Medical Version (M5)	1.5	GRF4.0026.013.C
10	10	Medical Version (M5)	1.5	GRF4.0027.013
10	10	Medical Version (M5)	1.5	GRF4.0027.013.C
15	15	Medical Version (M5)	1.5	GRF4.0029.013
15	15	Medical Version (M5)	1.5	GRF4.0029.013.C

Articles with packing unit 200 (without ending ".C") are no longer available

Packaging unit 20 Pcs

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder / quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder / quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

"Lock and shield" mounting, line switch, fuseh. 5x20 mm with/without voltage sel. (series-parallel)

Standard- or Medical-Filter



GRM2: only with shield, without line filter
Snap-In Version

C14



70° C



Description

- Panel Mount:
Snap-in version from rear-side
- 5 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, with or without Fuseholder for fuse-links 5 x 20 mm, with or without voltage selector, with EMC-shield

Approvals

- VDE License Number: 40024784
- UL License Number: E93617

Characteristics

- Ultra-compact design
Time saving "Lock and Shield" snap-in design for rear-panel mounting
- All single elements are already wired
- Fuseholder on the inside of the equipment prevents accidental use of incorrect fuse-links by the user
- Voltage selector for two voltage ranges
Innovative EMC-shielding with flexible steel segments for an excellent contact to the panel
- Insulation cover on the rear-side
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Panel thickness 1.0 / 2 / 2.5 mm (max.)
- Fuseholder 1-pole
- Line switch 1-pole
- Voltage selector with other marking

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

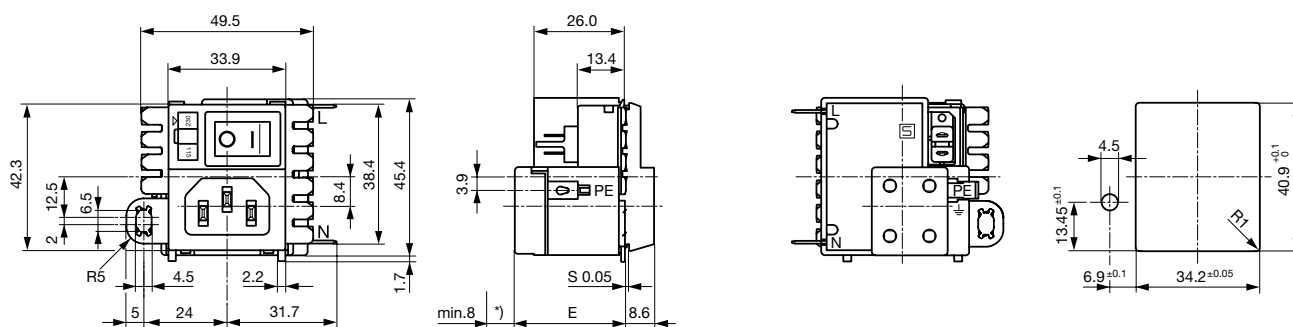
Technical Data

Ratings IEC	10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	10A @ Ta 40 °C / 125VAC; 60Hz
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm Solder terminal on request Solder terminals for voltage selector
Panel Thickness s	Snap-in: 1.5 mm (other on request)
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)/ 1.6W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Voltage selector	optional, jumper, 2 digits
MTBF	> 1'400'000h acc. to MIL-HB-217 F

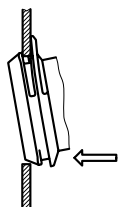
Dimensions

Length |-----| 48.3 mm



Dimensions

Step 1



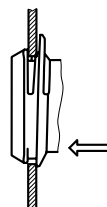
Place the socket in top edge of the panel cut-out.

Step 2



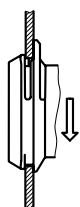
 Push the socket upwards.

Step 3



Push the socket forward into the panel cut-out.

Step 4

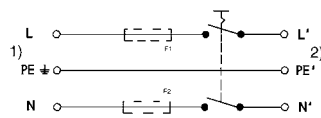
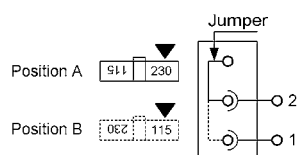


Release the socket. The component is self adjusting.

Diagrams

Voltage selector

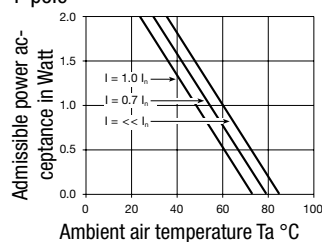
GRM2



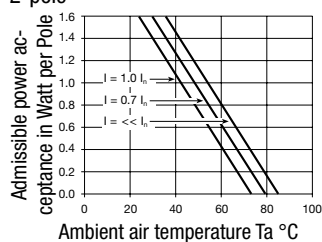
- 1) Line
- 2) Load

Derating Curves

1-pole



2-pole



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Basic version:

- Marking of the voltage selector 115/230
- with housing and cover on the rear-side

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Voltage selector	Order Number
10	without	-	2-pole		GRM2.1160.013
10	without	-	2-pole	●	GRM2.1161.023
10	without	2-pole	2-pole		GRM2.1180.013
10	without	2-pole	2-pole	●	GRM2.1181.023

Packaging unit 20 Pcs

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Filter for backpack mounting to KP01

Standard- or Medical-Filter

KP01 Base Module
(not enclosed)**Description**

- Component:
Snap-in version from rear-side
- 1 Function:
Line filter in standard and medical version
- For PCB mounting
- Only in combination with base-module type KP01

Approvals

- VDE License Number: 104869
- UL License Number: E72928
- CSA License Number: 97784

Characteristics

- Line filter for "backpack" mounting for modules type KP01 (snaps onto rear of KP01)
- Electrical connection done on the PCB
- Qualified for use in equipment according IEC/EN 60950

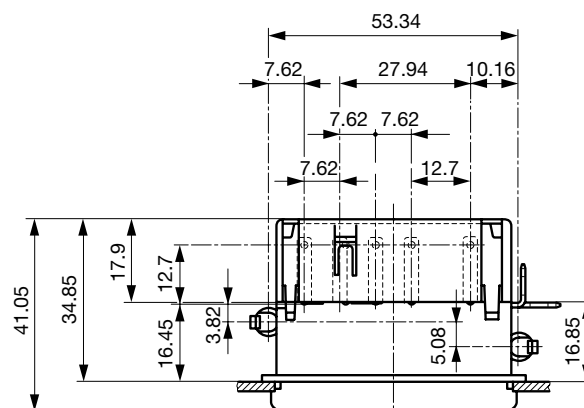
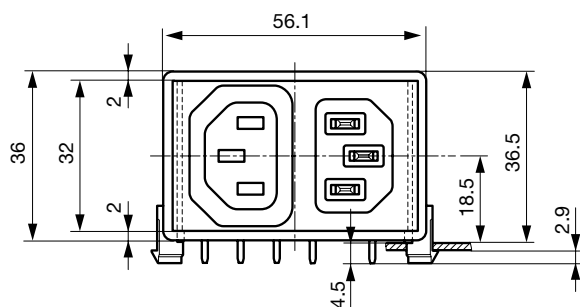
References
[General Product Information](#)
Weblinks
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60 Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 70 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	For PCB mounting
Material: Housing	Thermoplastic, black, UL 94V-0

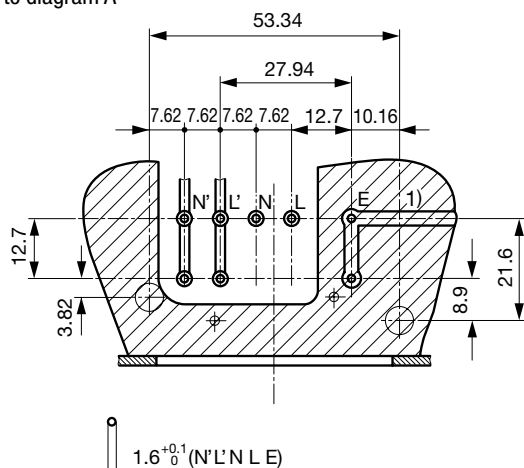
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'600'000h acc. to MIL-HB-217 F

Dimensions

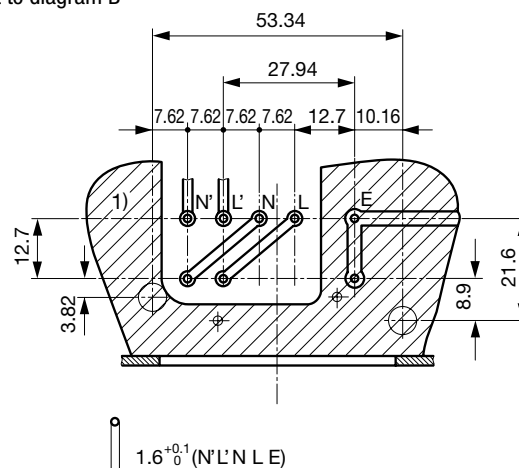
Length 53.4 mm



Drilling diagram
Layout to diagram A



Drilling diagram
Layout to diagram B

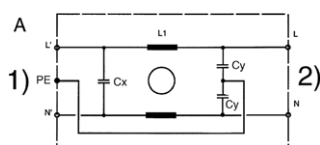


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	100	2.2	-
2	Standard Version	2 x 4	100	2.2	-
4	Standard Version	2 x 2	100	2.2	-
6	Standard Version	2 x 1	100	2.2	-
8	Standard Version	2 x 0.6	100	2.2	-
10	Standard Version	2 x 0.4	100	2.2	-
1	Medical Version (M5)	2 x 10	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
4	Medical Version (M5)	2 x 2	100	-	1
6	Medical Version (M5)	2 x 1	100	-	1
8	Medical Version (M5)	2 x 0.6	100	-	1
10	Medical Version (M5)	2 x 0.4	100	-	1

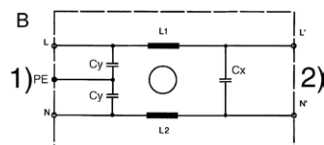
Diagrams

Standard line filter



1) Line
2) Load

EMI filtering of equipment emissions



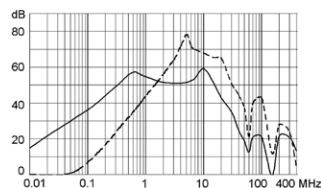
1) Line
2) Load

Attenuation Loss

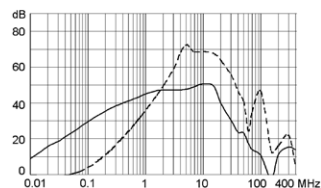
Standard version

- - - differential mode ____ common mode

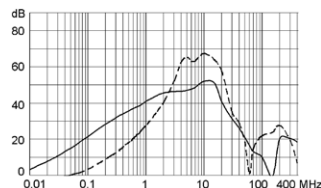
1 A



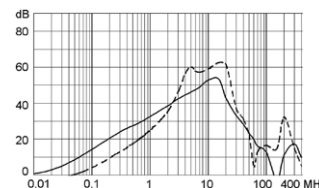
2 A



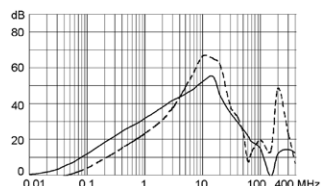
4 A



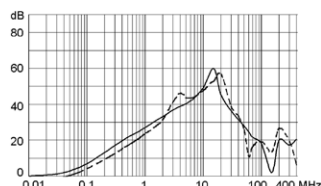
6 A



8 A

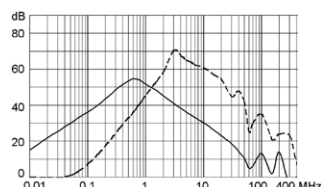


10 A

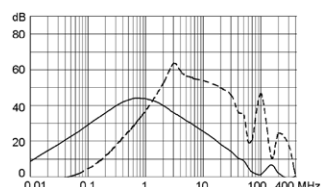


Medical version (M5)

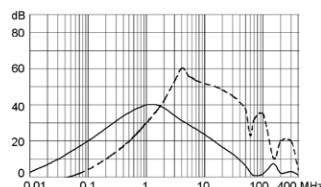
1 A



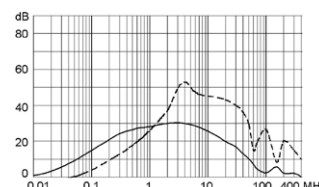
2 A



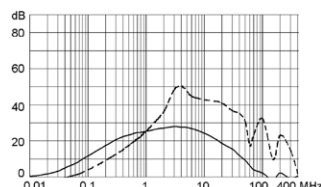
4 A



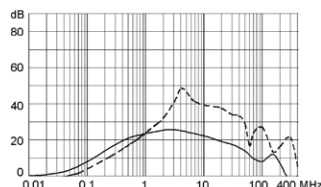
6 A



8 A



10 A

**Variants**

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Rated Current [A]	Filter-Type	Order Number
1	Standard Version	KPF1.1
2	Standard Version	KPF2.1
4	Standard Version	KPF4.1
6	Standard Version	KPF6.1
8	Standard Version	KPF8.1
10	Standard Version	KPF0.1
1	Medical Version (M5)	KPF1.3
2	Medical Version (M5)	KPF2.3
4	Medical Version (M5)	KPF4.3
6	Medical Version (M5)	KPF6.3
8	Medical Version (M5)	KPF8.3
10	Medical Version (M5)	KPF0.3

Packaging unit

50 Pcs

Inlet C20 with filter, ECO design, front or rear side mounting

Standard- or Medical-Filter



new

Screw-on or rivet mounting from front or rear side
Screw-On VersionScrew-on mounting from rear side, integrated thread
Screw-On VersionSnap-in mounting from front side
Snap-In Version

C20



70° C

**Description**

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 2 Functions:
Appliance Inlet Protection class I, Line filter in standard and medical version
- Quick connect terminals
- Fits to type: [Kabelverbindung/16 A; 4790; 4795 Kabelverbindung/16 A; 0104; 1651; 1652; 1654; 4790; 4795](#)

Approvals

- VDE License Number: 104884
- UL License Number: E72928

Characteristics

- Optimal shielding due to completely closed filter case, unpotted
- Suitable for assembly in metal plated plastic housings
- Version with class X1 and X2 (standard version) capacitors
- Universal line filter for standard applications
- Designed for standard and medical applications
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Solder terminals
- Medical version M80
- Capacity CX 330 nF

References[General Product Information](#)**Weblinks**
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

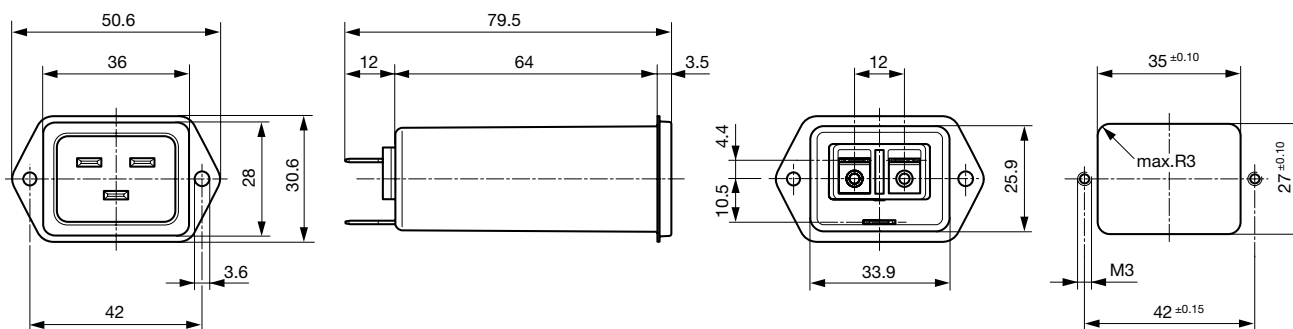
Ratings IEC	16A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	20A @ Ta 40 °C / 250 VAC; 60Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Impulse Withstand Voltage	> 2.5 kV between L-N (CX2) > 4 kV between L-N (CX1) > 5 kV between L/N-PE (Cy2) voltage (1.2/50 µs)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm Snap-in: 0.8 mm to 3 mm (all steps with one variant)
Material: Housing	Thermoplast / steel tin-plated, black / metallic, UL 94V-0

Appliance-Inlet/-Outlet	C20 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16 A, Protection class I
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'000'000h acc. to MIL-HB-217 F

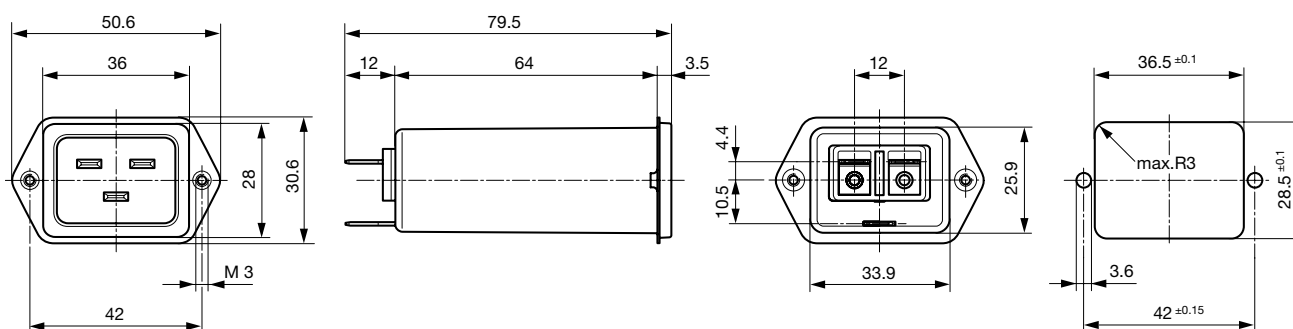
Dimensions

Length |-----| 79.5 mm

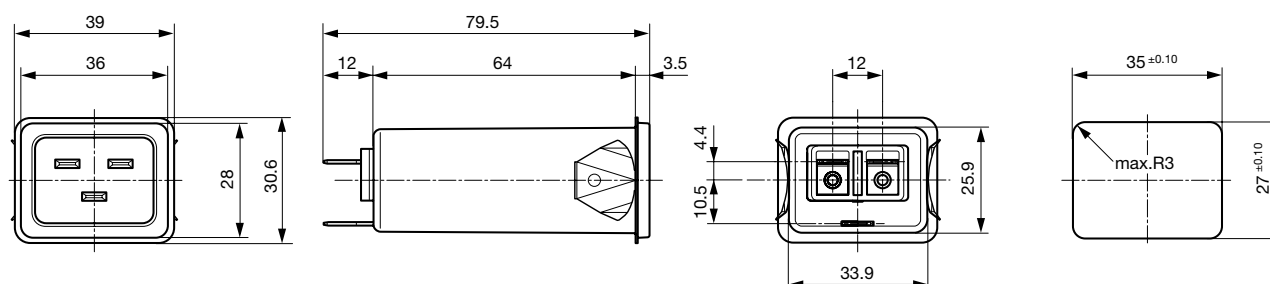
Front or rear side mounting for screws with nuts or blind rivets



Rear side mounting with pre-formed, threaded holes for M3 screws



Snap-in mounting from front side

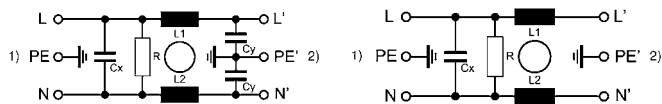


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
16	Standard Version	2 x 0.6	100	2.2	1
20	Standard Version	2 x 0.3	100	2.2	1
16	Medical Version (M5)	2 x 0.6	100	-	1
20	Medical Version (M5)	2 x 0.3	100	-	1

Diagrams

Standard or medical version (M80) Medical version (M5)

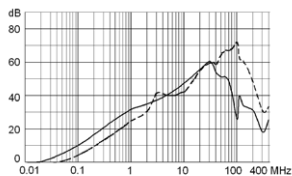
1) Line
2) Load1) Line
2) Load

Attenuation Loss

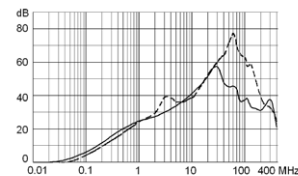
- - - differential mode _____ common mode

Standard version

16 A

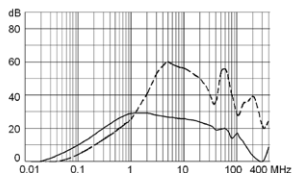


20 A

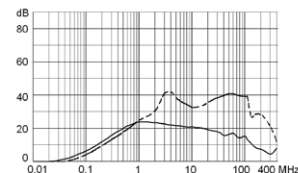


Medical version (M5)

16 A



20 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel mounting	Mounting side	Terminal	Capacitor	Order Number
16	16	Standard Version	Screw-on/Rivet	Front-Side	Quick connect terminals	X2	5130.0000
16	20	Standard Version	Screw-on/Rivet	Front-Side	Quick connect terminals	X2	5130.0001
16	16	Standard Version	Screw-on/Rivet	Front-Side	Quick connect terminals	X1	5130.0100
16	20	Standard Version	Screw-on/Rivet	Front-Side	Quick connect terminals	X1	5130.0101
16	16	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X2	5130.1000
16	20	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X2	5130.1001
16	16	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X1	5130.1100
16	20	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X1	5130.1101
16	16	Standard Version	Snap-in	Front-Side	Quick connect terminals	X2	5130.2000
16	20	Standard Version	Snap-in	Front-Side	Quick connect terminals	X2	5130.2001
16	16	Standard Version	Snap-in	Front-Side	Quick connect terminals	X1	5130.2100
16	20	Standard Version	Snap-in	Front-Side	Quick connect terminals	X1	5130.2101
16	16	Medical Version (M5)	Screw-on/Rivet	Front-Side	Quick connect terminals	X2	5130.0200
16	20	Medical Version (M5)	Screw-on/Rivet	Front-Side	Quick connect terminals	X2	5130.0201
16	16	Medical Version (M5)	Screw-on/Rivet	Front-Side	Quick connect terminals	X1	5130.0300
16	20	Medical Version (M5)	Screw-on/Rivet	Front-Side	Quick connect terminals	X1	5130.0301

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel mounting	Mounting side	Terminal	Capacitor	Order Number
16	16	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X2	5130.1200
16	20	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X2	5130.1201
16	16	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X1	5130.1300
16	20	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X1	5130.1301
16	16	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X2	5130.2200
16	20	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X2	5130.2201
16	16	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X1	5130.2300
16	20	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X1	5130.2301

Type for screw on mounting from rear side has pre-threaded holes for M3 screws

Packaging unit 20 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passender Stecker

Category / Description



Connector

IEC connector C19, rewirable, angled	4790
IEC connector C19, rewirable, straight	4795

Power Supply or Interconnection Cord

Kabelverbindung/16 A

Passende Dose



Connector

IEC connector C19, rewirable, straight	0104
IEC connector C19, rewirable, angled	1651
IEC connector C19, rewirable, straight	1652
IEC connector C19, rewirable, angled	4790
IEC connector C19, rewirable, straight	4795



Power Supply or Interconnection Cord

Power Cord with IEC Appliance Connector C19, straight, 70°C

1654

Kabelverbindung/16 A

Inlet filter, front or rear side mounting

Standard- or Medical-Filter

Screw-on mounting
from front sideSnap-in mounting
from front sideNew
Screw-on mounting
from rear side
with wires (stranded)

C20



70 °C

**Description**

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 2 Functions:
Appliance Inlet Protection class I, Line filter in standard and medical version
- Solder, quick connect or wires (stranded)

Approvals

- VDE License Number: 104884
- UL License Number: E72928
- CSA License Number: 97784

Characteristics

- Compact design with optimal shielding
Suitable for assembly in metal plated plastic housings
- Version with class X1 and X2 (standard version) capacitors
- Universal line filter for standard applications
Designed for standard and medical applications
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- 16A according to UL
- Capacity CX 330 nF

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

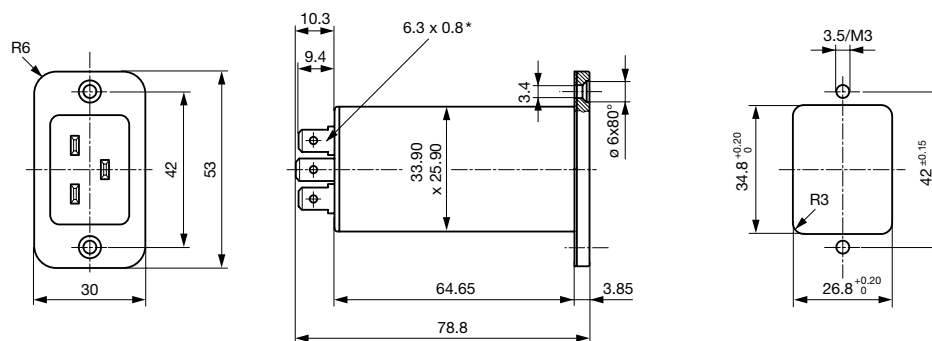
Ratings IEC	16A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	20A @ Ta 40 °C / 250VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250V / 60Hz)
Dielectric Strength	> 1.7 kVDC between L-N (Cy2) > 2.7 kVDC between L/N-PE (Cy2) Test voltage (2 sec)
Impulse Withstand Voltage	> 2.5 kV between L-N (CX2) > 4 kV between L-N (CX1) > 5 kV between L/N-PE (Cy2) voltage (1.2/50 µs)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Solder, quick connect or wires (stranded)
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm Snap-in: 1 mm to 3 mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C20 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16A, Protection class I
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 3'000'000 h acc. to MIL-HB-217 F

Dimensions

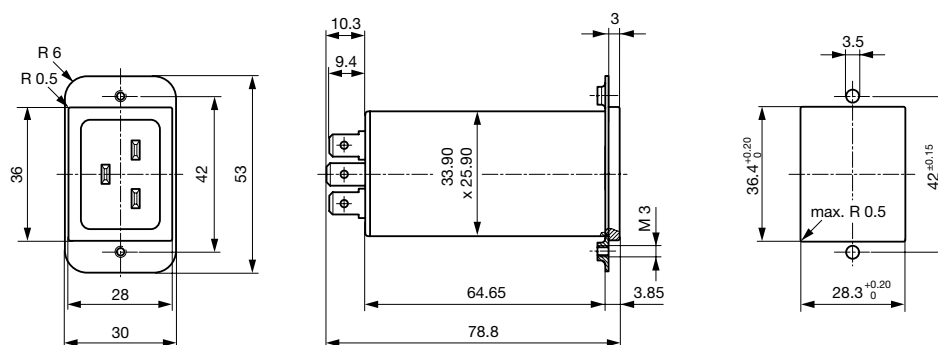
Screw-on mounting from front side

Length | 78.8 mm

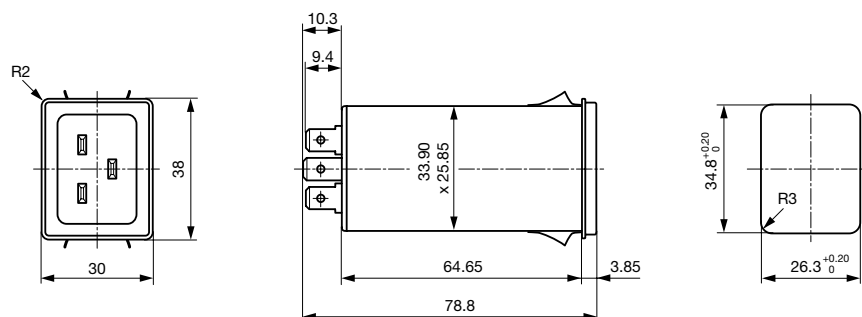


* Solder terminal: identical outer dimensions

Screw-on mounting from rear side with metal flange



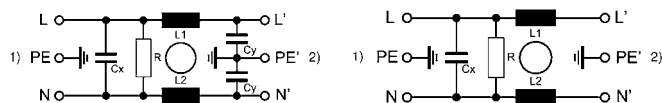
Snap-in mounting from front side

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
16	Standard Version	2 x 0.3	100	2.2	1
16	Medical Version (M5)	2 x 0.3	100	-	1
16	Medical Version (M80)	2 x 0.3	100	0.47	1

Diagrams

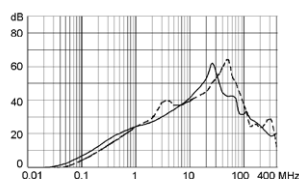
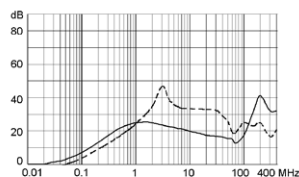
Standard or medical version (M80) Medical version (M5)

1) Line
2) Load1) Line
2) Load

Attenuation Loss

Standard version
IEC 16A / UL 20A

- - - differential mode common mode

Medical version (M5)
IEC 16A / UL 20A

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel mounting	Mounting side	Terminal	Capacitor	Order Number
16	20	Standard Version	Screw-on	Front-Side	Quick connect terminals	X2	C20F.0101
16	20	Standard Version	Screw-on	Front-Side	Quick connect terminals	X1	C20F.0103
16	20	Standard Version	Screw-on	Front-Side	Solder terminals	X2	C20F.0001
16	20	Standard Version	Screw-on	Front-Side	Solder terminals	X1	C20F.0003
16	20	Standard Version	Screw-on	Rear-Side	Flexible wire14 AWG	X2	C20F.0221
16	20	Standard Version	Screw-on	Rear-Side	Flexible wire14 AWG	X1	C20F.0223
16	20	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X2	C20F.0121
16	20	Standard Version	Screw-on	Rear-Side	Quick connect terminals	X1	C20F.0123
16	20	Standard Version	Screw-on	Rear-Side	Solder terminals	X2	C20F.0021
16	20	Standard Version	Screw-on	Rear-Side	Solder terminals	X1	C20F.0023
16	20	Standard Version	Snap-in	Front-Side	Quick connect terminals	X2	C20F.0111
16	20	Standard Version	Snap-in	Front-Side	Quick connect terminals	X1	C20F.0113
16	20	Standard Version	Snap-in	Front-Side	Solder terminals	X2	C20F.0011
16	20	Standard Version	Snap-in	Front-Side	Solder terminals	X1	C20F.0013
16	20	Medical Version (M5)	Screw-on	Front-Side	Quick connect terminals	X2	C20F.0102
16	20	Medical Version (M5)	Screw-on	Front-Side	Quick connect terminals	X1	C20F.0104
16	20	Medical Version (M5)	Screw-on	Front-Side	Solder terminals	X2	C20F.0002
16	20	Medical Version (M5)	Screw-on	Front-Side	Solder terminals	X1	C20F.0004
16	20	Medical Version (M5)	Screw-on	Rear-Side	Wires14 AWG	X1	C20F.0224
16	20	Medical Version (M5)	Screw-on	Rear-Side	Flexible wire14 AWG	X2	C20F.0222
16	20	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X2	C20F.0122
16	20	Medical Version (M5)	Screw-on	Rear-Side	Quick connect terminals	X1	C20F.0124
16	20	Medical Version (M5)	Screw-on	Rear-Side	Solder terminals	X2	C20F.0022

Rated Current IEC [A]	Rated Current UL [A]	Filter-Type	Panel mounting	Mounting side	Terminal	Capacitor	Order Number
16	20	Medical Version (M5)	Screw-on	Rear-Side	Solder terminals	X1	C20F.0024
16	20	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X2	C20F.0112
16	20	Medical Version (M5)	Snap-in	Front-Side	Quick connect terminals	X1	C20F.0114
16	20	Medical Version (M5)	Snap-in	Front-Side	Solder terminals	X2	C20F.0012
16	20	Medical Version (M5)	Snap-in	Front-Side	Solder terminals	X1	C20F.0014
16	20	Medical Version (M80)	Screw-on	Rear-Side	Quick connect terminals	X2	C20F.0125
16	20	Medical Version (M80)	Screw-on	Rear-Side	Quick connect terminals	X1	C20F.0126
16	20	Medical Version (M80)	Screw-on	Rear-Side	Solder terminals	X2	C20F.0025
16	20	Medical Version (M80)	Screw-on	Rear-Side	Solder terminals	X1	C20F.0026

Wire lenght: 150 mm

Packaging unit 20 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Connector



IEC connector C19, rewirable, straight	0104
IEC connector C19, rewirable, angled	1651
IEC connector C19, rewirable, straight	1652
IEC connector C19, rewirable, angled	4790
IEC connector C19, rewirable, straight	4795



Power Supply or Interconnection Cord

Power Cord with IEC Appliance Connector C19, straight, 70°C	1654
	Kabelverbindung/16 A

Inlet with filter, IP65, front or rear mounting, fuseholder 5x20 mm, protection class I or II

Medical fuse drawer



new



Mounting from front sideScrew-On Version



Mounting from rear sideScrew-On Version



Description

- Panel Mount:
Screw-on version from front or rear side, Screws with sealing are included
- 4 Functions:
Appliance Inlet protection class I or II, Line filter in standard and medical version, Fuseholder for fuse-links 5 x 20 mm, IP 65 protection
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40016382
- UL License Number: E72928

Characteristics

- Extreme robust design
- All single elements are already wired
- Screw type fuse carrier, slotted
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- With EMC-shield
- Especially for applications in rough environments
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- With solder terminals
- Class X1- and Y1-capacitors for enhanced withstand voltage
- Medical version M80
- Version with current rating 3 A

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

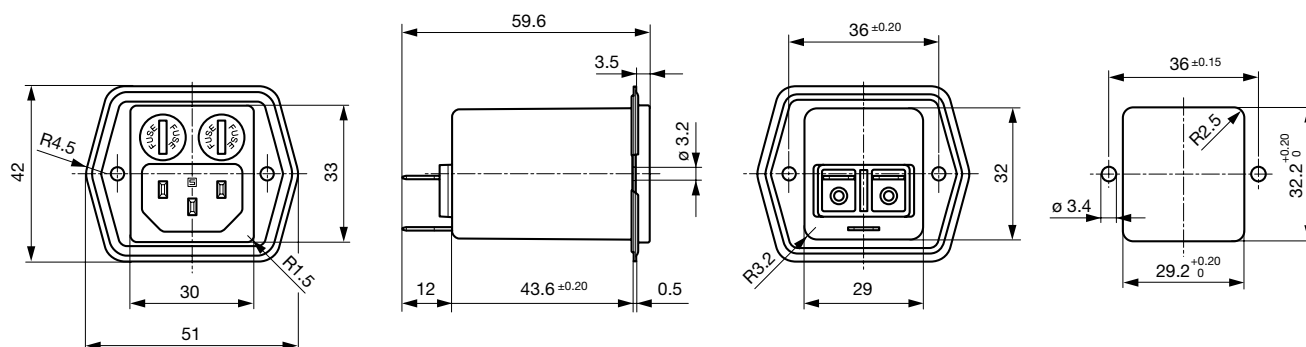
Ratings IEC	1 - 8A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 8A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 65 acc. to IEC 60529 from rear-side IP 65 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I or II acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on, max 3mm Mounting screw torque max 0.8Nm 2 screws M3 with sealing are provided
Material: Housing	black / metallic, UL 94V-0

Appliance-Inlet/-Outlet	C14/C18 acc. to IEC/EN 60320-1 UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 8 A, Protection class I or II
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6W 1 pole/ 1,2W 2-pole per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'800'000h acc. to MIL-HB-217 F

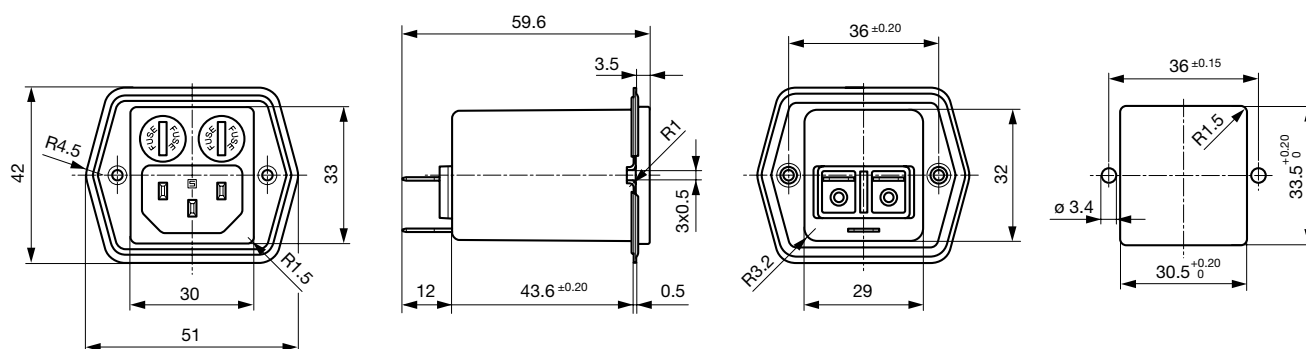
Dimensions

Mounting from front side

Length |-----| 60 mm

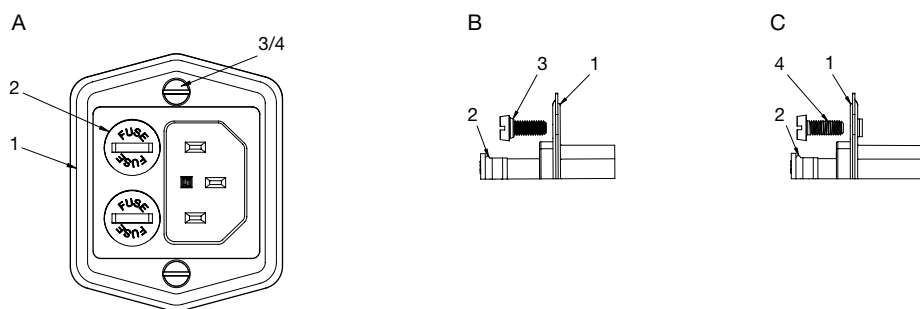


Mounting from rear side

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 12	100	2.2	1
2	Standard Version	2 x 5.2	100	2.2	1
4	Standard Version	2 x 2	100	2.2	1
6	Standard Version	2 x 0.8	100	2.2	1
8	Standard Version	2 x 0.4	100	2.2	1
1	Medical Version (M5)	2 x 12	100	-	1
2	Medical Version (M5)	2 x 5.2	100	-	1
4	Medical Version (M5)	2 x 2	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
8	Medical Version (M5)	2 x 0.4	100	-	1

Dimensions



A) front view

B) detail front mounting type

C) detail rear mounting type

1) sealing of flange

2) sealing of fuseholder

3) sealing of screw hole (front mounting type: sealing ring on screw head)

4) sealing of screw hole (rear mounting type: sealing on screw thread)

Important:

- use supplied fuse caps (2) and mounting screws (3/4)

- optimal sealing requires even and solid panel opening

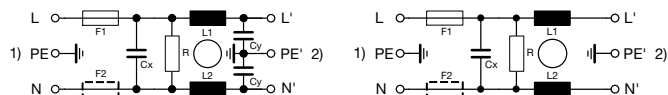
- recommended tightening torque for mounting screws (2/3/4): 0.5-0.8 Nm

- IP65 protection between the inlet and connector pins, but no IP rating between the connector pins and the plug of the power cord!

Diagrams

Standard version

Medical version (M5)



1) Line

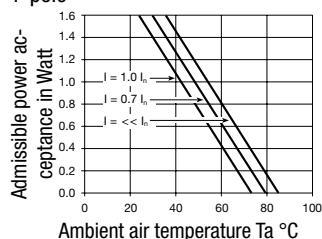
2) Load

1) Line

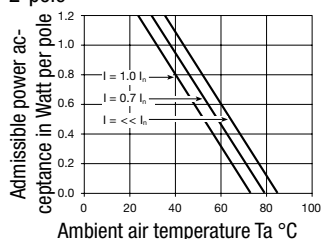
2) Load

Derating Curves

1-pole



2-pole

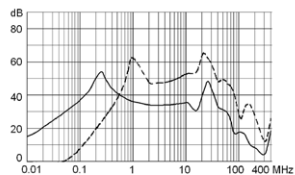


Attenuation Loss

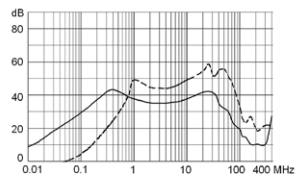
Standard version

- - - differential mode ____ common mode

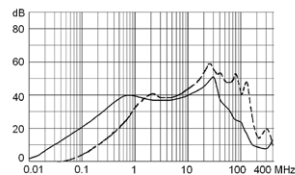
1 A



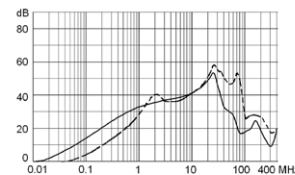
2 A



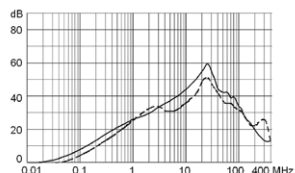
4 A



6 A

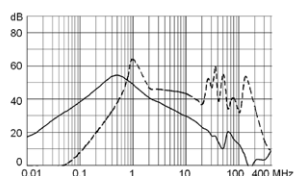


8 A

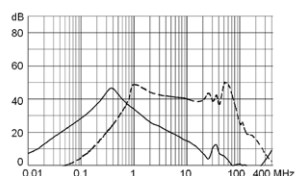


Medical version (M5)

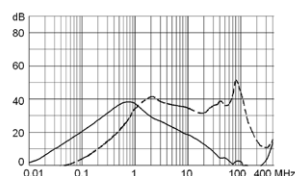
1 A



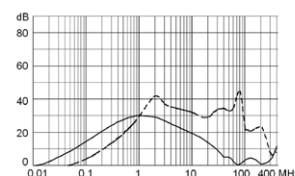
2 A



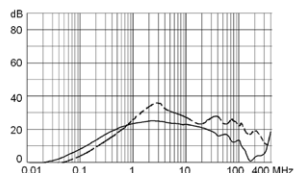
4 A



6 A



8 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Filter-Type	Screw-on or rivet mounting version from front side	Screw-on version from rear with pre-formed, threaded holes for M3 screws	Protection Class	Fuseholder	Order Number
1	Standard Version	●		I	1 pole	5707.0101.112
2	Standard Version	●		I	1 pole	5707.0201.112
4	Standard Version	●		I	1 pole	5707.0401.112
6	Standard Version	●		I	1 pole	5707.0601.112
8	Standard Version	●		I	1 pole	5707.0801.112
1	Standard Version		●	I	1 pole	5707.0101.113
2	Standard Version		●	I	1 pole	5707.0201.113
4	Standard Version		●	I	1 pole	5707.0401.113
6	Standard Version		●	I	1 pole	5707.0601.113
8	Standard Version		●	I	1 pole	5707.0801.113
1	Standard Version	●		I	2-pole	5707.0101.312
2	Standard Version	●		I	2-pole	5707.0201.312
4	Standard Version	●		I	2-pole	5707.0401.312
6	Standard Version	●		I	2-pole	5707.0601.312
8	Standard Version	●		I	2-pole	5707.0801.312
1	Standard Version		●	I	2-pole	5707.0101.313

Rated Current [A]	Filter-Type	Screw-on or rivet mounting version from front side	Screw-on version from rear with pre-formed, threaded holes for M3 screws	Protection Class	Fuseholder	Order Number
2	Standard Version		●	I	2-pole	5707.0201.313
4	Standard Version		●	I	2-pole	5707.0401.313
6	Standard Version		●	I	2-pole	5707.0601.313
8	Standard Version		●	I	2-pole	5707.0801.313
1	Medical Version (M5)	●		I	2-pole	5707.0103.312
2	Medical Version (M5)	●		I	2-pole	5707.0203.312
4	Medical Version (M5)	●		I	2-pole	5707.0403.312
6	Medical Version (M5)	●		I	2-pole	5707.0603.312
8	Medical Version (M5)	●		I	2-pole	5707.0803.312
1	Medical Version (M5)		●	I	2-pole	5707.0103.313
2	Medical Version (M5)		●	I	2-pole	5707.0203.313
4	Medical Version (M5)		●	I	2-pole	5707.0403.313
6	Medical Version (M5)		●	I	2-pole	5707.0603.313
8	Medical Version (M5)		●	I	2-pole	5707.0803.313
1	Medical Version (M5)	●		II	2-pole	5707.0103.412
2	Medical Version (M5)	●		II	2-pole	5707.0203.412
4	Medical Version (M5)	●		II	2-pole	5707.0403.412
6	Medical Version (M5)	●		II	2-pole	5707.0603.412
8	Medical Version (M5)	●		II	2-pole	5707.0803.412
1	Medical Version (M5)		●	II	2-pole	5707.0103.413
2	Medical Version (M5)		●	II	2-pole	5707.0203.413
4	Medical Version (M5)		●	II	2-pole	5707.0403.413
6	Medical Version (M5)		●	II	2-pole	5707.0603.413
8	Medical Version (M5)		●	II	2-pole	5707.0803.413

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover

Passende Dose

Category / Description

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...



Power Supply or Interconnection Cord

Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
...	...

