

2801051  
<https://www.phoenixcontact.com/ca/products/2801051>

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Attachment plug with replaceable surge protection for coaxial signal interfaces. Connection: N connector plug/socket

Your advantages

- For outdoor installations
- Mounting plate enables mounting, e.g., in a control cabinet
- Replaceable, gas-filled arrester
- Installed as surge protection between antenna and wireless module

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2801051             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | CL33                |
| Product key                          | CL3311              |
| Catalog page                         | Page 200 (C-4-2019) |
| GTIN                                 | 4046356675734       |
| Weight per piece (including packing) | 163.7 g             |
| Weight per piece (excluding packing) | 145 g               |
| Customs tariff number                | 85363010            |
| Country of origin                    | CN                  |

# CN-UB-280DC-3-SB - Surge protection device



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## Technical data

### Product properties

|                                |                                          |
|--------------------------------|------------------------------------------|
| Product type                   | Surge protection for transceiver systems |
| IEC test classification        | C2                                       |
|                                | C3                                       |
|                                | D1                                       |
| Type                           | Attachment plug                          |
| Number of positions            | 1                                        |
| Surge protection fault message | none                                     |

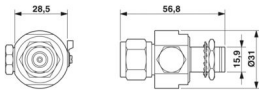
### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 2   |

### Connection data

|                   |                  |
|-------------------|------------------|
| Connection method | N connector 50 Ω |
|-------------------|------------------|

### Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 31 mm                                                                                |
| Height              | 33.5 mm                                                                              |
| Length              | 56.8 mm                                                                              |

### Material specifications

|                                  |                  |
|----------------------------------|------------------|
| Color                            | Nickel           |
|                                  | black (RAL 9005) |
| Housing material                 | HPb59-1          |
| Housing surface material         | Cu-Sn-Zn         |
| Contact surface material         | Au               |
| Inner conductor material         | QSn6.5-0.1       |
| Inner conductor surface material | Gold             |
| Insulation body material         | PTFE             |
| Spring contact material          | QSn6.5-0.1       |

### Mechanical properties

#### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

### Protective circuit

|                     |                          |
|---------------------|--------------------------|
| Direction of action | Line-Shield/Earth Ground |
|---------------------|--------------------------|

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|                                                                       |                                   |
|-----------------------------------------------------------------------|-----------------------------------|
| Maximum continuous voltage $U_C$                                      | 280 V DC                          |
| Maximum continuous voltage $U_C$ (line-earth)                         | 280 V DC                          |
| Rated current                                                         | 5 A (25 °C)                       |
| Operating effective current $I_C$ at $U_C$                            | $\leq 1 \mu A$                    |
| Nominal discharge current $I_n$ (8/20) $\mu s$ (line-ground)          | 20 kA                             |
| Nominal discharge current $I_n$ (8/20) $\mu s$ (line-shield)          | 20 kA                             |
| Pulse discharge current $I_{imp}$ (10/350) $\mu s$                    | 2.5 kA                            |
| Total surge current (10/350) $\mu s$                                  | 2.5 kA                            |
| Total discharge current $I_{total}$ (8/20) $\mu s$                    | 20 kA                             |
| Max. discharge current $I_{max}$ (8/20) $\mu s$ maximum (line-earth)  | 20 kA                             |
| Max. discharge current $I_{max}$ (8/20) $\mu s$ maximum (line-shield) | 20 kA                             |
| Nominal pulse current $I_{an}$ (10/1000) $\mu s$ (line-shield)        | 100 A                             |
| Output voltage limitation at 1 kV/ $\mu s$ (line-earth) spike         | $\leq 900$ V                      |
| Output voltage limitation at 1 kV/ $\mu s$ (line-shield) spike        | $\leq 900$ V                      |
| Voltage protection level $U_p$ (line-earth)                           | $\leq 900$ V (C1 - 1 kV / 500 A)  |
|                                                                       | $\leq 1.1$ kV (C2 - 10 kV / 5 kA) |
| Voltage protection level $U_p$ (line-shield)                          | $\leq 900$ V (C1 - 1 kV / 500 A)  |
|                                                                       | $\leq 1.1$ kV (C2 - 10 kV / 5 kA) |
| Response time $t_A$ (line-earth)                                      | $\leq 100$ ns                     |
| Response time $t_A$ (line-shield)                                     | $\leq 100$ ns                     |
| Input attenuation aE, asym.                                           | typ. 0.1 dB ( $\leq 3$ GHz)       |
| Cut-off frequency $f_g$ (3 dB), asym. (shield) in 50 $\Omega$ system  | $> 3$ GHz                         |
| Frequency range                                                       | 0 Hz ... 3 GHz                    |
| Voltage standing wave ratio VSWR in a 50 $\Omega$ system              | typ. 1.15 ( $\leq 3$ GHz)         |
|                                                                       | max. 1.20                         |
| Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system)           | 700 W (VSWR = 1.1)                |
|                                                                       | 200 W (VSWR = $\infty$ )          |
| Capacity (Core-Earth)                                                 | typ. 1.5 pF                       |
| Capacity asymmetrical (shield)                                        | typ. 1.5 pF                       |
| Surge protection fault message                                        | none                              |
| Impulse durability (line-earth)                                       | C2 - 10 kV / 5 kA                 |
|                                                                       | C3 - 100 A                        |
|                                                                       | D1 - 2.5 kA                       |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP55             |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Altitude                        | 2000 m           |

