## IEC Appliance Inlet C22 for hot Conditions, with Filter for high Temperatures, front side Mounting







155° C

## **Description**

- Panel mount :

Screw-on from front side

- 2 Functions:

Appliance Inlet Protection class I, Line filter in standard and medical version

- Solder / quick connect / wires (stranded)

## **Unique Selling Proposition**

- For higher temperatures
- Attractive flat front design
- Highly resistant since fully potted
- Various filter variants

#### See below:

## **Approvals and Compliances**

## **Characteristics**

- Compact design with optimal shielding
- Suitable for high ambient temperatures up to 75°C
- Version with class X1 and X2 (standard version) capacitors
- Universal line filter for standard applications
- Suitable for use in medical equipment according to IEC/UL 60601-1 (1 MOOP, 1 MOPP)

For applications according IEC/UL 62368-1 we recommend variants with bleed resistor

## Other versions on request

- flexible wire with various lenghts

## References

Alternative: version without line filter 1681

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

| Technical Data                  |  |
|---------------------------------|--|
| Ratings IEC                     | 16A @ Ta 75 °C / 250 VAC; 50 Hz  |
| Ratings UL/CSA                  | 20 A @ Ta 65 °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 (Cy2)<br>> 2.7 kVDC between L/N-PE (Cy2)<br>Test voltage (2 sec)                      |
| Impulse Withstand Voltage       | > 2.5 kV between L-N (CX2)<br>> 4 kV between L-N (CX1)<br>> 5 kV between L/N-PE (Cy2)<br>voltage (1.2/50 µs) |
| Allowable Operation Temperature | -25 °C to 100 °C   |
| Climatic Category               | 25/100/21 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                        | Solder / quick connect / wires (stranded)  |
| Panel Thickness S               | Screw: max 8 mm<br>Mounting screw torque max 0.5 Nm  |
| Material                        | Thermoplastic, black, UL 94V-0   |

| Appliance inlet/-outlet | C22 acc. to IEC 60320-1,<br>UL 498, CSA C22.2 no. 42 (for hot conditions) pin-temperature 155 °C, 16A,<br>Protection Class I |
|-------------------------|--|
| Line Filter             | Standard and Medical Version, IEC<br>60939, UL 1283, CSA C22.2 no. 8<br>Technical Details                                    |
| MTBF                    | > 1'400'000 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: C22F

| Approval Logo     | Certificates  | Certification Body | Description                |
|-------------------|---------------|--------------------|----------------------------|
| 10                | VDE Approvals | VDE                | Certificate Number: 104884 |
| c <b>'Al</b> l°us | UL Approvals  | UL                 | UR File Number: E72928     |

## **Product standards**

Product standards that are referenced

| Organization | Design                | Standard         | Description   |
|--------------|-----------------------|------------------|---|
| <u>IEC</u>   | Designed according to | IEC 60320-1      | Appliance couplers for household and similar general purposes         |
| <u>IEC</u>   | Designed according to | IEC 60939        | Passive filters for suppressing electromagnetic interference          |
| <u>IEC</u>   | Designed according to | IEC 61058-1      | Switches for appliances. Part 1. General requirements                 |
| (I)          | Designed according to | UL 498           | Standard for Attachment Plugs and Receptacles                         |
| (I)          | Designed according to | UL 1283          | Passive filters for suppressing electromagnetic interference          |
| CSA<br>Group | Designed according to | CSA C22.2 no. 42 | General Use Receptacles, Attachment Plugs, and Similar Wiring Devices |
| GF 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  |
|--------------|--------------------------------|----------------|--|
| <u>IEC</u>   | Suitable for applications acc. | IEC/UL 62368-1 | Audio/video, information and communication technology equipment - Part 1: Safety requirements          |
| <u>IEC</u>   | Suitable for applications acc. | IEC 60601-1    | Medical electrical equipment - Part 1: General requirements for basic safety and essential performance |

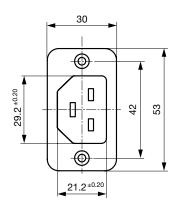
# Compliances

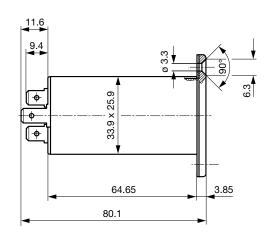
The product complies with following Guide Lines

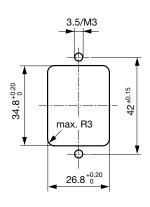
| Identification | Details                        | Initiator   | Description   |
|----------------|--------------------------------|-------------|---|
| C€             | CE declaration of conformity   | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
| UK<br>CA       | UKCA declaration of conformity | SCHURTER AG | The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.  |
| ROHS           | RoHS                           | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863  |
| <b>©</b>       | 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.                         |
| T              | Medical Equipment              | SCHURTER AG | Suitable for use in medical equipment according to IEC/UL 60601-1 (1 MOOP, 1 MOPP)  |

# Dimension [mm]

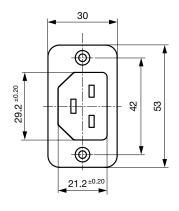
Screw-on mounting with quick connect terminals

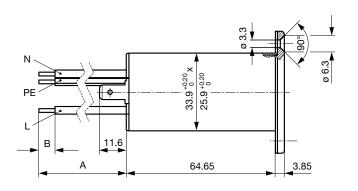


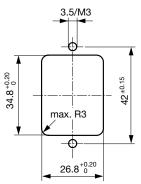




Screw-on mounting with wire leads







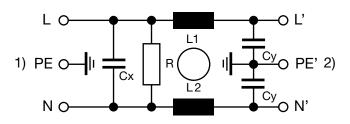
# **Technical Data of Filter-Components**