Inlet filter, front side mounting, fuseholder 5x20 mm

Plug removal necessary for fuse replacement



Socket and fuse-carrier included

Type 5200, Fuseholder 1-pole with spare compartment
Snap-In Version or Screw-On Version



70° C



Socket and fuse-carrier included

Type 5200, Fuseholder 1-pole with spare compartment
Snap-In Version or Screw-On Version



Description

- Panel Mount:
Snap-in or screw-on mounting from front side
- 3 Functions:
Appliance Inlet Protection class I, Fuseholder for fuse-links 5 x 20 mm
1-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [6200](#)

Approvals

- VDE License Number: 101307
- UL License Number: E72928
- CSA License Number: 97784

Characteristics

- All single elements are already wired
- Plug removal necessary for fuse-link replacement
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

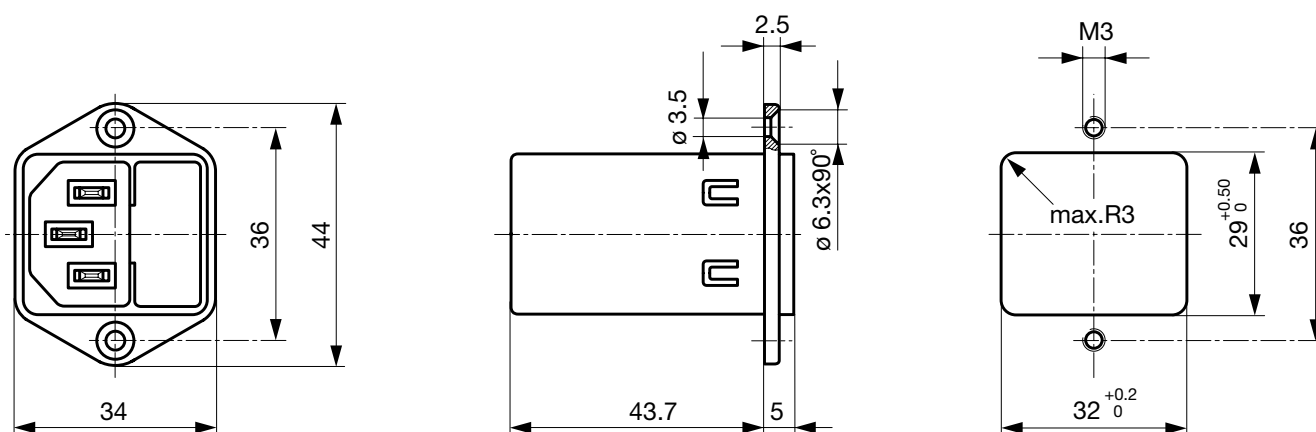
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm Snap-in: 0.8mm to 3mm
Material: Housing	Thermoplastic, black, UL 94V-0

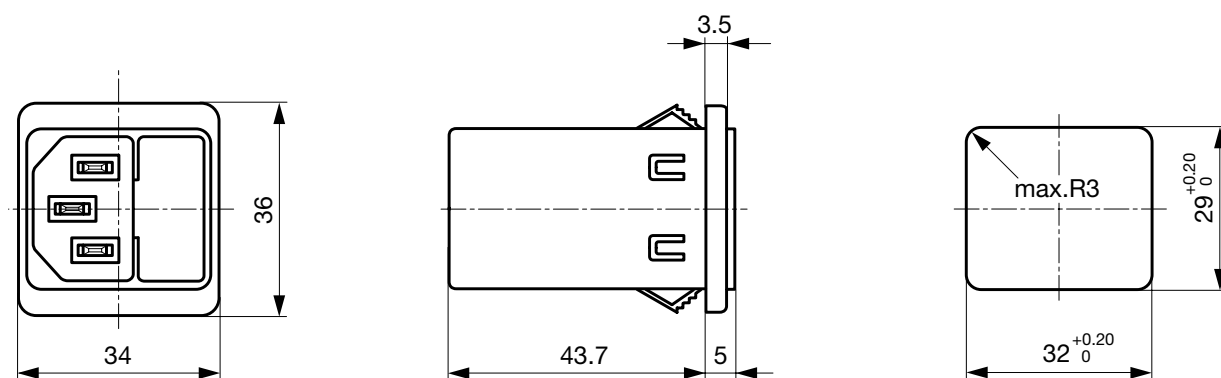
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'300'000h acc. to MIL-HB-217 F

Dimensions

Screw-on mounting type 5200

Length  48.7 mm

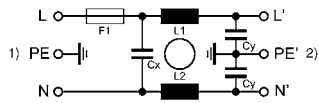
Snap-in mounting type 5200

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 11	47	2.2	-
2	Standard Version	2 x 4	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
6	Standard Version	2 x 0.7	47	2.2	-
8	Standard Version	2 x 0.6	47	2.2	-
10	Standard Version	2 x 0.4	47	2.2	-
1	Medical Version (M5)	2 x 11	47	-	1
2	Medical Version (M5)	2 x 4	47	-	1
4	Medical Version (M5)	2 x 1.6	47	-	1
6	Medical Version (M5)	2 x 0.7	47	-	1
8	Medical Version (M5)	2 x 0.6	47	-	1
10	Medical Version (M5)	2 x 0.4	47	-	1

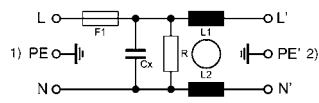
Diagrams

5200 Standard version



1) Line
2) Load

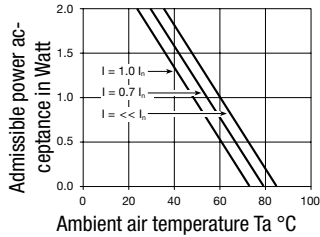
5200 Medical version



1) Line
2) Load

Derating Curves

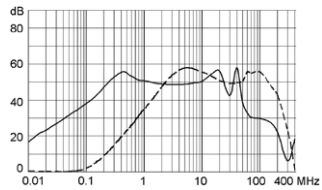
1-pole



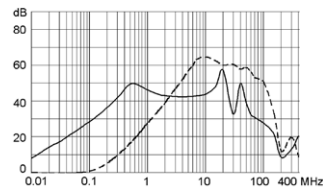
Attenuation Loss

Standard version

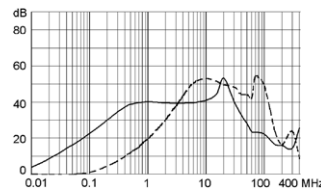
1 A



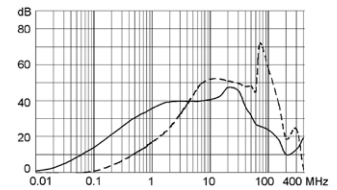
2 A



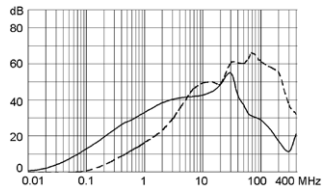
4 A



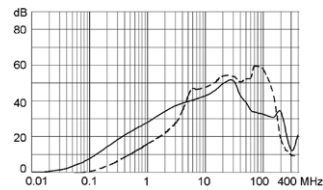
6 A



8 A

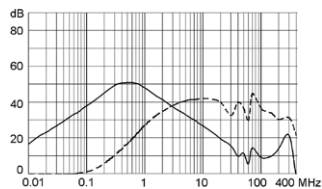


10 A

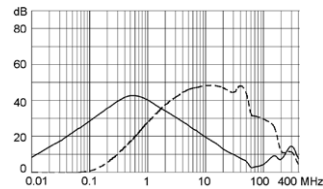


Medical version (M5)

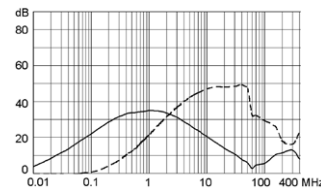
1 A



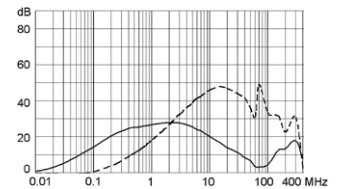
2 A



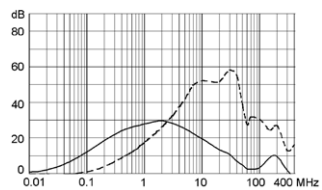
4 A



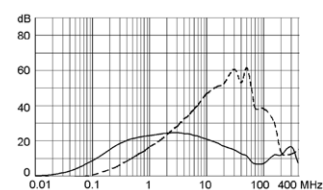
6 A



8 A



10 A



--- differential mode ____ common mode

Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Socket and fuse-carrier included

Rated Current [A]	Filter-Type	Panel mounting	Fuseholder	Order Number
1	Standard Version	Screw-on	1 pole	5200.0123.1
2	Standard Version	Screw-on	1 pole	5200.0223.1
4	Standard Version	Screw-on	1 pole	5200.0423.1
6	Standard Version	Screw-on	1 pole	5200.0623.1
8	Standard Version	Screw-on	1 pole	5200.0823.1
10	Standard Version	Screw-on	1 pole	5200.1023.1
1	Standard Version	Snap-in	1 pole	5200.0143.1
2	Standard Version	Snap-in	1 pole	5200.0243.1
4	Standard Version	Snap-in	1 pole	5200.0443.1
6	Standard Version	Snap-in	1 pole	5200.0643.1
8	Standard Version	Snap-in	1 pole	5200.0843.1
10	Standard Version	Snap-in	1 pole	5200.1043.1
1	Medical Version (M5)	Screw-on	1 pole	5200.0123.3
2	Medical Version (M5)	Screw-on	1 pole	5200.0223.3
4	Medical Version (M5)	Screw-on	1 pole	5200.0423.3
6	Medical Version (M5)	Screw-on	1 pole	5200.0623.3
8	Medical Version (M5)	Screw-on	1 pole	5200.0823.3
10	Medical Version (M5)	Screw-on	1 pole	5200.1023.3
1	Medical Version (M5)	Snap-in	1 pole	5200.0143.3
2	Medical Version (M5)	Snap-in	1 pole	5200.0243.3
4	Medical Version (M5)	Snap-in	1 pole	5200.0443.3
6	Medical Version (M5)	Snap-in	1 pole	5200.0643.3
8	Medical Version (M5)	Snap-in	1 pole	5200.0843.3
10	Medical Version (M5)	Snap-in	1 pole	5200.1043.3

Packaging unit 10 Pcs

Accessory

Description

Assorted Covers
Rear CoverCord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front side mounting, fuseholder 5x20 mm

Plug removal necessary for fuse replacement



Snap-In Version or Screw-On Version Typ 5220, Fuseholder 2-pole

Snap-In Version or Screw-On Version Typ 5220, Fuseholder 2-pole



Description

- Panel Mount:
Snap-in or screw-on mounting from front side
- 3 Functions:
Appliance Inlet Protection class I, Fuseholder for fuse-links 5 x 20 mm 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [6220](#)

Approvals

- VDE License Number: 101307
- UL License Number: E72928
- CSA License Number: 97784

Characteristics

- All single elements are already wired
- Plug removal necessary for fuse-link replacement
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

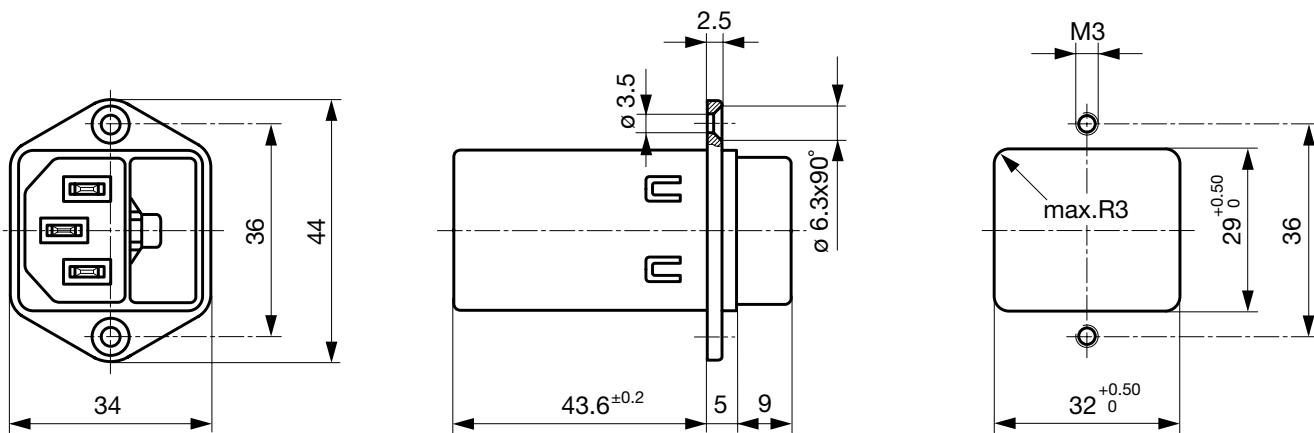
Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60 Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm Snap-in: 0.8 mm to 3 mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Fuseholder	2-pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6 W (2-pole)
Power Acceptance @ Ta > 23 °C	Admissible power acceptance at higher ambient temperature see derating curves
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'300'000 h acc. to MIL-HB-217 F

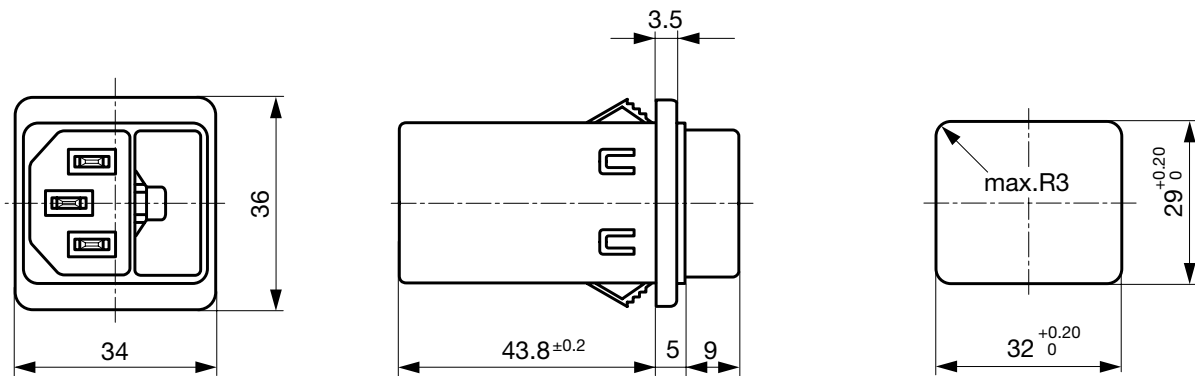
Dimensions

Screw-on mounting type 5220

Length |-----| 57.6 mm



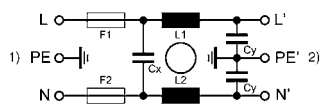
Snap-in mounting type 5220

**Technical Data of Filter-Components**

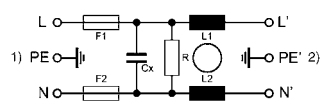
Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 11	47	2.2	-
2	Standard Version	2 x 4	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
6	Standard Version	2 x 0.7	47	2.2	-
8	Standard Version	2 x 0.6	47	2.2	-
10	Standard Version	2 x 0.4	47	2.2	-
1	Medical Version (M5)	2 x 11	47	-	1
2	Medical Version (M5)	2 x 4	47	-	1
4	Medical Version (M5)	2 x 1.6	47	-	1
6	Medical Version (M5)	2 x 0.7	47	-	1
8	Medical Version (M5)	2 x 0.6	47	-	1
10	Medical Version (M5)	2 x 0.4	47	-	1

Diagrams

5220 Standard version



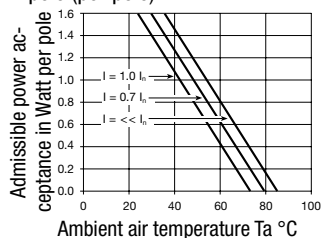
5220 Medical version



1) Line
2) Load

Derating Curves

2-pole (per pole)

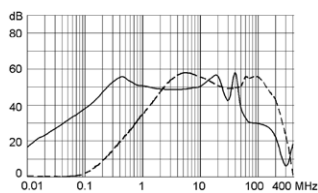


Attenuation Loss

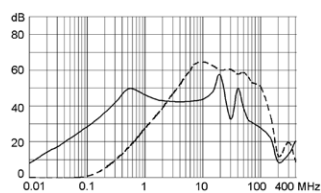
Standard version

- - - differential mode ____ common mode

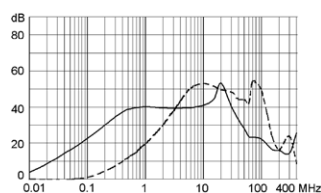
1 A



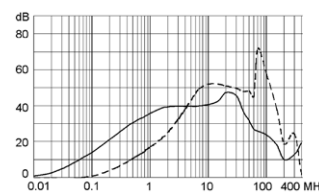
2 A



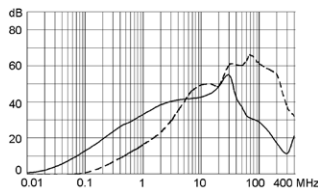
4 A



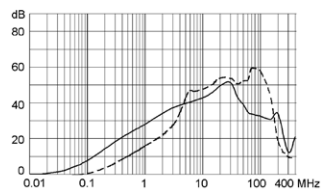
6 A



8 A

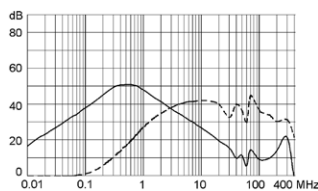


10 A

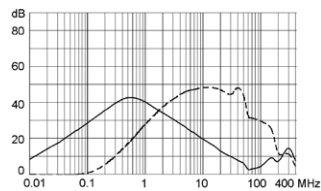


Medical version (M5)

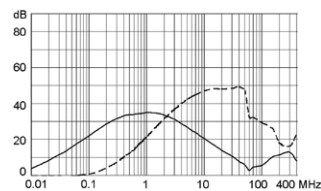
1 A



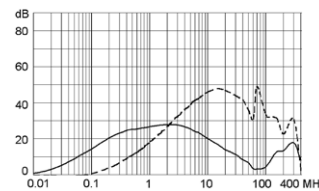
2 A



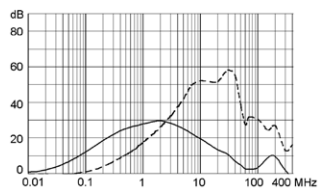
4 A



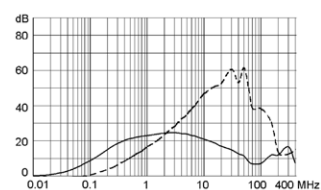
6 A



8 A



10 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Socket and fuse-carrier included

Rated Current [A]	Filter-Type	Panel mounting	Fuseholder	Order Number
1	Standard Version	Screw-on	2-pole	5220.0123.1
2	Standard Version	Screw-on	2-pole	5220.0223.1
4	Standard Version	Screw-on	2-pole	5220.0423.1
6	Standard Version	Screw-on	2-pole	5220.0623.1
8	Standard Version	Screw-on	2-pole	5220.0823.1
10	Standard Version	Screw-on	2-pole	5220.1023.1
1	Standard Version	Snap-in	2-pole	5220.0143.1
2	Standard Version	Snap-in	2-pole	5220.0243.1
4	Standard Version	Snap-in	2-pole	5220.0443.1
6	Standard Version	Snap-in	2-pole	5220.0643.1
8	Standard Version	Snap-in	2-pole	5220.0843.1
10	Standard Version	Snap-in	2-pole	5220.1043.1
1	Medical Version (M5)	Screw-on	2-pole	5220.0123.3
2	Medical Version (M5)	Screw-on	2-pole	5220.0223.3
4	Medical Version (M5)	Screw-on	2-pole	5220.0423.3
6	Medical Version (M5)	Screw-on	2-pole	5220.0623.3
8	Medical Version (M5)	Screw-on	2-pole	5220.0823.3
10	Medical Version (M5)	Screw-on	2-pole	5220.1023.3
1	Medical Version (M5)	Snap-in	2-pole	5220.0143.3
2	Medical Version (M5)	Snap-in	2-pole	5220.0243.3
4	Medical Version (M5)	Snap-in	2-pole	5220.0443.3
6	Medical Version (M5)	Snap-in	2-pole	5220.0643.3
8	Medical Version (M5)	Snap-in	2-pole	5220.0843.3
10	Medical Version (M5)	Snap-in	2-pole	5220.1043.3

Packaging unit 10 Pcs

Accessory

Description



[Assorted Covers](#)
Rear Cover



[Cord retaining kits](#)
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder / quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder / quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

With fuseholder 5x20 mm, with or without voltage selector (step switch)

Plug removal necessary for fuse replacement



Snap-in mounting from front side without voltage selector Fuse drawer must be ordered separately (see accessories).



Screw-on mounting from rear side without voltage selector Fuse drawer must be ordered separately (see accessories).



Screw-on mounting from front side with voltage selector



C14



70 °C



Description

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 4 Functions:
Appliance Inlet Protection class I, Fuseholder for fuse-links 5 x 20 mm 1- or 2-pole, with or without voltage selector (step switch), Line filter in standard and medical version
- Quick connect terminals or wires
- Alternative: version without line filter [KEA](#)

Approvals

- VDE License Number: 40004665 (FKE, FKF, FKV, FKW)
- UL License Number: E72928 (FKE, FKF, FKV, FKW)

Characteristics

- Rear side mounting for efficient costsaving assembly
- Suitable for assembly in metal plated plastic housings
- All single elements are already wired
- Plug removal necessary for fuse-link replacement
The fuse drawer "Fingergrip" can be removed by hand
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Capacity CX 100 nF

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

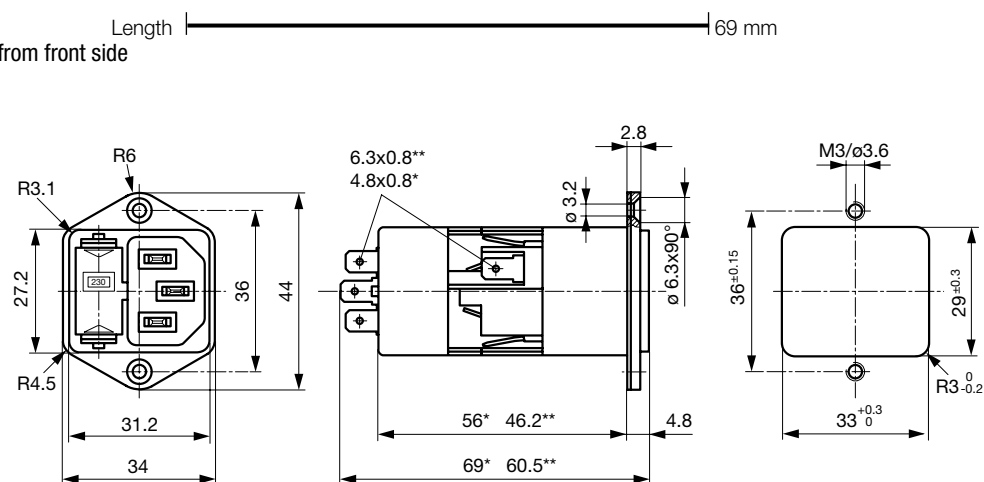
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals or wires
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm Snap-in: 0.8 mm to 3 mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2 W (1 pole)/ 1.6 W (2-pole) per pole
Power Acceptance @ Ta > 23 °C	Admissible power acceptance at higher ambient temperature see derating curves
Voltage selector	optional, step, 3 digits
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'700'000h acc. to MIL-HB-217 F

Dimensions

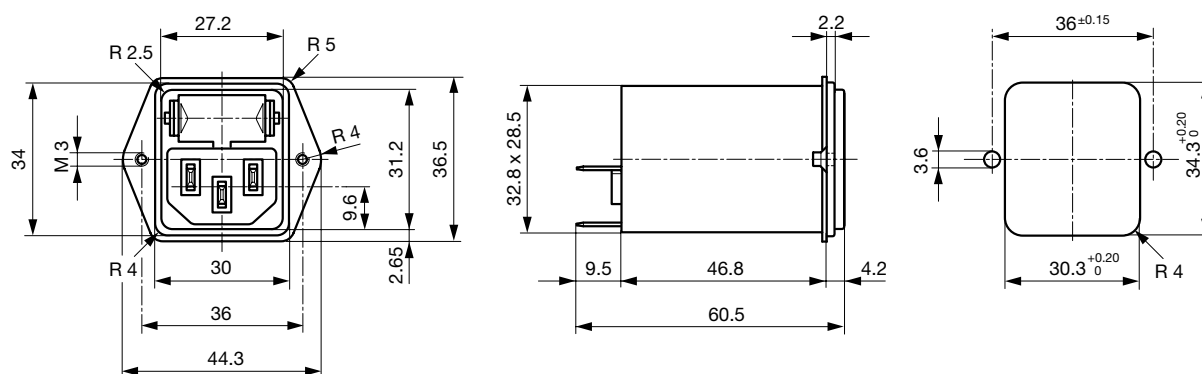
Screw-on mounting from front side



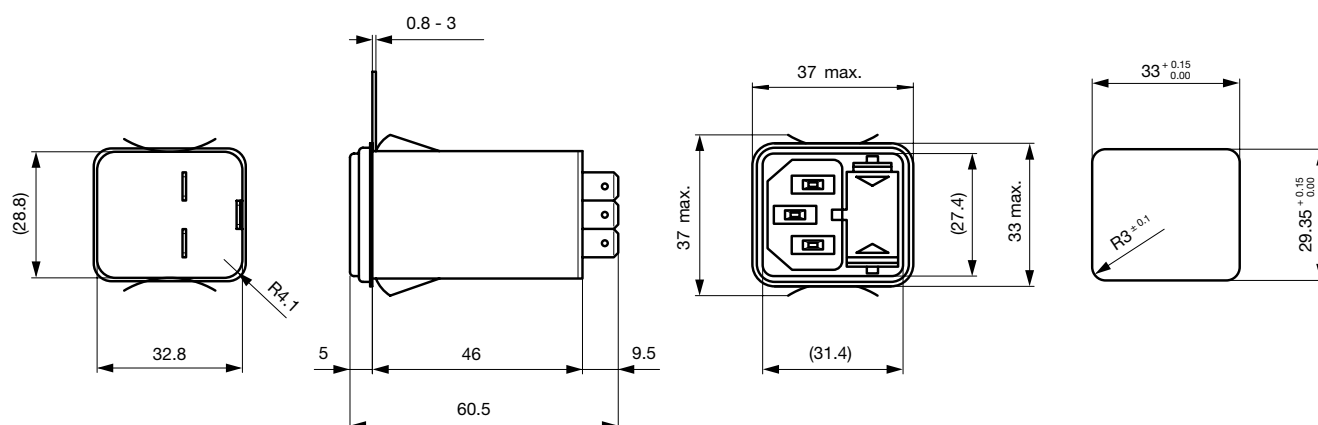
* with voltage selector

** without voltage selector

Screw-on mounting from rear side



Snap-in mounting

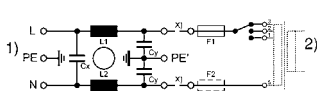


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1
1	Medical Version (M80)	2 x 10	68	0.47	1
2	Medical Version (M80)	2 x 4	68	0.47	1
4	Medical Version (M80)	2 x 1.5	68	0.47	1
6	Medical Version (M80)	2 x 0.8	68	0.47	1
10	Medical Version (M80)	2 x 0.3	68	0.47	1

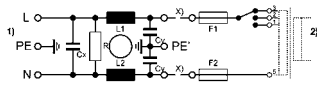
Diagrams

Standard version
with fuseholder 1- or 2-pole



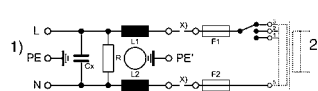
1) Line; 2) Load; x) external connection
to be made by the customer

Medical version (M80)
with voltage selector



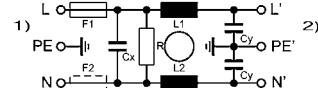
1) Line; 2) Load; x) external connection
to be made by customer

Medical version (M5)
with fuseholder 2-pole



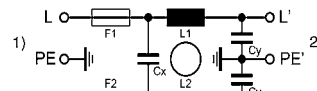
1) Line; 2) Load; x) external connection
to be made by the customer

Medical version (M80)
without voltage selector



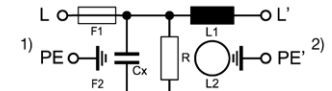
1) Line
2) Load

Standard version
without voltage selector



1) Line
2) Load

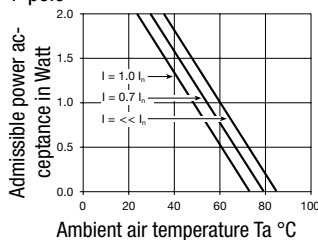
Medical version (M5)
without voltage selector



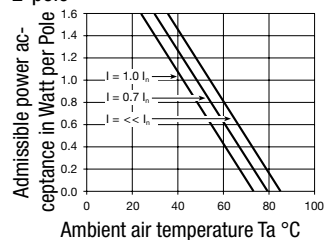
1) Line
2) Load

Derating Curves

1-pole



2-pole

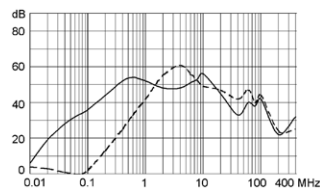


Attenuation Loss

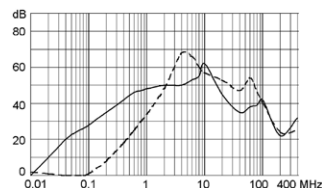
Standard version

- - - differential mode ____ common mode

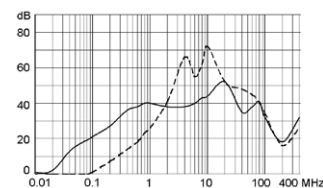
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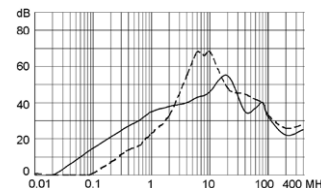
2 A



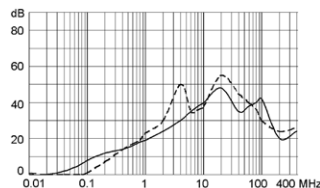
4 A



6 A

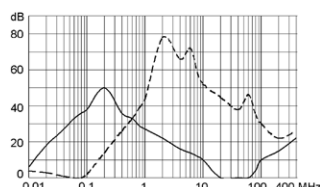


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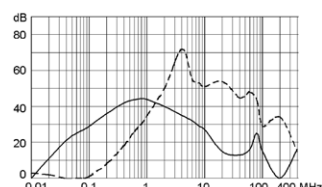


Medical version (M5)

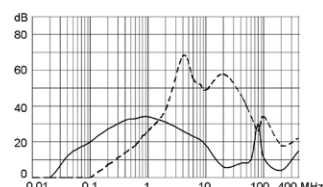
1 A



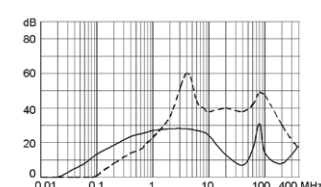
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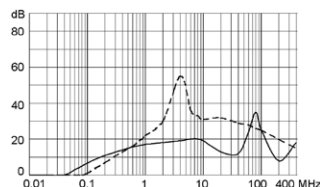
4 A



6 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer must be ordered separately (see accessories).

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Fuseholder	Terminal	Voltage selector	Order Number
1	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5011
1	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	3 digits	4301.5051
1	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5001
1	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5041
1	Standard Version	Screw-on	Rear-Side	1 pole	Flexible wire 18 AWG	-	4301.7311
1	Standard Version	Screw-on	Rear-Side	1 pole	Quick connect terminals	-	4301.7011
1	Standard Version	Screw-on	Rear-Side	2-pole	Flexible wire 18 AWG	-	4301.7301
1	Standard Version	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7001
2	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5012
2	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	3 digits	4301.5052
2	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5002
2	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5042
2	Standard Version	Screw-on	Rear-Side	1 pole	Quick connect terminals	-	4301.7012
2	Standard Version	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7002
4	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5013
4	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	3 digits	4301.5053

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Fuseholder	Terminal	Voltage selector	Order Number
4	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5003
4	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5043
4	Standard Version	Screw-on	Rear-Side	1 pole	Quick connect terminals	-	4301.7013
4	Standard Version	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7003
6	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5014
6	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	3 digits	4301.5054
6	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5004
6	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5044
6	Standard Version	Screw-on	Rear-Side	1 pole	Quick connect terminals	-	4301.7014
6	Standard Version	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7004
10	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5015
10	Standard Version	Screw-on	Front-Side	1 pole	Quick connect terminals	3 digits	4301.5055
10	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5005
10	Standard Version	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5045
10	Standard Version	Screw-on	Rear-Side	1 pole	Quick connect terminals	-	4301.7015
10	Standard Version	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7005
1	Standard Version	Snap-in	Front-Side	1 pole	Quick connect terminals	-	4301.6011
1	Standard Version	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6001
2	Standard Version	Snap-in	Front-Side	1 pole	Quick connect terminals	-	4301.6012
2	Standard Version	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6002
4	Standard Version	Snap-in	Front-Side	1 pole	Quick connect terminals	-	4301.6013
4	Standard Version	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6003
6	Standard Version	Snap-in	Front-Side	1 pole	Quick connect terminals	-	4301.6014
6	Standard Version	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6004
10	Standard Version	Snap-in	Front-Side	1 pole	Quick connect terminals	-	4301.6015
10	Standard Version	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6005
1	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5201
1	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5241
1	Medical Version (M5)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7201
2	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5203
2	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5243
2	Medical Version (M5)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7203
4	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5205
4	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5245
4	Medical Version (M5)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7205
6	Medical Version (M5)	Screw-on	Front-Side	1 pole	Quick connect terminals	-	4301.5217
6	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5247
6	Medical Version (M5)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7207
10	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5209
10	Medical Version (M5)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5249
10	Medical Version (M5)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7209
1	Medical Version (M5)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6201
2	Medical Version (M5)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6203
4	Medical Version (M5)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6205
6	Medical Version (M5)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6207
10	Medical Version (M5)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6209
1	Medical Version (M80)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7202
2	Medical Version (M80)	Screw-on	Front-Side	2-pole	Quick connect terminals	3 digits	4301.5244
2	Medical Version (M80)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7204
4	Medical Version (M80)	Screw-on	Front-Side	2-pole	Quick connect terminals	-	4301.5206
4	Medical Version (M80)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7206
6	Medical Version (M80)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7208
10	Medical Version (M80)	Screw-on	Rear-Side	2-pole	Quick connect terminals	-	4301.7200
4	Medical Version (M80)	Snap-in	Front-Side	2-pole	Quick connect terminals	-	4301.6206

Wire lenght: 150 mm

Packaging unit 10 Pcs

Required Accessory

Description



Fusedrawer 2
Fusedrawer with and without voltage selector insert

Accessory



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
	...

With fuseholder 5x20 mm / 6.3x32 mm, with or without voltage selector (step switch)

Standard- or Medical-Filter



Fuse drawer must be ordered separately (see accessories).

Screw-On Version
with voltage selector

70 °C



Fuse drawer must be ordered separately (see accessories).

Screw-On Version
without voltage selector

Description

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm, with or without voltage selector (step switch), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KEC](#)

Approvals

- VDE License Number: 40004665 (FKO, FKP, FKQ, FKR)
- UL License Number: E72928 (FKO, FKP, FKQ, FKR)

Characteristics

- All single elements are already wired
- The fuse drawer "Fingergrip" can be removed by hand
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

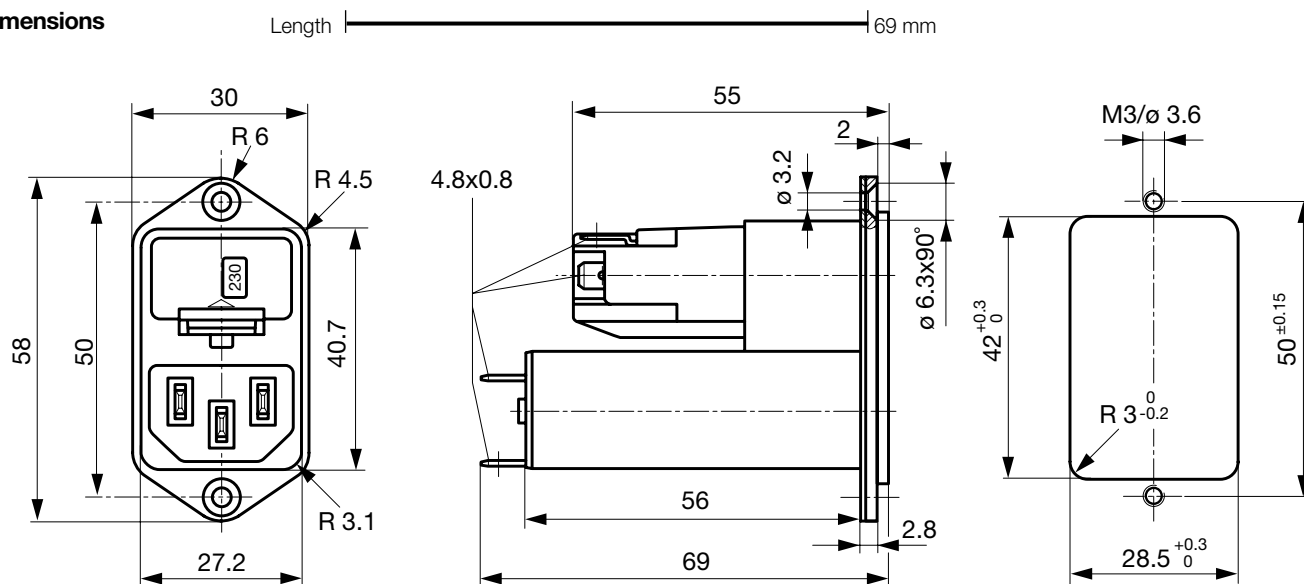
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7kVDC between L-N > 2.7kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Voltage selector	optional, step, 3 digits
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'700'000h acc. to MIL-HB-217 F

Dimensions



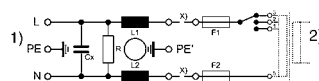
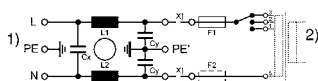
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [M Ω]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1
10	Standard and Medical Version	2 x 0.3	68	2.2	1

Diagrams

Standard version with voltage selector

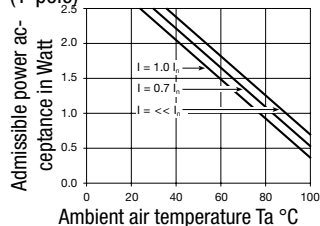
Medical version with voltage selector



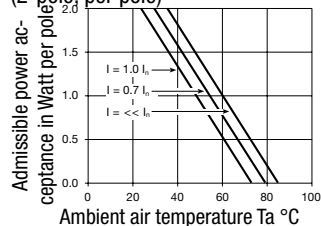
- 1) Line
2) Load
x) External connection to be made by the customer

Derating Curves

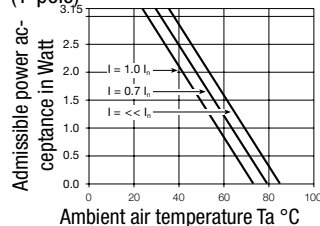
Fuses 5 x 20 mm (1-pole)



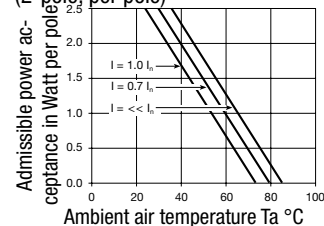
Fuses 5 x 20 mm (2-pole, per pole)



Fuses 6,3 x 32 mm (1-pole)



Fuses 6,3 x 32 mm (2-pole, per pole)

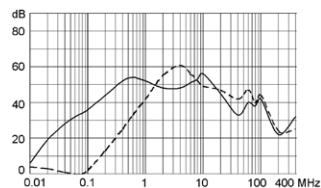


Attenuation Loss

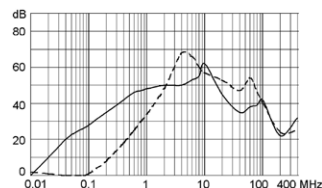
Standard version

- - - differential mode ____ common mode

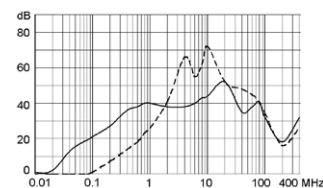
1 A



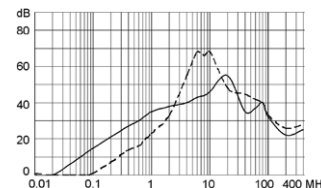
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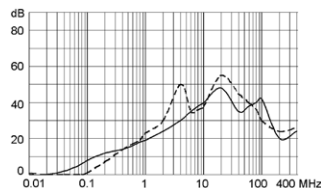
4 A



6 A

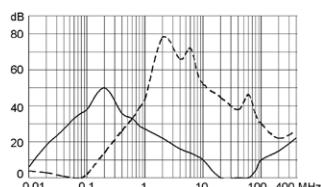


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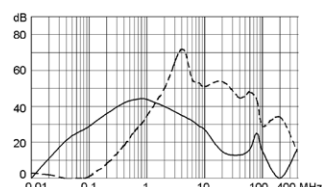


Medical version (M5)

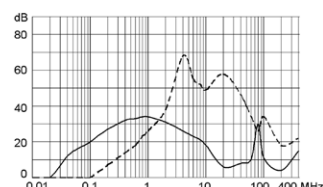
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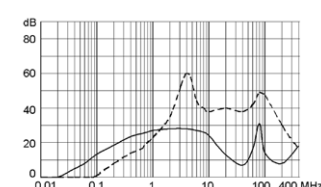
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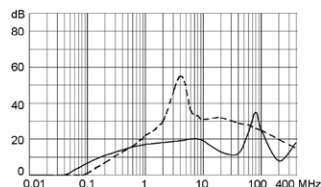
4 A



6 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer must be ordered separately (see accessories).

Rated Current [A]	Filter-Type	Fuseholder	Voltage selector	Order Number
1	Standard Version	1 pole	-	4303.5011
2	Standard Version	1 pole	-	4303.5012
4	Standard Version	1 pole	-	4303.5013
6	Standard Version	1 pole	-	4303.5014
10	Standard Version	1 pole	-	4303.5015
1	Standard Version	1 pole	3 digits	4303.5031
2	Standard Version	1 pole	3 digits	4303.5032
4	Standard Version	1 pole	3 digits	4303.5033
6	Standard Version	1 pole	3 digits	4303.5034
10	Standard Version	1 pole	3 digits	4303.5035
1	Standard Version	2-pole	-	4303.5001
2	Standard Version	2-pole	-	4303.5002
4	Standard Version	2-pole	-	4303.5003
6	Standard Version	2-pole	-	4303.5004
10	Standard Version	2-pole	-	4303.5005
1	Standard Version	2-pole	3 digits	4303.5021

Rated Current [A]	Filter-Type	Fuseholder	Voltage selector	Order Number
2	Standard Version	2-pole	3 digits	4303.5022
4	Standard Version	2-pole	3 digits	4303.5023
6	Standard Version	2-pole	3 digits	4303.5024
10	Standard Version	2-pole	3 digits	4303.5025
1	Medical Version (M5)	2-pole	3 digits	4303.5221
2	Medical Version (M5)	2-pole	3 digits	4303.5223
4	Medical Version (M5)	2-pole	3 digits	4303.5225
6	Medical Version (M5)	2-pole	3 digits	4303.5227
10	Medical Version (M5)	2-pole	3 digits	4303.5229
10	Standard and Medical Version	1 or 2 pole	3 digits	4303.5209

Packaging unit 10 Pcs

Required Accessory

Description



Fusedrawer 3

Drawers for fuse links 5x20mm resp. 6.3x32mm

Accessory



Assorted Covers

Rear Cover



Cord retaining kits

Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Front side mounting, fuseh. 5 x 20 mm/6.3x32 mm, with or without voltage selector (series-parallel)

Standard- or Medical-Filter



Fuse drawer and voltage selector insert must be ordered separately.

