

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

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

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

### Your advantages

- Extended temperature range, -40 °C ... +70 °C
- Easy module replacement even during operation (hot swap)
- 8 transistor outputs (30.5 V DC/250 mA)
- Easy startup via thumbwheel
- Approved for use in zone 2



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 681544
GTIN	4046356681544
Weight per Piece (excluding packing)	211.000 g
Custom tariff number	85177000
Country of origin	Germany

### Technical data

#### Note

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

Width	17.5 mm
Height	113 mm
Depth	114.5 mm

#### Ambient conditions

Degree of protection	IP20
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### Technical data

#### Ambient conditions

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

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	1594 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	600 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
	230 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	≤ 22 mA (At 24 V DC, at 25°C)
Transient surge protection	Yes

#### Digital outputs

Number of outputs	8
Contact type	Transistor
Supply voltage range	12 V DC ... 30.5 V DC (for digital outputs)
Maximum switching voltage	30.5 V DC
Max. switching current	200 mA (per channel)
Output current when switched off	≤ 300 µA
Output voltage when switched off	≤ 2 V
Maximum switching frequency	10 Hz
Behavior of the outputs (adjustable via DIP switch)	Hold / Reset

#### Electrical isolation

Digital I/O	50 V (Rated insulation voltage (between the channel groups 1...4 and 5...8/TBUS supply, reinforced insulation according to EN 61010))
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#### Test voltage

Digital I/O	1.5 kV AC (50 Hz, 1 min.)
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#### 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 output, DO1)
	Yellow LED (digital output, DO2)
	Yellow LED (digital output, DO3)
	Yellow LED (digital output, DO4)
	Yellow LED (digital output, DO5)
	Yellow LED (digital output, DO6)
	Yellow LED (digital output, DO7)
	Yellow LED (digital output, DO8)

#### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	EAC
Identification	EAC
Designation	ATEX
Identification	# II 3 G Ex nA IIC T4 Gc
Certificate	IBExU 15 ATEX B008 X
Additional text	Please follow the special installation instructions in the documentation!
Designation	IECEX
Identification	Ex nA IIC T4 Gc
Certificate	IECEX IBE 13.0019X
Designation	UL, USA/Canada
Identification	508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A

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#### Conformance/approvals

	Class I, Zone 2, IIC T4
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

#### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Standard designation	EMC Directive 2014/30/EU
Standards/regulations	EN 61000-6-2
Standard designation	EMC Directive 2014/30/EU
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
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
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

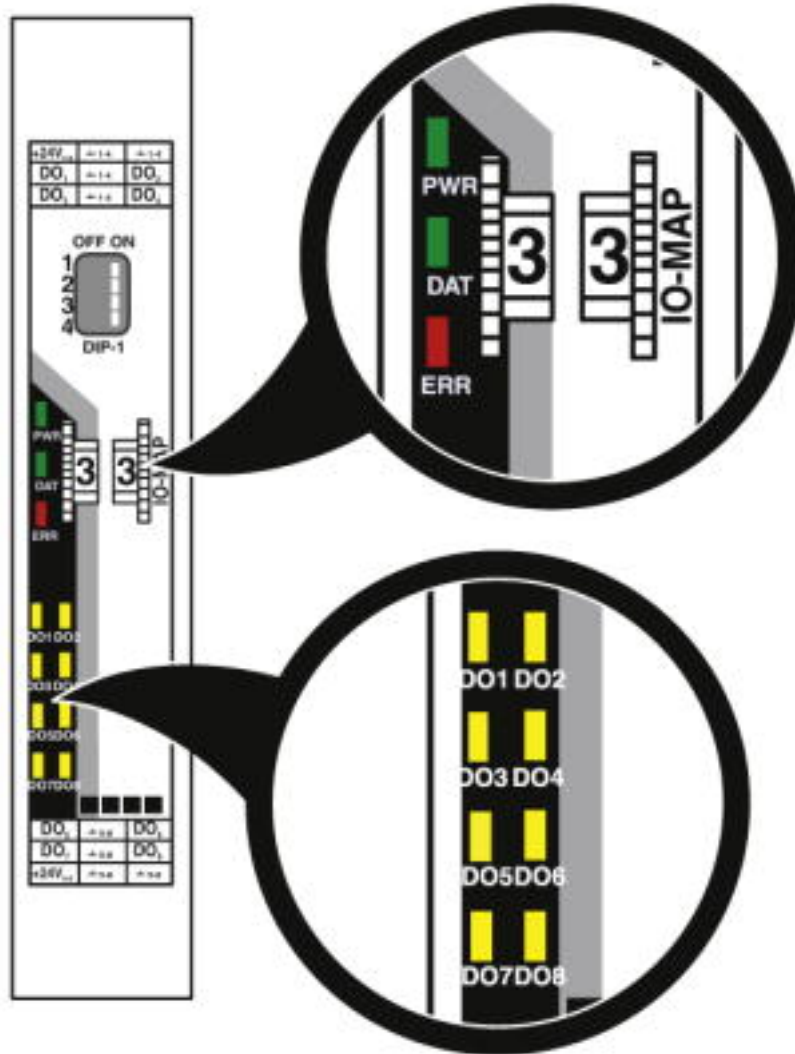
#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

