

## 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, antenna installation: Zone 0, 1 or 2, frequency range: 0.3 GHz ... 6 GHz, connection: 2 x N (female), ATEX 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 (ATEX, IECEx)
- ✓ Use of standard antennas in the hazardous area of zone 0, 1, and 2
- ✓ Universal use (frequency range of 0.3 ... 6 GHz)
- ✓ Inexpensive solution, as there is no need for expensive special antennas



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 033730
GTIN	4055626033730
Weight per Piece (excluding packing)	180.000 g
Custom tariff number	85177000
Country of origin	Taiwan

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

## Technical data

### Dimensions

### Ambient conditions

Degree of protection	IP65
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

### General

Connection method	N (female)
	N (female)
Frequency range	0.3 GHz ... 6 GHz
Impedance	50 Ω
Maximum HF output power P <sub>i</sub>	2 W
Maximum error voltage U <sub>m</sub>	253 V AC/DC
Maximum capacity	5.64 nF
Test voltage	2.1 kV AC (50 Hz / 2 s)
Conformance	CE-compliant
IECEX	[Ex ia Ma] I
	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T6 Gc X

### 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

### Standards and Regulations

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

## Technical data

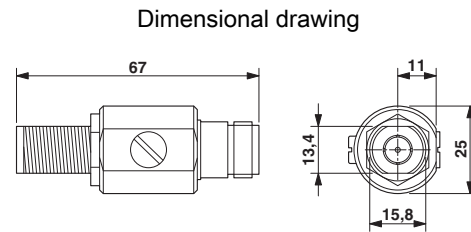
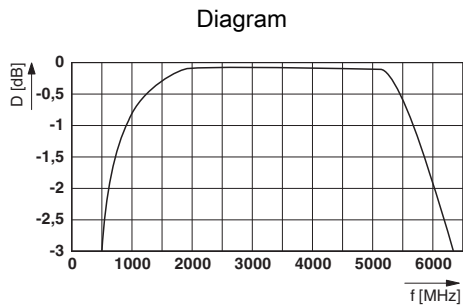
### Standards and Regulations

Conformance	CE-compliant
ATEX	# I (M1) [Ex ia Ma] I
	# II (1) G [Ex ia Ga] IIC
	# II (1) D [Ex ia Da] IIIC
IECEX	# II 3 (1) G Ex nA [ia Ga] IIC T6 Gc X
	[Ex ia Ma] I
	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T6 Gc X

