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

2702198

https://www.phoenixcontact.com/us/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	DN23
Product key	DNC6Z1
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

Technical data

Notes

Note on application

Note on application	Only for industrial use

Utilization restriction

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

Product properties

Product type	Coaxial adapter

Electrical properties

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

Connection data

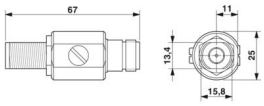
Connection method	N (female)
Connection method	N (female)

Ex data

Safety data

Input power P_i	≤ 2 W (HF input power, 33 dBm, IIC)
	≤ 3.5 W (HF input power, 35.4 dBm, IIB)
	≤ 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} ≤ 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
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

ATEX

Identification	Ⓔx II (1) G [Ex ia Ga] IIC
	Ⓔx II (1) D [Ex ia Da] IIIC
	Ⓔx I (M1) [Ex ia Ma] I
	Ⓔx II 3 (1) G Ex ec [ia Ga] IIC T6 Gc
	Ⓔx 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

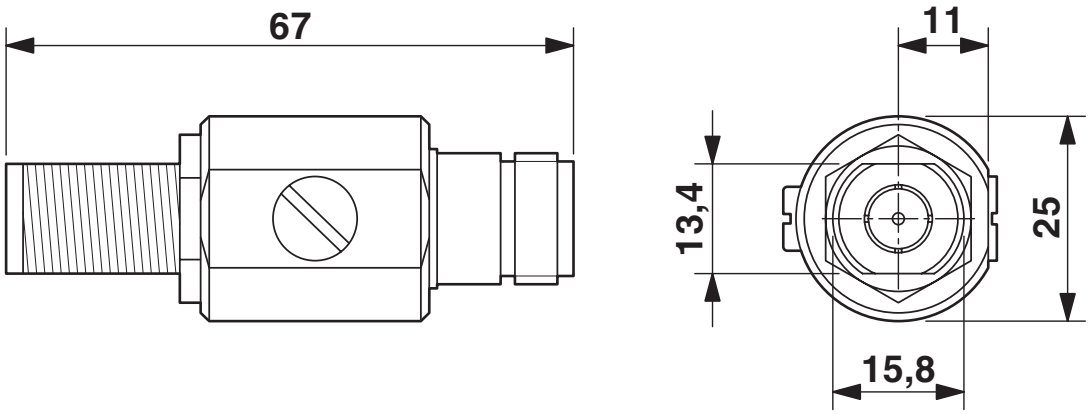
Mounting

	Outdoors and indoors

Assembly note	Connection-specific attachment plug
	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).

