IEC Appliance Inlet C14 with Filter, Fuseholder 1- or 2-pole, Line Switch 2-pole, for PCB Mounting





# Description

- Panel mount :
- Screw-on mounting on PCB , 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
- V-Lock notch standard
- PCB terminals

# **Unique Selling Proposition**

- Most compact power entry module
- Attractive flat design
- Switch for highest inrush current
- V-Lock cord retaining

See below: Approvals and Compliances

#### **Characteristics**

- Ultra-compact design. Ideal for low profile designs
- All single elements are already wired
- For added safety "Extra-Safe" fuse drawers are available
- Ideal for application with high transient loads
- 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

- 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

Alternative: version without line filter DD21 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 1 - 10 A @ Ta 40 °C / 250 VAC; 50 Hz Ratings UL/CSA 1 - 10A @ Ta 40 °C / 250 VAC; 50/60 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 (1 min/50 Hz) Allowable Operation Tempe--25 °C to 85 °C rature Climatic Category 25/085/21 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 For PCB mounting 3 mm additional quick connect 6.3 x 0.8 mm Panel Thickness S Screw-on mounting: max 3mm Mounting screw torque max 0.5 Nm Material: Housing Thermoplastic, black, UL 94V-0

| C14 acc. to IEC 60320-1<br>UL 498 CSA C22.2 no. 42 (for cold<br>conditions) pin-temperature 70 °C, 10 A,<br>Protection Class I |
|--|
| 1-/2-pole, Shocksafe category PC2<br>acc. to IEC 60127-6,<br>for fuse-links 5 x 20mm   |
| 5 x 20: 2W (1 pole)/ 1.6W (2-pole) per<br>pole   |
| Admissible power acceptance at higher ambient temperature see derating curves  |
| Rocker switch 2-pole, non-illuminated,<br>acc. to IEC 61058-1<br>Technical Details   |
| Standard and Medical Version, IEC<br>60939, UL 1283, CSA C22.2 no. 8<br>Technical Details                                      |
| > 2'000'000 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: DD22

| Approval Logo  | Certificates  | Certification Body | Description                  |
|----------------|---------------|--------------------|------------------------------|
| 10             | VDE Approvals | VDE                | Certificate Number: 40001522 |
| c <b>FL</b> 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 60127-6      | Miniature fuses. Part 6. Fuse-holders for miniature fuse-links        |
| IEC          | Designed according to | IEC 61058-1      | Switches for appliances. Part 1. General requirements                 |
| (U)          | Designed according to | UL 498           | Standard for Attachment Plugs and Receptacles                         |
| (l)          | Designed according to | UL 1283          | Electromagnetic interference filters                                  |
| CSA<br>Group | Designed according to | CSA C22.2 no. 42 | General Use Receptacles, Attachment Plugs, and Similar Wiring Devices |
| CSA<br>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,<br>information technology and office equipment.  |
| IEC          | Designed for applications acc. | IEC 60601-1    | Medical electrical equipment - Part 1: General requirements for basic<br>safety and essential performance  |
| IEC          | Designed for applications acc. | IEC 60335-1    | Safety of electrical appliances for household and similar purposes. Meets the requirements for appliances in unattended use. This includes the enhanced requirements of glow wire tests acc. to IEC 60695-2-11 or -12 & -13. |

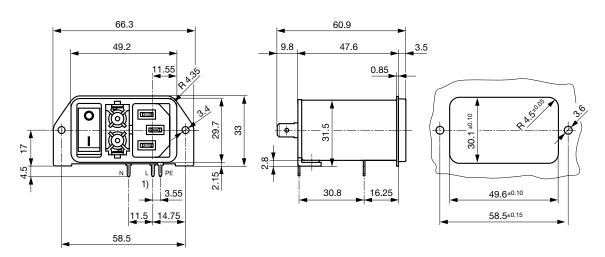
## Compliances

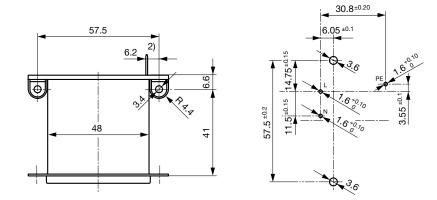
The product complies with following Guide Lines

| Identification | Details                      | Initiator   | Description   |
|----------------|------------------------------|-------------|---|
| CE             | CE declaration of conformity | SCHURTER AG | The CE marking declares that the product complies with the applicable<br>requirements laid down in the harmonisation of Community legislation on<br>its affixing in accordance with EU Regulation 765/2008.                           |
| ROHS           | 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          | REACH                        | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration,<br>Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as<br>"REACH") entered into force.   |
| <b>V</b> -Lock |                              | SCHURTER AG | V-Lock system are based on a matching plug-dose combination. The<br>connector is equipped with a notch intended for use with the latching<br>cordset. The cord latching system prevents against accidental removal of<br>the cordset. |
| 00             | White Paper Glow wire test   | SCHURTER AG | Meets the requirements of IEC 60335-1 for appliances in unattended use.<br>This includes the enhanced requirements of glow wire tests acc. to IEC<br>60695-2-11 or -12 &-13.  |
| T              | Medical Equipment            | SCHURTER AG | Suitable for use in medical equipment according to IEC/UL 60601-1   |

