

# BAR-ANT-N-N-EX - Antenna barrier



2702198

<https://www.phoenixcontact.com/gb/products/2702198>

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Antenna barrier for control cabinet feed-through, type of protection: Ex i, degree of protection: IP65, barrier installation: zone 2 / 22, antenna installation: in dust and gas Ex area, frequency range: 0.3 GHz ... 6 GHz, connection: 2 x N (female), ATEX, IECEx approval

## Product description

By using the antenna barrier, HF outputs from wireless modules can be designed with intrinsic safety. The antenna barrier limits the ignition energy in the event of an error. The antenna barrier is ATEX-certified and IECEx-certified, and can be installed in zone 2 or in the safe area. The antenna barrier enables the inexpensive use of selected standard antenna in Ex zones 0, 1, and 2. The antenna barrier covers the 0.3 GHz ... 6 GHz frequency range. Selected standard antennas from the wireless accessories range can be connected.

## Your advantages

- Compact housing design
- International approvals
- Use of standard antennas in the hazardous area of zone 0, 1, and 2
- Universal use (frequency range of 0.3 ... 6 GHz)
- Supply of all necessary certified components – including as a system solution
- Inexpensive solution, as there is no need for expensive special antennas

## Commercial data

Item number	2702198
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNC6Z1
Product key	DNC6Z1
Catalog page	Page 393 (C-6-2019)
GTIN	4055626033730
Weight per piece (including packing)	172.8 g
Weight per piece (excluding packing)	160 g
Customs tariff number	85177100
Country of origin	TW

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## Technical data

### Notes

#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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### Product properties

Product type	Coaxial adapter
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### Electrical properties

Frequency range	300 MHz ... 6000 MHz
Test voltage	2.1 kV AC (50 Hz / 2 s)
Impedance	50 $\Omega$
Insulation voltage input/output	265 V AC/DC 375 V (Peak value)
Maximum error voltage $U_m$	253 V AC/DC

### Connection data

Connection method	N (female)
Connection method	N (female)

### Ex data

#### Safety data

Input power $P_i$	$\leq 2$ W (HF input power, 33 dBm, IIC) $\leq 3.5$ W (HF input power, 35.4 dBm, IIB) $\leq 6$ W (HF input power, 37.7 dBm, I, IIA, III)
Max. internal inductance $L_i$	negligible
Max. internal capacitance $C_i$	5.64 pF
Max. output power $P_o$	$P_{out} \leq$ max. HF output power of the wireless module

### Dimensions

Dimensional drawing	
Height	67 mm
Diameter	25.00 mm

### Material specifications

Material Housing	Brass, nickel-plated
Material Inner conductor	CuZn
Material Inner conductor surface	Gold
Material Insulating body	PTFE

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Material Seal	Silicon
Material Spring contact	CuSn
Material Contact surface	Au

## Cable/line

400 MHz	< 3.5 dB (400 MHz)
868 MHz	< 1.2 dB (868 MHz)
900 MHz	< 0.9 dB (900 MHz)
2.4 GHz	< 0.2 dB (2.4 GHz)
5.8 GHz	< 1.8 dB (5.8 GHz)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65 (when installed)
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Air pressure (operation)	80 kPa ... 110 kPa

## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ II (1) G [Ex ia Ga] IIC
	⊕ II (1) D [Ex ia Da] IIIC
	⊕ I (M1) [Ex ia Ma] I
	⊕ II 3 (1) G Ex ec [ia Ga] IIC T6 Gc
	⊕ II 3 (1) D Ex tc [ia Da] IIIC T80 °C Dc
Certificate	IBExU 15 ATEX 1064 X
Note	Please follow the special installation instructions in the documentation!

### IECEX

Identification	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	[Ex ia Ma] I
	Ex ec [ia Ga] IIC T6 Gc
	Ex tc [ia Da] IIIC T80 °C Dc
Certificate	IECEX IBE 15.0006X

## Mounting

Assembly instructions	Outdoors and indoors Connection-specific attachment plug
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In the installed state, the device is suitable for atmospheres containing gas or dust. Ensure that the HF input socket is in the IP54 housing (zone 2, in accordance with EN/IEC 60079-15) or in the IP6x housing (zone 22, in accordance with EN/IEC 60079-31).