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

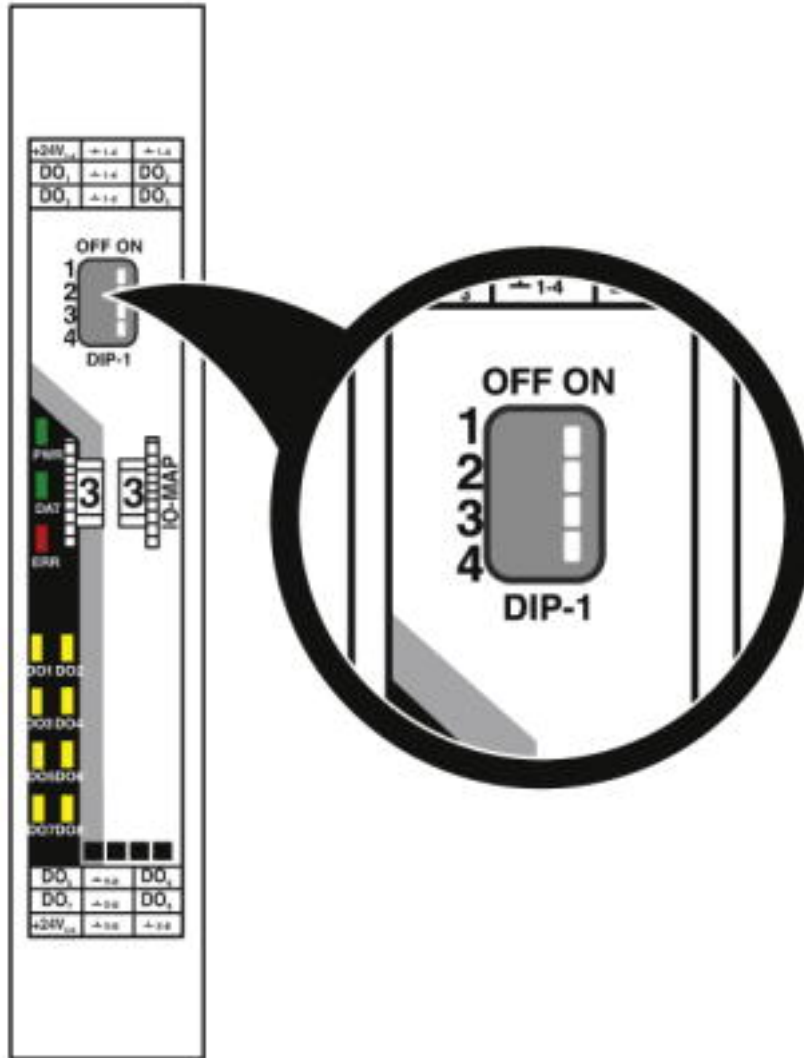
Schematic diagram



