

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



2818148

<https://www.phoenixcontact.com/us/products/2818148>

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

Your advantages

- Easy installation with system-compliant connection
- Use under extreme ambient conditions with robust design
- Service-friendly with replaceable protective components

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2818148 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL25 |
| Product key | CL3311 |
| GTIN | 4017918148379 |
| Weight per piece (including packing) | 146 g |
| Weight per piece (excluding packing) | 145.8 g |
| Customs tariff number | 85363010 |
| Country of origin | TW |

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Technical data

Notes

General

| | |
|------|---|
| Note | To meet the discharge conditions for DC voltages, please note the following information: "The surge protective device should be used together with a transmitter unit, which shuts down in the event of a short-circuit." |
|------|---|

Product properties

| | |
|--------------------------------|--|
| Product type | Surge protection for transceiver systems |
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Type | Intermediate plug |
| Surge protection fault message | none |

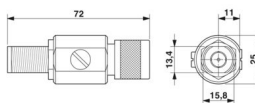
Insulation characteristics

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

Connection data

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

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 25 mm |
| Height | 25 mm |
| Depth | 72 mm |

Material specifications

| | |
|----------------------------------|---------------------|
| Color | nickel color |
| | copper color |
| Seal material | Silicon |
| Housing material | Nickel-plated brass |
| Housing surface material | Ni |
| Contact surface material | Au |
| Inner conductor material | CuZn |
| Inner conductor surface material | Gold |
| Insulation body material | PTFE |

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| | |
|-------------------------|------|
| Spring contact material | CuSn |
|-------------------------|------|

Mechanical properties

Mechanical data

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

Protective circuit

| | |
|---|--|
| Direction of action | Line-Shield/Earth Ground |
| Maximum continuous operating voltage U_C | 280 V DC |
| | 195 V AC |
| Rated current | 5 A (25 °C) |
| Operating effective current I_C at U_C | $\leq 1 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs (line-ground) | 20 kA |
| Nominal discharge current I_n (8/20) μs (line-shield) | 20 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-earth) | 2.5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-shield) | 2.5 kA |
| Total discharge current I_{Total} (8/20) μs | 20 kA |
| Max. discharge current I_{max} (8/20) μs maximum (line-earth) | 20 kA |
| Max. discharge current I_{max} (8/20) μs maximum (line-shield) | 20 kA |
| Nominal pulse current I_{an} (10/1000) μs (line-earth) | 100 A |
| Nominal pulse current I_{an} (10/1000) μs (line-shield) | 100 A |
| Output voltage limitation at 1 kV/ μs (line-earth) spike | $\leq 900 \text{ V}$ |
| Output voltage limitation at 1 kV/ μs (line-shield) spike | $\leq 900 \text{ V}$ |
| Voltage protection level U_p (line-earth) | $\leq 900 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 1.1 \text{ kV}$ (C2 - 10 kV / 5 kA) |
| | $\leq 1 \text{ kV}$ (C3 - 25 A) |
| Voltage protection level U_p (line-shield) | $\leq 900 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 1.1 \text{ kV}$ (C2 - 10 kV / 5 kA) |
| | $\leq 1 \text{ kV}$ (C3 - 25 A) |
| Response time t_A | $\leq 100 \text{ ns}$ |
| Input attenuation aE, asym. | typ. 0.1 dB ($\leq 1.2 \text{ GHz}$ / 50 Ω) |
| | typ. 0.2 dB ($\leq 2.2 \text{ GHz}$ / 50 Ω) |
| Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ω system | $> 3 \text{ GHz}$ |
| Voltage standing wave ratio VSWR in a 50 Ω system | typ. 1.10 ($\leq 2 \text{ GHz}$) |
| Permissible HF power P_{max} at VSWR = xx (50 ohm system) | 700 W (VSWR = 1.1) |
| | 200 W (VSWR = ∞) |
| Capacity | typ. 1.5 pF |
| Surge protection fault message | none |
| Impulse durability (line-earth) | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 100 A |
| | D1 - 2.5 kA |
| Impulse durability (line-shield) | C1 - 1 kV / 500 A |
| | C2 - 10 kV/5 kA |

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| | |
|--|-------------|
| | 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 (amsl) |

Standards and regulations

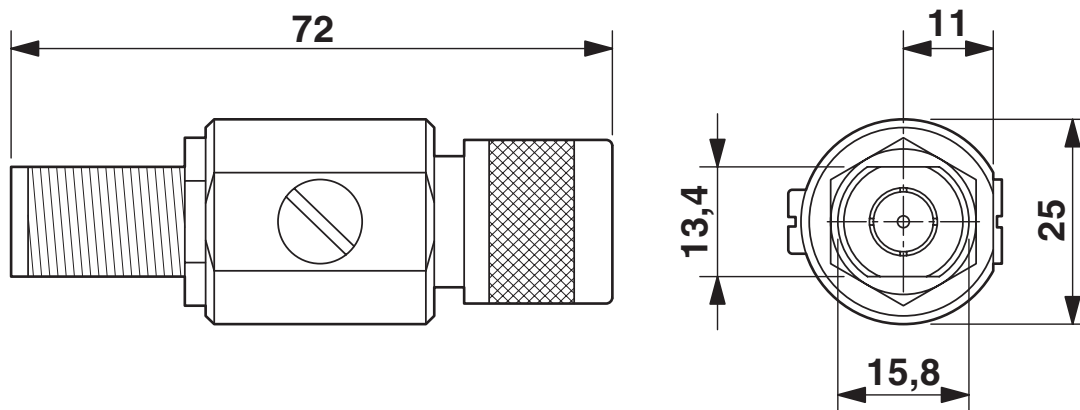
| | |
|--------------------------|----------------|
| Standards/specifications | IEC 61643-21 |
| Note | 2000 + A1:2008 |
| Standards/specifications | EN 61643-21 |
| Note | 2001 + A1:2009 |

