

# Antenna barrier - BAR-ANT-N-N-EX - 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, EAC Ex and 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 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 0.7 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



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626033730
Weight per Piece (excluding packing)	173.200 g
Custom tariff number	85177000
Country of origin	Taiwan

## Technical data

### Dimensions

### Ambient conditions

Degree of protection	IP65
Ambient temperature (operation)	-40 °C ... 75 °C

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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
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### General

Connection method	N (female)
	N (female)
Frequency range	0.3 GHz ... 6 GHz
Impedance	50 Ω
Input power P <sub>i</sub>	≤ 2 W
Maximum error voltage U <sub>m</sub>	253 V AC/DC
Maximum capacity	5.64 pF
Test voltage	2.1 kV AC (50 Hz / 2 s)

### Attenuation

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 GHz	< 0.5 dB (5.2 GHz)

### Material data

Housing material	Nickel-plated brass
Housing surface material	Nickel
Inner conductor material	CuZn
Inner conductor surface material	Gold
Insulation body material	PTFE
Seal material	Silicon
Spring contact material	CuSn
Contact surface material	Au

### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# I (M1) [Ex ia Ma] I
	# II (1) G [Ex ia Ga] IIC
	# II (1) D [Ex ia Da] IIIC
	# II 3 (1) G Ex nA [ia Ga] IIC T6 Gc
	# II 3 (1) D Ex tc [ia Da] IIIC T80 °C Dc
Additional text	Please follow the special installation instructions in the documentation!
Designation	IECEx
Identification	[Ex ia Ma] I
	[Ex ia Ga] IIC
	[Ex ia Da] IIIC

# Antenna barrier - BAR-ANT-N-N-EX - 2702198

## Technical data

### Conformance/approvals

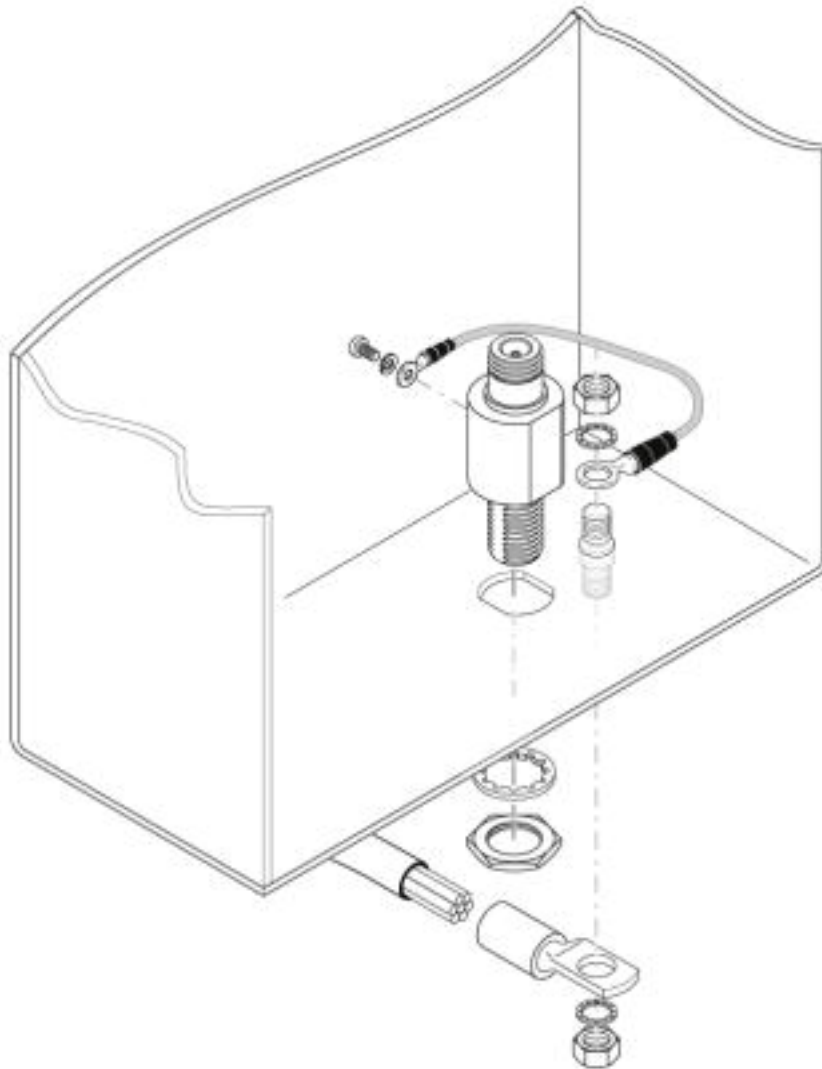
	Ex nA [ia Ga] IIC T6 Gc
	Ex tc [ia Da] IIIC T80 °C Dc

### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

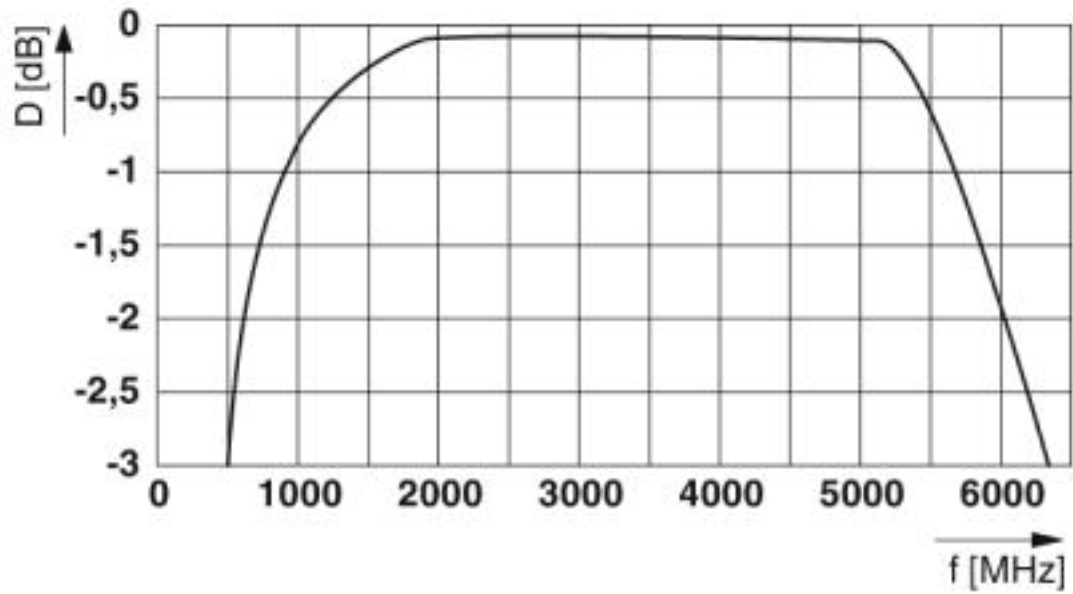
Schematic diagram



Control cabinet feed-through

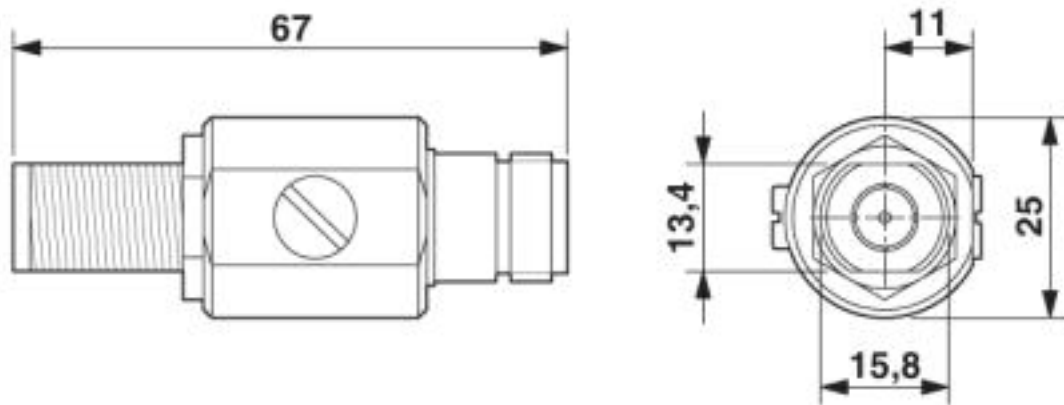
# Antenna barrier - BAR-ANT-N-N-EX - 2702198