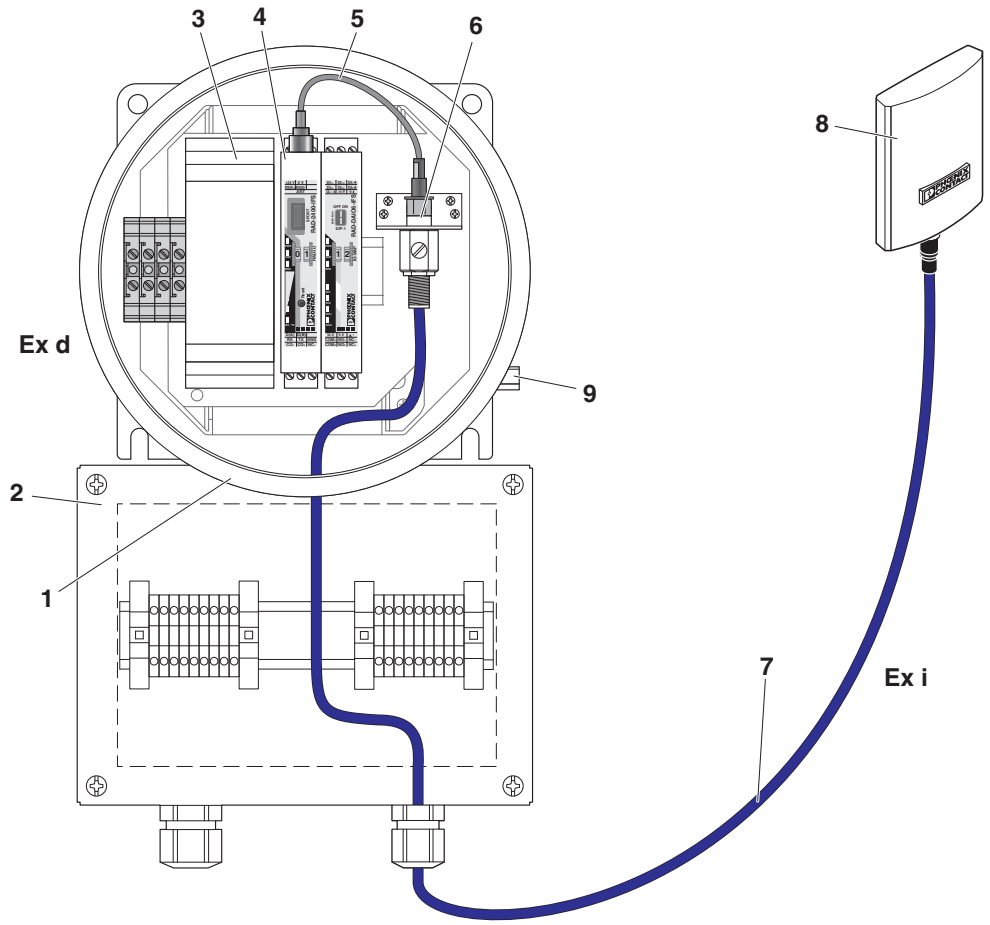
Drawings

Dimensional drawing



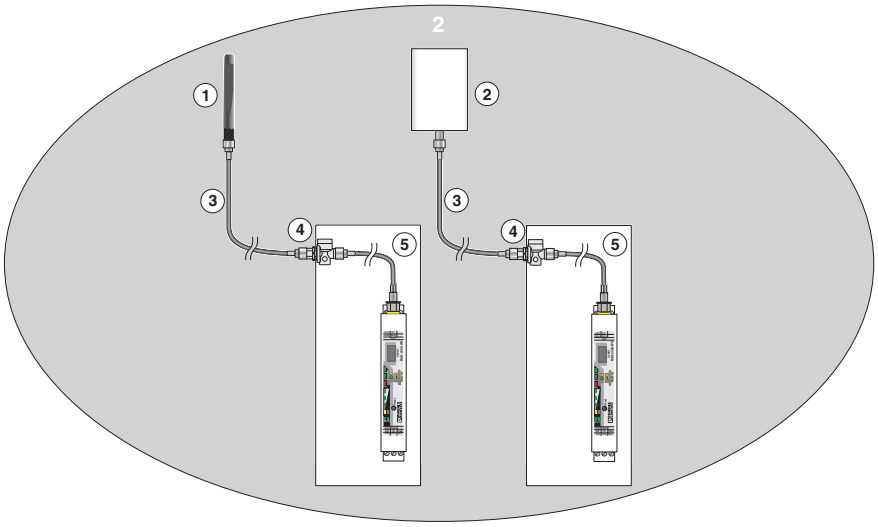
Dimensional drawing

Application drawing



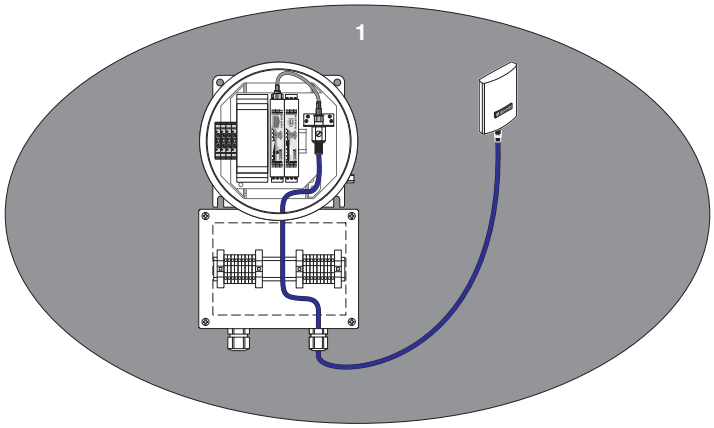
Installation in a housing with “flameproof enclosure” type of protection (EN 60079-1)

