

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 |

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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

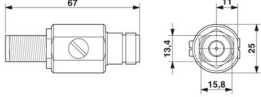
| | |
|-------------------|------------|
| Connection method | N (female) |
| Connection method | N (female) |

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 | $P_{out} \leq$ 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 |
|--------------------|----------------------|

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| | |
|------------------------------------|---------|
| 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 | ⊕ 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

Outdoors and indoors

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| | |
|---------------|--|
| Assembly note | <p>Connection-specific attachment plug</p> <p>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).</p> |
|---------------|--|

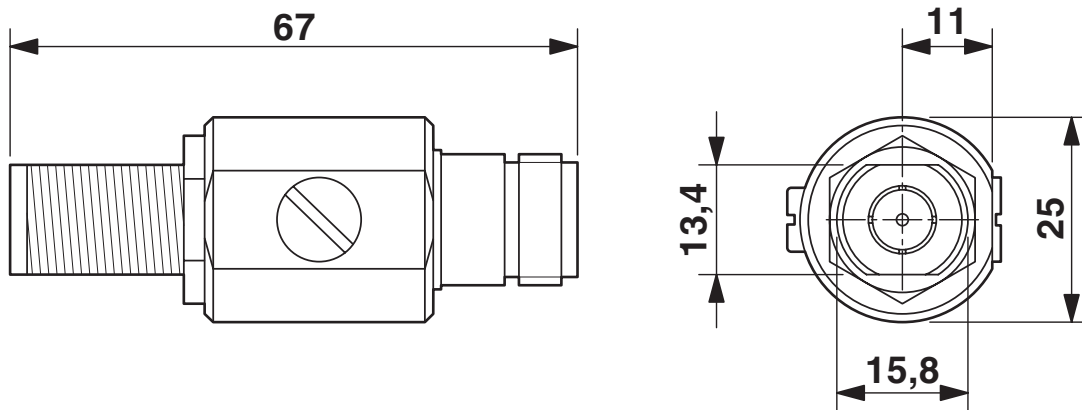
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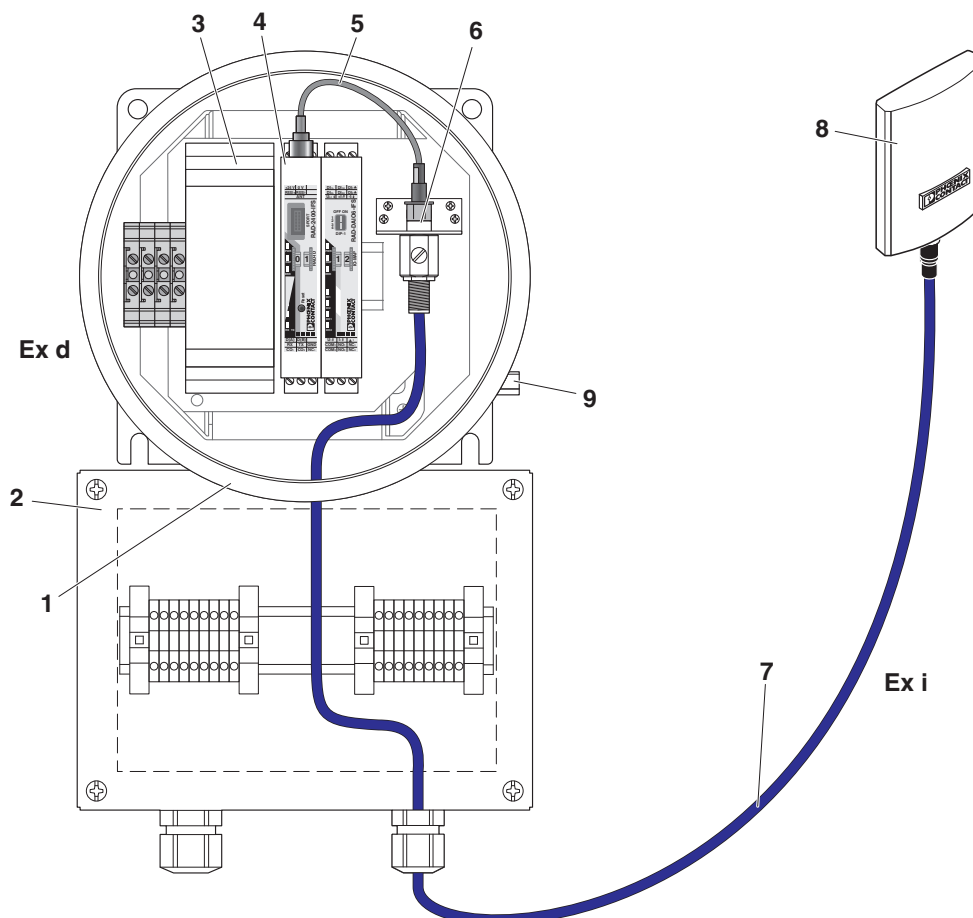
Drawings

