

I/O extension module - RAD-DO8-IFS



2902811

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

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



Your advantages

- Easy startup via thumbwheel
- Channel-to-channel electrical isolation
- Extended temperature range of -40 °C ... +70 °C
- Easy module replacement even during operation (hot swap)
- 8 transistor outputs (30.5 V DC/200 mA)
- Approved for use in zone 2

Commercial Data

Item number	2902811
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNC61D
Catalog Page	Page 381 (C-6-2019)
GTIN	4046356681544
Weight per Piece (including packing)	219 g
Weight per Piece (excluding packing)	200 g
Customs tariff number	85177900
Country of origin	DE

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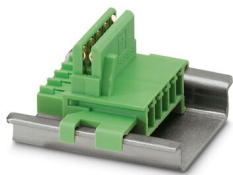
Set consists of

DIN rail bus connectors

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

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

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
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Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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Product properties

Product type	Extension module
MTTF	1594 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	600 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	230 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Insulation characteristics

Overvoltage category	II
Degree of pollution	2

Electrical properties

Electrical isolation	50 V (Rated insulation voltage (between the channel groups 1...4 and 5...8/TBUS supply, reinforced insulation according to EN 61010))
	300 V (Rated insulation voltage (to adjacent devices, basic insulation in accordance with EN 61010))
Test voltage for digital I/Os	1.5 kV AC (50 Hz, 1 min.)
Maximum power dissipation for nominal condition	0.528 W
Transient surge protection	Yes
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)

Output data

Output name	Transistor output, active
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

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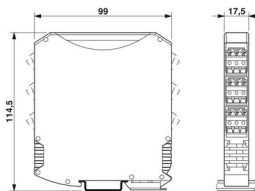
Connection data

Connection method	Screw connection
Stripping length	7 mm
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

LED signaling

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)	

Dimensions

Dimensional drawing	
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

Environmental and real-life conditions

Ambient conditions

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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
Altitude	2000 m
Permissible humidity (operation)	20 % ... 85 %
Permissible humidity (storage/transport)	20 % ... 85 %
Shock	16g, 11 ms
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz

Approval data

CE

Certificate	CE-compliant
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EAC

Identification	EAC
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ATEX

Identification	<input type="checkbox"/> II 3 G Ex nA IIC T4 Gc
Certificate	IBExU 15 ATEX B008 X
Note	Please follow the special installation instructions in the documentation!

IECEX

Identification	Ex nA IIC T4 Gc
Certificate	IECEX IBE 13.0019X

EAC Ex

Identification	2Ex nA nC IIC T4 Gc X
Certificate	RU C-DE.HB49.B.00033/20

UL, USA / Canada

Identification	508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, IIC T4

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
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EMC data

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

Standards and regulations

Standards/specifications	EN 61000-6-2
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Standards/specifications	EN 61000-6-4
Standards/specifications	EN 60079-0
Standards/specifications	EN-60079-15

Mounting

Mounting type	DIN rail mounting
Assembly instructions	on standard DIN rail NS 35 in accordance with EN 60715
Mounting position	any