Application drawing



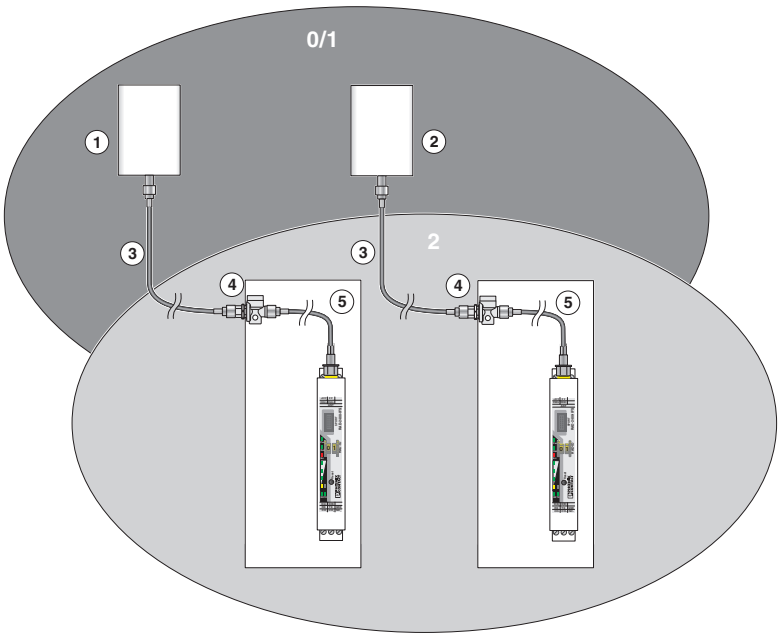
Installing the devices and antennas in zone 2

Application drawing



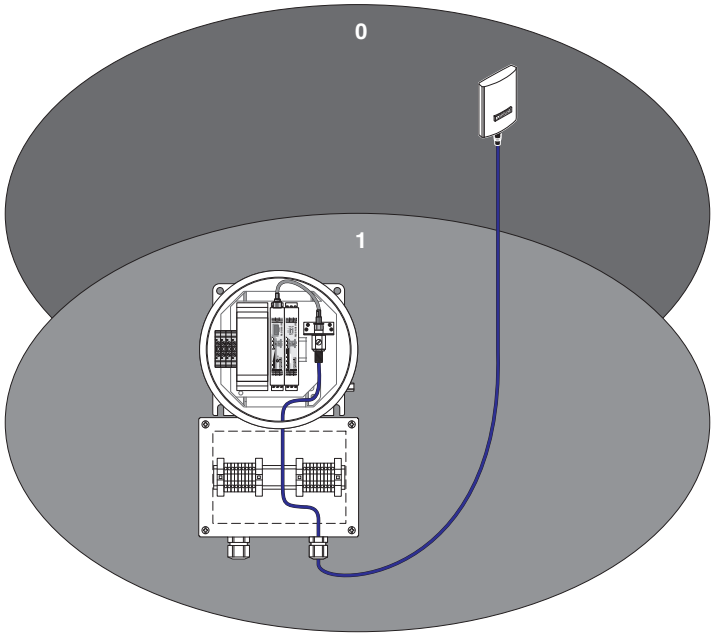
Installing the devices and antennas in zone 1

Application drawing



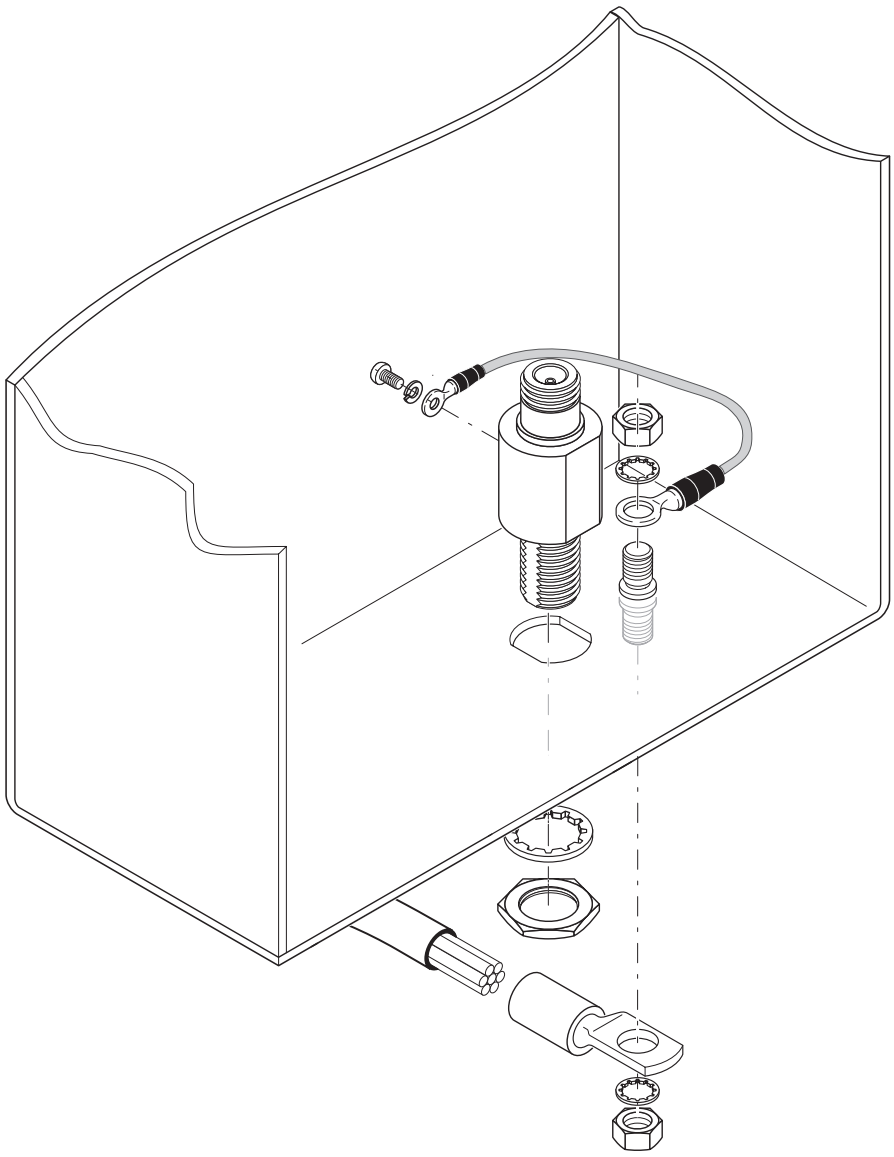
Installing the devices in zone 2 and the antennas in zone 1 or zone 0