Screw-On Version



70° C



Description

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm 1- or 2-pole, Voltage selector (series-parallel), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KE](#)

Approvals

- VDE License Number: 40004665 (FKA, FKB)
- UL License Number: E72928 (FKA, FKB)

Characteristics

- All single elements are already partially wired
- For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

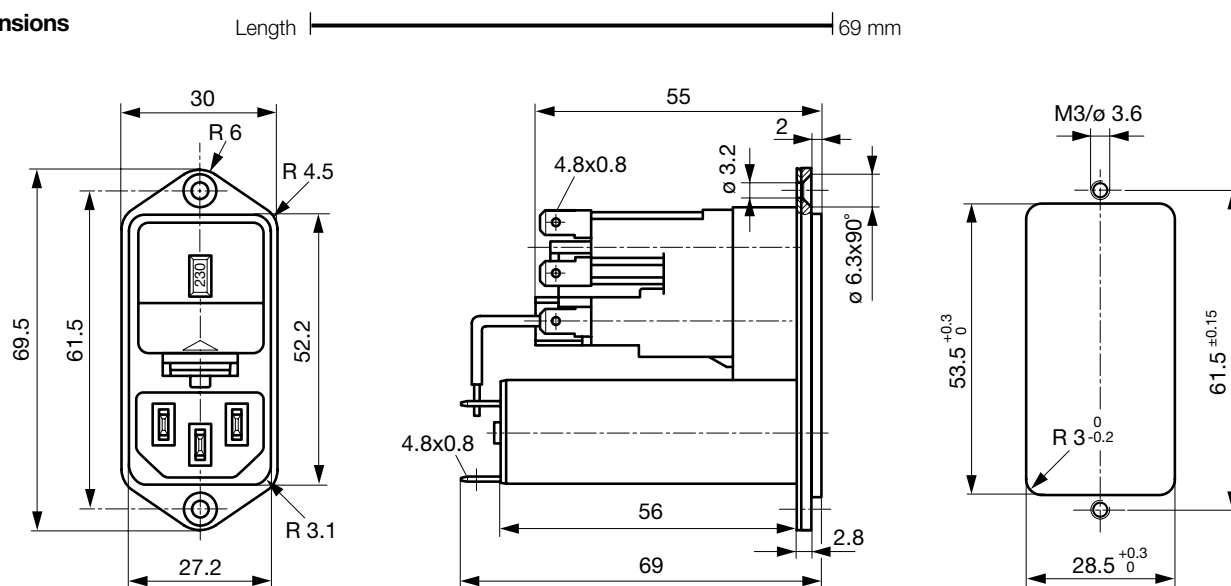
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Voltage selector	series-parallel, 4, 3 or 2 switch positions or usable as 2-pole change-over switch
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'400'000h acc. to MIL-HB-217 F

Dimensions



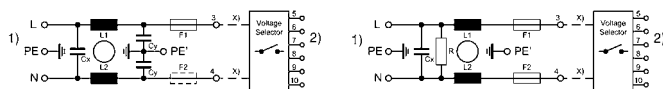
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1
2	Medical Version (M80)	2 x 4	68	0.47	1

Diagrams

Standard version

Medical version



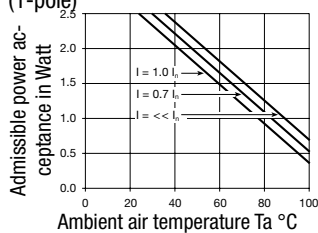
1) Line

2) Load

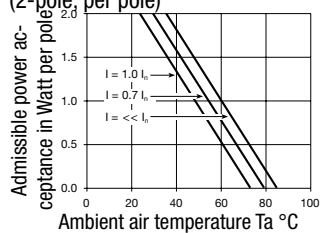
x) External connection to be made by customer

Derating Curves

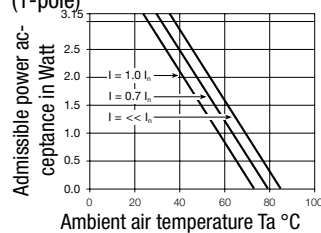
Fuses 5 x 20 mm (1-pole)



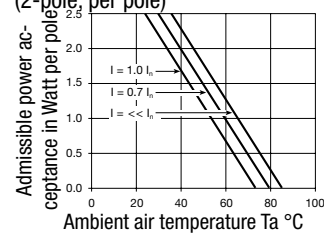
Fuses 5 x 20 mm (2-pole, per pole)



Fuses 6,3 x 32 mm (1-pole)



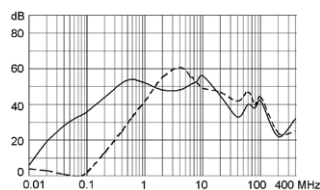
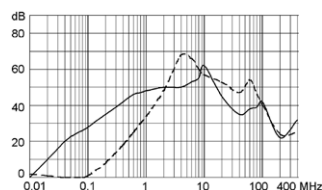
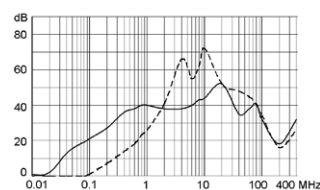
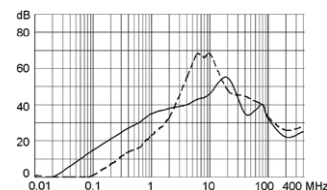
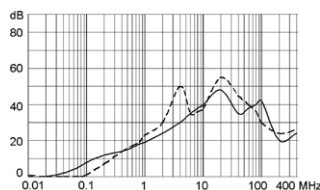
Fuses 6,3 x 32 mm (2-pole, per pole)



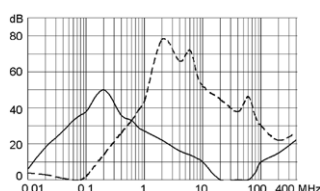
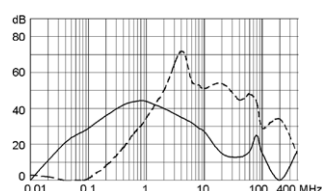
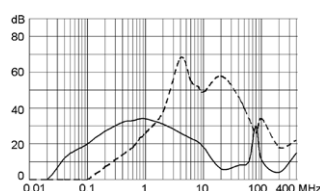
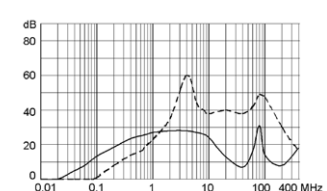
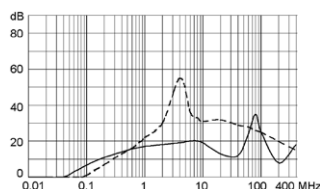
Attenuation Loss

Standard version

--- differential mode ____ common mode

1 A**2 A****4 A****6 A****10 A**

Medical version (M5)

1 A**2 A****4 A****6 A****10 A****Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer and voltage selector insert must be ordered separately.

Rated Current [A]	Filter-Type	Fuseholder	Order Number
1	Standard Version	1 pole	CE16.5100.151
2	Standard Version	1 pole	CE26.5100.151
4	Standard Version	1 pole	CE36.5100.151
6	Standard Version	1 pole	CE45.1100.151
6	Standard Version	1 pole	CE46.5100.151
10	Standard Version	1 pole	CE66.5100.151
1	Standard Version	2-pole	CE10.6100.151
2	Standard Version	2-pole	CE20.6100.151
4	Standard Version	2-pole	CE30.6100.151
6	Standard Version	2-pole	CE40.6100.151
10	Standard Version	2-pole	CE60.6100.151
1	Medical Version (M5)	2-pole	CEG0.6100.151
2	Medical Version (M5)	2-pole	CEA0.6100.151
4	Medical Version (M5)	2-pole	CEC0.6100.151
6	Medical Version (M5)	2-pole	CEE0.6100.151
10	Medical Version (M5)	2-pole	CEL0.6100.151

Rated Current [A]	Filter-Type	Fuseholder	Order Number
2	Medical Version (M80)	2-pole	CEB0.6100.151

Packaging unit 10 Pcs

Required Accessory

Description



Jumper Wire 1
Connection with Stranded Cable



Fusedrawer 1
Drawer for fuse links 5x20mm resp. 6.3x32mm



Voltage Selectors Insert 1
Voltage Selector Insert to KE, CE, KG, CG

Accessory



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front- or rear side mounting, line switch 1-/2-pole

Standard- or Medical-Filter

new

Screw-On Version
from front sideSnap-In Version
from front sideScrew-On Version
from rear sideC14

70° C**Description**

- Panel Mount:
Screw-on version from front or rear side, snap-in version from front side
- 3 Functions:
Appliance Inlet Protection class I, Line switch 1- or 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [DC11](#)
- Substitute for type [KFB1](#); [KFB2](#)

Approvals

- VDE License Number: 40001522
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- Rear side mounting for efficient cost-saving assembly
- All single elements are already wired
- Line switch non-illuminated or illuminated
- Marquard switch for high inrush currents
- Universal line filter for standard applications
- Ideal for application with high transient loads
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Solder terminals
- Other rocker marking
- Capacitance CX1

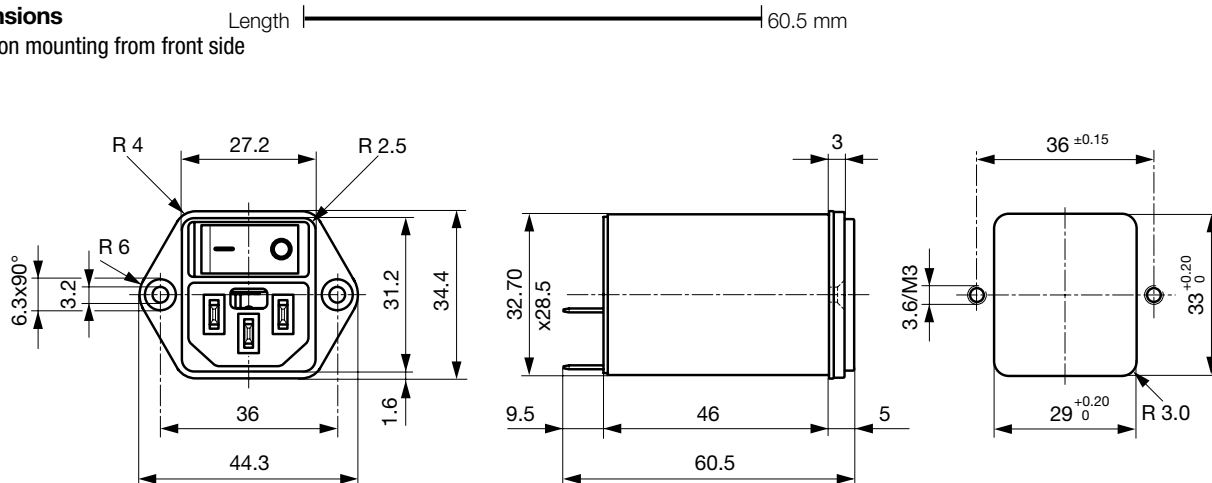
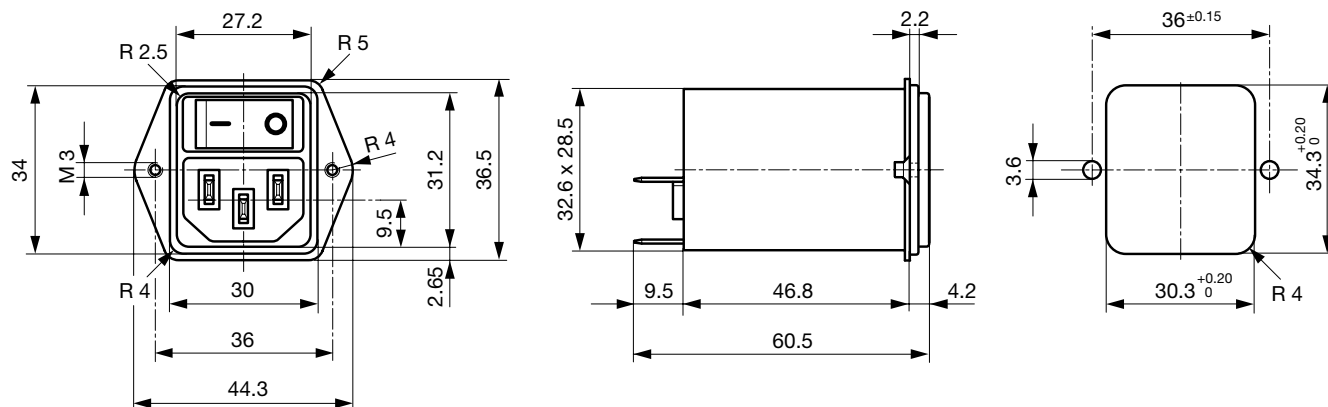
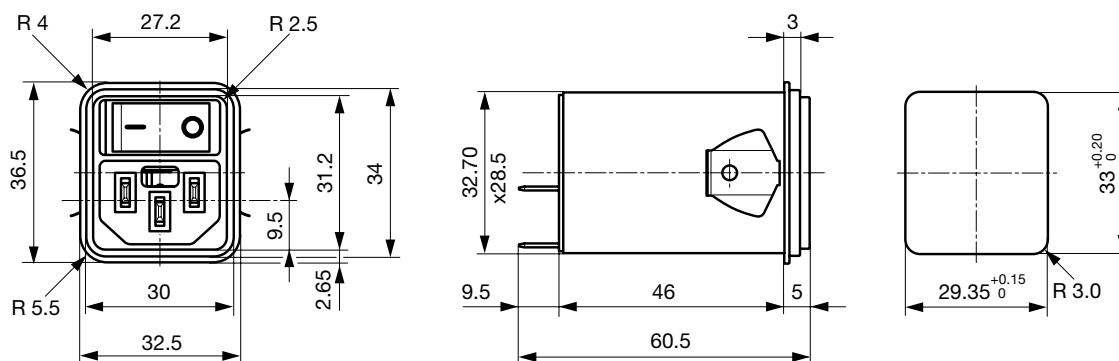
References[General Product Information](#)**Weblinks**[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)**Technical Data**

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5 mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm Snap-in: 1 mm to 3mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Switch	Rocker switch 1 or 2 pole, non-illuminated or illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'900'000h acc. to MIL-HB-217 F

Dimensions

Screw-on mounting from front side

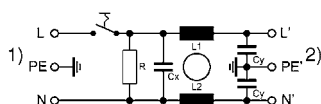
**Screw-On Version from rear side (metal flange)****Snap-in mounting from front side**

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	100	2.2	1
2	Standard Version	2 x 4	100	2.2	1
4	Standard Version	2 x 1.5	100	2.2	1
6	Standard Version	2 x 0.8	100	2.2	1
10	Standard Version	2 x 0.3	100	2.2	1
1	Medical Version (M5)	2 x 10	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
4	Medical Version (M5)	2 x 1.5	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
10	Medical Version (M5)	2 x 0.3	100	-	1
1	Medical Version (M80)	2 x 10	100	0.47	1
2	Medical Version (M80)	2 x 4	100	0.47	1
4	Medical Version (M80)	2 x 1.5	100	0.47	1
6	Medical Version (M80)	2 x 0.8	100	0.47	1
10	Medical Version (M80)	2 x 0.3	100	0.47	1

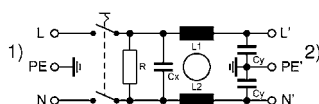
Diagrams

Standard filter 1-pole



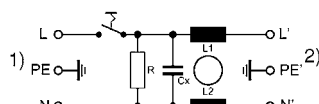
- 1) Line
2) Load

Standard filter 2-pole



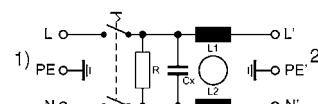
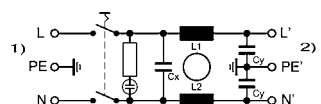
- 1) Line
2) Load

Medical filter 1-pole (M5)

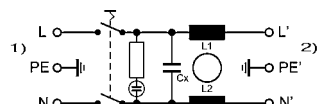


- 1) Line
2) Load

Medical filter 2-pole (M5)

Standard filter 2-pole
illuminated

- 1) Line
2) Load

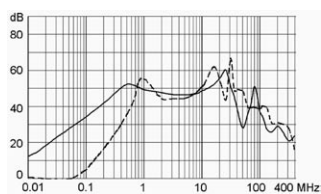
Medical Filter 2-pole (M5)
illuminated

- 1) Line
2) Load

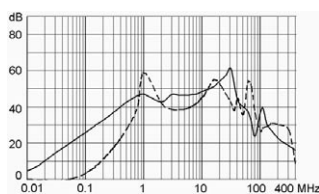
Attenuation Loss

Standard version

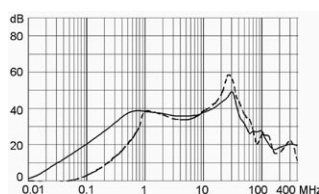
1 A



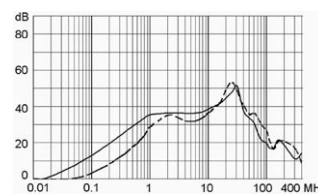
2 A



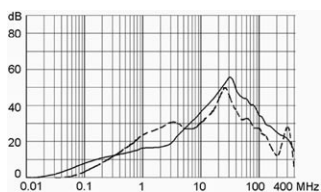
4 A



6 A



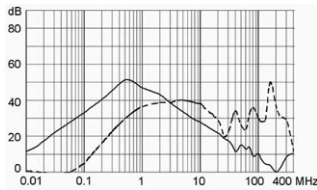
10 A



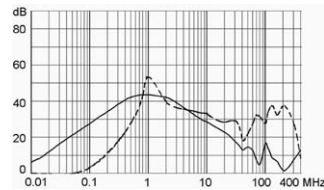
- - - differential mode ____ common mode

Medical version (M5)

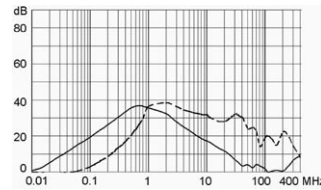
1 A



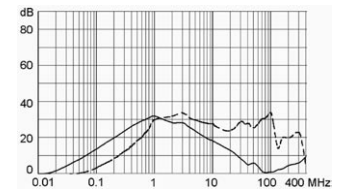
2 A



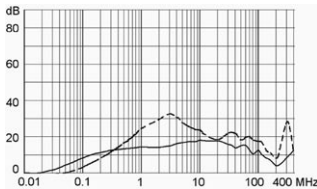
4 A



6 A



10 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Line Switch	Illumination	Color	Order Number
1	Standard Version	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.1102.003
2	Standard Version	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.2102.003
4	Standard Version	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.3102.003
6	Standard Version	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.4102.003
10	Standard Version	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.5102.003
1	Standard Version	Screw-on	Front-Side	1 pole	illuminated	red	DC12.1122.003
1	Standard Version	Screw-on	Front-Side	1 pole	illuminated	green	DC12.1132.003
2	Standard Version	Screw-on	Front-Side	1 pole	illuminated	red	DC12.2122.003
2	Standard Version	Screw-on	Front-Side	1 pole	illuminated	green	DC12.2132.003
4	Standard Version	Screw-on	Front-Side	1 pole	illuminated	red	DC12.3122.003
4	Standard Version	Screw-on	Front-Side	1 pole	illuminated	green	DC12.3132.003
6	Standard Version	Screw-on	Front-Side	1 pole	illuminated	red	DC12.4122.003
6	Standard Version	Screw-on	Front-Side	1 pole	illuminated	green	DC12.4132.003
10	Standard Version	Screw-on	Front-Side	1 pole	illuminated	red	DC12.5122.003
10	Standard Version	Screw-on	Front-Side	1 pole	illuminated	green	DC12.5132.003
1	Standard Version	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.1102.001
2	Standard Version	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.2102.001
4	Standard Version	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.3102.001
6	Standard Version	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.4102.001
10	Standard Version	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.5102.001
1	Standard Version	Screw-on	Front-Side	2-pole	illuminated	red	DC12.1122.001
1	Standard Version	Screw-on	Front-Side	2-pole	illuminated	green	DC12.1132.001
2	Standard Version	Screw-on	Front-Side	2-pole	illuminated	red	DC12.2122.001
2	Standard Version	Screw-on	Front-Side	2-pole	illuminated	green	DC12.2132.001
4	Standard Version	Screw-on	Front-Side	2-pole	illuminated	red	DC12.3122.001
4	Standard Version	Screw-on	Front-Side	2-pole	illuminated	green	DC12.3132.001
6	Standard Version	Screw-on	Front-Side	2-pole	illuminated	red	DC12.4122.001
6	Standard Version	Screw-on	Front-Side	2-pole	illuminated	green	DC12.4132.001
10	Standard Version	Screw-on	Front-Side	2-pole	illuminated	red	DC12.5122.001
10	Standard Version	Screw-on	Front-Side	2-pole	illuminated	green	DC12.5132.001
1	Standard Version	Screw-on	Rear-Side	1 pole	non-illuminated	-	DC12.1102.203
2	Standard Version	Screw-on	Rear-Side	1 pole	non-illuminated	-	DC12.2102.203
4	Standard Version	Screw-on	Rear-Side	1 pole	non-illuminated	-	DC12.3102.203
6	Standard Version	Screw-on	Rear-Side	1 pole	non-illuminated	-	DC12.4102.203
10	Standard Version	Screw-on	Rear-Side	1 pole	non-illuminated	-	DC12.5102.203
1	Standard Version	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.1102.201

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Line Switch	Illumination	Color	Order Number
2	Standard Version	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.2102.201
4	Standard Version	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.3102.201
6	Standard Version	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.4102.201
10	Standard Version	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.5102.201
1	Standard Version	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.1102.103
2	Standard Version	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.2102.103
4	Standard Version	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.3102.103
6	Standard Version	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.4102.103
10	Standard Version	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.5102.103
1	Standard Version	Snap-in	Front-Side	1 pole	illuminated	red	DC12.1122.103
1	Standard Version	Snap-in	Front-Side	1 pole	illuminated	green	DC12.1132.103
2	Standard Version	Snap-in	Front-Side	1 pole	illuminated	red	DC12.2122.103
2	Standard Version	Snap-in	Front-Side	1 pole	illuminated	green	DC12.2132.103
4	Standard Version	Snap-in	Front-Side	1 pole	illuminated	red	DC12.3122.103
4	Standard Version	Snap-in	Front-Side	1 pole	illuminated	green	DC12.3132.103
6	Standard Version	Snap-in	Front-Side	1 pole	illuminated	red	DC12.4122.103
6	Standard Version	Snap-in	Front-Side	1 pole	illuminated	green	DC12.4132.103
10	Standard Version	Snap-in	Front-Side	1 pole	illuminated	red	DC12.5122.103
10	Standard Version	Snap-in	Front-Side	1 pole	illuminated	green	DC12.5132.103
1	Standard Version	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.1102.101
2	Standard Version	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.2102.101
4	Standard Version	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.3102.101
6	Standard Version	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.4102.101
10	Standard Version	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.5102.101
1	Standard Version	Snap-in	Front-Side	2-pole	illuminated	red	DC12.1122.101
1	Standard Version	Snap-in	Front-Side	2-pole	illuminated	green	DC12.1132.101
2	Standard Version	Snap-in	Front-Side	2-pole	illuminated	red	DC12.2122.101
2	Standard Version	Snap-in	Front-Side	2-pole	illuminated	green	DC12.2132.101
4	Standard Version	Snap-in	Front-Side	2-pole	illuminated	red	DC12.3122.101
4	Standard Version	Snap-in	Front-Side	2-pole	illuminated	green	DC12.3132.101
6	Standard Version	Snap-in	Front-Side	2-pole	illuminated	red	DC12.4122.101
6	Standard Version	Snap-in	Front-Side	2-pole	illuminated	green	DC12.4132.101
10	Standard Version	Snap-in	Front-Side	2-pole	illuminated	red	DC12.5122.101
10	Standard Version	Snap-in	Front-Side	2-pole	illuminated	green	DC12.5132.101
1	Medical Version (M5)	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.1202.003
2	Medical Version (M5)	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.2202.003
4	Medical Version (M5)	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.3202.003
6	Medical Version (M5)	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.4202.003
10	Medical Version (M5)	Screw-on	Front-Side	1 pole	non-illuminated	-	DC12.5202.003
1	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	red	DC12.1222.003
1	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	green	DC12.1232.003
2	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	red	DC12.2222.003
2	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	green	DC12.2232.003
4	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	red	DC12.3222.003
4	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	green	DC12.3232.003
6	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	red	DC12.4222.003
6	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	green	DC12.4232.003
10	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	red	DC12.5222.003
10	Medical Version (M5)	Screw-on	Front-Side	1 pole	illuminated	green	DC12.5232.003
1	Medical Version (M5)	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.1202.001
2	Medical Version (M5)	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.2202.001
4	Medical Version (M5)	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.3202.001
6	Medical Version (M5)	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.4202.001
10	Medical Version (M5)	Screw-on	Front-Side	2-pole	non-illuminated	-	DC12.5202.001
1	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	red	DC12.1222.001

Rated Current [A]	Filter-Type	Panel mounting	Mounting side	Line Switch	Illumination	Color	Order Number
1	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	green	DC12.1232.001
2	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	red	DC12.2222.001
2	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	green	DC12.2232.001
4	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	red	DC12.3222.001
4	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	green	DC12.3232.001
6	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	red	DC12.4222.001
6	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	green	DC12.4232.001
10	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	red	DC12.5222.001
10	Medical Version (M5)	Screw-on	Front-Side	2-pole	illuminated	green	DC12.5232.001
1	Medical Version (M5)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.1202.201
2	Medical Version (M5)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.2202.201
4	Medical Version (M5)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.3202.201
6	Medical Version (M5)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.4202.201
10	Medical Version (M5)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.5202.201
1	Medical Version (M5)	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.1202.103
2	Medical Version (M5)	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.2202.103
4	Medical Version (M5)	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.3202.103
6	Medical Version (M5)	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.4202.103
10	Medical Version (M5)	Snap-in	Front-Side	1 pole	non-illuminated	-	DC12.5202.103
1	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	red	DC12.1222.103
1	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	green	DC12.1232.103
2	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	red	DC12.2222.103
2	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	green	DC12.2232.103
4	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	red	DC12.3222.103
4	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	green	DC12.3232.103
6	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	red	DC12.4222.103
6	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	green	DC12.4232.103
10	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	red	DC12.5222.103
10	Medical Version (M5)	Snap-in	Front-Side	1 pole	illuminated	green	DC12.5232.103
1	Medical Version (M5)	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.1202.101
2	Medical Version (M5)	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.2202.101
4	Medical Version (M5)	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.3202.101
6	Medical Version (M5)	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.4202.101
10	Medical Version (M5)	Snap-in	Front-Side	2-pole	non-illuminated	-	DC12.5202.101
1	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	red	DC12.1222.101
1	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	green	DC12.1232.101
2	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	red	DC12.2222.101
2	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	green	DC12.2232.101
4	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	red	DC12.3222.101
4	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	green	DC12.3232.101
6	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	red	DC12.4222.101
10	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	red	DC12.5222.101
10	Medical Version (M5)	Snap-in	Front-Side	2-pole	illuminated	green	DC12.5232.101
1	Medical Version (M80)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.1602.201
2	Medical Version (M80)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.2602.201
4	Medical Version (M80)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.3602.201
6	Medical Version (M80)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.4602.201
10	Medical Version (M80)	Screw-on	Rear-Side	2-pole	non-illuminated	-	DC12.5602.201

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

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Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front side mounting, line switch 1-pole



Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, Line switch 1-pole, Line-filter in standard version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [KEB1](#)
- We recommend for new applications the new type [DC12](#)

Approvals

- VDE License Number: 40004665 (FKS)
- UL License Number: E72928 (FKS)

Characteristics

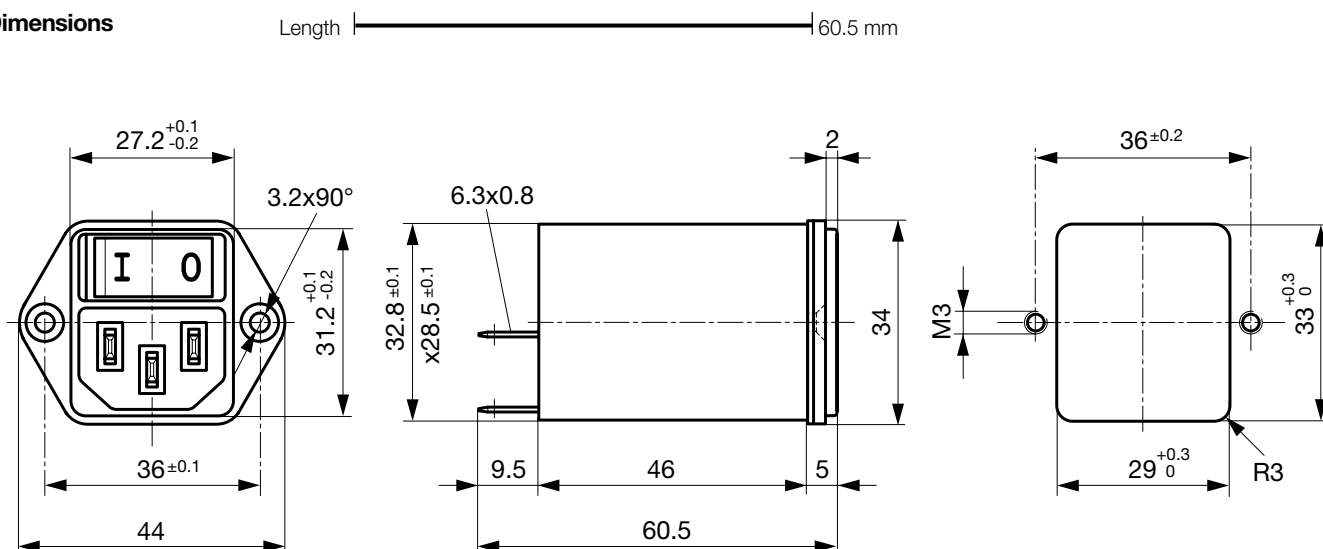
- All single elements are already wired
- Line switch non-illuminated
- With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

References[General Product Information](#)**Weblinks**
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Switch	Rocker switch 1 pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'100'000h acc. to MIL-HB-217 F

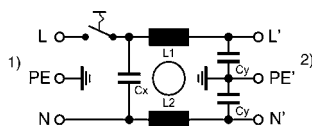
Dimensions



Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]
1	Standard Version	2 x 10	68	2.2
2	Standard Version	2 x 4	68	2.2
4	Standard Version	2 x 1.5	68	2.2
6	Standard Version	2 x 0.8	68	2.2
10	Standard Version	2 x 0.3	68	2.2

Diagrams



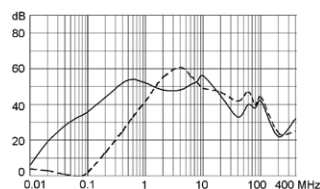
- 1) Line
2) Load

Attenuation Loss

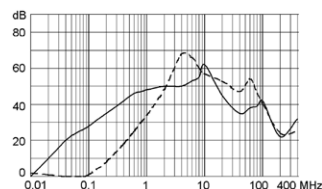
--- differential mode ____ common mode

Standard version

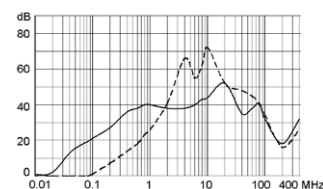
1 A



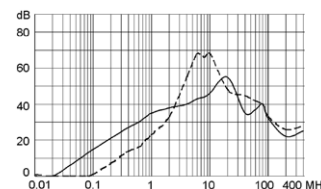
2 A



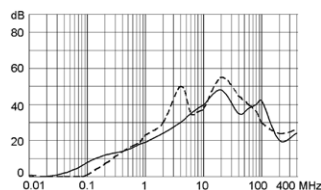
4 A



6 A



10 A



Variants

Rated Current [A]	Filter-Type	Order Number
1	Standard Version	4302.5001
2	Standard Version	4302.5002
4	Standard Version	4302.5003
6	Standard Version	4302.5004
10	Standard Version	4302.5005

Packaging unit 10 Pcs

Accessory

Description



[Assorted Covers](#)
Rear Cover



[Cord retaining kits](#)
Cord retaining strain relieve

Passende Dose

Category / Description

[Appliance Outlet](#)

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

[Connector](#)

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
...	...

Inlet filter, front side mounting, line switch 2-pole

Standard- or Medical-Filter



Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [KEB2](#)
- We recommend for new applications the new type [DC12](#)

Approvals

- VDE License Number: 40004665 (FKT)
- UL License Number: E72928 (FKT)

Characteristics

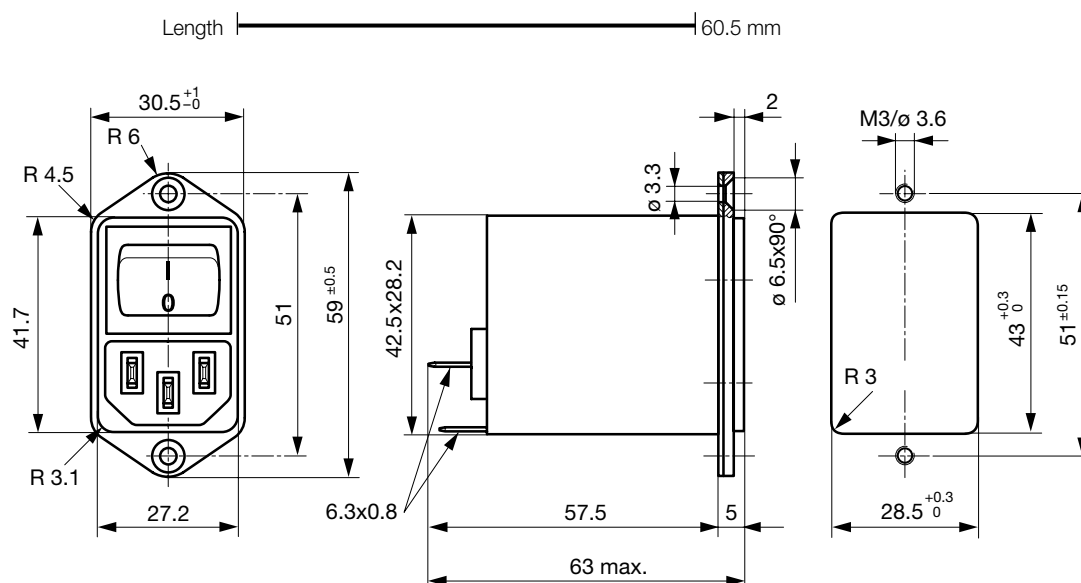
- All single elements are already wired
- Line switch non-illuminated
- With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

References
[General Product Information](#)
Weblinks
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5 mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'900'000h acc. to MIL-HB-217 F

Dimensions



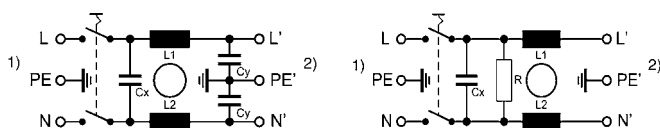
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [M Ω]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1

Diagrams

Standard version

Medical version

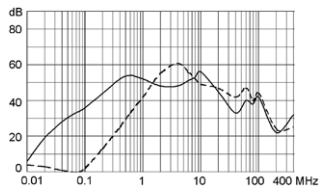
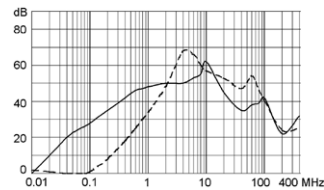
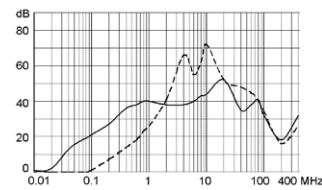
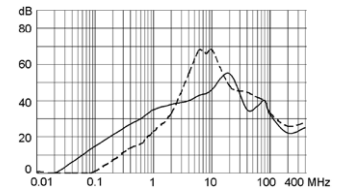
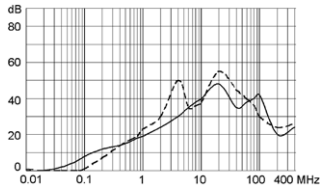


- 1) Line
2) Load

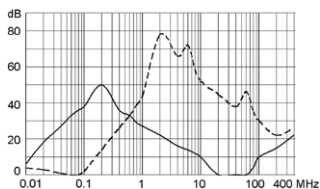
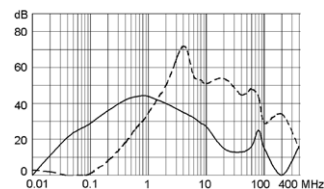
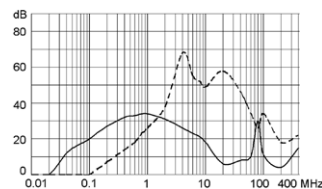
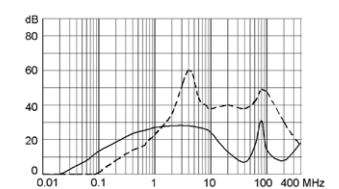
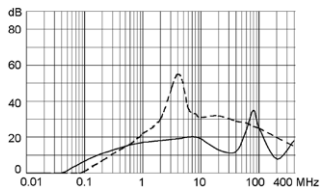
Attenuation Loss

Standard version

--- differential mode ____ common mode

1 A**2 A****4 A****6 A****10 A**

Medical version (M5)

1 A**2 A****4 A****6 A****10 A****Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Filter-Type	Order Number
1	Standard Version	4302.5311
2	Standard Version	4302.5312
4	Standard Version	4302.5313
6	Standard Version	4302.5314
10	Standard Version	4302.5315
1	Medical Version (M5)	4302.5331
2	Medical Version (M5)	4302.5333
4	Medical Version (M5)	4302.5335
6	Medical Version (M5)	4302.5337
10	Medical Version (M5)	4302.5339

Packaging unit

10 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, PCB mounting, line switch 1-/2-pole

Standard- or Medical-Filter



new



Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on mounting on PCB from rear-side
- 3 Functions:
Appliance Inlet Protection class I, Line switch 1- or 2-pole, Line filter in standard and medical version
- For PCB mounting
- Alternative: version without line filter [DC21](#)

Approvals

- VDE License Number: 40001522
- UL License Number: E72928

Characteristics

- Ultra-compact design
- All single elements are already wired
- Line switch non-illuminated or illuminated
- With EMC-shield
- Especially suitable for use in switching power supplies
Ideal for application with high transient loads
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

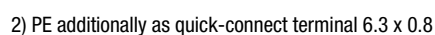
- Fixing on PCB with self-tapping screws 3 mm or pre-inserted nuts M3
- Other rocker marking
- Illuminated green
- Medical version M80
- Capacitance CX1

References[General Product Information](#)**Weblinks**
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60Hz
Leakage Current	standard < 0.5 mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	For PCB mounting ; Ground terminal: Quick connect terminals 6.3 x 0.8 mm angled to pin axis
Panel Thickness s	Screw-on: max 4 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498 CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Line Switch	Rocker switch 1 or 2 pole, non-illuminated or illuminated red, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'100'000h acc. to MIL-HB-217 F

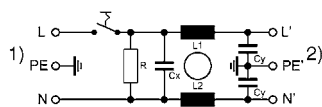
Screw-on mounting



Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [mΩ]
1	Standard Version	2 x 10	100	2.2	1
2	Standard Version	2 x 4	100	2.2	1
4	Standard Version	2 x 1.5	100	2.2	1
6	Standard Version	2 x 0.8	100	2.2	1
10	Standard Version	2 x 0.3	100	2.2	1
1	Medical Version (M5)	2 x 10	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
4	Medical Version (M5)	2 x 1.5	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
10	Medical Version (M5)	2 x 0.3	100	-	1

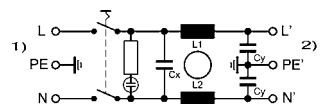
Diagrams

Standard filter 1-pole



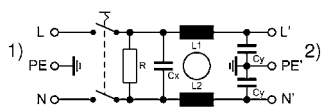
- 1) Line
2) Load

Standard filter 2-pole illuminated



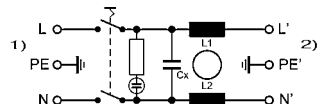
- 1) Line
2) Load

Standard filter 2-pole



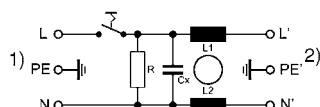
- 1) Line
2) Load

Medical Filter 2-pole (M5) illuminated



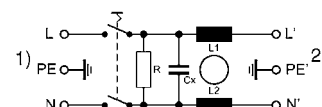
- 1) Line
2) Load

Medical filter 1-pole (M5)



- 1) Line
2) Load

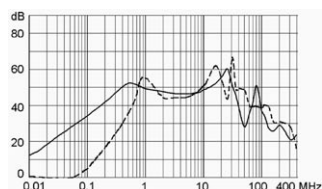
Medical filter 2-pole (M5)



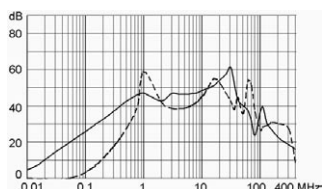
Attenuation Loss

Standard version

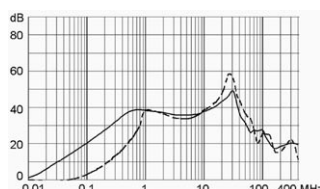
1 A



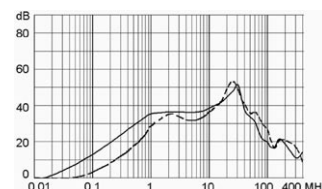
2 A



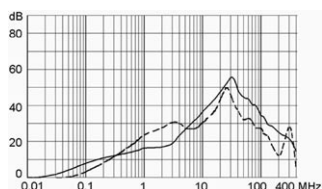
4 A



6 A

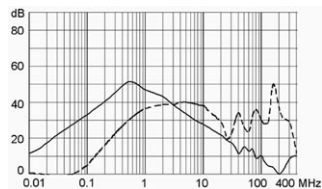


10 A

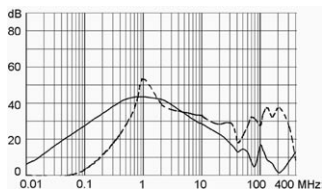


Medical version (M5)

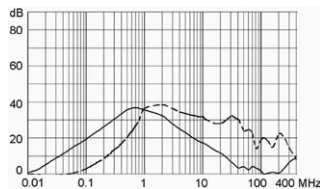
1 A



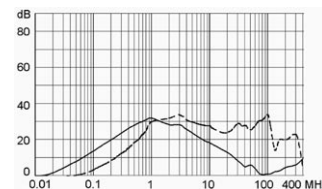
2 A



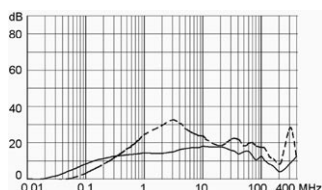
4 A



6 A



10 A



--- differential mode ____ common mode

Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Rated Current [A]	Filter-Type	Line Switch	Illumination	Color	Order Number
1	Standard Version	1 pole		-	DC22.1111.111
2	Standard Version	1 pole		-	DC22.2111.111
4	Standard Version	1 pole		-	DC22.4111.111
6	Standard Version	1 pole		-	DC22.6111.111
10	Standard Version	1 pole		-	DC22.9111.111
1	Standard Version	2-pole		-	DC22.1121.111
2	Standard Version	2-pole		-	DC22.2121.111
4	Standard Version	2-pole		-	DC22.4121.111
6	Standard Version	2-pole		-	DC22.6121.111
10	Standard Version	2-pole		-	DC22.9121.111
1	Standard Version	2-pole	●	red	DC22.1123.111
2	Standard Version	2-pole	●	red	DC22.2123.111
4	Standard Version	2-pole	●	red	DC22.4123.111
6	Standard Version	2-pole	●	red	DC22.6123.111
10	Standard Version	2-pole	●	red	DC22.9123.111
1	Medical Version (M5)	2-pole		-	DC22.1221.111
2	Medical Version (M5)	2-pole		-	DC22.2221.111
4	Medical Version (M5)	2-pole		-	DC22.4221.111
6	Medical Version (M5)	2-pole		-	DC22.6221.111
10	Medical Version (M5)	2-pole		-	DC22.9221.111
1	Medical Version (M5)	2-pole	●	red	DC22.1223.111
2	Medical Version (M5)	2-pole	●	red	DC22.2223.111
4	Medical Version (M5)	2-pole	●	red	DC22.4223.111
6	Medical Version (M5)	2-pole	●	red	DC22.6223.111
10	Medical Version (M5)	2-pole	●	red	DC22.9223.111

Packaging unit 10 Pcs

Accessory

Description



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, front side mounting, recessed circuit breaker TA45 2-pole

Standard- or Medical-Filter



Screw-On Version



Description

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, circuit breaker type TA45 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [DF11](#)
- Substitute for type [5145](#)

Approvals

- VDE License Number: 40012935
- UL License Number: E72928

Characteristics

- All single elements are already wired
- Line switch non-illuminated or illuminated
Thermal overload protection
Optional with undervoltage release or remote trip release
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Unwired versions
- Line switch 1-pole
- Other rocker marking
- Medical version M80
- Capacitance CX1

References

[General Product Information](#)

Weblinks

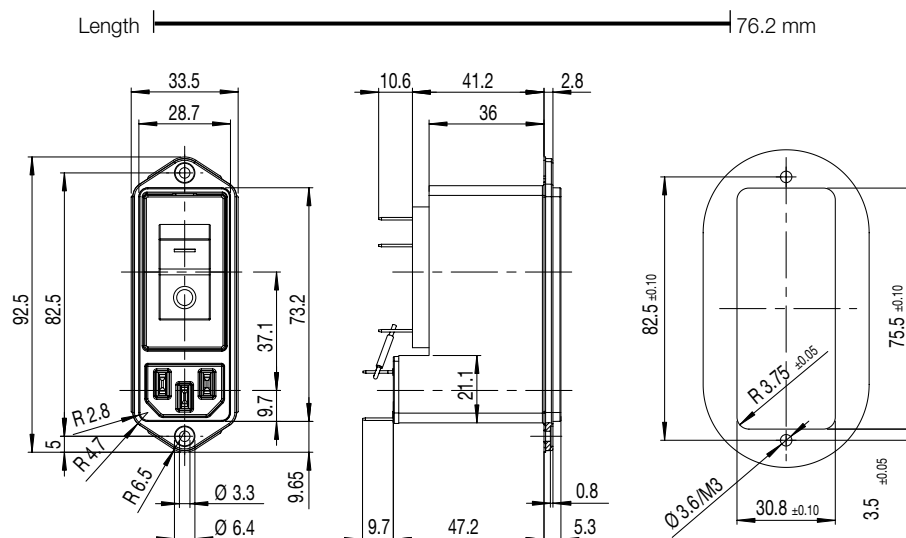
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50 Hz
Ratings UL/CSA	1 - 15A @ Ta 40 °C / 250VAC; 60 Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-10 °C to 55 °C
Climatic Category	10/055/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1 UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Circuit breaker	Acc. IEC/EN 60934, UL 1077, CSA 22.2 no. 235 2-pole rocker switch, illuminated or non-illuminated. Optional with undervoltage- or remote trip release Short circuit capacity Icn: at In < 3A/240VAC : 10 x In at In ≥ 3A/240VAC : 300A
Line Switch	Rocker switch 2-pole non-illuminated or illuminated acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 100'000h acc. to MIL-HB-217 F

Dimensions



* Version TA45 with undervoltage release

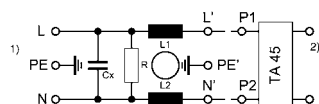
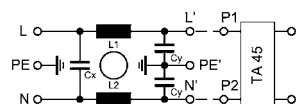
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [M Ω]
1	Standard Version	2 x 11	100	2.2	1
2	Standard Version	2 x 4	100	2.2	1
3	Standard Version	2 x 2.5	100	2.2	1
4	Standard Version	2 x 1.6	100	2.2	1
6	Standard Version	2 x 0.7	100	2.2	1
8	Standard Version	2 x 0.6	100	2.2	1
10	Standard Version	2 x 0.4	100	2.2	1
15	Standard Version	2 x 0.1	100	2.2	1
1	Medical Version (M5)	2 x 11	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
3	Medical Version (M5)	2 x 2.5	100	-	1
4	Medical Version (M5)	2 x 1.6	100	-	1
6	Medical Version (M5)	2 x 0.7	100	-	1
8	Medical Version (M5)	2 x 0.6	100	-	1
10	Medical Version (M5)	2 x 0.4	100	-	1
15	Medical Version (M5)	2 x 0.1	100	-	1

Diagrams

Standard version

Medical version



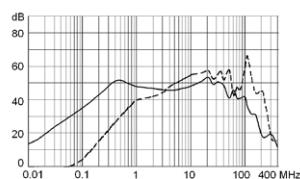
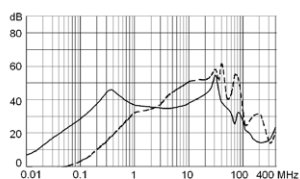
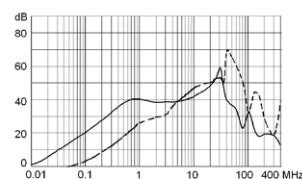
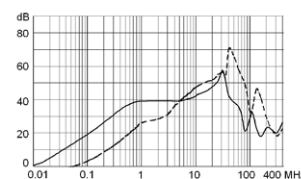
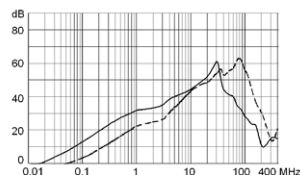
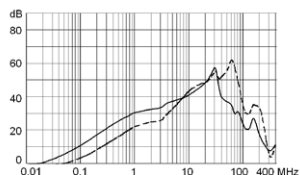
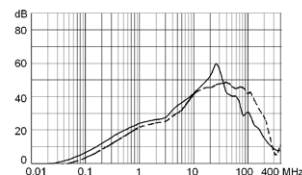
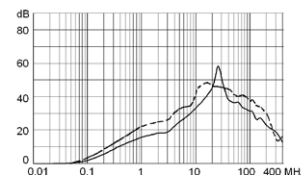
1) Line
2) Load

1) Line
2) Load

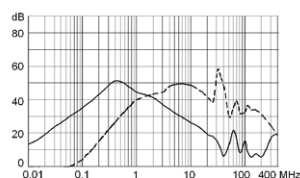
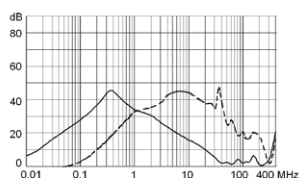
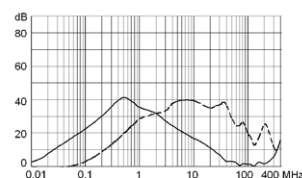
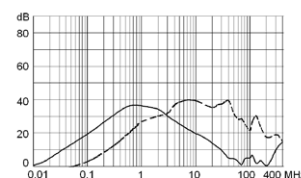
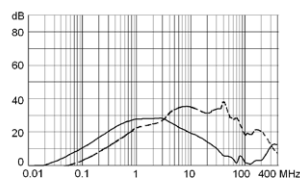
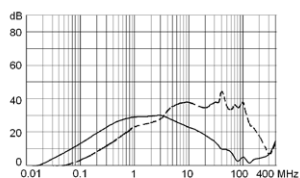
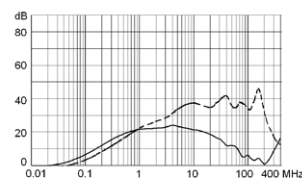
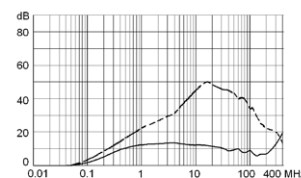
Attenuation Loss

Standard version

- - - differential mode ____ common mode

1 A**2 A****3 A****4 A****6 A****8 A****10 A****15 A**

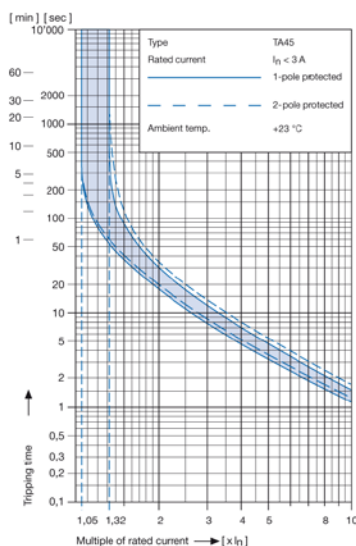
Medical version (M5)

1 A**2 A****3 A****4 A****6 A****8 A****10 A****15 A**

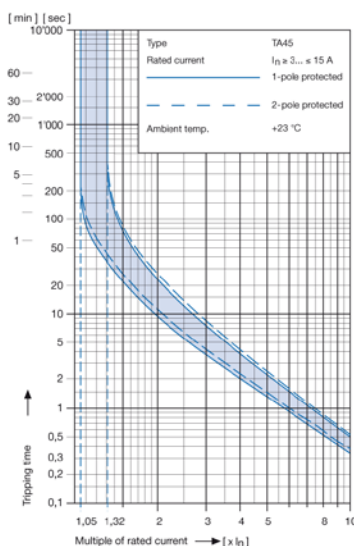
Technical data (continued)

Circuit breaker

Tripping characteristics

 $I_n < 3\text{ A}$ 

Tripping characteristics

 $I_n \geq 3 \dots \leq 15\text{ A}$ Effect of ambient temperature ¹⁾

The unit is calibrated for an ambient temperature of +23 °C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below.