LED indicators

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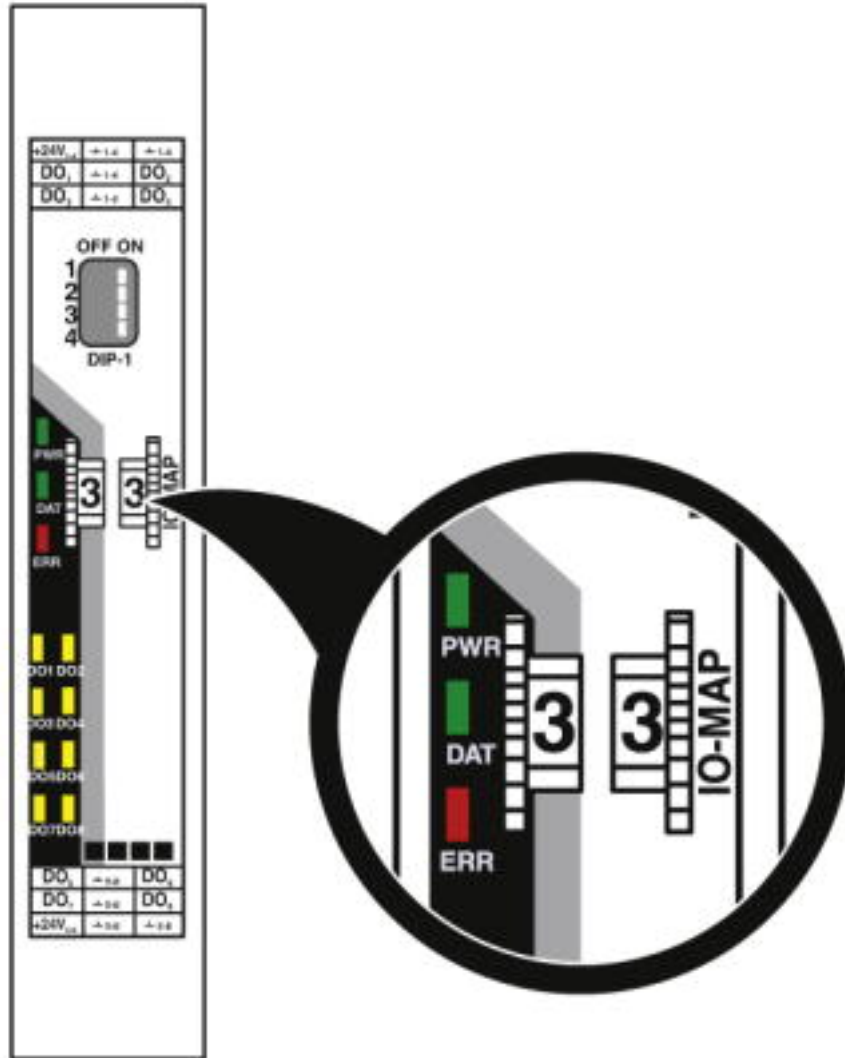
Schematic diagram