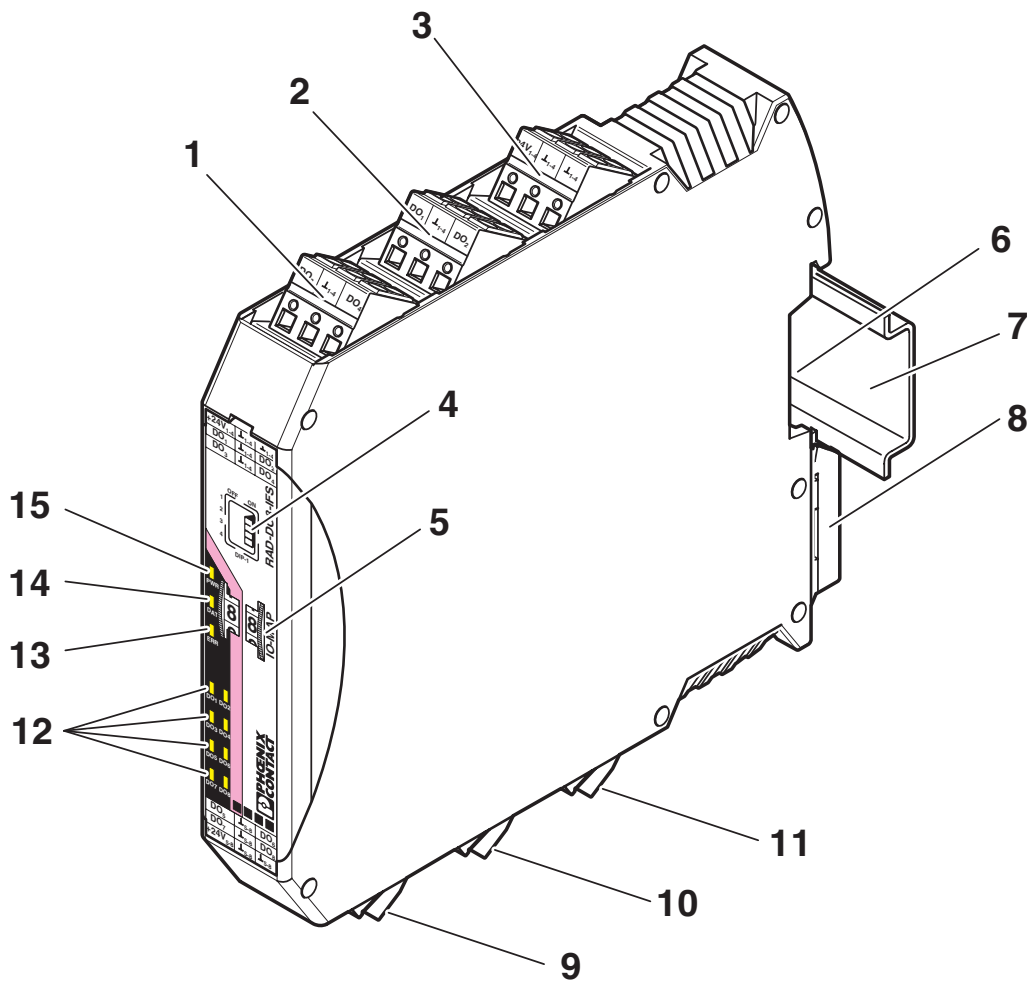
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Drawings

Schematic diagram



Function elements

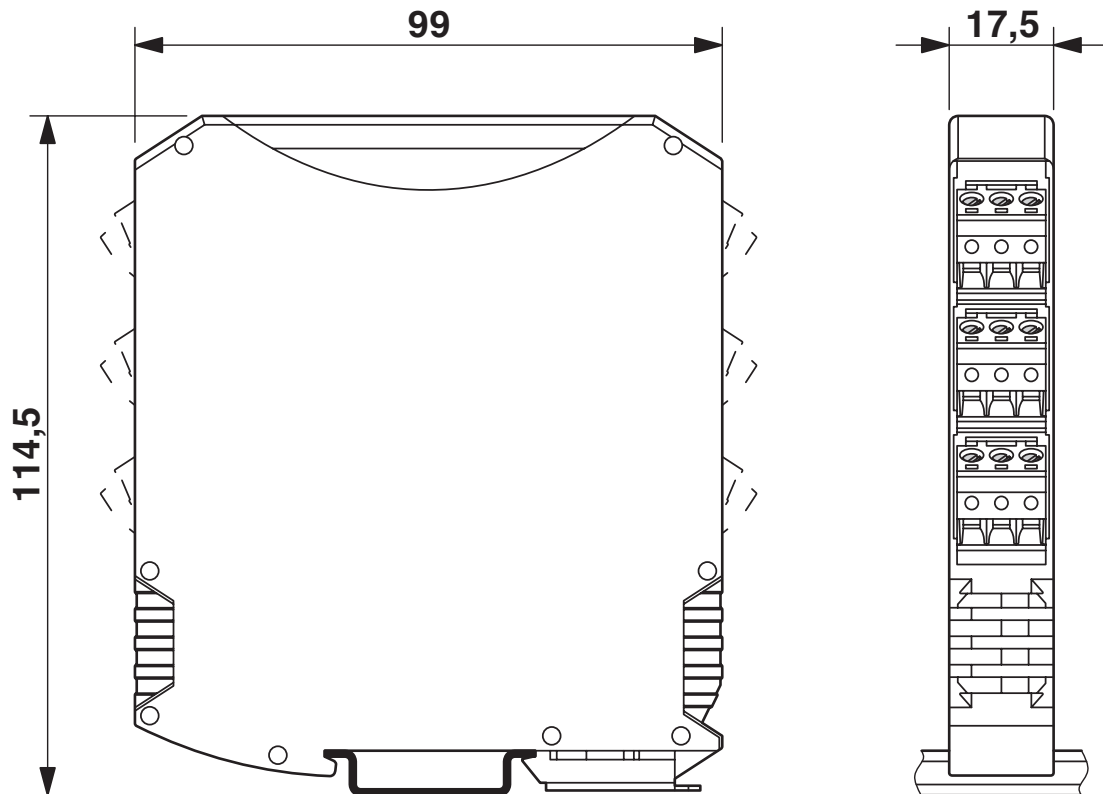
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Dimensional drawing