* Ambient temperature [°C] Correction factor

-10	0,89
- 5	0,91
0	0,92
+23	1,00
+30	1,03
+40	1,08
+55	1,16

* Temperature must be measured at the rear of the breaker next to the terminals after equipment operating temperature has been reached.

¹⁾ Example

Rated current at +23 °C	6,0 A
Ambient temperature	+40 °C
Correction factor	1,08
Chosen rated current at + 40 °C ambient temperature	6 A x 1,08 = 6,5 A

Order code (Order example)

Type	Order code TA 45 (2-pole rocker-switch without accessories)
DF12.	A B T W F 1 5 0 C 0 . 0 0 1 0 . 1
	see table 1
	Wiring 1 wired 2 unwired
	Mounting 0 Screw
	Terminals 1 Quick connect 6.3 x 0.8
	Filter Version 1 Standard 3 Medical M5
	Rated Current 1 = 1A 5 = 6A 2 = 2A 6 = 8A 3 = 3A 7 = 10A 4 = 4A 9 = 15A

Please note that Schurter will establish an internal part number for logistical use in addition to the order code. The format of this internal part number is, for example DF12.xxxxxx

Table 1 Selection for type TA45

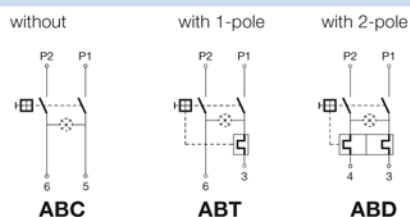
Order example



- Line switch
- 2-pole, rocker actuated
- Quick connect terminal
- Other types on request

Diagram

Thermal overload protection



Without illumination

ABC

ABT

ABD

With illumination

220...240 V
110...120 VA02
A04A12
A14A32
A34

Colours

Switch front

W black
B black
6 black

Rocker

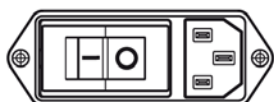
white
black
— orange transp.

Rocker legend

Surface	Illustration	Colour of print
F embossed / Relief	— ○	
H printed / bedruckt	ON OFF	white / weiss
K printed / bedruckt	ON OFF	black / schwarz
L printed / bedruckt	— ○	white / weiss

Surface	Illustration	Colour of print
M printed	— ○	black
P printed	I ○	white
R printed	I ○	black

Position of the rocker legend
e.g F



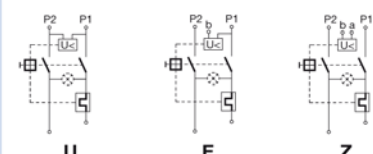
Rated current:

- Without thermal overload protection: code C00 } $I_n = 20 \text{ A}$
- With thermal overload protection: rated current I_n (A)

I_n	Code	I_n	Code	I_n	Code	I_n	Code
0,1	J01	1,3	J13	2,8	J28	10,0	100
0,2	J02	1,4	J14	3,0	030	11,0	110
0,3	J03	1,5	J15	3,5	035	12,0	120
0,4	J04	1,6	J16	4,0	040	13,0	130
0,5	J05	1,7	J17	4,5	045	14,0	140
0,6	J06	1,8	J18	5,0	050	15,0	150
0,7	J07	1,9	J19	6,0	060		
0,8	J08	2,0	J20	6,5	065		
0,9	J09	2,1	J21	7,0	070		
1,0	J10	2,2	J22	7,5	075		
1,1	J11	2,3	J23	8,0	080		
1,2	J12	2,5	J25	9,0	090		

Without release: code C0

Undervoltage release

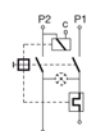


U

E

Z

Remote trip release



A

Code

Rated
voltage U_n

•	•	•	•	2	240 V AC
•	•	•	•	3	230 V AC
•	•	•	•	4	120 V AC

Packaging unit

10 Pcs

Accessory

Description



Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06
...	...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
...	...

Inlet filter, front side mounting, circuit breaker TA45 2-pole

Standard- or Medical-Filter



Screw-On Version

**Description**

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, circuit breaker type TA45 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [6145](#)
- We recommend for new applications the new type [DF12](#)

Approvals

- VDE License Number: 117118
- UL License Number: E72928

Characteristics

- All single elements are already wired
- Unwired versions available on request
- Line switch non-illuminated or illuminated
- Thermal overload protection
- Optional with undervoltage release or remote trip release
- Qualified for use in equipment according IEC/EN 60950

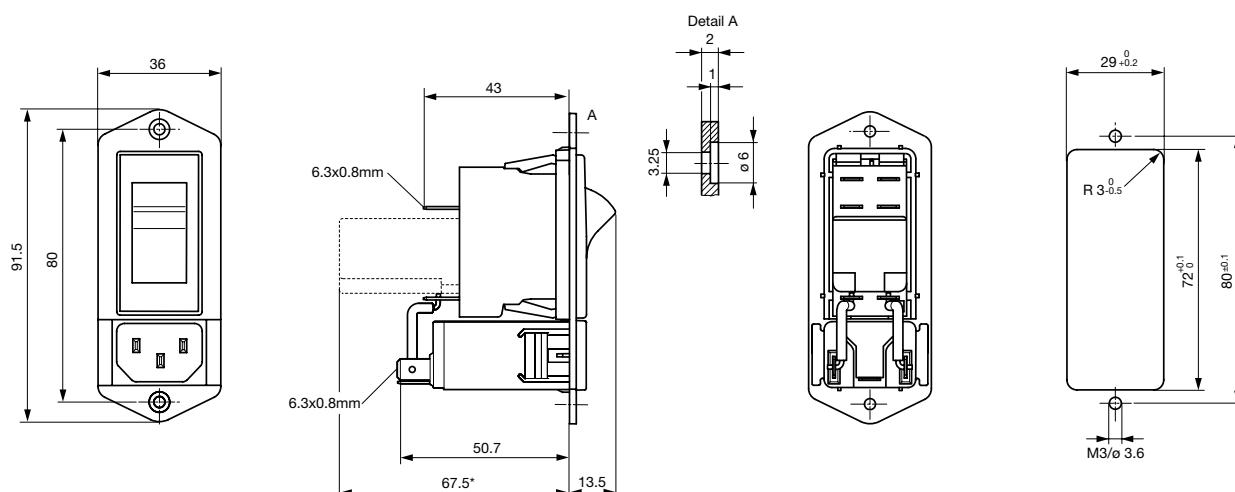
References
[General Product Information](#)
Weblinks
[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 15A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7kVDC between L-N > 2.7kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-10°C to 55°C
Climatic Category	10/055/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Circuit breaker	Acc. IEC/EN 60934, UL 1077, CSA 22.2 no. 235 2-pole rocker switch, illuminated or non-illuminated. Optional with undervoltage- or remote trip release Short circuit capacity Icn: at In < 3A/240VAC : 10 x In at In ≥ 3A/240VAC : 300A
Line Switch	Rocker switch 2-pole non-illuminated or illuminated acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 100'000h acc. to MIL-HB-217 F

Dimensions

Length | 67.5 mm



* --- Version TA45 with undervoltage release

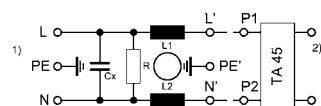
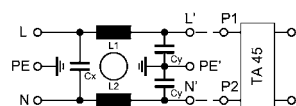
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 11	47	2.2	-
2	Standard Version	2 x 4	47	2.2	-
3	Standard Version	2 x 2.5	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
6	Standard Version	2 x 0.7	47	2.2	-
8	Standard Version	2 x 0.6	47	2.2	-
10	Standard Version	2 x 0.4	47	2.2	-
15	Standard Version	2 x 0.1	47	2.2	-
1	Medical Version (M5)	2 x 11	47	-	1
2	Medical Version (M5)	2 x 4	47	-	1
6	Medical Version (M5)	2 x 0.7	47	-	1
8	Medical Version (M5)	2 x 0.6	47	-	1
10	Medical Version (M5)	2 x 0.4	47	-	1
15	Medical Version (M5)	2 x 0.1	47	-	1

Diagrams

Standard version

Medical version

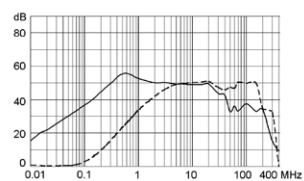
1) Line
2) Load1) Line
2) Load

Attenuation Loss

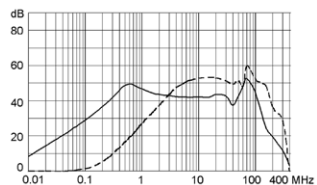
Standard version

- - - - differential mode _____ common mode

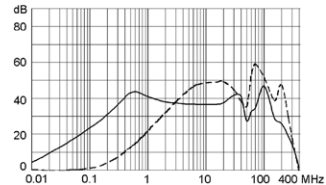
1 A



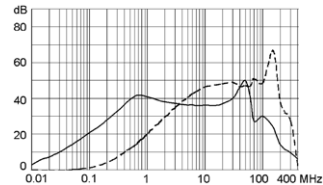
2A



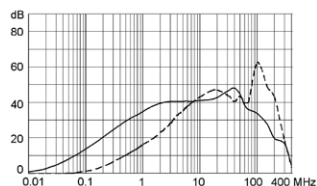
3 A



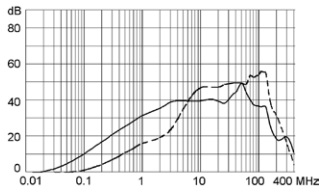
4 A



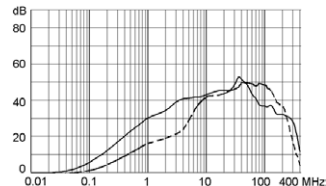
6 A



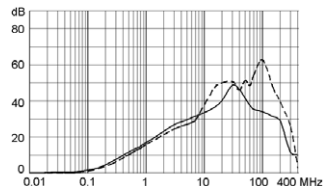
8 A



10 A

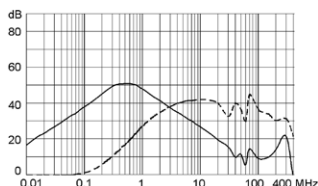


15A

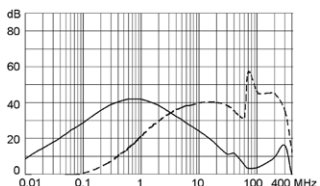


Medical version (M5)

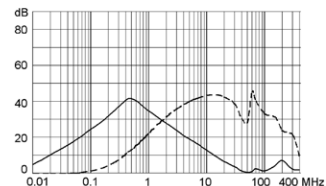
1 A



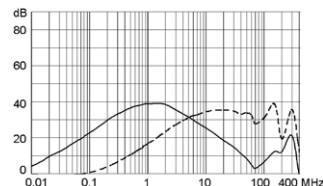
2A



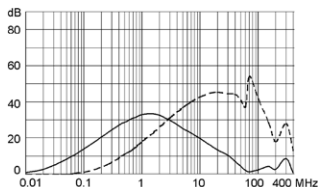
3 A



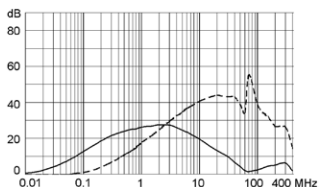
4 A



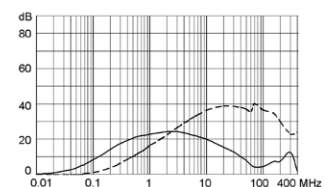
6 A



8A



10 A



15A

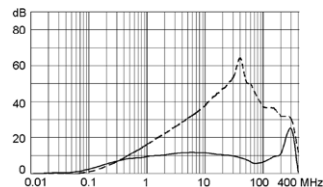


Table 1 Selection for type TA45

Order example



- Line switch
 - 2-pole, rocker actuated
 - Quick connect terminal
- Other types on request

Diagram

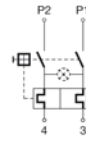
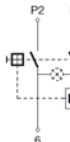
Thermal overload protection

without

with 1-pole

with 2-pole

Without illumination

**ABC****ABT****ABD**

With illumination

220...240 V
110...120 V**A02**
A04**A12**
A14**A32**
A34**Colours****Switch front**

W black
B black
6 black

Rocker

white
black
— orange transp.

Rocker legend**Surface****Illustration****Colour of print****F** embossed / Relief

white / weiss

H printed / bedruckt

black / schwarz

K printed / bedruckt

white / weiss

L printed / bedruckt**Surface****Illustration****Colour of print****M** printed

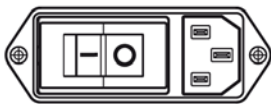
black

P printed

white

R printed

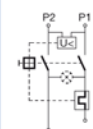
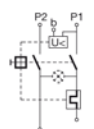
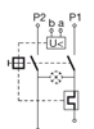
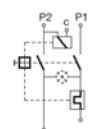
black

Position of the rocker legend
e.g F**Rated current:**

• Without thermal overload protection: code C00 } $I_n = 20\text{ A}$

• With thermal overload protection: rated current I_n (A)

I_n	Code	I_n	Code	I_n	Code	I_n	Code
0,1	J01	1,3	J13	2,8	J28	10,0	100
0,2	J02	1,4	J14	3,0	030	11,0	110
0,3	J03	1,5	J15	3,5	035	12,0	120
0,4	J04	1,6	J16	4,0	040	13,0	130
0,5	J05	1,7	J17	4,5	045	14,0	140
0,6	J06	1,8	J18	5,0	050	15,0	150
0,7	J07	1,9	J19	6,0	060		
0,8	J08	2,0	J20	6,5	065		
0,9	J09	2,1	J21	7,0	070		
1,0	J10	2,2	J22	7,5	075		
1,1	J11	2,3	J23	8,0	080		
1,2	J12	2,5	J25	9,0	090		

Without release: code C0**Undervoltage release****U****E****Z****Remote trip release****A****Code**Rated
voltage U_n

•	•	•	•	2	240 V AC
•	•	•	•	3	230 V AC
•	•	•	•	4	120 V AC

Packaging unit 20 Pcs

Accessory

Description

Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



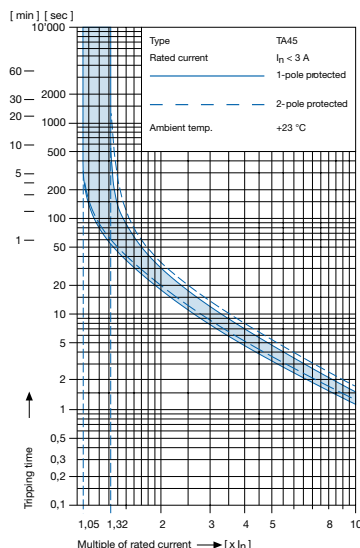
Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

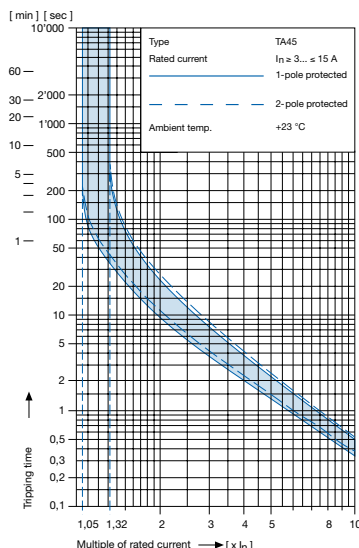
Technical data (continued)

Circuit breaker

Tripping characteristics

 $I_n < 3 \text{ A}$ 

Tripping characteristics

 $I_n \geq 3 \dots \leq 15 \text{ A}$ Effect of ambient temperature ¹⁾

The unit is calibrated for an ambient temperature of +23 °C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below.

* Ambient temperature [°C] Correction factor

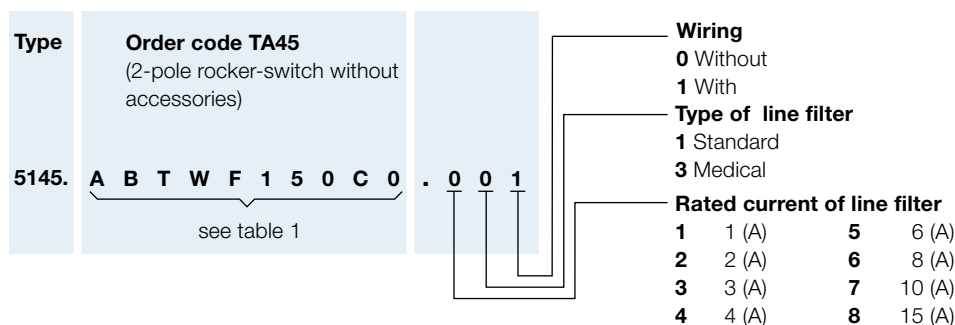
-10	0,89
- 5	0,91
0	0,92
+23	1,00
+30	1,03
+40	1,08
+55	1,16

* Temperature must be measured at the rear of the breaker next to the terminals after equipment operating temperature has been reached.

¹⁾ Example

Rated current at +23 °C	6,0 A
Ambient temperature	+40 °C
Correction factor	1,08
Chosen rated current at + 40 °C ambient temperature	6 A x 1,08 = 6,5 A

Order code (Order example)



Please note that Schurter will establish an internal part number for logistical use in addition to the order code. The format of this internal part number is, for example 5145.0031.001

Inlet filter, front side mounting, line switch 2-pole

Standard- or Medical-Filter



C20



70° C



Description

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [EC11](#)

Approvals

- VDE License Number: 40001522
- UL License Number: E72928

Characteristics

- All single elements are already wired
- Line switch non-illuminated
Illuminated version on request
- With EMC-shield
- Ideal for application with high transient loads
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Line switch, illuminated
- Line switch with other rocker marking

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	12 - 16A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	12 - 20A @ Ta 40 °C / 125 VAC; 60Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

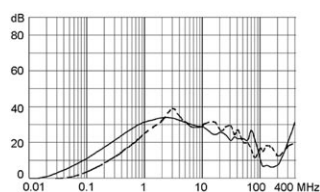
Appliance-Inlet/-Outlet	C20 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16A, Protection class I
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'700'000 h acc. to MIL-HB-217 F

Length |-----| 59.5 mm

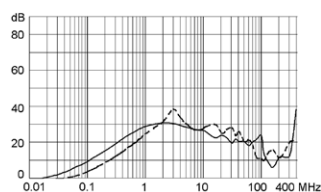


Medical version (M5)

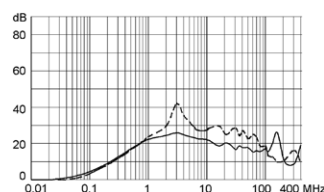
12 A



16 A



20 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Rated Current [A]	Filter-Type	internally wired	Line Switch	Order Number
12	Standard Version		2-pole	EC12.3101.001
16	Standard Version		2-pole	EC12.2101.001
20	Standard Version		2-pole	EC12.1101.001
12	Standard Version		2-pole	EC12.3101.002
16	Standard Version		2-pole	EC12.2101.002
20	Standard Version		2-pole	EC12.1101.002
12	Medical Version (M5)		2-pole	EC12.3201.001
16	Medical Version (M5)		2-pole	EC12.2201.001
20	Medical Version (M5)		2-pole	EC12.1201.001
12	Medical Version (M5)		2-pole	EC12.3201.002
16	Medical Version (M5)		2-pole	EC12.2201.002
20	Medical Version (M5)		2-pole	EC12.1201.002

Packaging unit

20 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Connector



IEC connector C19, rewirable, straight	0104
IEC connector C19, rewirable, angled	1651
IEC connector C19, rewirable, straight	1652
IEC connector C19, rewirable, angled	4790
IEC connector C19, rewirable, straight	4795



Power Supply or Interconnection Cord

Power Cord with IEC Appliance Connector C19, straight, 70°C

1654

Kabelverbindung/16 A

Inlet filter, front side mounting, recessed circuit breaker TA45 2-pole

Standard- or Medical-Filter



Screw-On Version

C20



70° C



Description

- Panel Mount:
Screw-on from front side
- 3 Functions:
Appliance Inlet Protection class I, circuit breaker type TA45 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [EF11](#)

Approvals

- VDE License Number: 40001520
- UL License Number: E72928

Characteristics

- All single elements are already wired
- Line switch non-illuminated
Illuminated version on request
- Thermal overload protection
- Optional with undervoltage release or remote trip release
- With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

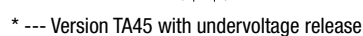
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	12 - 16 A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	12 - 20 A @ Ta 40 °C / 125 VAC; 60 Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-10 °C to 55 °C
Climatic Category	10/055/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

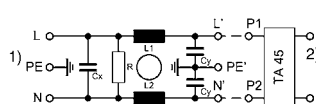
Appliance-Inlet/-Outlet	C20 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16 A, Protection class I
Circuit breaker	Acc. IEC/EN 60934, UL 1077, CSA 22.2 no. 235 2-pole rocker switch, illuminated or non-illuminated. Optional with undervoltage- or remote trip release Short circuit capacity Icn: at In < 3A/240VAC : 10 x In at In ≥ 3A/240VAC : 300A
Line Switch	Rocker switch 2-pole, non-illuminated or illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 100'000h acc. to MIL-HB-217 F

Length |-----| 59.5 mm

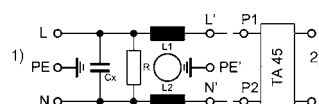


Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
12	Standard Version	2 x 0.8	100	2.2	1
16	Standard Version	2 x 0.6	100	2.2	1
20	Standard Version	2 x 0.3	100	2.2	1
12	Medical Version (M5)	2 x 0.8	100	-	1
16	Medical Version (M5)	2 x 0.6	100	-	1
20	Medical Version (M5)	2 x 0.3	100	-	1

Standard version



- 1) Line
- 2) Load

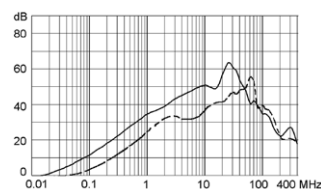


- 1) Line
- 2) Load

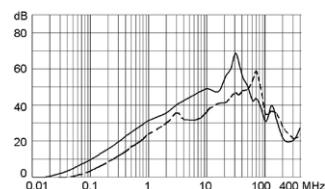
- - - differential mode _____ common mode

Standard version

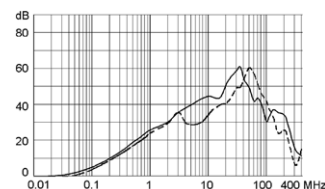
12A



16 A

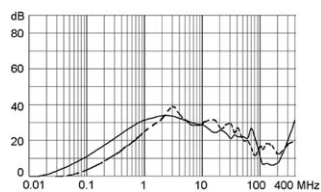


20 A

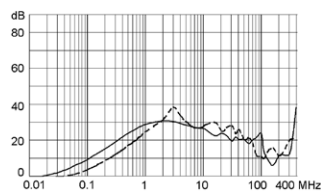


Medical version (M5)

12 A



16 A



20 A

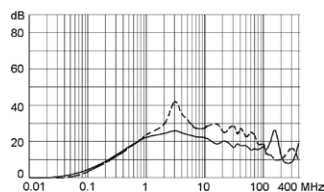


Table 1 Selection for type TA45

Order example



- Line switch
 - 2-pole, rocker actuated
 - Quick connect terminal
- Other types on request

Diagram

Thermal overload protection		without	with 1-pole	with 2-pole
Without illumination				
		ABC	ABT	ABD
With illumination	220...240 V	A02	A12	A32
	110...120 V	A04	A14	A34

Colours**Switch front**

W black
B black
6 black

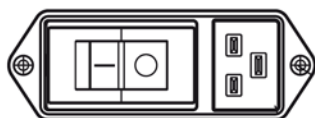
Rocker

white
 black
 — orange transp.

Rocker legend

Surface	Illustration	Colour of print	Surface	Illustration	Colour of print
F embossed	— ○		M printed	— ○	black
H printed	ON OFF	white	P printed	I ○	white
K printed	ON OFF	black	R printed	I ○	black
L printed	— ○	white			

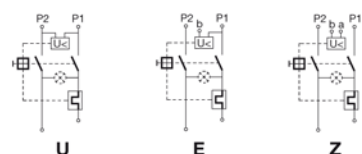
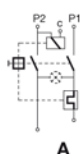
Position of the rocker legend
 e.g F

**Rated current:**

- Without thermal overload protection: code **C00** } $I_n = 20\text{ A}$
- With thermal overload protection: rated current I_n (A)

I_n	Code	I_n	Code	I_n	Code	I_n	Code
10,0	100	13,0	130	16,0	160	19,0	190
11,0	110	14,0	140	17,0	170	20,0	200
12,0	120	15,0	150	18,0	180		

Other rated currents on request

Without release: code C0**Undervoltage release****U****E****Z****Remote trip release****A****Code**Rated voltage U_n

•	2	240 V AC
•	3	230 V AC
•	4	120 V AC

Packaging unit 16 Pcs

Accessory

Description



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Connector



IEC connector C19, rewirable, straight	0104
IEC connector C19, rewirable, angled	1651
IEC connector C19, rewirable, straight	1652
IEC connector C19, rewirable, angled	4790
IEC connector C19, rewirable, straight	4795



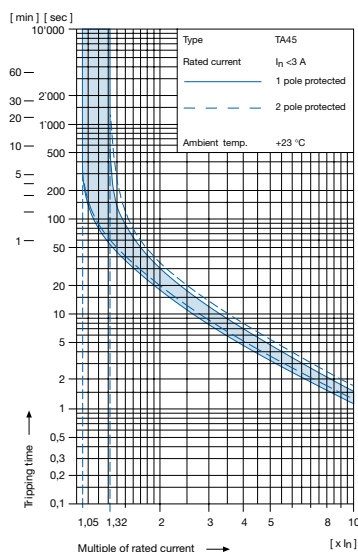
Power Supply or Interconnection Cord

Power Cord with IEC Appliance Connector C19, straight, 70°C	1654
	Kabelverbindung/16 A

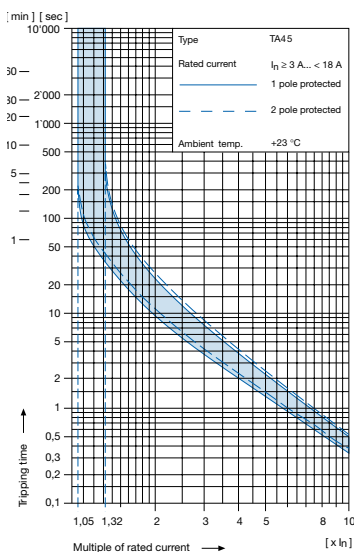
Technical data (continued)

Circuit breaker

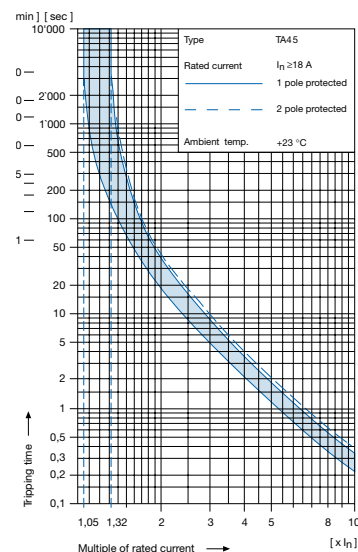
Tripping characteristics

 $I_n < 3 \text{ A}$ 

Tripping characteristics

 $I_n \geq 3 \dots < 18 \text{ A}$ 

Tripping characteristics

 $I_n \geq 18 \text{ A}$ ¹⁾ Effect of ambient temperature

The unit is calibrated for an ambient temperature of $+23^\circ\text{C}$. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table on the right side:

* Ambient temperature [$^\circ\text{C}$]	Correction factor
-10	0,89
-5	0,91
0	0,92
+23	1,00
+30	1,03
+40	1,08
+55	1,16

* Temperature must be measured at the rear of the breaker next to the terminals after equipment operating temperature has been reached.

¹⁾ Example

Rated current at $+23^\circ\text{C}$	6,0 A
Ambient temperature	$+40^\circ\text{C}$
Correction factor	1,08
Chosen rated current at $+40^\circ\text{C}$ ambient temperature	6 A x 1,08 = 6,5 A

Order code for EF12 (order example)

Type	Order code TA45 (2-pole rocker-switch without accessories)
EF12.	A B T W F 1 5 0 C 0 .
	see table 1

11 10.01

Wiring
1 = wired

Protection class
0 = Class I, housing black

Panel mount
0 = Screw-on version

Terminals
1 = Quick connect terminals 6,3 x 0,8 mm

Line filter version
1 = standard
2 = medical

Line filter, rated current
1 = 20 A, 2 = 16 A, 3 = 12 A

Please note that Schurter will establish an internal new part number for logistical use in addition to the order code. The format of this internal part number is, for example EF12.xxxx.1110.01

Application note

The rated current of the line filter must be equal or higher than the rated current of the circuit-breaker

Other versions on request

– Rocker switch illuminated

Line switch with/without bowden cable, fuseh. 5x20/6.3x32 mm, voltage selector

Standard- or Medical-Filter



Fuse drawer and bowden cable have to be ordered separately

Screw-On Version



70° C



Description

- Panel Mount:
Screw-on from front side
- 5 Functions:
Appliance Inlet, Line switch for bowdencable actuation, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm, with or without voltage selector (step switch), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KD-Bowdencable](#)

Approvals

- VDE License Number: 40004665 (FKSO, FKSP, FKSU, FKSV)
- UL License Number: E72928 (FKSO, FKSP, FKSU, FKSV)

Characteristics

- All single elements are already wired
- The fuse drawer "Fingergrip" can be removed by hand
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

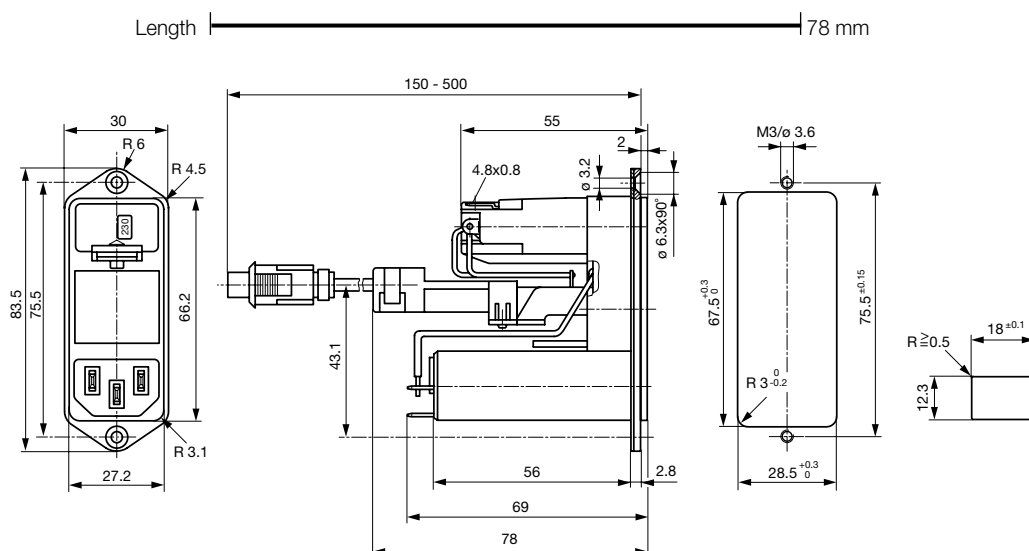
Technical Data

Ratings IEC	1 - 6A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 8A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Switch for bowdencable 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Voltage selector	optional step, 2-4 digits
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'200'000h acc. to MIL-HB-217 F

Dimensions

CD bowden cable



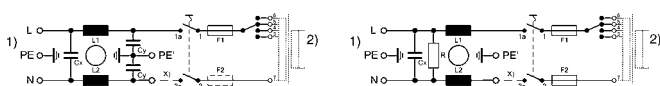
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1

Diagrams

Standard version with voltage selector

Medical version with voltage selector

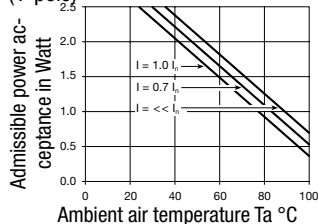


- 1) Line
2) Load
x) External connection to be made by the customer

Derating Curves

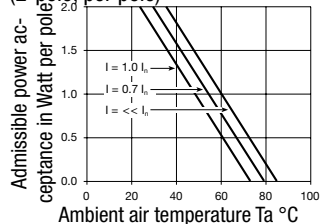
Fuses 5 x 20 mm

(1-pole)



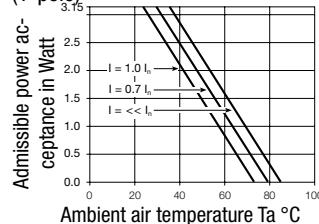
Fuses 5 x 20 mm

(2-pole, per pole)



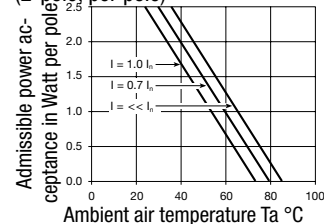
Fuses 6,3 x 32 mm

(1-pole)



Fuses 6,3 x 32 mm

(2-pole, per pole)

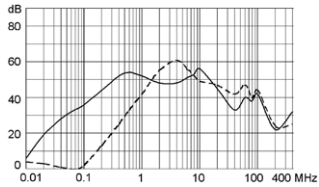


Attenuation Loss

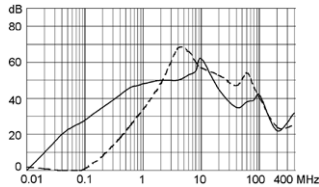
Standard version

--- differential mode ____ common mode

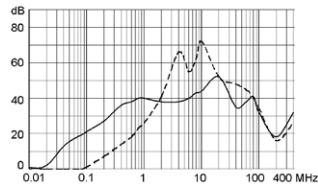
1 A



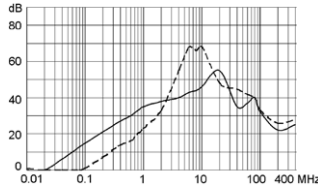
2 A



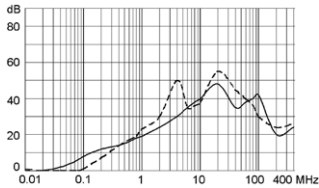
4 A



6 A

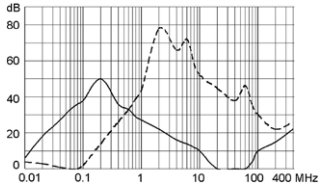


10 A

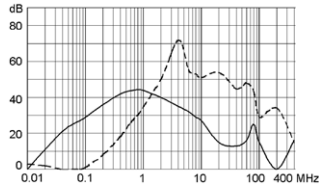


Medical version (M5)

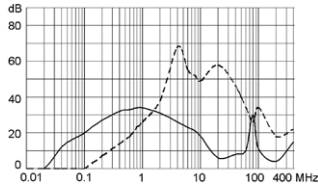
1 A



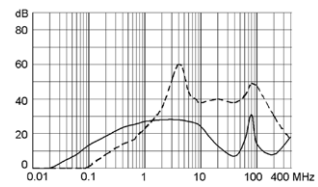
2 A



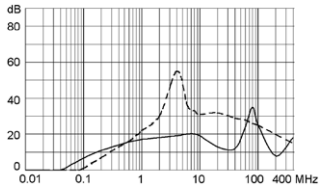
4 A



6 A



10 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer and bowden cable have to be ordered separately

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Voltage selector	Order Number
CD-Bowdenzug	1	Standard Version	1 pole	2-pole	2-4 digits	CD11.4599.151
CD-Bowdenzug	2	Standard Version	1 pole	2-pole	2-4 digits	CD21.4599.151
CD-Bowdenzug	4	Standard Version	1 pole	2-pole	2-4 digits	CD31.4599.151
CD-Bowdenzug	6	Standard Version	1 pole	2-pole	2-4 digits	CD41.4599.151
CD-Bowdenzug	1	Standard Version	2-pole	2-pole	2-4 digits	CD14.4199.151
CD-Bowdenzug	2	Standard Version	2-pole	2-pole	2-4 digits	CD24.4199.151
CD-Bowdenzug	4	Standard Version	2-pole	2-pole	2-4 digits	CD34.4199.151
CD-Bowdenzug	6	Standard Version	2-pole	2-pole	2-4 digits	CD44.4199.151
CD-Bowdenzug	1	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDG4.4199.151
CD-Bowdenzug	2	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDA4.4199.151
CD-Bowdenzug	4	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDC4.4199.151
CD-Bowdenzug	6	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDE4.4199.151

Packaging unit 10 Pcs

Required Accessory

Description



[Bowdencables incl. accessory](#)
Bowden Cable for Power Entry Modules



[Fusedrawer 3](#)
Drawers for fuse links 5x20mm resp. 6.3x32mm

Accessory



[Cord retaining kits](#)
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
	...

With fuseholder 5x20 mm/6.3x32 mm, voltage sel. (series-parallel)

Standard- or Medical-Filter



Fuse drawer, voltage selector insert and Bowdencable must be ordered separately.

Screw-On Version



Description

- Panel Mount:
Screw-on from front side
- 5 Functions:
Appliance Inlet, Line switch for bowdencable actuation, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm, Voltage selector (series-parallel), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KG-Bowdencable](#)

Approvals

- VDE License Number: 40004665 (FKSA, FKSB)
- UL License Number: E72928 (FKSA, FKSB)

Characteristics

- All single elements are already partially wired
- For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

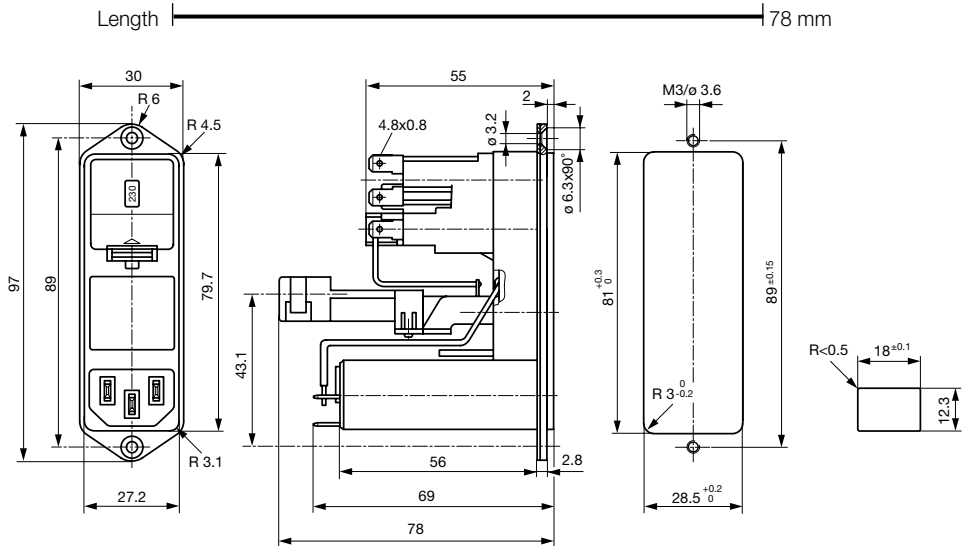
Technical Data

Ratings IEC	1 - 6A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 8A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Switch for bowdencable 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Voltage selector	series-parallel, 4, 3 or 2 switch positions or usable as 2-pole change-over switch
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'100'000h acc. to MIL-HB-217 F

Dimensions

CG bowden cable



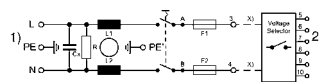
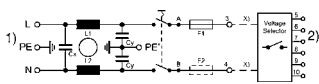
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1

Diagrams

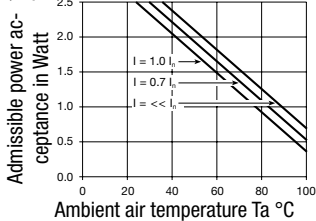
Standard version
with fuseholder 1- or 2-pole

Medical version
with fuseholder 2-pole

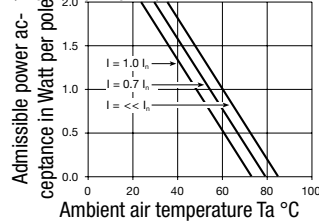


Derating Curves

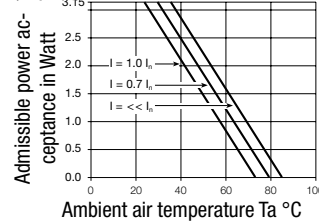
Fuses 5 x 20 mm
(1-pole)



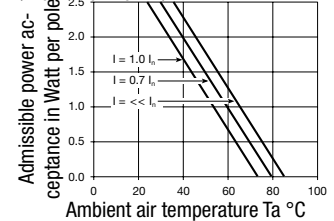
Fuses 5 x 20 mm
(2-pole, per pole)



Fuses 6,3 x 32 mm
(1-pole)



Fuses 6,3 x 32 mm
(2-pole, per pole)

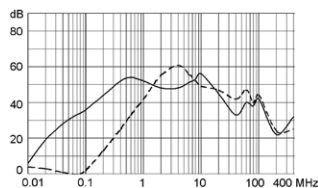


Attenuation Loss

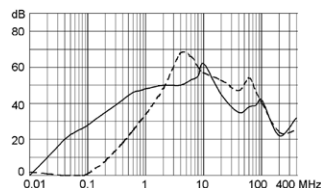
Standard version

- - - differential mode ____ common mode

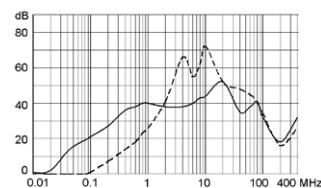
1 A



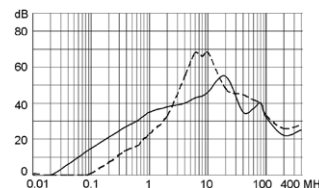
2 A



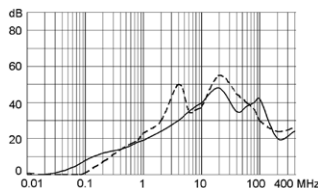
4 A



6 A

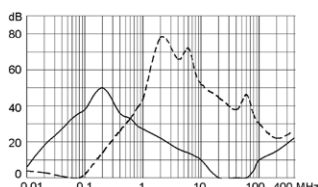


10 A

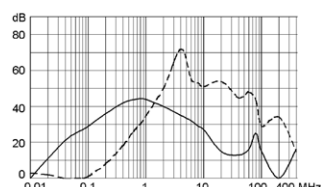


Medical version (M5)

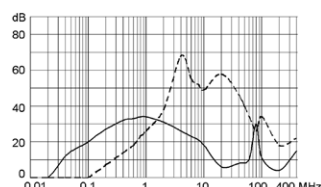
1 A



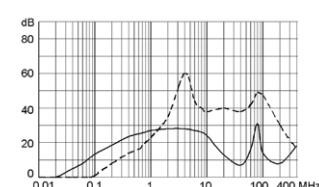
2 A



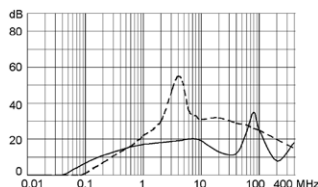
4 A



6 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer, voltage selector insert and Bowdencable must be ordered separately.