Diagram



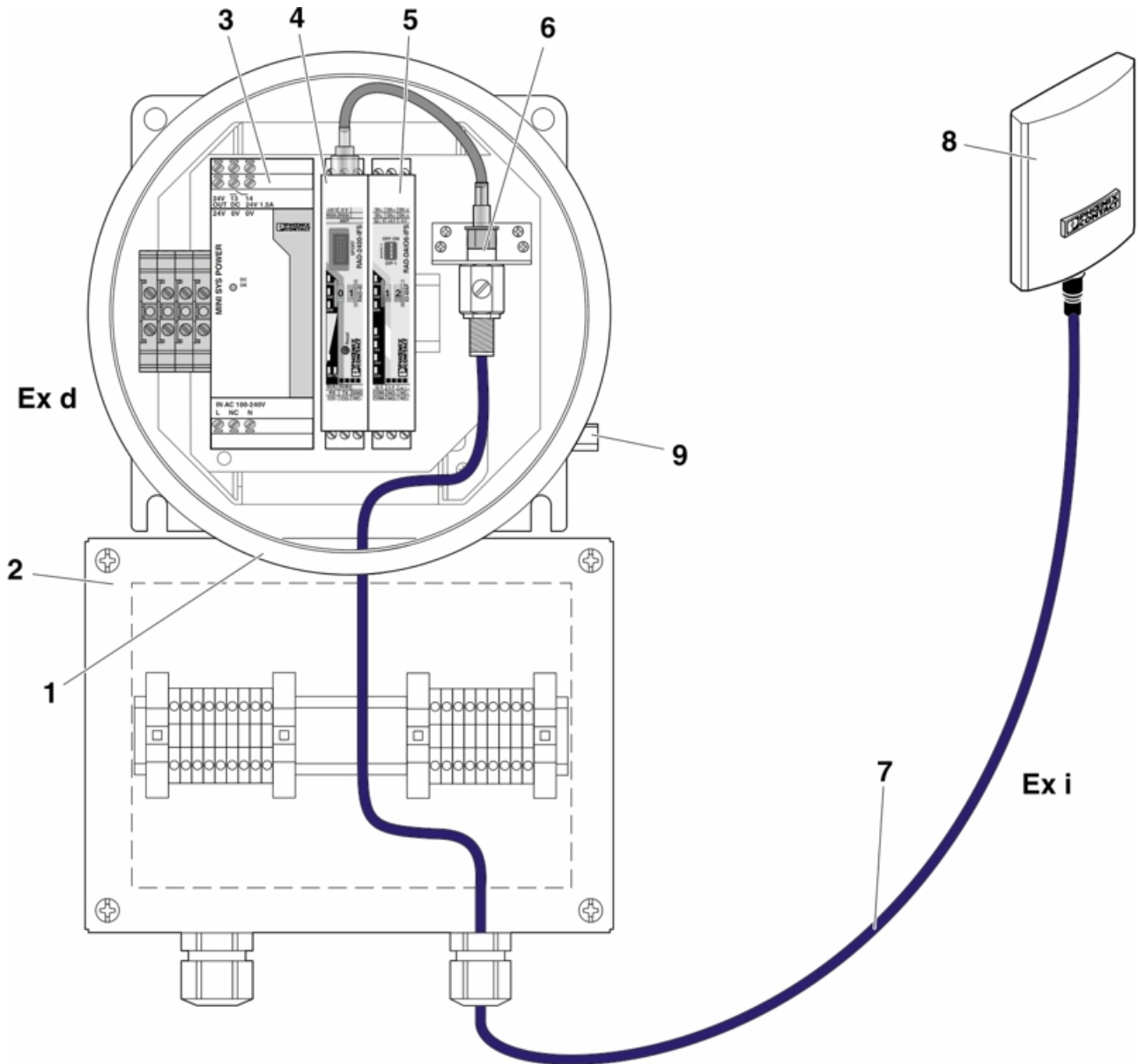
Attenuation

Dimensional drawing