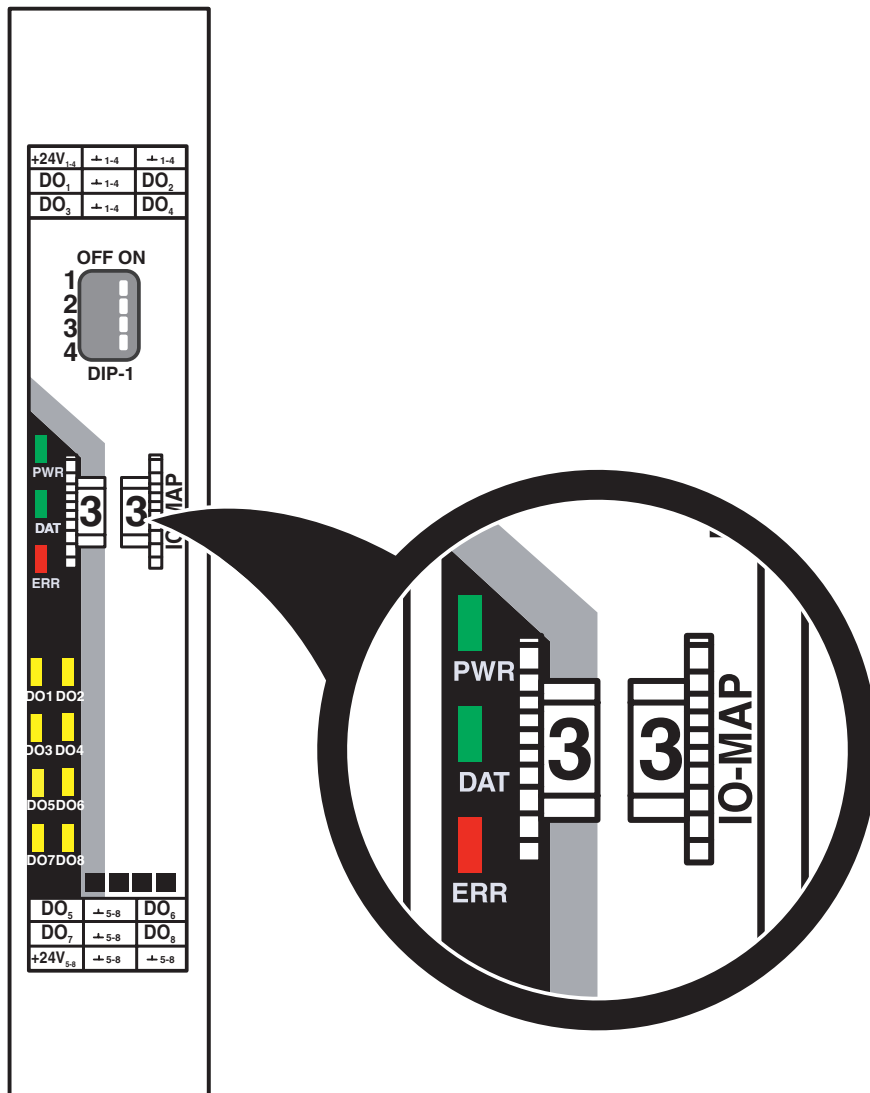
Slim design

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Schematic diagram



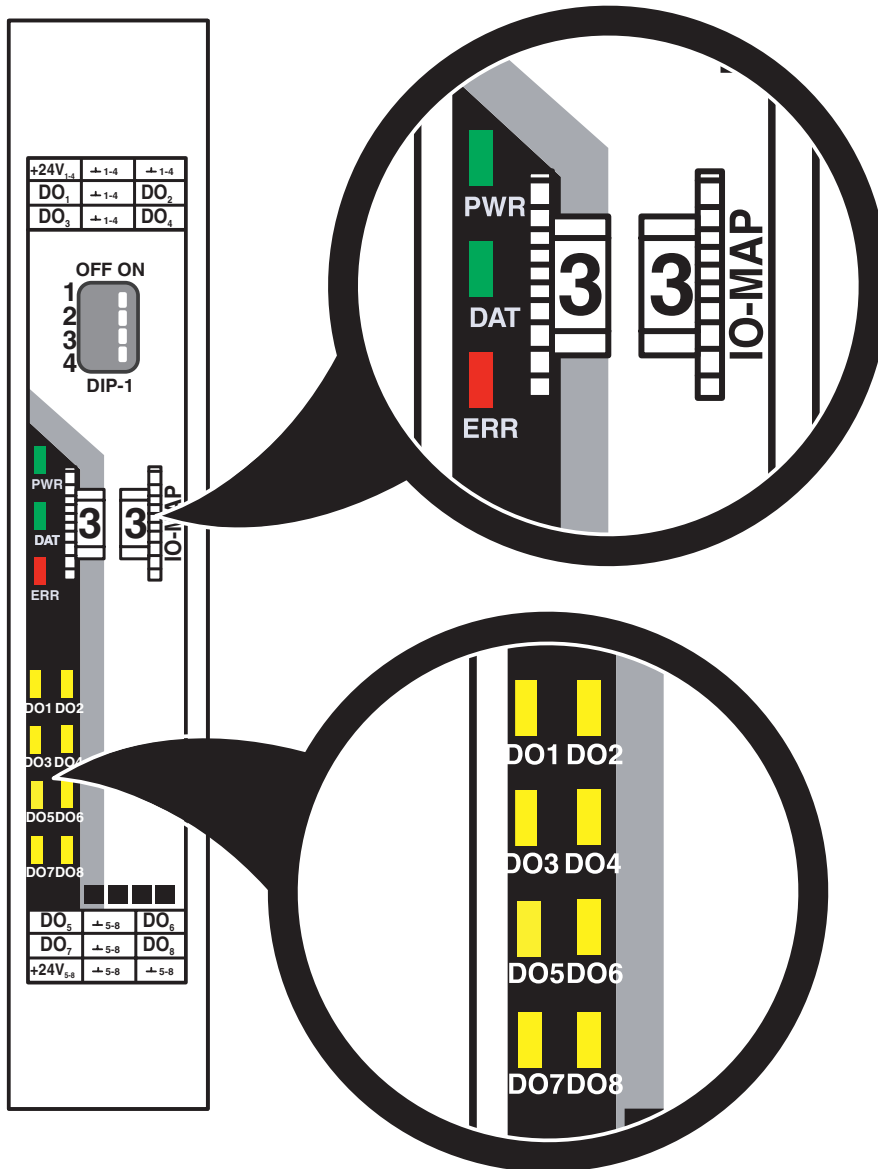
Thumbwheel

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Schematic