

I/O extension module - RAD-NAM4-IFS - 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, -40 °C ... +70 °C
- ✓ Easy module replacement even during operation (hot swap)
- ✓ Easy startup via thumbwheel
- ✓ Approved for use in zone 2

RoHS

Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 055626 321615 |
| GTIN | 4055626321615 |
| Weight per Piece (excluding packing) | 0.010 g |
| Custom tariff number | 85389091 |
| Country of origin | United States |

Technical data

Note

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

Dimensions

| | |
|--------|----------|
| Width | 17.5 mm |
| Height | 113 mm |
| Depth | 114.5 mm |

I/O extension module - RAD-NAM4-IFS - 2316275

Technical data

Ambient conditions

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

General

| | |
|--|--|
| Set consists of | 2709561 ME 17,5 TBUS 1,5/ 5-ST-3,81 GN |
| Overvoltage category | II |
| Degree of pollution | 2 |
| Housing material | PA 6.6-FR |
| Flammability rating according to UL 94 | V0 |
| 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)) |

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) |

Digital inputs

| | |
|----------------------------|---|
| 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 |
| Switching level "1" signal | 10 V DC ... 30.5 V DC |
| Switching level "0" signal | 0 V DC ... 4 V DC |
| Min. voltage input signal | 0 V DC |
| Max. voltage input signal | 30.5 V DC |
| Current input signal | ≤ 1.2 mA (blocking) |
| | ≥ 2.1 mA (conductive) |
| Non-load voltage | ~ 8 V DC |
| Switching hysteresis | ≤ 0.2 mA |
| Short-circuit current | ≤ 8 mA |
| Line fault detection | Break 0.05 mA < IIN < 0.35 mA |
| | Short circuit 100 Ω < RSensor < 360 Ω |

I/O extension module - RAD-NAM4-IFS - 2316275

Technical data

Connection data

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid 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 |
| Stripping length | 7 mm |
| Tightening torque | 0.6 Nm |
| Screw thread | M3 |

Status indicator

| | |
|----------------|--|
| 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) |

Standards and Regulations

| | |
|--|--|
| Standard designation | Ex Directive (ATEX) |
| Standards/regulations | EN 60079-0 |
| Flammability rating according to UL 94 | V0 |
| Conformance | CE-compliant |
| 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 |

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

I/O extension module - RAD-NAM4-IFS - 2316275

Articles in set

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



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

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 8.0 | 27242604 |
| eCl@ss 9.0 | 27242604 |

ETIM

| | |
|----------|----------|
| ETIM 5.0 | EC001599 |
| ETIM 6.0 | EC001599 |

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

IECEEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

| | | | |
|-----------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
|-----------|---|---|---------------|

| | | | |
|------------|---|---|---------------|
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
|------------|---|---|---------------|

I/O extension module - RAD-NAM4-IFS - 2316275

Approvals

cULus Listed



Accessories

Accessories

DIN rail connector

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



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

Extension module

I/O extension module - RAD-DO8-IFS - 2902811



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

Necessary add-on products

Wireless module - RAD-2400-IFS - 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

I/O extension module - RAD-NAM4-IFS - 2316275

Accessories

Wireless module - RAD-900-IFS - 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

Wireless module - RAD-868-IFS - 2904909



Radioline - 868 MHz 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 99 stations, range of up to 20 km (with a clear line of sight), for use in Europe

Communication module - RAD-RS485-IFS - 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

Wireless module - RAD-2400-IFS-JP - 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

Wireless module - RAD-900-IFS-AU - 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.

I/O extension module - RAD-NAM4-IFS - 2316275

Accessories

Multiplexer - FB-MUX/HS/DIO-NAM/PA - 2316270



The FB-MUX/HS/DIO-NAM/PA head station can be used with up to three 4-channel NAMUR digital input modules (FB-DI4/NAMUR-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.

Multiplexer - FB-MUX/HS/DI24/PA - 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 (FB-DI4/NAMUR-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.

