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 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

## 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)<br>medical < 5 µA (250 V / 60 Hz) |
| Dielectric Strength | > 1.7 kVDC between L-N<br>> 2.7 kVDC between L/N-PE<br>Test voltage (2 sec) |
| Allowable Operation Temperature | -10 °C to 55 °C |
| Climatic Category | 10/055/21 acc. to IEC 60068-1 |
| IP-Protection | from 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<br>Mounting screw torque max 0.5 Nm |
| Material: Housing | Thermoplastic, black, UL 94V-0 |

| | |
|---|---|
| Appliance inlet/-outlet | C20 acc. to IEC 60320-1,<br>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<br>2-pole rocker switch, illuminated or non-illuminated. Optional with undervoltage- or remote trip release<br>Short circuit capacity Icn:<br>at In < 3A/240VAC : 10 x In<br>at In ≥ 3A/240VAC : 300A |
| Line Filter | Standard and Medical Version, IEC 60939, UL 1283, CSA C22.2 no. 8<br>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 |
|---|---|---|---|
| 10 | VDE Approvals | VDE | Certificate Number: 40001520 |
| c US | UL Approvals | UL | UL File Number: E72928 |

## Product standards

Product standards that are referenced

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

## Application standards

Application standards where the product can be used

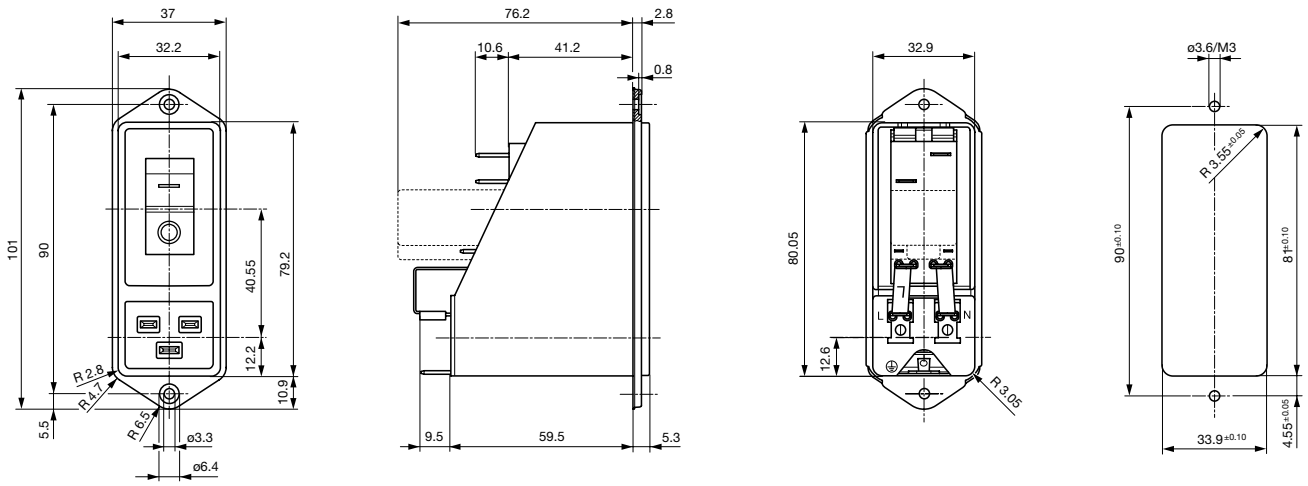
| Organization | Design | Standard | Description |
|---|---|---|---|
| IEC | Designed for applications acc. | IEC/UL 62368-1 | IEC 62368-1 includes the basic requirements for safety of audio, video, information technology and office equipment. |
| IEC | Designed for applications acc. | IEC 60601-1 | 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 | 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 COMPLIANT | RoHS | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863 |
| 50 | China RoHS | SCHURTER AG | The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS. |
| REACH | REACH | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force. |
| V-Lock | | 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 |

