

# Surge protection device - CN-UB-280DC-3-BB



2801050

<https://www.phoenixcontact.com/pc/products/2801050>

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

## Commercial Data

Item number	2801050
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CL3311
Catalog Page	Page 200 (C-4-2019)
GTIN	4046356675727
Weight per Piece (including packing)	172 g
Weight per Piece (excluding packing)	145 g
Customs tariff number	85363010
Country of origin	CN

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## Technical Data

### Product properties

IEC test classification	C2
	C3
	D1
Type	Attachment plug
Product type	Surge protection for transceiver systems
Number of positions	1
Surge protection fault message	none

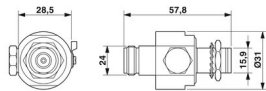
### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Connection data

Connection method	N connector 50 Ω
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### Dimensions

Dimensional drawing	
Width	31 mm
Height	33.5 mm
Length	57.8 mm

### Material specifications

Color	nickel
Housing surface material	Cu-Sn-Zn
Contact surface material	Au
Housing material	HPb59-1
Inner conductor material	QSn6.5-0.1
Inner conductor surface material	Gold
Insulation body material	PTFE
Spring contact material	QSn6.5-0.1

### Mechanical properties

#### Mechanical data

Open side panel	No
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### Protective circuit

Direction of action	Line-Shield/Earth Ground
Maximum continuous voltage $U_C$	280 V DC

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Maximum continuous voltage $U_C$ (line-earth)	280 V DC
Rated current	5 A (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1 \mu\text{A}$
Nominal discharge surge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	20 kA
Nominal discharge surge current $I_n$ (8/20) $\mu\text{s}$ (core-shield)	20 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$	2.5 kA
Total surge current (10/350) $\mu\text{s}$	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-shield)	100 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 900$ V
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-shield) spike	$\leq 900$ V
Voltage protection level $U_p$ (line-earth)	$\leq 900$ V (C1 - 1 kV / 500 A)
	$\leq 1.1$ kV (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ (line-shield)	$\leq 900$ V (C1 - 1 kV / 500 A)
	$\leq 1.1$ kV (C2 - 10 kV / 5 kA)
Response time $t_A$ (line-earth)	$\leq 100$ ns
Response time $t_A$ (line-shield)	$\leq 100$ ns
Input attenuation aE, asym.	typ. 0.1 dB ( $\leq 3$ GHz)
Cut-off frequency $f_g$ (3 dB), asym. (shield) in 50 $\Omega$ system	> 3 GHz
Frequency range	0 Hz ... 3 GHz
Voltage standing wave ratio VSWR in a 50 $\Omega$ system	typ. 1.15 ( $\leq 3$ GHz)
	max. 1.2
Permissible HF power $P_{max}$ at VSWR = xx (50 ohm system)	700 W (VSWR = 1.1)
	200 W (VSWR = $\infty$ )
Capacity (Core-Earth)	typ. 1.5 pF
Capacity asymmetrical (shield)	typ. 1.5 pF
Surge protection fault message	none
Impulse durability (line-earth)	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 2.5 kA

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### Air clearances and creepage distances

Standards/regulations	IEC 60664-1
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Standards/specifications	IEC 61643-21/A1
Standards/specifications	EN 61643-21/A1

## Mounting

Mounting type	Connection-specific intermediate plugging
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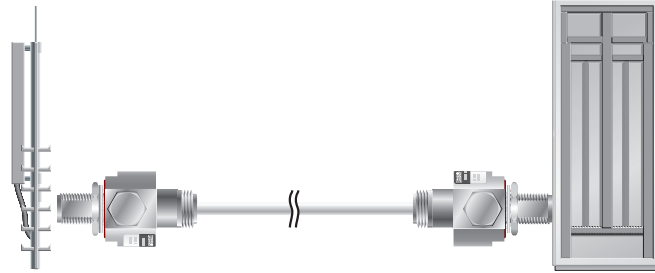
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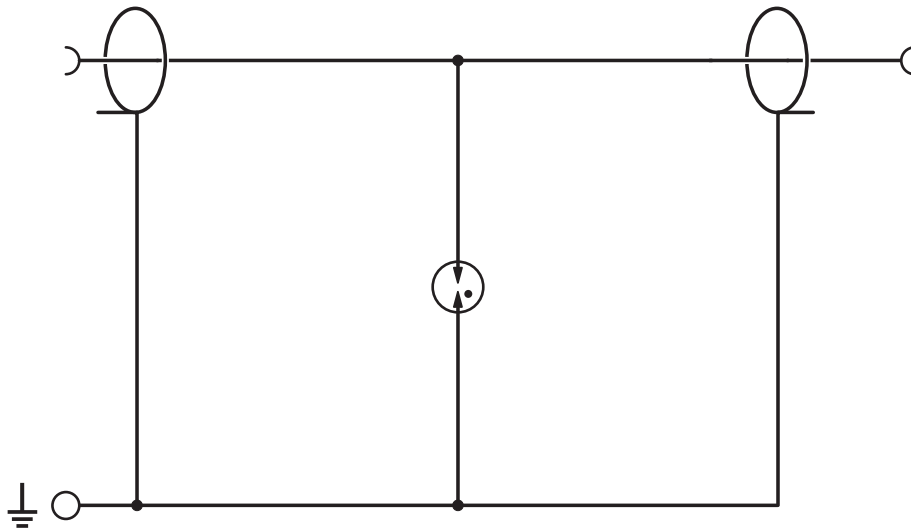
<https://www.phoenixcontact.com/pc/products/2801050>