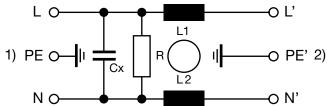
| Rated Current<br>[A] | Filter-Type           | Inductances L [mH] | Capacitance<br>CX [nF] | Capacitance<br>CY [nF] | <b>R</b> [ <b>M</b> Ω] |
|----------------------|-----------------------|--------------------|------------------------|------------------------|------------------------|
| 16                   | Standard version      | 2 x 0.6            | 100                    | 2.2                    | 1                      |
| 16                   | Standard version      | 2 x 0.6            | 330                    | 2.2                    | 1                      |
| 20                   | Standard version      | 2 x 0.3            | 100                    | 2.2                    | 1                      |
| 20                   | Standard version      | 2 x 0.3            | 330                    | 2.2                    | 1                      |
| 16                   | Medical Version (M5)  | 2 x 0.6            | 100                    | -                      | 1                      |
| 20                   | Medical Version (M5)  | 2 x 0.3            | 100                    | -                      | 1                      |
| 20                   | Medical Version (M5)  | 2 x 0.3            | 330                    | -                      | 1                      |
| 16                   | Medical Version (M80) | 2 x 0.6            | 100                    | 0.47                   | 1                      |
| 20                   | Medical Version (M80) | 2 x 0.3            | 100                    | 0.47                   | 1                      |
|                      |                       |                    |                        |                        |                        |

# **Diagrams**

Standard version

Medical Version (M5)





- - - -  $50\Omega$  differential mode \_\_\_\_\_

 $50\Omega$  common mode

1) Line

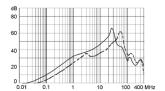
2) Load

1) Line 2) Load

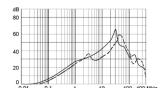
# **Attenuation Loss**

Standard version

16 A

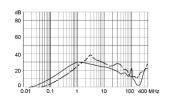


20 A

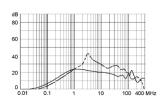


# Medical version (M5)

16 A

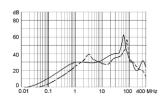


20 A

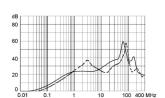


## Medical version (M80)

16 A



20 A



## **All Variants**

| Rated Current<br>IEC [A] | Rated Current<br>UL [A] | Filter-Type      | Panel mounting | Mounting side | Terminal                             | Capacitor | V-Lock | Order Number |
|--------------------------|-------------------------|------------------|----------------|---------------|--------------------------------------|-----------|--------|--------------|
| 16                       | 16                      | Standard version | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X2 330nF  |        | C22F.1107    |
| 16                       | 20                      | Standard version | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X2 100nF  |        | C22F.0101    |
| 16                       | 16                      | Standard version | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X2 100nF  |        | C22F.1101    |
| 16                       | 20                      | Standard version | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X1 100nF  |        | C22F.0103    |
| 16                       | 20                      | Standard version | Screw          | Front Side    | Solder terminal                      | X2 330nF  |        | C22F.0007    |
| 16                       | 20                      | Standard version | Screw          | Front Side    | Solder terminal                      | X2 100nF  |        | C22F.0001    |

| Rated Current<br>IEC [A] | Rated Current<br>UL [A] | Filter-Type           | Panel mounting | Mounting side | Terminal                             | Capacitor | V-Lock | Order Number |
|--------------------------|-------------------------|-----------------------|----------------|---------------|--------------------------------------|-----------|--------|--------------|
| 16                       | 16                      | Standard version      | Screw          | Front Side    | Solder terminal                      | X2 100nF  |        | C22F.1001    |
| 16                       | 20                      | Standard version      | Screw          | Front Side    | Solder terminal                      | X1 100nF  |        | C22F.0003    |
| 16                       | 20                      | Medical Version (M5)  | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X2 100nF  |        | C22F.0102    |
| 16                       | 16                      | Medical Version (M5)  | Screw          | Front Side    | Quick connect terminals 6.3 x 0.8 mm | X2 100nF  |        | C22F.1102    |
| 16                       | 20                      | Medical Version (M5)  | Screw          | Front Side    | Solder terminal                      | X2 330nF  |        | C22F.0008    |
| 16                       | 20                      | Medical Version (M5)  | Screw          | Front Side    | Solder terminal                      | X2 100nF  |        | C22F.0002    |
| 16                       | 16                      | Medical Version (M5)  | Screw          | Front Side    | Solder terminal                      | X2 100nF  |        | C22F.1002    |
| 16                       | 16                      | Medical Version (M80) | Screw          | Front Side    | Solder terminal                      | X2 100nF  |        | C22F.1005    |

 $Availability for all products can be searched real-time: \\ https://www.schurter.com/en/info-center/support-tools/stock-check-distributors$ 

Packaging unit

20 Pcs

## **Accessories**

## Description



Wire\_Harness Wire harness for SCHURTER products



Assorted\_Covers Rear Cover



RC320 Rear Cover for Power Entry Module

# **Mating Outlets/Connectors**

Category / Description



Connector Overview complete

1658, Mounting: Power Cord, Screw clamps Connector: IEC C21

1658.0000



Power Supply Cord Overview complete

Cord Sets 16 A, Europlug, 2.5 m, Connector IEC C21, H05VV-F3G1.5, black

6051.5001