

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
Catalog page	Page 155 (C-4-2017)
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 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

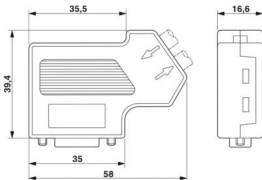
Dimensions

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2880642

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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
Housing material	ABS, metal-plated

Mechanical properties

Mechanical data	
Open side panel	No
Insertion/withdrawal cycles	> 200

Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Maximum continuous voltage U_C	5.2 V DC
Rated current	250 mA (25 °C)
Operating effective current I_C at U_C	$\leq 100 \mu A$
Residual current I_{PE}	$\leq 100 \mu A$
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	$\leq 20 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 20 V$
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 14 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 14 V$
Output voltage limitation (10/700) μs (line-line)	$\leq 15 V$ ($U_o=4 kV$)
Output voltage limitation (10/700) μs (line-earth)	$\leq 15 V$ ($U_o=4 kV$)
Residual voltage at I_n (conductor-conductor)	$\leq 25 V$
Residual voltage at I_n (conductor-ground)	$\leq 25 V$
	$\leq 25 V$ (C1 - 500 V / 250 A)

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Voltage protection level U_p (line-line)	≤ 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

Air clearances and creepage distances

Standards/regulations	IEC 60664-1 / DIN VDE 0110-1
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Standards Information technology specification

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

Mounting

Mounting type	Direct assembly on the device interface
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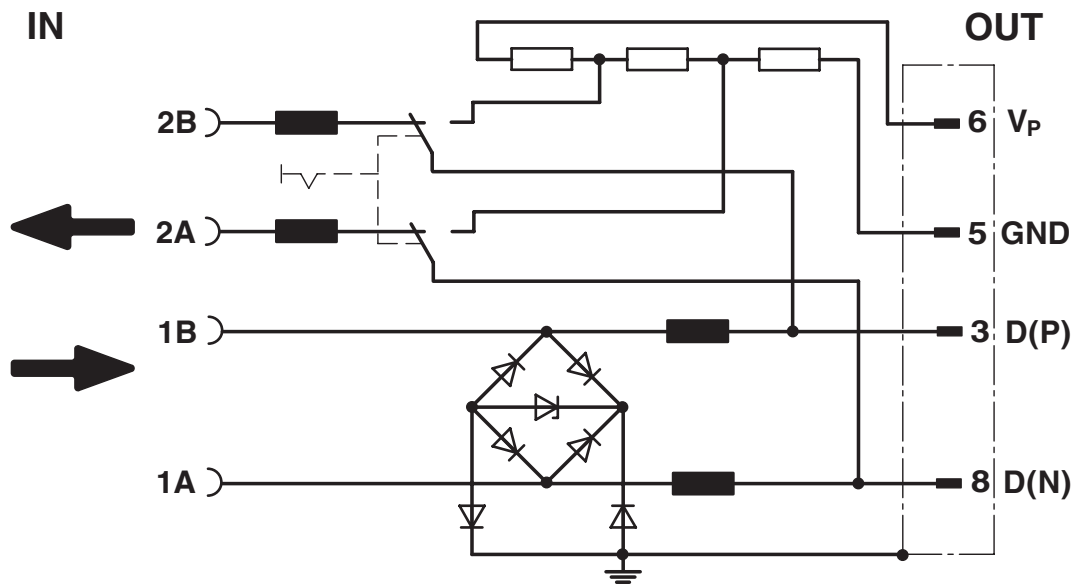
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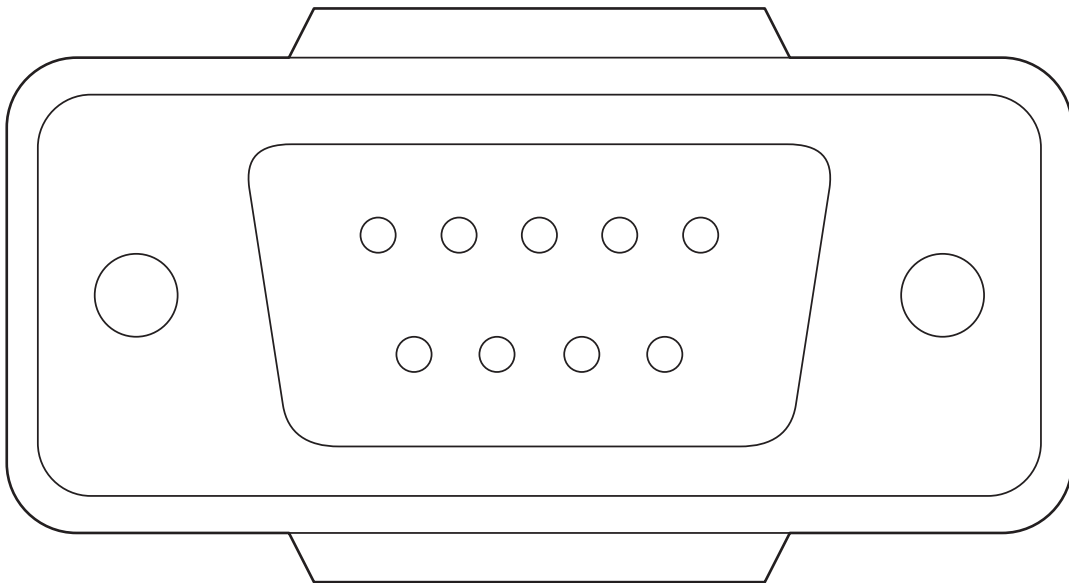


