

# CN-LAMBDA/4-2.25-SB - Surge protection device



2801056

<https://www.phoenixcontact.com/us/products/2801056>

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Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces.  
Connection: N connectors plug/socket



## Your advantages

- High HF power in the kW range
- Maintenance-free surge protection with LAMBDA/4 technology
- Low protection level

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2801056       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL26          |
| Product key                          | CL3312        |
| GTIN                                 | 4046356678247 |
| Weight per piece (including packing) | 296 g         |
| Weight per piece (excluding packing) | 260 g         |
| Customs tariff number                | 85363010      |
| Country of origin                    | CN            |

## 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                        |
| Number of positions            | 1                                        |
| Surge protection fault message | none                                     |

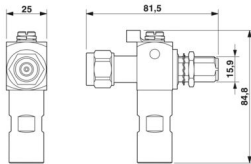
### Insulation characteristics

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

### Connection data

|                   |                  |
|-------------------|------------------|
| Connection method | N connector 50 Ω |
| Tightening torque | 1.5 Nm           |

### Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 25 mm                                                                                |
| Height              | 77.5 mm                                                                              |
| Length              | 81.5 mm                                                                              |

### Material specifications

|                                  |                  |
|----------------------------------|------------------|
| Color                            | nickel color     |
|                                  | 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       |

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## Mechanical properties

### Mechanical data

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

## Protective circuit

|                                                                       |                                 |
|-----------------------------------------------------------------------|---------------------------------|
| Direction of action                                                   | Line-Shield/Earth Ground        |
| Rated current                                                         | 5 A (25 °C)                     |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (line-ground)          | 50 kA                           |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (line-shield)          | 50 kA                           |
| Pulse discharge current $I_{imp}$ (10/350) $\mu$ s                    | 20 kA                           |
| Total surge current (8/20) $\mu$ s                                    | 60 kA                           |
| Total surge current (10/350) $\mu$ s                                  | 20 kA                           |
| Total discharge current $I_{Total}$ (8/20) $\mu$ s                    | 60 kA                           |
| Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-earth)  | 60 kA                           |
| Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-shield) | 60 kA                           |
| Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike         | $\leq 1$ V                      |
| Output voltage limitation at 1 kV/ $\mu$ s (line-shield) spike        | $\leq 1$ V                      |
| Output voltage limitation at 1 kV/ $\mu$ s (line-earth) static        | $\leq 1$ V                      |
| Voltage protection level $U_p$ (line-earth)                           | $\leq 5$ V (C1 - 1 kV / 500 A)  |
|                                                                       | $\leq 25$ V (C2 - 10 kV / 5 kA) |
|                                                                       | $\leq 15$ V (6 kV / 3 kA)       |
| Voltage protection level $U_p$ (line-shield)                          | $\leq 5$ V (C1 - 1 kV / 500 A)  |
|                                                                       | $\leq 25$ V (C2 - 10 kV / 5 kA) |
|                                                                       | $\leq 15$ V (6 kV / 3 kA)       |
| Input attenuation aE, asym.                                           | $\leq 0.2$ dB (50 $\Omega$ )    |
| Frequency range                                                       | 0.8 GHz ... 2.25 GHz            |
| Voltage standing wave ratio VSWR in a 50 $\Omega$ system              | typ. 1.20                       |
|                                                                       | max. 1.25                       |
| Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system)           | $\leq 500$ W                    |
|                                                                       | $\leq 4$ kW (peak)              |
| Surge protection fault message                                        | none                            |
| Impulse durability (line-earth)                                       | C1 - 1 kV / 500 A               |
|                                                                       | C2 - 10 kV / 5 kA               |
|                                                                       | D1 - 2.5 kA                     |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP68             |
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Altitude                        | 2000 m           |

