

CTNC-UFB-5DC/E

Order No.: 2762087



Attachment plug with surge voltage coarse and fine protection, for coaxial signal interfaces with floating shield, signal voltage 5 V.
Connection: TNC female/male connector

Commercial data

EAN	4017918064839
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.11418 KG
Catalog page information	Page 117 (TT-2002)

Technical data

General

Housing material	Aluminum
Color	black
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	93.00 mm
Length	25.40 mm

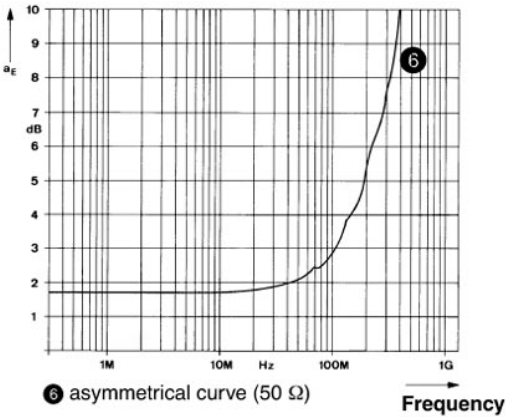
Protective circuit

IEC category	C2
	C3

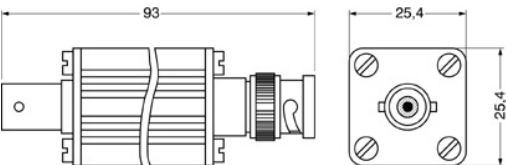
VDE requirement class	C2
	C3
Nominal voltage U_N	5 V DC
Arrester rated voltage U_C (Core-Earth)	5 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_C at U_C	$\leq 300 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-GND)	10 kA
Output voltage limitation at 1 kV/ μs (Core-Core) spike	$\leq 13 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 500 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 500 V$
Output voltage limitation at 1 kV/ μs (Core-GND) static	$\leq 13 V$
Residual voltage at I_n , (conductor-GND)	$\leq 10 V$
Protection level U_p (Core-Earth)	$\leq 500 V$
Protection level U_p (Core-GND)	$\leq 13 V$
Response time t_A (Core-Earth)	$\leq 500 ns$
	$\leq 100 ns$
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ohm system	170 MHz
Resistance in series	22 Ω
Connection data	
Type of connection	TNC 50 Ω
Connection type IN	TNC socket
Connection type OUT	TNC plug
Connection, protective circuit	
Standards/regulations	Draft IEC 64644-1
	E VDE 0845-3-1

Drawings

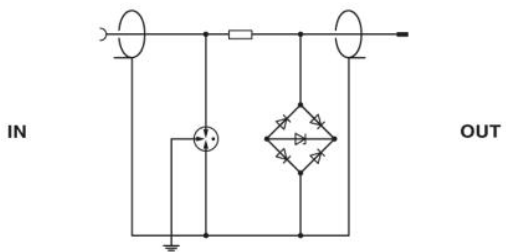
Diagram



Dimensioned drawing



Circuit diagram



RF-TRAB-G2

Order No.: 2763002



Reserve gas-filled surge arrester for RF-TRAB

Commercial data	
EAN	4017918065287
Pack	1 pcs.
Customs tariff	85363010
Weight/Piece	0.0033 KG
Catalog page information	Page 115 (TT-2002)

C-UFB- 5DC/E 75

Order No.: 2763604

The illustration shows version C-UFB- 5DC/E



Attachment plug with surge voltage coarse and fine protection, for
coaxial signal interfaces with floating shield, signal voltage 5 V.
Connection: BNC female/male connector

Commercial data

EAN	4017918347772
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.1137 KG
Catalog page information	Page 175 (TT-2009)

Technical data

General

Housing material	Aluminum
Color	black

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) μ s	20 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	93.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	5 V DC
Arrester rated voltage U_c (Core-Shield)	5 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_c at U_c	$\leq 300 \mu$ A
Discharge current to PE at U_c	$\leq 2 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	10 kA
Total surge current (8/20) μ s	20 kA
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 150 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) static	≤ 13 V
Residual voltage at I_n , (conductor-shield)	≤ 12 V
Protection level U_p (Core-Earth)	≤ 500 V
Protection level U_p (Core-Shield)	≤ 13 V
Response time t_A (Core-Earth)	≤ 100 ns

Response time t_A (Core-GND)	$\leq 500 \text{ ns}$
Input attenuation a_E , asym.	1.3 dB ($\leq 5 \text{ MHz}$)
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 80 MHz
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	BNC 75 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, equipotential bonding

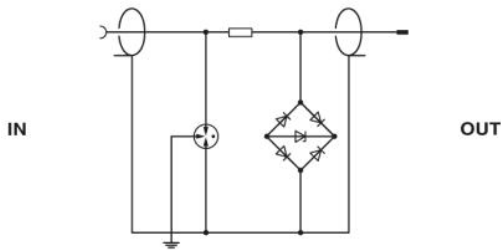
Type of connection	PVC litz wire
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Connection, protective circuit

Standards/regulations	IEC 61643-21
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Drawings

Circuit diagram



CN-UB/E

Order No.: 2763691



Attachment plug with surge protection, for coaxial signal interfaces
with floating shield. Connection: N connector female/male connector

Commercial data

EAN	4017918099527
Pack	1 pcs.
Customs tariff	85363010
Weight/Piece	0.15155 KG
Catalog page information	Page 169 (TT-2009)

Technical data**General**

Housing material	Aluminum
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10

Surge voltage category	II
Pollution degree	2
Total surge current (8/20) μ s	10 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	25.40 mm
Length	83.00 mm

Protective circuit

IEC category	C2
	C3
	D1
VDE requirement class	C2
	C3
	D1
Arrester rated voltage U_c	180 V DC
	130 V AC
Arrester rated voltage U_c (Core-Earth)	180 V DC
	130 V AC
Nominal current I_n	5 A (25°C)
Operating effective current I_c at U_c	$\leq 1 \mu$ A
Discharge current to PE at U_c	$\leq 2 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	5 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	5 kA
Nominal discharge surge current I_n (8/20) μ s (Shield-Earth)	5 kA
Total surge current (8/20) μ s	10 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Earth)	100 A
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 470 V

Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 590 V
Output voltage limitation at 1 kV/ μ s (Shield-Earth) spike	≤ 470 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 470 V
	≤ 33 V
Output voltage limitation at 1 kV/ μ s (Shield-Earth) static	≤ 33 V
Residual voltage at In, (conductor-ground)	≤ 160 V (1.5 m cable)
Residual voltage at In, (conductor-shield)	≤ 55 V
Residual voltage at In, (shield-ground)	≤ 160 V (1.5 m cable)
Protection level U_p (Core-Earth)	≤ 500 V (C2, 10 kV/5 kA)
Protection level U_p (Core-Shield)	≤ 700 V (C2, 10 kV/5 kA)
Protection level U_p (Shield-Earth)	≤ 500 V (C2, 10 kV/5 kA)
Response time t_A (Core-Earth)	≤ 100 ns
Response time t_A (Core-GND)	≤ 100 ns
Response time t_A (Shield-Earth)	≤ 100 ns
Input attenuation aE, asym.	0.1 dB (≤ 100 MHz)
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 1 GHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 (≤ 200 MHz)
Permissible HF power $P_{max.}$ at SWR=xx (50 Ohm system)	300 W (VSWR = 1.1)
	80 W (VSWR = ∞)
Capacity asymmetrical (shield)	7 pF (typical)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Shield-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	N connector 50 Ω
Connection type IN	N socket
Connection type OUT	N plug