## Standards and regulations

### Air clearances and creepage distances

|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 60664-1 |
|-----------------------|-------------|

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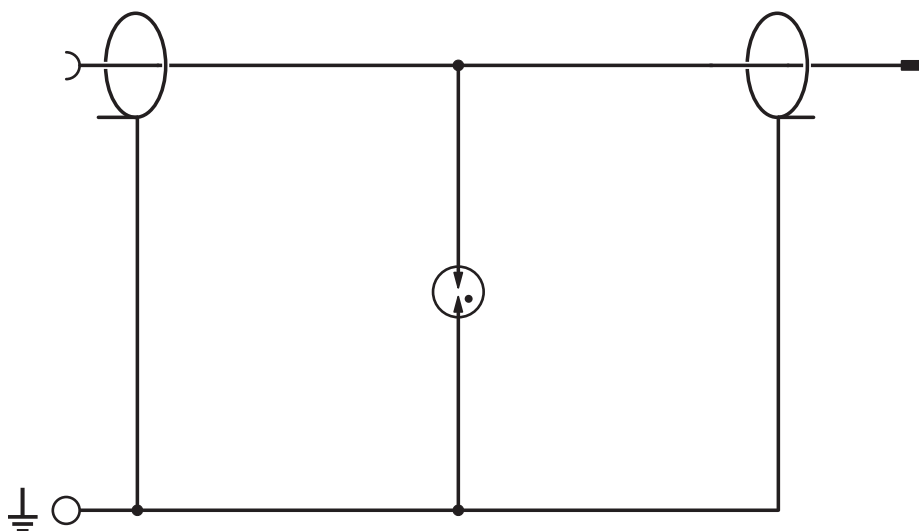
|                          |                 |
|--------------------------|-----------------|
| Standards/specifications | IEC 61643-21/A1 |
| Note                     | 2008            |
| Standards/specifications | EN 61643-21/A1  |
| Note                     | 2009            |

## Mounting

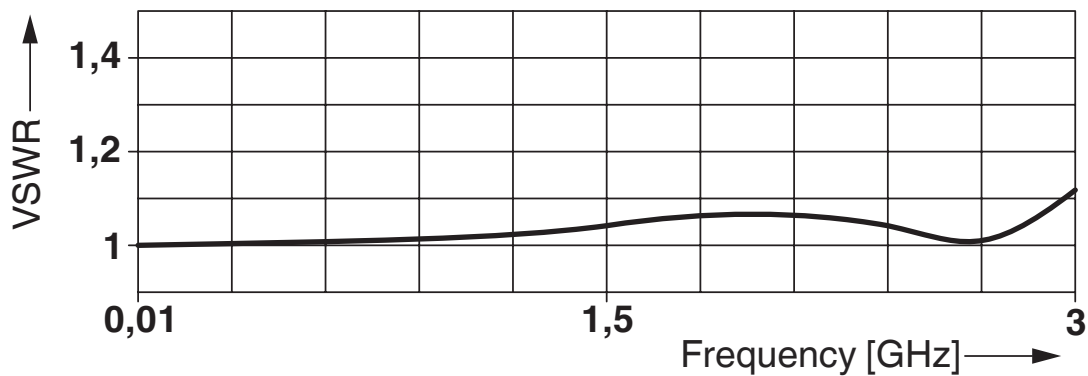
|               |                                           |
|---------------|-------------------------------------------|
| Mounting type | Connection-specific intermediate plugging |
|---------------|-------------------------------------------|

