

## 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.



### Why buy this product

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



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 048989

### 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 clearances and creepage distances	IEC 60664-1
	DIN VDE 0110-1
Overvoltage category	II
Degree of pollution	2
Mounting type	Direct assembly on the device interface

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## Technical data

### General

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
Maximum continuous voltage $U_c$ (wire-wire)	5.2 V DC
Maximum continuous voltage $U_c$ (wire-ground)	5.2 V DC
Nominal current $I_N$	250 mA (25 °C)
Operating effective current $I_c$ at $U_c$	$\leq 100 \mu\text{A}$
Residual current $I_{PE}$	$\leq 100 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Core)	350 A
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	350 A
Total surge current (8/20) $\mu\text{s}$	350 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Core)	350 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Earth)	350 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) spike	$\leq 20 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike	$\leq 20 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) static	$\leq 14 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) static	$\leq 14 \text{ V}$
Output voltage limitation (10/700) $\mu\text{s}$ (core-core)	$\leq 15 \text{ V}$ ( $U_0=4 \text{ kV}$ )
Output voltage limitation (10/700) $\mu\text{s}$ (Core-Earth)	$\leq 15 \text{ V}$ ( $U_0=4 \text{ kV}$ )
Residual voltage at $I_n$ (conductor-conductor)	$\leq 25 \text{ V}$
Residual voltage at $I_n$ (conductor-ground)	$\leq 25 \text{ V}$
Voltage protection level $U_p$ (core-core)	$\leq 25 \text{ V}$ (C1 (500 V/250 A))
	$\leq 15 \text{ V}$ (C3 - 25 A)
	$\leq 15 \text{ V}$ (B2 (4 kV/100 A))
Voltage protection level $U_p$ (core-ground)	$\leq 25 \text{ V}$ (C1 (500 V/250 A))
	$\leq 15 \text{ V}$ (C3 - 25 A)
	$\leq 15 \text{ V}$ (B2 (4 kV/100 A))
Response time $t_A$ (Core-Core)	$\leq 500 \text{ ns}$
Response time $t_A$ (Core-Earth)	$\leq 500 \text{ ns}$
Cut-off frequency $f_g$ (3 dB), sym. in 100 Ohm system	typ. 70 MHz
Inductivity in series	0.11 $\mu\text{H}$

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## Technical data

### Protective circuit

Impulse durability (conductor-conductor)	C1 - 500 V / 250 A
	C3 - 2 kV/25 A
Impulse durability (conductor-ground)	C1 (500 A/250 A)
	C3 - 2 kV/25 A

### Connection data

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

### Connection, equipotential bonding

Connection method	PVC Litz wire, 1.0 mm <sup>2</sup> , 0.5 m length
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### Standards and Regulations

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

## Classifications

### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

### ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943

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## Classifications

### ETIM

ETIM 4.0	EC000943
ETIM 5.0	EC000943

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Approvals

### Approvals

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Approvals

UL Listed / EAC

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Ex Approvals

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Approvals submitted

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### Approval details

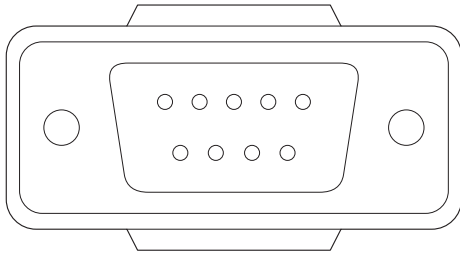
UL Listed 
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EAC
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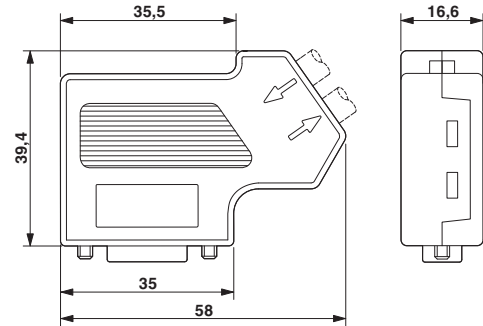
## Drawings

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

Product drawing

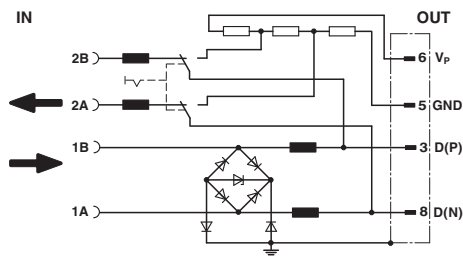


Dimensional drawing



Dimensional drawing: D-UFB-PB

Circuit diagram



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