Dimensional drawing



Dimensional drawing

Application drawing



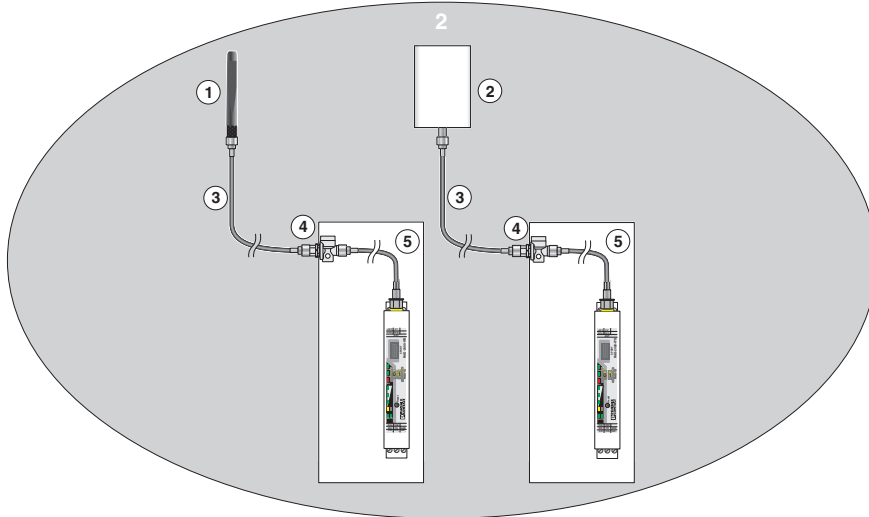
Installation in a housing with "flameproof enclosure" type of protection (EN 60079-1)

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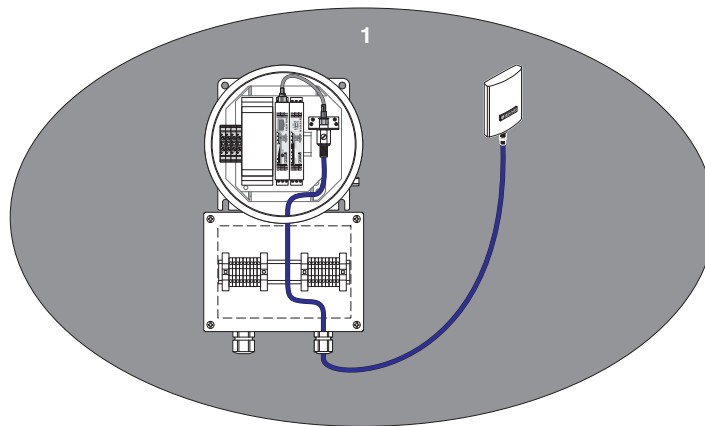
<https://www.phoenixcontact.com/us/products/2702198>

