

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

### Approvals

- VDE Certificate Number: 40001520
- UL File 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
- Suitable for use in equipment according to IEC/UL 60950  
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

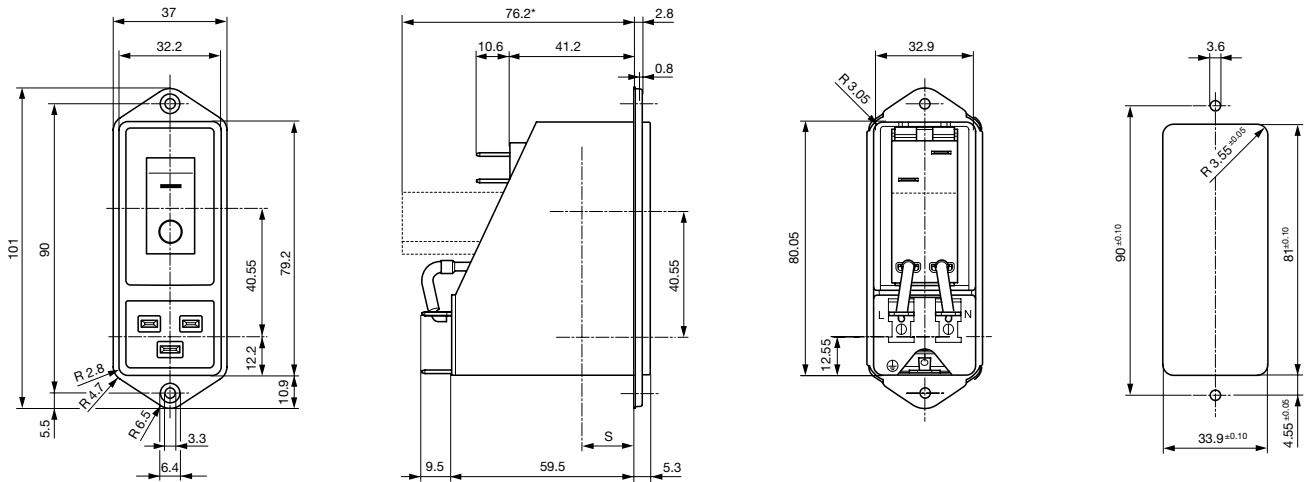
[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [Mating Connectors](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [CAD-Drawings](#), [Accessories](#), [Detailed request for product](#)

Newly available variants corresponding to V-Lock mating cordset. 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.

### Technical Data

Ratings IEC	12 - 16A @ Ta 40 °C / 250VAC; 50Hz	Appliance-Inlet/-Outlet	C20 acc. to IEC 60320, UL 498, CSA C22.2 no. 42 (for cold conditions) pin-temperature 70 °C, 16A, Protection Class I
Ratings UL/CSA	12 - 20A @ Ta 40 °C / 125VAC; 60Hz	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
Leakage Current	standard < 0.5 mA (250 V / 60Hz) medical < 5 µA (250 V / 60 Hz)	Line Switch	Rocker switch 2-pole, non-illuminated or illuminated, acc. to IEC 61058-1 <a href="#">Technical Details</a>
Dielectric Strength	> 1.7kVDC between L-N > 2.7kVDC between L/N-PE Test voltage (2 sec)	Line Filter	Standard and Medical Version, IEC 60939, UL 1283, CSA C22.2 no. 8 <a href="#">Technical Details</a>
Allowable Operation Temp.	-10°C to 55°C	MTBF	> 100'000h acc. to MIL-HB-217 F
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: max 8 mm Mounting screw torque max 0.5Nm		
Material: Housing	Thermoplastic, black, UL 94V-0		