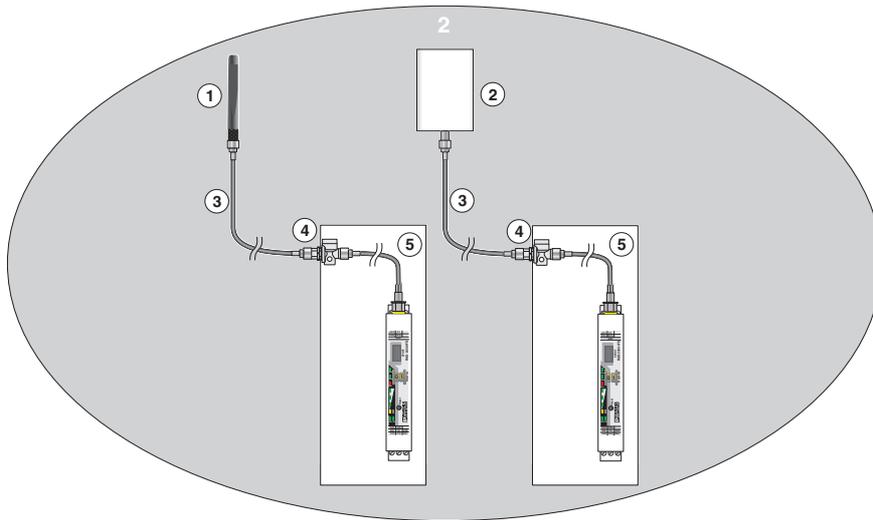
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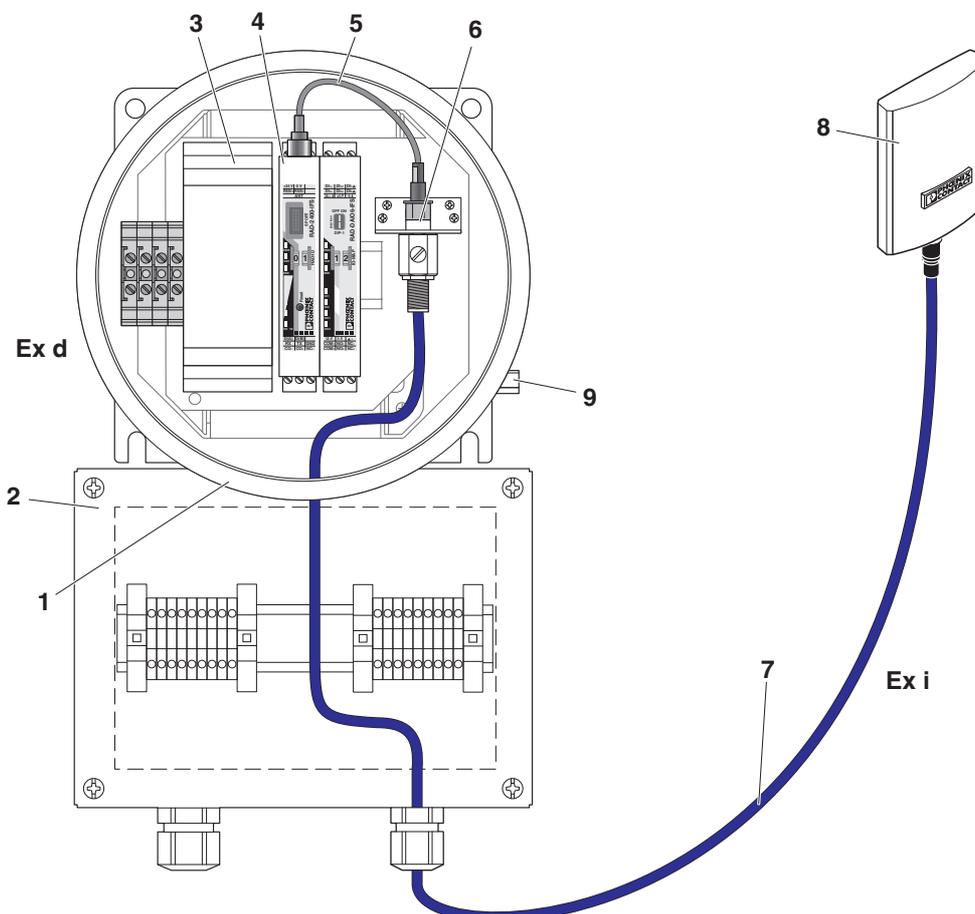
## Drawings

