

# 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
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#### PCB connection

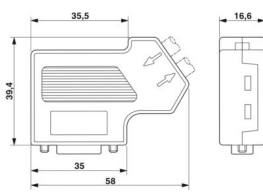
Connection method	Screw connection
Stripping length	5 mm
Conductor cross-section, rigid min.	0.14 mm <sup>2</sup>
Conductor cross-section, rigid max.	1.5 mm <sup>2</sup>
Conductor cross-section flexible min.	0.14 mm <sup>2</sup>
Conductor cross-section flexible max.	1 mm <sup>2</sup>
Conductor cross-section 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 <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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) $\mu\text{s}$ (line-line)	350 A
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-ground)	350 A
Total discharge current $I_{Total}$ (8/20) $\mu\text{s}$	350 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-line)	350 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-earth)	350 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-line) spike	$\leq 20$ V
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 20$ V
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-line) static	$\leq 14$ V
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) static	$\leq 14$ V
Output voltage limitation (10/700) $\mu\text{s}$ (line-line)	$\leq 15$ V ( $U_o=4$ kV)
Output voltage limitation (10/700) $\mu\text{s}$ (line-earth)	$\leq 15$ V ( $U_o=4$ kV)
Residual voltage at $I_n$ (conductor-conductor)	$\leq 25$ V

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Residual voltage at $I_n$ (conductor-ground)	$\leq 25$ V
Voltage protection level $U_p$ (line-line)	$\leq 25$ V (C1 - 500 V / 250 A)
	$\leq 15$ V (C3 - 25 A)
	$\leq 15$ V (B2 - 4 kV / 100 A)
Voltage protection level $U_p$ (line-earth)	$\leq 25$ V (C1 - 500 V / 250 A)
	$\leq 15$ V (C3 - 25 A)
	$\leq 15$ V (B2 - 4 kV / 100 A)
Response time $t_A$ (line-line)	$\leq 500$ ns
Response time $t_A$ (line-earth)	$\leq 500$ ns
Cut-off frequency $f_g$ (3 dB), sym. in 100 $\Omega$ system	typ. 70 MHz
Inductivity in series	0.11 $\mu$ 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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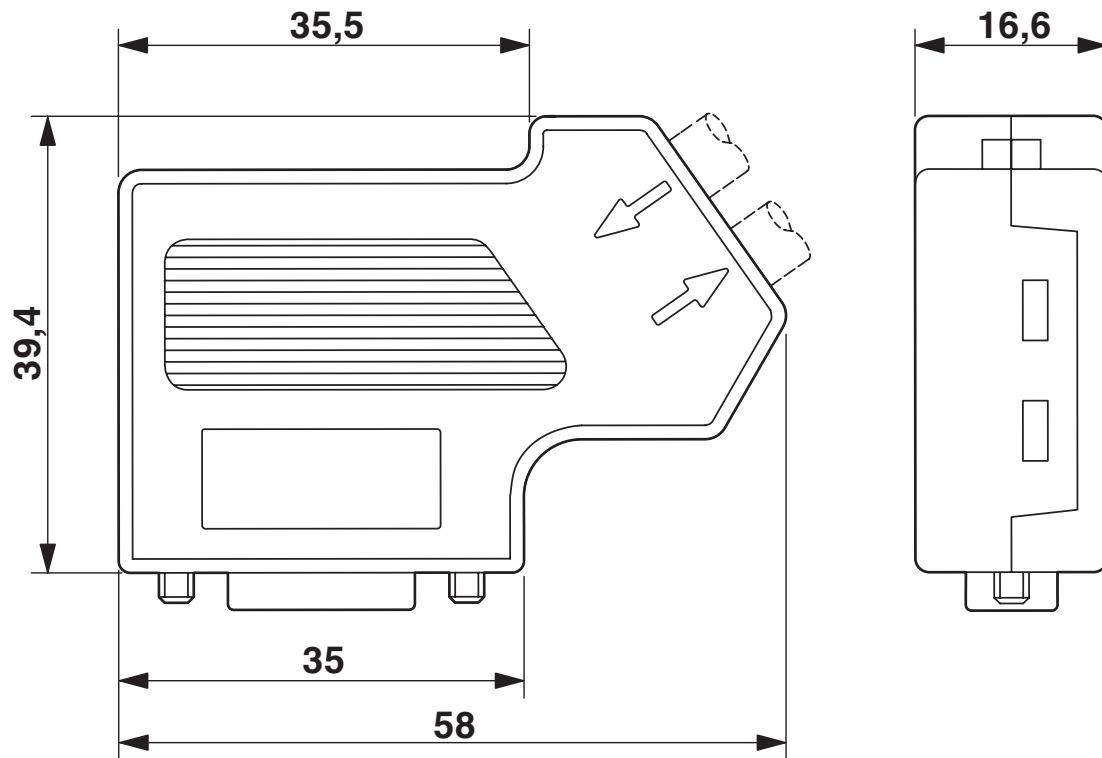
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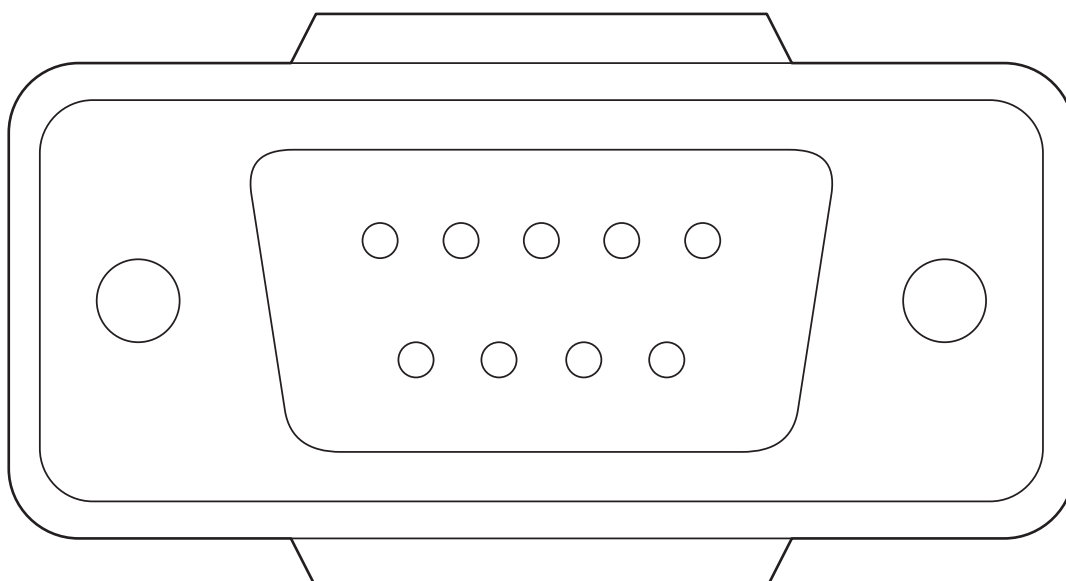
## Drawings

