IEC Appliance Inlet C20 with Filter, Circuit Breaker TA45 (recessed)



Screw-on from front side
Rocker non-illuminated
white



Screw-on from front side
Rocker illuminated
orange

C20

70° C

See below:
Approvals and Compliances

Description

- Panel mount :
  Screw-on mounting 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

Characteristics

- All single elements are already wired
- Circuit Breaker non-illuminated or illuminated
- With EMC-shield
- For applications according IEC/UL 62368-1 we recommend variants with bleed resistor
  Suitable for use in medical equipment according to IEC/UL 60601-1

Other versions on request

- Variant with notch for V-Lock mating Cordsets

References

Alternative: version without line filter EF11
Alternative: Standard version

Weblinks

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

Technical Data

Ratings IEC	12 - 16 A @ Ta 40 °C / 250 VAC; 50 Hz
Ratings UL/CSA	12 - 20 A @ Ta 40 °C / 250 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 Temperature	-10 °C to 55 °C
Climatic Category	10/055/21 acc. to IEC 60068-1
IP-Protection	front side IP40 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: max 8 mm Mounting screw torque max 0.5 Nm
Material: Housing	Thermoplastic, black, UL 94V-0

Appliance inlet/-outlet	C20 acc. to IEC 60320-1, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16 A, Protection Class I
Circuit Breakers	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 Filter	Standard and Medical Version, IEC 60939, UL 1283, CSA C22.2 no. 8 Technical Details
MTBF	> 100'000 h acc. to MIL-HB-217 F

Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in Details about Approvals

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

Approvals

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

Approval Reference Type: EF12

Approval Logo	Certificates	Certification Body	Description
	VDE Approvals	VDE	Certificate Number: 40001520
	UL Approvals	UL	UL File Number: E72928

Product standards

Product standards that are referenced

Organization	Design	Standard	Description
	Designed according to	IEC 60320-1	Appliance couplers for household and similar general purposes
	Designed according to	IEC 60939	Passive filters for suppressing electromagnetic interference
	Designed according to	IEC 61058-1	Switches for appliances. Part 1. General requirements
	Designed according to	UL 498	Standard for Attachment Plugs and Receptacles
	Designed according to	UL 1283	Electromagnetic interference filters
	Designed according to	CSA C22.2 no. 42	General Use Receptacles, Attachment Plugs, and Similar Wiring Devices
	Designed according to	CSA C22.2 no. 8	Electromagnetic interference (EMI) filters

Application standards

Application standards where the product can be used

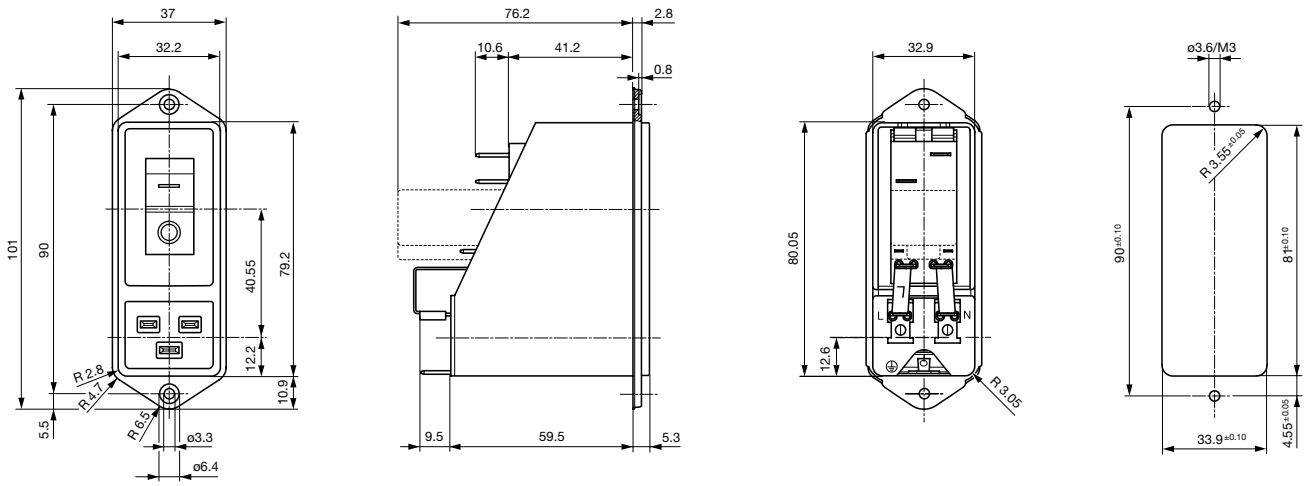
Organization	Design	Standard	Description
	Designed for applications acc.	IEC/UL 62368-1	Audio/video, information and communication technology equipment - Part 1: Safety requirements
	Designed for applications acc.	IEC 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance

Compliances

The product complies with following Guide Lines

Identification	Details	Initiator	Description
	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
	China RoHS	SCHURTER AG	The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.
	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.
		SCHURTER AG	V-Lock system are based on a matching plug-dose combination. The connector is equipped with a notch intended for use with the latching cordset. The cord latching system prevents against accidental removal of the cordset.
	Medical Equipment	SCHURTER AG	Suitable for use in medical equipment according to IEC/UL 60601-1

Dimensions [mm]



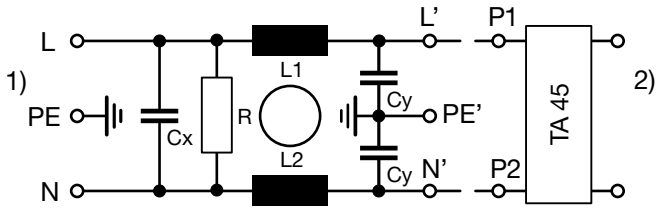
* --- Version TA45 with undervoltage release

Technical Data of Filter-Components

Rated Current [A]	Filter-Type	Inductances L [mH]	Capacitance CX [nF]	Capacitance CY [nF]	R [MΩ]
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

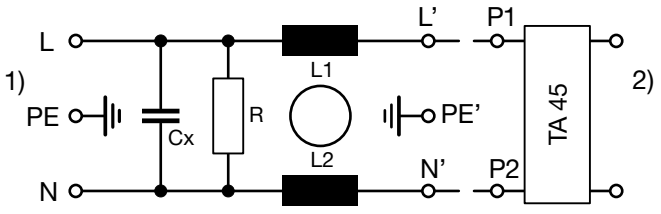
Diagrams

Standard version



1) Line
2) Load

Medical Version (M5)



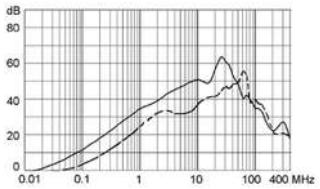
1) Line
2) Load

Attenuation Loss

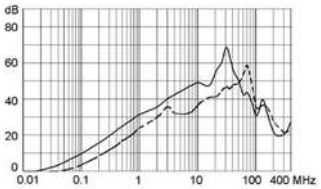
- - - - 50Ω differential mode _____ 50Ω common mode

Standard version

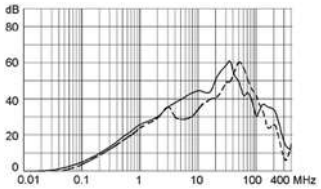
12 A



16 A

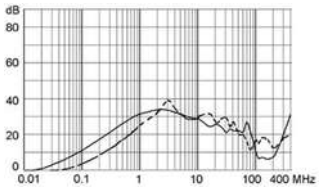


20 A

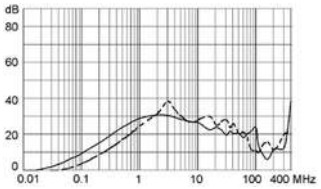


Medical version (M5)