Connection, equipotential bonding

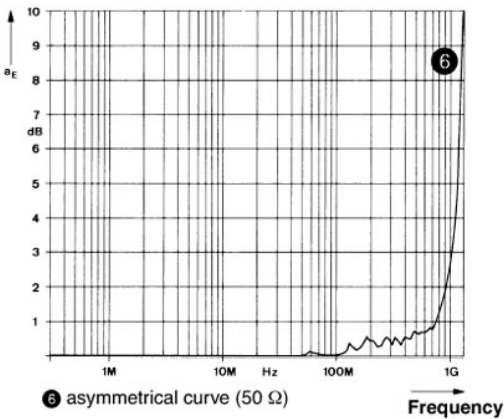
Type of connection	PVC litz wire
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Connection, protective circuit

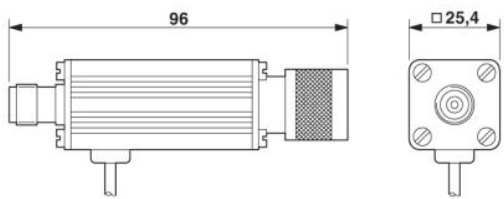
Standards/regulations	IEC 61643-21
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Drawings

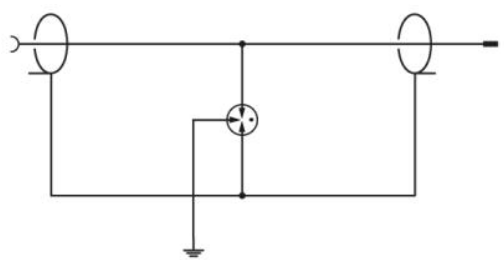
Diagram



Dimensioned drawing



Circuit diagram



C-UB/E

Order No.: 2763701



Attachment plug with surge protection, for coaxial signal interfaces
with floating shield. Connection: BNC female/male connector

Commercial data

EAN	4017918065638
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.10426 KG
Catalog page information	Page 169 (TT-2009)

Technical data**General**

Housing material	Aluminum
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10

Total surge current (8/20) μ s	10 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	80.00 mm
Length	2.54 mm

Protective circuit

IEC category	C2
	C3
	D1
VDE requirement class	C2
	C3
	D1
Arrester rated voltage U_c	180 V DC
	130 V AC
Arrester rated voltage U_c (Core-Earth)	180 V DC
	130 V AC
Nominal current I_N	5 A (25°C)
Operating effective current I_c at U_c	$\leq 1 \mu$ A
Discharge current to PE at U_c	$\leq 2 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	5 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	5 kA
Nominal discharge surge current I_n (8/20) μ s (Shield-Earth)	5 kA
Total surge current (8/20) μ s	10 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Earth)	100 A
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 470 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 590 V

Output voltage limitation at 1 kV/ μ s (Shield-Earth) spike	≤ 470 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 470 V
	≤ 33 V
Output voltage limitation at 1 kV/ μ s (Shield-Earth) static	≤ 33 V
Residual voltage at In, (conductor-ground)	≤ 160 V (1.5 m cable)
Residual voltage at In, (conductor-shield)	≤ 55 V
Residual voltage at In, (shield-ground)	≤ 160 V (1.5 m cable)
Protection level U_p (Core-Earth)	≤ 500 V (C2, 10 kV/5 kA)
Protection level U_p (Core-Shield)	≤ 700 V (C2, 10 kV/5 kA)
Protection level U_p (Shield-Earth)	≤ 500 V (C2, 10 kV/5 kA)
Response time t_A (Core-Earth)	≤ 100 ns
Response time t_A (Core-GND)	≤ 100 ns
Response time t_A (Shield-Earth)	≤ 100 ns
Input attenuation aE, asym.	0.1 dB (≤ 100 MHz)
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 1 GHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 (≤ 200 MHz)
Permissible HF power $P_{max.}$ at SWR=xx (50 Ohm system)	300 W (VSWR = 1.1)
	80 W (VSWR = ∞)
Capacity asymmetrical (shield)	7 pF (typical)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Shield-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, equipotential bonding

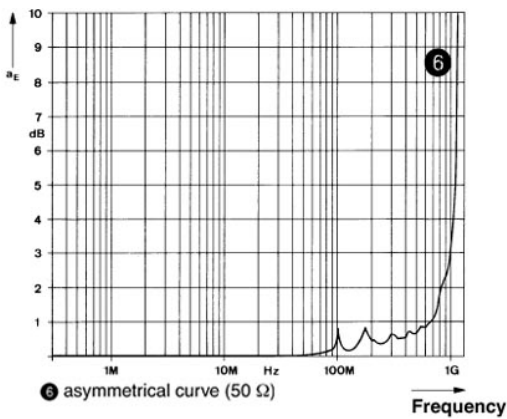
Type of connection	PVC litz wire
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Connection, protective circuit

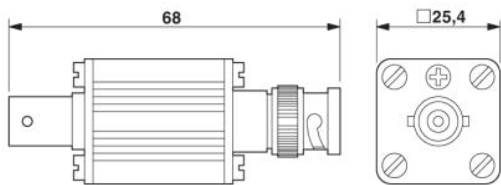
Standards/regulations	IEC 61643-21
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Drawings

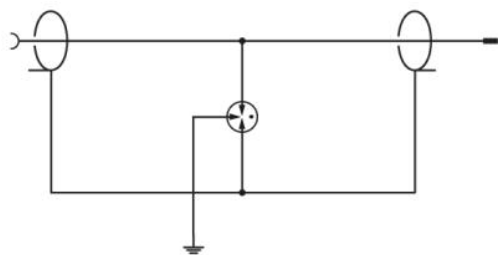
Diagram



Dimensioned drawing



Circuit diagram



RF-TRAB 500

Order No.: 2765084

The illustration shows version RF-TRAB



Attachment plug with replaceable surge protection for coaxial signal interfaces, transmission capacity ≤ 800 W. Connection: UHF female/female.