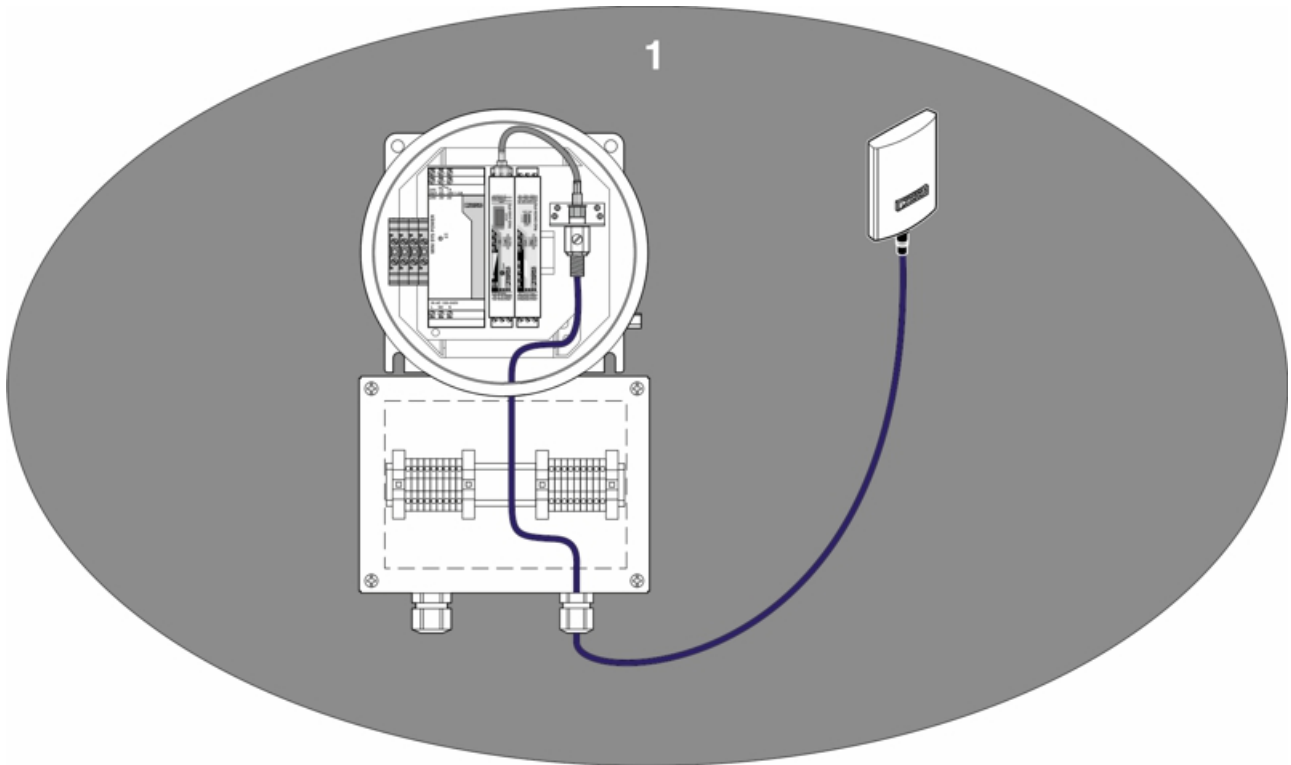
# Antenna barrier - BAR-ANT-N-N-EX - 2702198