diagram



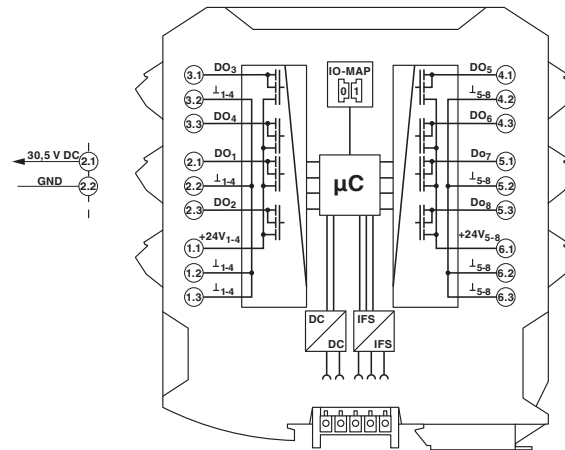
LED indicators

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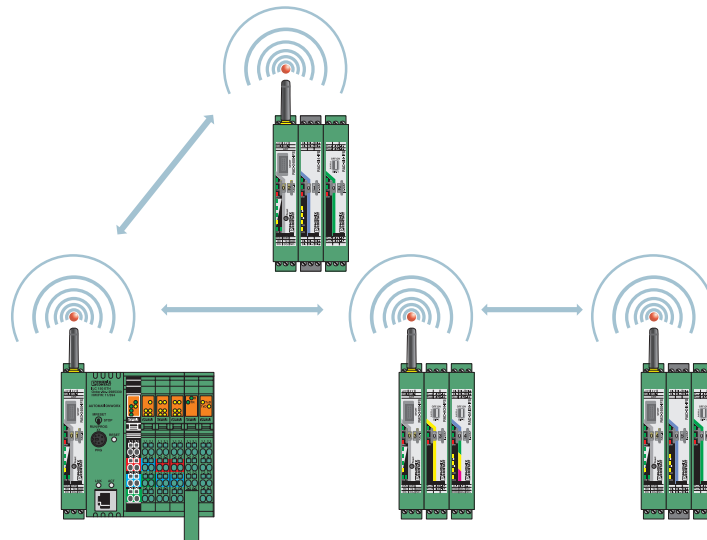