Commercial data

EAN	4017918066154
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.07947 KG
Catalog page information	Page 172 (TT-2009)

Technical data

General

Housing material	Nickel-plated brass
Color	silver
Total surge current (8/20) μ s	10 kA

Ambient temperature (operation)	-40 °C ... 90 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	60.50 mm
Height	40.00 mm
Length	18.10 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	265 V AC
Arrester rated voltage U_c (Core-Earth)	265 V AC
Arrester rated voltage U_c (Core-Shield)	265 V AC
Nominal current I_N	10 A (25°C)
Operating effective current I_c at U_c	$\leq 1 \mu A$
Discharge current to PE at U_c	$\leq 1 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μs (Core-Shield)	10 kA
Total surge current (8/20) μs	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	≤ 1.5 kV
Output voltage limitation at 1 kV/ μs (Core-Shield) spike	≤ 1.5 kV
Output voltage limitation at 1 kV/ μs (Core-Earth) static	≤ 1.5 kV
Output voltage limitation at 1 kV/ μs (Core-Shield) static	≤ 1.5 kV
Protection level U_p (Core-Earth)	≤ 1.5 kV
Protection level U_p (Core-Shield)	≤ 1.5 kV
Response time t_A (Core-Earth)	≤ 100 ns
Response time t_A (Core-GND)	≤ 100 ns
Input attenuation aE, asym.	0.3 dB (≤ 250 MHz)

Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 950 MHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 (≤ 80 MHz)
Permissible HF power $P_{\max.}$ at SWR=xx (50 Ohm system)	1 kW (VSWR = 1.1)
	300 W (VSWR = ∞)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	UHF connector
Connection type IN	UHF connector, female
Connection type OUT	UHF connector, female

Connection, equipotential bonding

Type of connection	Screw terminal block
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Connection, protective circuit

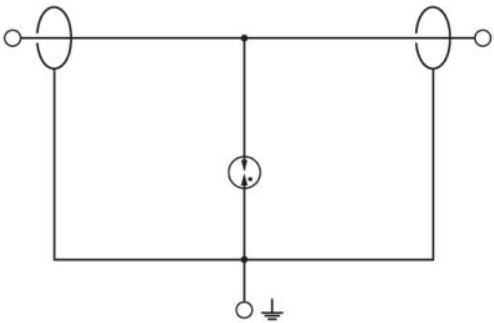
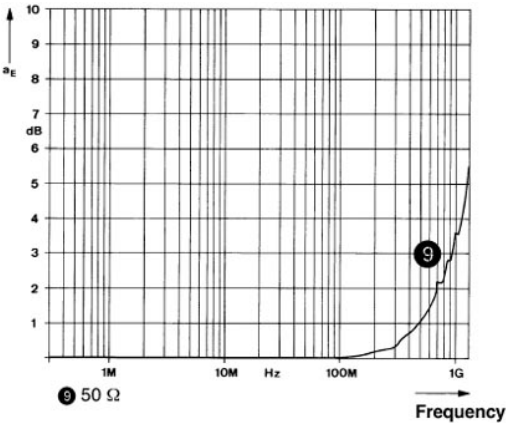
Standards/regulations	IEC 61643-21
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Drawings

Circuit diagram

Diagram

Circuit diagram



RF-TRAB

Order No.: 2782135



Attachment plug with replaceable surge protection for coaxial signal interfaces, transmission capacity ≤ 200 W. Connection: UHF female/female.

Commercial data

EAN	4017918069377
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.07989 KG
Catalog page information	Page 172 (TT-2009)

Technical data

General

Housing material	Nickel-plated brass
Color	silver
Total surge current (8/20) μ s	10 kA

Ambient temperature (operation)	-40 °C ... -90 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	60.50 mm
Height	40.00 mm
Length	18.10 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	130 V AC
Arrester rated voltage U_c (Core-Earth)	130 V AC
Arrester rated voltage U_c (Core-Shield)	130 V AC
Nominal current I_N	10 A (25°C)
Operating effective current I_c at U_c	$\leq 1 \mu A$
Discharge current to PE at U_c	$\leq 1 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μs (Core-Shield)	10 kA
Total surge current (8/20) μs	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 600 V$
Output voltage limitation at 1 kV/ μs (Core-Shield) spike	$\leq 600 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 600 V$
Output voltage limitation at 1 kV/ μs (Core-Shield) static	$\leq 600 V$
Protection level U_p (Core-Earth)	$\leq 600 V$
Protection level U_p (Core-Shield)	$\leq 600 V$
Response time t_A (Core-Earth)	$\leq 100 ns$
Response time t_A (Core-GND)	$\leq 100 ns$
Input attenuation aE, asym.	0.3 dB ($\leq 250 MHz$)

Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 950 MHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 (≤ 80 MHz)
Permissible HF power $P_{max.}$ at SWR=xx (50 Ohm system)	300 W (VSWR = 1.1)
	80 W (VSWR = ∞)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	UHF connector
Connection type IN	UHF connector, female
Connection type OUT	UHF connector, female

Connection, equipotential bonding

Type of connection	Screw terminal block
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Connection, protective circuit

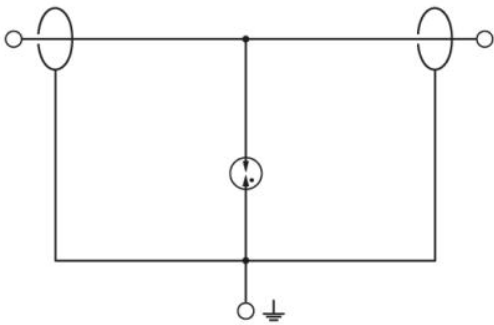
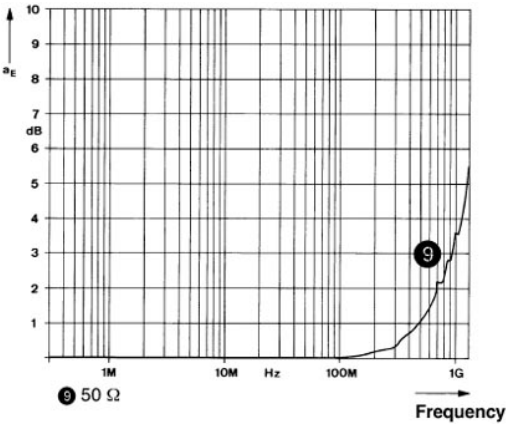
Standards/regulations	IEC 61643-21
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Drawings

Circuit diagram

Diagram

Circuit diagram



RF-TRAB-G1

Order No.: 2782151



Reserve gas-filled surge arrester for RF-TRAB

Commercial data	
EAN	4017918069384
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.00146 KG
Catalog page information	Page 115 (TT-2002)

C-UB

Order No.: 2782245



Attachment connector with surge protection, for coaxial signal interfaces. Connection: BNC female/male connector

Commercial data

EAN	4017918069438
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.06386 KG
Catalog page information	Page 113 (TT-2002)

Technical data

General

Housing material	Aluminum
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10
Ambient temperature (operation)	-40 °C ... 80 °C

Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	25.40 mm
Length	68.00 mm

Protective circuit

IEC category	C2
	C3
	D1
VDE requirement class	C2
	C3
	D1
Arrester rated voltage U_c (Core-Earth)	68 V DC
	50 V AC
Nominal current I_N	1 A (25°C)
Operating effective current I_c at U_c	$\leq 1 \mu A$
Discharge current to PE at U_c	$\leq 1 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μs (Core-Shield)	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 650 V$
Output voltage limitation at 1 kV/ μs (Core-Shield) spike	$\leq 650 V$
Protection level U_p (Core-Earth)	$\leq 650 V$
Protection level U_p (Core-Shield)	$\leq 650 V$
Response time t_A (Core-Earth)	$\leq 100 ns$
Input attenuation aE, asym.	0.1 dB (up to 20 MHz in a 50 Ω system)
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	1 GHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 (200 MHz)
Permissible HF power P_{max} at SWR=xx (50 Ohm system)	40 W (at SWR = 1.1 in a 50 Ω system)
	12 W (at SWR = infinity in a 50 Ω system)

Capacity asymmetrical (shield)	1.5 pF (typical)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

