# CN-UB-70DC-6-BB - Surge protection device

2803166

https://www.phoenixcontact.com/us/products/2803166

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Attachment plug with surge protection for coaxial signal interfaces. Connection: N connector, female/female

## Your advantages

- Mounting plate enables mounting, e.g., in a control cabinet

## Commercial data

| | |
|---|---|
| Item number | 2803166 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL25 |
| Product key | CL3311 |
| GTIN | 4046356293211 |
| Weight per piece (including packing) | 75.7 g |
| Weight per piece (excluding packing) | 75 g |
| Customs tariff number | 85363010 |
| Country of origin | US |

## 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." |

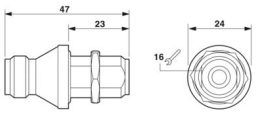
### Product properties

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

### Connection data

| | |
|---|---|
| Connection method | N connector 50 Ω |
| Tightening torque | 1.4 Nm ... 1.7 Nm (N coupling nut) |

### Dimensions

| | |
|---|---|
| Dimensional drawing |   |
| Width | 24 mm |
| Height | 24 mm |
| Depth | 47 mm |

### Material specifications

| | |
|---|---|
| Color | nickel color |
| Seal material | Silicon |
| Housing material | Brass (CuZn) |
| Housing surface material | Ni |
| Inner conductor material | BeCu |
| Inner conductor surface material | Gold |
| Insulation body material | PTFE |

### Mechanical properties

Mechanical data

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

## Protective circuit

| | |
|---|---|
| Direction of action | Line-Shield/Earth Ground |
| Maximum continuous operating voltage $U_C$ | 70 V DC |
| | 50 V AC |
| Maximum continuous voltage $U_C$ (line-earth) | 70 V DC |
| | 50 V AC |
| Rated current | 10 A |
| Operating effective current $I_C$ at $U_C$ | ≤ 1 µA |
| Nominal discharge current $I_n$ (8/20) µs | 5 kA |
| Nominal discharge current $I_n$ (8/20) µs (line-ground) | 5 kA |
| Nominal discharge current $I_n$ (8/20) µs (line-shield) | 5 kA |
| Pulse discharge current $I_{imp}$ (10/350) µs | 1 kA |
| Pulse discharge current $I_{imp}$ (10/350) µs (line-earth) | 1 kA |
| Max. discharge current $I_{max}$ (8/20) µs maximum (line-earth) | 10 kA |
| Max. discharge current $I_{max}$ (8/20) µs maximum (line-shield) | 10 kA |
| Nominal pulse current Ian (10/1000) µs (line-shield) | 100 A |
| Impulse discharge current (10/350) µs, peak value $I_{imp}$ | 1 kA |
| Output voltage limitation at 1 kV/µs (line-earth) spike | ≤ 650 V |
| Output voltage limitation at 1 kV/µs (line-shield) spike | ≤ 650 V |
| Output voltage limitation at 1 kV/µs (line-earth) static | ≤ 650 V |
| Output voltage limitation at 1 kV/µs (line-shield) static | ≤ 650 V |
| Voltage protection level $U_p$ (line-earth) | ≤ 800 V (C2 - 4 kV / 2 kA) |
| | ≤ 1 kV (C2 - 10 kV / 5 kA) |
| Voltage protection level $U_p$ (line-shield) | ≤ 800 V (C2 - 4 kV / 2 kA) |
| | ≤ 1 kV (C2 - 10 kV / 5 kA) |
| Response time $t_A$ (line-earth) | ≤ 100 ns |
| Response time tA (line-shield) | ≤ 100 ns |
| Input attenuation aE, asym. | 0.1 dB (≤ 6 GHz) |
| Cut-off frequency fg (3 dB), asym. (shield) in 50 Ω system | > 6 GHz |
| Frequency range | 0 Hz ... 6 GHz |
| Voltage standing wave ratio VSWR in a 50 Ω system | typ. 1.15 (≤ 6 GHz) |
| Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system) | 30 W (VSWR = 1.15) |
| 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 - 1 kA |
| Impulse durability (line-shield) | C2 - 10 kV/5 kA |
| | C3 - 100 A |

| | |
|---|---|
| | D1 - 1 kA |
| Alternating current carrying capacity (line-shield) | 5 A - 1 s |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP68 |
| Ambient temperature (operation) | -40 °C ... 90 °C |