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Line Switch	Order Number
CG-Bowdencable	1	Standard Version	2-pole	2-pole	Rocker switch	CG10.6199.151
CG-Bowdencable	2	Standard Version	2-pole	2-pole	Rocker switch	CG20.6199.151
CG-Bowdencable	4	Standard Version	2-pole	2-pole	Switch for bowdencable	CG30.6199.151
CG-Bowdencable	6	Standard Version	2-pole	2-pole	Rocker switch	CG40.6199.151
CG-Bowdencable	1	Medical Version (M5)	2-pole	2-pole	Switch for bowdencable	CGG0.6199.151
CG-Bowdencable	2	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGA0.6199.151
CG-Bowdencable	4	Medical Version (M5)	2-pole	2-pole	Switch for bowdencable	CGC0.6199.151
CG-Bowdencable	6	Medical Version (M5)	2-pole	2-pole	Switch for bowdencable	CGE0.6199.151

Packaging unit

10 Pcs

Required Accessory

Description



[Bowdencables incl. accessory](#)
Bowden Cable for Power Entry Modules



[Jumper Wire 1](#)
Connection with Starnded Cable



[Fusedrawer 1](#)
Drawer for fuse links 5x20mm resp. 6.3x32mm



[Voltage Selectors Insert 1](#)
Voltage Selector Insert to KE, CE, KG, CG

Accessory



[Cord retaining kits](#)
Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet	
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet filter, modular assembling

Standard- or Medical-Filter



Snap-In Version

5411.XX5X.XXX

Appliance inlet

Fuseholder

Line filter
Snap-In Version

5431.X05X.XXX

Appliance inlet

Appliance outlet

Switch

Line filter
Snap-In Version

C14



70° C



Description

- Panel Mount:
Snap-in version from front side
- 2 - 5 Functions:
Appliance Inlet Protection class I, Connector, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 1- or 2-pole, Line filter in standard and medical version
- Solder terminals 3.5 x 0.8 mm or quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [Felcom 64](#)

Approvals

- VDE License Number: 101307
- UL License Number: E72928

Characteristics

- Modular component selection
- Individual components soldered on a printed circuit board
- Plug removal necessary for fuse-link replacement
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- Technical data of filter-components see blockfilter type 5500
- Fully insulated from the rear
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Line switch with other rocker marking

References

[General Product Information](#)

Weblinks

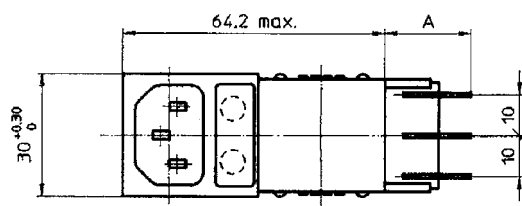
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

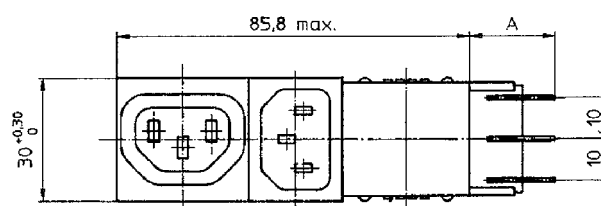
Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 250VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Solder terminals 3.5 x 0.8 mm or quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Snap-in: 1/1.2/1.5/2/2.5/3 mm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, F acc. to IEC/EN 60320-2-2, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)/ 1.6W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'400'000h acc. to MIL-HB-217 F

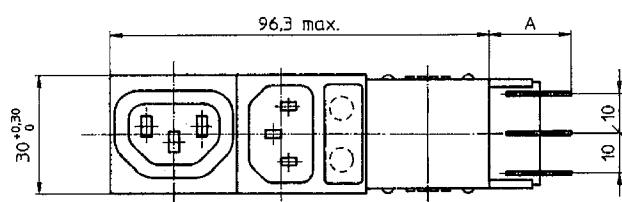
Dimensions



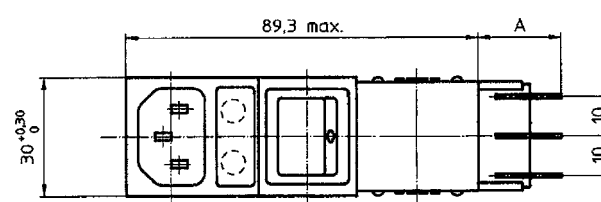
Variants 5411.XX5X.XXX
Mounting Ø: 63+0,2 x 27.6+0,2



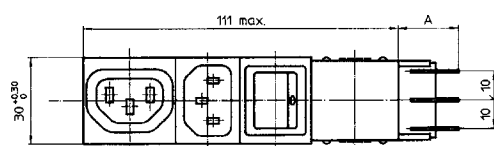
Variants 5421.X05X.XXX
Mounting Ø: 85.9+0,2 x 27.6+0,2



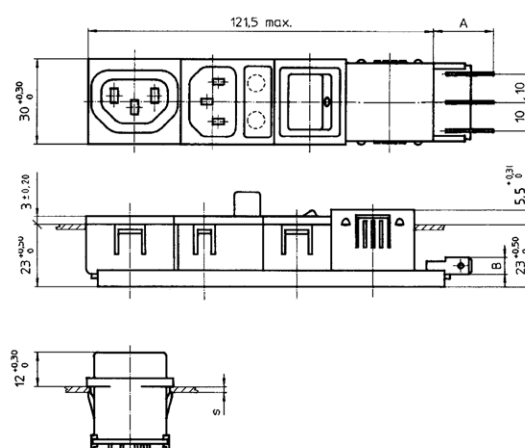
Variants 5423.XX5X.XXX
Mounting Ø: 96.4+0,2 x 27.6+0,2



Variants 5424.XX5X.XXX
Mounting Ø: 87.9+0,2 x 27.6+0,2



Variants 5431.X05X.XXX
Mounting Ø: 111.1+0,2 x 27.6+0,2



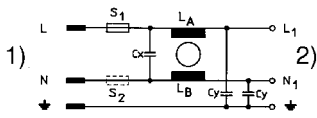
Variants 5432.XX5X.XXX
Mounting Ø: 121.6+0,2 x 27.6+0,2

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
2	Standard Version	2 x 4	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
10	Standard Version	2 x 0.7	47	2.2	-
10	Standard Version	2 x 11	47	2.2	-
2	Medical Version (M5)	2 x 4	47	-	1
4	Medical Version (M5)	2 x 1.6	47	-	1
10	Medical Version (M5)	2 x 0.7	47	-	1
10	Medical Version (M5)	2 x 11	47	-	1

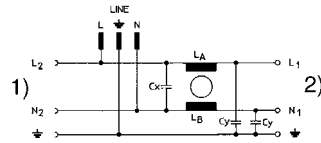
Diagrams

5411



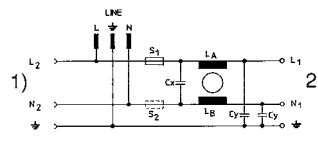
1) Line
2) Load 1

5421



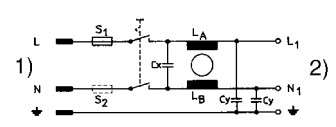
1) Load 2
2) Load 1

5423



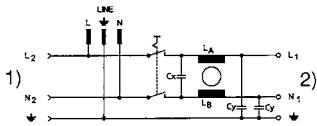
1) Load 2
2) Load 1

5424



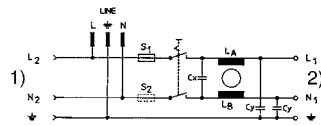
1) Line
2) Load 1

5431



1) Load 2
2) Load 1

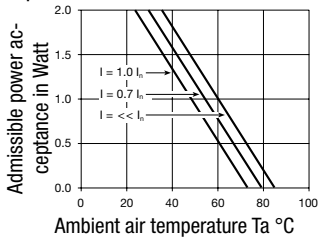
5432



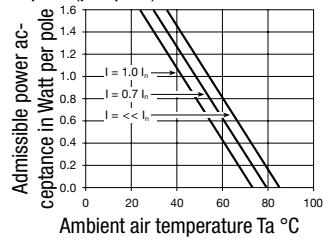
1) Load 2
2) Load 1

Derating Curves

1-pole



2-pole (per pole)



Ordering instructions

54 XX.X X XX.XX X

Type of line filter

1 = standard

3 = medical

“Snap-in” panel thickness

10 = 1,0 mm

12 = 1,2 mm

15 = 1,5 mm

20 = 2,0 mm

25 = 2,5 mm

30 = 3,0 mm

Connection

51 = solder terminals 3,5 x 0,8 mm

53 = quick connect terminals 6,3 x 0,8 mm

Fuseholder 5 x 20 mm

0 = without fuseholder

1 = 1-pole

2 = 2-pole

Line filter

1 = 1 Amp.

2 = 2 Amp.

4 = 4 Amp.

6 = 6 Amp.

8 = 8 Amp.

9 = 10 Amp.

Module combination

11 = Appliance inlet, fuseholder

21 = Appliance inlet, appliance outlet

23 = Appliance inlet, fuseholder, appliance outlet

24 = Appliance inlet, fuseholder, switch

31 = Appliance inlet, appliance outlet, switch

32 = Appliance inlet, fuseholder, appliance outlet, switch

Base model

Ordering instructions

54 XX. X X XX. XX X

Type of line filter

1 = standard
3 = medical

"Snap-in" panel thickness

10 = 1,0 mm
12 = 1,2 mm
15 = 1,5 mm
20 = 2,0 mm
25 = 2,5 mm
30 = 3,0 mm

Connection

51 = solder terminals 3,5 x 0,8 mm
53 = quick connect terminals 6,3 x 0,8 mm

Fuseholder 5 x 20 mm

0 = without fuseholder
1 = 1-pole
2 = 2-pole

Line filter

1 = 1 Amp.
2 = 2 Amp.
4 = 4 Amp.
6 = 6 Amp.

Module combination

11 = Appliance inlet, fuseholder
21 = Appliance inlet, appliance outlet
23 = Appliance inlet, fuseholder, appliance outlet
24 = Appliance inlet, fuseholder, switch
31 = Appliance inlet, appliance outlet, switch
32 = Appliance inlet, fuseholder, appliance outlet, switch

Base model

Packaging unit

10 Pcs

Accessory

Description



Cord retaining kits
Cord retaining strain relieve

Passender Stecker

Category / Description

Interconnection Cord



Power Cord with IEC Appliance Plug E, angled, 70°C	0607
Power Cord with IEC Appliance Plug E, angled, 70°C	0608
Power Cord with IEC Appliance Plug E, straight, 70°C	0609
Power Cord with IEC Appliance Plug G, angled, 70°C	607B
Power Cord with IEC Appliance Plug G, angled, 70°C	608B
Power Cord with IEC Appliance Plug G, straight, 70°C	609B

Plug Connector



IEC plug connector E, rewirable, straight, max. cable diameter 8.5 mm	4732
IEC plug connector E, rewirable, angled, max. cable diameter 10 mm	4733
IEC plug connector E, rewirable, straight, max. cable diameter 10 mm	4735
IEC plug connector E, rewirable, angled, max. cable diameter 10 mm	4736
IEC plug connector E, rewirable, straight	9009
IEC plug connector E, rewirable, angled	9013
IEC plug connector E, rewirable, angled	P685

Passende Dose

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
	...

Inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm

Plug removal necessary for fuse replacement



Fuse drawer must be ordered separately (see accessories).

Snap-In Version



70° C



Description

- Panel Mount:
Snap-in version from front side
- 4 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 1- or 2-pole, Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KM](#)
- Alternative: version for screw mounting [DD12](#)

Approvals

- VDE License Number: 126123
- UL License Number: E72928

Characteristics

- Ultra-compact design. Small dimensions in front of and behind the panel
- All single elements are already wired
- For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Innovative EMC-shielding with flexible steel segments for an excellent contact
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer 1-pole, plus spare fuse case
- Fuse drawer 2-pole, with shorting bar
- Other rocker marking

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

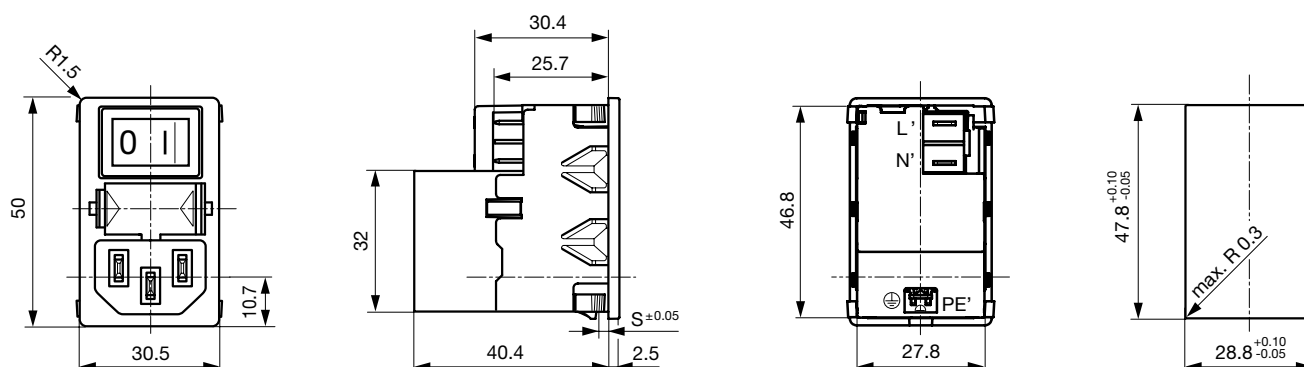
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60 Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Snap-in: 1/1.5/2/2.5 mm (all steps with one variant)
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10 A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)/ 1.4W (2-pole) per pole
Power Acceptance @ Ta > 23 °C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'800'000 h acc. to MIL-HB-217 F

Dimensions

Length | 42.9 mm



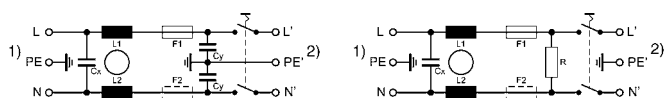
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 11	47	2.2	-
2	Standard Version	2 x 4	47	2.2	-
4	Standard Version	2 x 1.6	47	2.2	-
6	Standard Version	2 x 0.7	47	2.2	-
10	Standard Version	2 x 0.4	47	2.2	-
1	Medical Version (M5)	2 x 11	47	-	1
2	Medical Version (M5)	2 x 4	47	-	1
4	Medical Version (M5)	2 x 1.6	47	-	1
6	Medical Version (M5)	2 x 0.7	47	-	1
10	Medical Version (M5)	2 x 0.4	47	-	1

Diagrams

Standard version

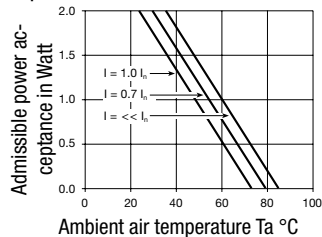
Medical version


1) Line
2) Load

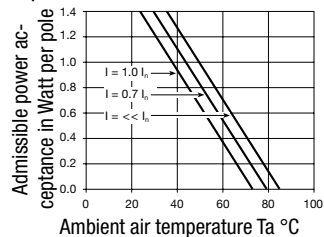
1) Line
2) Load

Derating Curves

1-pole



2-pole

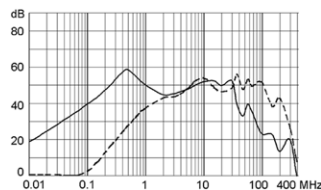


Attenuation Loss

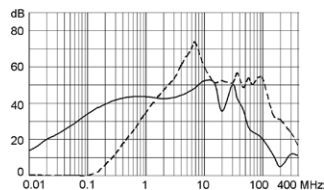
Standard version

- - - differential mode ____ common mode

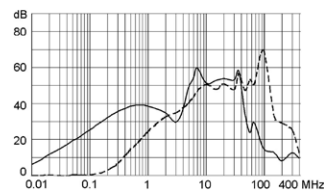
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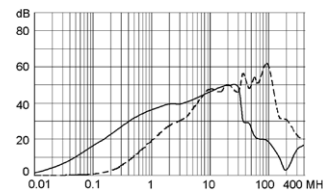
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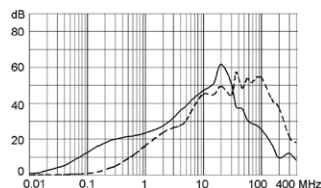
4 A



6 A

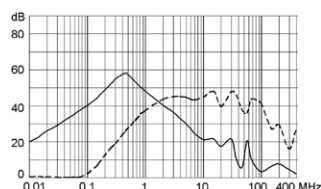


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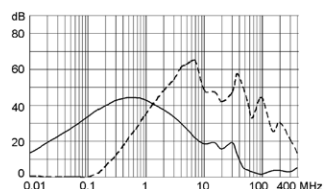


Medical version (M5)

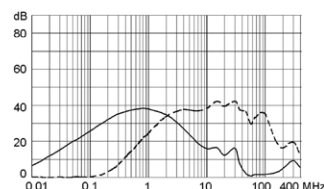
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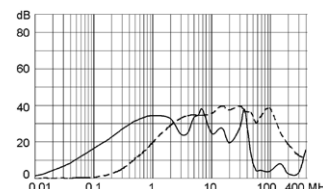
2 A



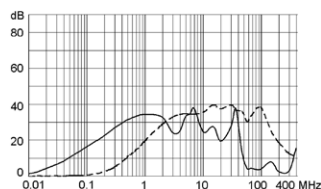
4 A



6 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer must be ordered separately (see accessories).

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Order Number
1	Standard Version	1 pole	2-pole	KMF1.1211.11
2	Standard Version	1 pole	2-pole	KMF1.1221.11
4	Standard Version	1 pole	2-pole	KMF1.1241.11
6	Standard Version	1 pole	2-pole	KMF1.1261.11
10	Standard Version	1 pole	2-pole	KMF1.1291.11
1	Standard Version	2-pole	2-pole	KMF1.1111.11
2	Standard Version	2-pole	2-pole	KMF1.1121.11
4	Standard Version	2-pole	2-pole	KMF1.1141.11
6	Standard Version	2-pole	2-pole	KMF1.1161.11
10	Standard Version	2-pole	2-pole	KMF1.1191.11
1	Medical Version (M5)	1 pole	2-pole	KMF1.1213.11
2	Medical Version (M5)	1 pole	2-pole	KMF1.1223.11
4	Medical Version (M5)	1 pole	2-pole	KMF1.1243.11
6	Medical Version (M5)	1 pole	2-pole	KMF1.1263.11
10	Medical Version (M5)	1 pole	2-pole	KMF1.1293.11
1	Medical Version (M5)	2-pole	2-pole	KMF1.1113.11

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Order Number
2	Medical Version (M5)	2-pole	2-pole	KMF1.1123.11
4	Medical Version (M5)	2-pole	2-pole	KMF1.1143.11
6	Medical Version (M5)	2-pole	2-pole	KMF1.1163.11
10	Medical Version (M5)	2-pole	2-pole	KMF1.1193.11

Packaging unit 20 Pcs

Required Accessory

Description



Fusedrawer 2

Fusedrawer with and without voltage selector insert

Accessory



Assorted Covers

Rear Cover



Cord retaining kits

Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet with filter for front side mounting, fuse 1-/2-pole, line switch 2-pole

Standard- or Medical-Filter



new



Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 1- or 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm
- Alternative: version without line filter [DD11](#)
- Alternative: version for snap-in mounting [KMF](#)

Approvals

- VDE License Number: 40001522
- UL License Number: E72928

Characteristics

- Ultra-compact design. Ideal for low profile designs
- Aluminum case provides good shielding
- All single elements are already wired
- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
For added safety "Extra-Safe" fuse drawers are available
- Ideal for application with high transient loads
Designed for standard and medical applications
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Solder terminals
- Fuse drawer 1-pole, plus spare fuse case
- Fuse drawer 2-pole, with shorting bar
- Other rocker marking
- Line switch, illuminated
- Line switch 1-pole
- Medical version M80
- Class X1- and Y1-capacitors for enhanced withstand voltage
- Protection class II, 70°C

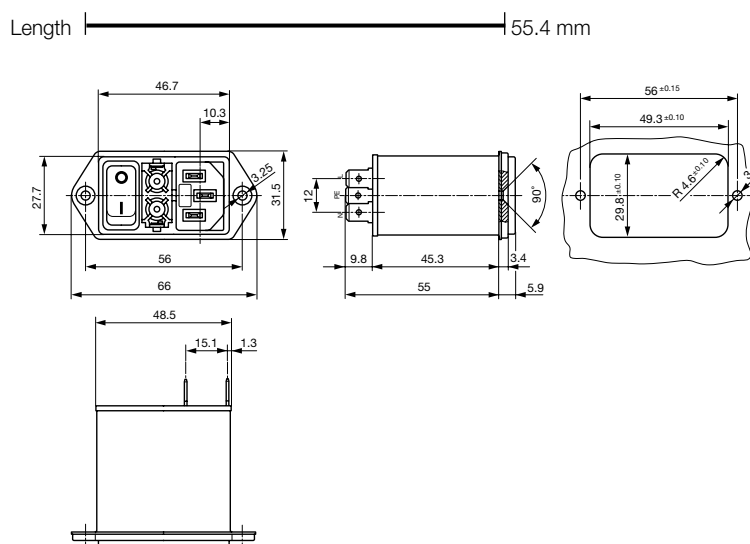
References[General Product Information](#)**Weblinks**
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 8A @ Ta 40 °C / 250VAC; 60Hz
Leakage Current	standard < 0.5 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (1 min/50Hz)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1 UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)/ 1.6W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 2'000'000h acc. to MIL-HB-217 F

Dimensions

Screw version

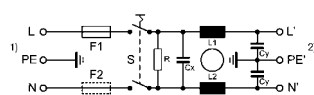


Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	100	2.2	1
2	Standard Version	2 x 4	100	2.2	1
4	Standard Version	2 x 1.5	100	2.2	1
6	Standard Version	2 x 0.8	100	2.2	1
8	Standard Version	2 x 0.6	100	2.2	1
10	Standard Version	2 x 0.3	100	2.2	1
1	Medical Version (M5)	2 x 10	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
4	Medical Version (M5)	2 x 1.5	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
8	Medical Version (M5)	2 x 0.6	100	-	1
10	Medical Version (M5)	2 x 0.3	100	-	1

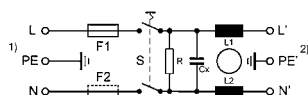
Diagrams

Filter standard
non illuminated



1) Line
2) Load

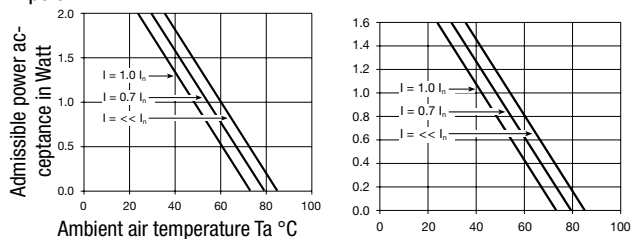
Filter Medical M5
non illuminated



1) Line
2) Load

Derating Curves

1-pole

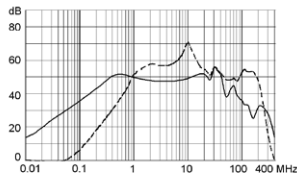


Attenuation Loss

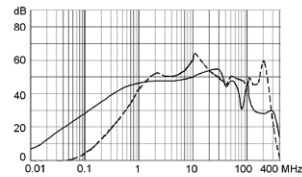
Standard version

--- differential mode ____ common mode

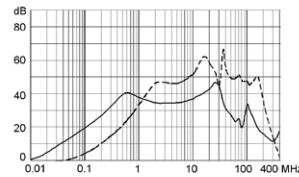
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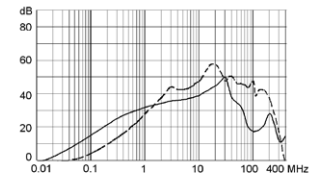
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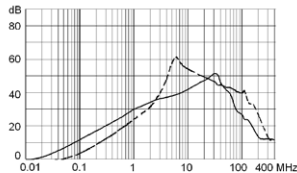
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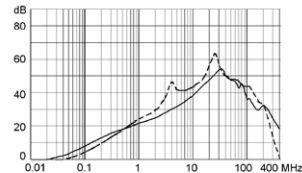
6 A



8 A

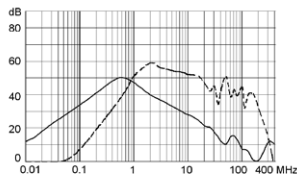


10 A

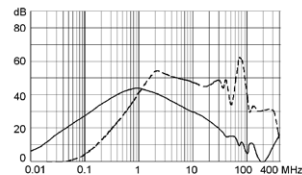


Medical version (M5)

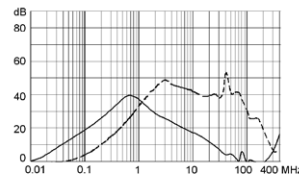
1 A



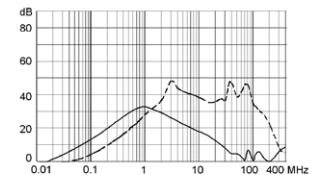
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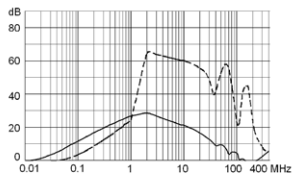
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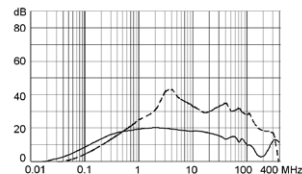
6 A



8 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer must be ordered separately (see accessories).
Fingergrip and Extra Safe. The same drawer as used by type KEA.

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Order Number
1	Standard Version	1 pole	2-pole	DD12.1111.111
2	Standard Version	1 pole	2-pole	DD12.2111.111
4	Standard Version	1 pole	2-pole	DD12.4111.111
6	Standard Version	1 pole	2-pole	DD12.6111.111
8	Standard Version	1 pole	2-pole	DD12.8111.111
10	Standard Version	1 pole	2-pole	DD12.9111.111
1	Standard Version	2-pole	2-pole	DD12.1121.111
2	Standard Version	2-pole	2-pole	DD12.2121.111
4	Standard Version	2-pole	2-pole	DD12.4121.111
6	Standard Version	2-pole	2-pole	DD12.6121.111
8	Standard Version	2-pole	2-pole	DD12.8121.111
10	Standard Version	2-pole	2-pole	DD12.9121.111
1	Medical Version (M5)	2-pole	2-pole	DD12.1321.111
2	Medical Version (M5)	2-pole	2-pole	DD12.2321.111
4	Medical Version (M5)	2-pole	2-pole	DD12.4321.111

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Order Number
6	Medical Version (M5)	2-pole	2-pole	DD12.6321.111
8	Medical Version (M5)	2-pole	2-pole	DD12.8321.111
10	Medical Version (M5)	2-pole	2-pole	DD12.9321.111

10 A version only approved up to 8 A at UL.

Packaging unit 20 Pcs

Required Accessory

Description



Fusedrawer 2

Fusedrawer with and without voltage selector insert

Accessory



Assorted Covers

Rear Cover



Cord retaining kits

Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Inlet with filter for PCB mounting, fuse 1-/2-pole, line switch 2-pole

Standard or Medical Fuse drawer



new



Fuse drawer must be ordered separately (see accessories).

Screw-On Version



70° C



Description

- Panel Mount:
Screw-on mounting on PCB, from rear-side
- 4 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 1- or 2-pole, Line filter in standard and medical version
- PCB solder terminals
- Alternative: version without line filter [DD21](#)

Approvals

- VDE License Number: 40001522
- UL License Number: E72928

Characteristics

- Ultra-compact design. Ideal for low profile designs
- All single elements are already wired
- For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Ideal for application with high transient loads
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer 1-pole, plus spare fuse case
- Fuse drawer 2-pole, with shorting bar
- Other rocker marking
- Line switch, illuminated
- Line switch 1-pole
- Medical version M80
- Protection class II, 70°C

References

[General Product Information](#)

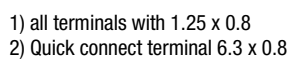
Weblinks

[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)

Technical Data

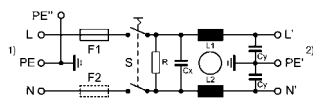
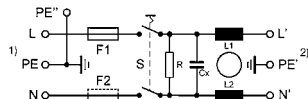
Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz	Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1
Ratings UL/CSA	1 - 8A @ Ta 40 °C / 125VAC; 60Hz		UL 498 CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)	Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (1 min/50 Hz)	Rated Power Acceptance @ Ta 23 °C	5 x 20: 2W (1 pole)/ 1.6W (2-pole) per pole
Allowable Operation Temp.	-25 °C to 85 °C	Power Acceptance @ Ta > 23 °C	Admissible power acceptance at higher ambient temperature see derating curves
Climatic Category	25/085/21 acc. to IEC 60068-1	Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Degree of Protection	from front side IP 40 acc. to IEC 60529	Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140	MTBF	> 2'000'000h acc. to MIL-HB-217 F
Terminal	For PCB mounting 3 mm additional quick connect 6.3 x 0.8 mm		
Panel Thickness s	Screw-on: max 3mm Mounting screw torque max 0.5Nm		
Material: Housing	Thermoplastic, black, UL 94V-0		

Screw version



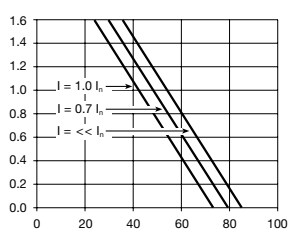
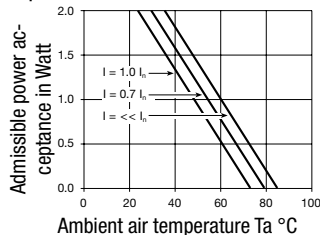
Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [mΩ]
1	Standard Version	2 x 10	100	2.2	1
2	Standard Version	2 x 4	100	2.2	1
4	Standard Version	2 x 1.5	100	2.2	1
6	Standard Version	2 x 0.8	100	2.2	1
10	Standard Version	2 x 0.3	100	2.2	1
1	Medical Version (M5)	2 x 10	100	-	1
2	Medical Version (M5)	2 x 4	100	-	1
4	Medical Version (M5)	2 x 1.5	100	-	1
6	Medical Version (M5)	2 x 0.8	100	-	1
10	Medical Version (M5)	2 x 0.3	100	-	1

Diagrams

Filter Standard
non illuminated1) Line
2) LoadFilter Medical M5
non illuminated1) Line
2) Load

Derating Curves

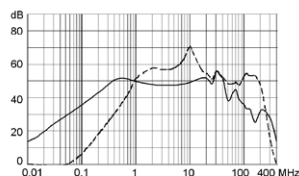
1-pole



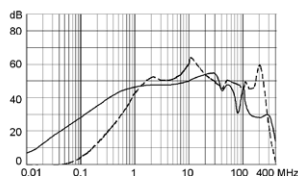
Attenuation Loss

Standard version

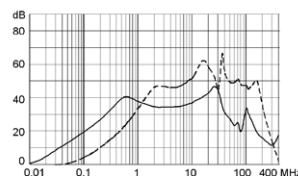
1 A



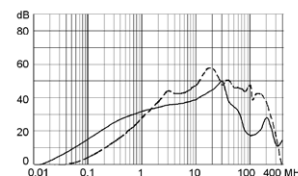
2 A



4 A

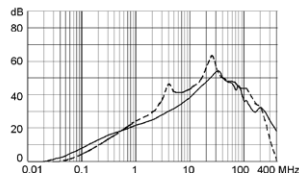


6 A



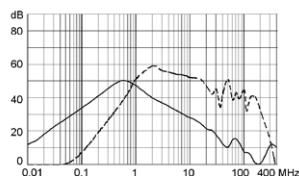
- - - differential mode ____ common mode

10 A

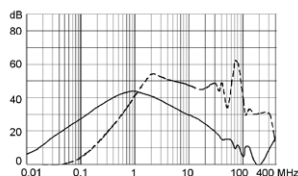


Medical version (M5)

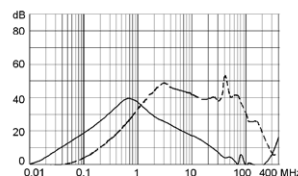
1 A



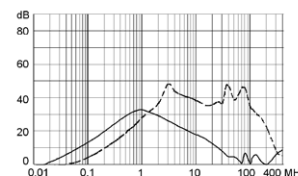
2 A



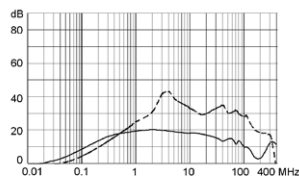
4 A



6 A



10 A



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Fuse drawer must be ordered separately (see accessories).

Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Order Number
1	Standard Version	1 pole	2-pole	DD22.1111.1111
2	Standard Version	1 pole	2-pole	DD22.2111.1111
4	Standard Version	1 pole	2-pole	DD22.4111.1111
6	Standard Version	1 pole	2-pole	DD22.6111.1111
10	Standard Version	1 pole	2-pole	DD22.9111.1111
1	Standard Version	2-pole	2-pole	DD22.1121.1111
2	Standard Version	2-pole	2-pole	DD22.2121.1111
4	Standard Version	2-pole	2-pole	DD22.4121.1111
6	Standard Version	2-pole	2-pole	DD22.6121.1111
10	Standard Version	2-pole	2-pole	DD22.9121.1111
1	Medical Version (M5)	2-pole	2-pole	DD22.1321.1111
2	Medical Version (M5)	2-pole	2-pole	DD22.2321.1111
4	Medical Version (M5)	2-pole	2-pole	DD22.4321.1111
6	Medical Version (M5)	2-pole	2-pole	DD22.6321.1111
10	Medical Version (M5)	2-pole	2-pole	DD22.9321.1111

10 A version only approved up to 8 A at UL.

Packaging unit

20 Pcs

Required Accessory

Description



Fusedrawer 2

Fusedrawer with and without voltage selector insert

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
...	...

1-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 1-pole



Socket and fuse drawer included

on phase-out
Screw-On Version

C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 1-pole, Line-filter in standard version
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Plug removal necessary for fuse-link replacement
If the power entry module is installed as normal, it is not possible to touch any live parts with the test-finger according to IEC60529
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- With EMC-shield
- Qualified for use in equipment according to IEC/EN 60950

Other versions on request

- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250 VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125 VAC; 60Hz
Leakage Current	standard < 0.25 mA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N
	> 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm
	Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

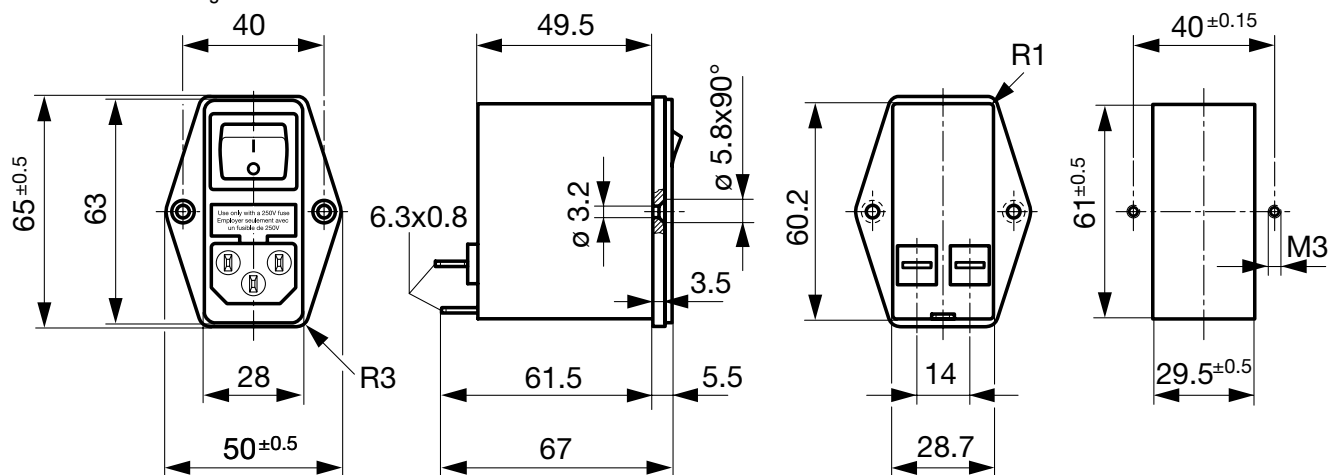
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6 W (1 pole)
Power Acceptance @ Ta > 23 °C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'700'000h acc. to MIL-HB-217 F

Dimensions

Case 45

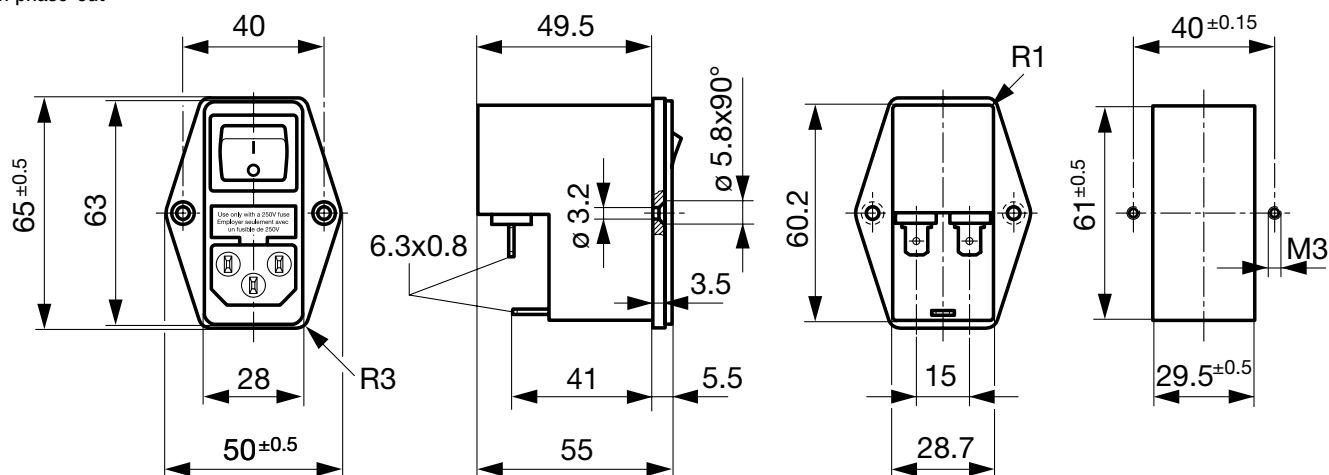
recommend for new designs

Length |-----| 55 mm



Case 50

on phase-out



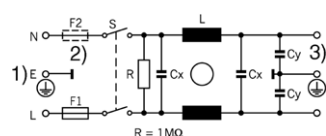
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	1
2	Standard Version	2 x 4	68	2.2	1
4	Standard Version	2 x 1.5	68	2.2	1
6	Standard Version	2 x 0.8	68	2.2	1
10	Standard Version	2 x 0.3	68	2.2	1

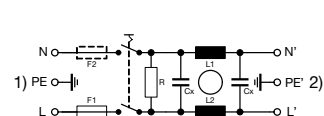
Diagrams

Standard Version

Medical version



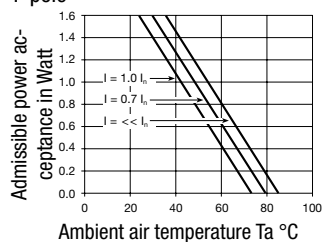
- 1) Line
- 2) only FKI
- 3) Load



- 1) Line
- 2) Load

Derating Curves

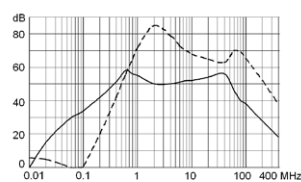
1-pole

**Attenuation Loss**

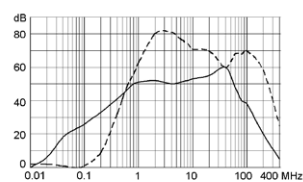
Standard version

--- differential mode ____ common mode

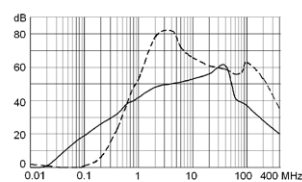
1 A



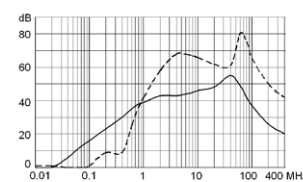
2 A



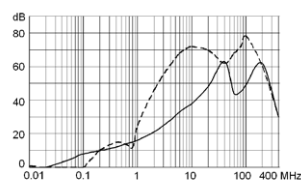
4 A



6 A

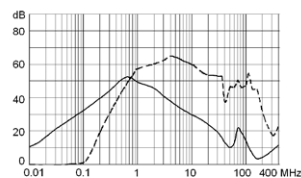


10 A

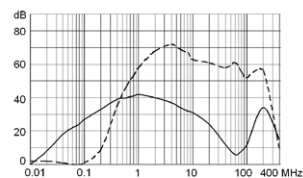


Medical version (M5)

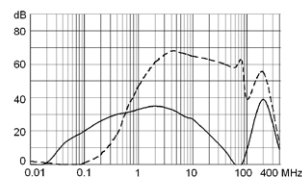
1 A



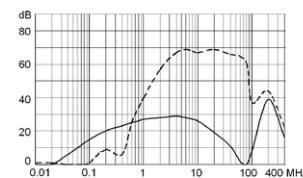
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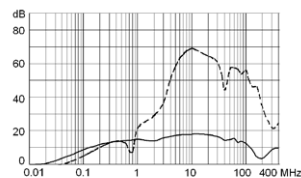
4 A



6 A



10 A



Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

Socket and fuse drawer included

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Case	Material: Housing	Comment	Order Number
FKH	1	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.4041
FKH	2	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.4042
FKH	4	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.4043
FKH	6	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.4044
FKH	10	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.4045
FKH	1	Standard Version	1 pole	2-pole	50	Nickel plated steel	1)	4304.4001
FKH	2	Standard Version	1 pole	2-pole	50	Nickel plated steel	1)	4304.4002
FKH	4	Standard Version	1 pole	2-pole	50	Nickel plated steel	1)	4304.4003
FKH	6	Standard Version	1 pole	2-pole	50	Nickel plated steel	1)	4304.4004
FKH	10	Standard Version	1 pole	2-pole	50	Nickel plated steel	1)	4304.4005

1) Versions with nickel plated steel enclosure are on phase-out. For new designs we recommend the versions with aluminum enclosure.

