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

Set consists of

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

2709561

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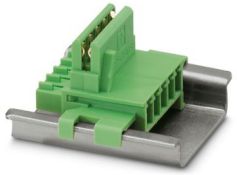


DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Technical data

Notes

Utilization restriction

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

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 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
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

Connection data

Connection method	Screw connection
Stripping length	7 mm
Conductor cross section, rigid min.	0.2 mm²
Conductor cross section, rigid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

Signaling

Status display	Green LED (supply voltage, PWR)
	Green LED (bus communication, DAT)
	Red LED (periphery error, ERR)
	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 mA < IIN < 0.35 mA
	Short circuit 100 Ω < RSensor < 360 Ω

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

Approvals

Conformity/Approvals

Conformance	CE-compliant
CCC	Ex ec IIC T4 Gc

Ex data

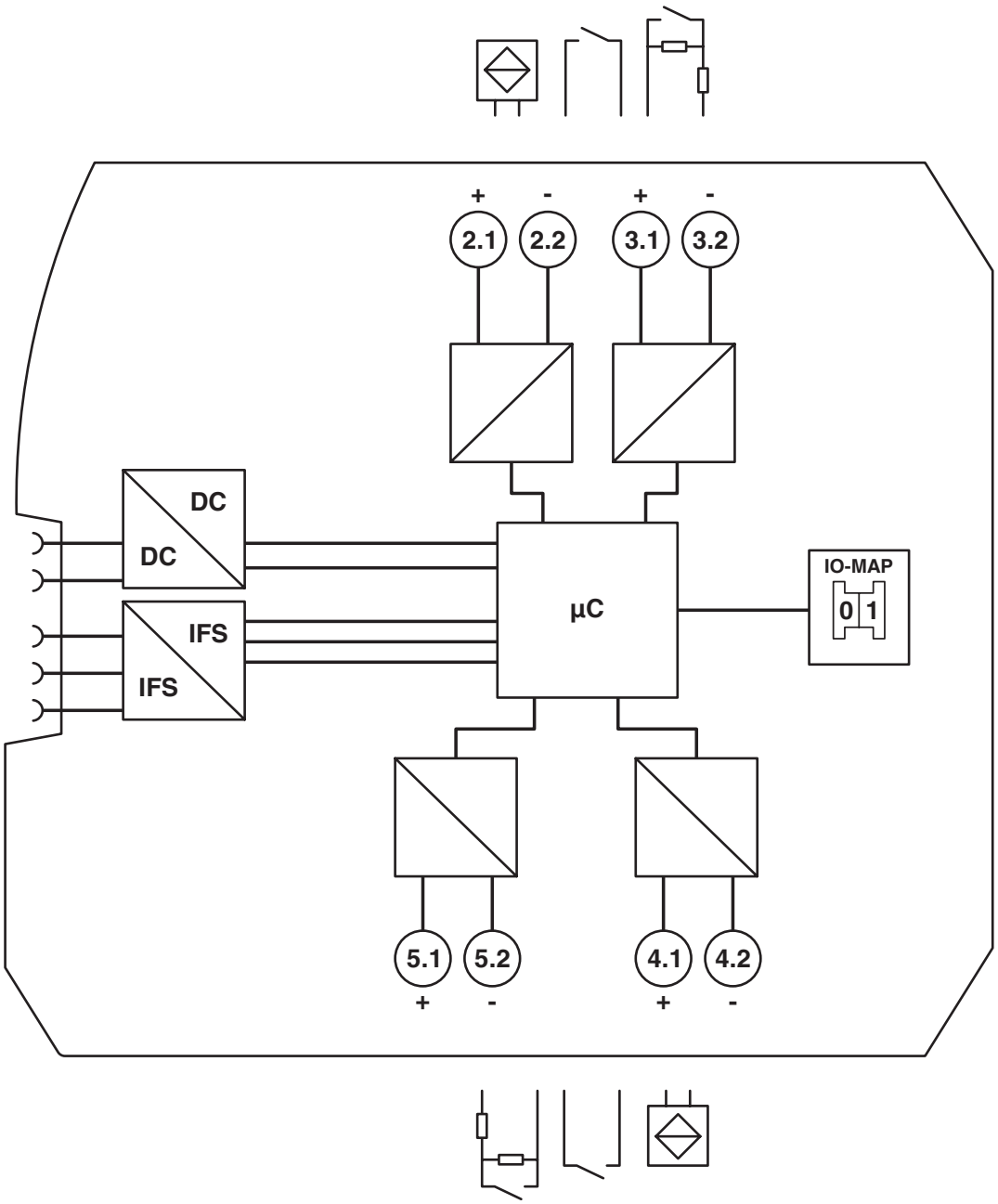
ATEX	IBExU 17ATEXB011X; II 3 G; Ex ec IIC T4 Gc
IECEx	IECEx IBE 17.0029X; Ex ec IIC T4 Gc
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T4 Class I, Zone 2, AEx ec IIC T4, Ex ec IIC T4 Gc X

Standards and regulations

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

Drawings

Block diagram



Approvals

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

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

IECEx
Approval ID: IECEx IBE 17.0029X

cUL Listed
Approval ID: FILE E 358724

UL Listed
Approval ID: FILE E 358724

ATEX
Approval ID: IBExU17ATEXB011 X

CCC
Approval ID: 2022122310115620

cULus Listed

cULus Listed

Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	EC001599

UNSPSC

UNSPSC 21.0	32151600

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

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-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

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.

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

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

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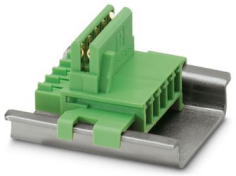

DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

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)

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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