# Surge protection device - D-UFB-PB - 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

- Integrated termination resistor
- Data transmission speed up to 12 Mbps
- Direct use at the interface

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| GTIN | 4 046356 048989 |
| GTIN | 4046356048989 |

## Technical data

### Dimensions

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

### Ambient conditions

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

### General

| | |
|---|---|
| Housing material | ABS, metal-plated |
| Color | silver |
| Standards for cearances and creepage distances | IEC 60664-1 |
| | DIN VDE 0110-1 |

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## Technical data

### General

| | |
|---|---|
| Overvoltage category | II |
| Degree of pollution | 2 |
| Mounting type | Direct assembly on the device interface |
| Type | Connecting plug |
| Number of positions | 4 |
| Direction of action | Line-Line & Line-Earth Ground |

### Protective circuit

| | |
|---|---|
| IEC test classification | C1 |
| | C3 |
| | B2 |
| VDE requirement class | C1 |
| | C3 |
| | B2 |
| Maximum continuous voltage $U_C$ | 5.2 V DC |
| Rated current | 250 mA (25 °C) |
| Operating effective current $I_C$ at $U_C$ | ≤ 100 µA |
| Residual current $I_{PE}$ | ≤ 100 µA |
| Nominal discharge current $I_n$ (8/20) µs (line-line) | 350 A |
| Nominal discharge current $I_n$ (8/20) µs (line-earth) | 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 (Uo=4 kV) |
| Output voltage limitation (10/700) µs (line-earth) | ≤ 15 V (Uo=4 kV) |
| Residual voltage at $I_n$ (line-line) | ≤ 25 V |
| Residual voltage at $I_n$ (line-earth) | ≤ 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 fg (3 dB), sym. in 100 Ohm system | typ. 70 MHz |

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## Technical data

### Protective circuit

| | |
|---|---|
| Inductivity in series | 0.11 µH |
| 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 |

### Connection data

| | |
|---|---|
| Connection method | Screw connection & D-SUB-9 |
| Connection method IN | Screw terminal blocks |
| Connection method OUT | D-SUB-9 connector |
| Connection technology | 2-wire (shielded) |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Stripping length | 5 mm |
| Conductor cross section flexible | 0.14 mm² ... 1.5 mm² |
| Conductor cross section solid | 0.14 mm² ... 1.5 mm² |
| Conductor cross section AWG | 26 ... 16 |