Packaging unit

10 Pcs

Accessory

Description

Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

1-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 2-pole

Standard- or Medical-Filter

on phase-out
Screw-On Version

Description

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Line switch 2-pole, Fuseholder for fuse-links 5 x 20 mm 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Plug removal necessary for fuse-link replacement
If the power entry module is installed as normal, it is not possible to touch any live parts with the test-finger according to IEC60529
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- With EMC-shield
- Qualified for use in equipment according to IEC/EN 60950

Other versions on request

- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.25 mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

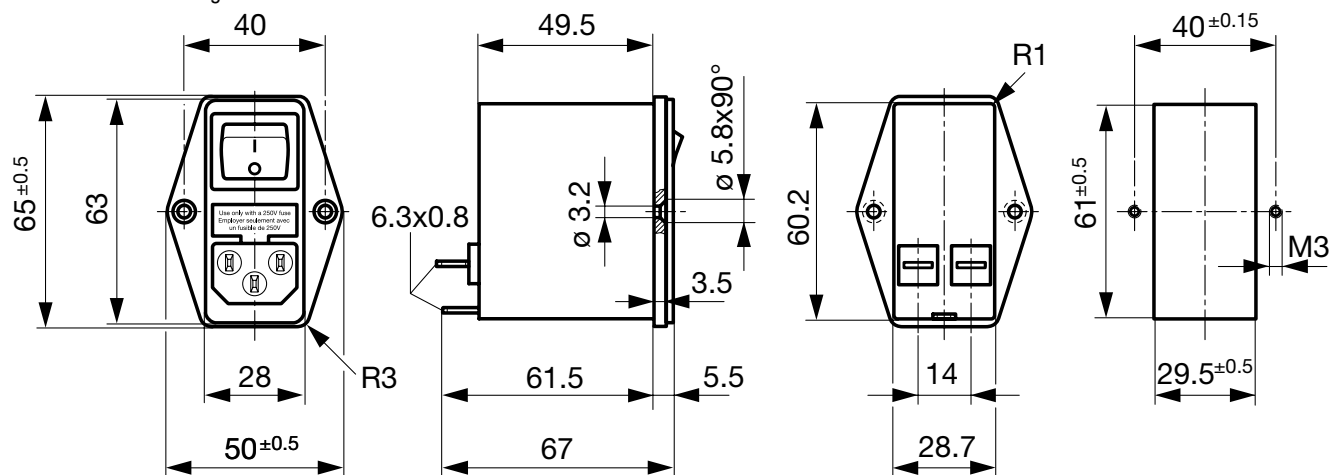
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	2-pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6W (2-pole)
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'700'000 h acc. to MIL-HB-217 F

Dimensions

Case 45

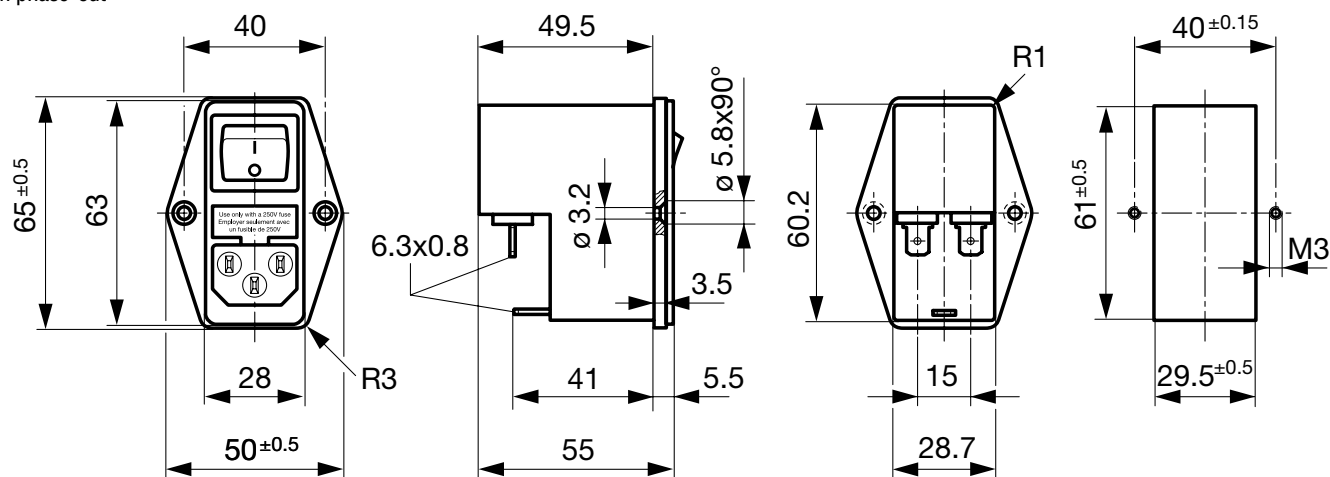
recommend for new designs

Length |-----| 55 mm



Case 50

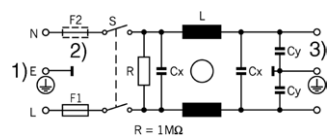
on phase-out

**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	1
2	Standard Version	2 x 4	68	2.2	1
4	Standard Version	2 x 1.5	68	2.2	1
6	Standard Version	2 x 0.8	68	2.2	1
10	Standard Version	2 x 0.3	68	2.2	1
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1

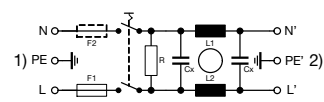
Diagrams

Standard Version



- 1) Line
2) only FKI
3) Load

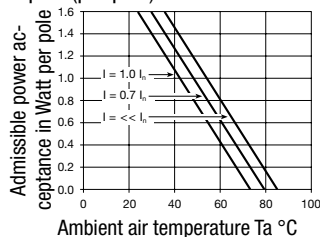
Medical version



- 1) Line
2) Load

Derating Curves

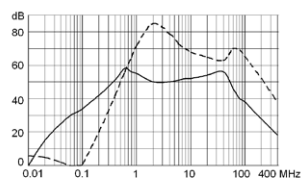
2-pole (per pole)



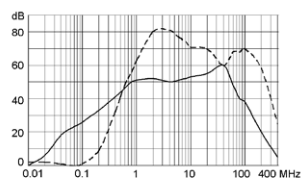
Attenuation Loss

Standard version

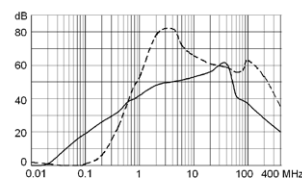
1 A



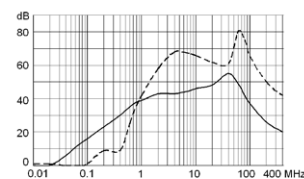
2 A



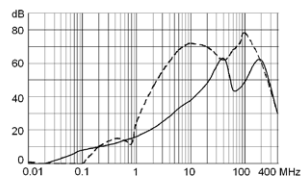
4 A



6 A

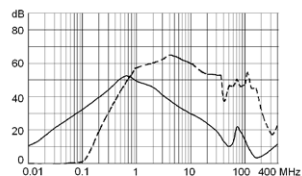


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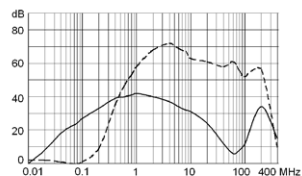


Medical version (M5)

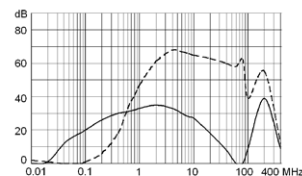
1 A



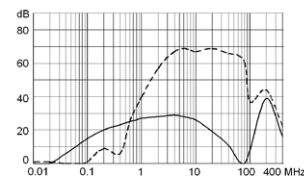
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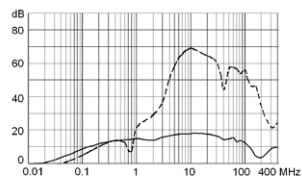
4 A



6 A



10 A



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Socket and fuse drawer included

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Case	Material: Housing	Comment	Order Number
FKI	1	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.4061
FKI	2	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.4062
FKI	4	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.4063
FKI	6	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.4064
FKI	10	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.4065
FKI	1	Standard Version	2-pole	2-pole	50	Nickel plated steel	1)	4304.4021
FKI	2	Standard Version	2-pole	2-pole	50	Nickel plated steel	1)	4304.4022
FKI	4	Standard Version	2-pole	2-pole	50	Nickel plated steel	1)	4304.4023
FKI	6	Standard Version	2-pole	2-pole	50	Nickel plated steel	1)	4304.4024
FKI	10	Standard Version	2-pole	2-pole	50	Nickel plated steel	1)	4304.4025
FKI	1	Medical Version (M5)	2-pole	2-pole	50	Nickel plated steel	1)	4304.4066
FKI	2	Medical Version (M5)	2-pole	2-pole	50	Nickel plated steel	1)	4304.4067
FKI	4	Medical Version (M5)	2-pole	2-pole	50	Nickel plated steel	1)	4304.4068
FKI	6	Medical Version (M5)	2-pole	2-pole	50	Nickel plated steel	1)	4304.4069
FKI	10	Medical Version (M5)	2-pole	2-pole	50	Nickel plated steel	1)	4304.4070

1) Versions with nickel plated steel enclosure are on phase-out. For new designs we recommend the versions with aluminum enclosure.

Packaging unit

10 Pcs

Accessory

Description

Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Category / Description

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L
...	...

2-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 1-polig



C14



70° C



Description

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Fuseholder for fuse-links 5 x 20 mm
1-pole, Line switch 2-pole, Line-filter in standard version, 2-stage
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Plug removal necessary for fuse-link replacement
If the power entry module is installed as normal, it is not possible to touch any live parts with the test-finger according to IEC60529
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- 2-stage line filter with increased attenuation
With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.25 mA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

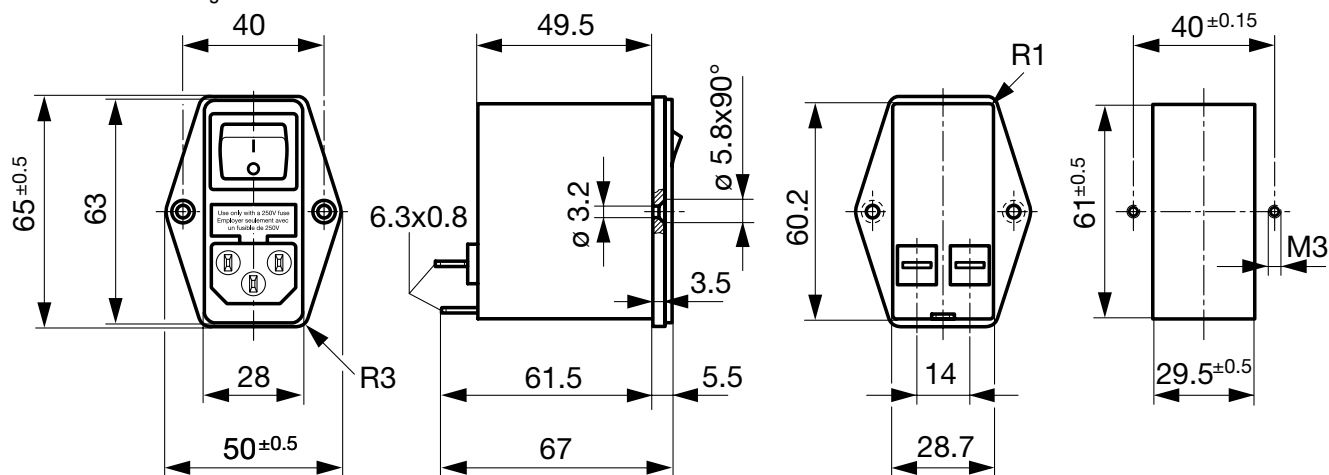
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6W (1 pole)
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'200'000 h acc. to MIL-HB-217 F

Dimensions

Case 45

recommend for new designs

Length | 67 mm



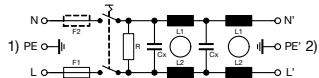
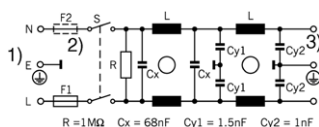
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacity Cy1 [nF]	Capacity Cy2 [nF]	R [MΩ]
1	Standard Version	2 x 10	68	1.5	1	1
2	Standard Version	2 x 4	68	1.5	1	1
4	Standard Version	2 x 1.5	68	1.5	1	1
6	Standard Version	2 x 0.8	68	1.5	1	1
10	Standard Version	2 x 0.3	68	1.5	1	1
1	Medical Version (M5)	2 x 10	68	-	-	1
2	Medical Version (M5)	2 x 4	68	-	-	1
4	Medical Version (M5)	2 x 1.5	68	-	-	1
6	Medical Version (M5)	2 x 0.8	68	-	-	1
10	Medical Version (M5)	2 x 0.3	68	-	-	1

Diagrams

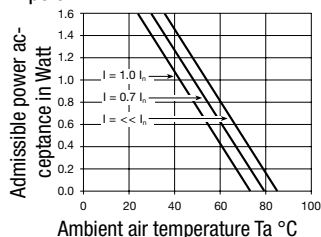
Standard Version

Medical version



Derating Curves

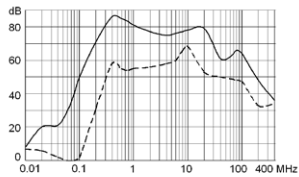
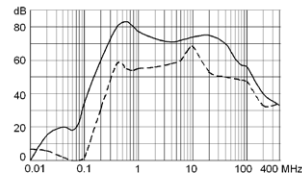
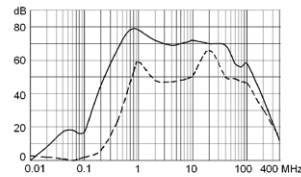
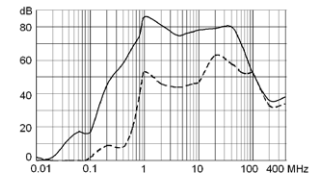
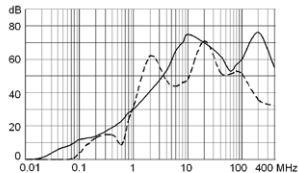
1-pole



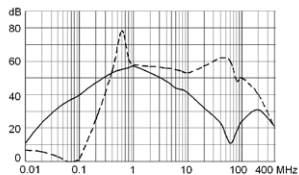
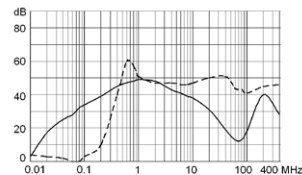
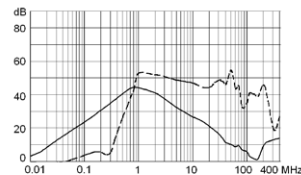
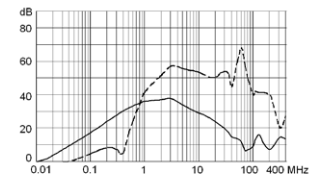
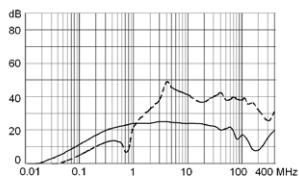
Attenuation Loss

Standard version

--- differential mode ____ common mode

1 A**2 A****4 A****6 A****10 A**

Medical version (M5)

1 A**2 A****4 A****6 A****10 A****Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Socket and fuse drawer included

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Case	Material: Housing	Comment	Order Number
FKHD	1	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.5041
FKHD	2	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.5042
FKHD	4	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.5043
FKHD	6	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.5044
FKHD	10	Standard Version	1 pole	2-pole	45	Aluminum	-	4304.5045
FKHD	1	Standard Version	1 pole	2-pole	45	Nickel plated steel	1)	4304.5001
FKHD	2	Standard Version	1 pole	2-pole	45	Nickel plated steel	1)	4304.5002
FKHD	4	Standard Version	1 pole	2-pole	45	Nickel plated steel	1)	4304.5003
FKHD	6	Standard Version	1 pole	2-pole	45	Nickel plated steel	1)	4304.5004
FKHD	10	Standard Version	1 pole	2-pole	45	Nickel plated steel	1)	4304.5005
FKHD	1	Medical Version (M5)	1 pole	2-pole	45	Nickel plated steel	1)	4304.5051
FKHD	2	Medical Version (M5)	1 pole	2-pole	45	Nickel plated steel	1)	4304.5052
FKHD	4	Medical Version (M5)	1 pole	2-pole	45	Nickel plated steel	1)	4304.5053
FKHD	6	Medical Version (M5)	1 pole	2-pole	45	Nickel plated steel	1)	4304.5054
FKHD	10	Medical Version (M5)	1 pole	2-pole	45	Nickel plated steel	1)	4304.5055

1) Versions with nickel plated steel enclosure are on phase-out. For new designs we recommend the versions with aluminum enclosure.

Packaging unit 10 Pcs

Accessory

Description



Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

2-stage inlet filter, front side mounting, line switch 2-pole, fuseholder 5x20 mm 2-pole

Standard- or Medical-Filter



C14



70° C



Description

- Panel Mount:
Screw-on from front side
- 4 Functions:
Appliance Inlet Protection class I, Fuseholder for fuse-links 5 x 20 mm 2-pole, Line switch 2-pole, Line filter in standard and medical version, 2-stage
- Quick connect terminals 6.3 x 0.8 mm

Approvals

- VDE License Number: 40004665
- UL License Number: E72928

Characteristics

- Compact design with optimal shielding
- All single elements are already wired
- Plug removal necessary for fuse-link replacement
If the power entry module is installed as normal, it is not possible to touch any live parts with the test-finger according to IEC60529
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuseholder is accessible from the equipment front
- 2-stage line filter with increased attenuation
With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Medical version M80

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.25 mA (250 V / 60 Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

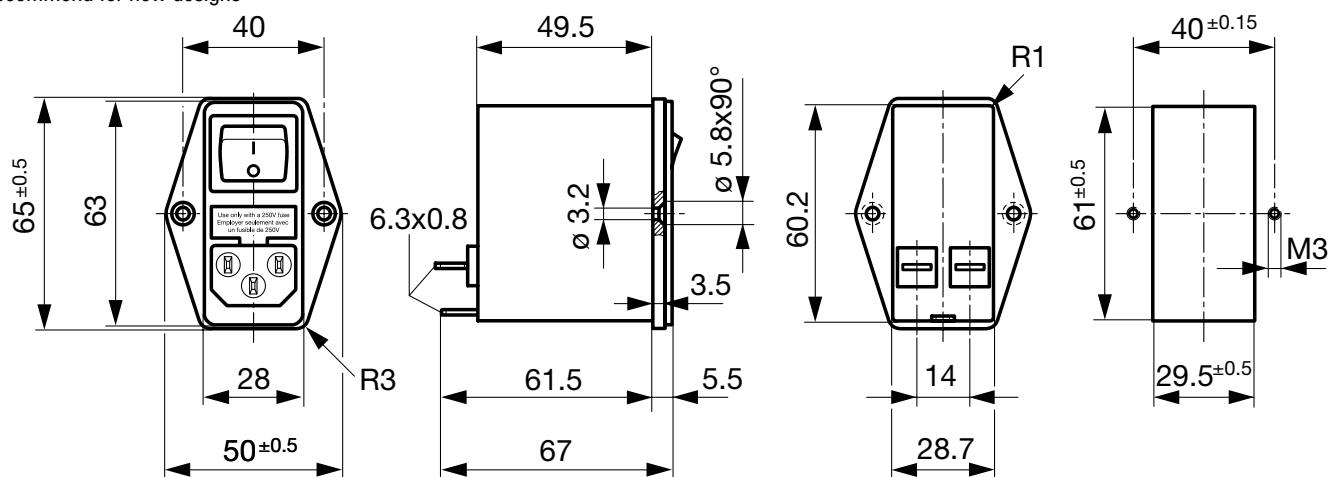
Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	2-pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 1.6W (2-pole)
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'200'000h acc. to MIL-HB-217 F

Dimensions

Case 45

recommend for new designs

Length | 67 mm

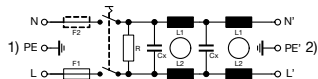
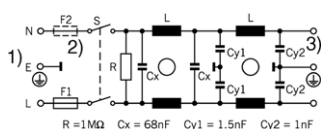
**Technical Data of Filter-Components**

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacity Cy1 [nF]	Capacity Cy2 [nF]	R [MΩ]
1	Standard Version	2 x 10	68	1.5	1	1
2	Standard Version	2 x 4	68	1.5	1	1
4	Standard Version	2 x 1.5	68	1.5	1	1
6	Standard Version	2 x 0.8	68	1.5	1	1
10	Standard Version	2 x 0.3	68	1.5	1	1
2	Medical Version (M5)	2 x 4	68	-	-	1

Diagrams

Standard Version

Medical version

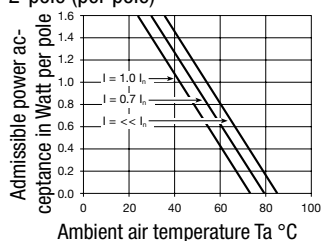


- 1) Line
- 2) only FKID
- 3) Load

- 1) Line
- 2) Load

Derating Curves

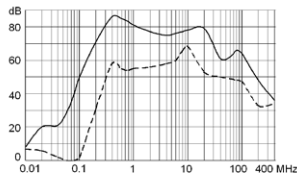
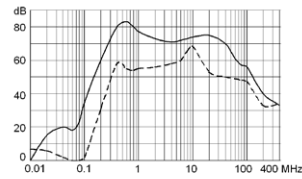
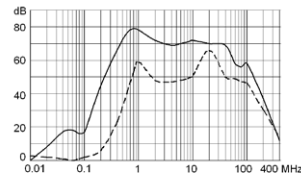
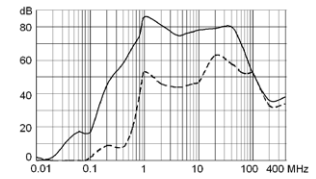
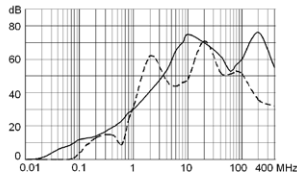
2-pole (per pole)



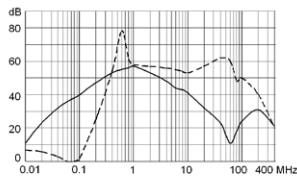
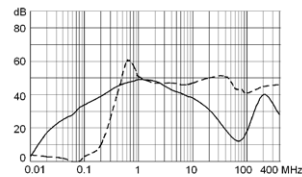
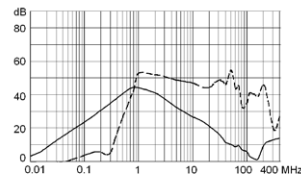
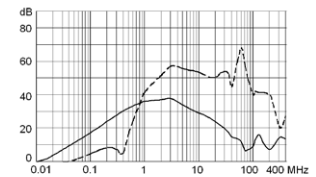
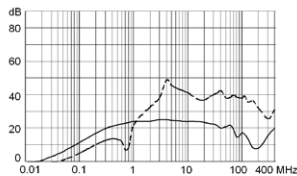
Attenuation Loss

Standard version

--- differential mode ____ common mode

1 A**2 A****4 A****6 A****10 A**

Medical version (M5)

1 A**2 A****4 A****6 A****10 A****Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Socket and fuse drawer included

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Case	Material: Housing	Comment	Order Number
FKID	1	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.5061
FKID	2	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.5062
FKID	4	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.5063
FKID	6	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.5064
FKID	10	Standard Version	2-pole	2-pole	45	Aluminum	-	4304.5065
FKID	1	Standard Version	2-pole	2-pole	45	Nickel plated steel	1)	4304.5021
FKID	2	Standard Version	2-pole	2-pole	45	Nickel plated steel	1)	4304.5022
FKID	4	Standard Version	2-pole	2-pole	45	Nickel plated steel	1)	4304.5023
FKID	6	Standard Version	2-pole	2-pole	45	Nickel plated steel	1)	4304.5024
FKID	10	Standard Version	2-pole	2-pole	45	Nickel plated steel	1)	4304.5025
FKID	2	Medical Version (M5)	2-pole	2-pole	45	Nickel plated steel	1)	4304.5067

1) Versions with nickel plated steel enclosure are on phase-out. For new designs we recommend the versions with aluminum enclosure.

Packaging unit

10 Pcs

Accessory

Description



Assorted Covers
Rear Cover

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Line switch with/without bowden cable, fuseh. 5x20/6.3x32 mm, voltage selector

Standard- or Medical-Filter



Fuse drawer must be ordered separately (see accessories).

Screw-On Version



70 °C



Description

- Panel Mount:
Screw-on from front side
- 5 Functions:
Appliance Inlet, Line switch, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm, with or without voltage selector (step switch), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KD](#)

Approvals

- VDE License Number: 40004665 (FKSO, FKSP, FKSU, FKSV)
- UL License Number: E72928 (FKSO, FKSP, FKSU, FKSV)

Characteristics

- All single elements are already wired
- The fuse drawer "Fingergrip" can be removed by hand
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

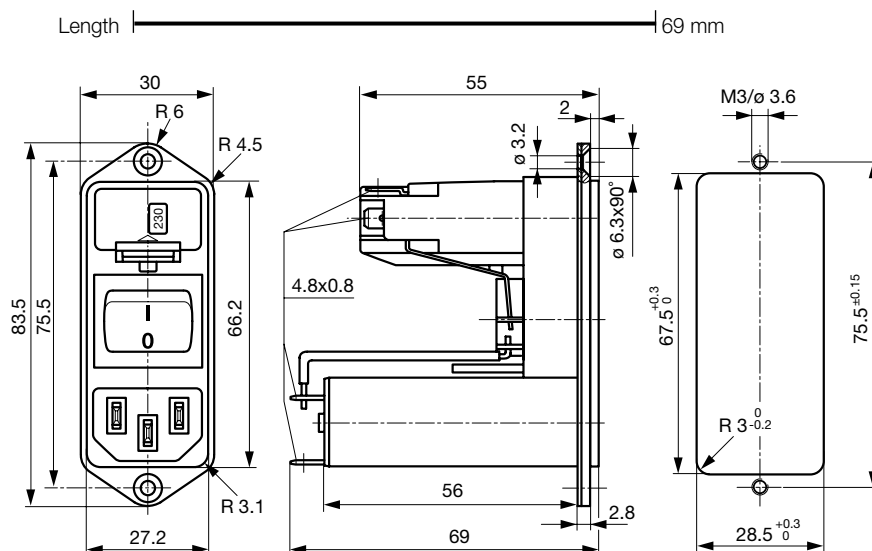
Technical Data

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7 kVDC between L-N > 2.7 kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32 mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Voltage selector	optional, step, 2-4 digits
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'200'000h acc. to MIL-HB-217 F

Dimensions

CD



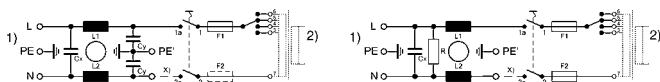
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [M Ω]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1

Diagrams

Standard version with voltage selector

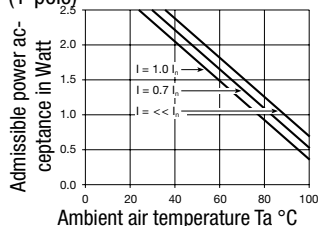
Medical version with voltage selector



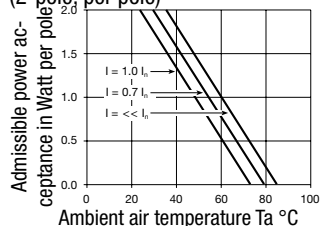
- 1) Line
- 2) Load
- x) External connection to be made by the customer

Derating Curves

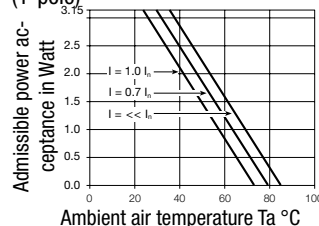
Fuses 5 x 20 mm (1-pole)



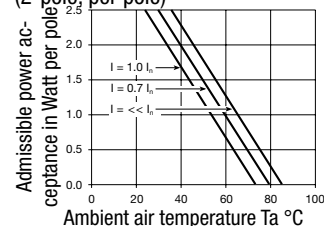
Fuses 5 x 20 mm (2-pole, per pole)



Fuses 6,3 x 32 mm (1-pole)



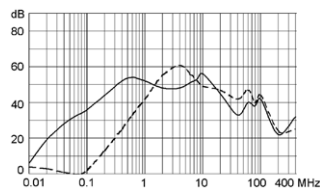
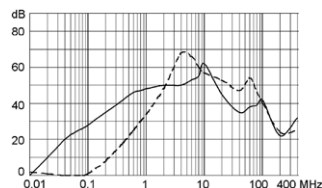
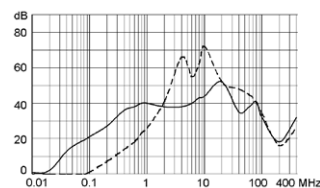
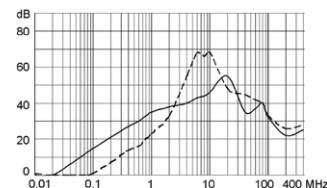
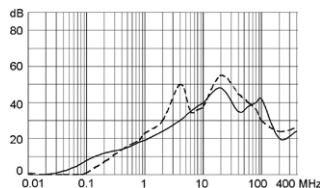
Fuses 6,3 x 32 mm (2-pole, per pole)



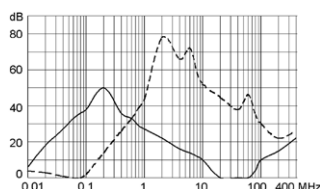
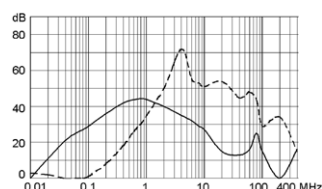
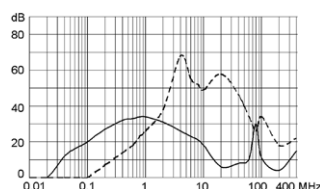
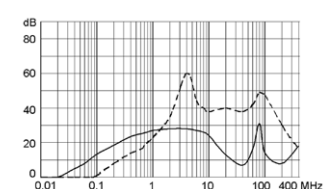
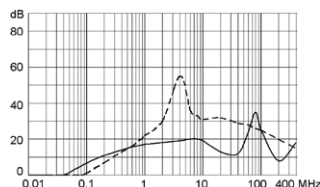
Attenuation Loss

Standard version

--- differential mode ____ common mode

1 A**2 A****4 A****6 A****10 A**

Medical version (M5)

1 A**2 A****4 A****6 A****10 A****Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Voltage selector	Order Number
CD	1	Standard Version	1 pole	2-pole	-	CD11.1501.151
CD	2	Standard Version	1 pole	2-pole	-	CD21.1501.151
CD	4	Standard Version	1 pole	2-pole	-	CD31.1501.151
CD	6	Standard Version	1 pole	2-pole	-	CD41.1501.151
CD	10	Standard Version	1 pole	2-pole	-	CD61.1501.151
CD	1	Standard Version	1 pole	2-pole	2-4 digits	CD11.4501.151
CD	2	Standard Version	1 pole	2-pole	2-4 digits	CD21.4501.151
CD	4	Standard Version	1 pole	2-pole	2-4 digits	CD31.4501.151
CD	6	Standard Version	1 pole	2-pole	2-4 digits	CD41.4501.151
CD	10	Standard Version	1 pole	2-pole	2-4 digits	CD61.4501.151
CD	1	Standard Version	2-pole	2-pole	-	CD14.1101.151
CD	2	Standard Version	2-pole	2-pole	-	CD24.1101.151
CD	4	Standard Version	2-pole	2-pole	-	CD34.1101.151
CD	6	Standard Version	2-pole	2-pole	-	CD44.1101.151
CD	10	Standard Version	2-pole	2-pole	-	CD64.1101.151
CD	1	Standard Version	2-pole	2-pole	2-4 digits	CD14.4101.151
CD	2	Standard Version	2-pole	2-pole	2-4 digits	CD24.4101.151

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Voltage selector	Order Number
CD	4	Standard Version	2-pole	2-pole	2-4 digits	CD34.4101.151
CD	6	Standard Version	2-pole	2-pole	2-4 digits	CD44.4101.151
CD	10	Standard Version	2-pole	2-pole	2-4 digits	CD64.4101.151
CD	1	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDG4.4101.151
CD	2	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDA4.4101.151
CD	4	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDC4.4101.151
CD	6	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDE4.4101.151
CD	10	Medical Version (M5)	2-pole	2-pole	2-4 digits	CDL4.4101.151

Packaging unit 10 Pcs

Required Accessory

Description



Fusedrawer 3

Drawers for fuse links 5x20mm resp. 6.3x32mm

Accessory



Assorted Covers

Rear Cover



Cord retaining kits

Cord retaining strain relieve

Passende Dose

Category / Description



Appliance Outlet

IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092

Connector



IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Line switch with/without bowden cable, fuseh. 5x20/6.3 x 32 mm, voltage sel. (series-parallel)

Standard- or Medical-Filter



C14



70° C

**Description**

- Panel Mount:
Screw-on from front side
- 5 Functions:
Appliance Inlet, Line switch, Fuseholder with interchangeable fuse drawer for Fuse-links 5 x 20 mm or 6.3 x 32 mm, Voltage selector (series-parallel), Line filter in standard and medical version
- Quick connect terminals 4.8 x 0.8 mm
- Alternative: version without line filter [KG](#)

Approvals

- VDE License Number: 40004665 (FKSA, FKSB)
- UL License Number: E72928 (FKSA, FKSB)

Characteristics

- All single elements are already partially wired
- For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer can only be opened with the aid of a tool
The fuseholder is accessible from the equipment front
- Qualified for use in equipment according IEC/EN 60950

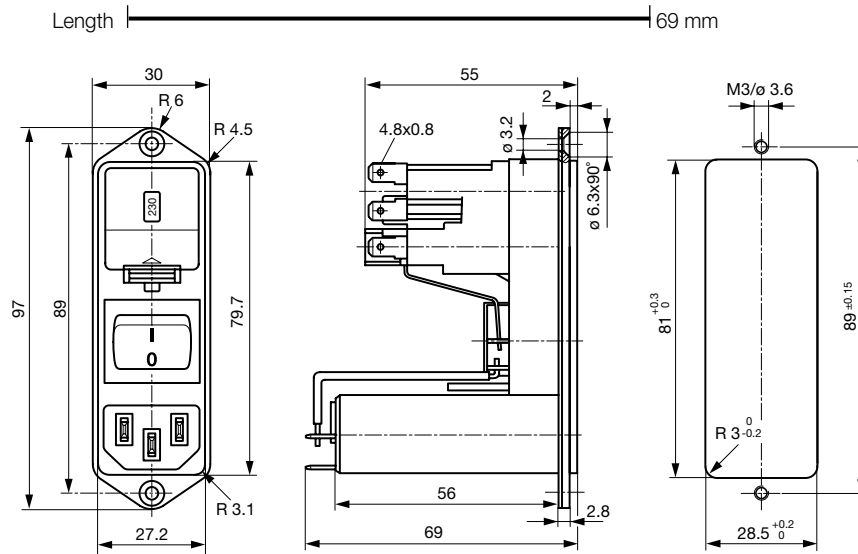
References[General Product Information](#)**Weblinks**[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)**Technical Data**

Ratings IEC	1 - 10A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	1 - 10A @ Ta 40 °C / 125VAC; 60Hz
Leakage Current	standard < 0.5mA (250V / 60Hz) medical < 5 µA (250 V / 60 Hz)
Dielectric Strength	> 1.7kVDC between L-N > 2.7kVDC between L/N-PE Test voltage (2 sec)
Allowable Operation Temp.	-25 °C to 85 °C
Climatic Category	25/085/21 acc. to IEC 60068-1
Degree of Protection	from front side IP 40 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Terminal	Quick connect terminals 4.8 x 0.8 mm
Panel Thickness s	Screw-on: max 8mm Mounting screw torque max 0.5Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance-Inlet/-Outlet	C14 acc. to IEC/EN 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 10A, Protection class I
Fuseholder	1 or 2 pole, Shocksafe category PC2 acc. to IEC 60127-6, for fuse-links 5 x 20 or 6.3 x 32mm
Rated Power Acceptance @ Ta 23 °C	5 x 20: 2.5W (1 pole)/ 2W (2-pole) per pole 6.3 x 32: 3.15W (1 pole)/ 2.5W (2-pole) per pole
Power Acceptance @ Ta > 23°C	Admissible power acceptance at higher ambient temperature see derating curves
Line Switch	Rocker switch 2-pole, non-illuminated, acc. to IEC 61058-1 Technical details
Voltage selector	series-parallel, 4, 3 or 2 switch positions or usable as 2-pole change-over switch
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 Technical details
MTBF	> 1'100'000h acc. to MIL-HB-217 F

Dimensions

CG



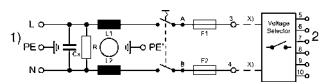
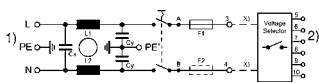
Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
1	Standard Version	2 x 10	68	2.2	-
2	Standard Version	2 x 4	68	2.2	-
4	Standard Version	2 x 1.5	68	2.2	-
6	Standard Version	2 x 0.8	68	2.2	-
10	Standard Version	2 x 0.3	68	2.2	-
1	Medical Version (M5)	2 x 10	68	-	1
2	Medical Version (M5)	2 x 4	68	-	1
4	Medical Version (M5)	2 x 1.5	68	-	1
6	Medical Version (M5)	2 x 0.8	68	-	1
10	Medical Version (M5)	2 x 0.3	68	-	1

Diagrams

Standard version
with fuseholder 1- or 2-pole

Medical version
with fuseholder 2-pole



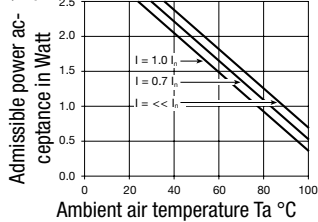
1) Line
2) Load

1) Line
2) Load

Derating Curves

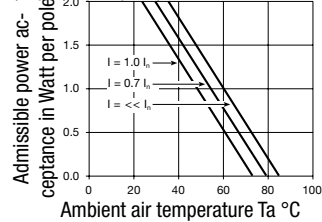
Fuses 5 x 20 mm

(1-pole)



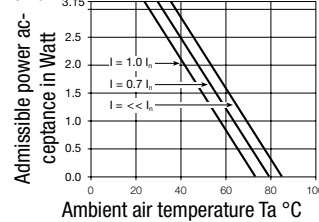
Fuses 5 x 20 mm

(2-pole, per pole)



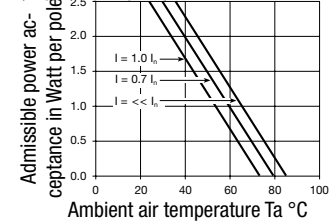
Fuses 6,3 x 32 mm

(1-pole)



Fuses 6,3 x 32 mm

(2-pole, per pole)

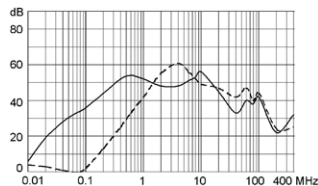


Attenuation Loss

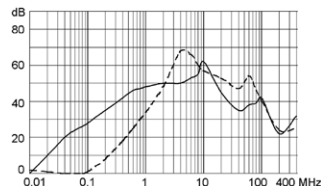
Standard version

- - - differential mode ____ common mode

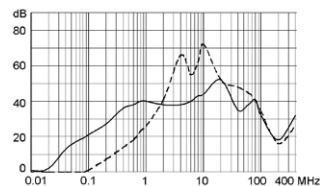
1 A



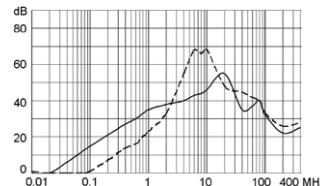
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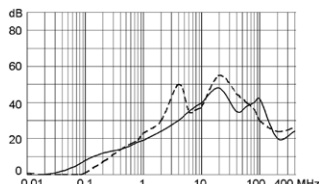
4 A



6 A

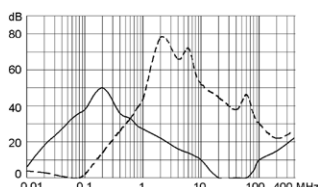


10 A

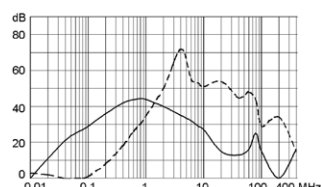


Medical version (M5)

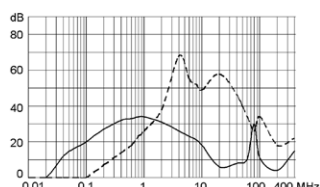
1 A



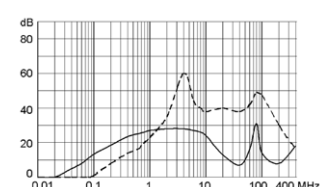
2 A



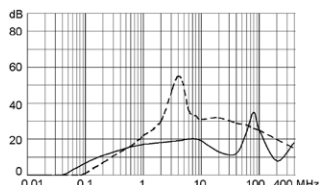
4 A



6 A



10 A

**Variants**[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Fuse drawer and voltage selector insert must be ordered separately.

Type	Rated Current [A]	Filter-Type	Fuseholder	Line Switch	Line Switch	Order Number
CG	1	Standard Version	1 pole	2-pole	Rocker switch	CG16.5101.151
CG	2	Standard Version	1 pole	2-pole	Rocker switch	CG26.5101.151
CG	4	Standard Version	1 pole	2-pole	Rocker switch	CG36.5101.151
CG	6	Standard Version	1 pole	2-pole	Rocker switch	CG46.5101.151
CG	10	Standard Version	1 pole	2-pole	Rocker switch	CG66.5101.151
CG	1	Standard Version	2-pole	2-pole	Rocker switch	CG10.6101.151
CG	2	Standard Version	2-pole	2-pole	Rocker switch	CG20.6101.151
CG	4	Standard Version	2-pole	2-pole	Rocker switch	CG30.6101.151
CG	6	Standard Version	2-pole	2-pole	Rocker switch	CG40.6101.151
CG	10	Standard Version	2-pole	2-pole	Rocker switch	CG60.6101.151
CG	1	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGG0.6101.151
CG	2	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGA0.6101.151
CG	4	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGC0.6101.151
CG	6	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGE0.6101.151
CG	10	Medical Version (M5)	2-pole	2-pole	Rocker switch	CGL0.6101.151

Packaging unit 10 Pcs

Required Accessory

Description



Jumper Wire 1
Connection with Starnded Cable



Fusedrawer 1
Drawer for fuse links 5x20mm resp. 6.3x32mm



Voltage Selectors Insert 1
Voltage Selector Insert to KE, CE, KG, CG

Accessory



Assorted Covers
Rear Cover



Cord retaining kits
Cord retaining strain relieve

Passende Dose

Category / Description

Appliance Outlet



IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4787
IEC appliance outlet F, screw-on mounting, front side, solder /quick connect terminal	4788
IEC appliance outlet F oder H, screw-on mounting, front side, solder/PCB/quick connect terminal	5091
IEC appliance outlet F oder H, screw-on mounting, front side, solder/quick connect terminal	5092



Connector

IEC cord connector C15, rewirable, straight	0101
IEC cord connector C15A, rewirable, straight	0102
IEC cord connector C15A, rewirable, straight	0102-G
IEC cord connector C15A, rewirable, angled	0112
IEC cord connector C13, rewirable, angled	4012
IEC cord connector C13, rewirable, angled	4013
IEC cord connector C13, rewirable, straight	4020
IEC cord connector C13, rewirable, straight	4021
IEC cord connector C13, rewirable, straight	4022
IEC cord connector C13, rewirable, angled	4300-06

...

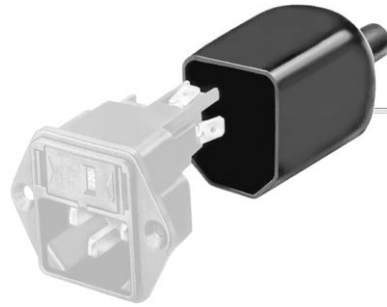
Power Supply or Interconnection Cord



Power Cord with IEC Appliance Connector C13, angled, 70°C	0311
Power Cord with IEC Appliance Connector C13, angled, 70°C	3011
Power Cord with IEC Appliance Connector C13, angled, 70°C	3012
Power Cord with IEC Appliance Connector C13, angled, 70°C	3013
Power Cord with IEC Appliance Connector C13, 70°C	3020
Power Cord with IEC Appliance Connector C13, straight, 70°C	3027
Power Cord with IEC Appliance Connector C13, straight, 70°C	302U
Power Cord with IEC Appliance Connector C13, straight, 70°C	3030
Power Cord with IEC Appliance Connector C13, angled, 70°C	311L
Power Cord with IEC Appliance Connector C13, angled, 70°C	312L

...