Additional products

I/O extension module - RAD-DO8-IFS - 2902811



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

I/O extension module - RAD-AI4-U-IFS - 2702290

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Radioline - I/O extension module, 4 analog voltage inputs (0 ... 5 V, 0 ... 10 V)

Your advantages

- ✓ Channel-to-channel electrical isolation
- ✓ Extended temperature range, -40 °C ... +70 °C
- ✓ Easy module replacement even during operation (hot swap)
- ✓ Easy startup via thumbwheel

Key Commercial Data

| | |
|-------------------|---------------|
| Packing unit | 1 pc |
| Country of origin | United States |

Technical data

Dimensions

| | |
|--------|----------|
| Width | 17.5 mm |
| Height | 113 mm |
| Depth | 114.5 mm |

Ambient conditions

| | |
|--|--|
| Degree of protection | IP20 |
| | IP20 |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| | -40 °F ... 158 °F |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| | -40 °F ... 185 °F |
| Permissible humidity (operation) | 20 % ... 85 % |
| Permissible humidity (storage/transport) | 20 % ... 85 % |
| Altitude | 2000 m |
| Vibration (operation) | in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz |
| Shock | 16g, 11 ms |

I/O extension module - RAD-AI4-U-IFS - 2702290

Technical data

General

| | |
|--|--|
| Set consists of | 2709561 ME 17,5 TBUS 1,5/ 5-ST-3,81 GN |
| Overvoltage category | II |
| Mounting position | any |
| Assembly instructions | on standard DIN rail NS 35 in accordance with EN 60715 |
| Degree of pollution | 2 |
| Housing material | PA 6.6-FR |
| Flammability rating according to UL 94 | V0 |
| MTTF | 887 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
| | 357 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day)) |
| | 65 Years (Telcordia standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day)) |

Supply

| | |
|----------------------------|--|
| Supply voltage range | 19.2 V DC ... 30.5 V DC (DIN rail connector) |
| Max. current consumption | ≤ 120 mA (At 24 V DC, at 25°C) |
| Transient surge protection | Yes |

Connection data

| | |
|---------------------------------------|------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm² |
| Conductor cross section solid 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 |
| Stripping length | 7 mm |
| Tightening torque | 0.6 Nm |
| Screw thread | M3 |

Status indicator

| | |
|----------------|------------------------------------|
| Status display | Green LED (supply voltage, PWR) |
| | Green LED (bus communication, DAT) |
| | Red LED (periphery error, ERR) |

Standards and Regulations

| | |
|-----------------------|--------------------------|
| Standard designation | EMC Directive 2014/30/EU |
| Standards/regulations | EN 61000-6-2 |
| Standard designation | EMC Directive 2014/30/EU |

I/O extension module - RAD-AI4-U-IFS - 2702290

Technical data

Standards and Regulations

| | |
|--|--|
| Standards/regulations | EN 61000-6-4 |
| Standard designation | Ex Directive (ATEX) |
| Standards/regulations | EN 60079-0 |
| Standard designation | Ex Directive (ATEX) |
| Standards/regulations | EN-60079-15 |
| Flammability rating according to UL 94 | V0 |
| Shock | 16g, 11 ms |
| Vibration (operation) | in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz |
| Conformance | CE-compliant |

Articles in set

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



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

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.1 | 27242601 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242601 |
| eCl@ss 8.0 | 27242601 |
| eCl@ss 9.0 | 27242601 |

ETIM

| | |
|----------|----------|
| ETIM 4.0 | EC001596 |
| ETIM 5.0 | EC001596 |
| ETIM 6.0 | EC001596 |
| ETIM 7.0 | EC001596 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 13.2 | 32151602 |
|-------------|----------|

I/O extension module - RAD-AI4-U-IFS - 2702290

Accessories

Accessories

DIN rail connector

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



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

Extension module

I/O extension module - RAD-AO4-IFS - 2901538



Radioline - I/O extension module, 4 analog current or voltage outputs (0/4 mA ... 20 mA, 0 V ... 10 V)

Necessary add-on products

Wireless module - RAD-2400-IFS - 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

Wireless module - RAD-900-IFS - 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

I/O extension module - RAD-AI4-U-IFS - 2702290

Accessories

Wireless module - RAD-868-IFS - 2904909



Radioline - 868 MHz 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 99 stations, range of up to 20 km (with a clear line of sight), for use in Europe

Communication module - RAD-RS485-IFS - 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

Wireless module - RAD-2400-IFS-JP - 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

Wireless module - RAD-900-IFS-AU - 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.

Additional products

I/O extension module - RAD-AO4-IFS - 2901538



Radioline - I/O extension module, 4 analog current or voltage outputs (0/4 mA ... 20 mA, 0 V ... 10 V)