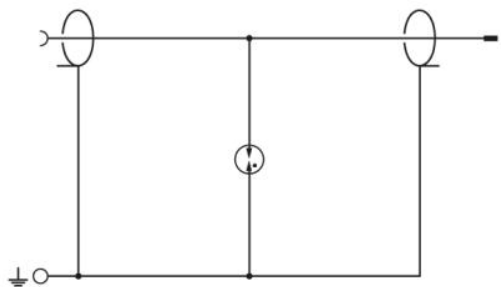
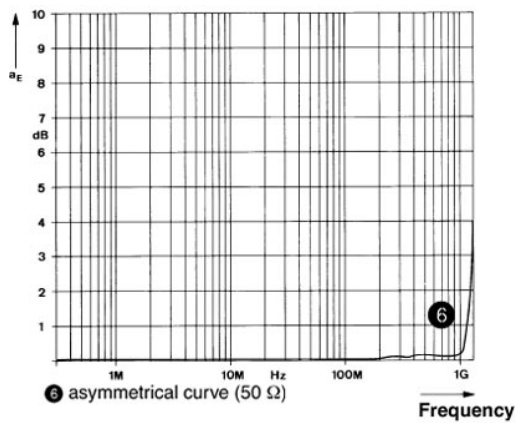
Connection data

Type of connection	BNC 50 Ω
Connection type IN	BNC plug
Connection type OUT	BNC socket

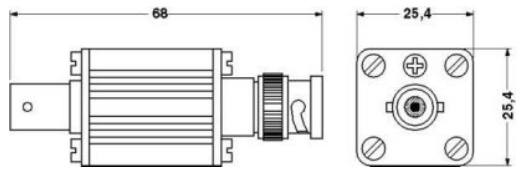
Connection, protective circuit

Standards/regulations	DIN EN 61643-21
	E VDE 0845-3-1
	IEC 61643-21

Drawings	Circuit diagram
Diagram	Circuit diagram



Dimensioned drawing



C-UFB- 5DC/E

Order No.: 2782300



Attachment plug with surge voltage coarse and fine protection, for
coaxial signal interfaces with floating shield, signal voltage 5 V.
Connection: BNC female/male connector

Commercial data

EAN	4017918069445
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.114 KG
Catalog page information	Page 174 (TT-2009)

Technical data**General**

Housing material	Aluminum
Color	black

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) μ s	20 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	93.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	5 V DC
Arrester rated voltage U_c (Core-Shield)	5 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_c at U_c	$\leq 300 \mu$ A
Discharge current to PE at U_c	$\leq 2 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	10 kA
Total surge current (8/20) μ s	20 kA
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 150 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) static	≤ 13 V
Residual voltage at I_n , (conductor-shield)	≤ 10 V
Protection level U_p (Core-Earth)	≤ 500 V
Protection level U_p (Core-Shield)	≤ 13 V
Response time t_A (Core-Earth)	≤ 100 ns

Response time tA (Core-GND)	≤ 500 ns
Input attenuation aE, asym.	1.7 dB (≤ 20 MHz)
Cut-off frequency fg (3 dB), asym. (shield) in 50 Ohm system	Typ. 170 MHz
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, equipotential bonding

Type of connection	PVC litz wire
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Connection, protective circuit

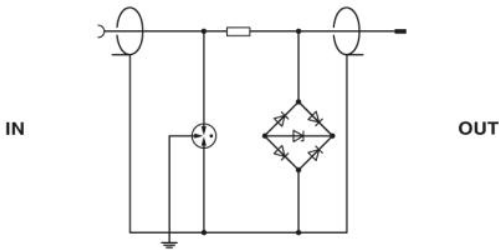
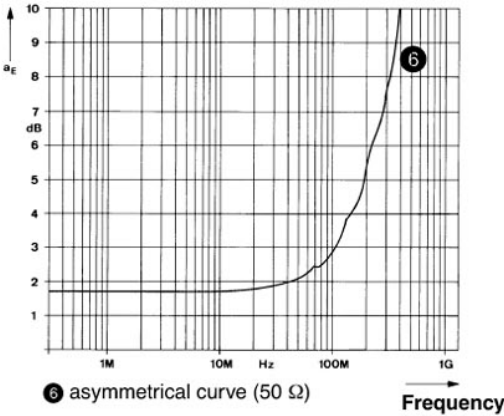
Standards/regulations	IEC 61643-21
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Drawings

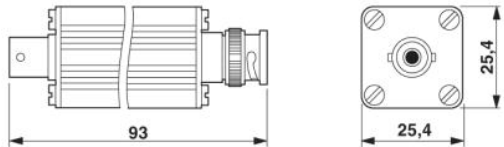
Circuit diagram

Diagram

Circuit diagram



Dimensioned drawing



C-UFB-24DC/E

Order No.: 2782313

The illustration shows version C-UFB- 5DC/E



Attachment plug with surge voltage coarse and fine protection, for
coaxial signal interfaces with floating shield, signal voltage 24 V.
Connection: BNC female/male connector

Commercial data

EAN	4017918069452
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.11369 KG
Catalog page information	Page 174 (TT-2009)

Technical data

General

Housing material	Aluminum
Color	black

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) μ s	20 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	93.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	30 V DC
Arrester rated voltage U_c (Core-Shield)	30 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_c at U_c	$\leq 10 \mu$ A
Discharge current to PE at U_c	$\leq 2 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	10 kA
Total surge current (8/20) μ s	20 kA
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 160 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 500 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) static	≤ 42 V
Residual voltage at I_n , (conductor-ground)	≤ 50 V (10 cm cable)
Residual voltage at I_n , (conductor-shield)	≤ 43 V
Protection level U_p (Core-Earth)	≤ 450 V
Protection level U_p (Core-Shield)	≤ 35 V

Response time tA (Core-Earth)	≤ 100 ns
Response time tA (Core-GND)	≤ 500 ns
Input attenuation aE, asym.	1.7 dB (≤ 20 MHz)
Cut-off frequency fg (3 dB), asym. (shield) in 50 Ohm system	Typ. 170 MHz
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, equipotential bonding

Type of connection	PVC litz wire
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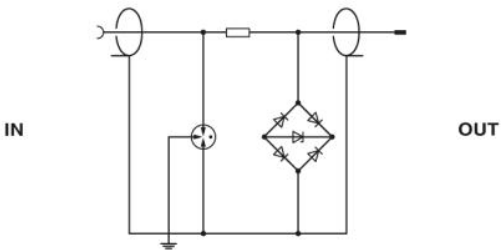
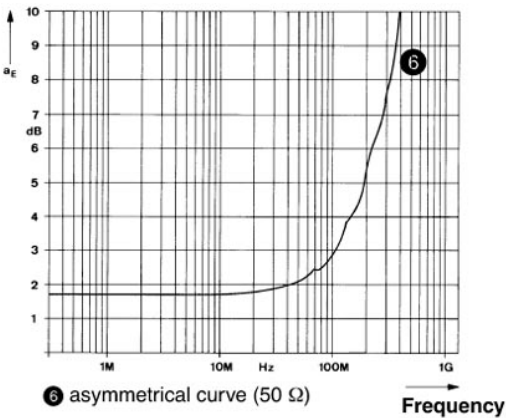
Connection, protective circuit