## Standards and regulations

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

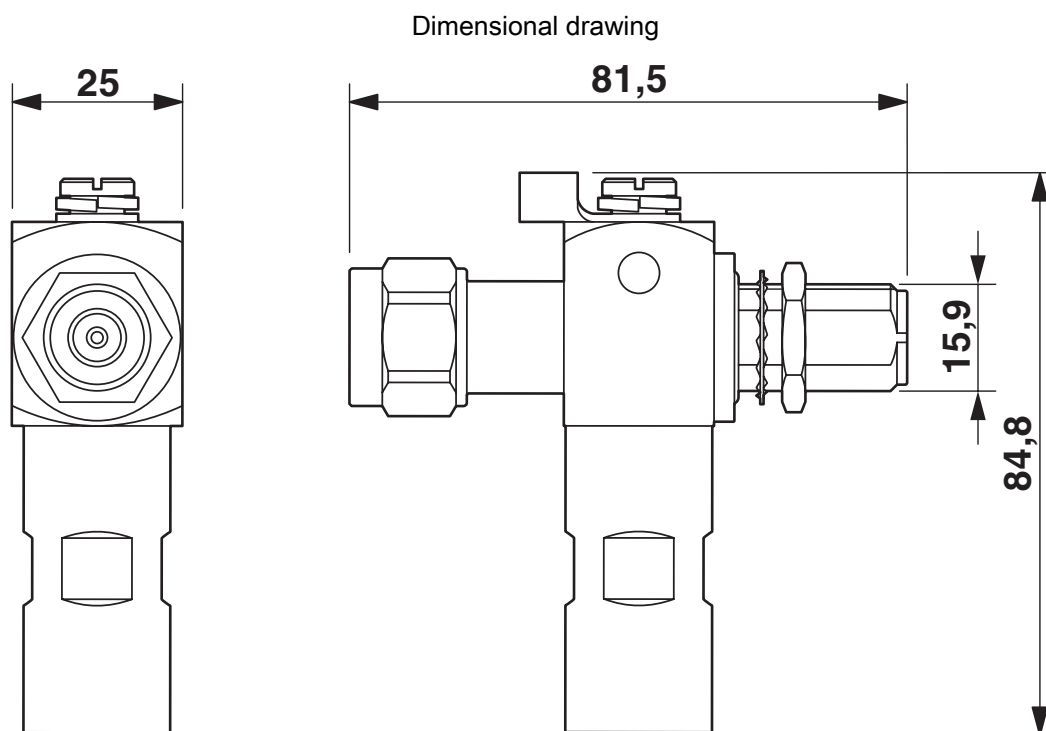
## Air clearances and creepage distances

|                          |                 |
|--------------------------|-----------------|
| Standards/regulations    | IEC 60664-1     |
| Standards/specifications | IEC 61643-21/A1 |
| Note                     | 2008            |
| Standards/specifications | EN 61643-21/A1  |
| Note                     | 2009            |