## Drawings

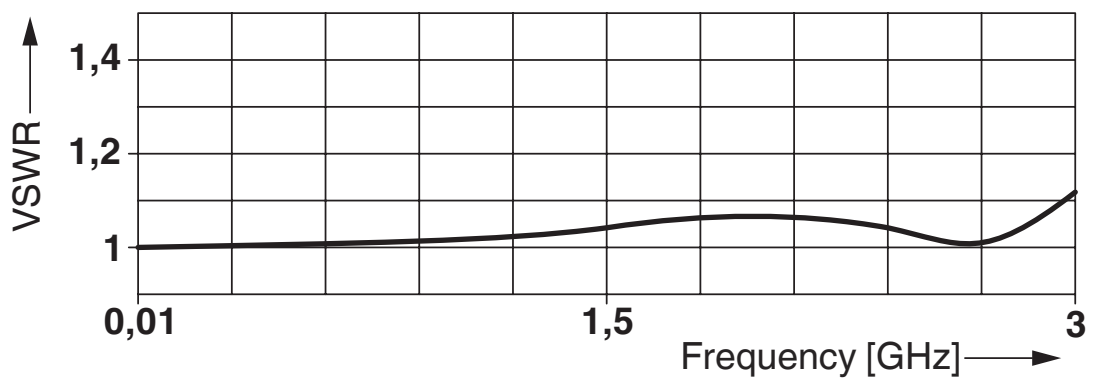
Application drawing



Circuit diagram



Diagram

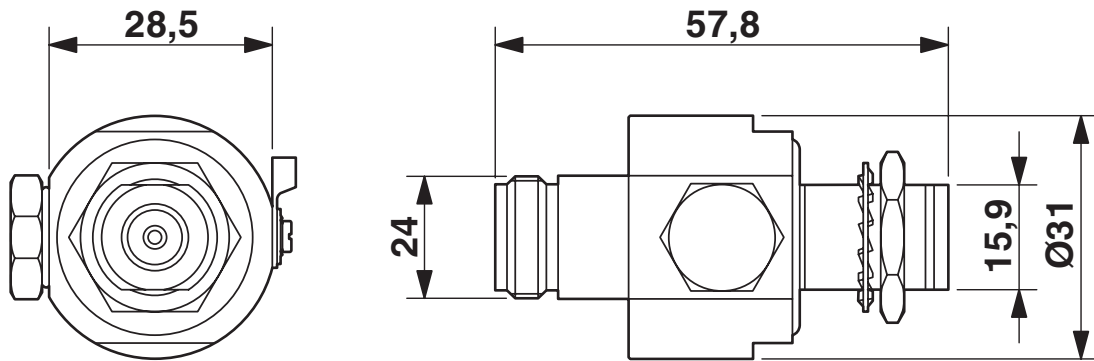


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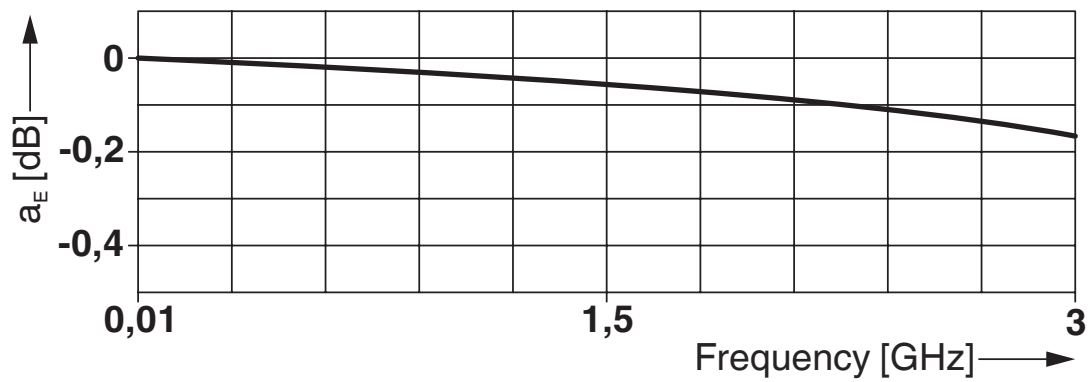
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Dimensional drawing



Dimensional drawing  
CN-UB-280DC-3-BB

Diagram



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## Approvals



**EAC**

Approval ID: RU C-DE.\*09.B.00169

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## Classifications

### ECLASS

ECLASS-9.0	27130807
ECLASS-10.0.1	27130807
ECLASS-11.0	27130807

### ETIM

ETIM 8.0	EC000943
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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## Accessories

### Mounting plate

Mounting plate - CN-UB/MP - 2818135

<https://www.phoenixcontact.com/pc/products/2818135>

Tongue for attaching the CN-UB..., to housing panels, for example.



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### Mounting plate

Mounting plate - CN-UB/MP-90DEG-50 - 2803137

<https://www.phoenixcontact.com/pc/products/2803137>

Angled bracket for individually fixing CN-UB... to housing panels, for example.



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## Gas-filled surge arrester

Gas-filled surge arrester - CN-UB-G1 - 2818203

<https://www.phoenixcontact.com/pc/products/2818203>

Reserve gas-filled surge arrester for CN-UB-280DC...



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