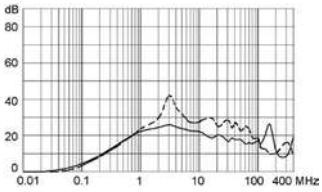
12 A



16 A



20 A



Effect of ambient temperature

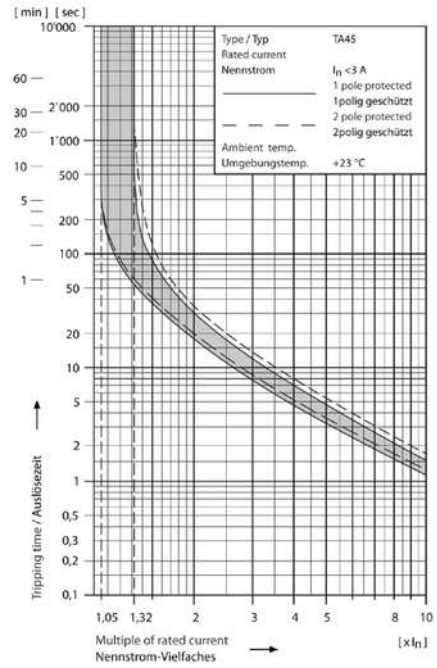
The units are calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor (typical value) from the table below:

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

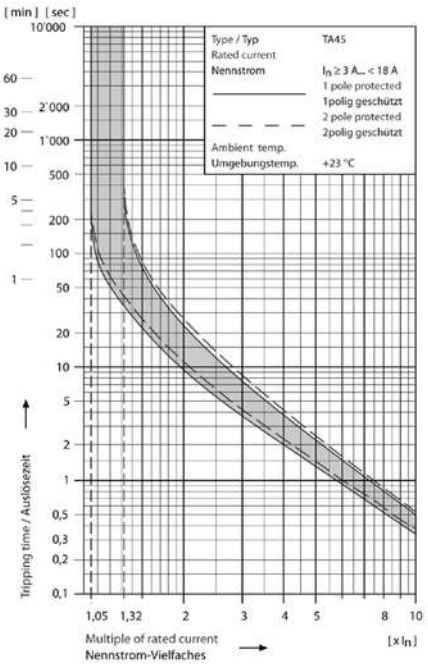
Example: Rated current = 5 A, Environmental temperature = 40 °C, --> Correction factor = 1.08, Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

Time-Current-Curves

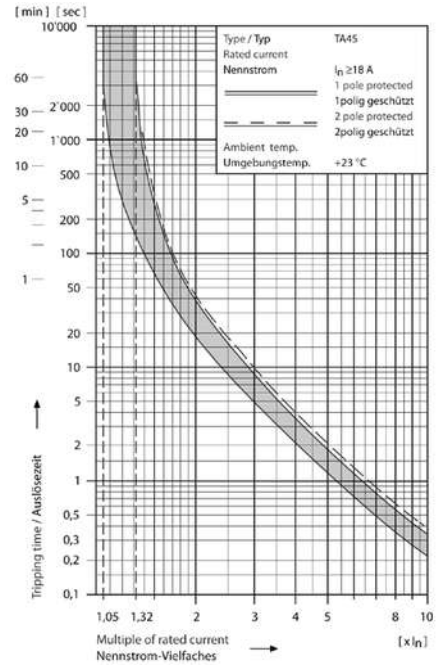
Tripping Characteristics I_n < 3 A



Tripping Characteristics In ≥ 3. . . < 18 A

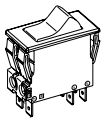


Tripping Characteristics In ≥ 18 A



Configuration code TA45

Type	Configuration code TA45														
EF12 -	A	3	2	6	M	1	5	0	C	0	-	000	-	2131	- 10 - 00

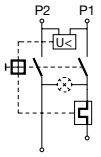


- Circuit Breaker of Equipment
- 2-pole, rocker actuated
- Quick connect terminal

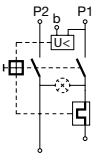
Other types on request

Without release: code C0

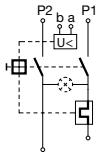
Undervoltage release



U

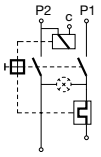


E



Z

Remote trip release



A

U	E	Z	A	Code	Rated voltage U_n
•	•	•	•	**2**	240 V AC
•	•	•	•	**3**	230 V AC
•	•	•	•	**4**	120 V AC

Rated current circuit breaker of equipment

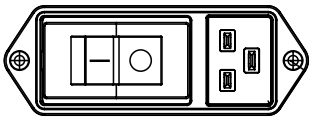
I_n	Code	I_n	Code	I_n	Code	I_n	Code
10,0	**100**	13,0	**130**	16,0	**160**	19,0	**190**
11,0	**110**	14,0	**140**	17,0	**170**	20,0	**200**
12,0	**120**	15,0	**150**	18,0	**180**		

Other rated currents on request

Rocker legend

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

Position of the rocker legend e.g F

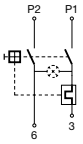
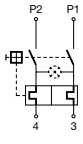


Colours

Switch front		Rocker	
		———	⊗
W	black	white	–
B	black	black	–
6	black	–	orange transp.