Rear Cover



E.g. KEA with rear cover



E.g. Rear cover for GSF1



Description

- Component:
Press-Fit Version, Rear Mounting
- 1 Function:

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit

100 Pcs

Cord retaining strain relieve

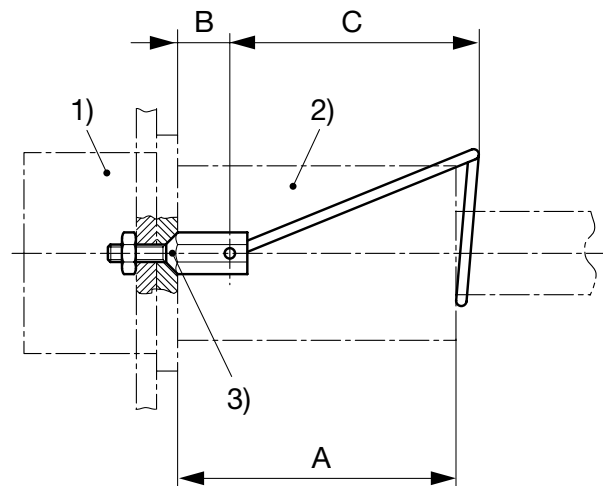


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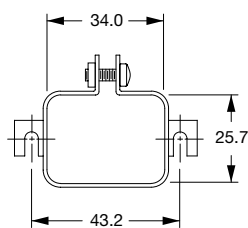
**Description**

- Front-side:
Screw-on from front side
- 1 Function:
Protection against accidental disconnection of the plug

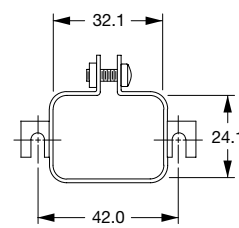
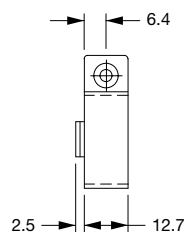
References
[General Product Information](#)
Weblinks
[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)
Dimensions

(Details see overview table and table of variants)

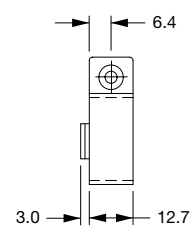
1) Inlet/Outlet 2) Plug/Connector 3) Design

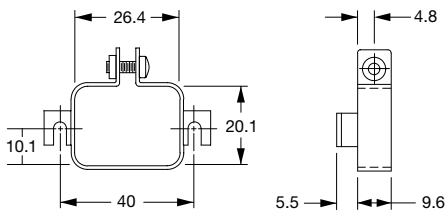


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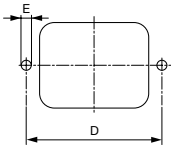


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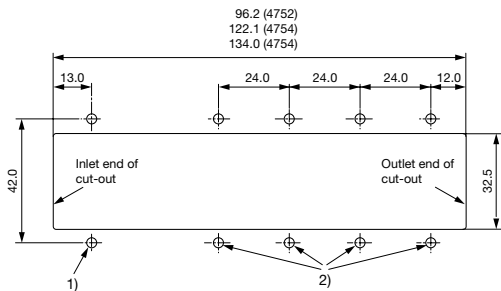




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(Details see overview table and table of variants)
Holes according inlet/outlet dimensions centered to respectively inlet/outlet



(Details see overview table)

								Cord plug/connector								
								Type	4781	4782	4795	4732	4735	4796	3020	302U
								Dimension A	61.5	61.5	57.0	55.5	60.0	58.0	-	-
								Plug	*	*	*	*	*	*	*	*
								Connector	*	*	*	*	*	*	*	*
Appliance inlet/outlet																
Type	Snap-in Mounting	Screw-on Mounting	Mounting from Frontside	Mounting from Rearside	Outlet	Inlet	Panel Thickness									
4707		*	*		*				B	B						
4721		*	*		*						D					
4721		*	*		*							F				
4723	*		*		*						E					
4723	*		*		*							G				
4752	*		*		*						E					
4752	*		*		*							G				
4754	*		*		*						E					
4754	*		*		*	*						G				
4754	*		*		*	*		H	H					Z	Z	
4758	*		*		*						E					
4758	*		*		*	*						G				
4758	*		*		*	*		H	H					Z	Z	
4793		*	*		*	*				L						
4797	*		*		*	*								L		
4797		*	*		*	*								J		
4798		*	*		*	*				K						
5110	*		*		*	*			A	A						
5110		*	*		*	*			C	C					Z	Z
5120	*		*		*	*			G	G					Z	Z
5120		*	*		*	*			G	G					Z	Z
5120		*	*		*	*	>5mm		E	E					Z	Z
5120		*	*		*	*	<3mm		G	G					Z	Z
5150	*		*		*	*			G	G					Z	Z
5150		*	*		*	*			G	G					Z	Z
5150		*	*		*	*	>5mm		E	E					Z	Z
5150		*	*		*	*	<3mm		G	G					Z	Z
5130	*		*		*	*					L					
5130		*	*		*	*					L					
5130		*	*		*	*	<3mm				L					
5200		*	*		*	*			B	B						
5220		*	*		*	*			B	B						
6100	*		*		*	*			A	A						
6100		*	*		*	*			C	C					Z	Z
6110	*		*		*	*			A	A						
6110		*	*		*	*			C	C					Z	Z
6135	*		*		*	*			A	A						
6200	*		*		*	*			A	A						
6200		*	*		*	*			B	B						
6220	*		*		*	*			A	A						
6220		*	*		*	*			B	B						
6600	*		*		*	*					E					
6600	*		*		*	*						G				
6600		*	*		*	*					D					
6600		*	*		*	*						F				
6610	*		*		*	*						G				
0723		*	*		*	*								J		
C20F	*		*		*	*					L					
C20F		*	*		*	*					L					
C20F		*	*		*	*	<3mm				L					
CD	*	*	*		*	*			A	A						
CE	*	*	*		*	*			A	A						
CG	*	*	*		*	*			A	A						
DC11	*		*		*	*			A	A						
DC11		*	*		*	*			B	B						
DC12	*		*		*	*			A	A						
DC12		*	*		*	*			B	B						
DC12		*	*		*	*			A	A						
DC21		*	*		*	*			G	G					Z	Z
DD11		*	*		*	*			A	A						
DD11		*	*		*	*	<3mm		A	A						
DD12		*	*		*	*			A	A						
DD12		*	*		*	*	<3mm		A	A						
DD21		*	*		*	*	<3mm		A	A						
DD22		*	*		*	*	<3mm		A	A						
EC11		*	*		*	*					M				Z	Z
EC12		*	*		*	*					M				Z	Z
EF11		*	*		*	*					M				Z	Z
EF12		*	*		*	*					M				Z	Z
EG11		*	*		*	*					M				Z	Z
EG12		*	*		*	*					M				Z	Z

								Cord plug/connector								
								Type	4781	4782	4795	4732	4735	4796	3020	302U
								Dimension A	61.5	61.5	57.0	55.5	60.0	58.0	-	-
								Plug				*	*	*		
								Connector	*	*	*			*	*	
Appliance inlet/outlet																
Type	Snap-in Mounting	Screw-on Mounting	Mounting from Frontside	Mounting from Rearside	Outlet	Inlet	Panel Thickness									
FELCOM 54	*		*		*				A	A						
FELCOM 54	*		*		*						E					
FELCOM 54	*		*			*						G				
FELCOM 64	*		*		*				A	A						
FELCOM 64	*		*		*						E					
FELCOM 64	*		*			*						G				
KD	*	*	*			*			A	A						
KE	*	*	*			*			A	A						
KEA	*		*			*			A	A						
KEA		*	*			*			B	B						
KEB I	*		*			*			A	A						
KEB I		*	*			*			B	B						
KEB II	*	*	*			*			A	A						
KEC	*	*	*			*			A	A						
KFA	*		*			*			A	A						
KFA		*	*			*			B	B						
KFA		*		*		*			A	A						
KFB I		*	*			*			B	B						
KFB II	*	*	*			*			A	A						
KFC	*	*	*			*			A	A						
KFS		*	*			*			C	C				Z	Z	
KFX		*	*			*			C	C				Z	Z	
KG		*	*			*			A	A						
KM	*		*			*			A	A						

Packaging unit 50 Pcs

Drawer for fuse links 5x20mm resp. 6.3x32mm

Medical fuse drawer



(Fuse links not enclosed)



Description

- Component:
Extra-Safe
- 1 Function:
Fuseholder for Fuse-links 5 x 20 mm or 6.3 x 32 mm
- Fits to type:
- Approved together with power entry module

Characteristics

- The fuseholder is accessible from the equipment front
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit

50 Pcs

Fusedrawer with and without voltage selector insert

Standard or Medical Fuse drawer



Fuse drawer without voltage selector
insert with shorting bar
(Fuse links not enclosed)



Fuse drawer with voltage selector insert
(Fuse links not enclosed)



Description

- Component
- Snap-in version from front side
- 2 Functions:
Fuseholder, Voltage selector
- Fits to type:
- Approved together with power entry module

Characteristics

- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer "Fingergrip" can be removed by hand
The fuseholder is accessible from the equipment front
- Designed for standard and medical applications
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer with other voltage values

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit 50 Pcs

Drawers for fuse links 5x20mm resp. 6.3x32mm

Standard or Medical Fuse drawer



Fuse drawer "Fingergrab" with voltage selector
(Fuse links not enclosed)

Fuse drawer "Extrasafe" without voltage selector
(Fuse links not enclosed)



Description

- Component:
 Snap-in, Rear Mounting
- 2 Functions:
 Fuseholder for Fuse-links 5 x 20 mm or 6.3 x 32 mm, Voltage selector insert
- Fits to type:
- Approved together with power entry module

Characteristics

- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
 The fuse drawer "Fingergrab" can be removed by hand
 For added safety "Extra-Safe" fuse drawers are available
 With spare fuse compartment
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer with other voltage values

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit 50 Pcs

Bowden Cable for Power Entry Modules



Type A (Snap-in mounting)

Type B (Screw-on mounting)

**Description**

- Component:
Snap-in or screw-on mounting, front or rear-side
- Fits to type:
- Approved together with power entry module

Characteristics

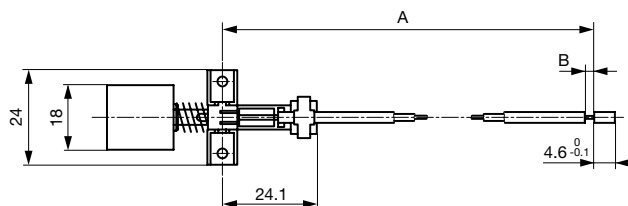
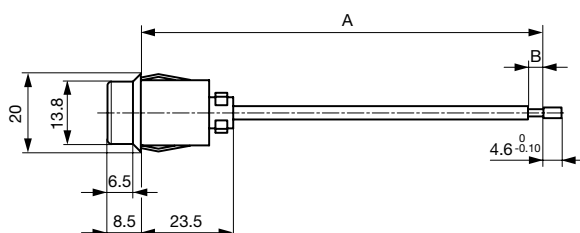
- Designed for universal industrial applications

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

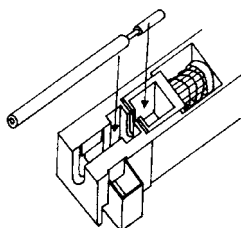
Dimensions

Type A (Snap-in mounting)

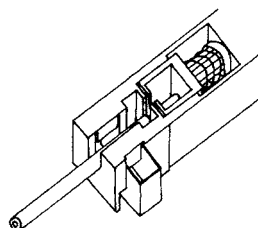
Dimension A will be evaluated and defined in trials by SCHURTER based on customer information a, b and c. (See Type R and Type S diagram below.)

Type B (Screw-on mounting)

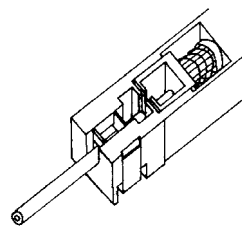
Dimension A will be evaluated and defined in trials by SCHURTER based on customer information a, b and c. (See Type R and Type S diagram below.)

Dimensions

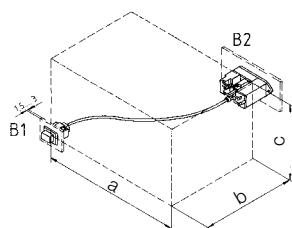
Drop bowden barrel into seat of switch



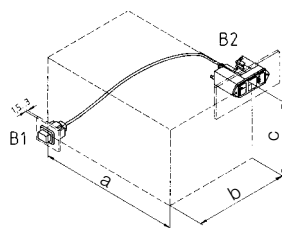
Slide clamp around cable



Bowden cable locked into assembly

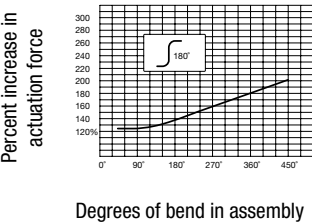


Type R



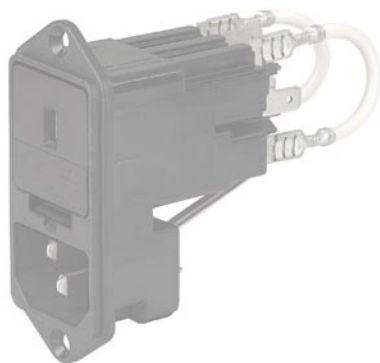
Type S

Derating Curves



Packaging unit 50 Pcs

Connection with Starnded Cable

**Description**

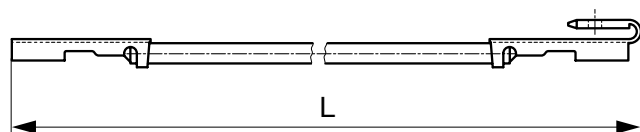
- Wire (braid):
Push-mounted from rear-side
- 1 Function Stranded cable
- Quick connect terminals 4.8 x 0.8 mm
- Fits to type:
- Approved together with power entry module

References

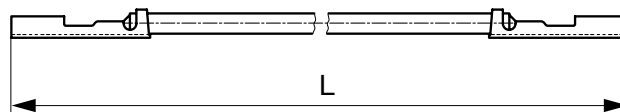
[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Dimensions

Type A, (Lenght see order table)



Type B (Length see order table)

Packaging unit

100 Pcs

Voltage Selector Insert to KE, CE, KG, CG



To be used with drawer for KE, CE, KG, CG



Description

- Component:
Drop-in type, Switching Unit
- 1 Function:
Voltage selector insert (step switch)
- Up to four different switch positions
- Fits to type:
- Approved together with power entry module

Other versions on request

- Fuse drawer with other voltage values

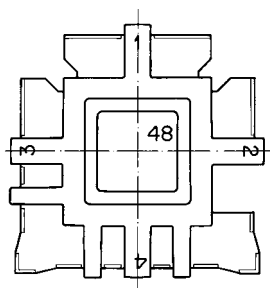
References

[General Product Information](#)

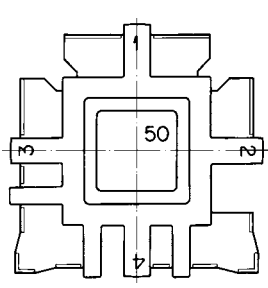
Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

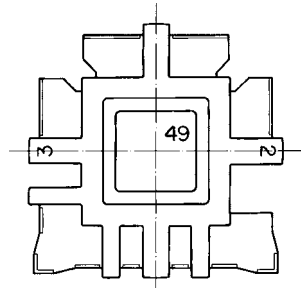
Dimensions



Switch position 1



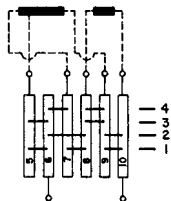
Switch position 2



Switch position 3

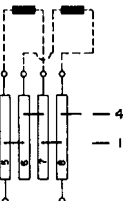
Diagrams

System No. 1



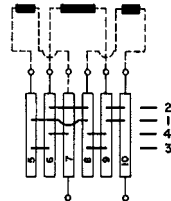
2 separate windings, one with a tap
3 or 4 switch positions

System No. 2



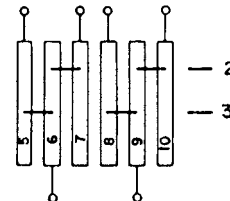
2 separate windings
2 switch positions

System No. 3



3 separate windings
3 or 4 switch positions

System No. 4



2-pole change over switch

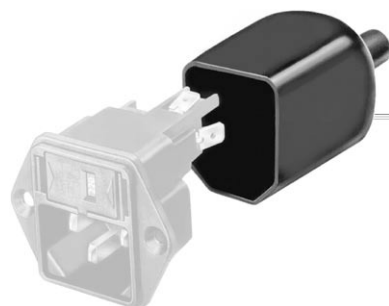
Packaging unit

50 Pcs

accessories types

Assorted Covers	208
Cord retaining kits	209
Fusedrawer 1	214
Fusedrawer 2	215
Fusedrawer 3	216
Bowdencables incl. accessory	217
Jumper Wire 1	219
Voltage Selectors Insert 1	220

Rear Cover



E.g. KEA with rear cover



E.g. Rear cover for GSF1



Description

- Component:
Press-Fit Version, Rear Mounting
- 1 Function:

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit

100 Pcs

Cord retaining strain relieve

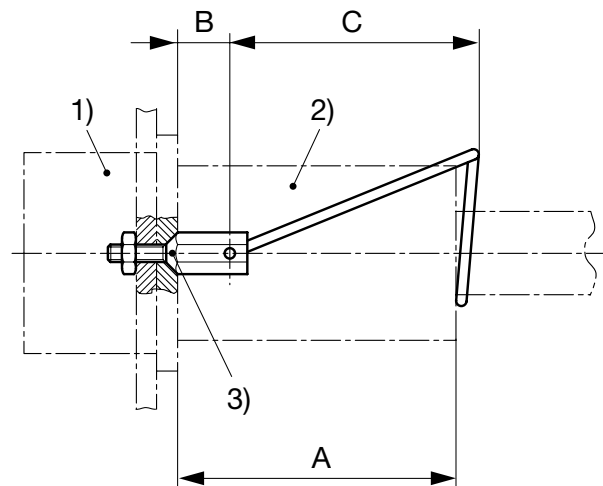


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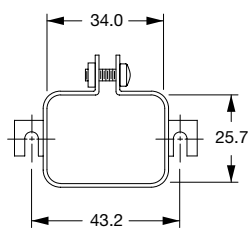
**Description**

- Front-side:
Screw-on from front side
- 1 Function:
Protection against accidental disconnection of the plug

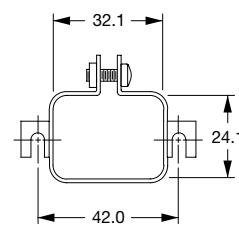
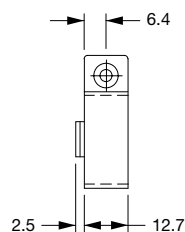
References
[General Product Information](#)
Weblinks
[Approvals, RoHS, CHINA-RoHS, e-Store, SCHURTER-Stock-Check, Distributor-Stock-Check](#)
Dimensions

(Details see overview table and table of variants)

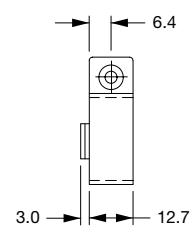
1) Inlet/Outlet 2) Plug/Connector 3) Design



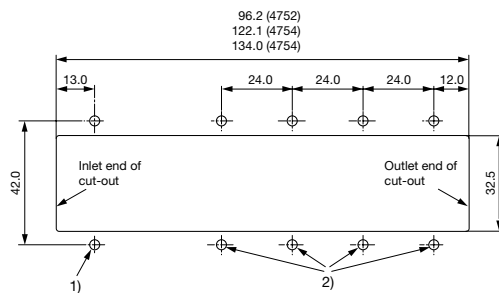
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Holes according inlet/outlet dimensions centered to respectively inlet/outlet



EMC products

								Cord plug/connector								
								Type	4781	4782	4795	4732	4735	4796	3020	302U
								Dimension A	61.5	61.5	57.0	55.5	60.0	58.0	-	-
								Plug	*	*	*	*	*	*	*	*
								Connector	*	*	*	*	*	*	*	*
Appliance inlet/outlet																
Type	Snap-in Mounting	Screw-on Mounting	Mounting from Frontside	Mounting from Rearside	Outlet	Inlet	Panel Thickness									
4707		*	*		*				B	B						
4721		*	*		*						D					
4721		*	*		*							F				
4723	*		*		*						E					
4723	*		*		*							G				
4752	*		*		*						E					
4752	*		*		*							G				
4754	*		*		*						E					
4754	*		*		*	*						G				
4758	*		*		*				H	H					Z	Z
4758	*		*		*	*					E					
4758	*		*		*	*					G					
4793		*	*		*	*			H	H					Z	Z
4797	*		*		*	*					L					
4797		*	*		*	*								L		
4798		*	*		*	*					K					
5110	*		*		*	*			A	A						
5110		*	*		*	*			C	C					Z	Z
5120	*		*		*	*			G	G					Z	Z
5120		*	*		*	*			G	G					Z	Z
5120		*	*		*	*	>5mm		E	E					Z	Z
5120		*	*		*	*	<3mm		G	G					Z	Z
5150	*		*		*	*			G	G					Z	Z
5150		*	*		*	*			G	G					Z	Z
5150		*	*		*	*	>5mm		E	E					Z	Z
5150		*	*		*	*	<3mm		G	G					Z	Z
5130	*		*		*	*					L					
5130		*	*		*	*					L					
5130		*	*	*	*	*	<3mm				L					
5200		*	*		*	*			B	B						
5220		*	*		*	*			B	B						
6100	*		*		*	*			A	A						
6100		*	*		*	*			C	C					Z	Z
6110	*		*		*	*			A	A						
6110		*	*		*	*			C	C					Z	Z
6135	*		*		*	*			A	A						
6200	*		*		*	*			A	A						
6200		*	*		*	*			B	B						
6220	*		*		*	*			A	A						
6220		*	*		*	*			B	B						
6600	*		*		*	*					E					
6600	*		*		*	*						G				
6600		*	*		*	*					D					
6600		*	*		*	*						F				
6610	*		*		*	*						G				
0723		*	*		*	*								J		
C20F	*		*		*	*					L					
C20F		*	*		*	*					L					
C20F		*	*	*	*	*	<3mm				L					
CD	*	*	*		*	*			A	A						
CE	*	*	*		*	*			A	A						
CG	*	*	*		*	*			A	A						
DC11	*		*		*	*			A	A						
DC11		*	*		*	*			B	B						
DC12	*		*		*	*			A	A						
DC12		*	*		*	*			B	B						
DC12		*	*	*	*	*			A	A						
DC21		*	*		*	*			G	G					Z	Z
DD11		*	*		*	*			A	A						
DD11		*	*		*	*	<3mm		A	A						
DD12		*	*		*	*			A	A						
DD12		*	*	*	*	*	<3mm		A	A						
DD21		*	*		*	*	<3mm		A	A						
DD22		*	*		*	*	<3mm		A	A						
EC11		*	*		*	*			A	A					Z	Z
EC12		*	*		*	*					M				Z	Z
EF11		*	*		*	*					M				Z	Z
EF12		*	*		*	*					M				Z	Z
EG11		*	*		*	*					M				Z	Z
EG12		*	*		*	*					M				Z	Z

								Cord plug/connector									
								Type	4781	4782	4795	4732	4735	4796	3020	302U	
								Dimension A	61.5	61.5	57.0	55.5	60.0	58.0	-	-	
								Plug				*	*	*			
								Connector	*	*	*				*	*	
Appliance inlet/outlet																	
Type	Snap-in Mounting	Screw-on Mounting	Mounting from Frontside	Mounting from Rearside	Outlet	Inlet	Panel Thickness										
FELCOM 54	*		*		*				A	A							
FELCOM 54	*		*		*							E					
FELCOM 54	*		*			*							G				
FELCOM 64	*		*		*				A	A							
FELCOM 64	*		*		*							E					
FELCOM 64	*		*			*							G				
KD	*	*	*			*			A	A							
KE	*	*	*			*			A	A							
KEA	*		*			*			A	A							
KEA		*	*			*			B	B							
KEB I	*		*			*			A	A							
KEB I		*	*			*			B	B							
KEB II	*	*	*			*			A	A							
KEC	*	*	*			*			A	A							
KFA	*		*			*			A	A							
KFA		*	*			*			B	B							
KFA		*		*		*			A	A							
KFB I		*	*			*			B	B							
KFB II	*	*	*			*			A	A							
KFC	*	*	*			*			A	A							
KFS		*	*			*			C	C					Z	Z	
KFX		*	*			*			C	C					Z	Z	
KG		*	*			*			A	A							
KM	*		*			*			A	A							

Packaging unit 50 Pcs

Drawer for fuse links 5x20mm resp. 6.3x32mm

Medical fuse drawer



(Fuse links not enclosed)



Description

- Component:
Extra-Safe
- 1 Function:
Fuseholder for Fuse-links 5 x 20 mm or 6.3 x 32 mm
- Fits to type:
- Approved together with power entry module

Characteristics

- The fuseholder is accessible from the equipment front
For added safety "Extra-Safe" fuse drawers are available
Fuse drawer meets requirements of medical standard IEC/EN 60601-1
- Qualified for use in equipment according IEC/EN 60950

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit

50 Pcs

Fusedrawer with and without voltage selector insert

Standard or Medical Fuse drawer



Fuse drawer without voltage selector
insert with shorting bar
(Fuse links not enclosed)



Fuse drawer with voltage selector insert
(Fuse links not enclosed)



Description

- Component
- Snap-in version from front side
- 2 Functions:
Fuseholder, Voltage selector
- Fits to type:
- Approved together with power entry module

Characteristics

- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer "Fingergrip" can be removed by hand
The fuseholder is accessible from the equipment front
- Designed for standard and medical applications
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer with other voltage values

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit 50 Pcs

Drawers for fuse links 5x20mm resp. 6.3x32mm

Standard or Medical Fuse drawer



Fuse drawer "Fingergrab" with voltage selector
(Fuse links not enclosed)

Fuse drawer "Extrasafe" without voltage selector
(Fuse links not enclosed)



Description

- Component:
Snap-in, Rear Mounting
- 2 Functions:
Fuseholder for Fuse-links 5 x 20 mm or 6.3 x 32 mm, Voltage selector insert
- Fits to type:
- Approved together with power entry module

Characteristics

- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
The fuse drawer "Fingergrab" can be removed by hand
For added safety "Extra-Safe" fuse drawers are available
With spare fuse compartment
- Qualified for use in equipment according IEC/EN 60950

Other versions on request

- Fuse drawer with other voltage values

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Packaging unit 50 Pcs

Bowden Cable for Power Entry Modules



Type A (Snap-in mounting)

Type B (Screw-on mounting)

**Description**

- Component:
Snap-in or screw-on mounting, front or rear-side
- Fits to type:
- Approved together with power entry module

Characteristics

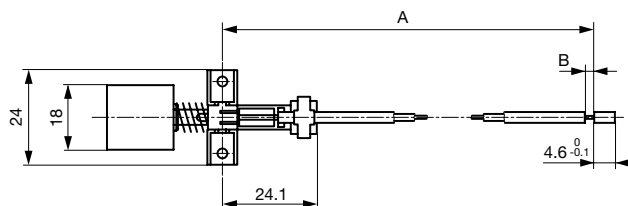
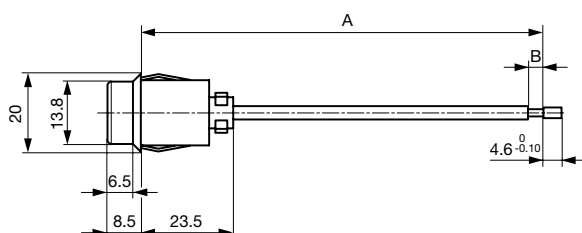
- Designed for universal industrial applications

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

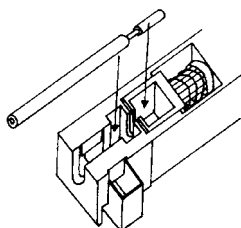
Dimensions

Type A (Snap-in mounting)

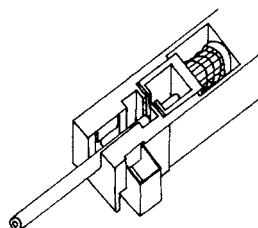
Dimension A will be evaluated and defined in trials by SCHURTER based on customer information a, b and c. (See Type R and Type S diagram below.)

Type B (Screw-on mounting)

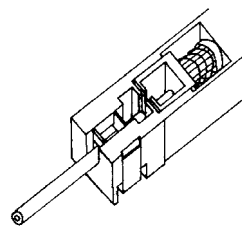
Dimension A will be evaluated and defined in trials by SCHURTER based on customer information a, b and c. (See Type R and Type S diagram below.)

Dimensions

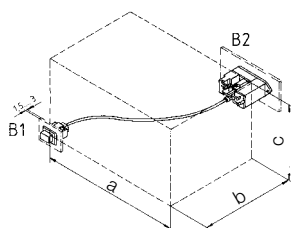
Drop bowden barrel into seat of switch



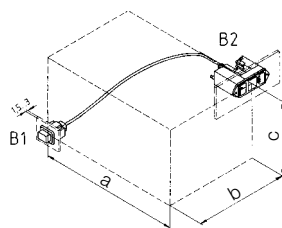
Slide clamp around cable



Bowden cable locked into assembly

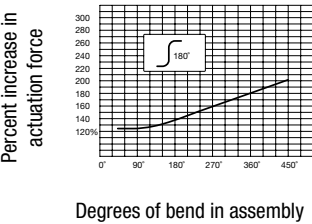


Type R



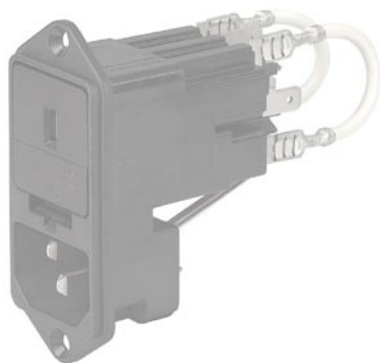
Type S

Derating Curves



Packaging unit 50 Pcs

Connection with Starnded Cable

**Description**

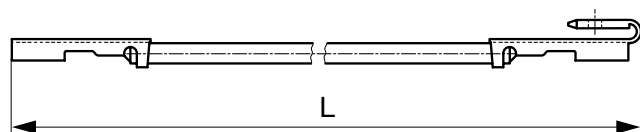
- Wire (braid):
Push-mounted from rear-side
- 1 Function Stranded cable
- Quick connect terminals 4.8 x 0.8 mm
- Fits to type:
- Approved together with power entry module

References

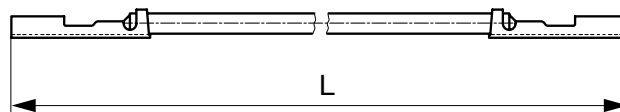
[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Dimensions

Type A, (Lenght see order table)



Type B (Length see order table)

Packaging unit

100 Pcs

Voltage Selector Insert to KE, CE, KG, CG



To be used with drawer for KE, CE, KG, CG



Description

- Component:
Drop-in type, Switching Unit
- 1 Function:
Voltage selector insert (step switch)
- Up to four different switch positions
- Fits to type:
- Approved together with power entry module

Other versions on request

- Fuse drawer with other voltage values

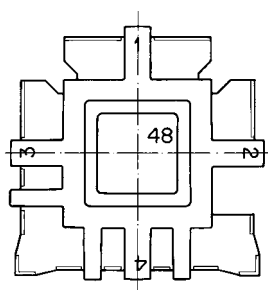
References

[General Product Information](#)

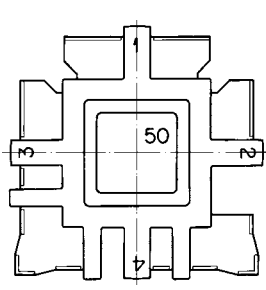
Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

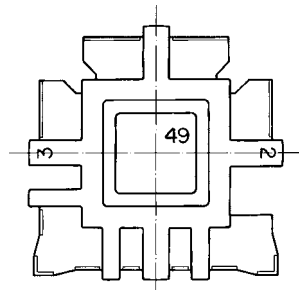
Dimensions



Switch position 1



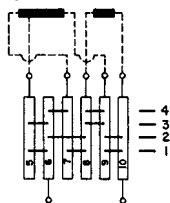
Switch position 2



Switch position 3

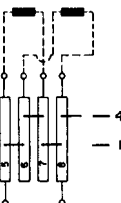
Diagrams

System No. 1



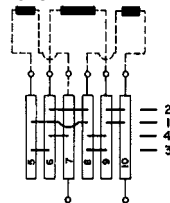
2 separate windings, one with a tap
3 or 4 switch positions

System No. 2



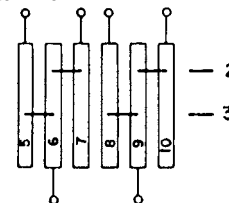
2 separate windings
2 switch positions

System No. 3



3 separate windings
3 or 4 switch positions

System No. 4



2-pole change over switch

Packaging unit

50 Pcs

Product Standard / Definitions / CE-Marking / Conformity	236
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general product-information

Product standard equipment standard

The product standard only contains minimum requirements. Attention is drawn to the fact that appliance specifications might contain requirements additional to or deviating from those specified in the relevant product standards.

Comments on definitions used

Please be aware that the specifications nominal value used in the German part of the Schurter catalogue and the data sheets, is synonymous with rated value.
The difference between these two values is a pure matter of definition. In order to avoid any unnecessary complications we will continue to use the specifications nominal value.

CE marking acc. to EU-directives

CE marking is the only marking which indicates that a product conforms to the relevant EU-directive.
This means that the CE-mark is no quality or standard conformity mark but only an administration mark.
SCHURTER products are covered by the low voltage directives 72/23/EEC and 93/68/EEC. Those are valid for equipment and appliances with rated voltage values between AC 50 V to AC 1000 V as well as DC 75 V to DC 1500 V.
The CE marking of SCHURTER parts will be found on the label of the smallest packing unit. On request we will submit a CE conformity statement for each component. CE conformity statements and approvals can also be retrieved from the internet under www.schurter.com.

Conformity to component standards, national approvals

National testing institutions are testing according to national and international standards or other generally recognized rules of technology. Their certification/approval-marks confirm the observance of the safety requirements which electric appliances must fulfil.

National approvals

	(Recognition)	UL	Underwriters Laboratories (USA)
	(Listing)	UL	Underwriters Laboratories (USA, Canada)
	(Recognition)	UL	Underwriters Laboratories (USA, Canada)
	(Listing)	UL	Underwriters Laboratories (USA, Canada)
		CSA	Canadian Standard Association, Component Acceptance Service
		CSA	Canadian Standard Association
		SEV	Schweizerischer Elektrotechnischer Verein
	(Mark)	VDE	Verband Deutscher Elektrotechniker
	(Certificate of conformity with factory surveillance)		
		BSI	British Standard Institute
		SEMKO	Svenska Elektriska Materielkontrollanstalten
		NEMKO	Norges Elektriske Materielkontroll
		DEMKO	Danmarks Elektriske Materielkontroll
		FIMKO	Finnish Electrical Inspectorate
		ÖVE	Österreichischer Verband für Elektrotechnik
		KEMA	Keuring van Elektrotechnische Materialen
		IMQ	Instituto italiano del marchio di qualità
	(Mark)		European Norms Electrical Certification
		CCC	China Compulsory Certification

In addition to the combined UL/CSA approvals, most of the SCHURTER components are also approved by one of the European Certification Bodies like VDE (Germany), Electrosuisse (Switzerland) or SEMKO (Sweden). The safety testing of all these European Certification Bodies are based on the common European Safety Standards. With the harmonisation effort in Europe, the different National European Certification Bodies have lost their importance and SCHURTER has decided to maintain only one European approval (e.g. VDE, SEV or SEMKO) in future. The others will not be renewed once they have expired.

Because UL and CSA are not members of the CENELEC, the standards of UL and CSA are not harmonised yet with the European Standards. However, UL and CSA are trying to harmonize their standards with each other. Where possible, SCHURTER will apply for the combined cULus or cURus approval.

Further to development in Asia, SCHURTER has obtained national approvals from China, Japan and Korea.



general product-information

IP degrees of protection provided by enclosures (IP code)

Standards IEC 60529; EN 60529

Scope

These standards apply to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72.5 kV.

Object

The object of these standards is to give:

- a) Definitions** for degrees of protection provided by enclosures of electrical equipment as regards:
 - 1. Protection of persons against access to hazardous parts inside the enclosure
 - 2. Protection of the equipment inside the enclosure against ingress of solid foreign objects
 - 3. Protection of the equipment inside the enclosure against harmful effects due to the ingress of water.
- b) Designations** for these degrees of protection.
- c) Requirements** for each designation.
- d) Tests** to be performed to verify that the enclosure meets the requirements of these standards.

Designations

The degree of protection provided by an enclosure is indicated by the IP Code.

Elements of the IP Code and their meanings

A brief description of the IP Code elements is given in the following table.

IP xy	Meaning for the protection of equipment	Meaning for the protection of persons
	Against ingress of solid foreign objectif	Against access to hazardous parts with
x = 0	(non-protected)	(non-protected)
x = 1	50 mm diameter	back of hand
x = 2	12.5 mm diameter	finger
x = 3	2.5 mm diameter	tool
x = 4	1.0 mm diameter	wire
x = 5	dust-protected	wire
x = 6	dust-tight	wire
	Against ingress of water with harmful effects	
y = 0	(non protected)	
y = 1	vertically dripping	
y = 2	dripping (15° tilted)	
y = 3	spraying	
y = 4	splashing	
y = 5	jetting	
y = 6	powerful jetting	
y = 7	temporary immersion	
y = 8	continuous immersion	

Protection against electric shock

1. Protection against direct and indirect contact General terms

The protection against electric shock on electric equipment as well as their components are divided into the following parts:

- Protection against direct contact with live parts concerns all measures for the protection of human beings and animals against hazards which result from direct contact with live parts of electric equipment and their components.
- Protection against indirect contact is the protection of human beings and animals against hazards which result from contact of live parts 1 of electric equipment as well as components thereof, which have become live due to an insulation failure.

¹⁾ Accessible, conductive part, which is not conductive normally but which may be conductive due to a failure.

2. Protection against direct contact with live parts e.g. of a fuseholder

The data sheets of the relevant components inform about the taken measures.

3. Protection against indirect contact

Measures for the protection against indirect contact on electrical equipment are defined according to IEC 61140 by the 4 protection classes 0, I, II, III. Each protection class includes two protection measures. Even if one of these measures should fail, no electric shocks will occur.

Protection class	Main protective measures
0	1. Basic insulation between live parts and accessible conductive parts. 2. Earth-free location, non-conducting environment.
I	 1. Basic insulation between live parts and accessible conductive parts. 2. Means are provided for the connection of accessible conductive parts of the equipment to the protective (earthing) conductor in the fixed wiring of the installation in such a way that accessible conductive parts cannot become live in the event of a failure of the basic insulation.
II	 1. Basic insulation between live parts and accessible conductive parts. 2. Additional insulation. Basic and supplementary insulation are summarised under the term "double insulation". Under certain circumstances also a "reinforced insulation" (single insulation system) may guarantee an equivalent protection against electric shock as a "double-insulation" does. No terminal for a protective conductor is allowable. A possibly existing protective conductor must not be connected and has to be insulated like any live part.
III	 1. Functional insulation. 2. Supply at safety extra-low voltage SELV (the circuit is isolated from the mains supply by such means as a safety isolating transformer). The protection against electric shock is in this case completely based on the supplying by SELV-circuits ($U \leq 42$ V). Higher voltages are not generated in the equipment. No terminal for a protective conductor is allowable.



general product-information

IEC connectors

Appliance couplers approved according IEC 60320 are designed as two pole appliance couplers for alternate current with or without protective conductor with a rated voltage of 250 V and a rated current of 16A for technical application that are desired for interconnection to flexible cords of electrical equipment for power supply of 50Hz or 60Hz.

Appliance couplers according mentioned standard are suitable for operation under environmental temperatures of normally 25° C and do not have to exceed 35° C.

Appliance couplers are designed for use without especial moisture protection. So the design of the appliance needs to assure ingress protection if it is designed to be used under these circumstances.

Following figures need to be respected in order to meet standard IEC 60320:

- Rated voltage: 250 VAC
- Rated current according type: 0.2A, 2.5A, 6A, 10A, 16A

The appliance couplers are separated according the maximum operation temperature at the base of the connector pin:

- Pin temperature up to 70°C: Appliance couplers for cold condition
- Pin temperature up to 120°C: Appliance couplers for warm condition
- Pin temperature up to 155°C: Appliance couplers for hot condition

Their outlines are coded in a way, that appliance couplers for hot conditions may also be used under cold conditions, and appliance couplers for very hot conditions may also be used under cold or hot conditions.

The Appliance couplers are separated according the categories of equipment:

- Appliance couplers for appliances according protection class I
- Appliance couplers for appliances according protection class II
- The protection classes are described in standard IEC 61140

Appliance couplers will be additionally separated according the connection method to a flexible cord:

- Rewireable connectors
- Non-Rewireable connectors

7.5.6.4

Fuseholders, part of a power entry module

Fusedrawer 1 www.schurter.ch/pdf/english/typ_Fusedrawer_1.pdf

Fusedrawer 2 www.schurter.ch/pdf/english/typ_Fusedrawer_2.pdf

Fusedrawer 3 www.schurter.ch/pdf/english/typ_Fusedrawer_3.pdf

Explanations, thermal requirements, selection criteria

7.5.6.4.1

Protection against electric shock (against direct contact with live parts) for fuseholders

The assessment of the protection against electric shock assumes that the fuseholder is properly assembled, installed and operated as in normal use, e.g. on the front panel of the equipment. IEC 60127-6 and EN 60127-6 divides into three categories:

Category	Features
PC1	Fuseholders without integral protection against electric shock. They are only suitable for applications where corresponding additional means are provided to protect against electric shock.
PC2	Fuseholders with integral protection against electric shock live part is not accessible: - when the fuseholder is closed - after the fuse carrier (incl. fuse-link) has been removed - either during insertion or removal of the fuse carrier (incl. fuse-link) Compliance is checked by using the standard test finger specified in IEC 60529.

PC3 Fuseholder with enhanced integral protection against electric shock

The requirements for this category are the same as those for category PC2, with the exception that the testing is carried

Extra-safe handling with SCHURTER power entry modules

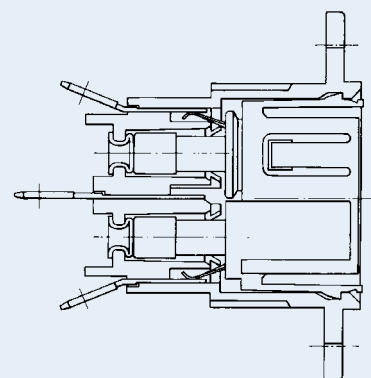
Protection against contact with live parts is an important aspect when dealing with electrical connecting devices. Both your customers and your servicing engineers will appreciate the greatest possible protection against accidental contact with live parts something which can easily happen as a result of inappropriate use, or during servicing or repair work.

In particular, our "shock-safe", "extra-Safe fuse-drawers" and "protective covers" precautions are effective ways of protecting against accidental contact when using the power entry modules.

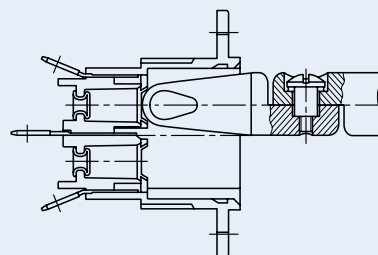
Example:

Power entry module with fuseholder, shocksafe category PC2

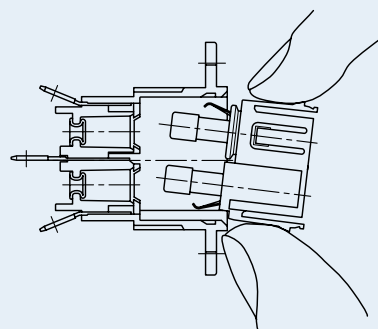
Closed fuseholder and appliance inlet.



It is not possible to touch any live parts on the SCHURTER fuseholders when the fuse-carrier is extracted.



When a fuse-link 5 x 20 mm or 6,3 x 32 mm (1/4" x 1 1/4") is inserted or replaced, neither the fuse nor the fuse-carrier can come in contact with any live parts.



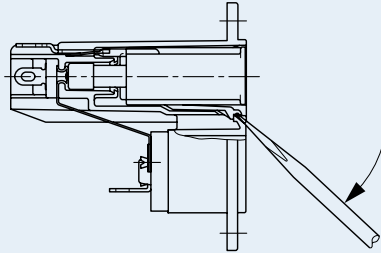


general product-information

The Extra-Safe versions of shock-safe power entry modules are now available.

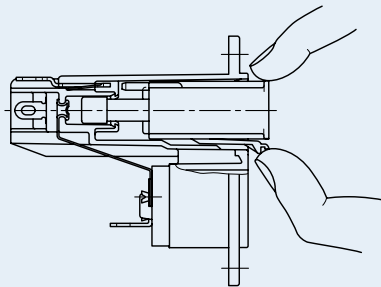
They are thus also able to satisfy requirements of the following standard: IEC 60601-1 (medical equipments)

The drawer can only be extracted with the aid of a tool (e.g. screwdriver) so that opening by hand is quite impossible.



With some types it is also necessary to pull out the mains outlet first. Only then can the drawer be removed from the socket.

The drawer can then be removed by hand.



7.5.6.4.2

Thermal requirements of the fuseholder

7.5.6.4.2.1

Influencing factors

The design engineer of electrical equipment is responsible for its safety and functioning to humans, animals and real values. Above all, it is his task to make sure that the state of the art as well as the valid national and international standards and regulations be observed.

In view of the safety of electrical equipment the selection of the most suitable fuseholder is of great importance. Among other parameters, one has to make sure that the maximum admissible power acceptances and temperatures defined by the manufacturer are followed. Differing definitions and requirements in the most important standards for fuse-links and fuseholders are time and again origin for the incorrect selection of fuseholders.

To equate the rated current of a fuse-link with the rated current of the fuseholder, may, especially at higher currents, cause high, not admissible temperatures, when the influence of the power dissipation in the contacts of the fuseholder was not taken into consideration.

For a correct selection the following influence factors depending on the application and mounting method, have to be followed:

1. Rated power dissipation of the suitable fuse-link.
2. Admissible power acceptance, operating current and temperatures of the suitable fuseholder.
3. Differing ambient air temperature outside and inside of the equipment.
4. Electrical load alternation

5. Long time (> 500 h) operation with load $> 0.7 I_n$.

6. Heat dissipation/cooling and ventilation. Heat influence of adjacent components.

7. Length and cross section of the connecting wire.

7.5.6.4.2.2

Rated current of a fuseholder

The value of current assigned by the manufacturer of the fuseholder and to which the rated power acceptance is referred.

7.5.6.4.2.3

Rated power dissipation of the fuse-link

(power dissipation at rated current)

See sep. catalogue "fuses".

7.5.6.4.2.4

Rated power acceptance and admissible temperatures of a fuseholder.