## Drawings

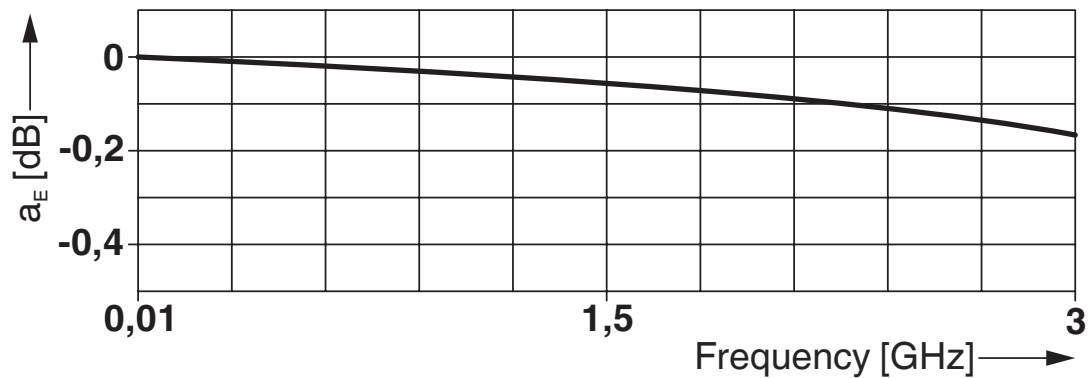
Circuit diagram



Diagram



Diagram



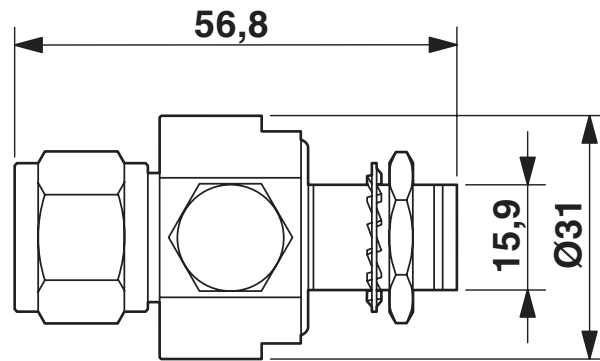
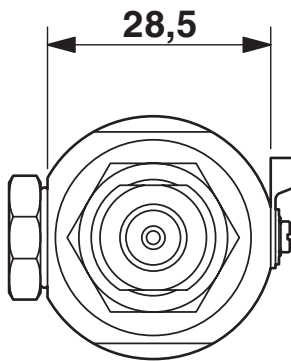
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Dimensional drawing



Dimensional drawing  
CN-UB-280DC-3-SB

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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ca/products/2801051>



**EAC**

Approval ID: RU C-DE.\*09.B.00169

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130807 |
| ECLASS-13.0 | 27171504 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000943 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

Environmental product compliance

EU RoHS

|                                         |      |
|-----------------------------------------|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

China RoHS

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-50                                                                                                                                                                                                                           |
|                                        | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | b6cd5d6a-c359-418b-b9f9-8cccb5b23e76 |

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## Accessories

### CN-UB/MP - Mounting panel

2818135

<https://www.phoenixcontact.com/ca/products/2818135>

Tongue for attaching the CN-UB..., to housing panels, for example.



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### CN-UB/MP-90DEG-50 - Mounting panel

2803137

<https://www.phoenixcontact.com/ca/products/2803137>

Angled bracket for individually fixing CN-UB... to housing panels, for example.



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## CN-UB-G1 - Gas discharge tube

2818203

<https://www.phoenixcontact.com/ca/products/2818203>

Reserve gas-filled surge arrester for CN-UB-280DC...



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PHOENIX CONTACT Ltd

8240 Parkhill Drive

Milton, Ontario L9T 5V7

1-800-890-2820

[cdinfo@phoenixcontact.ca](mailto:cdinfo@phoenixcontact.ca)