

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

Standard- or Medical-Filter



C20



70° C

**Description**

- Panel Mount:
- Screw-on mounting 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- or remote trip release
- With EMC-shield
- Qualified for use in equipment according IEC/EN 60950

**References**[General Product Information](#)**Weblinks**

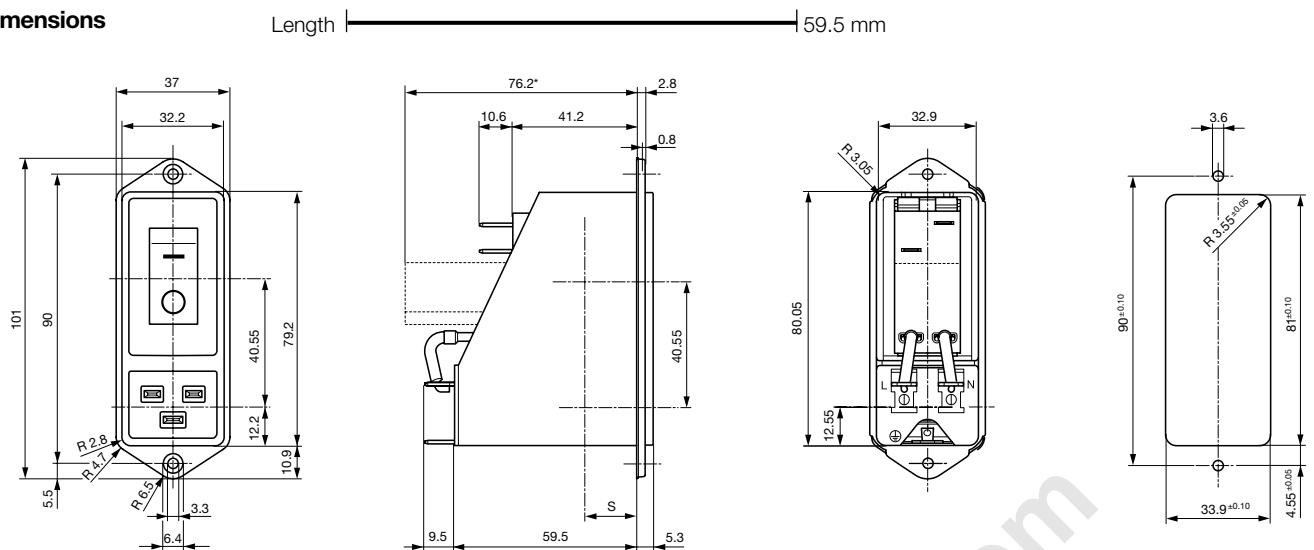
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [Mating Connectors](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

**Technical Data**

Ratings IEC	12 - 16A @ Ta 40 °C / 250VAC; 50Hz
Ratings UL/CSA	12 - 20A @ 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 1 acc. to IEC 61140
Terminal	Quick connect terminals 6.3 x 0.8 mm
Panel Thickness s	Screw: max 8mm Mounting screw torque max 0.5Nm
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 1
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 $I_n < 3A/240VAC$ : 10 x $I_n$ at $I_n \geq 3A/240VAC$ : 300A
Line Switch	Rocker switch 2-pole, non-illuminated or illuminated, acc. to IEC 61058-1 <a href="#">Technical details</a>
Line Filter	Standard and Medical Version, IEC 60939, IEC 60601-1, UL 1283, UL 544, EN 133 200, CSA C22.2 no. 8 <a href="#">Technical details</a>
MTBF	> 100'000h acc. to MIL-HB-217 F

## Dimensions



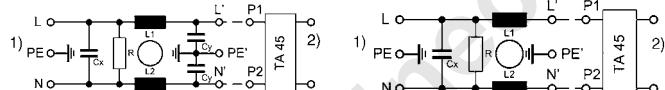
\* --- Version TA45 with undervoltage release

## Technical Data of Filter-Components

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

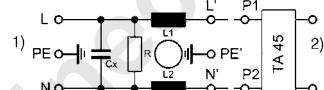
## Diagrams

Standard version



1) Line  
2) Load

Medical version

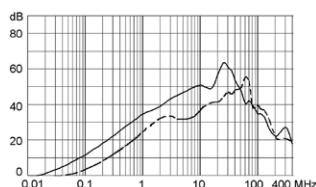


1) Line  
2) Load

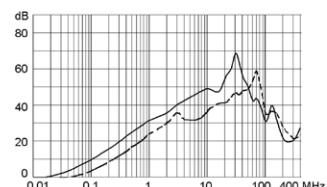
## Attenuation Loss

Standard version

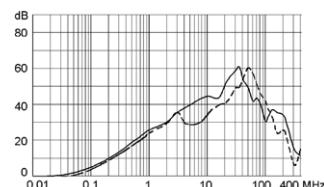
12 A



16 A



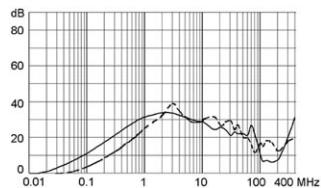
20 A



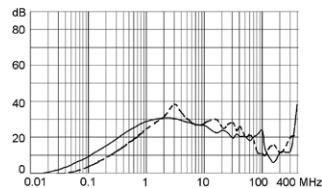
- - - differential mode \_\_\_\_\_ common mode