### Connection, equipotential bonding

| | |
|---|---|
| Connection method | PVC Litz wire, 1.0 mm², 0.5 m length |

### Standards and Regulations

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

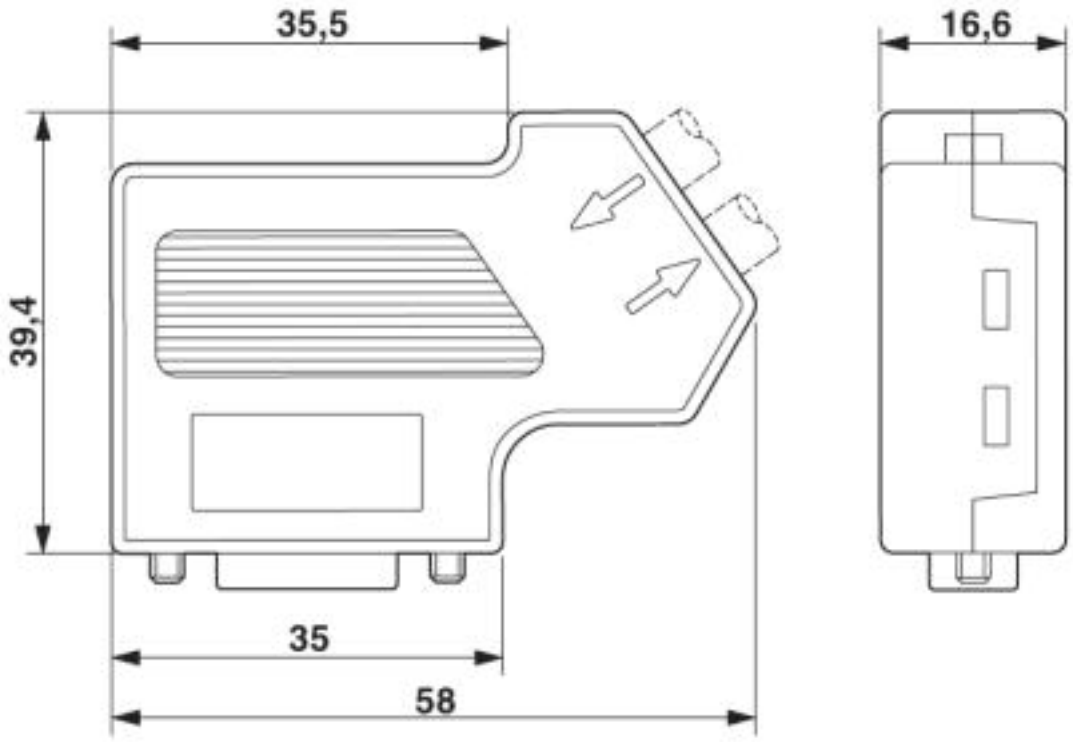
### Environmental Product Compliance

| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration” |

## Drawings

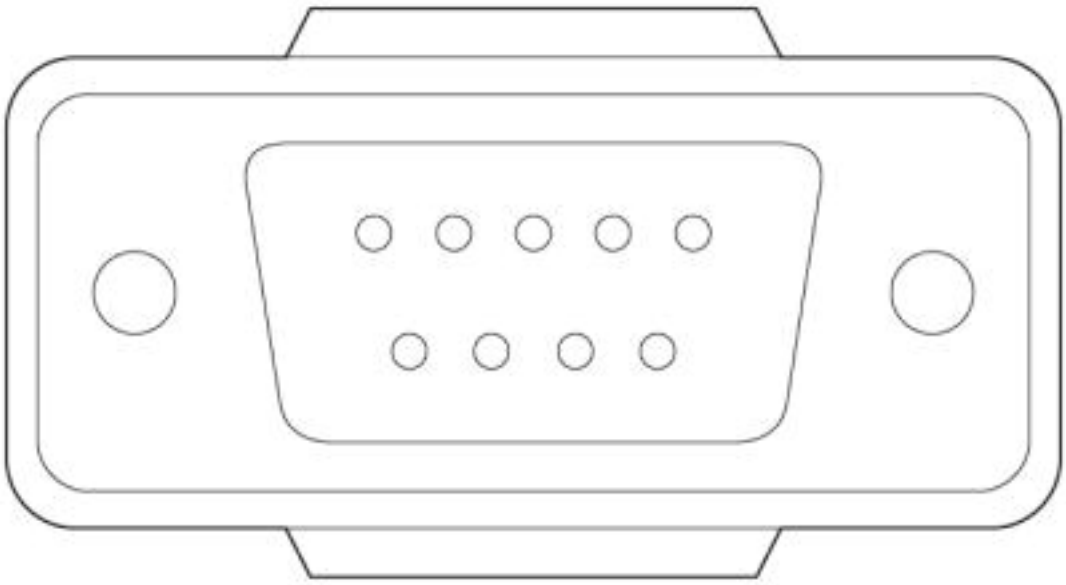
# Surge protection device - D-UFB-PB - 2880642

Dimensional drawing



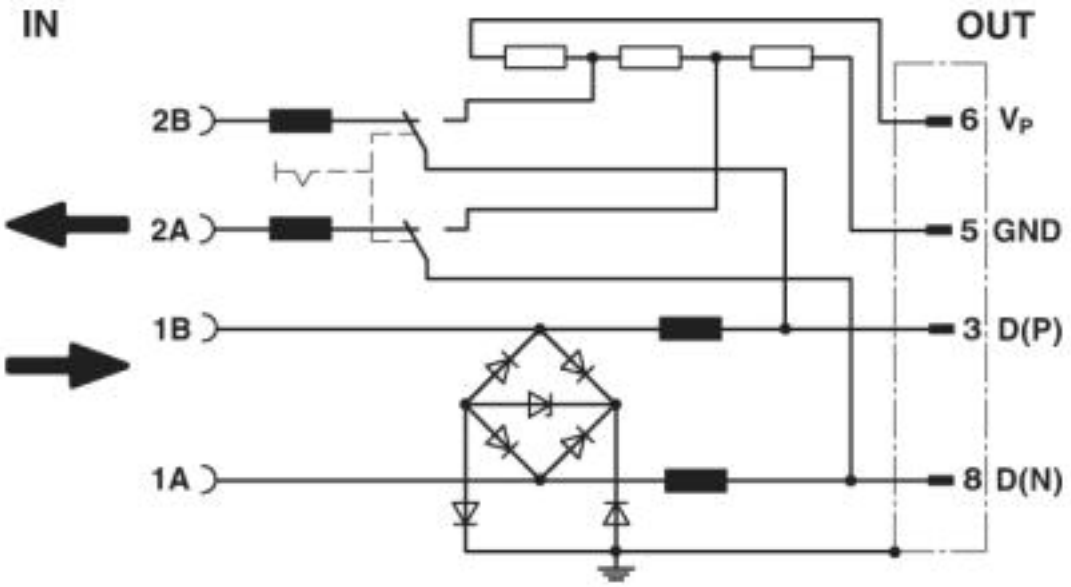

Dimensional drawing: D-UFB-PB

Product drawing



# Surge protection device - D-UFB-PB - 2880642

Circuit diagram




## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27130807 |
| eCl@ss 4.0 | 27130800 |
| eCl@ss 4.1 | 27130800 |
| eCl@ss 5.0 | 27130800 |
| eCl@ss 5.1 | 27130800 |
| eCl@ss 6.0 | 27130800 |
| eCl@ss 7.0 | 27130807 |
| eCl@ss 8.0 | 27130807 |
| eCl@ss 9.0 | 27130807 |

### ETIM

| | |
|---|---|
| ETIM 2.0 | EC000943 |
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000943 |
| ETIM 5.0 | EC000943 |
| ETIM 6.0 | EC000943 |
| ETIM 7.0 | EC000943 |

### UNSPSC

| | |
|---|---|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |

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## Classifications

### UNSPSC

| | |
|---|---|
| UNSPSC 13.2 | 39121620 |
| UNSPSC 18.0 | 39121620 |
| UNSPSC 19.0 | 39121620 |
| UNSPSC 20.0 | 39121620 |
| UNSPSC 21.0 | 39121620 |

## Approvals

### Approvals

Approvals

UL Listed / EAC

Ex Approvals

### Approval details

| | | | |
|---|---|---|---|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 138168 |

| | | |
|---|---|---|
| EAC | | RU C-DE.A*30.B01561 |



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