Standards/regulations	IEC 61643-21
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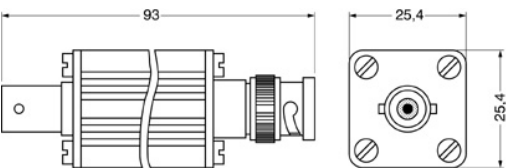
Drawings	Circuit diagram
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Diagram

Circuit diagram



Dimensioned drawing



RF-TRAB-A1

Order No.: 2782575



Screw-on module with surge protection, for coaxial signal interfaces with floating shield, transmission power 200 W, connection: UHF connector

Commercial data

EAN	4017918069629
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.10964 KG
Catalog page information	Page 173 (TT-2009)

Technical data

General

Housing material	Aluminum
Color	black
Total surge current (8/20) μ s	10 kA

Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Protective circuit	
IEC category	C2
	C3
	D1
Arrester rated voltage U_c	130 V AC
Arrester rated voltage U_c (Core-Earth)	130 V AC
Discharge current to PE at U_c	$\leq 2 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	5 kA
Nominal discharge surge current I_n (8/20) μs (Core-Shield)	5 kA
Total surge current (8/20) μs	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 450 V$
Output voltage limitation at 1 kV/ μs (Core-Shield) spike	$\leq 650 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 450 V$
Output voltage limitation at 1 kV/ μs (Core-Shield) static	$\leq 650 V$
Protection level U_p (Core-Earth)	$\leq 450 V$
Protection level U_p (Core-Shield)	$\leq 650 V$
Response time t_A (Core-Earth)	$\leq 100 ns$
Response time t_A (Core-GND)	$\leq 100 ns$
Input attenuation aE, asym.	0.3 dB ($\leq 150 MHz$)
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 550 MHz
Standing wave ratio SWR in a 50 Ω system	≤ 1.2 ($\leq 80 MHz$)
Permissible HF power $P_{max.}$ at SWR=xx (50 Ohm system)	300 W (VSWR = 1.1)
	80 W (VSWR = ∞)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	UHF connector
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Connection, equipotential bonding

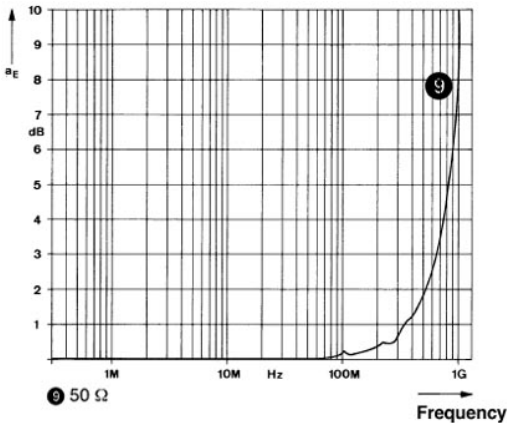
Type of connection	PVC litz wire
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Connection, protective circuit

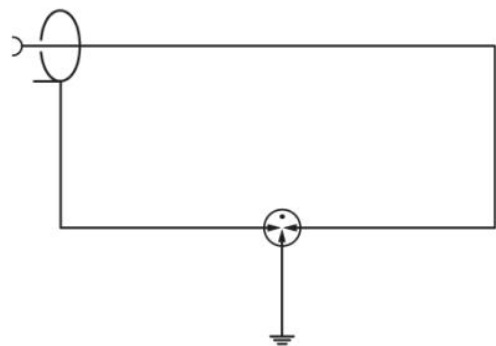
Standards/regulations	IEC 61643-21
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Drawings

Diagram



Circuit diagram



C-UFB-24DC/1

Order No.: 2782630



Attachment plug with quick-responding surge voltage coarse and fine protection, for coaxial signal interfaces, signal voltage 24 V.
Connection: BNC female/male connector

Commercial data

EAN	4017918069674
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.06569 KG
Catalog page information	Page 117 (TT-2002)

Technical data

General

Ambient temperature (operation)	-20 °C ... 60 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20

Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	68.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
VDE requirement class	C2
	C3
	D1
Nominal voltage U_N	24 V DC
Arrester rated voltage U_C (Core-Earth)	30 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_C at U_C	$\leq 10 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-GND)	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 45 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 45 V$
Residual voltage at I_n , (conductor-GND)	$\leq 50 V$
Protection level U_P (Core-Earth)	$\leq 50 V$
Response time t_A (Core-Earth)	$\leq 1 ns$
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ohm system	20 MHz
Resistance in series	22 Ω

Connection data

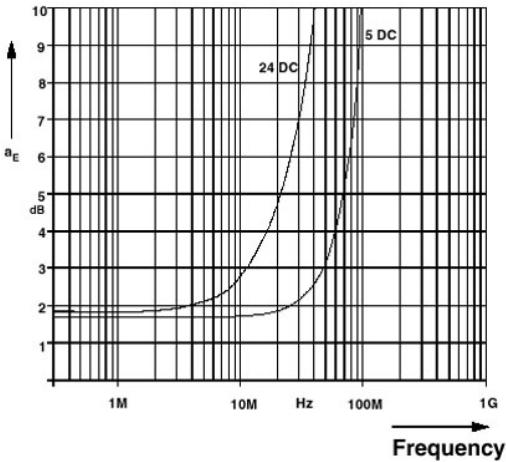
Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, protective circuit

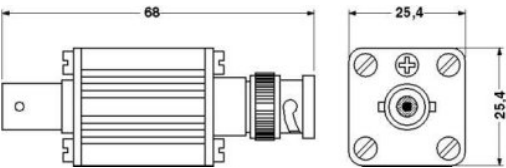
Standards/regulations	Draft IEC 64644-1
	E VDE 0845-3-1

Drawings

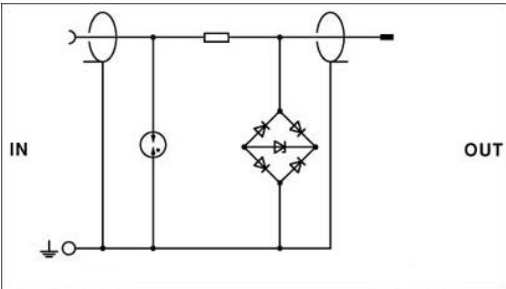
Diagram



Dimensioned drawing



Circuit diagram



C-UFB- 5DC/1

Order No.: 2782643

The illustration shows version C-UFB- 24DC/1



Attachment plug with quick-responding surge voltage coarse and fine protection, for coaxial signal interfaces, signal voltage 5 V.
Connection: BNC female/male connector

Commercial data

EAN	4017918069681
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.0631 KG
Catalog page information	Page 117 (TT-2002)

Technical data

General

Ambient temperature (operation)	-20 °C ... 60 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20

Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	68.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
VDE requirement class	C2
	C3
	D1
Nominal voltage U_N	5 V DC
Arrester rated voltage U_C (Core-Earth)	5 V DC
Nominal current I_N	185 mA (25°C)
Operating effective current I_C at U_C	$\leq 50 \mu A$
Nominal discharge surge current I_n (8/20) μs (Core-GND)	10 kA
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 17 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 17 V$
Residual voltage at I_n , (conductor-GND)	$\leq 29 V$
Protection level U_P (Core-Earth)	$\leq 30 V$
Response time t_A (Core-Earth)	$\leq 1 ns$
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ohm system	60 MHz
Resistance in series	22 Ω