Application drawing



Installing the devices and antennas in zone 2

Application drawing

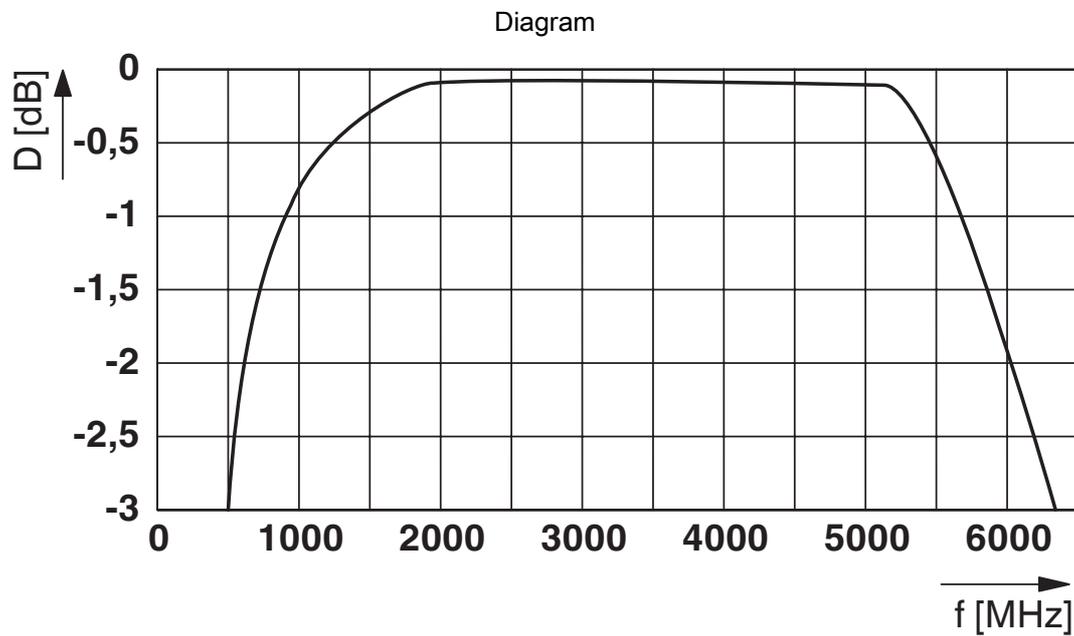


Installation in a housing with "flameproof enclosure" type of protection (EN 60079-1)

# BAR-ANT-N-N-EX - Antenna barrier

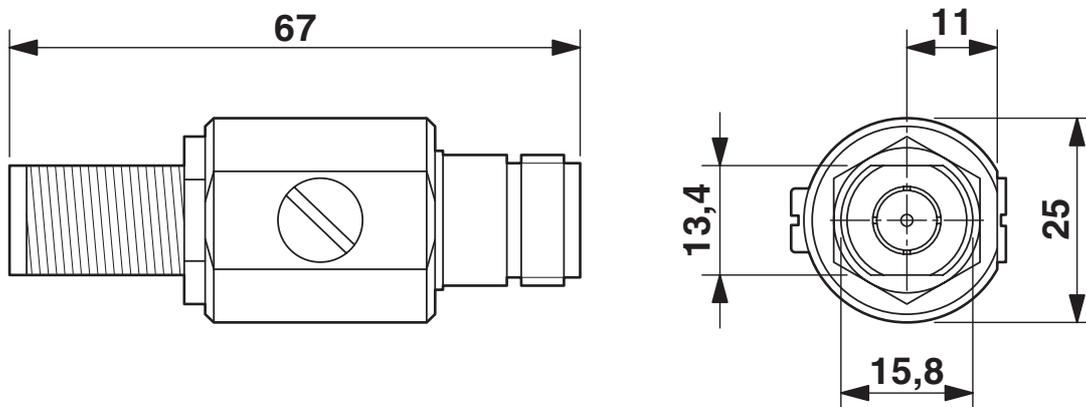
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Attenuation