**Dimension** [mm]

Screw-on version





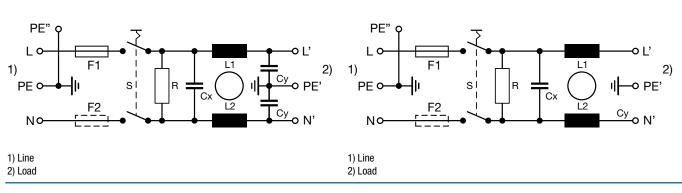
all terminals with 1.25 x 0.8
 Quick connect terminal 6.3 x 0.8

# **Technical Data of Filter-Components**

| Rated Current<br>[A] | Filter-Type          | Inductances<br>L [mH] | Capacitance<br>CX [nF] | Capacitance<br>CY [nF] | <b>R [Μ</b> Ω] |
|----------------------|----------------------|-----------------------|------------------------|------------------------|----------------|
| 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-illuminated



Medical Version (M5)

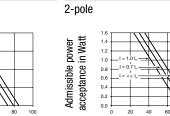
non-illuminated

## **Derating Curves**

1.0 0.5 0.0

1-pole

Admissible power acceptance in Watt

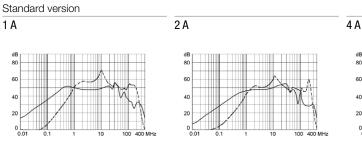


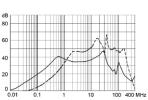
20 Ambient air temperature Ta °C

| 1                | 1.4 - | -      | - + +     | <u> </u>                 |               |       |   |
|------------------|-------|--------|-----------|--------------------------|---------------|-------|---|
| acceptance in Wa | 1.2 - |        | $-\gamma$ | $\sim$                   |               |       |   |
| <u> </u>         | 1.0 - | I = 1. | 0 I,      | $\mathcal{H}\mathcal{H}$ |               |       |   |
| g                | 0.8   | I = 0. |           | $\neq$                   |               |       |   |
| an               | 0.6   | I = <  | < I       |                          | 1/            |       |   |
| đ                | 0.4 - |        |           |                          | ()            |       |   |
| S                | 0.2 - |        |           |                          | $\mathcal{H}$ | <hr/> |   |
| g                | 0.0   | 2 2    | 0 4       | 0 6                      | 0 8           | 0 10  | 0 |
|                  | Ambie |        |           |                          |               |       |   |

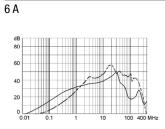
Τ 

## **Attenuation Loss**



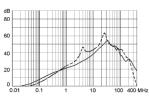


- - - - 50 $\Omega$  differential mode .

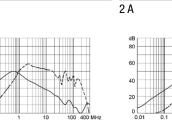


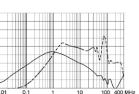
 $50\Omega$  common mode

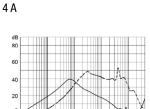


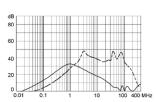


## Medical version (M5)









6 A

10 A

1 A

dB 80

60

40

20

| dB<br>80 |     |    |    |   |
|----------|-----|----|----|---|
| 60       |     |    |    |   |
| 40       |     | /  |    | 2                                       |
| 20       |     | 1- |    | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| 0.01     | 0.1 | 1  | 10 | 100 400 MHz                             |

## **All Variants**

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

## Most Popular.

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

The fuse drawer is not included and must be ordered separately (see required accessory).

 Packaging unit
 20 Pcs

# **Required Accessory**

## Description

#### Fusedrawer 2

Fusedrawer for Fuse Links 5x20 mm, with or without Voltage Selector Insert

| Fingergrip, 2-pole | 4301.1401 |
|--------------------|-----------|
| Extra-Safe, 2-pole | 4301.1403 |
| Fingergrip, 1-pole | 4301.1405 |
| Extra-Safe, 1-pole | 4301.1407 |
|                    |           |
|                    |           |



# Mating Outlets/Connectors

Category / Description

#### Appliance Outlet Overview complete



| 4787, Mounting: Screw-on mounting, Appliance Outlet: IEC Solder terminals, 10 A, Suitable for appliances with pro-<br>tection class I   | 4787 |
|---|------|
| 4788, Mounting: Snap-in version, Appliance Outlet: IEC Solder / Quick Connect, 10 A, Suitable for appliances with<br>protection class I | 4788 |
| IEC Appliance Outlet F or H, Screw-on Mounting, Front Side, Solder, PCB or Quick-connect Terminal                                       | 5091 |
|   |      |
|   |      |

#### Connector Overview complete



| 4782 Mounting: Power Cord, 3 x 1 mm <sup>2</sup> / 3 x 18 AWG, Cable, Connector: IEC C13    | 4782    |
|---|---------|
| 4785 Mounting: Power Cord, 3 x 1 mm² / 3 x 18 AWG, Cable, Connector: IEC C13                | 4785    |
| 4300-06 Mounting: Power Cord, 3 x 1 mm <sup>2</sup> / 3 x 18 AWG, Cable, Connector: IEC C13 | 4300-06 |
| 4781 Mounting: Power Cord, Cable, Connector: IEC C15  | 4781    |
| 4784 Mounting: Power Cord, 3 x 1 mm <sup>2</sup> / 3 x 18 AWG, Cable, Connector: IEC C15    | 4784    |
|   |         |

## Mating Outlets/Connectors shuttered



# Connector Overview complete

| 4783 Mounting: Power Cord, 3 x 1 mm <sup>2</sup> / 3 x 18 AWG, Cable, Connector: IEC C13 | 4783 |
|--|------|
|--|------|



#### Power Cord Overview complete

VAC13KS, Overview, V-Lock cord retaining, diverse Connector IEC C13, diverse, black

VAC13KS