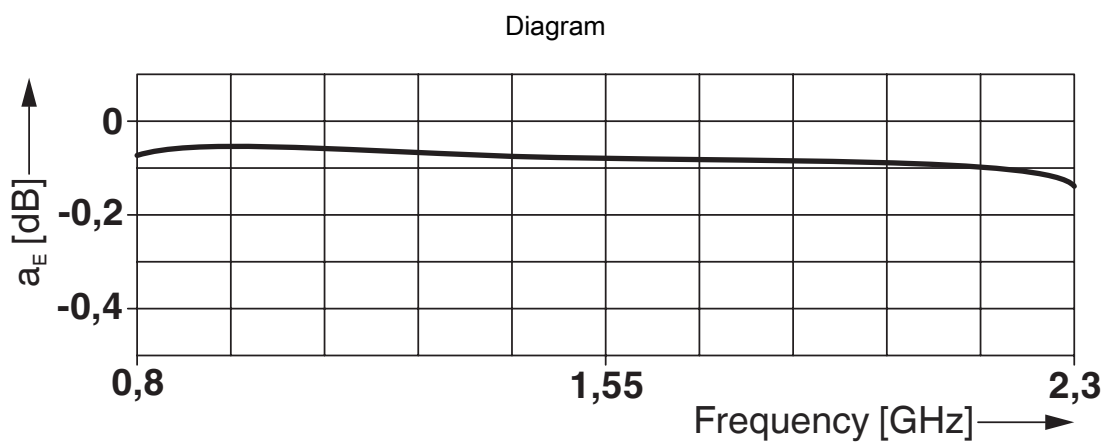
## Mounting

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

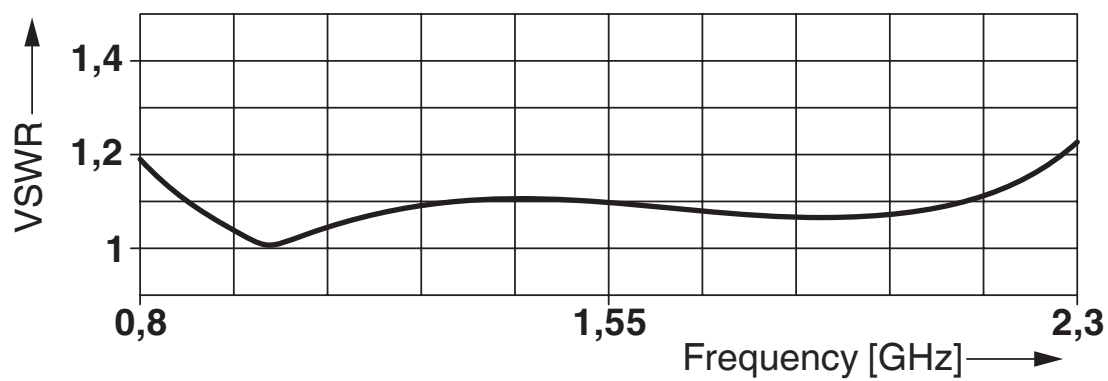
## Drawings



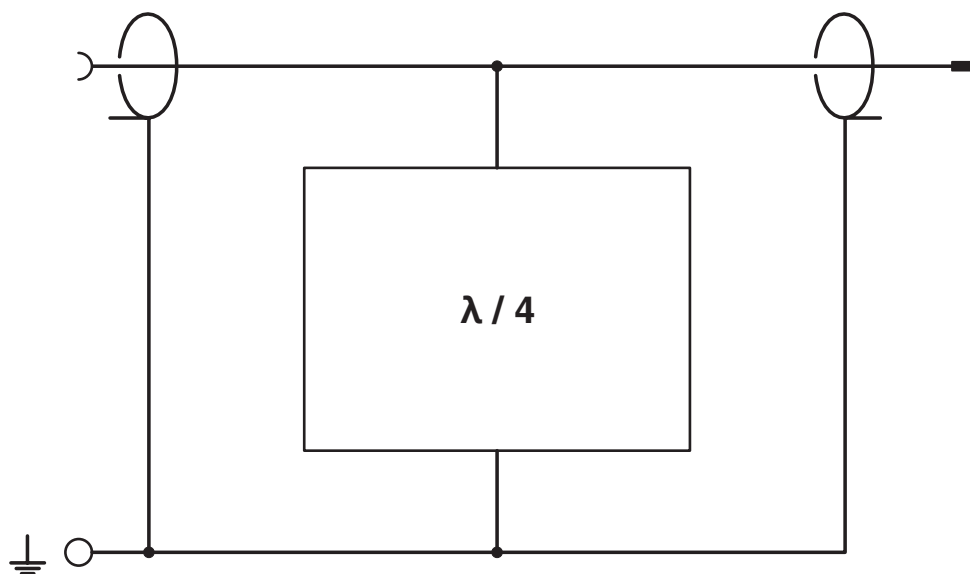
Dimensional drawing  
CN-LAMBDA/4-2.25-SB



Diagram



Circuit diagram



Circuit diagram

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27171504 |
| ECLASS-15.0 | 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                                | e9651d28-e0ba-4650-b1fa-961e034d92d6 |

## EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 8.763 kg CO2e |
|---------|---------------|