Dimensional drawing



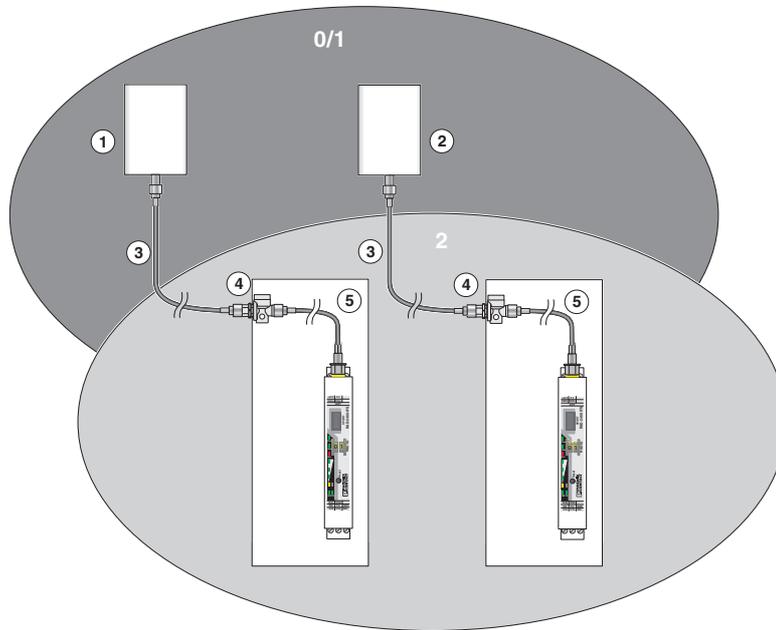
Dimensional drawing

# BAR-ANT-N-N-EX - Antenna barrier

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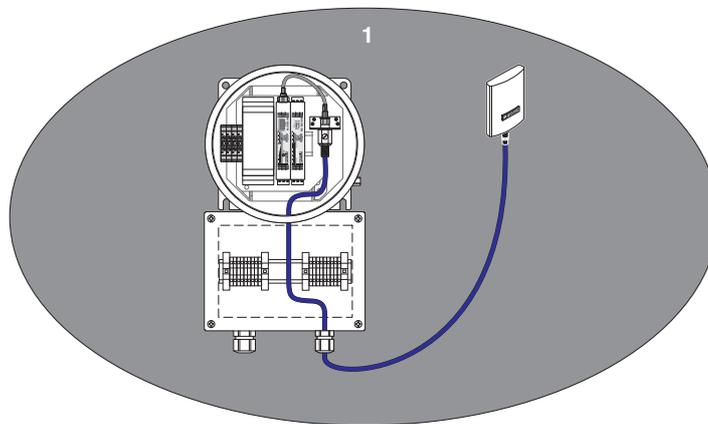
<https://www.phoenixcontact.com/gb/products/2702198>

Application drawing



Installing the devices in zone 2 and the antennas in zone 1 or zone 0

Application drawing



Installing the devices and antennas in zone 1

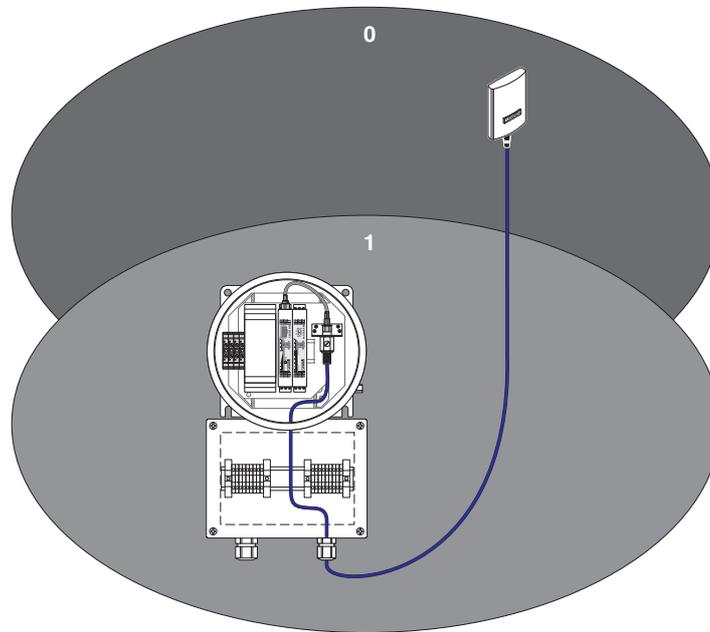
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Application drawing