Application drawing



## Antenna barrier - BAR-ANT-N-N-EX - 2702198

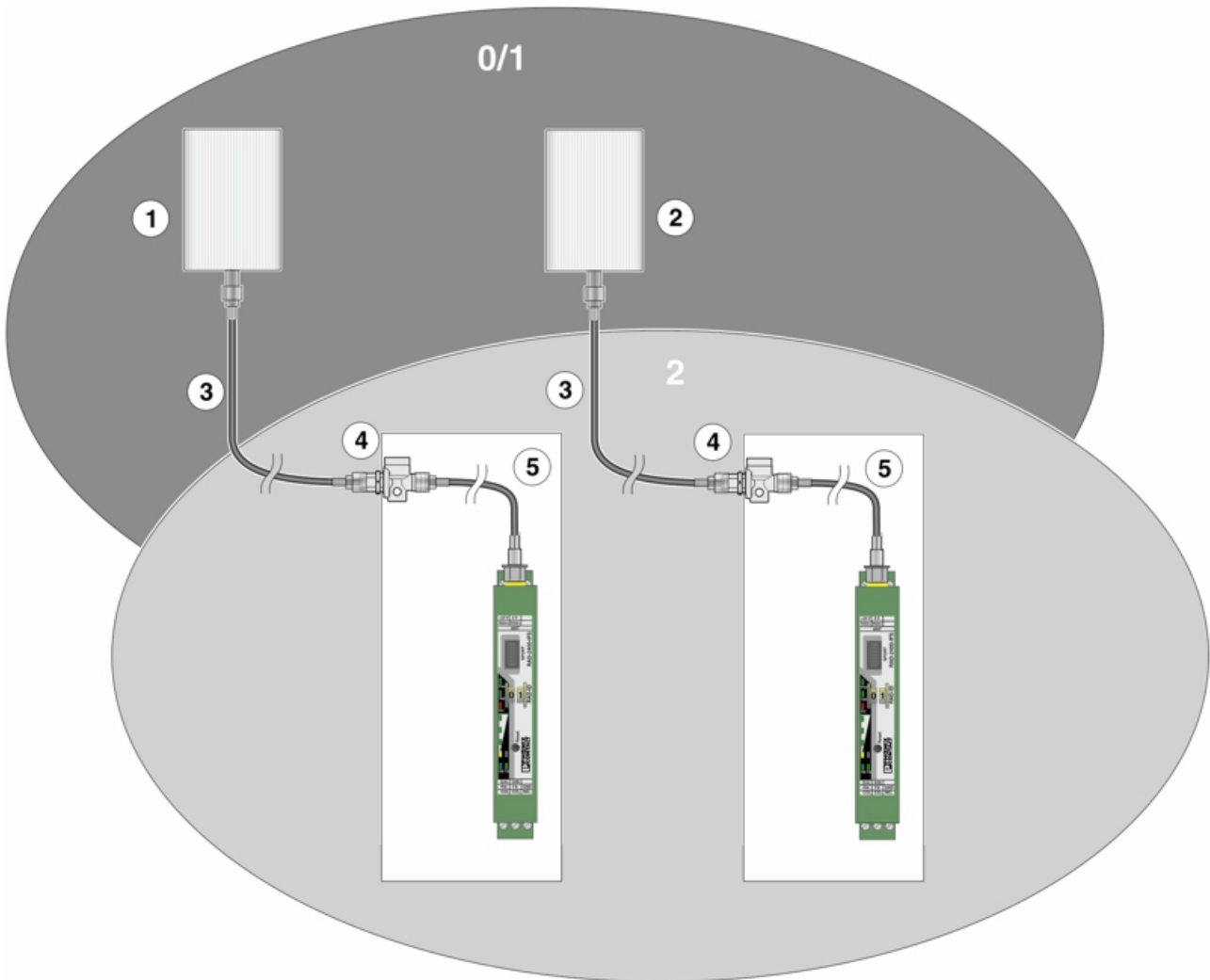
Application drawing