Dimension



\* --- Version TA45 with undervoltage release

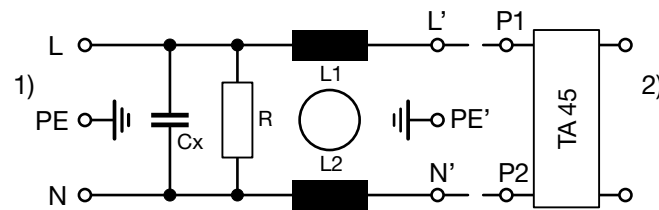
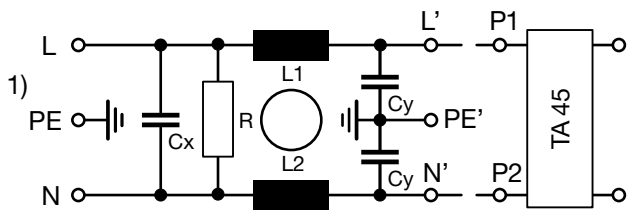
Technical Data of Filter-Components

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

Medical version



1) Line  
2) Load

1) Line  
2) Load

Attenuation Loss

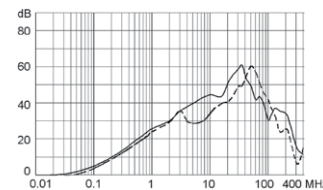
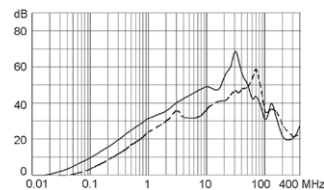
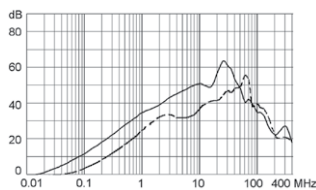
--- differential mode    \_\_\_\_ common mode

Standard version

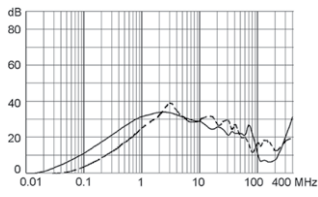
12 A

16 A

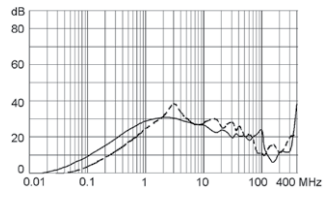
20 A



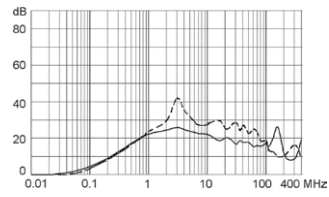
Medical version (M5)  
12 A



16 A



20 A



**Table 1 Selection for type TA45**

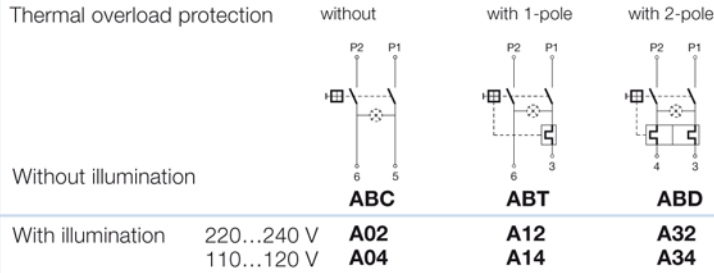
Order example



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

ABT W F 150 C0

**Diagram**



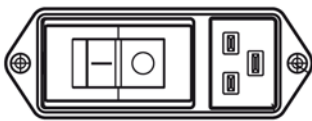
**Colours**

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	ON OFF	white	<b>P</b> printed	I ○	white
<b>K</b> printed	ON OFF	black	<b>R</b> printed	I ○	black
<b>L</b> printed	— ○	white			

Position of the rocker legend  
e.g F



**Rated current:**

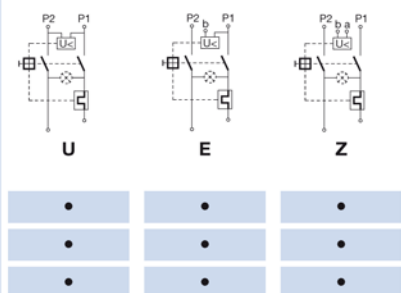
- Without thermal overload protection: code **C00** }  $I_n = 20\text{ A}$
- With thermal overload protection: rated current  $I_n$  (A)