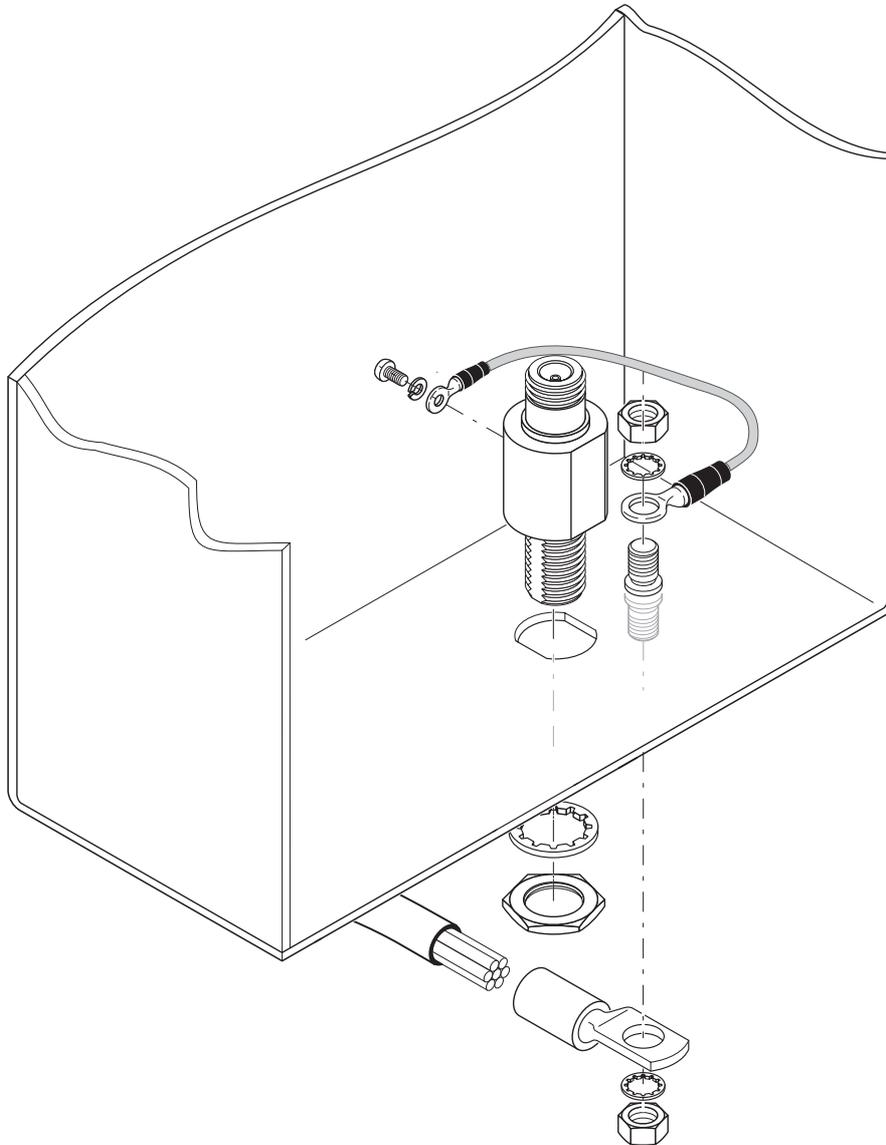
Installing the devices in zone 1 and the antennas in zone 0

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Schematic diagram



Control cabinet feed-through

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2702198>



**IECEx**

Approval ID: IECEx IBE 15.0006 X



**ATEX**

Approval ID: IBExU 15 ATEX 1064 X

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## Classifications

### ECLASS

ECLASS-11.0	19070417
ECLASS-12.0	19070417
ECLASS-13.0	19070417

### ETIM

ETIM 9.0	EC001135
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 25; For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"
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## Accessories

### CN-UB/MP-90DEG-50 - Mounting panel

2803137

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



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

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### CN-UB/MP - Mounting panel

2818135

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



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

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## ANT-OMNI-868-01 - Antenna

2702136

<https://www.phoenixcontact.com/gb/products/2702136>



Omnidirectional antenna for wall or mast mounting, 868 MHz, gain: 4 dBi, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval

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## RAD-ISM-2400-ANT-OMNI-6-0 - Antenna

2885919

<https://www.phoenixcontact.com/gb/products/2885919>



Omnidirectional antenna for wall or mast mounting, 2.4 GHz, gain: 6 dBi, degree of protection: IP67, saltwater-resistant, shock- and vibration-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval

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## ANT-DIR-868-01 - Antenna

2702137

<https://www.phoenixcontact.com/gb/products/2702137>

Directional antenna for mast or wall mounting, frequency band: 868 MHz, gain: 3.5 dBi, circular polarized, degree of protection: IP67, shockproof: IK06, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval



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## ANT-DIR-2459-01 - Antenna

2701186

<https://www.phoenixcontact.com/gb/products/2701186>

Directional antenna for wall or mast mounting, 2.4 GHz / 5 GHz, gain: 9 dBi, degree of protection: IP67, shockproof: IK06, saltwater-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval



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## RAD-PIG-RSMA/N-0.5 - Antenna cable

2903263

<https://www.phoenixcontact.com/gb/products/2903263>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.4 / 0.5 / 0.6 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 0.5 m (1.6 ft.)