Drawings

Circuit diagram



Product drawing



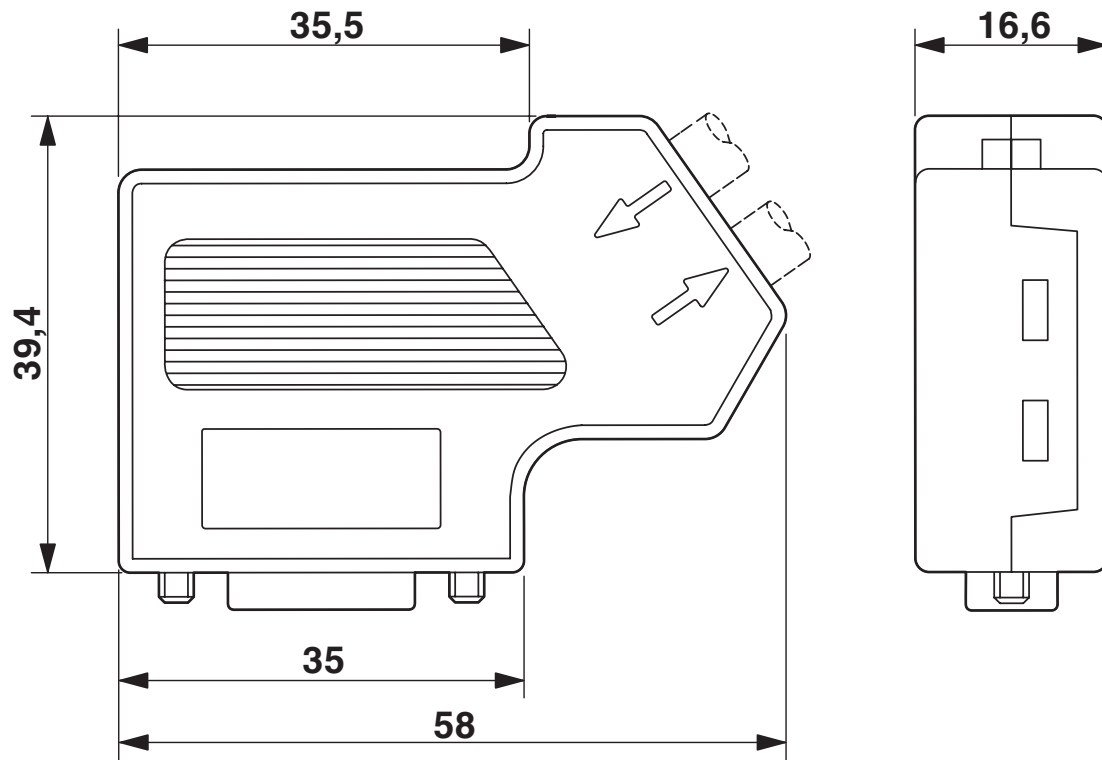
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Dimensional drawing



Dimensional drawing: D-UFB-PB

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171503

ETIM

ETIM 9.0	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	9bc3aad8-885e-4321-8a11-8cd8837f9d1d

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