$I_n$	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>		

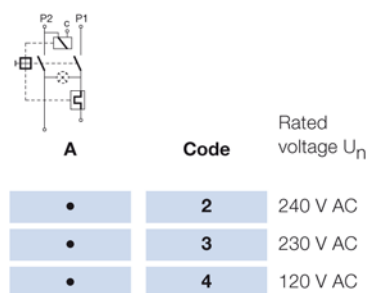
Other rated currents on request

**Without release: code C0**

**Undervoltage release**

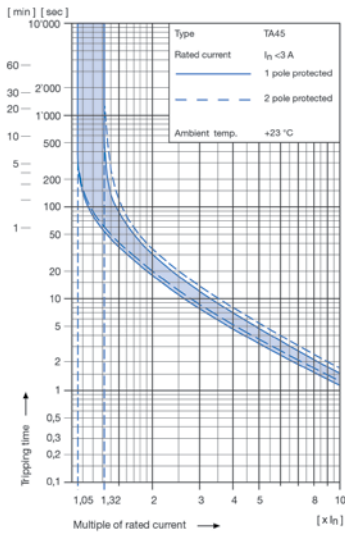


**Remote trip release**

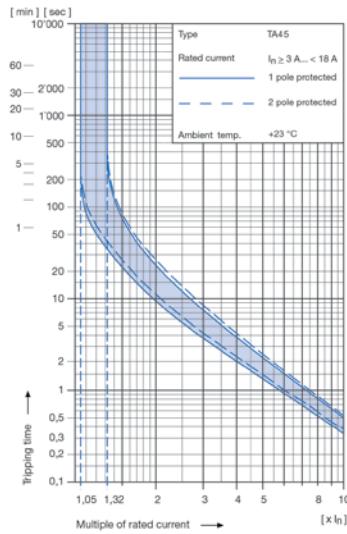


**Technical data (continued)**  
**Circuit breaker**

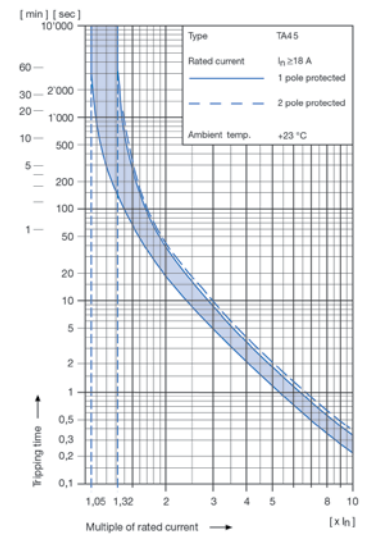
Tripping characteristics  
 $I_n < 3 \text{ A}$



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 °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.

**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 for EF12 (order example)**

<b>Type</b>	<b>Order code TA45</b> (2-pole rocker-switch without accessories)
<b>EF12.</b>	<b>A B T W F 1 5 0 C 0 .</b> see table 1
	<b>11 10.01</b>

- Wiring**  
1 = wired
- Protection class**  
0 = Class I, housing black
- Panel mount / V-Lock**  
0 = Screw-on version  
1 = Screw-on version with V-Lock
- 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

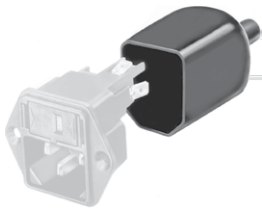
**Other versions on request**

- Rocker switch illuminated

Packaging unit 16 Pcs

## Accessories

### Description



Assorted Covers  
Rear Cover



Cord retaining kits  
Cord retaining strain relief

## Mating Outlets/Connectors

### Category / Description



Connector Overview complete

IEC Connector C19, Rewireable, Straight

0104U

IEC Connector C19, Rewireable, Angled

4790

IEC Connector C19, Rewireable, Straight

4795

Connector further types to EF12



Power Supply or Interconnection Cord Overview complete

Diverse Power Supply and Interconnection Cords 16 A

Cord Sets 15 A

Power Supply or Interconnection Cord further types to EF12

## Mating Outlets/Connectors shuttered



Power Cord Overview complete

Overview Power Cord with IEC Appliance Connector C19, V-Lock, straight

VAC19KS

Power Cord further types to EF12