DIP switches

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

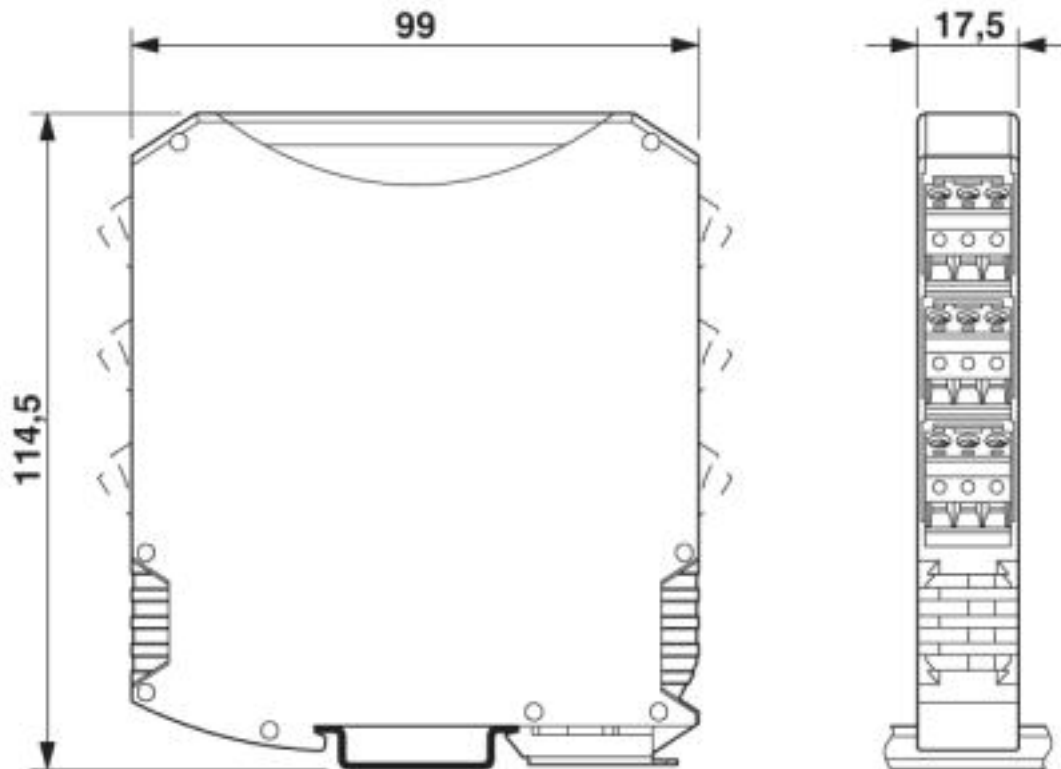
Schematic diagram



Thumb wheel

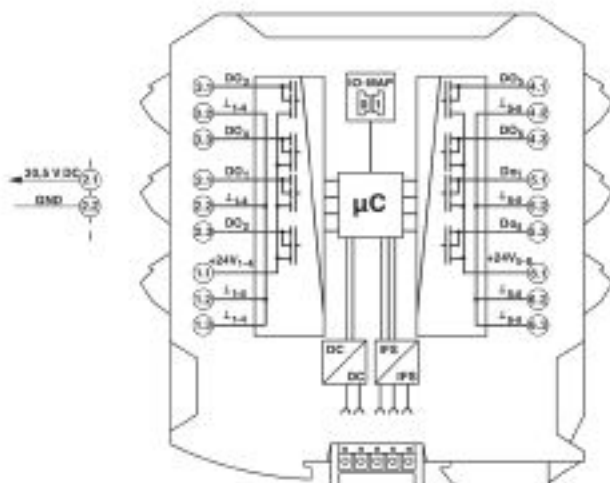
# I/O extension module - RAD-DO8-IFS - 2902811

