

# CN-UB-280DC-SB - Surge protection device



2818148

<https://www.phoenixcontact.com/us/products/2818148>

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Attachment plug with replaceable surge protection for coaxial signal interfaces. Connection: N connector plug/socket

## Your advantages

- Easy installation with system-compliant connection
- Use under extreme ambient conditions with robust design
- Service-friendly with replaceable protective components

## Commercial data

Item number	2818148
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL25
Product key	CL3311
GTIN	4017918148379
Weight per piece (including packing)	146 g
Weight per piece (excluding packing)	145.8 g
Customs tariff number	85363010
Country of origin	TW

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## Technical data

### Notes

#### General

Note	To meet the discharge conditions for DC voltages, please note the following information: "The surge protective device should be used together with a transmitter unit, which shuts down in the event of a short-circuit."
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### Product properties

Product type	Surge protection for transceiver systems
IEC test classification	C1
	C2
	C3
	D1
Type	Intermediate plug
Surge protection fault message	none

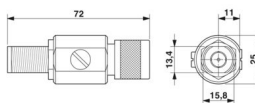
#### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Connection data

Connection method	N connector 50 Ω
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### Dimensions

Dimensional drawing	
Width	25 mm
Height	25 mm
Depth	72 mm

### Material specifications

Color	nickel color
	copper color
Seal material	Silicon
Housing material	Nickel-plated brass
Housing surface material	Ni
Contact surface material	Au
Inner conductor material	CuZn
Inner conductor surface material	Gold
Insulation body material	PTFE

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Spring contact material	CuSn
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## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Direction of action	Line-Shield/Earth Ground
Maximum continuous operating voltage $U_C$	280 V DC
	195 V AC
Rated current	5 A (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-ground)	20 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-shield)	20 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-earth)	2.5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-shield)	2.5 kA
Total discharge current $I_{Total}$ (8/20) $\mu\text{s}$	20 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-earth)	20 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-shield)	20 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	100 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-shield)	100 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 900 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-shield) spike	$\leq 900 \text{ V}$
Voltage protection level $U_p$ (line-earth)	$\leq 900 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 1.1 \text{ kV}$ (C2 - 10 kV / 5 kA)
	$\leq 1 \text{ kV}$ (C3 - 25 A)
Voltage protection level $U_p$ (line-shield)	$\leq 900 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 1.1 \text{ kV}$ (C2 - 10 kV / 5 kA)
	$\leq 1 \text{ kV}$ (C3 - 25 A)
Response time $t_A$	$\leq 100 \text{ ns}$
Input attenuation aE, asym.	typ. 0.1 dB ( $\leq 1.2 \text{ GHz}$ / 50 $\Omega$ )
	typ. 0.2 dB ( $\leq 2.2 \text{ GHz}$ / 50 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (shield) in 50 $\Omega$ system	$> 3 \text{ GHz}$
Voltage standing wave ratio VSWR in a 50 $\Omega$ system	typ. 1.10 ( $\leq 2 \text{ GHz}$ )
Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system)	700 W (VSWR = 1.1)
	200 W (VSWR = $\infty$ )
Capacity	typ. 1.5 pF
Surge protection fault message	none
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 2.5 kA
Impulse durability (line-shield)	C1 - 1 kV / 500 A
	C2 - 10 kV/5 kA

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	C3 - 100 A
	D1 - 2.5 kA

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP55
Ambient temperature (operation)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl)

## Standards and regulations

Standards/specifications	IEC 61643-21
Note	2000 + A1:2008
Standards/specifications	EN 61643-21
Note	2001 + A1:2009

## Mounting

Mounting type	Connection-specific intermediate plugging
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# CN-UB-280DC-SB - Surge protection device