Installing the devices and antennas in zone 1

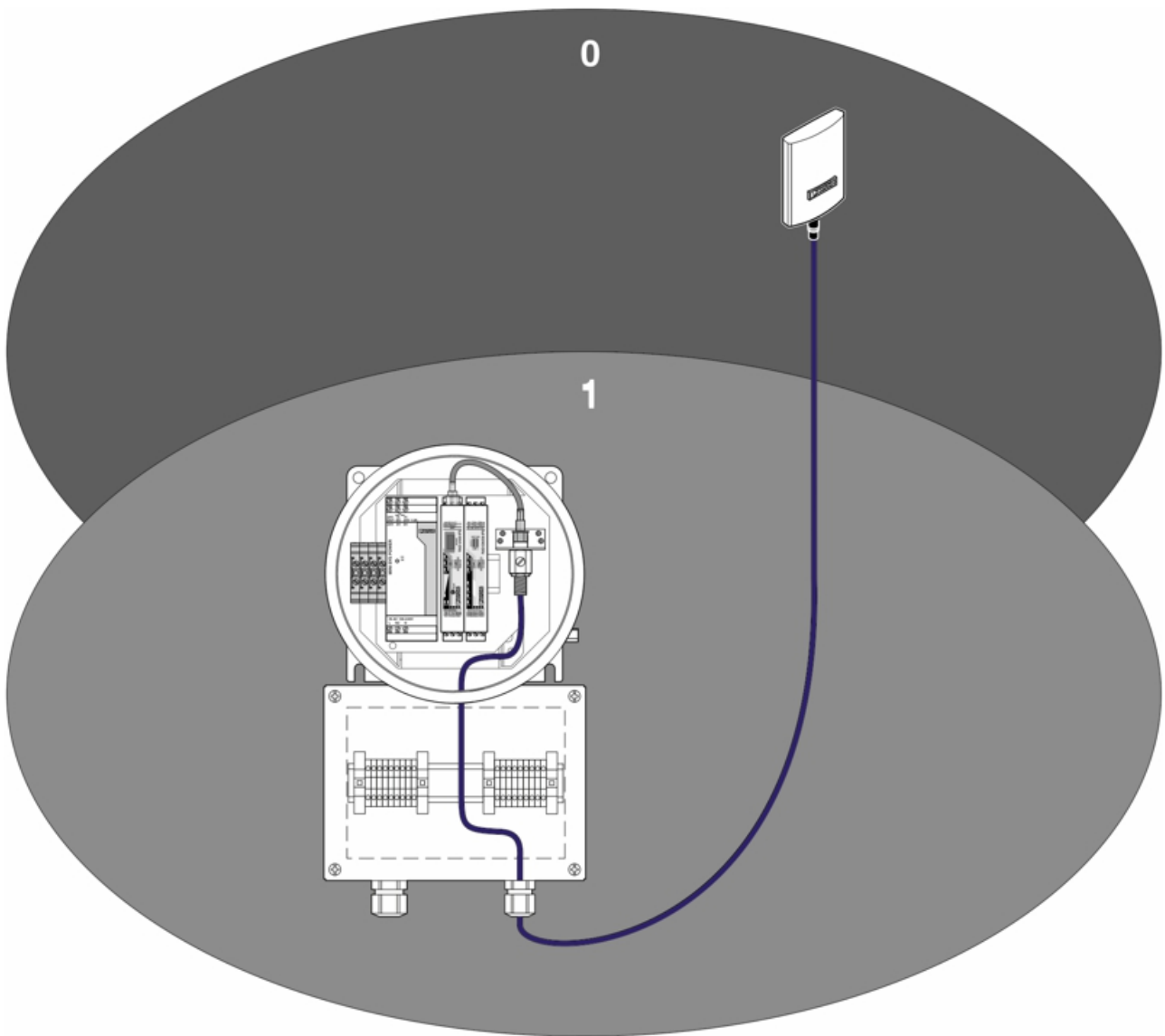
# Antenna barrier - BAR-ANT-N-N-EX - 2702198