### Environmental Product Compliance

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

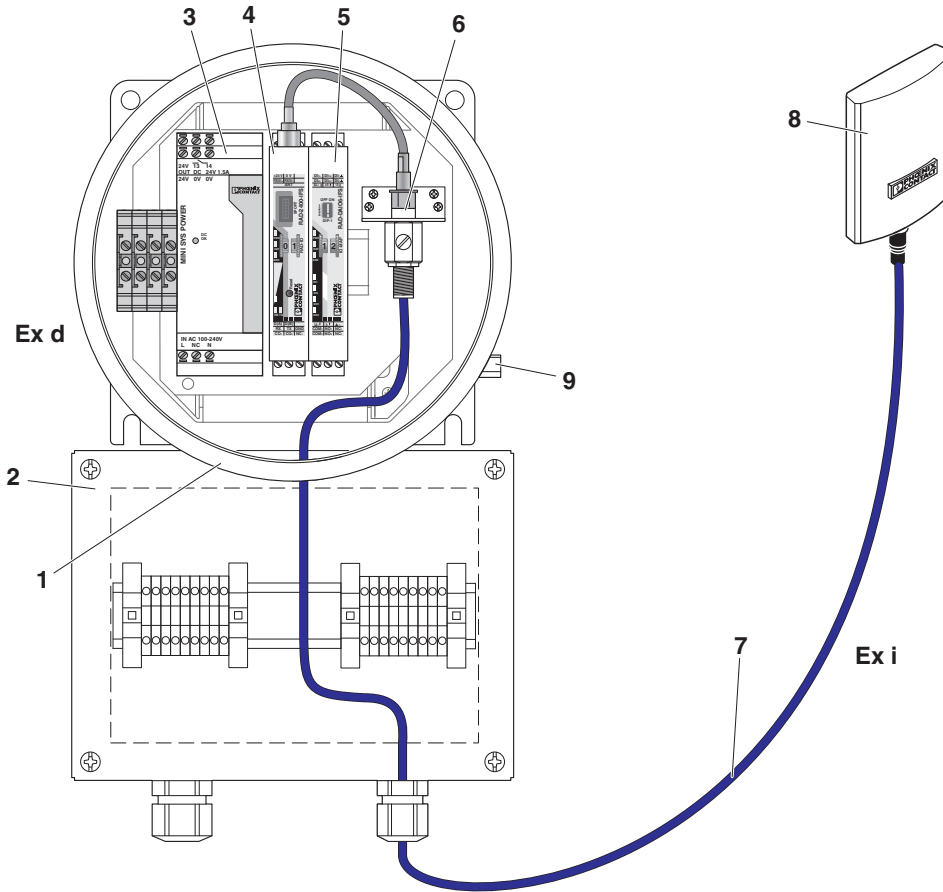
## Drawings



Attenuation

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

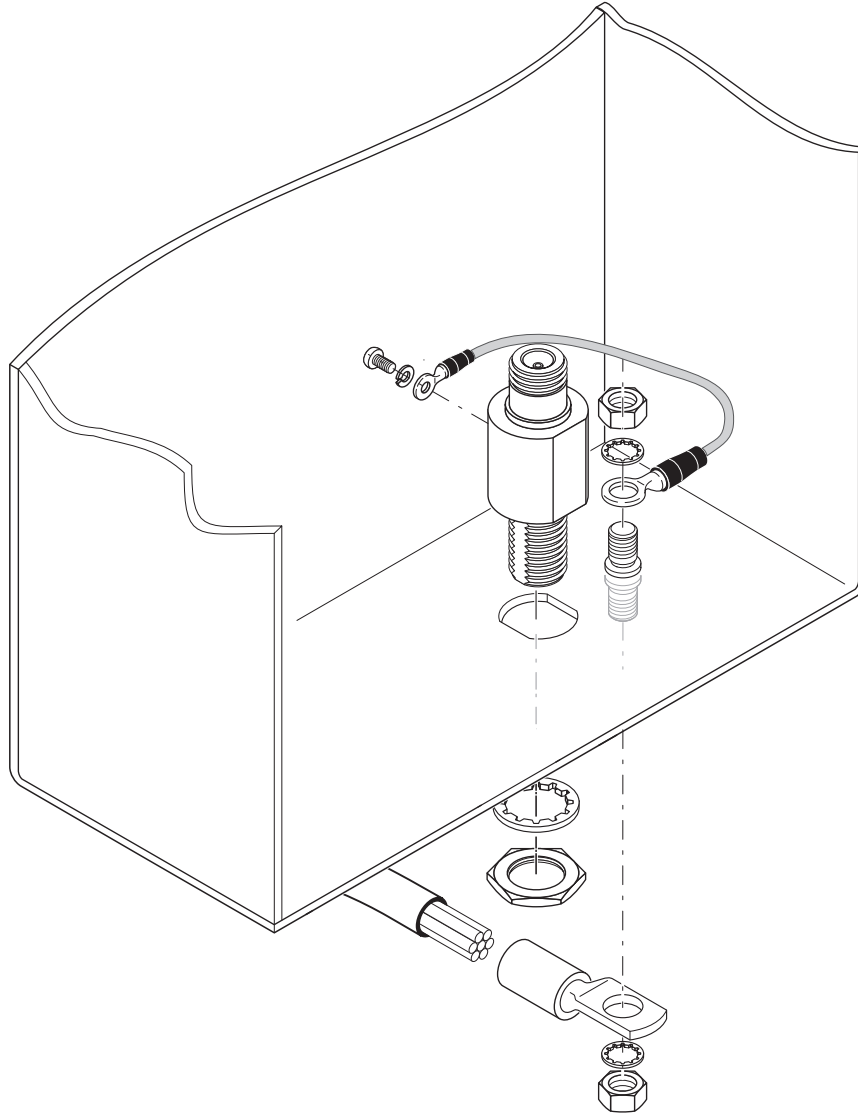
Application drawing



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

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

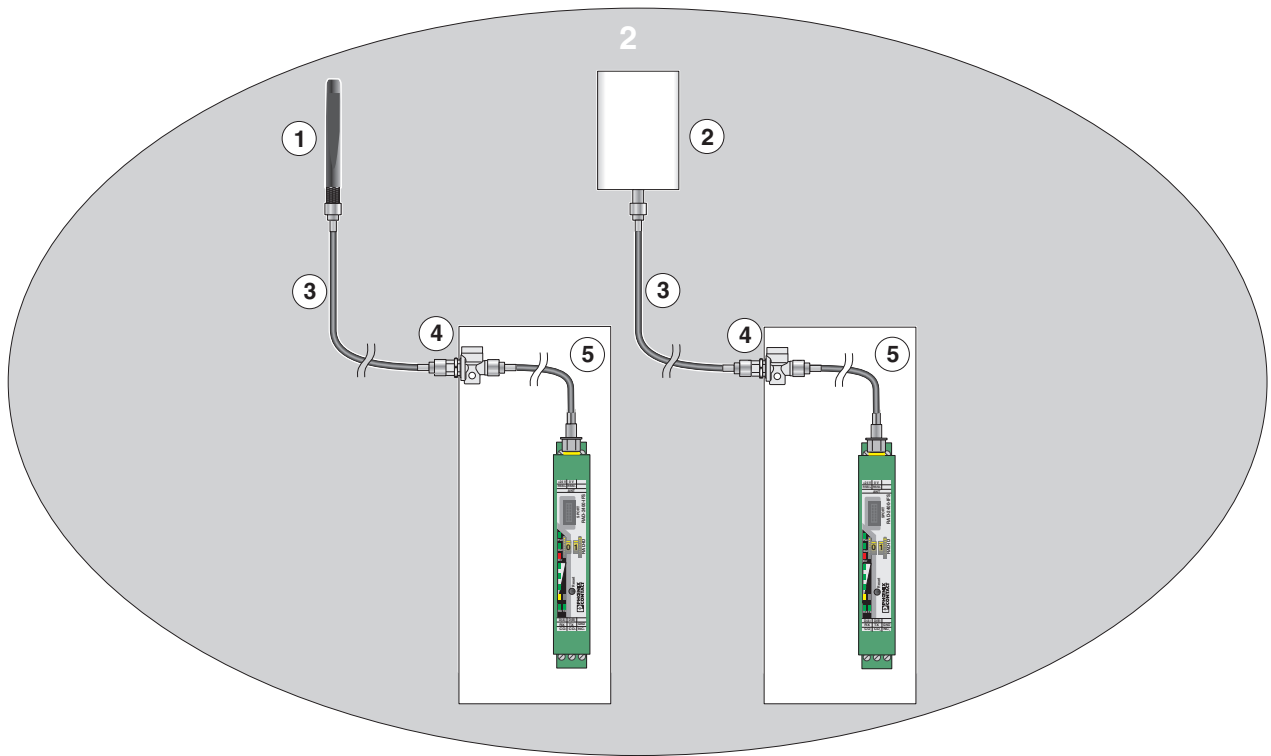
Schematic diagram



Control cabinet feed-through

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

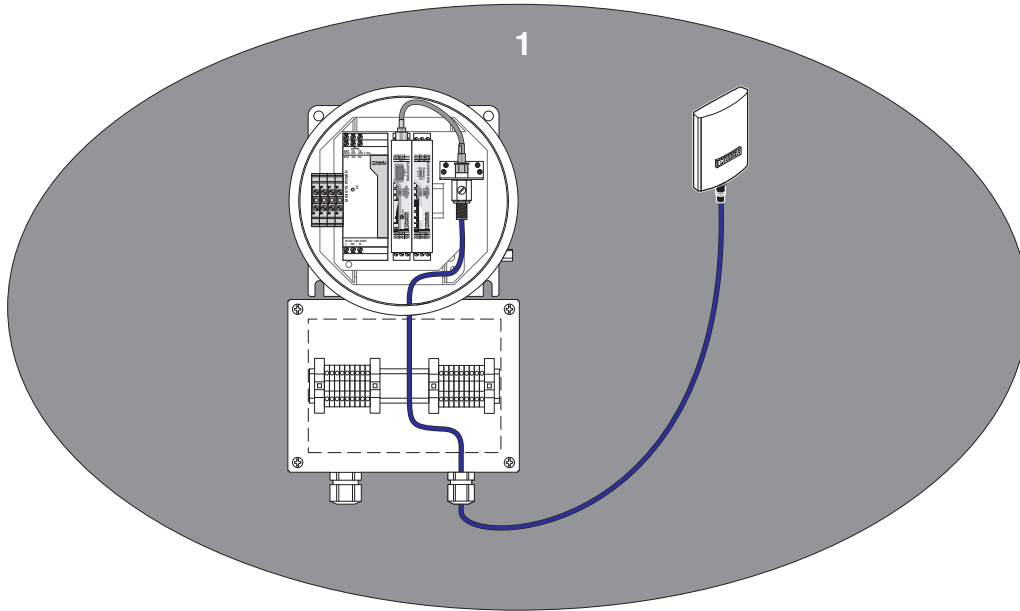
Application drawing