Connection data

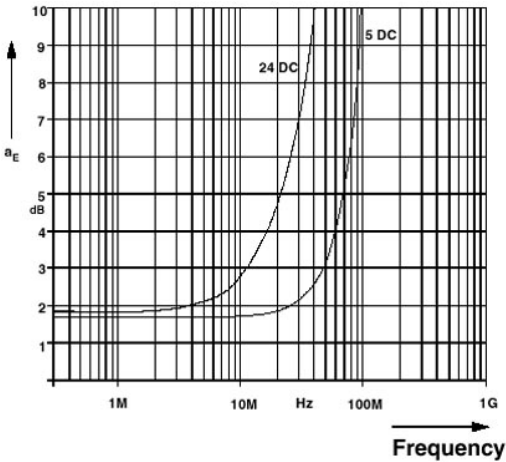
Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, protective circuit

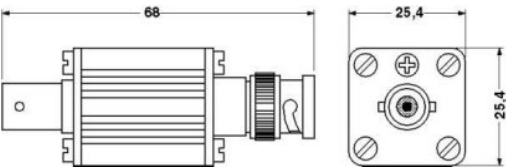
Standards/regulations	Draft IEC 64644-1
	E VDE 0845-3-1

Drawings

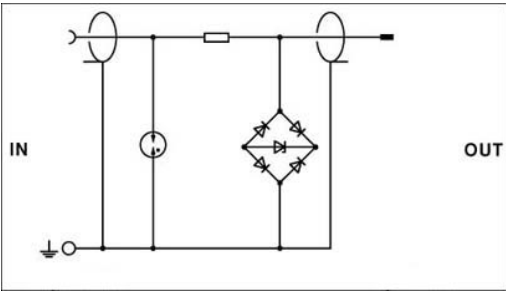
Diagram



Dimensioned drawing



Circuit diagram



RF-TRAB-A2

This product has been replaced by a newer version.

Order No.: 2789785

The illustration shows version RF-TRAB-A1

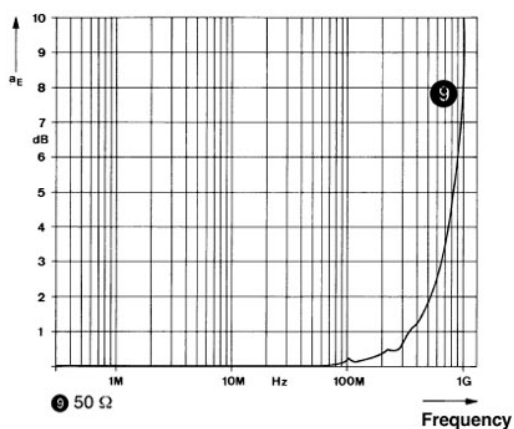


Screw-on module with surge protection, for coaxial signal interfaces with floating shield, transmission power ≤ 200 W. Connection: N connector female.

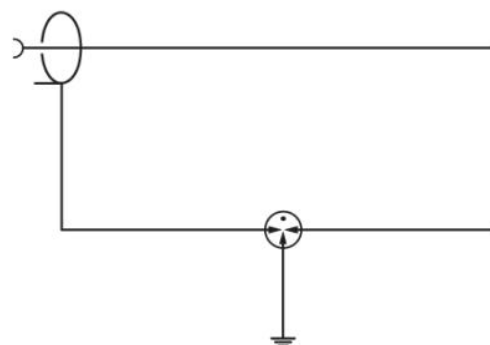
Commercial data

EAN	4017918072223
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.11915 KG
Catalog page information	Page 115 (TT-2002)

Diagram



Circuit diagram



C-UFB-24DC

Order No.: 2797861

The illustration shows version C-UFB- 5DC



Attachment plug with surge voltage coarse and fine protection, for coaxial signal interfaces, signal voltage 24 V. Connection: BNC female/male connector

Commercial data

EAN	4017918073541
Pack	10 pcs.
Customs tariff	85363010
Weight/Piece	0.086305 KG
Catalog page information	Page 175 (TT-2009)



Technical data

General

Housing material	Aluminum
Color	black

Standards for air and creepage distances	VDE 0110-1
	IEC 60664-1: 1992-10
Total surge current (8/20) μ s	10 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	25.40 mm
Height	93.00 mm
Length	25.40 mm

Protective circuit

IEC category	C2
	C3
	D1
Arrester rated voltage U_c	30 V DC
Arrester rated voltage U_c (Core-Earth)	30 V DC
Nominal current I_n	185 mA (25°C)
Operating effective current I_c at U_c	$\leq 10 \mu$ A
Discharge current to PE at U_c	$\leq 10 \mu$ A
Nominal discharge surge current I_n (8/20) μ s (Core-Earth)	10 kA
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	10 kA
Total surge current (8/20) μ s	10 kA
Max. discharge surge current I_{max} (8/20) μ s maximum (Core-Earth)	10 kA
Output voltage limitation at 1 kV/ μ s (Core-Earth) spike	≤ 150 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	≤ 150 V
Output voltage limitation at 1 kV/ μ s (Core-Earth) static	≤ 45 V
Output voltage limitation at 1 kV/ μ s (Core-Shield) static	≤ 45 V
Residual voltage at I_n , (conductor-ground)	≤ 45 V
Residual voltage at I_n , (conductor-shield)	≤ 45 V

Protection level U_p (Core-Earth)	$\leq 80 \text{ V (C2 (5kA))}$
Protection level U_p (Core-Shield)	$\leq 80 \text{ V (C2 (5kA))}$
Response time t_A (Core-Earth)	$\leq 500 \text{ ns}$
Response time t_A (Core-GND)	$\leq 500 \text{ ns}$
Input attenuation a_E , asym.	$1.8 \text{ dB } (\leq 10 \text{ MHz})$
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ohm system	Typ. 150 MHz
Cut-off frequency f_g (3 dB), asym. (shield) in 50 Ohm system	Typ. 150 MHz
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	BNC 50 Ω
Connection type IN	BNC socket
Connection type OUT	BNC plug

Connection, equipotential bonding

Type of connection	Screw connection
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Connection, protective circuit

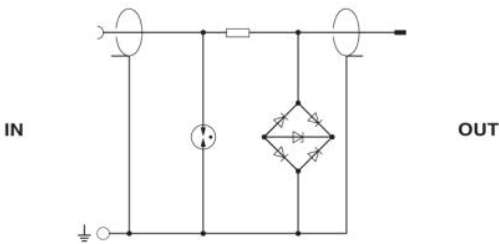
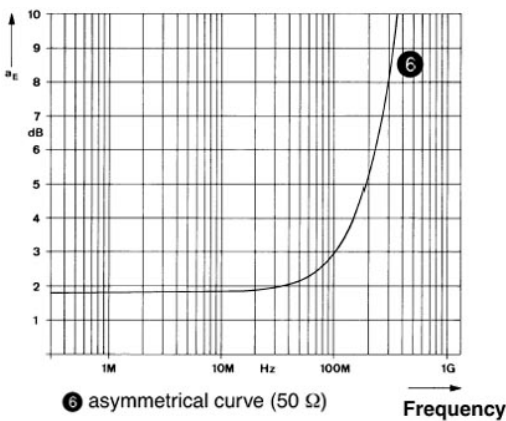
Standards/regulations	IEC 61643-21
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Drawings