Dimensional drawing



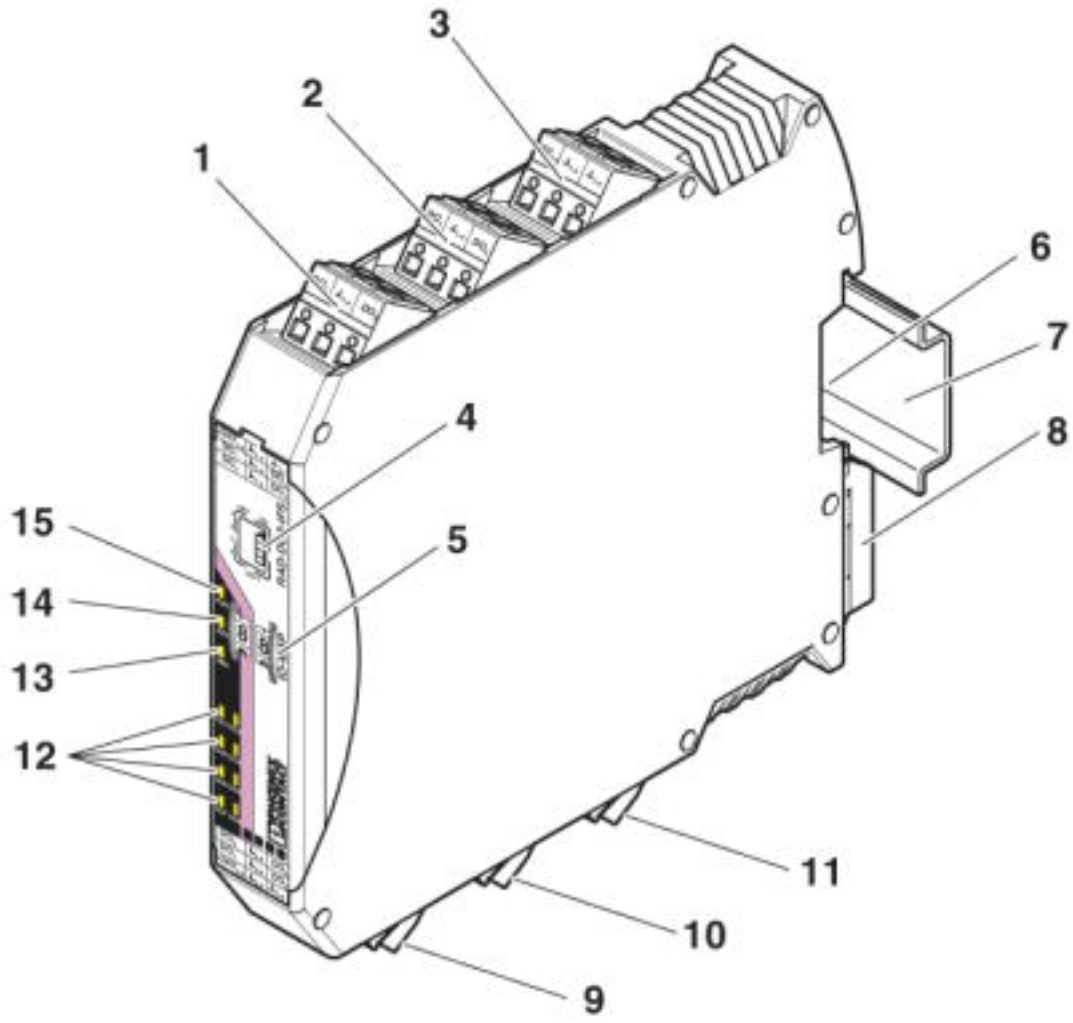
Slim design

Circuit diagram



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

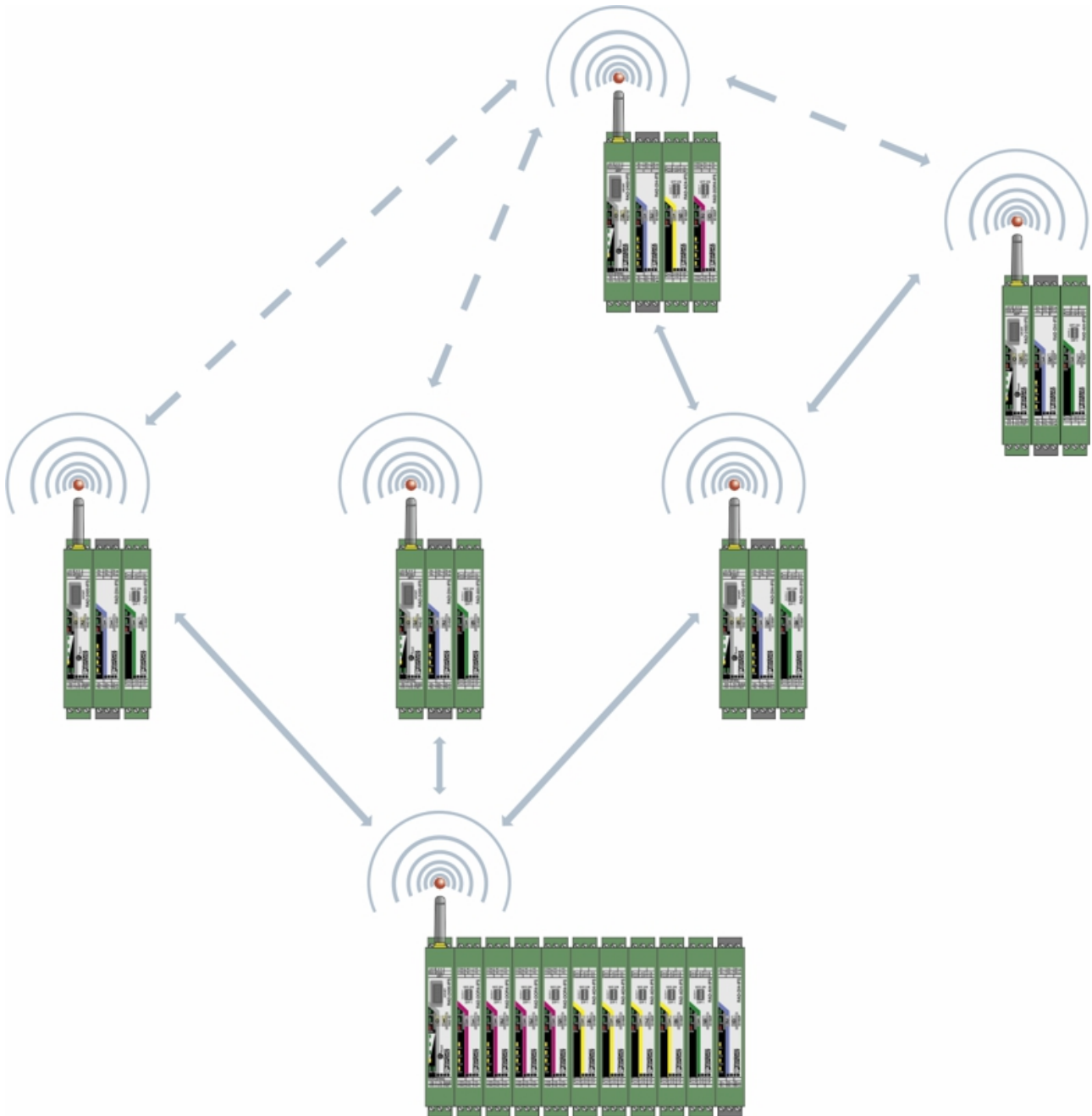
Schematic diagram



Function elements

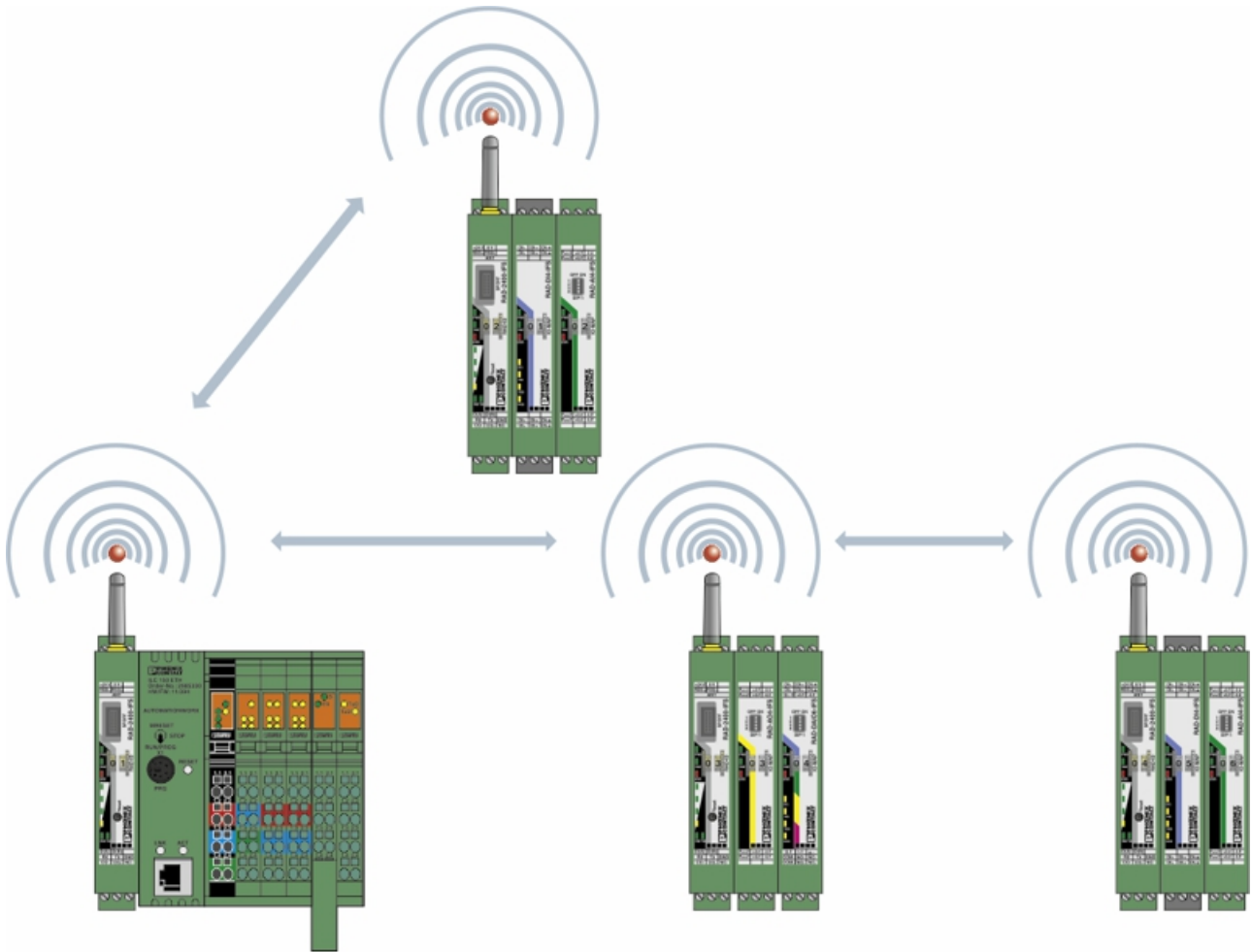
# I/O extension module - RAD-DO8-IFS - 2902811

Application drawing



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Application drawing



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

### 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 4.0	27230200
eCl@ss 4.1	27230200
eCl@ss 5.0	27242200
eCl@ss 5.1	27242200
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

#### ETIM

ETIM 3.0	EC001423
ETIM 4.0	EC000310
ETIM 5.0	EC001599
ETIM 6.0	EC001599
ETIM 7.0	EC001599

#### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008
UNSPSC 12.01	43223108
UNSPSC 13.2	32151602

### Approvals

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UL Listed / cUL Listed / EAC / cULus Listed

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### Approvals

Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / cULus Listed

#### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
EAC			EAC-Zulassung
cULus Listed			

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