Installing the devices and antennas in zone 2

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

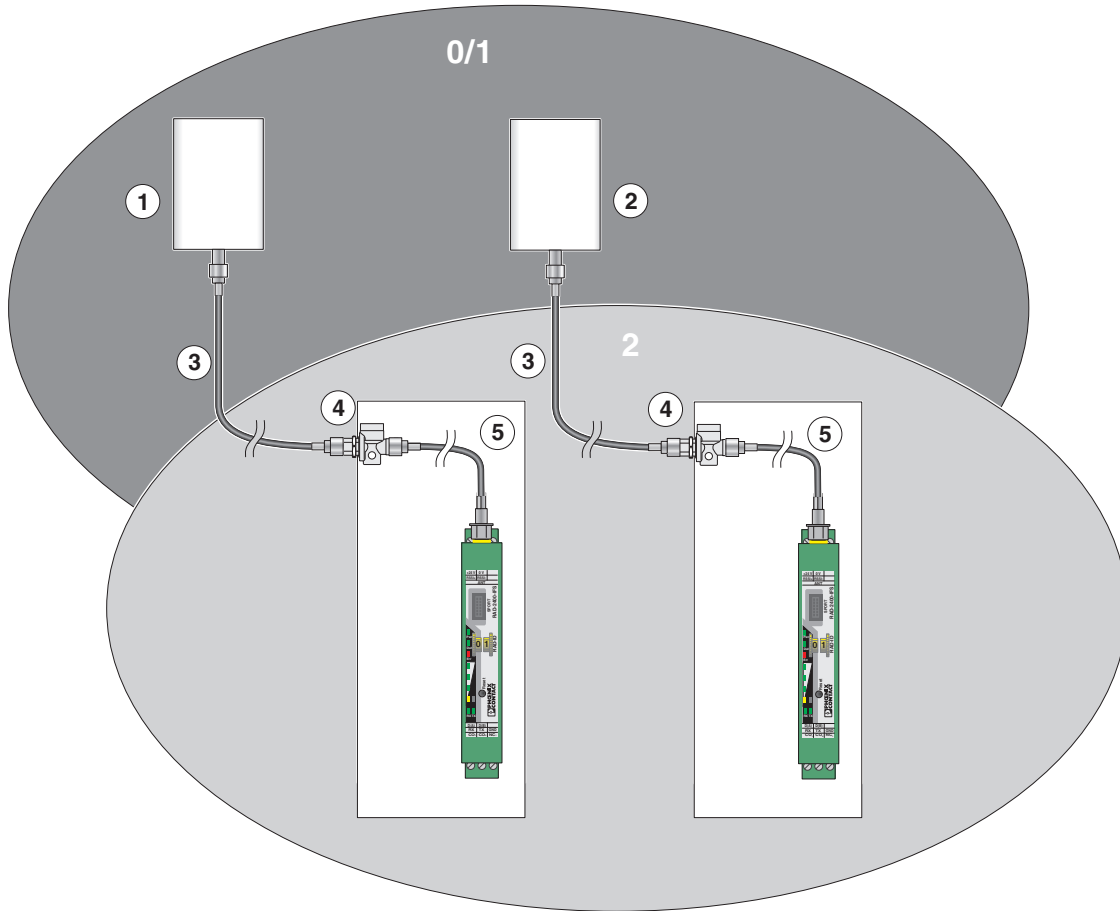
Application drawing



Installing the devices and antennas in zone 1

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

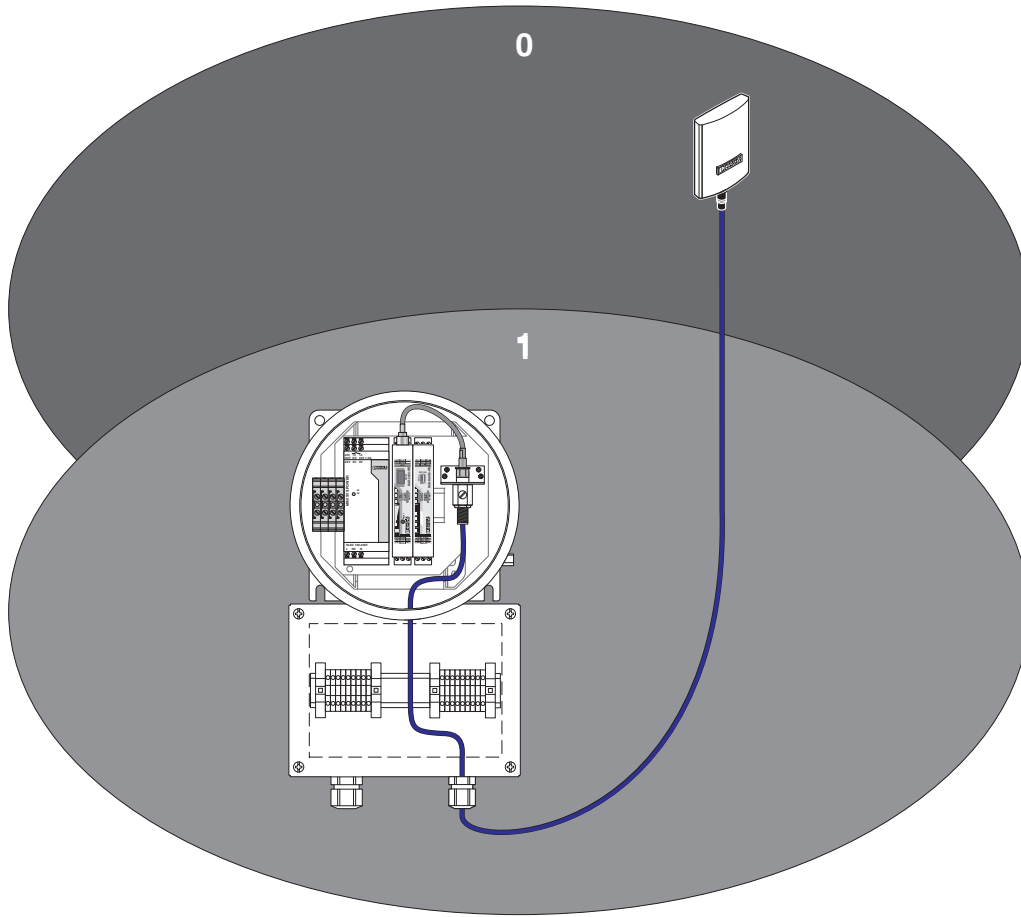
Application drawing



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

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

Application drawing



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

## Classifications

eCl@ss

eCl@ss 5.1	27142000
eCl@ss 6.0	19070100
eCl@ss 7.0	19070102
eCl@ss 8.0	19070102

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

## Classifications

eCl@ss

eCl@ss 9.0	19070417
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ETIM

ETIM 5.0	EC001135
ETIM 6.0	EC000416

## 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 - 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

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

### Accessories

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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.)

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## 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.)

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#### 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.)

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### 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

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### 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

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#### 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

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#### 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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