Medical version (M5)

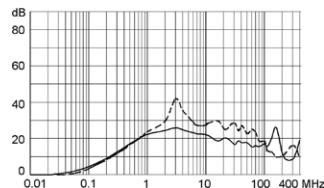
12 A



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**

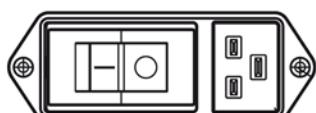
Thermal overload protection		without	with 1-pole	with 2-pole
Without illumination				
With illumination	220...240 V 110...120 V	<b>ABC</b>	<b>ABT</b>	<b>ABD</b>
		<b>A02</b> <b>A04</b>	<b>A12</b> <b>A14</b>	<b>A32</b> <b>A34</b>

**ABT** **W** **F** **150** **C0****Colours**

Switch front	Rocker
<b>W</b> black	white
<b>B</b> black	black
<b>6</b> black	— orange transp.

**Rocker legend**

Surface	Illustration	Colour of print	Surface	Illustration	Colour of print
<b>F</b> embossed			<b>M</b> printed		black
<b>H</b> printed		white	<b>P</b> printed		white
<b>K</b> printed		black	<b>R</b> printed		black
<b>L</b> 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	<b>100</b>	13,0	<b>130</b>	16,0	<b>160</b>	19,0	<b>190</b>
11,0	<b>110</b>	14,0	<b>140</b>	17,0	<b>170</b>	20,0	<b>200</b>
12,0	<b>120</b>	15,0	<b>150</b>	18,0	<b>180</b>		

Other rated currents on request

**Without release: code C0****Undervoltage release**

•	•	•
•	•	•
•	•	•

**Remote trip release**

	Code	Rated voltage $U_n$
•	<b>2</b>	240 V AC
•	<b>3</b>	230 V AC
•	<b>4</b>	120 V AC

Packaging unit 16 Pcs

## Accessories

## Description


**Assorted Covers**  
 Rear Cover

0859.0109


**Cord retaining kits**  
 Cord retaining strain relief  
 Flat head, Z  
 Flat head, H

0888.0021

4700.0008

## Mating Outlets/Connectors

## Category / Description

## Connector Overview complete



IEC Connector C19, Rewireable, Straight	0104
IEC Connector C19, Rewireable, Angled	1651
IEC Connector C19, Rewireable, Straight	1652
IEC Connector C19, Rewireable, Angled	4790
IEC Connector C19, Rewireable, Straight	4795

## Connector further types to EF12



## Power Cord Overview complete

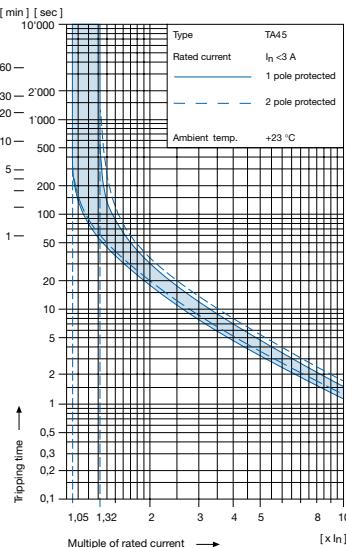
Power Cord with IEC Connector C19, Straight	1654
Power Cord further types to EF12	

## Power Supply or Interconnection Cord Overview complete

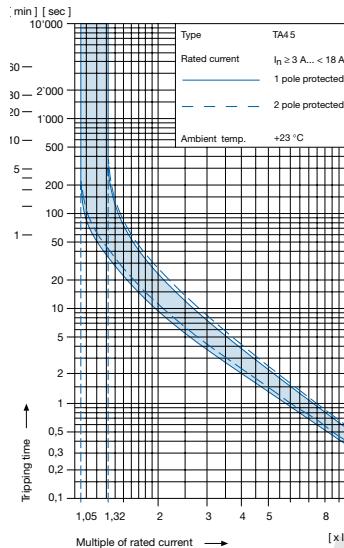
Divers Power Supply and Interconnection Cords 16 A	Kabelverbindung/16 A
Power Supply or Interconnection Cord further types to EF12	

**Technical data (continued)****Circuit breaker**

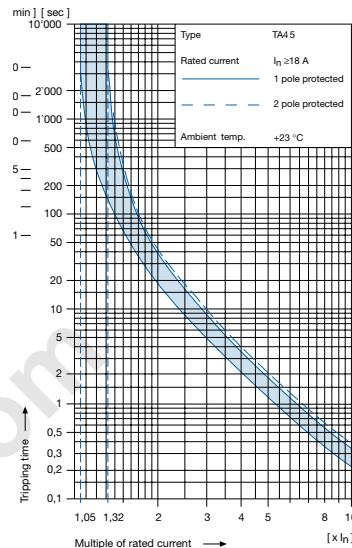
## Tripping characteristics

 $I_n < 3 \text{ A}$ 

## Tripping characteristics

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

## Tripping characteristics

 $I_n \geq 18 \text{ A}$ <sup>1)</sup> **Effect of ambient temperature**

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 on the right side:

* 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.

<sup>1)</sup> **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 for EF12 (order example)**

Type	<b>Order code TA45</b> (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