

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	DNC135
Catalog page	Page 461 (C-6-2019)
GTIN	4055626321615
Weight per piece (including packing)	188 g
Weight per piece (excluding packing)	188 g
Customs tariff number	85389091
Country of origin	US

RAD-NAM4-IFS - I/O extension module



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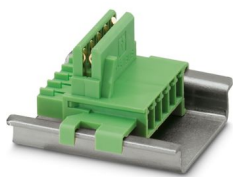
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Set consists of

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

2709561

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



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

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Technical data

Notes

Note on application

Note on application	Only for industrial use
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Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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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))

Data management status

Article revision	06
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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 connector)
Max. current consumption	≤ 64 mA (At 24 V DC, at 25°C)

Input data

Digital

Non-load 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

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Current input signal	$\leq 1.2 \text{ mA}$ (blocking)
	$\geq 2.1 \text{ mA}$ (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

Connection data

Connection method	Screw connection
Stripping length	7 mm
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 $100 \, \Omega < R_{Sensor} < 360 \, \Omega$

Environmental and real-life conditions

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Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	2000 m
Permissible humidity (operation)	20 % ... 95 % (non-condensing)

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

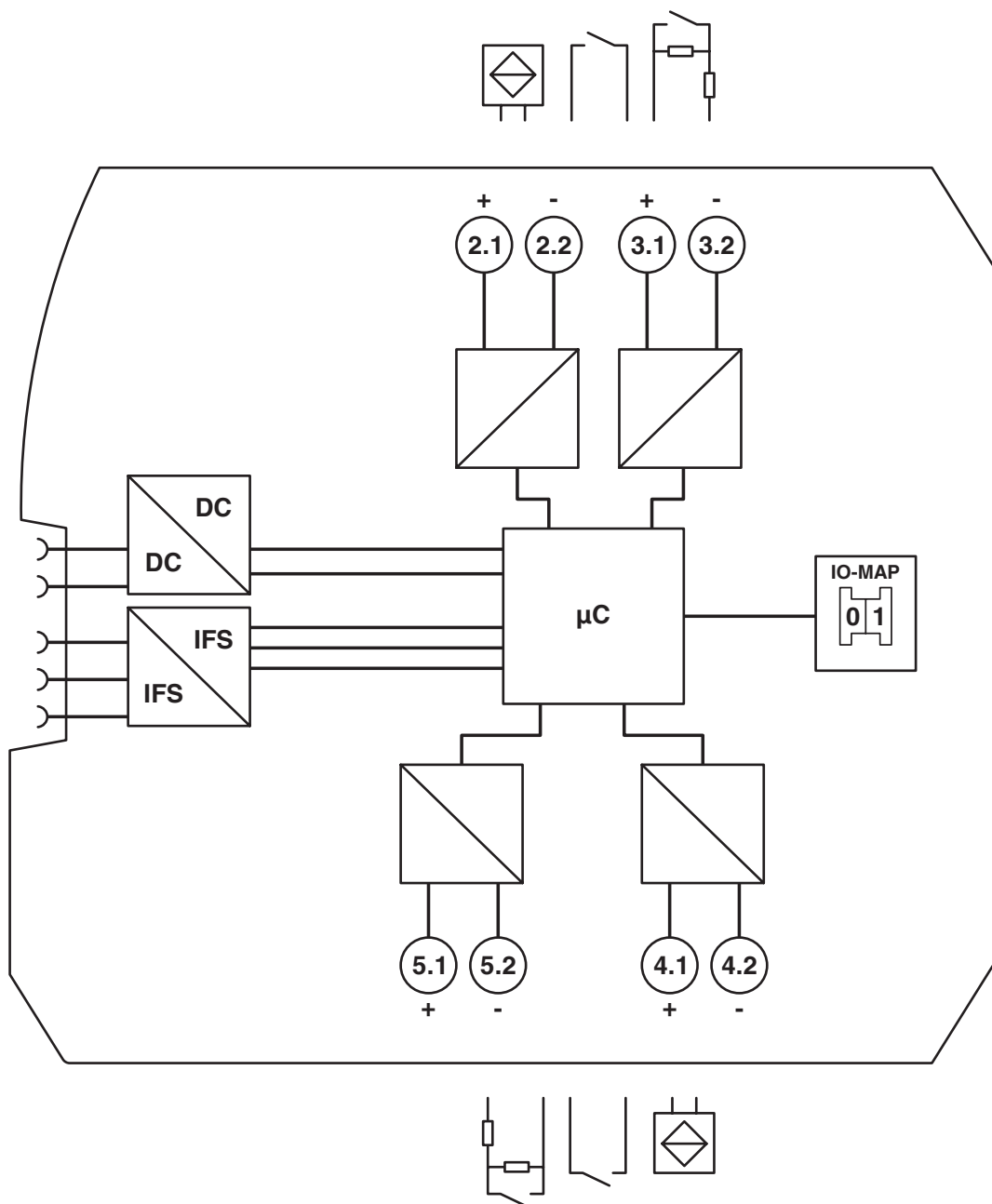
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Drawings

Block diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2316275>



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

cULus Listed

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	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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Mandatory accessories

RAD-2400-IFS - Wireless module

2901541

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

RAD-900-IFS - Wireless module

2901540

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

RAD-NAM4-IFS - I/O extension module

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RAD-RS485-IFS - Communication module

2702184

<https://www.phoenixcontact.com/us/products/2702184>



Radioline - RS-485 multipoint multiplexer, can be extended with I/O modules, can be used as Modbus/RTU bus coupler or can be combined with Radioline wireless system, up to 99 stations, range of up to 1.2 km on in-house copper cables

RAD-2400-IFS-JP - Wireless module

2702863

<https://www.phoenixcontact.com/us/products/2702863>



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 use in Japan

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RAD-900-IFS-AU - Wireless module

2702878

<https://www.phoenixcontact.com/us/products/2702878>



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), for use in Australia.

FB-MUX/HS/DIO-NAM/PA - Multiplexer

2316270

<https://www.phoenixcontact.com/us/products/2316270>



The FB-MUX/HS/DIO-NAM/PA head station can be used with up to three 4-channel NAMUR digital input modules (RAD-NAM4-IFS) and two 4-channel digital output modules (RAD-DOR4-IFS). This configuration can be used as a valve coupler solution to open and close, as well as monitor, the position of a valve.

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FB-MUX/HS/DI24/PA - Multiplexer

1005332

<https://www.phoenixcontact.com/us/products/1005332>



The FB-MUX/HS/DI24/PA head station can be used with up to six 4-channel digital input modules (RAD-DI4-IFS), six 4-channel NAMUR digital input modules (RAD-NAM4-IFS), three 8-channel digital input modules (RAD-DI8-IFS), or any combination of modules for maximum of 24 total channels. This configuration can be used as a high-density digital input solution.

Accessories

RAD-DO8-IFS - I/O extension module

2902811

<https://www.phoenixcontact.com/us/products/2902811>



Radioline - I/O extension module, 8 digital transistor outputs (30.5 V DC/200 mA)

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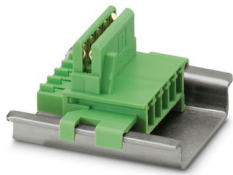


ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - DIN rail bus connectors

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



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