## Dimension [mm]



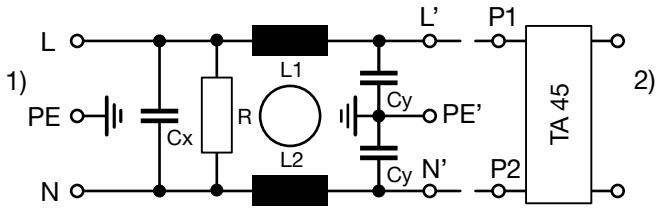

* --- Version TA45 with undervoltage release

## 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 |

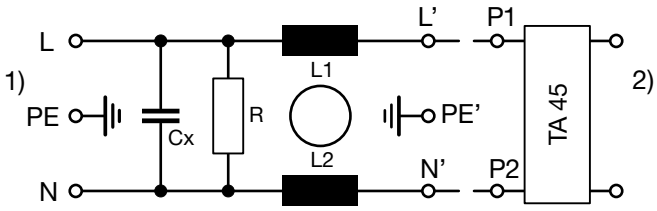
## Diagrams

Standard version




1) Line
2) Load

Medical Version (M5)



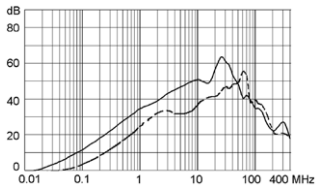

1) Line
2) Load

## Attenuation Loss

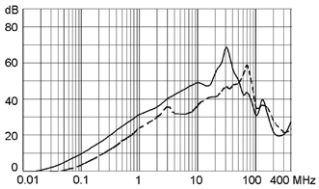
- - - - 50Ω differential mode _____ 50Ω common mode

Standard version

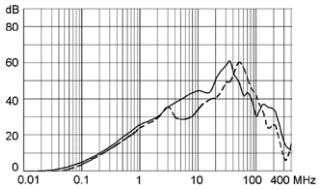
12 A




16 A

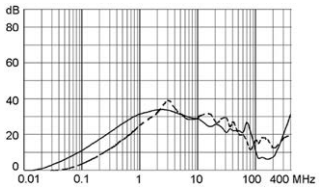



20 A

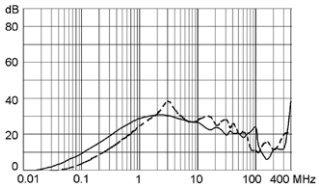



Medical version (M5)

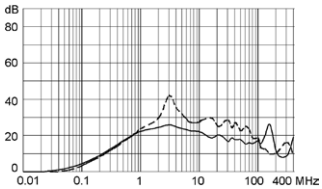
12 A




16 A




20 A




## Effect of ambient temperature

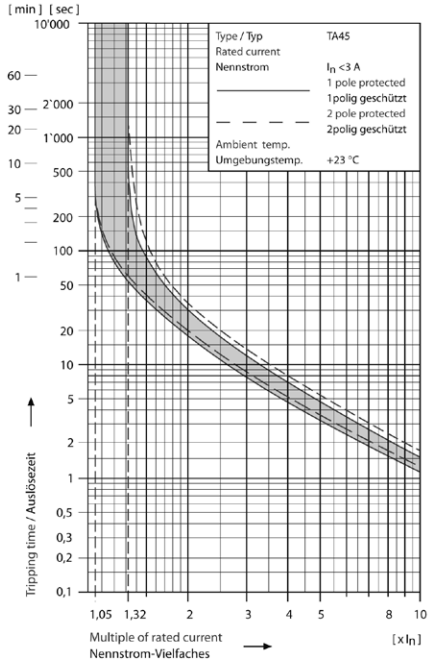
The units are calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor (typical value) from the table below:

| 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 |

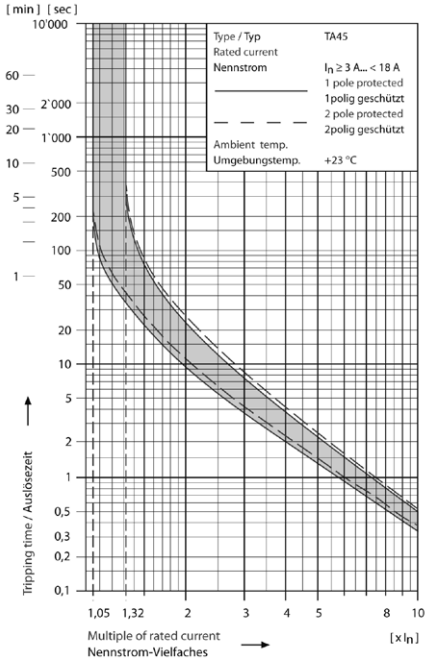
Example: Rated current = 5 A, Environmental temperature = 40 °C, --> Correction factor = 1.08, Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

## Time-Current-Curves

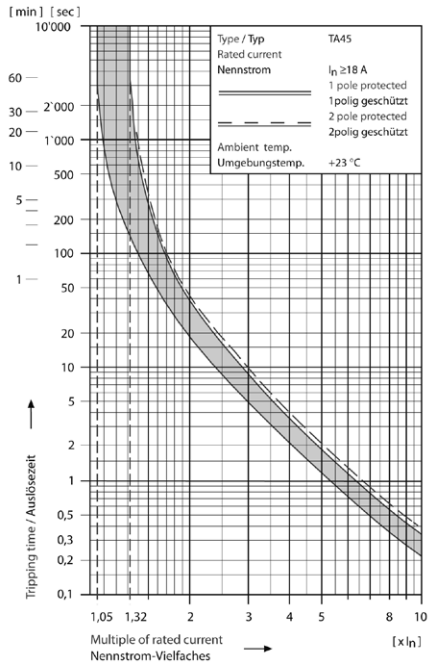
Tripping Characteristics $I_n$ < 3 A




Tripping Characteristics In ≥ 3. . . < 18 A

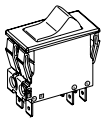



Tripping Characteristics In ≥ 18 A



## Configuration code TA45

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

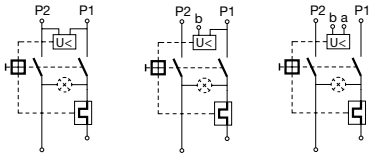


- Circuit Breaker of Equipment
- 2-pole, rocker actuated
- Quick connect terminal

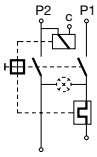
Other types on request

### Without release: code C0

**Undervoltage release**




**Remote trip release**




| 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

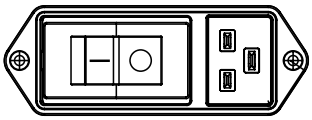
| $I_n$ | Code | $I_n$ | Code | $I_n$ | Code | $I_n$ | Code |
|---|---|---|---|---|---|---|---|
| 10,0 | **100** | 13,0 | **130** | 16,0 | **160** | 19,0 | **190** |
| 11,0 | **110** | 14,0 | **140** | 17,0 | **170** | 20,0 | **200** |
| 12,0 | **120** | 15,0 | **150** | 18,0 | **180** | | |

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 |

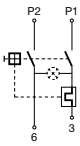
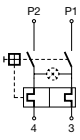
Position of the rocker legend e.g F



### Colours

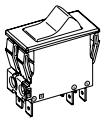
| | Switch front | Rocker | |
|---|---|---|---|
| **W** | black | white | – |
| **B** | black | black | – |
| **6** | black | – | orange transp. |

### Diagram

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

### Configuration code TA45

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

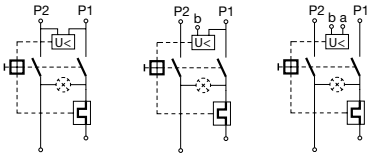


- Circuit Breaker of Equipment
- 2-pole, rocker actuated
- Quick connect terminal