## Standards and regulations

| | |
|---|---|
| VDE requirement class | C2 |
| | C3 |
| | D1 |

### Air clearances and creepage distances

| | |
|---|---|
| Standards/regulations | DIN VDE 0110-1 / IEC 60664-1 |

### Standards Information technology specification

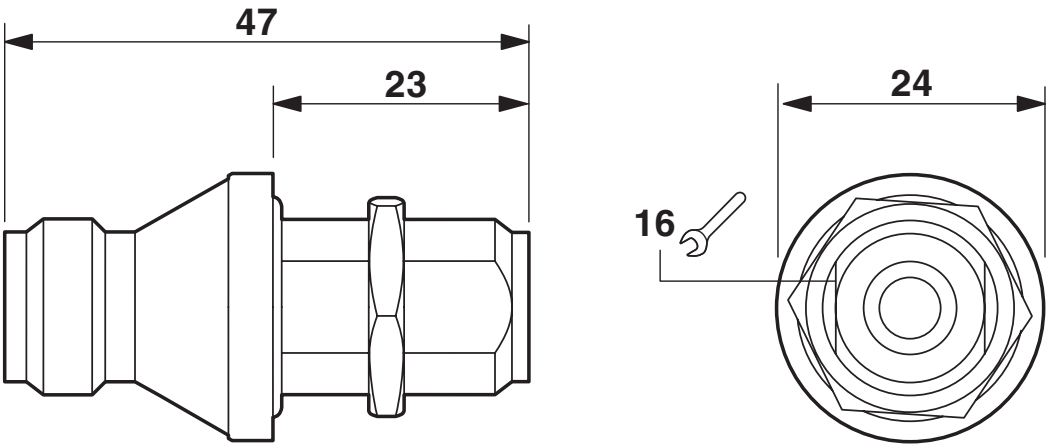
| | |
|---|---|
| Standards/regulations | IEC 61643-21 |
| | IEC 61643-21 |
| Standards/specifications | IEC 61643-21 |
| Note | 2000 |

## Mounting

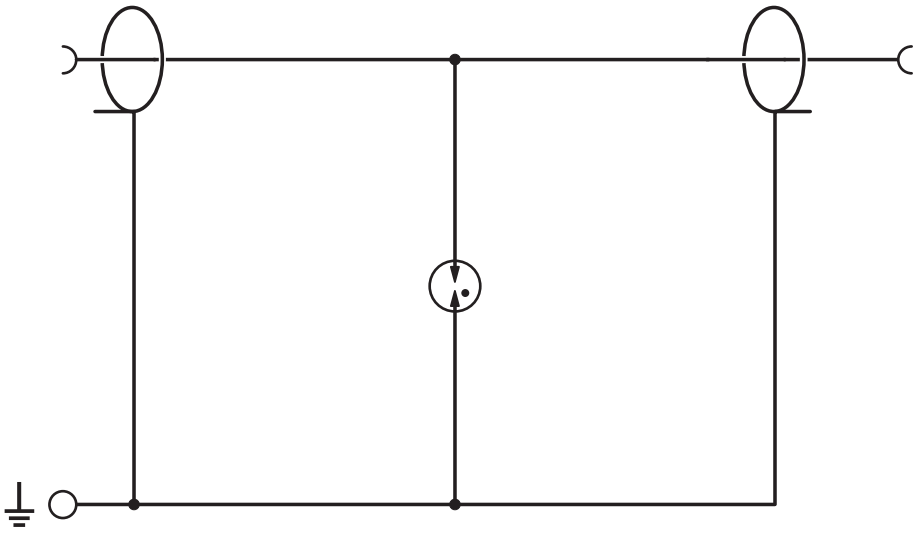
| | |
|---|---|
| Mounting type | Connection-specific intermediate plugging |
| Assembly note | Outdoors and indoors |

## Drawings

Dimensional drawing




Circuit diagram



## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |




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