Dimensional drawing



Dimensional drawing: D-UFB-PB

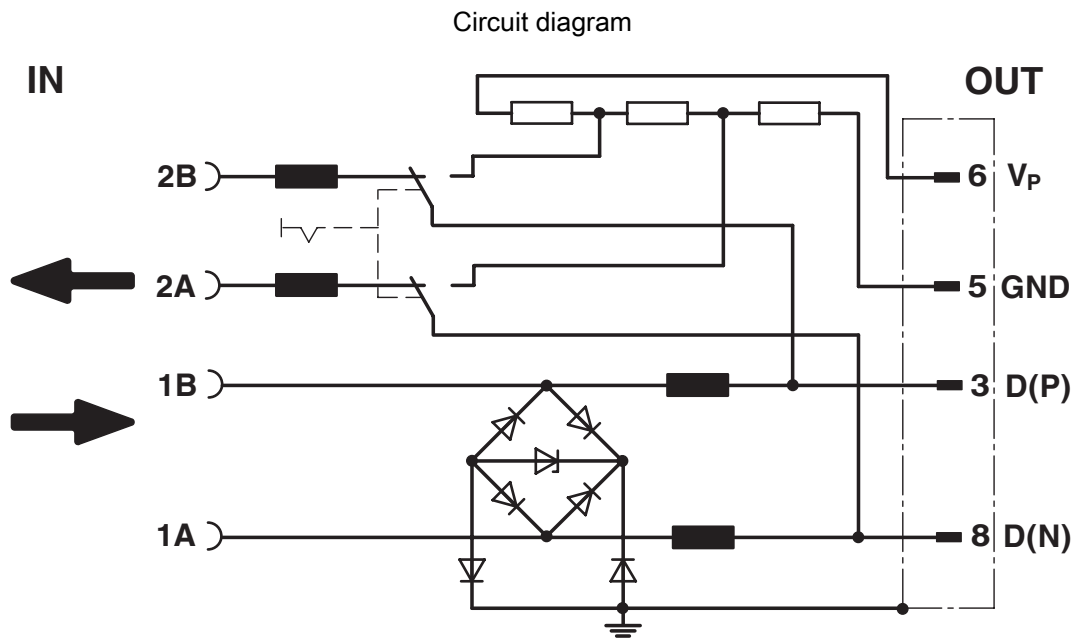
Product drawing



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## Classifications

### ECLASS

ECLASS-13.0	27171503
ECLASS-15.0	27171503

### ETIM

ETIM 10.0	EC001466
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### 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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