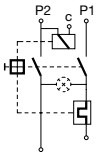
Other types on request

#### Without release: code C0

**Undervoltage release**




**Remote trip release**




| 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

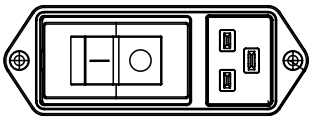
| $I_n$ | Code | $I_n$ | Code | $I_n$ | Code | $I_n$ | Code |
|---|---|---|---|---|---|---|---|
| 10,0 | **100** | 13,0 | **130** | 16,0 | **160** | 19,0 | **190** |
| 11,0 | **110** | 14,0 | **140** | 17,0 | **170** | 20,0 | **200** |
| 12,0 | **120** | 15,0 | **150** | 18,0 | **180** | | |

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 |

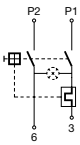
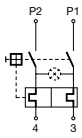
Position of the rocker legend e.g F



#### Colours

| | Switch front | Rocker | |
|---|---|---|---|
| **W** | black | white | – |
| **B** | black | black | – |
| **6** | black | – | orange transp. |

#### Diagram

| | | 1-pole | 2-pole |
|---|---|---|---|
| Thermal overload protection | |  |  |
| 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.

**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 | - | 20 | Standard version | I | | prewired | EF12-ABD-BL150C0-000-1131-00-00 | EF12.1089.1110.01 |
| 15 | black | non-illuminated | - | 16 | Standard version | I | | prewired | EF12-ABD-WF150C0-000-2131-00-00 | EF12.0885.2110.01 |
| 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-ABD-WF160C0-000-2131-00-00 | EF12.0699.2110.01 |
| 16 | black | non-illuminated | - | 16 | Standard version | I | | prewired | EF12-ABT-BP160C0-000-2131-00-00 | EF12.3103.2110.01 |
| 16 | black | non-illuminated | - | 16 | Standard version | I | | prewired | EF12-ABT-WF160C0-000-2131-00-00 | EF12.0034.2110.01 |
| 20 | black | non-illuminated | - | 20 | Standard version | I | | prewired | EF12-A126K200C0-000-1131-00-00 | EF12.3197.1110.01 |
| 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-BL200C0-000-1131-00-00 | EF12.2196.1110.01 |
| 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-ABD-WM200C0-000-1131-00-00 | EF12.2961.1110.01 |
| 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-ABT-WF200U2-000-1131-00-00 | EF12.1164.1110.01 |
| 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<br>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 |

13.01.2021

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.

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for*** AC Power Entry Modules ***category:***

***Click to view products by*** Schurter ***manufacturer:***

Other Similar products are found below :

0098.0050 6-1609987-9 6167.0002 7-6609955-2 FN389-4-22 FN9226B-6-02 FN9233ER-12-06 FN9233S1-10-06 FN9233S1-8-06 FN9233S1B-8-06 FN9233S1R-1-06 FN9233S1R-12-06 FN9233SB-1-06 FN9233SB-12-06 FN9233SB-8-06 FN9233SR-10-06 FN9233SR-3-06 FN9244B-15-06HI FN9244EB-3-06 FN9244EB-8-06 FN9244ER-15-06 FN9244ER-8-06 FN9244ES1-8-06 FN9244ESB-8-06 FN9244EU-6-06 FN9244R-12-06 FN9244R-3-07 FN9244S1-10-06 FN9244S1-12-06 FN9244S1-3-06 FN9244S1B-6-06 FN9244S1R-3-06 FN9244S-6-06 FN9244SB-10-06 FN9244SB-6-06 FN9244SB-8-06 FN9244SR-6-06 FN9244U-3-06 FN9244U-8-06 FN9260A-6-06 PE00SSSXB Fuse-H-EUR-1 Fuse-H-USA-1 PM00XD000 PS0SSDBX0 A-0701-HT-H RAPC3FG 15EJMS8 CA121003-6 2121