

# CN-UB/E-BB - Surge protection device



2817686

<https://www.phoenixcontact.com/us/products/2817686>

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Attachment plug with surge protection, for coaxial signal interfaces with floating shield.  
Connection: N connector socket-socket

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2817686       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL25          |
| Product key                          | CL3311        |
| GTIN                                 | 4017918148584 |
| Weight per piece (including packing) | 138.3 g       |
| Weight per piece (excluding packing) | 117.26 g      |
| Customs tariff number                | 85363010      |
| Country of origin                    | DE            |

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## Technical data

### 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                                     |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Pollution degree     | 2  |

### Connection data

|                   |                         |
|-------------------|-------------------------|
| Connection method | N connector 50 $\Omega$ |
|-------------------|-------------------------|

### Dimensions

|        |         |
|--------|---------|
| Width  | 25.4 mm |
| Height | 83 mm   |
| Depth  | 25.4 mm |

### Material specifications

|                  |                  |
|------------------|------------------|
| Color            | black (RAL 9005) |
|                  | copper color     |
| Housing material | Aluminum         |

### Mechanical properties

#### Mechanical data

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

### Protective circuit

|                                                              |                          |
|--------------------------------------------------------------|--------------------------|
| Direction of action                                          | Line-Shield/Earth Ground |
| Maximum continuous operating voltage $U_C$                   | 180 V DC                 |
|                                                              | 130 V AC                 |
| Maximum continuous voltage $U_C$ (line-earth)                | 180 V DC                 |
|                                                              | 130 V AC                 |
| Rated current                                                | 5 A (25 °C)              |
| Operating effective current $I_C$ at $U_C$                   | $\leq 1 \mu A$           |
| Protective conductor current $I_{PE}$                        | $\leq 2 \mu A$           |
| Nominal discharge current $I_n$ (8/20) $\mu s$ (line-ground) | 5 kA                     |

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|                                                                      |                                              |
|----------------------------------------------------------------------|----------------------------------------------|
| Nominal discharge current $I_n$ (8/20) $\mu$ s (line-shield)         | 5 kA                                         |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (shield-ground)       | 5 kA                                         |
| Total discharge current $I_{Total}$ (8/20) $\mu$ s                   | 10 kA                                        |
| Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (line-earth)        | 100 A                                        |
| Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike        | $\leq 470$ V                                 |
| Output voltage limitation at 1 kV/ $\mu$ s (line-shield) spike       | $\leq 590$ V                                 |
| Output voltage limitation at 1 kV/ $\mu$ s (shield-ground) spike     | $\leq 470$ V                                 |
| Output voltage limitation at 1 kV/ $\mu$ s (line-earth) static       | $\leq 470$ V                                 |
|                                                                      | $\leq 33$ V                                  |
| Output voltage limitation at 1 kV/ $\mu$ s (shield-ground) static    | $\leq 33$ V                                  |
| Residual voltage at $I_n$ (conductor-ground)                         | $\leq 160$ V (1.5 m cable)                   |
| Residual voltage at $I_n$ (conductor-shield)                         | $\leq 55$ V                                  |
| Residual voltage at $I_n$ (shield-ground)                            | $\leq 160$ V (1.5 m cable)                   |
| Voltage protection level $U_p$ (line-earth)                          | $\leq 500$ V (C2 - 10 kV / 5 kA)             |
| Voltage protection level $U_p$ (line-shield)                         | $\leq 700$ V (C2 - 10 kV / 5 kA)             |
| Voltage protection level $U_p$ (shield-ground)                       | $\leq 500$ V (C2 - 10 kV / 5 kA)             |
| Response time $t_A$ (line-earth)                                     | $\leq 100$ ns                                |
| Response time $t_A$ (line-shield)                                    | $\leq 100$ ns                                |
| Response time $t_A$ (shield-ground)                                  | $\leq 100$ ns                                |
| Input attenuation aE, asym.                                          | 0.1 dB ( $\leq 100$ MHz)                     |
| Cut-off frequency $f_g$ (3 dB), asym. (shield) in 50 $\Omega$ system | typ. 1 GHz                                   |
| Voltage standing wave ratio VSWR in a 50 $\Omega$ system             | $\leq 1.20$ (200 MHz)                        |
| Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system)          | 300 W (at SWR = 1.1 in a 50 $\Omega$ system) |
|                                                                      | 80 W (VSWR = $\infty$ )                      |
| Capacity asymmetrical (shield)                                       | 7 pF (typical)                               |
| Surge protection fault message                                       | none                                         |
| Impulse durability (line-earth)                                      | C2 - 10 kV / 5 kA                            |
|                                                                      | D1 - 2.5 kA                                  |
| Impulse durability (shield-ground)                                   | C2 - 10 kV/5 kA                              |
|                                                                      | D1 - 2.5 kA                                  |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP20             |
|                                 | IP20             |
| Ambient temperature (operation) | -40 °C ... 80 °C |

## Standards and regulations

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

### Standards Information technology specification

|                       |              |
|-----------------------|--------------|
| Standards/regulations | IEC 61643-21 |
|-----------------------|--------------|

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|  |              |
|--|--------------|
|  | IEC 61643-21 |
|--|--------------|

## Air clearances and creepage distances

|                          |                              |
|--------------------------|------------------------------|
| Standards/regulations    | DIN VDE 0110-1 / IEC 60664-1 |
| Standards/specifications | IEC 61643-21                 |
| Note                     | 2002                         |

## Mounting

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

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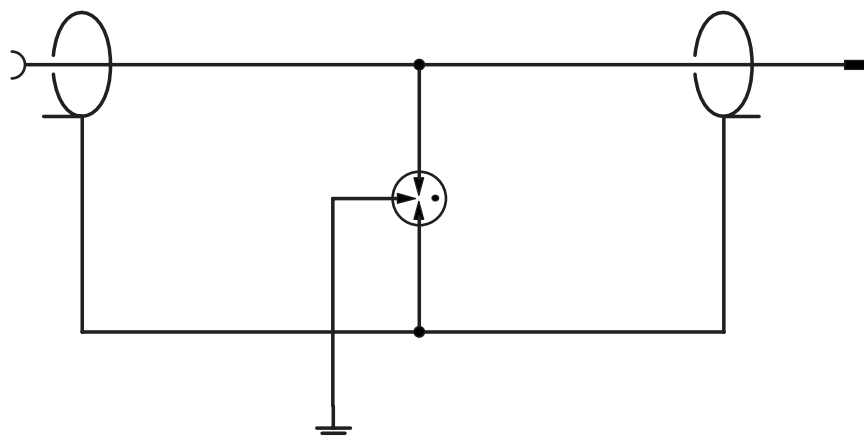


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## Drawings

Circuit diagram



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## Classifications

### ECLASS

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

### ETIM

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

### 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                                | 48ca1d93-5cc9-4fbc-a9a9-a7fb359c9eb7 |

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