

# RAD-NAM4-IFS - I/O extension module



2316275

<https://www.phoenixcontact.com/us/products/2316275>

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Radioline - I/O extension module, 4 NAMUR digital input module used in Radioline and PROFIBUS PA MUX I/O systems. Fulfills the NAMUR proximity sensor standard EN 60947-5-6, and communication to the head stations for Radioline systems and the FB-MUX/HS...PA via the T-BUS connector installed on the DIN rail. This module has channel-to-channel isolation.

## Your advantages

- Extended temperature range of -40 °C ... +70 °C
- Easy module replacement even during operation (hot swap)
- Easy startup via thumbwheel
- Approved for use in zone 2

## Commercial data

Item number	2316275
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC61D
GTIN	4055626321615
Weight per piece (including packing)	188 g
Weight per piece (excluding packing)	188 g
Customs tariff number	85389091
Country of origin	US

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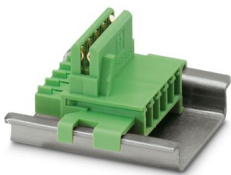
## Set consists of

ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - DIN rail bus connector

2709561

<https://www.phoenixcontact.com/us/products/2709561>

DIN rail bus connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.



## Technical data

### Notes

#### Note on application

Note on application	Only for industrial use
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### Product properties

Product type	Extension module
MTTF	1065 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	449 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
	85 Years (Telcordia standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))

#### Insulation characteristics

Overvoltage category	II
Degree of pollution	2

### Electrical properties

Electrical isolation	500 V AC (NAMUR digital I/O - 50 Hz, 1 min, test voltage)
Test voltage	500 V AC (50 Hz, 1 min.)
Maximum power dissipation for nominal condition	1.54 W

#### Supply

Supply voltage range	19.2 V DC ... 30.5 V DC (DIN rail bus connector)
Max. current consumption	≤ 64 mA (At 24 V DC, at 25°C)

### Input data

#### Digital

Open-circuit voltage	~ 8 V DC
Switching hysteresis	≤ 0.2 mA

#### Digital

Description of the input	Digital input
Number of inputs	4
Available input sources	NAMUR proximity sensors (EN 60947-5-6)
	floating switch contacts
	Switch contacts with resistance circuit
Current input signal	≤ 1.2 mA (blocking)
	≥ 2.1 mA (conductive)
Min. voltage input signal	0 V DC
Max. voltage input signal	30.5 V DC
Switching level "0" signal	0 V DC ... 4 V DC
Switching level "1" signal	10 V DC ... 30.5 V DC

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## Connection data

Connection method	Screw connection
Stripping length	7 mm
Conductor cross-section, rigid min.	0.2 mm <sup>2</sup>
Conductor cross-section, rigid max.	2.5 mm <sup>2</sup>
Conductor cross-section flexible min.	0.2 mm <sup>2</sup>
Conductor cross-section flexible max.	2.5 mm <sup>2</sup>
Conductor cross-section AWG min.	24
Conductor cross-section AWG max.	14

## Signaling

Status display	LED supply voltage, PWR (green)
	Green LED (bus communication, DAT)
	LED periphery error, ERR (red)
	Yellow LED (digital input, DI1)
	Yellow LED (digital input, DI2)
	Yellow LED (digital input, DI3)
	Yellow LED (digital input, DI4)
	Red LED (Short circuit/Line break, E1)
	Red LED (Short circuit/Line break, E2)
	Red LED (Short circuit/Line break, E3)
Red LED (Short circuit/Line break, E4)	

## Dimensions

Width	17.5 mm
Height	113 mm
Depth	114.5 mm

## Material specifications

Color	green
Flammability rating according to UL 94	V0
Housing material	PA 6.6-FR

## Characteristics

Line fault detection	Break $0.05 \text{ mA} < I_{IN} < 0.35 \text{ mA}$
	Short circuit $100 \text{ } \Omega < R_{Sensor} < 360 \text{ } \Omega$

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	2000 m

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Permissible humidity (operation)	20 % ... 95 % (non-condensing)
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## Approvals

### Conformity/Approvals

Conformance	CE-compliant
CCC	Ex ec IIC T4 Gc

### Ex data

ATEX	IBExU 17ATEXB011X; II 3 G; Ex ec IIC T4 Gc
IECEX	IECEX IBE 17.0029X; Ex ec IIC T4 Gc
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T4 Class I, Zone 2, AEx ec IIC T4, Ex ec IIC T4 Gc X

