

## I/O extension module - RAD-DI4-IFS - 2901535

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Digital I/O extension module with 4 digital inputs (0...250 V AC/DC), with screw connection, incl. DIN rail connector

### Product Features

- Channel-to-channel electrical isolation
- Extended temperature range, -40°C ... +70°C
- Easy module replacement even during operation (hot swap)
- Digital wide-range inputs (0 ... 250 V AC/DC)
- Suitable for ATEX zone 2
- Easy startup via thumbwheel



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	200.0 g
Custom tariff number	85389091
Country of origin	Germany

### Technical data

#### Note

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

#### Dimensions

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

# I/O extension module - RAD-DI4-IFS - 2901535

## Technical data

### Ambient conditions

Degree of protection	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

### General

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	1766 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	653 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
	250 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	≤ 11 mA (At 24 V DC, at 25°C)
Transient surge protection	Yes

### Digital inputs

Description of the input	Digital input
Number of inputs	4
Switching level "1" signal	10 V AC/DC ... 50 V AC/DC (Low-voltage input)
	50 V AC/DC ... 250 V AC/DC (High-voltage input)
Switching level "0" signal	0 V AC/DC ... 4 V AC/DC (Low-voltage input)
	0 V AC/DC ... 20 V AC/DC (High-voltage input)
Input frequency	≤ 2 Hz
Min. voltage input signal	0 V AC/DC
Max. voltage input signal	250 V AC/DC

# I/O extension module - RAD-DI4-IFS - 2901535

## Technical data

### Electrical isolation

Digital I/O	300 V (Rated insulation voltage (in each case between the digital inputs // TBUS supply, reinforced insulation according to EN 61010))
-------------	--

### Test voltage

Digital I/O	2.5 kV AC (50 Hz, 1 min.)
-------------	---------------------------

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid 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
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)

### Approvals and conformance

Conformance	CE-compliant
IECEX	Ex nA IIC T4 Gc
UL, USA / Canada	UL 508 Listed
Standard designation	EMC Directive 2004/108/EC
Standards/regulations	EN 61000-6-2
Standard designation	EMC Directive 2004/108/EC
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

# I/O extension module - RAD-DI4-IFS - 2901535

## Technical data

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Standard designation	EMC Directive 2004/108/EC
Standards/regulations	EN 61000-6-2
Standard designation	EMC Directive 2004/108/EC
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
Shock	16g, 11 ms
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Flammability rating according to UL 94	V0
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
IECEX	Ex nA IIC T4 Gc
UL, USA / Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, IIC T4

## Classifications

### eCl@ss

eCl@ss 4.0	27230207
eCl@ss 4.1	27230207
eCl@ss 5.0	27230207
eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

### ETIM

ETIM 3.0	EC001423
ETIM 4.0	EC000310
ETIM 5.0	EC001599

# I/O extension module - RAD-DI4-IFS - 2901535

## Classifications

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008
UNSPSC 12.01	43223108
UNSPSC 13.2	43223108