Circuit diagram

Diagram

Circuit diagram



C-TV-SAT

Order No.: 2856993



Attachment plug with surge protection for antenna inputs with F connector

Commercial data

EAN	4017918915179
Pack	1 pcs.
Customs tariff	85363010
Weight/Piece	0.076 KG
Catalog page information	Page 177 (TT-2009)

Technical data

General

Housing material	PA
Inflammability class acc. to UL 94	V0
Color	black

Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10
Surge voltage category	II
Pollution degree	2
Total surge current (8/20) μ s	2.5 kA
Ambient temperature (operation)	-25 °C ... 75 °C
Mounting type	Connection-specific intermediate plugging
Design	Attachment plug
Number of positions	1
Degree of protection	IP20
Direction of action	Line-Shield/Earth Ground
Width	27.00 mm
Height	69.00 mm
Length	40.00 mm

Protective circuit

IEC category	C1
	C2
	C3
	D1
Arrester rated voltage U_c	180 V DC
	130 V AC
Arrester rated voltage U_c (Core-Shield)	180 V DC
Nominal current I_N	1.5 A ($\leq 25^\circ\text{C}$)
Operating effective current I_c at U_c	$\leq 1 \mu\text{A}$
Nominal discharge surge current I_n (8/20) μ s (Core-Shield)	2.5 kA
Total surge current (8/20) μ s	2.5 kA
Nominal pulse current I_{an} (10/1000) μ s (Core-Shield)	120 A
Output voltage limitation at 1 kV/ μ s (Core-Shield) spike	$\leq 600 \text{ V}$
Output voltage limitation at 1 kV/ μ s (Core-Shield) static	$\leq 600 \text{ V}$
Residual voltage at I_n , (conductor-shield)	$\leq 30 \text{ V}$
Protection level U_p (Core-Shield)	$\leq 700 \text{ V}$ (C2 (4 kV/2 kA))
Response time t_A (Core-GND)	$\leq 100 \text{ ns}$

Input attenuation aE, asym.	0.5 dB (≤ 2.4 GHz)
Cut-off frequency fg (3 dB), asym. (shield) in 75 Ohm system	> 3 GHz
Frequency range	950 MHz ... 2.5 GHz
Capacity asymmetrical (shield)	Typ. 10 pF
Surge carrying capacity in acc. with IEC 61643-21 (Core-Shield)	C2 (4 kV / 2 kA)
	C3 (100 A)
	D1 (500 A)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Shield)	5 A - 1 s

Connection data

Type of connection	F connector
Connection type IN	F connector, female
Connection type OUT	F connector, female

Connection, protective circuit

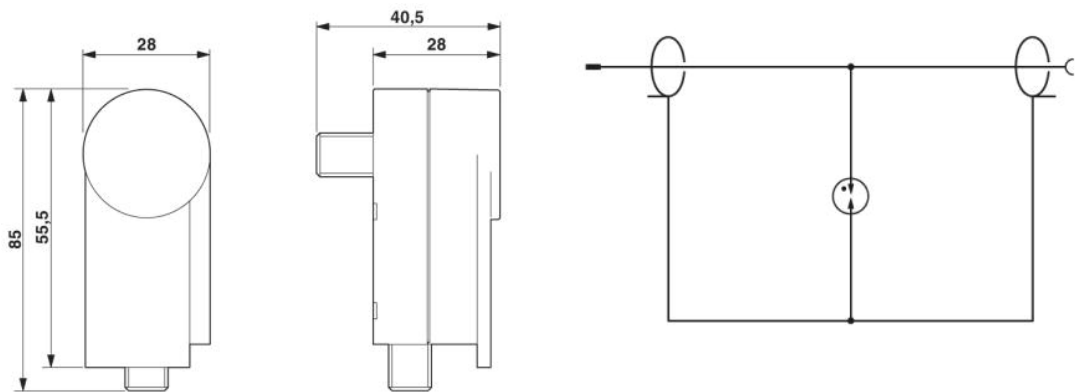
Standards/regulations	IEC 61643-21
	EN 50083 - CLASS A

Drawings

Circuit diagram

Dimensioned drawing

Circuit diagram



COAXTRAB CN-LAMBDA/4-2.0 and
COAXTRAB CN-LAMBDA...SET



CN-LAMBDA/4-2.0 CN-LAMBDA...SET

Technical data

COAXTRAB,
protective adapter for antenna connections

COAXTRAB 7/16-SET, consisting of:
CN...BB + adapter N on 7/16 socket and N on 7/16 plug
CN...BB + 2 adapter N on 7/16 socket

Equipotential lead,
supply length: 1.5 m,
Conductor cross section 1.5 mm², with cable lug

CN-UB assembly board

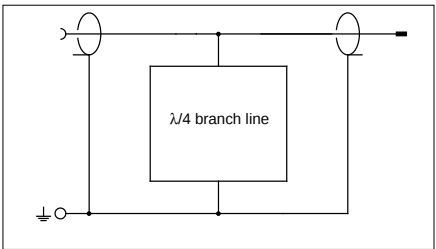
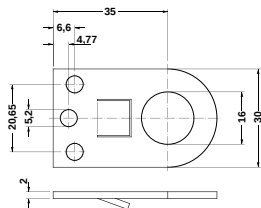
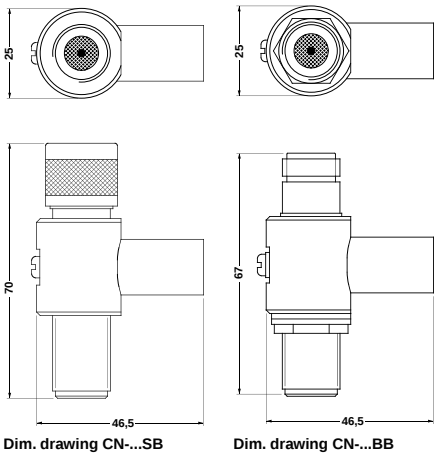


Type	Order No.	Pcs. Pkt.
CN-LAMBDA/4-2.0BB	28 18 86 3	1
CN-LAMBDA/4-2.0SB	28 18 87 6	1
C7/16-LAMBDA/4-2.0-BS-SET	28 39 04 6	1
C7/16-LAMBDA/4-2.0-BB-SET	28 39 05 9	1
C-UF8-PA	27 62 36 2	10
CN-UB/MP	28 18 13 5	10

Technical data

IEC category:
Nom. discharge surge current I_n (8/20)µs:
Output voltage limitation at 1 kV/µs: asymm. (±)
Residual voltage at I_n :
Protection level U_p (1.2/50 + 8/20)µs:
Input attenuation a_E in a 50 Ω system:
Standing wave ratio VSWR in a 50 Ω system:
Perm. HF power P_{max} with VSWR=1.2/1.0 in a 50 Ω system:
Connection:
Temperature range:
Type of protection in acc. with IEC 529/ EN 60 529:
In accordance with test standards:

CN-LAMBDA/4-2.0BB	C7/16-LAMBDA/4-2.0...SET
C2, C3, D1	C2, C3, D1
20 kA	20 kA
≤ 10 V	≤ 10 V
≤ 20 V	≤ 20 V
≤ 20 V	≤ 20 V
≤ 0.2 dB from 1.7 - 2.3 GHz	≤ 0.3 dB from 1.7 - 2.3 GHz
≤ 1.2 from 1.7 - 2.3 GHz	≤ 1.2 from 1.7 - 2.3 GHz
≤ 400 W/≤ 500 W (2 GHz)	≤ 400 W/≤ 500 W (2 GHz)
N connector	7/16 connector
- 40 °C to + 100 °C	- 40 °C to + 100 °C
IP55	IP55
Draft IEC 61644-1:1998-10, E VDE 0845 Part 3-1:1999-07	



COAXTRAB CN-UB-280DC
with N-Connector



Technical data

COAXTRAB, as surge voltage protection for coaxial cables	N-Connector N-Connector
Reserve gas-filled surge arrester	
CN-UB assembly board	

Technical data

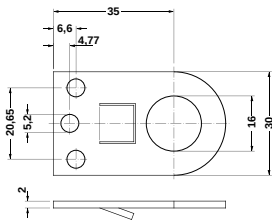
IEC category/VDE requirement class:	
Arrester rated voltage (highest constant volt.) U_C :	
Nominal current I_N :	
Operating current I_C at U_C :	
Nominal discharge surge current I_n (8/20):	
Output voltage threshold at 1 kV/ μ s:	asym. ($\pm$)
Protection level U_p :	asym. ($\pm$)
Response time t_a :	asym. ($\pm$)
Cut-off frequency f_g (3 dB) (typ.):	asym. in a 50 Ω system
Standing wave ratio (SWR) in a 50 Ω system:	
perm. HF power P_{max} at SWR= 1.1/ ∞ in a 50 Ω system:	
Capacitance (typ.):	asym. (GND/ $\pm$)
Connection:	
Temperature range:	
Protection type in acc. with IEC 529/ EN 60 529:	
Approvals:	
Based on test standards:	

Type	Article no.	Pcs. Pkt.
CN-UB-280DC-SB ¹⁾	28 18 14 8	1
CN-UB-280DC-BB ¹⁾	28 18 85 0	1
CN-UB-G1	28 18 20 3	10
CN-UB/MP	28 18 13 5	10

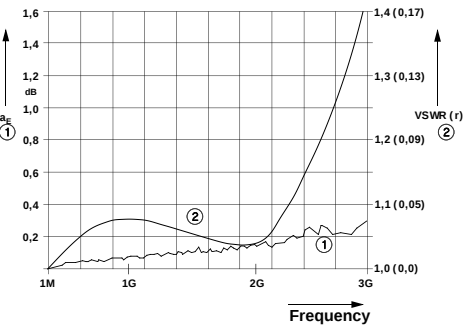
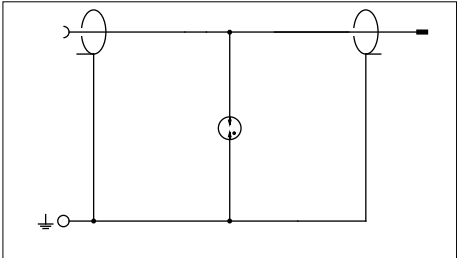
C2, C3, D1
280 V DC
5 A/25 °C
$\leq 1 \mu$ A
20 kA
≤ 700 V
≤ 700 V
≤ 100 ns
> 3 GHz
≤ 1.1 bis 2.0 GHz
700 W/200 W
1.5 pF
N-Connector 50 Ω
- 25 °C bis + 80 °C
IP 55

Draft IEC 61643-21:2000-09, E VDE 0845 T.3-1:1999-07

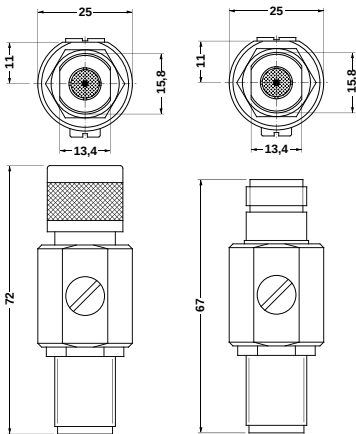
¹⁾ with 7/16 connectors on request



Dimensional drawing CN-UB assembly board



① Typical attenuation curve CN-UB-280DC...
② Typical VSWR on CN-UB-280DC...



Dimensional drawing CN-UB 280 DC-SB and CN-UB 280 DC-BB

COAXTRAB CF-UB-280DC-SB-SET
with F-Connector



Technical data

COAXTRAB, as surge voltage protection for coaxial cables	N-Connector N-Connector
Reserve gas-filled surge arrester	
CN-UB assembly board	

Type	Article no.	Pcs. Pkt.
CF-UB-280DC-SB-SET	28 39 54 1	1
CN-UB-G1	28 18 20 3	10
CN-UB/MP	28 18 13 5	10

Technical data

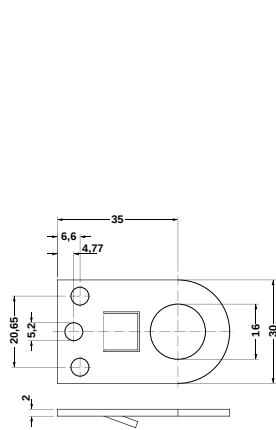
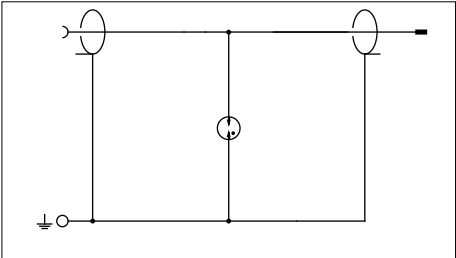
IEC category/VDE requirement class:	
Arrester rated voltage (highest constant volt.) U_C :	
Operating current I_C at U_C :	
Nominal discharge surge current I_n (8/20):	
Output voltage threshold at 1 kV/ μ s:	asym. ($\pm$)
Protection level U_p :	asym. ($\pm$)
Response time t_a :	/asym. ($\pm$)
Cut-off frequency f_g (3 dB) (typ.):	asym. in a 50 Ω system
Capacitance (typ.):	asym. ($\pm$)
Connection:	
Temperature range:	
Protection type in acc. with IEC 529/ EN 60 529	

C2, C3, D1
280 V DC
$\leq 1 \mu A$
10 kA
$\leq 700 V$
$\leq 700 V$
$\leq 100 ns$
$> 2 GHz$
1.5 pF
F-Connector 75 Ω
- 20 °C bis + 80 °C
IP 55

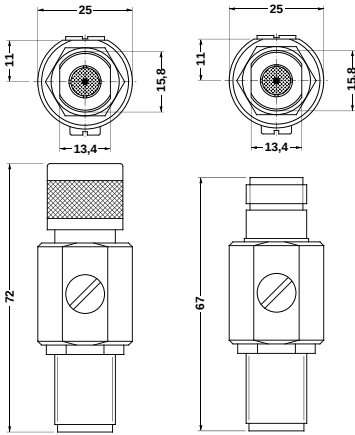
Based on test standards:

Draft IEC 61643-21:2000-09, E VDE 0845 T.3-1:1999-07

1) with 7/16 connectors on request



Dimensional drawing CN-UB assembly board



Dimensional drawing CN-UB 280 DC-SB and CN-UB 280 DC-BB