Application drawing



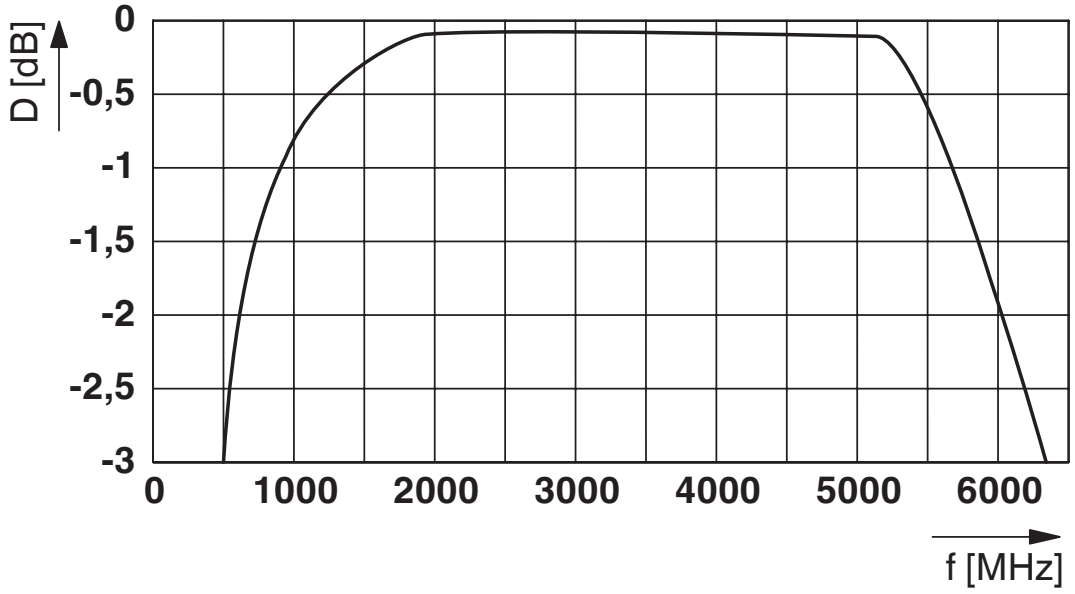
Installing the devices in zone 1 and the antennas in zone 0

Schematic diagram



Control cabinet feed-through

Diagram



Attenuation

Approvals

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

IECEx
Approval ID: IECEx IBE 15.0006 X

ATEX
Approval ID: IBExU 15 ATEX 1064 X

Classifications

ECLASS

ECLASS-13.0	19070417
ECLASS-15.0	19070417

ETIM

ETIM 10.0	EC001135

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	9dc59fc0-8026-4918-94f4-fd2601b36191

EF3.1 Climate Change

CO2e kg	6.012 kg CO2e

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