Application drawing



# Antenna barrier - BAR-ANT-N-N-EX - 2702198

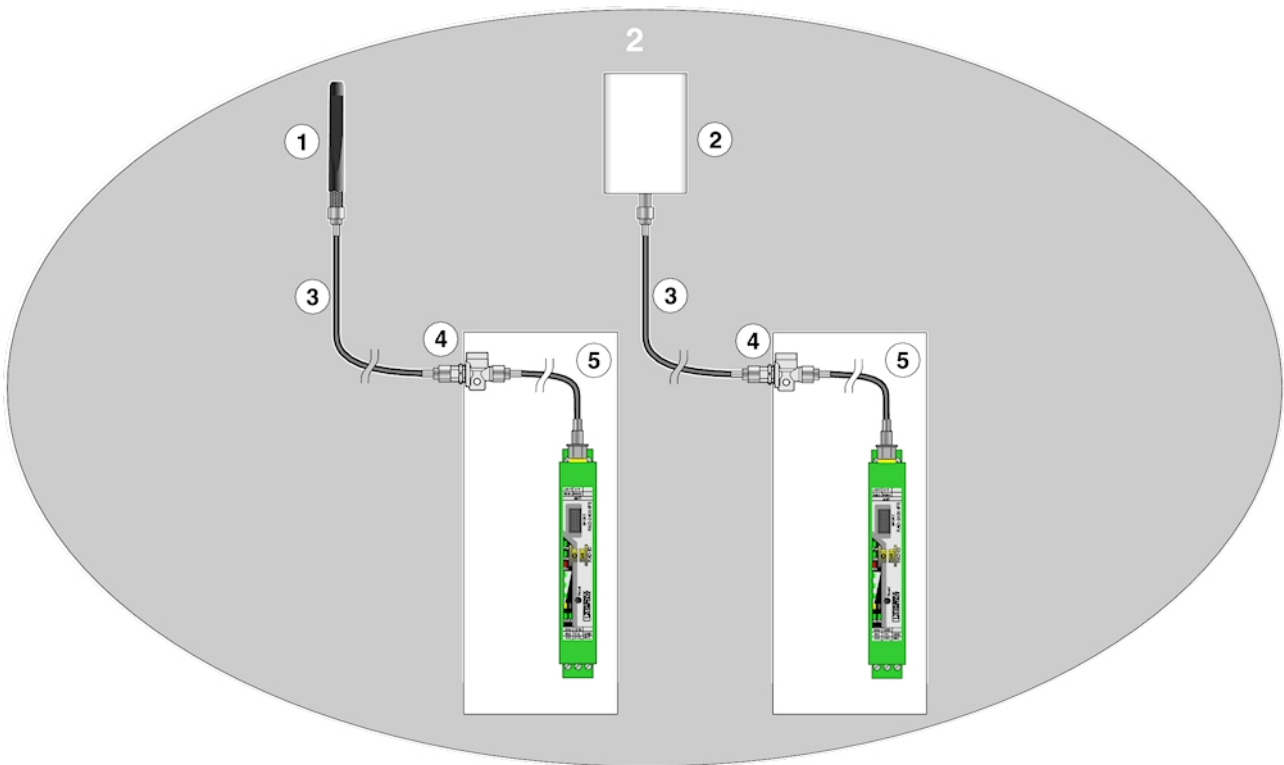
Application drawing





## Antenna barrier - BAR-ANT-N-N-EX - 2702198

Application drawing



# Antenna barrier - BAR-ANT-N-N-EX - 2702198

## Classifications

eCl@ss

eCl@ss 4.0	27142000
eCl@ss 5.0	19070100
eCl@ss 5.1	27142000
eCl@ss 6.0	19070100
eCl@ss 7.0	19070102
eCl@ss 8.0	19070102
eCl@ss 9.0	19070417

ETIM

ETIM 5.0	EC001135
ETIM 6.0	EC001135
ETIM 7.0	EC001135

## Accessories

Accessories

Antenna

Antenna - ANT-OMNI-868-01 - 2702136



Omnidirectional antenna, 868 MHz, gain: 4 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval

Antenna - RAD-ISM-2400-ANT-OMNI-6-0 - 2885919



Omnidirectional antenna, 2.4 GHz, gain: 6 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval

Antenna - ANT-DIR-868-01 - 2702137



Directional antenna, 868 MHz, gain: 3.5 dBi, polarization: circular, opening angle: h/v 135°/90°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval

## Antenna barrier - BAR-ANT-N-N-EX - 2702198

### Accessories

#### Antenna - ANT-DIR-2459-01 - 2701186



Directional antenna, 2.4 GHz/5 GHz, gain: 9 dBi, polarization: linear, opening angle: h/v 75°/55°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval

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#### Assembly adapter

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



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

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##### Mounting plate - CN-UB/MP - 2818135



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

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#### Coaxial cable

##### Antenna cable - RAD-PIG-RSMA/N-0.5 - 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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##### Antenna cable - RAD-PIG-RSMA/N-1 - 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.)

## Antenna barrier - BAR-ANT-N-N-EX - 2702198

### Accessories

#### Antenna cable - RAD-PIG-RSMA/N-2 - 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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#### Antenna cable - RAD-PIG-RSMA/N-3 - 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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#### Antenna cable - RAD-PIG-RSMA/N-5 - 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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#### Antenna cable - RAD-CAB-EF393- 3M - 2867649



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.0 / 1.8 / 3.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 3 m (10 ft.)

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#### Antenna cable - RAD-CAB-EF393- 5M - 2867652



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.6 / 2.9 / 5.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 5 m (16 ft.)

## Antenna barrier - BAR-ANT-N-N-EX - 2702198

### Accessories

Antenna cable - RAD-CAB-EF393-10M - 2867665



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 2.9 / 5.6 / 9.9 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 10 m (32 ft.)

Antenna cable - RAD-CAB-EF393-15M - 2885634



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 4.3 / 8.3 / 14.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 15 m (50 ft.)

### Mounting material

Weather protection tape - RAD-TAPE-SV-19-3 - 2903182



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

### Trusted Wireless device

Wireless module - RAD-2400-IFS - 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

Wireless module - RAD-868-IFS - 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

## Antenna barrier - BAR-ANT-N-N-EX - 2702198

### Accessories

Wireless module - RAD-900-IFS - 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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