

D-UFB-PB - Surge protection device



2880642

<https://www.phoenixcontact.com/us/products/2880642>

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Fine surge protection in a 9-pos. D-SUB plug for PROFIBUS-DP applications with a transmission speed of up to 12 Mbps.



Your advantages

- Space saving with use directly at the interface
- Can be in applications up to 12 Mbps with adapted protective circuit
- Adjustment of the transmission properties with switchable termination resistor

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2880642 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL03 |
| Product key | CL3113 |
| GTIN | 4046356048989 |
| Weight per piece (including packing) | 52.8 g |
| Weight per piece (excluding packing) | 52.8 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------------------------|---|
| Product type | Surge protection for information technology |
| Product family | DATATRAB |
| IEC test classification | C1 |
| | C3 |
| | B2 |
| VDE requirement class | C1 |
| | C3 |
| | B2 |
| Type | Connecting plug |
| Number of positions | 4 |
| Surge protection fault message | none |
| Pin assignment | 3, 5, 6, 8 |

Insulation characteristics

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

Connection data

D-SUB connection

| | |
|-------------------|-----------------|
| Connection method | D-SUB connector |
|-------------------|-----------------|

PCB connection

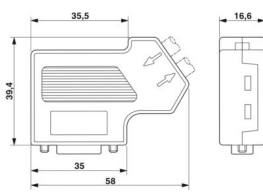
| | |
|---------------------------------------|--|
| Connection method | Screw connection |
| Stripping length | 5 mm |
| Conductor cross-section, rigid min. | 0.14 mm ² |
| Conductor cross-section, rigid max. | 1.5 mm ² |
| Conductor cross-section flexible min. | 0.14 mm ² |
| Conductor cross-section flexible max. | 1 mm ² |
| Conductor cross-section AWG min. | 26 |
| Conductor cross-section AWG max. | 16 |
| Connection method | Screw connection & D-SUB-9 |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Conductor cross-section flexible | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross-section rigid | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross-section AWG | 26 ... 16 |

Dimensions

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| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 44.5 mm |
| Height | 58 mm |
| Depth | 16.6 mm |

External dimensions

| | |
|------------------------|--------|
| External diameter min. | 7.6 mm |
| External diameter max. | 8.4 mm |

Material specifications

| | |
|------------------|-------------------|
| Color | silver-colored |
| Housing material | ABS, metal-plated |

Mechanical properties

Mechanical data

| | |
|-----------------------------|----------|
| Open side panel | No |
| Insertion/withdrawal cycles | > 200 |
| Fixing screws | 4-40 UNC |
| Tightening torque | 0.4 Nm |

Protective circuit

| | |
|--|-------------------------------|
| Direction of action | Line-Line & Line-Earth Ground |
| Maximum continuous operating voltage U_C | 5.2 V DC |
| Rated current | 250 mA (25 °C) |
| Operating effective current I_C at U_C | $\leq 100 \mu\text{A}$ |
| Protective conductor current I_{PE} | $\leq 100 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs (line-line) | 350 A |
| Nominal discharge current I_n (8/20) μs (line-ground) | 350 A |
| Total discharge current I_{Total} (8/20) μs | 350 A |
| Max. discharge current I_{max} (8/20) μs maximum (line-line) | 350 A |
| Max. discharge current I_{max} (8/20) μs maximum (line-earth) | 350 A |
| Output voltage limitation at 1 kV/ μs (line-line) spike | ≤ 20 V |
| Output voltage limitation at 1 kV/ μs (line-earth) spike | ≤ 20 V |
| Output voltage limitation at 1 kV/ μs (line-line) static | ≤ 14 V |
| Output voltage limitation at 1 kV/ μs (line-earth) static | ≤ 14 V |
| Output voltage limitation (10/700) μs (line-line) | ≤ 15 V ($U_o=4$ kV) |
| Output voltage limitation (10/700) μs (line-earth) | ≤ 15 V ($U_o=4$ kV) |
| Residual voltage at I_n (conductor-conductor) | ≤ 25 V |