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## RAD-PIG-RSMA/N-1 - Antenna cable

2903264

<https://www.phoenixcontact.com/gb/products/2903264>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)

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## RAD-PIG-RSMA/N-2 - Antenna cable

2903265

<https://www.phoenixcontact.com/gb/products/2903265>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.9 / 1.3 / 2.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 2 m (6.5 ft.)

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## RAD-PIG-RSMA/N-3 - Antenna cable

2903266

<https://www.phoenixcontact.com/gb/products/2903266>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 1.2 / 2.0 / 3.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 3 m (10 ft.)

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## RAD-PIG-RSMA/N-5 - Antenna cable

2702140

<https://www.phoenixcontact.com/gb/products/2702140>

Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 2.0 / 3.3 / 4.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 5 m (16 ft.)



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## NBC-COX-CNM/3.0-L/COX-CNM - Coaxial cable

1340123

<https://www.phoenixcontact.com/gb/products/1340123>

Coaxial cable, 50  $\Omega$ , length: 3 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency:  $\leq 7.25$  GHz, typical attenuation: 800 MHz 0.5 dB, 2.4 GHz 0.8 dB, 5.8 GHz 1.3 dB, 7.25 GHz 1.5 dB



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## NBC-COX-CNM/5.0-L/COX-CNM - Coaxial cable

1340124

<https://www.phoenixcontact.com/gb/products/1340124>



Coaxial cable, 50  $\Omega$ , length: 5 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency:  $\leq 7.25$  GHz, typical attenuation: 800 MHz 0.8 dB, 2.4 GHz 1.4 dB, 5.8 GHz 2.2 dB, 7.25 GHz 2.5 dB

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## NBC-COX-CNM/10.0-L/COX-CNM - Coaxial cable

1340125

<https://www.phoenixcontact.com/gb/products/1340125>



Coaxial cable, 50  $\Omega$ , length: 10 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency:  $\leq 7.25$  GHz, typical attenuation: 800 MHz 1.6 dB, 2.4 GHz 2.7 dB, 5.8 GHz 4.3 dB, 7.25 GHz 5 dB

# BAR-ANT-N-N-EX - Antenna barrier

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## NBC-COX-CNM/15.0-L/COX-CNM - Coaxial cable

1340126

<https://www.phoenixcontact.com/gb/products/1340126>



Coaxial cable, 50  $\Omega$ , length: 15 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency:  $\leq 7.25$  GHz, typical attenuation: 800 MHz 2.4 dB, 2.4 GHz 4.1 dB, 5.8 GHz 6.5 dB, 7.25 GHz 7.5 dB

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## NBC-COX-CNM/30.0-L/COX-CNM - Coaxial cable

1340127

<https://www.phoenixcontact.com/gb/products/1340127>



Coaxial cable, 50  $\Omega$ , length: 30 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency:  $\leq 7.25$  GHz, typical attenuation: 800 MHz 4.8 dB, 2.4 GHz 8.1 dB, 5.8 GHz 12.9 dB, 7.25 GHz 15 dB

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## RAD-2400-IFS - Wireless module

2901541

<https://www.phoenixcontact.com/gb/products/2901541>



Radioline - 2.4 GHz wireless transceiver with RS-232/RS-485 interface, can be extended with I/O modules, RSMA (female) antenna connection, point-to-point, star, and mesh networks up to 250 stations, range of up to 5 km (with a clear line of sight), for worldwide use

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## RAD-868-IFS - Wireless module

2904909

<https://www.phoenixcontact.com/gb/products/2904909>



Radioline - 868 MHz wireless transceiver with RS-232/RS-485 interface, can be extended with I/O modules, RSMA (female) antenna connection, point-to-point, star, and mesh networks up to 99 stations, range of up to 20 km (with a clear line of sight), for use in Europe

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## RAD-900-IFS - Wireless module

2901540

<https://www.phoenixcontact.com/gb/products/2901540>



Radioline - 900 MHz wireless transceiver with RS-232/485 interface, can be extended with I/O modules, RSMA (female) antenna connection, point-to-point, star, and mesh networks up to 250 stations, range of up to 32 km (line of sight), use in North America

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## RAD-TAPE-SV-19-3 - Weather protection tape

2903182

<https://www.phoenixcontact.com/gb/products/2903182>



Vulcanizing sealing tape for external protection of adapters, cable connections, etc. against the effects of weather, roll length: 3 m

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