Application drawing



Installing the devices and antennas in zone 2

Application drawing



Installing the devices and antennas in zone 1

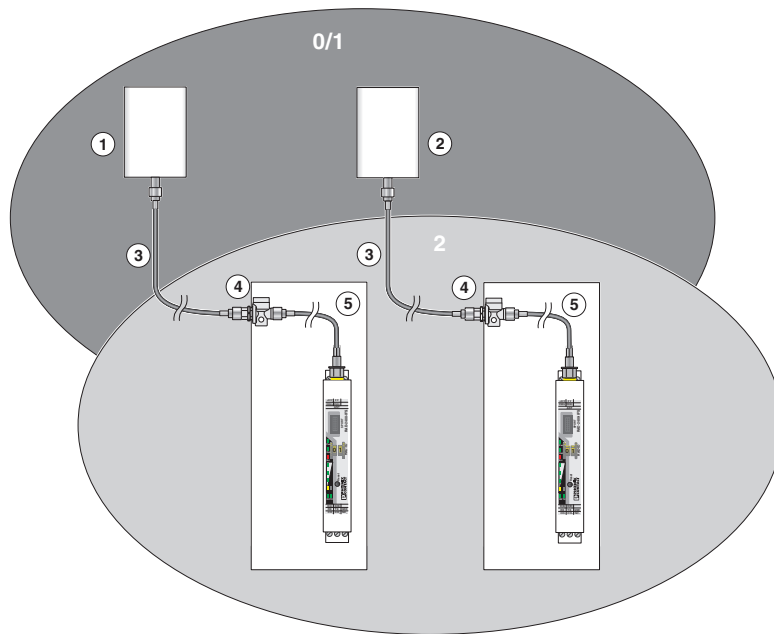
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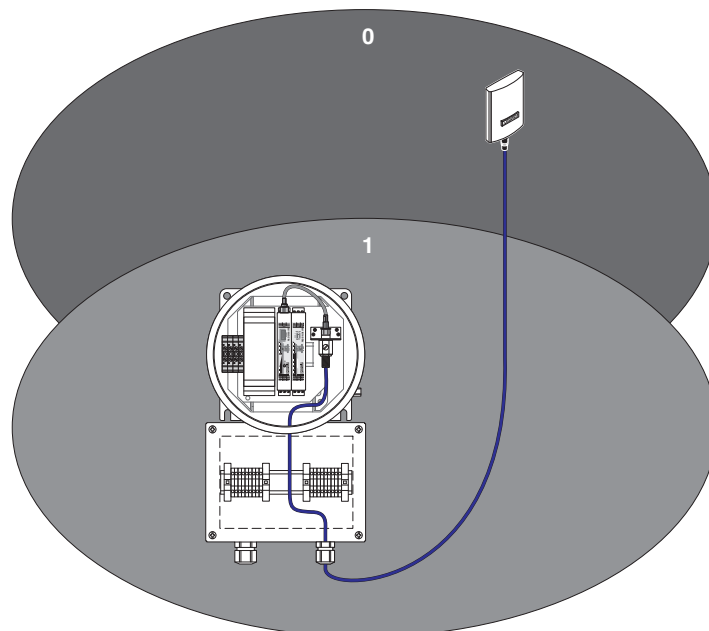