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| | |
|---|----------------------------------|
| Residual voltage at I_n (conductor-ground) | ≤ 25 V |
| Voltage protection level U_p (line-line) | ≤ 25 V (C1 - 500 V / 250 A) |
| | ≤ 15 V (C3 - 25 A) |
| | ≤ 15 V (B2 - 4 kV / 100 A) |
| Voltage protection level U_p (line-earth) | ≤ 25 V (C1 - 500 V / 250 A) |
| | ≤ 15 V (C3 - 25 A) |
| | ≤ 15 V (B2 - 4 kV / 100 A) |
| Response time t_A (line-line) | ≤ 500 ns |
| Response time t_A (line-earth) | ≤ 500 ns |
| Cut-off frequency f_g (3 dB), sym. in 100 Ω system | typ. 70 MHz |
| Inductivity in series | 0.11 μ H |
| Surge protection fault message | none |
| Impulse durability (line-line) | C1 - 500 V / 250 A |
| | C3 - 2 kV / 25 A |
| Impulse durability (line-earth) | C1 - 500 V / 250 A |
| | C3 - 2 kV/25 A |

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP40 |
| Ambient temperature (operation) | -20 °C ... 75 °C |
| Ambient temperature (storage/transport) | -20 °C ... 75 °C |

Standards and regulations

| | |
|-----------------------|----|
| VDE requirement class | C1 |
| | C3 |
| | B2 |

Standards Information technology specification

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

Air clearances and creepage distances

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

Mounting

| | |
|---------------|---|
| Mounting type | Direct assembly on the device interface |
|---------------|---|

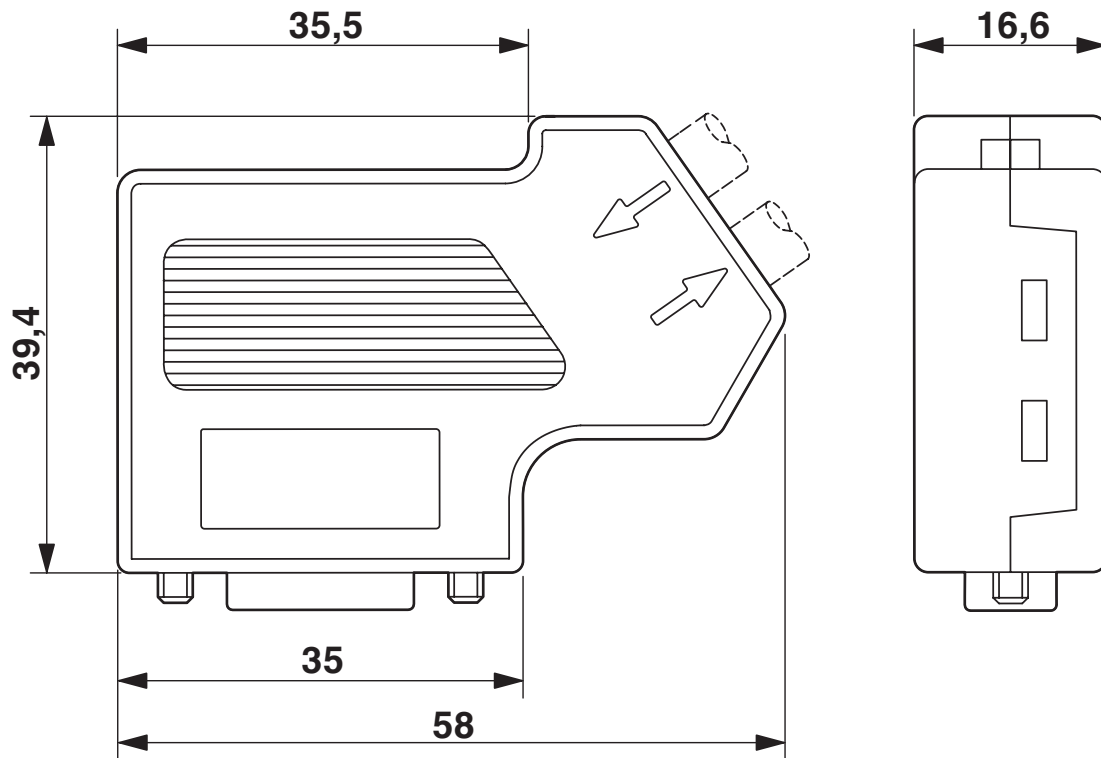
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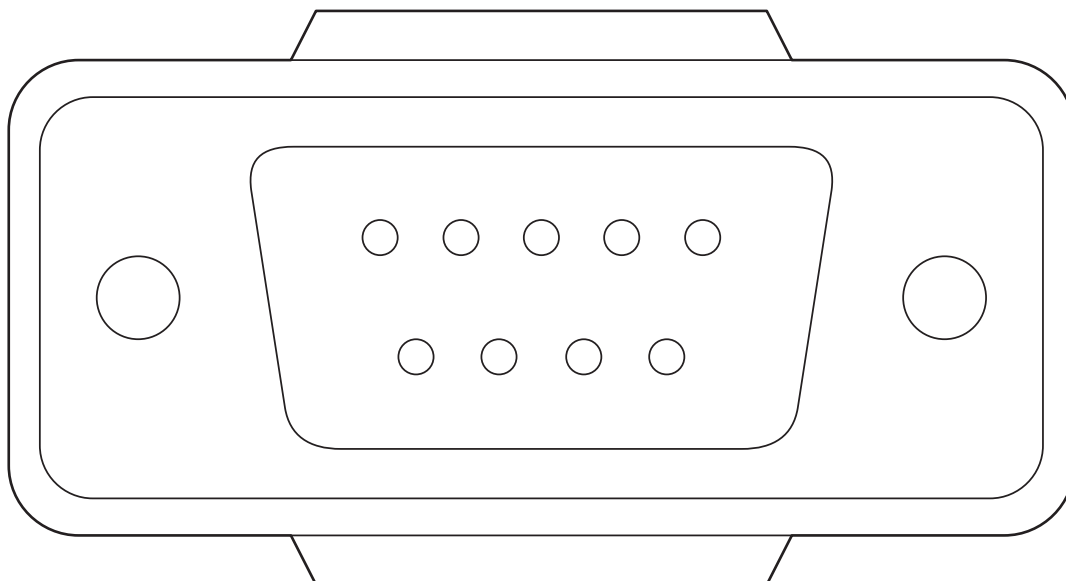
Drawings