Diagram

Thermal overload protection

		1-pole	2-pole
			
Without illumination		**ABT**	**ABD**
With illumination	220…240 V	**A12**	**A32**
	110…120 V	**A14**	**A34**

Configuration code (Order example)

Type	Configuration code TA45					
EF12	- A 3 2 6 M 1 5 0 C 0	-	000	- 2131	- 10	- 00

Color
0 black

Interlocking
0 without V-Lock
1 with V-Lock

Terminal PE
0 without (PCII)
1 QC 6.3x0.8

Terminal L and N
1 QC 6.3x0.8, without connection to TA45
3 Connection to TA45 non insulated

Type of mains fi lter / capacitor / bleed resistor

1 standard	X2,Y2	with bleed resistor
2 medical M5	X2	with bleed resistor

Rated current
1 20 A
2 16 A
3 12 A

The rated current of the line-filter must not be exceeded in the end application.

Variants

Circuit Breakers				Filter		Connectors				
Rated Current [A]	Rocker colour	Illumination	Add-on modules	Rated Current [A]	Filter Type	Protection Class	V-Lock	Internally wired	Config. Code	Order Number
12	black	non-illuminated	-	12	Standard version	I		prewired	EF12-ABD-WF120C0-000-3131-00-00	EF12.1034.3110.01
15	black	non-illuminated	-	16	Standard version	I		prewired	EF12-ABD-WF150C0-000-2131-00-00	EF12.0885.2110.01
15	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABD-BL150C0-000-1131-00-00	EF12.1089.1110.01
16	black	non-illuminated	-	16	Standard version	I		prewired	EF12-ABT-WF160C0-000-2131-00-00	EF12.0034.2110.01
16	black	non-illuminated	-	16	Standard version	I		prewired	EF12-ABD-WF160C0-000-2131-00-00	EF12.0699.2110.01
16	black	non-illuminated	-	16	Standard version	I		prewired	EF12-ABD-BL160C0-000-2131-00-00	EF12.2105.2110.01
16	black	non-illuminated	-	16	Standard version	I		prewired	EF12-ABT-BP160C0-000-2131-00-00	EF12.3103.2110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABT-WF200C0-000-1131-00-00	EF12.0035.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABD-WF200C0-000-1131-00-00	EF12.0572.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABT-WF200U2-000-1131-00-00	EF12.1164.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABD-BL200C0-000-1131-00-00	EF12.2196.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-A326K200C0-000-1131-00-00	EF12.2561.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-ABD-WM200C0-000-1131-00-00	EF12.2961.1110.01
20	black	non-illuminated	-	20	Standard version	I		prewired	EF12-A126K200C0-000-1131-00-00	EF12.3197.1110.01
16	black	non-illuminated	-	16	Medical Version (M5)	I		prewired	EF12-ABD-WF160C0-000-2231-00-00	EF12.0699.2210.01
20	black	non-illuminated	-	20	Medical Version (M5)	I		prewired	EF12-ABT-WF200C0-000-1231-00-00	EF12.0035.1210.01

Most Popular.

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

Packaging unit 16 Pcs

Accessories

	Description	
	Cord retaining kits Cord retaining strain relief	
	Flat head, H	4700.0008

Mating Outlets/Connectors



Category / Description

Connector Overview complete

4795, Mounting: Power Cord, Cable Connector: IEC C19	4795
4790, Mounting: Power Cord, Screw Connector: IEC C19	4790
0104U, Mounting: Power Supply Cord, Screw clamps Connector: IEC C19	0104U

Mating Outlets/Connectors shuttered



Power Cord Overview complete

VAC19KS, Overview, V-Lock cord retaining, diverse Connector IEC C19, diverse, black	VAC19KS

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