Application drawing



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

Application drawing



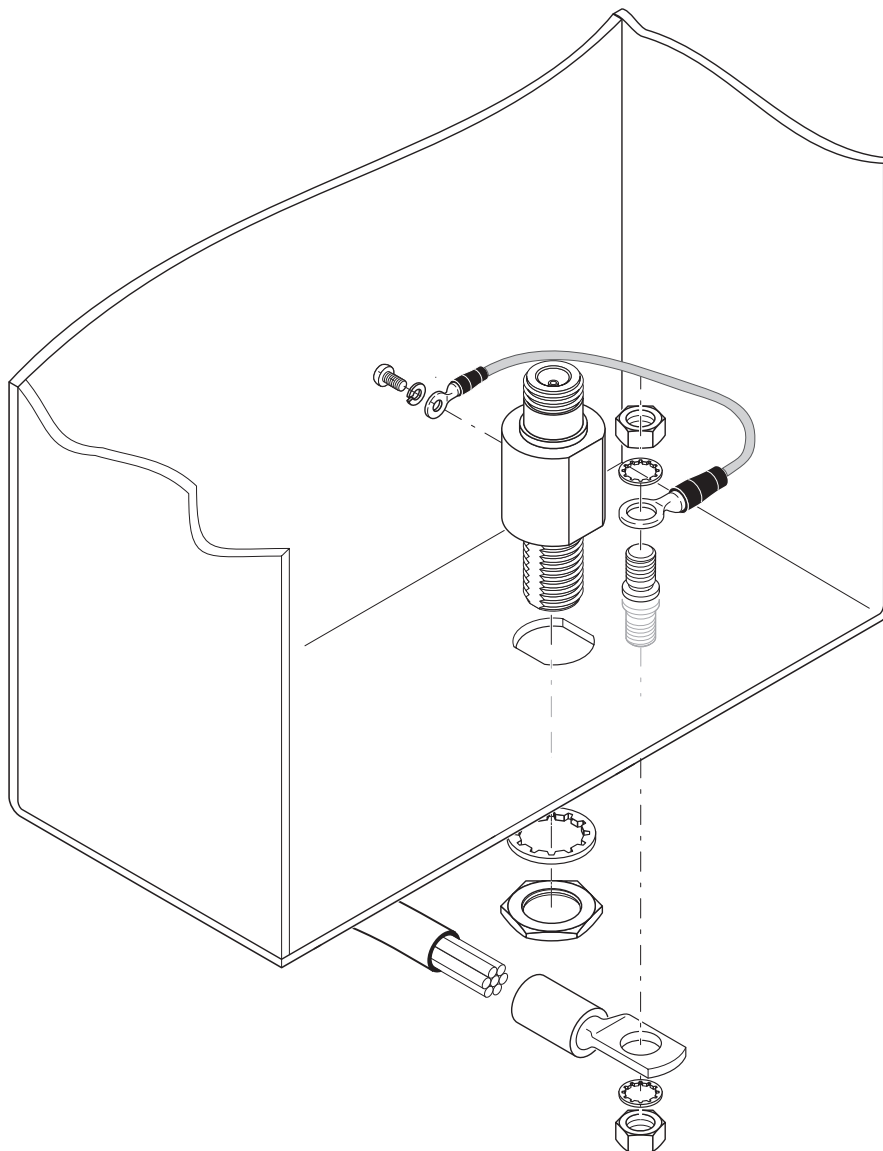
Installing the devices in zone 1 and the antennas in zone 0

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Schematic diagram



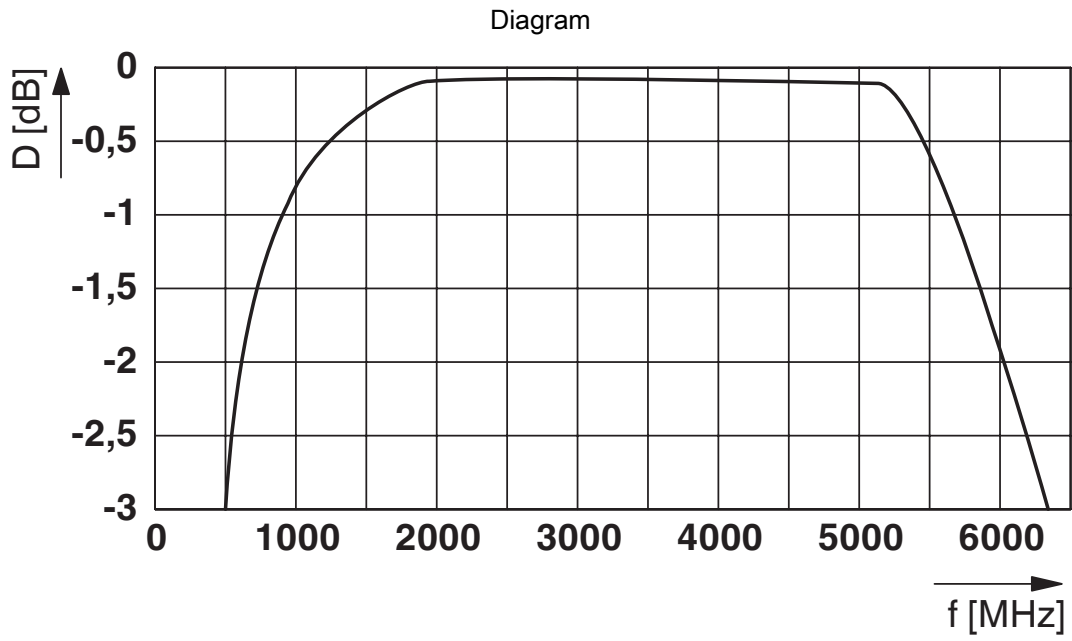
Control cabinet feed-through

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Attenuation

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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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 19070417 |
| ECLASS-15.0 | 19070417 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001135 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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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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