## Approvals

### Approvals

---

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

---

#### Ex Approvals


ATEX / IECEx / UL Listed / cUL Listed


---

#### Approvals submitted


---

### Approval details

UL Listed 

cUL Listed 

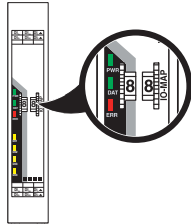
EAC

cULus Listed 

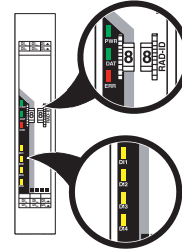
## Drawings

# I/O extension module - RAD-DI4-IFS - 2901535

Schematic diagram



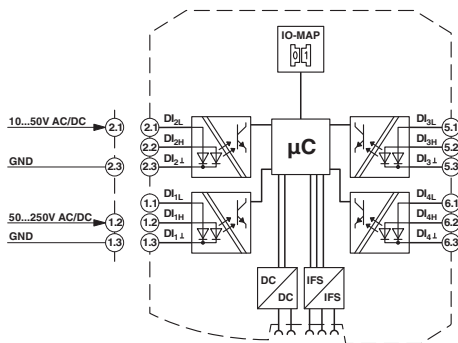
Schematic diagram



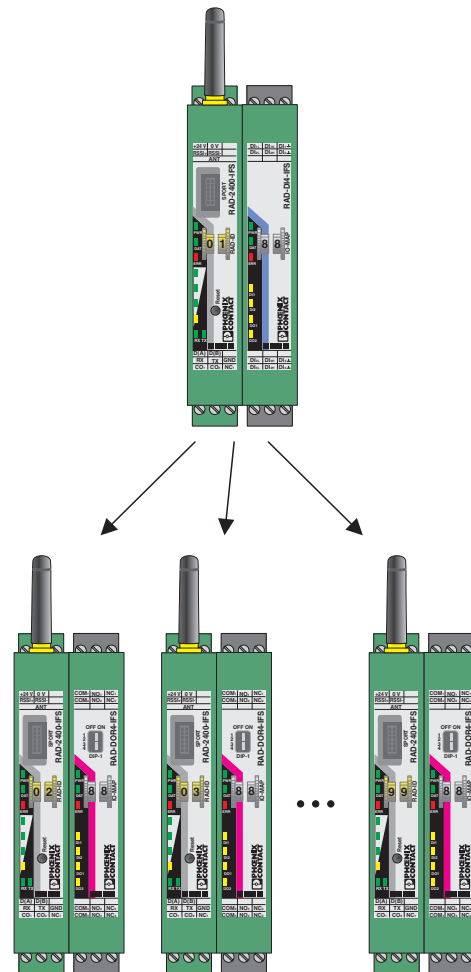
Thumb wheel

LED indicators

Block diagram



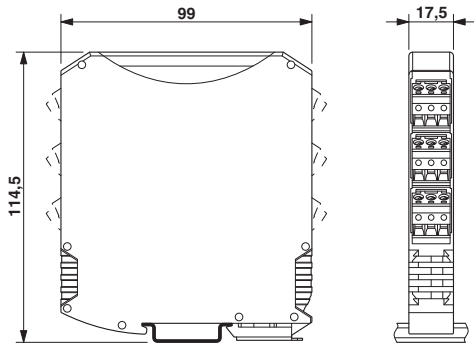
Functional drawing



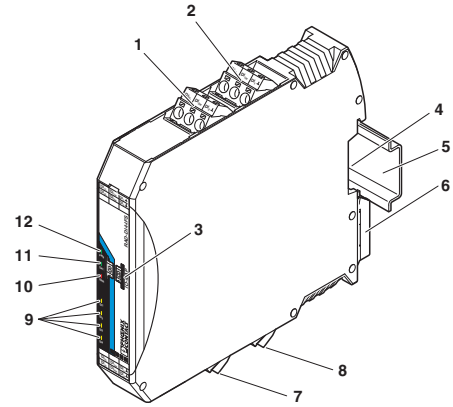
Assignment of digital inputs and digital outputs

# I/O extension module - RAD-DI4-IFS - 2901535

Dimensional drawing



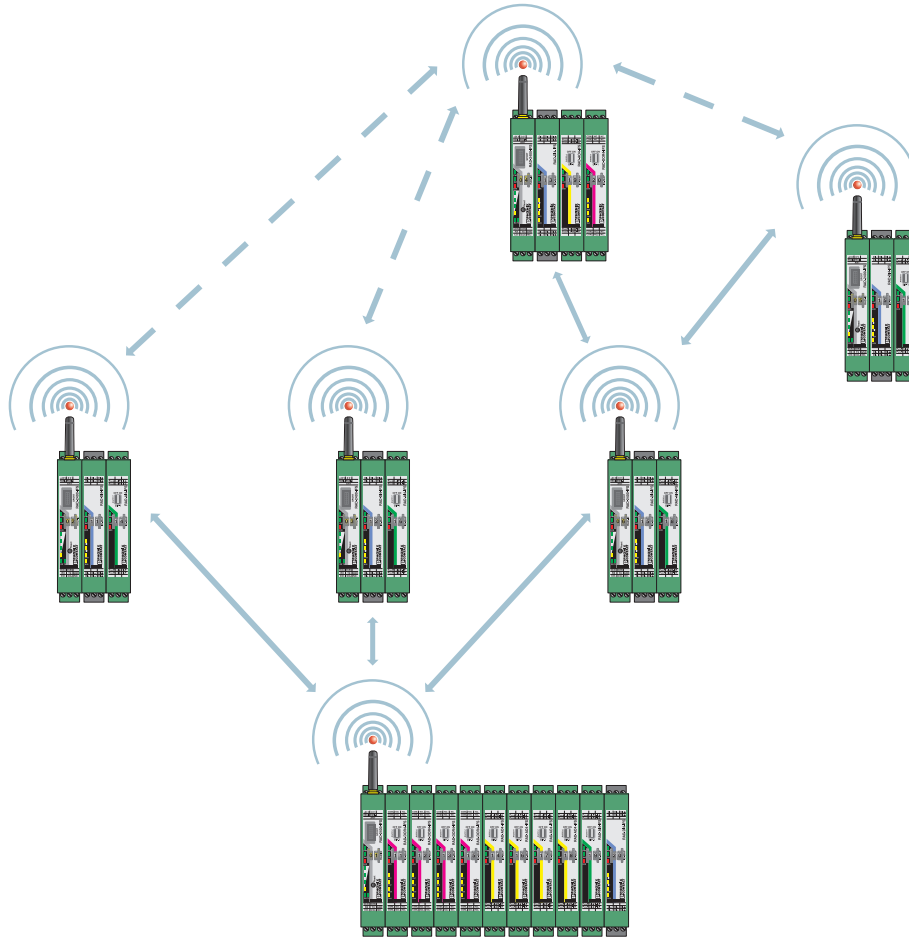
Schematic diagram



Function elements

# I/O extension module - RAD-DI4-IFS - 2901535

Application drawing

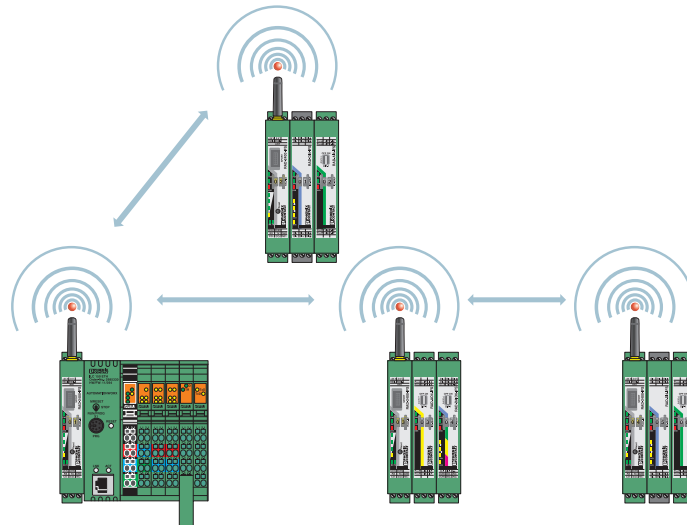


Wireless module in I/O data mode



## I/O extension module - RAD-DI4-IFS - 2901535

Application drawing



Wireless module in PLC/Modbus RTU mode