Mounting

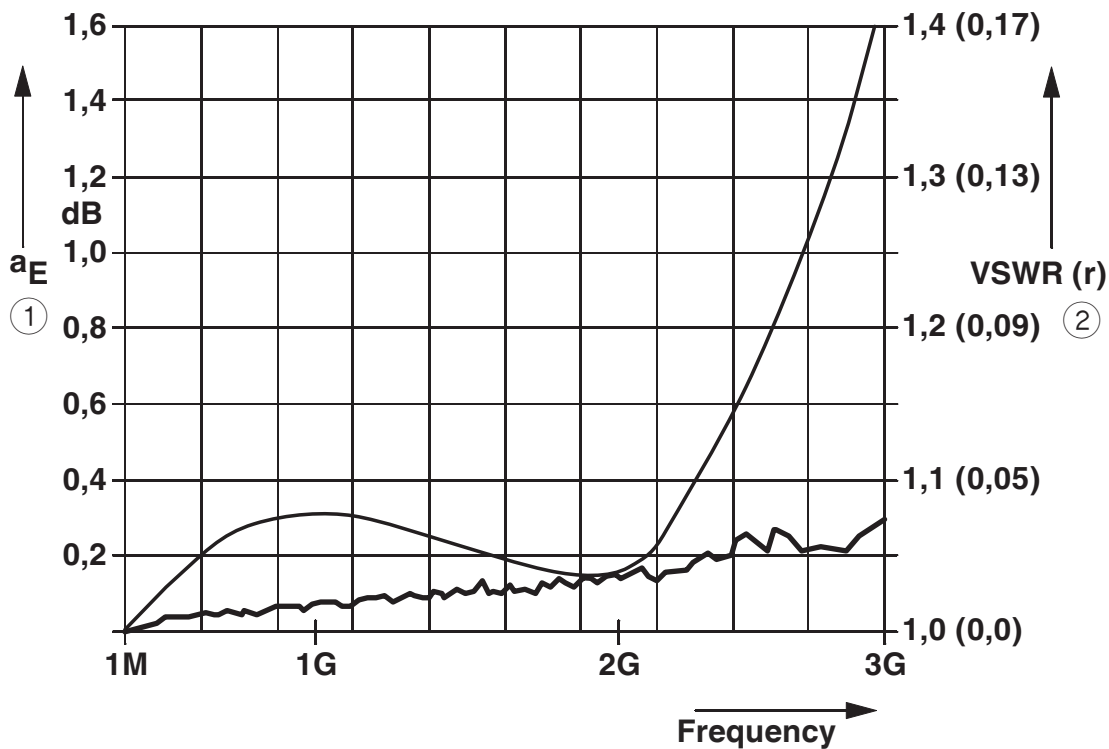
| | |
|---------------|---|
| Mounting type | Connection-specific intermediate plugging |
|---------------|---|

Drawings

Dimensional drawing



Diagram



① Typical attenuation curve for CN-UB-280DC...

② Typical VSWR at CN-UB-280DC...

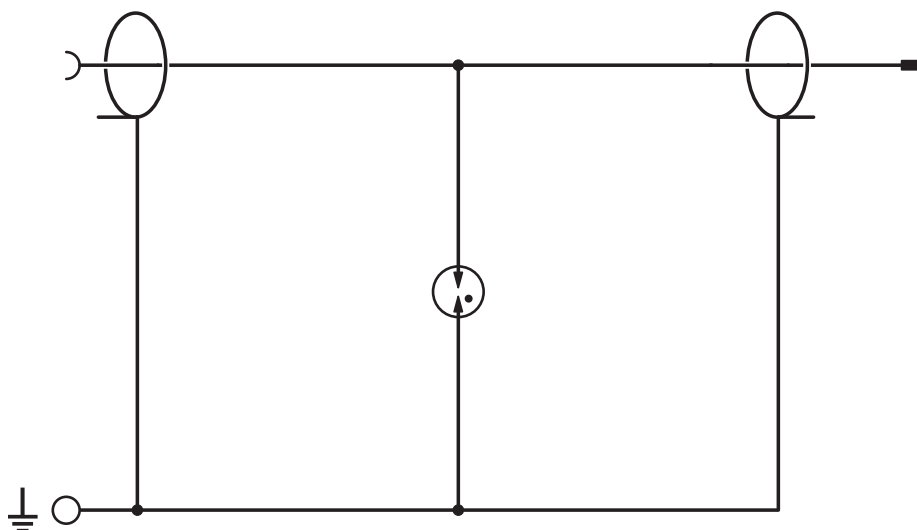
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Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2818148>



UL Listed

Approval ID: FILE E 138168



UL Listed

Approval ID: FILE E 362540

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine | | | | |
| | 280 V | 5 A | - | - |



cUL Listed

Approval ID: FILE E 333250

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine | | | | |
| | 280 V | 5 A | - | - |



UL Listed

Approval ID: FILE E 333250

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine | | | | |
| | 280 V | 5 A | - | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171504 |
| ECLASS-15.0 | 27171504 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001466 |
|-----------|----------|

UNSPSC

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

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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 | 1a333f25-257e-49c2-86f5-4b7a9223c94c |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 5.672 kg CO2e |
|---------|---------------|

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