## Standards and regulations

Standard designation	Ex Directive (ATEX)
Standards/specifications	EN 60079-0

## Mounting

Mounting type	DIN rail mounting
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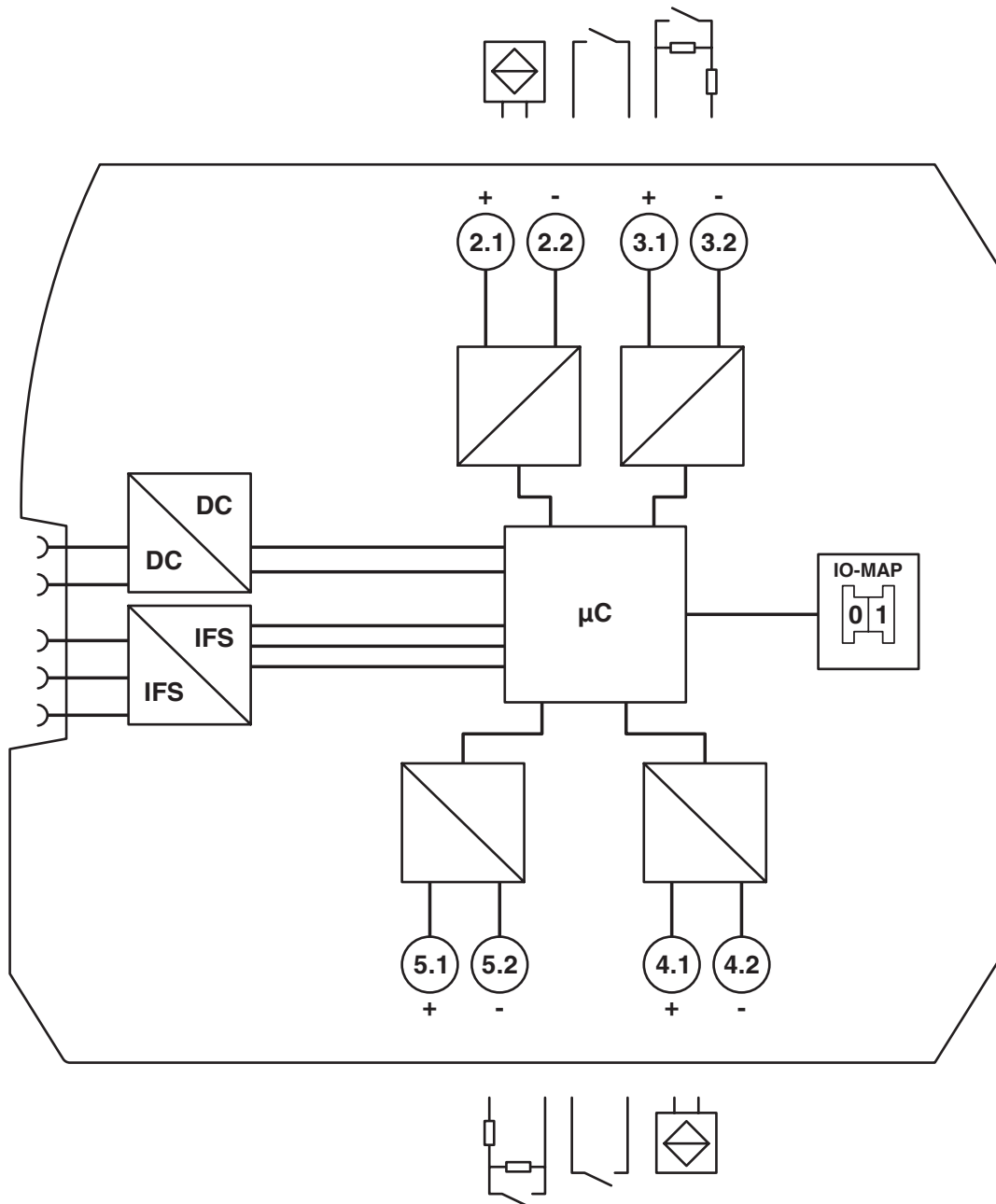
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## Drawings

Block diagram



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## Approvals

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**UL Listed**

Approval ID: E238705



**cUL Listed**

Approval ID: E238705



**IECEX**

Approval ID: IECEX IBE 17.0029X



**cUL Listed**

Approval ID: FILE E 358724



**UL Listed**

Approval ID: E358724



**ATEX**

Approval ID: IBExU17ATEXB011 X



**CCC**

Approval ID: 2022122310115620

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## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	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	1cc9f995-5214-4cad-8e03-c3d7a397dac4

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