The rated power acceptance of a fuseholder is determined by a standardised testing procedure according to IEC 60127-6. It is intended to be the power dissipation caused by the inserted dummy fuse-link at the rated current of the fuseholder and at an ambient air temperature of $T_{A1} = T_{A2} = 23^\circ\text{C}$ (over a long period). During this test the following temperatures must not be exceeded on the surface of the fuseholder:

Fuseholder surface area	Maximum allowable temperature measuring points (see figure 1)	
		$^\circ\text{C}$
1. Accessible parts ¹⁾	T_{S1}	85
2. Inaccessible parts ¹⁾ Insulating parts	T_{S2}	²⁾

NOTES:

1) When the fuse-holder is properly assembled, installed and operated as in normal use, e.g. on the front panel of equipment.

2) The maximum allowable temperature of the used insulating materials corresponds to the Relative Temperature Index (RTI) according to IEC 60216-1 or UL 746 B.

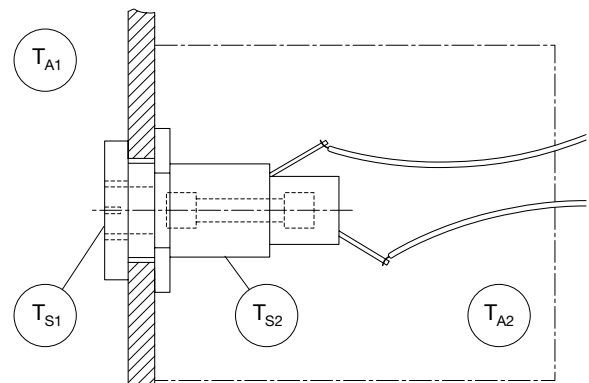


Illustration of temperatures experienced

T_{A1} = ambient air temperature, surrounding the equipment

T_{A2} = ambient air temperature in the equipment

T_{S1} = temperature of accessible parts on fuseholder surface

T_{S2} = temperature of inaccessible parts on fuseholder surface

7.5.6.4.2.5

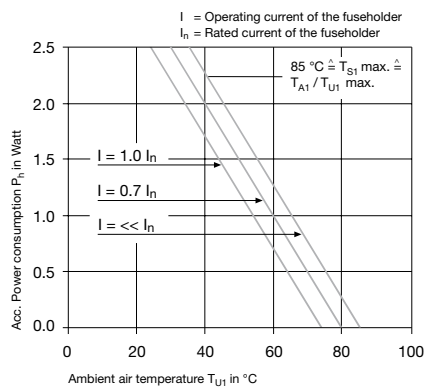
Correlation between operating current I , ambient air temperature T_{A1} and the power acceptance P_n of the fuseholder.



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This correlation is demonstrated by derating curves.

Example of a derating curve



I = operating current of the fuseholder
 I_n = rated current of the fuseholder

The derating curves demonstrate the admissible power acceptance of a fuseholder depending on the ambient air temperature T_{A1} for the following fuseholder operating currents: $I \ll I_n$, $I = 0.7 \cdot I_n$ and $I = 1.0 \cdot I_n$. This power acceptance corresponds to the max. admissible power dissipation of a fuse-link.

A calculation example can be looked up in the technical information for fuses.



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Line switch used by type	Technical data	
CMF1, CMF2, CMF3, CMF4	Electrical rating acc. to IEC/EN 61058-1	10 (4) A / 250 VAC, 10 000 switch operations 6 (4) A / 250 VAC, 50 000 switch operations Statement in () at inductive load with p. f. 0.6
	Electrical rating acc. to UL 1054	6 A, 125250 VAC, 6000 switch operations (1/4) HP, 125 VAC (1/2) HP, 250 VAC Statement in () at inductive load with p. f. 0.45
	Inrush current acc. to IEC/EN 61058-1	capacitive 70 A, 34 ms continuous current 5 A 10 000 switch operations
	Contact gap	≥3 mm
KM, KMF, PMM, GRM1, GRM2, GRM4	Electrical rating acc. to IEC/EN 61058-1	10 (4) A / 250 VAC, 10 000 switch operations 6 (4) A / 250 VAC, 50 000 switch operations Statement in () at inductive load with p. f. 0.6
	Electrical rating acc. to UL 1054	12 A, 125250 VAC, 6000 switch operations (1/3) HP, 125 VAC (1/2) HP, 250 VAC Statement in () at inductive load with p. f. 0.45 Meets switching current test acc. to UL 1054, TV-3
	Inrush current acc. to IEC/EN 61058-1	capacitive 100 A, 34 ms continuous current 5 A 10 000 switch operations
	Contact gap	≥3 mm
KEB1, KFB1	Electrical rating acc. to DIN/VDE 0630	12 (3) A / 250 VAC, 10 000 switch operations Statement in () at inductive load with p. f. 0.6
	Inrush current acc. to	capacitive 20 A, < 5 ms continuous current 5 A
	IEC/EN 61058-1	10 000 switch operations
	Contact gap	≥3 mm
DC11, DC12, DC21, DC22, DD11, DD12, DD21, DD22	Electrical rating acc. to IEC/EN 61058-1	16 (4) A / 250 VAC, 10 000 switch operations 10 (4) A / 250 VAC, 50 000 switch operations Statement in () at inductive load with p. f. 0.6
	Electrical rating acc. to UL 1054	16 A / 125250 VAC, 6000 switch operations (1) HP 125 VAC / (2) HP 250 VAC Statement in () at inductive load with p. f. 0.45
	Inrush current acc. to IEC/EN 61058-1	capacitive 100 A, 3-4 ms 100 A, 3-4 ms continuous current 5 A
KP (Schalter), KEB2, KFB2, KD, CD, KG, CG, Felcom 54, Felcom 64, FKH, FK1, FKHD, FKID	Electrical rating acc. to IEC/EN 61058-1	12 (4) A / 250 VAC, 10 000 switch operations 8 (8) A / 250 VAC, 50 000 switch operations Statement in () at inductive load with p. f. 0.6
	Electrical rating acc. to UL 1054	15 A, 125250 VAC, 6000 switch operations (3/4) HP, 125 VAC (11/2) HP, 250 VAC Statement in () at inductive load with p. f. 0.45 Meets switching current test acc. to UL 1054, TV-3
	Inrush current acc. to IEC/EN 61058-1	capacitive 70 A, 34 ms continuous current 5 A 10 000 switch operations
	Contact gap	≥3 mm
KD Bowden cable, CD Bowden cable, KG Bowden cable, CG Bowden cable	Electrical rating acc. to IEC/EN 61058-1	6 (4) A / 250 VAC, 10 000 switch operations Statement in () at inductive load with p. f. 0.6
	Electrical rating acc. to UL 1054	6 A, 250 VAC, 10 000 switch operations 8 A, 125 VAC, 10 000 switch operations
	Inrush current acc. to IEC/EN 61058-1	capacitive 36 A, < 5 ms continuous current 6 A 6000 switch operations
	Contact gap	≥3 mm
EC11, EC12	Electrical rating acc. to IEC/EN 61058-1	16 (4) A / 250 VAC, 10 000 switch operations 10 (4) A / 250 VAC, 50 000 switch operations Statement in () at inductive load with p. f. 0.6



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Line switch used by type	Technical data	
	Electrical rating acc. to UL 1054	20 A, 125250 VAC, 6000 switch operations (1) HP, 125 VAC (2) HP, 250 VAC Statement in () at inductive load with p. f. 0.45 Meets switching current test acc. to UL 1054, TV-3
	Inrush current acc. to IEC/EN 61058-1	capacitive 100 A, 34 ms continuous current 5 A 10 000 switch operations
	Contact gap	≥3 mm



Industrial mains filters

Frequency range 0.01 MHz ... 1000 MHz

General Information

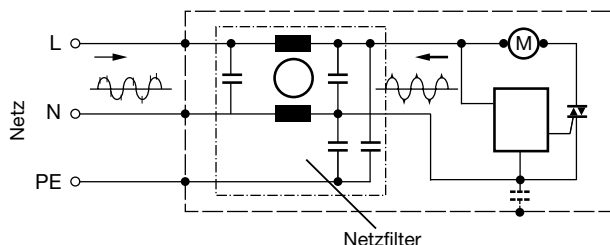
Electromagnetic Compatibility (EMC) is the capability of electrical equipment (installations, devices, assemblies) to operate effectively in its electromagnetic environment (Immunity), without in turn irresponsibly affecting this environment (Emission).

Mains filters of various types are used for the protection of electronic circuits, components and equipment against transients or similar interference, on the mains power supply. A suitable filter can be selected from the existing product range for each equipment type in accordance with electromagnetic conditions of its environment.

Mains interference can be classified into four categories:

- A) Fluctuations in the industrial mains supply (magnetic voltage stabilizer)
- B) Harmonic wave interference in the frequency range 100 Hz ... 2 kHz (filter type selective harmonic)
- C) Transient interference signals in the frequency range up to 300 MHz (filter type low-pass)
- D) Sinusoidal interference signals in the frequency range up to 1 GHz (filter type broad band, low-pass)

In practice, however, interference is mainly found in the last three categories B, C and D. Superimposed on the high-voltage mains supply, such interference can affect the performance of electronic circuits, or even cause them damage. An optimally-designed mains filter can perform a double function:



Function 1

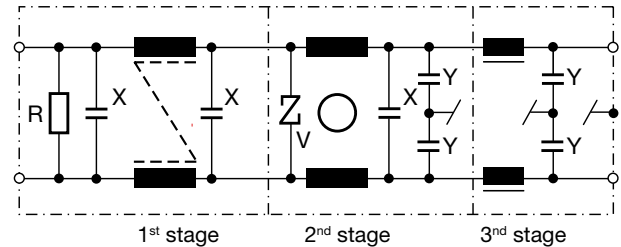
The filter protects an electronic control circuit from voltage spikes in the mains supply, which may be generated, for example, by electro-mechanical switches and relays.

Function 2

The same filter also acts simultaneously in the opposite direction. The HF interference generated in the unit by thyristor control is attenuated such that the boundary values Class B, (EN 55011/55022) are maintained.

Filters are usually made up of capacitors and inductance coils. Components such as leakage resistors, surge dissipators and VHF chokes can also be integrated into the filter. Broad band filters which meet the highest requirements are often composed of 2 or 3 single stages put together to make one filter unit:

3-stage filter



1st stage

A differential mode acting filter with high energy absorption. Discharging resistors are normally used for Cx capacitors > 100 nF. The capacitors are tested and approved as so-called Class X noise suppression capacitors. The 1st stage serves as di/dt limitation.

2nd stage

A common mode acting filter with a high, broad band attenuation ratio. A ZNR varistor surge serves as the overvoltage suppression component. The earthed capacitors are tested and approved as so-called Class Y noise suppression capacitors.

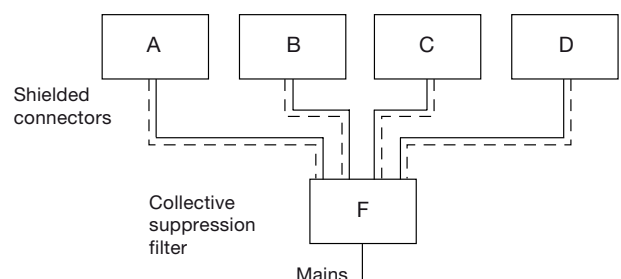
3rd stage

Common mode as well as differential mode acting filter in the HF range up to 300 MHz. Feedthrough capacitors make high attenuation values possible up to the gigahertz range. These capacitors are also Class Y type. SCHURTER uses only approved noise suppression capacitors according to EN 132400.

Filter Assemblies

Three types of mains noise suppression filter assemblies are used in practice:

Collective Suppressor



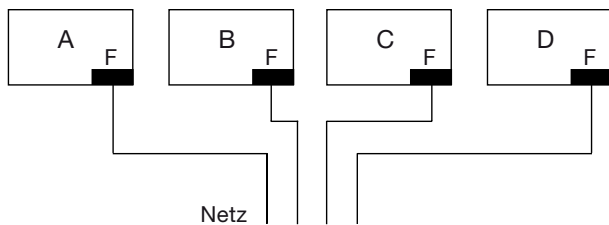
The collective suppressor principle results in one filter per plant. This has to cope with the entire power input. In addition, all of the connecting cables have to be shielded. Furthermore interference generated by «A» device can reach other devices for instance «B» or «C» through the connecting cables. The following example promises to be a more economical solution. In many cases, the single suppressor principle is



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the most economical solution.

Single Suppressors



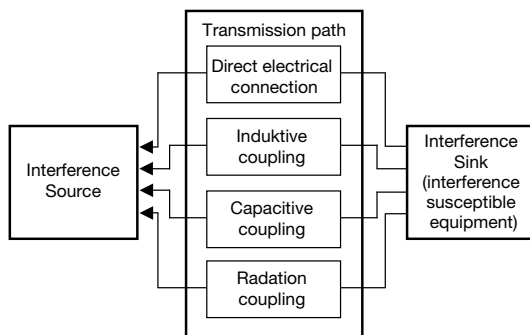
Combined Single and Collective Suppressor

From the technical point of view, only the combined application of both suppression techniques can result in a significant improvement.

Interference Propagation

In the field of interference and RF suppression, the most significant means of transmission is the direct electrical connection, i.e. the connecting wiring. The radiation coupling is also important from the electromagnetic compatibility (EMC) point of view; it cannot, however, be dealt with here.

Interference Propagation



Propagation and Coupling Paths

The capacitive and inductive coupling effects occur inside the case. These could be:

- Capacitive coupling through the coupling capacity of a mains transformer.
- Inductive coupling through control system wiring in parallel.

The introduction briefly mentioned the possibility of the mains filter operating with a double function. Depending on the main area of application, these filters are designated as either RF SUPPRESSION FILTERS or INTERFERENCE SUPPRESSION FILTERS.

The one filter may, therefore, appear under two references in the documentation. A filter is also classified by its mechanical design as well as its electrical data.

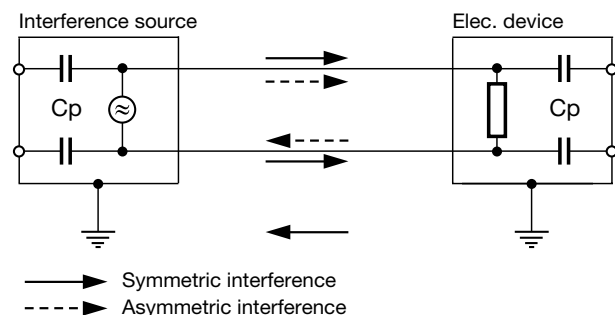
RF SUPPRESSION FILTERS impede the propagation of RF interference, generated by an electronic or electrical device into the mains. They also ensure an interference-free radio reception in the immediate vicinity.

INTERFERENCE SUPPRESSION FILTERS prevent mains interference from affecting electronic equipment. They enable an interference-free operation even in the case of a power supply badly affected by mains interference.

It is common to operate the mains filter in both directions in the one piece of equipment, allowing it to fulfil its double function as both interference and RF suppression filters as specified.

Common- and differential Mode Interference

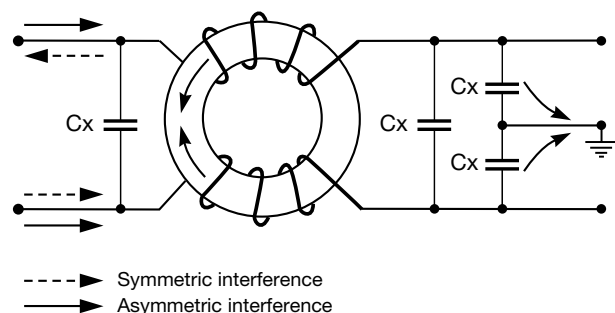
Filter engineering differentiates between common and differential mode interference originating from supply lines.



In the case of a non-earthed interference source, interference at first only propagates along the connecting lines. Like the mains AC current, the parasitic current flows to the user on one lead, and returns to the interference source on the other. Both these currents are in differential mode. This type of interference is therefore referred to as differential mode interference.

Due to the mechanical configuration and its parasitic capacitance, parasitic currents are also generated in the earthing circuit. This parasitic current flows on both connecting leads to the user and over an earthed lead back to the interference source. Both currents on the connecting lead are in common mode. This type of interference is therefore referred to as common mode interference.

Current Compensated Chokes in Interference Suppression Filters



The main type of choke used in suppression filter engineering is the current compensated choke. This mainly damps the common mode interference. The differential mode parasitic current, or rather the magnetic flux they produce in the core, is compensated by means of a special type of winding. The relatively small attenuation of the differential mode parasitic currents can be balanced through the large,

symmetrically connected capacitance C_x between the lines. Only the leakage inductance L_s of the choke is then of any importance.

$$L_{\text{leakage}} \approx \frac{L_{\text{nominal}}}{50} \text{ to } \frac{L_{\text{nominal}}}{100}$$

The high nominal inductance L_N active for common mode parasitic currents allows the insertion of small, earthed capacitances C_Y in a filter circuit. These capacitances are regulated by international standards for leakage currents.

RF Suppression Capacitors:

General Information

All SCHURTER filters are fitted with Class X or Y RF suppression capacitors in accordance with international standards (IEC, EN). These are mainly self-healing metallized paper or polyester types, tested against the standards of major countries around the world and approved as noise suppression capacitors. Class X capacitors are capacitors with unlimited capacity for those applications in which a failure caused by a short circuit cannot result in a dangerous electrical shock. Class Y capacitors are capacitors intended for an operating voltage $V_{\text{eff}} = 250 \text{ V}$ with increased electrical and mechanical safety and limited capacitance.

General notes

a) Leakage current according to IEC 60335-1

The leakage current of a device is mainly determined by the capacity value of the Y-capacitor. According to international standards (IEC 60335-1) the following regulations with respect to leakage current can be assumed:

Type of appliance	Protection class	I_L max. (mA)	U(V)	f(Hz)
Portable appliances	I	0.75	250	50
Stationary motor appliances *	I	3.5	250	50
Stationary heating appliances	I	0.75/kW (max. 5.0)	250	50
Appliances	II	0.25	250	50
Appliances	I, II, III	0.5	250	50

* Stationary appliances fixed or weighing in excess of 18 kg (without carrying handle).

For other applications:

Ref.	Laboratory	Medical	IT	Test equipment
UL	0.5 mA (UL 1262)	0.1 mA (UL 544)	3.5 mA (UL 1950)	5.0 mA (UL 1244)
IEC		0.1 mA (IEC 60601-1)	3.5 mA (IEC 60950)	3.5 mA (IEC 61010-1)

Filter classification

For easy reading of the catalogue data, SCHURTER uses the following simplified filter classification:

Differential Mode and Common Mode Attenuation

Attenuation value			
Standard	Medium	High	Excellent

Differential Mode and Common Mode Attenuation

20-50 dB	40-70 dB	60-80 dB	70-95 dB
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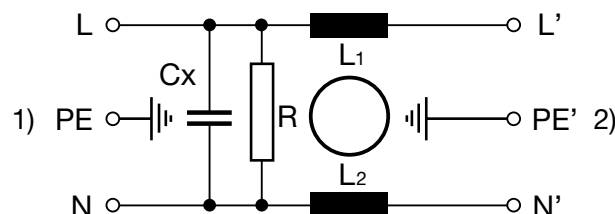
Leakage Current Classification

Operating leakage current			
Medical	Standard	Industrial	Other
<0.1 mA	<0.5 mA	<5 mA	>5 mA

Medical filter

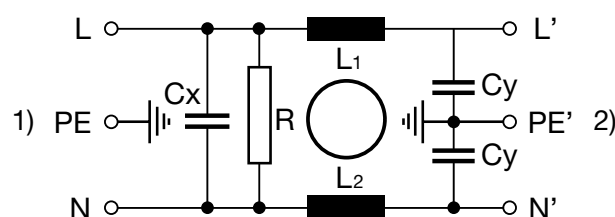
SCHURTER medical filters comply with UL544 and IEC 60601-1 standard specifications and are available in two versions, which differ in terms of their leakage current values.

Medical filter (M5)



- 1) Line
2) Load

Medical filter (M80)



- 1) Line
2) Load

Standard medical filters for direct person contact supplied by SCHURTER have a leakage current value of $<5 \mu\text{A}$ (M5). This can only be achieved without C_Y . Here, a common mode fault current against earth is not attenuated and the filter acts only on differential mode fault currents. In addition, an inlet in protection class II can be used here, as no earth connection exists. However, if an earth connection is desired, Type (M80) can be used for indirect person contact; this has a leakage current of $<80 \mu\text{A}$ which is below the required limit value of 0.1 mA. Type (M80) is manufactured to special order.



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Bleed resistor

Medical filters and filters with a X-capacitor >100 nF have a bleed resistor so that no inadmissible rest voltage occurs at the touchable pins

of the inlet.

EMC requirements in Europe

Household, Luminaries and Telecommunication Residential, commercial and light industrial	Class Industrial (ISM) Industrial, Scientific and Medical
Emission IEC 61000-6-3 (EN 50081-1) EN 55022 ITE Information technology equipment EN 55014 Household Applications and Tools Harmonic (IEC 61000-3-2) Voltage fluctuations (IEC 61000-3-3)	Emission IEC 61000-6-4(EN 50081-2) EN 55011 Harmonics (IEC 61000-3-2) Voltage fluctuation (IEC 61000-3-3)
Immunity IEC 61000-6-1 (EN 50082-1) IEC 61000-4-2 ESD IEC 61000-4-3 HF-Field IEC 61000-4-4 Burst IEC 61000-4-5 Surge	Immunity IEC 61000-6-2 (EN 50082-2) IEC 61000-4-2 ESD IEC 61000-4-3 Inducted HF-Field (enclosure) IEC 61000-4-6 Inducted HF-Field (lines) IEC 61000-4-4 Burst IEC 61000-4-5 Surge IEC 61000-4-8 NF Magnetic Field (only for magnetic devices)

Electrical Safety Regulations

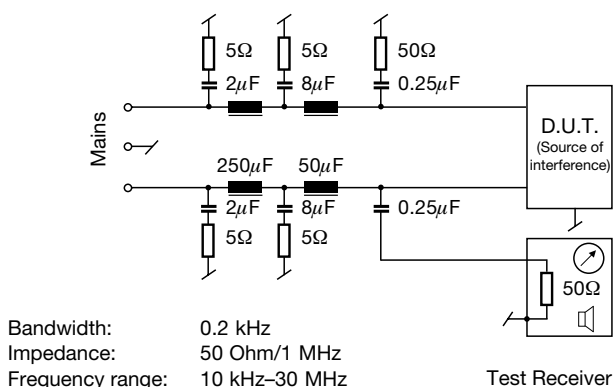
The most important safety standards for equipment/installations are listed in the following:

IEC 60950	Safety of Information Technology Equipment including Electrical Business Equipment
IEC 60335	Safety of Household and similar Electrical Appliances
IEC 61010-1	Safety requirements for Electronic Measuring Apparatus
IEC 60601	Safety requirements for Electro-medical Equipment
UL 1950	Safety requirements for Information Technology Equipment
UL 544	Electric Medical and Dental Equipment

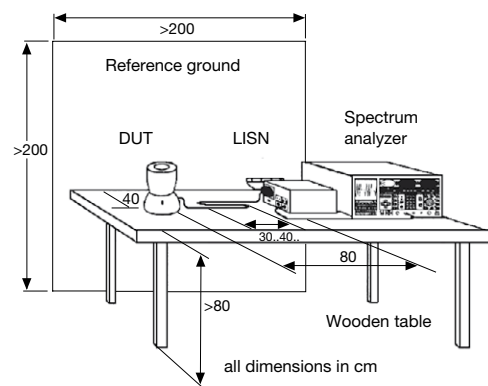
Interference Emissions

There are basically 2 types of emitted disturbances: conducted and radiated. Line interferences are high frequency noise signals which are superimposed on the useful signals on input and output lines. Interference signals can be of common- or differential mode type. The significance of line interference is reduced dramatically above a frequency of 30 MHz. From here radiated interference increases greatly. On the following pages we will nevertheless deal with conducted interference only.

Measuring Technique CISPR 3



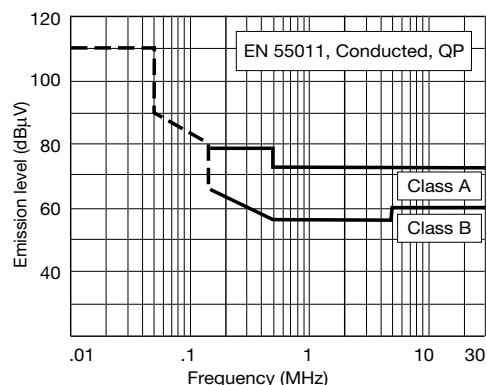
Radio Frequency Interference Boundary Values



RFI testing station

EN 55011: Boundary values and measuring systems for RF suppression for industrial, scientific and medical high frequency equipment (ISM), 1991 (see also CISPR 11 or VDE 0871)

Boundary values complying with EN 55011



Quasipeak (QP) and Average (AV) are two limits, neither of which must be exceeded and which are measured by two different test receivers. The test arrangement remains the same. These boundary values replace the boundary values given by the old standards for broadband and narrowband noise generators.



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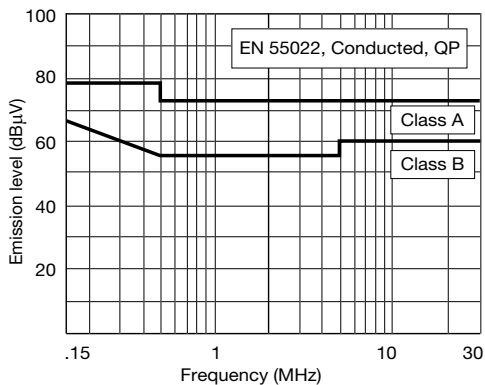
Boundary values are divided into Class A and B.

Into Class A fall those devices which should not be operated in residential buildings and should not be connected to power supplies which also supply these areas. Class A boundary values shall not be exceeded.

Into Class B fall devices for which above restrictions do not apply. Class B boundary values shall not be exceeded.

EN 55022: Boundary values and measuring systems for RF suppression for information technology installations (Telecommunications) 1987 (see also CISPR 22 or VDE 0878).

Boundary values complying with EN 55022



Into Class A fall all units which should be used in a commercial environment and should be used with a safety distance of 30 m to other units.

Into Class B fall all units which have no restrictions on their use.

EN 55013: Boundary value and measuring techniques for RF suppression characteristics of radio receivers and connected applications.

EN 55014: Boundary values and measuring systems for RF suppression for electrical household appliances, handheld electrical tools and similar electrical products, 1993 (see also CISPR 14).

EN 55015: Boundary values and measuring systems for RF suppression for fluorescent lamps and lighting, 1993 (see also CISPR 13).

Harmonics

(EN 61000-3-2, IEC 61000-3-2)

Current harmonics represent a distortion of the normal sine wave provided by the utility. When a product such as an SCR switched load or a switching power supply distorts the current, harmonics at multiples of the power line frequency are generated. Two significant consequences arise as a result of harmonic generation. First, because of finite impedances of power lines, voltage variations are generated that other equipment on the line must tolerate. Second, when generated in a three-phase system, harmonics may cause overheating of neutral lines.

Power line harmonics are generated when a load draws a non linear current from a sinusoidal voltage. The harmonic component is an element of a Fourier series which can be used to define any periodic waveshape. The harmonic order or number is the integral number defined by the ratio of the frequency of the harmonic to the fundamental frequency (e.g., 150 Hz is the third harmonic of 50 Hz; $n = 150/50$).

After multiple postponement finishes at 1.1. 2001 the transition-period for the EN 61000-3-2, frequently called "PFC-Norm". It applies to all electrical and electronic devices with input current up to max. 16 A

per phase, which are designed to connect to the general lowvoltage mains. Limits are set only for 220/380 V, 230/400 V and 240/415 V at 50 Hz.

This standard distinguishes four classes of equipment.

Class	Equipment
A	Simmetric three phase equipment and all other equipment not in other classes
B	Portable tools
C	Lighting equipment
D	Equipment having special Waveshape (see EN 61000-3-2, paragraph 4 picture 1)

A harmonics test to conform to the standards must include an analysis of the incoming current up to the 40th harmonic (for $f_N = 50$ Hz, $f_H = 2$ kHz).

The IEC 61642 "Industrial a.c. networks affected by harmonics- Application of filters and shunt capacitors" give guidance for the use of passive a.c. harmonic filters and shunt capacitors for the limitation of harmonics and power factor correction intended to be used in industrial applications, at low and high voltages.

Voltage Fluctuations (Flicker)

(EN61000-3-3, IEC 61000-3-3, IEC 61000-3-5)

The appearance of flicker effects and voltage fluctuations on the mains supply is caused by varying loads connected to the mains. The most critical are the effects of voltage fluctuations on equipment such as lights and illumination. Here the light output and thereby the intensity is an exponential function of the supplied voltage. This fluctuation in light intensity is called flicker. Many people experience dizziness and headaches as a result.

There are various limit values depending on the type of voltage fluctuation (square, sinusoidal and mixed or erratic voltage fluctuation).

Flickers are measured by so-called flicker meters (arranged in compliance with EN 60808).

Immunity

ESD (Electrostatic Discharge)

(EN 61000-4-2, IEC 61000-4-2)

One of the main interference sources, along with switching through radio interference, is electrostatic discharge from people and equipment.

Burst

(EN 61000-4-4, IEC 61000-4-4)

One of the most common and most dangerous sources of interference are transient disturbances such as those originating from switching transients (interruption of inductive loads, relay contact bounce, etc.). The burst test measures the resistance of the device to repetitive fast transients.

Surge

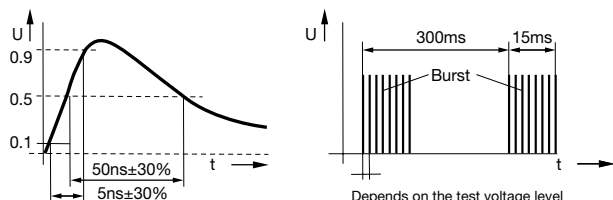
(EN 61000-4-5, IEC 61000-4-5)

This test procedure measures the behaviour of a device when subjected to high-energy pulses. Sources of such pulses are switching events due to lightning strikes, short-circuits, or switching cycles which vary in time and place. Surge test on SCHURTER filters are according to EN 133200.

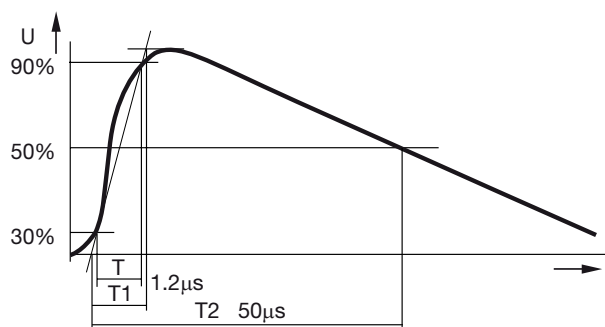


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Specification of the Burst test impulse



Surge voltage form in open circuit



Guideline for the selection of ESD test levels

Class	Relative ambient humidity as low as [%]	Antistatic material (floor)	Synthetic material (floor)	Level air discharge (kV)	Level contact discharge (kV)
Class 1	35	x		2.00	2.00
Class 2	10	x		4.00	4.00
Class 3	50		x	8.00	6.00
Class 4	10		x	15.00	8.00

Recommended test levels for Fast Transient/Burst (acc. IEC 61000-4-4)

Test levels	The installation is characterized by following attributes	Voltage peak: [kV]		Repetition rate [kHz]
		Power supply	Signal ports	
Level 1 Well-protected environment	Suppression of all EFT/B* in the switched power supply circuits Separation between power supply lines and control and measurement circuits Shielded power supply cables with the screens earthed at both ends	0.50	0.25	5.0
Level 2 Protected environment	Partial suppression of EFT/B* in the power supply and control circuits Separation of all the circuits from other circuits associated with environments of higher severity levels Physical separation of unshielded power supply and control cable from signal and communication cables	1.00	0.50	5.0
Level 3 Typical industrial environment	No suppression of EFT/B* in the power supply and control circuits Poor separation of the industrial circuits from other circuits Dedicated cables for power supply, control, signal and communication lines Poor separation between power supply, control, signal and communication cables	2.00	1.00	5.0
Level 4 Severe industrial environment	No Suppression of EFT/B* in the power supply and control and power circuits No separation between power supply, control, signal and communication cables Use of multicore cables in common for control and signal lines	4.00	2.00	2.5

*EFT/B: Electrical Fast Transient/Burst

Installation classification for Surge Immunity test (acc. IEC 61000-4-5)

Class	Environment definition	Voltage peak [kV]	
		L → N [2kV]	L/N → PE [12kHz]
Class 0 well-protected environment	- All cables with overvoltage protection - Well-designed earthing system - Surge voltage may not exceed 25 V	-	-
Class 1 Partly protected environment	- All cables with overvoltage protection, well interconnected earth line network - Power supply completely separated from the other equipment - Surge voltage may not exceed 500 V	-	0.50
Class 2	- Separate earth line to earthing system - The power supply is separated from other circuits - Non-protected circuits are in the installation, but well separated and in restricted numbers - Surge voltage may not exceed 1000 V	0.50	1.00
Class 3	- The installation is earthed to the common earthing system - Protected electronic equipment and less sensitive electric equipment on the same power supply network - Unsuppressed inductive loads are in the installation	1.00	2.00



Installation classification for Surge Immunity test (acc. IEC 61000-4-5)

Class 4	- The installation is connected to the earthing system for the power installation - Current in the kA range due to earth faults - The power supply network can be the same for both the electronic and the electrical equipment - Surge voltages may not exceed 2000 V	2.00	4.00
Class 5	- Electrical environment for electronic equipment connected to telecommunication cables - The interference voltages can be extremely high - All cables and lines are provided with overvoltage protection	dep. on the local power supply network	dep. on the local power supply network dep. on the local power supply network

General Technical Data - Filter parameters

Rated voltage U_R (U_{max})

The rated voltage U_R is the maximum RMS alternating line to line voltage (U_{max}) which may be applied continuously to the terminals of the filter. The rated voltage is the nominal voltage including 10% tolerances.

Example:

Filter with $U_R = 440$ VAC is made for a power system with nominal voltage 400 VAC +10%.

For standard three phase filters the voltage between phase and earth is intended $U_R/\sqrt{3}$ (example 440/250 VAC).

Filters made for IT power systems withstand a voltage between phase and earth equal to U_R .

SCHURTER filters for IT systems have code ending with "I": ex. FMAC-0932-2512I.

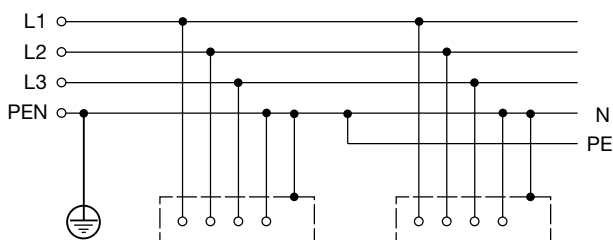
The line frequency f_N (50/60 Hz) may be exceeded under certain conditions. We recommend the users to consult in any case our technical department. DC power operation is possible in most cases.

Power distribution system

There are three main types of power distribution systems according to IEC 60950 (1.2.12): TN, TT, IT.

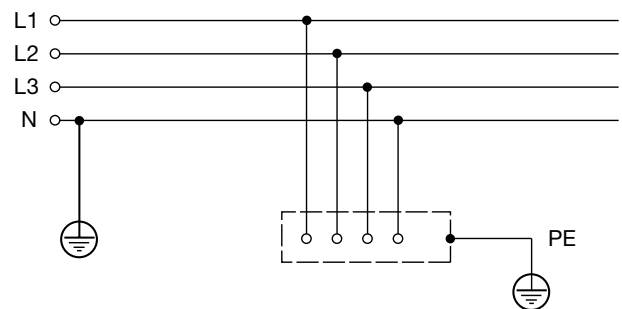
The TN POWER SYSTEM is a power distribution system having one point directly earthed, the exposed conductive parts of the installation being connected to that point by protective earth conductors. Three types of TN POWER SYSTEMS are recognized according to the arrangement of neutral and protective earth conductors: TN-S, TN-C-S, TN-C.

Example of a TN-C-S system



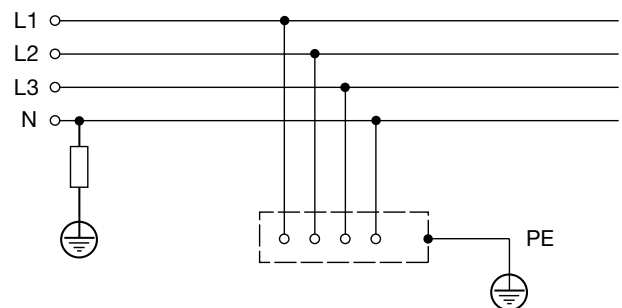
TN-C-S is in a system which neutral and protective functions are combined in a single conductors in a part of the system.

Example of a TT system



A TT POWER SYSTEM is a power distribution system having one point directly earthed, the exposed conductive parts of the installation being connected to earth electrodes electrically independent of the earth electrodes of the power system.

Example of a IT system



The IT POWER SYSTEM is a power distribution system having no direct connection to earth, the exposed conductive parts of the electrical installation being earthed. In this case the voltage between phase and earth can reach the line to line voltage.

Nominal Current I_N

The technical data gives the max continuous supply current in function of the ambient temperature I_N/v_a . The SCHURTER range generally differentiates between two types of filters:

- High-current filter: v_a at $I_N = 40^\circ\text{C}$
 $v_{a_{max}} = 100^\circ\text{C}$
- All other filters: v_a at $I_N = 40^\circ\text{C}$
 $v_{a_{max}} = 85^\circ\text{C}$

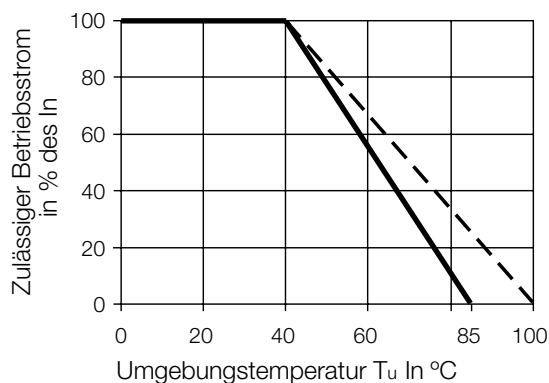
The permissible working current at higher ambient temperatures can be read from the following graph.



general product-information

Permissible Working Current as a Function of Ambient Temperature
Up to the approved nominal ambient temperature a the filter can be operated continuously at its nominal current. Above this temperature the square of the nominal current drops off linearly and reaches its zero point at T_{max} (85 or 100 °C).

Derating curve (approx.)



Formula:

$$I = I_n \sqrt{\frac{T_{\max} - T_a}{T_{\max} - T_n}}$$

I = admissible operating current at elevated ambient air temperature

I_n = rated current

$T_{\max}$ = max. allowable ambient air temperature T_a (85 °C)

T_a = ambient air temperature

T_n = allowable ambient air temperature at rated current (40 °C)

RF Suppression Capacitor Complying with IEC 60384-14

All SCHURTER filters are equipped with components which have been tested and approved as R_F suppression capacitors.

The most important test data for R_F suppression capacitors are:
Capacitance C_x, C_y ± 20% for fM = 1 kHz

Insulation resistance R_{is} between the capacitor terminals:

for C > 0.33 µF: R_{is} × C > 2000 s (time constant)

for C ≤ 0.33 µF: R_{is} > 6000 MOhm

Major voltage test and standards for C_x and C_y capacitors

Country	Standard	C	Rigidity	Pulse Test 1.2/50 µs
Europe	EN 132400	X1	4.3 UR VAC	4.0 kV
		X2	4.3 UR VAC	2.5 kV
		Y1	4.0 kVAC	8.0 kV
		Y2	2.5 kVAC	5.0 kV
	IEC 60950 (Equipment Standard)	X1	2700 V _{DC} , 60s	4.0 kV
		X2	2121 V _{DC} , 60s	2.5 kV
USA	UL 1414		2121 V _{DC} , 60s	50 Pulse, 10 kV, 1000 W
	UL 1283		2121 VDC, 60s 2545 VDC, 1s	-
Switzerland	SEV 1055	x	4.3 UR VAC	3.0 kV
		y	2(100 + 2 UR) min. 2250 VAC	5.0 kV

RF Suppression Chokes Conforming to IEC60938

All SCHURTER filters are fitted with chokes which satisfy the guidelines set down by international and national standards organizations.

The most important test data for RF suppression chokes are:

Maximum variation of inductance:	30% / +50% for compensated 15% / +15% for linear and storage
Test frequency	1MHz ± 20% at L ≤ 10 µH 100kHz ± 20% at 10 µH < L ≤ 1 mH 10kHz ± 20% at 1 mH < L ≤ 50 mH 50 to 120 Hz ± 20% at L > 50 mH
Test current:	0.1 mA
Test temperature:	25°C ± 3°C
Insulation resistance R _{is} :	6000 MOhm

Test voltages

Chokes for	Between connections	Inner and outer insulation
AC	4.3 U _R VDC	2 U _R + 1500 VAC, but at least 2000 VAC
DC	3 U _R VDC	2 U _R + 1500 VDC

Leakage Current

(see also Chapter 1.6 RF Suppression Capacitors: General information)

1-Phase measuring Techniques

Measurement of the leakage current (simplified).

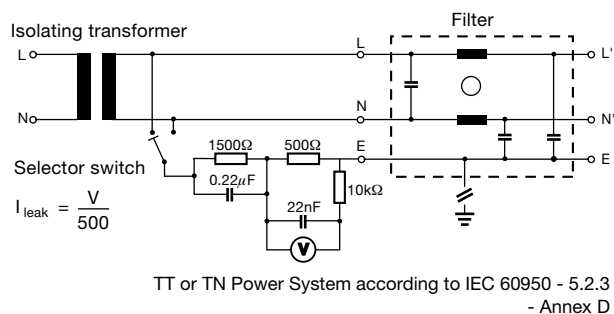
The leakage current is measured from every pole of the network:

- to all accessible metal parts

- to metal parts of protection class II equipment which is separated only by the base material from parts under voltage.

The test is made with AC at 250 V / 50 Hz.

Measurements are made in both switch positions (see diagram).



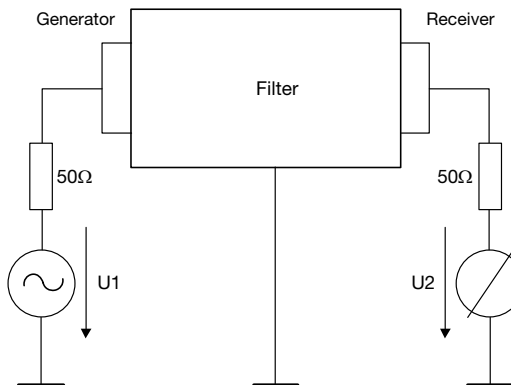
Protection Class I:

Devices are fitted with a special grounding conductor to provide protection against electrical shocks (L,N,PE wire cable). SCHURTER filters correspond to Protection Class I.

Insertion loss acc. CISPR 17 (common- and differential mode)

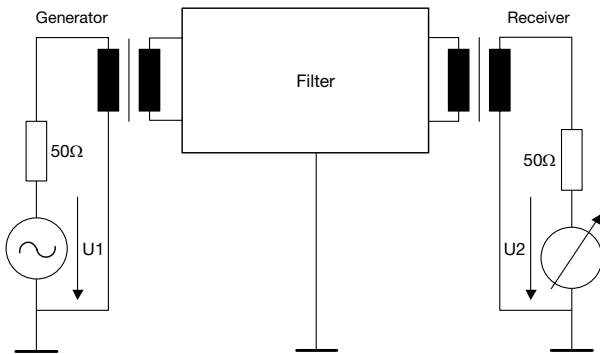


Asymmetrical measurement



In common mode measurements, the line and neutral conductors are measured with respect to earth.
Line (L) and neutral (N) are measured to earth (E).

Symmetrical measurement



In differential mode measurements, the insertion transmission loss is measured between line and neutral through a balancing transformer; the earth wire is not used.
4-pole network with integrated balancing transformer for the measurement of insertion transmission loss in the symmetric case.

Measurement Method

The insertion loss D is defined as that loss which results when a four-pole network is inserted into an existing layout, having a surge impedance Z, assuming that the LHS and the RHS terminal impedances of the four-pole network are equal in magnitude and real, the insertion transmission loss and the overall loss are the same.

The insertion transmission loss, in decibels, can be obtained as follows:

$$D_{dB} = \frac{20 \log (U_2)}{2 U_1}$$

IEC 60939-2

Nominal voltage connections	Between	Inner and outer insulation	
		C* ≤ 1 μF	C* > 1 μF
150 ≤ U _R ≤ 250 VAC	4.3 U _R VDC	1500 VAC or 2250 VDC	4.3 U _R VDC
250 ≤ U _R ≤ 500 VAC	4.3 U _R VDC	2 kVAC or 3 kVDC	4.3 U _R VDC
500 ≤ U _R ≤ 760 VAC	4.3 U _R VDC	3 kVAC or 4 kVDC	4.3 U _R VDC

*) C is the capacity measured between the connection block to which the high voltage is connected for test.

UL 1283

(Appliance filters)

Nominal voltage	Between connection	Between connection and case
UR ≤ 250 VAC	1250 VAC or 1768 VDC	1500 VAC or 2121 VDC

In compliance to the known standards of the IEC, EN, VDE and UL, the filters are tested as follows. In principle, these tests correspond to those of the RF suppression capacitors.

Test duration

- 2 sec for production test
- 60 sec for types test

The SCHURTER final production test has a duration of 2 sec. This test may not be repeated more than one time (i.e. incoming inspection at the customer). Any filter that has been under test for 60 sec can not be commercially used (reduced life cycle).



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