Dimensional drawing



Dimensional drawing: D-UFB-PB

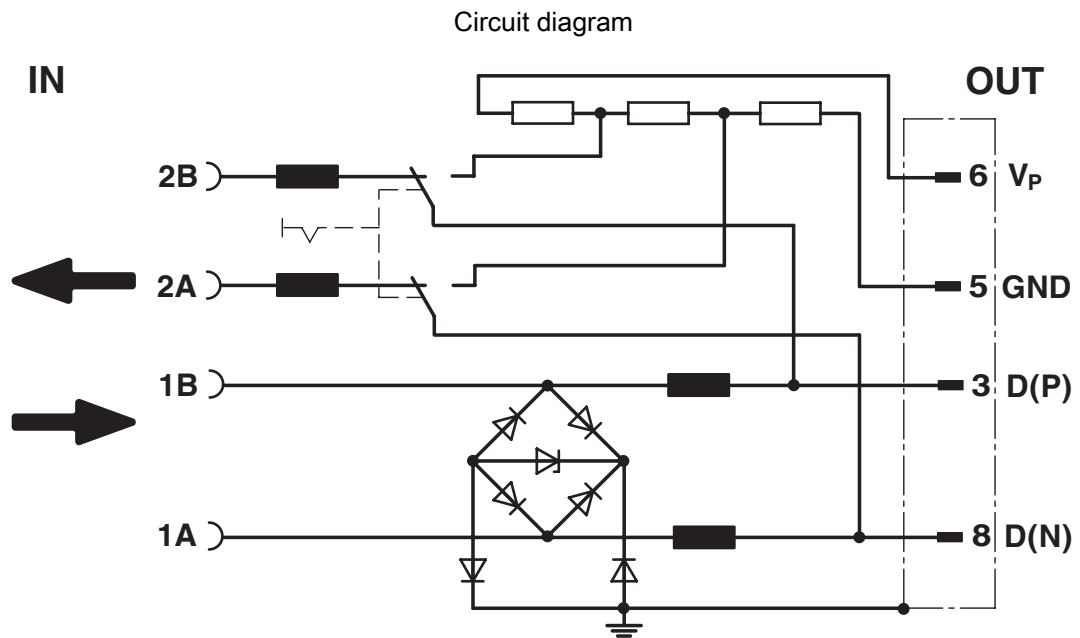
Product drawing



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171503 |
| ECLASS-15.0 | 27171503 |

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 | 7(a), 7(c)-I |

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 | 9bc3aad0-885e-4321-8a11-8cd8837f9d1d |

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com