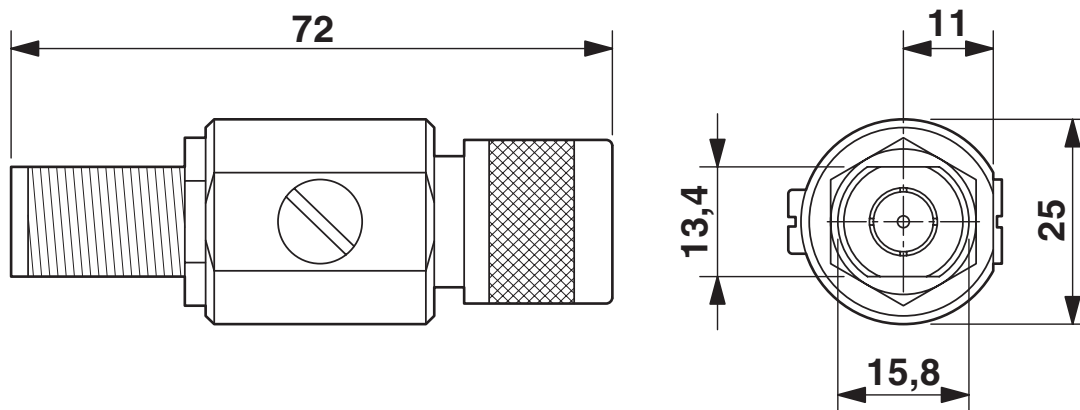


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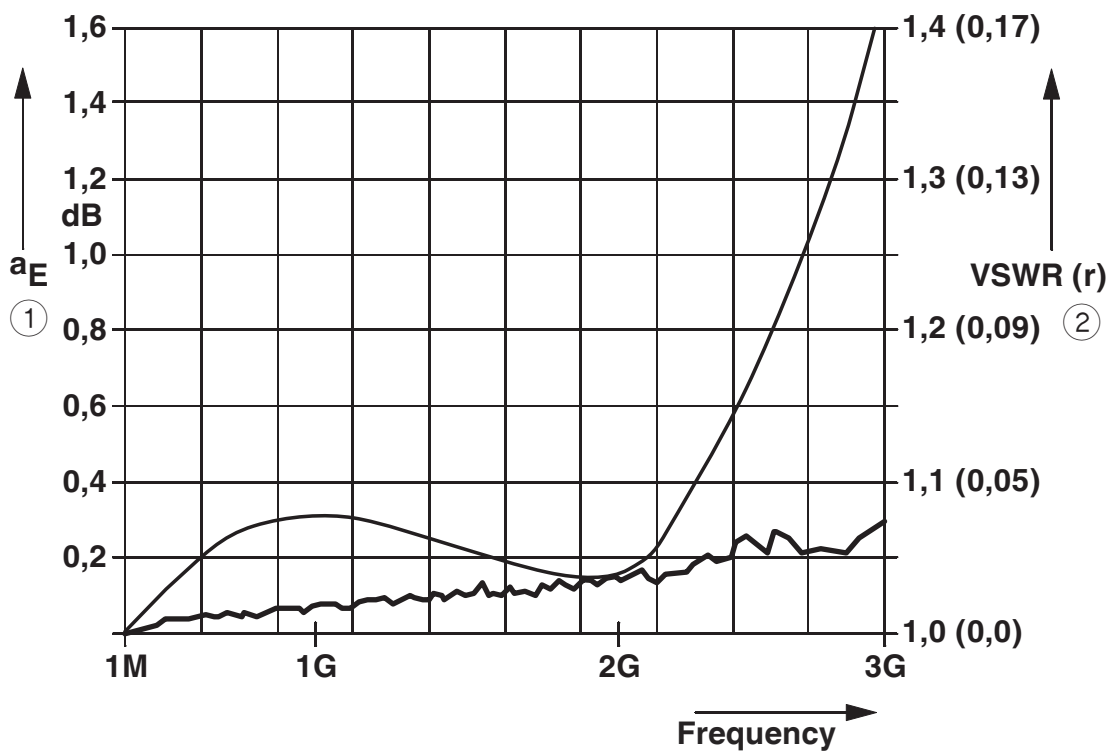
<https://www.phoenixcontact.com/us/products/2818148>

## Drawings

Dimensional drawing



Diagram



① Typical attenuation curve for CN-UB-280DC...

② Typical VSWR at CN-UB-280DC...

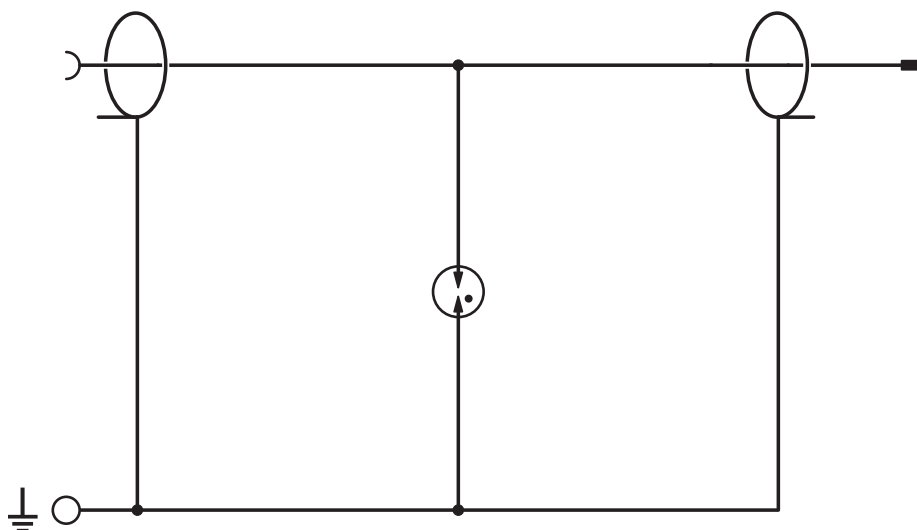
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Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2818148>



### UL Listed

Approval ID: FILE E 138168



### UL Listed

Approval ID: FILE E 362540

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	280 V	5 A	-	-



### cUL Listed

Approval ID: FILE E 333250

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	280 V	5 A	-	-



### UL Listed

Approval ID: FILE E 333250

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	280 V	5 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27171504
ECLASS-15.0	27171504

### 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	6(c)

### 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	1a333f25-257e-49c2-86f5-4b7a9223c94c

### EF3.1 Climate Change

CO2e kg	5.672 kg CO2e
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