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Circuit diagram



Application drawing



Wireless module in PLC/Modbus RTU mode

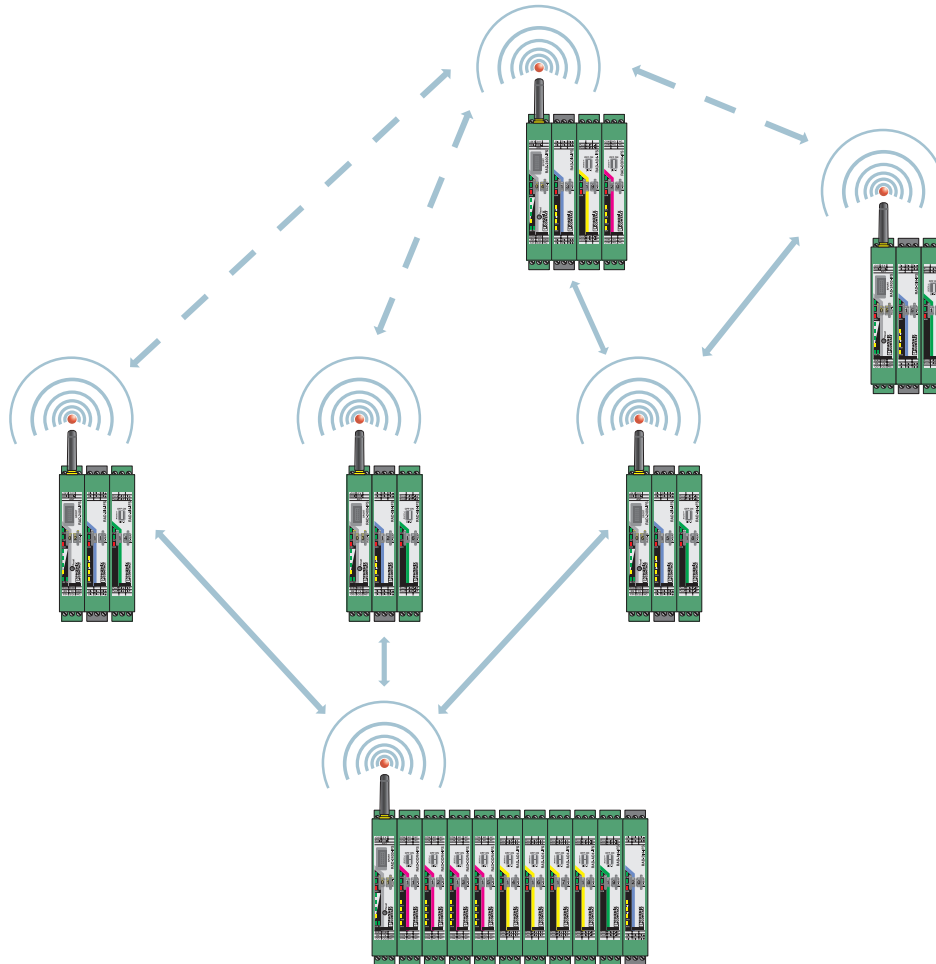
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Application drawing



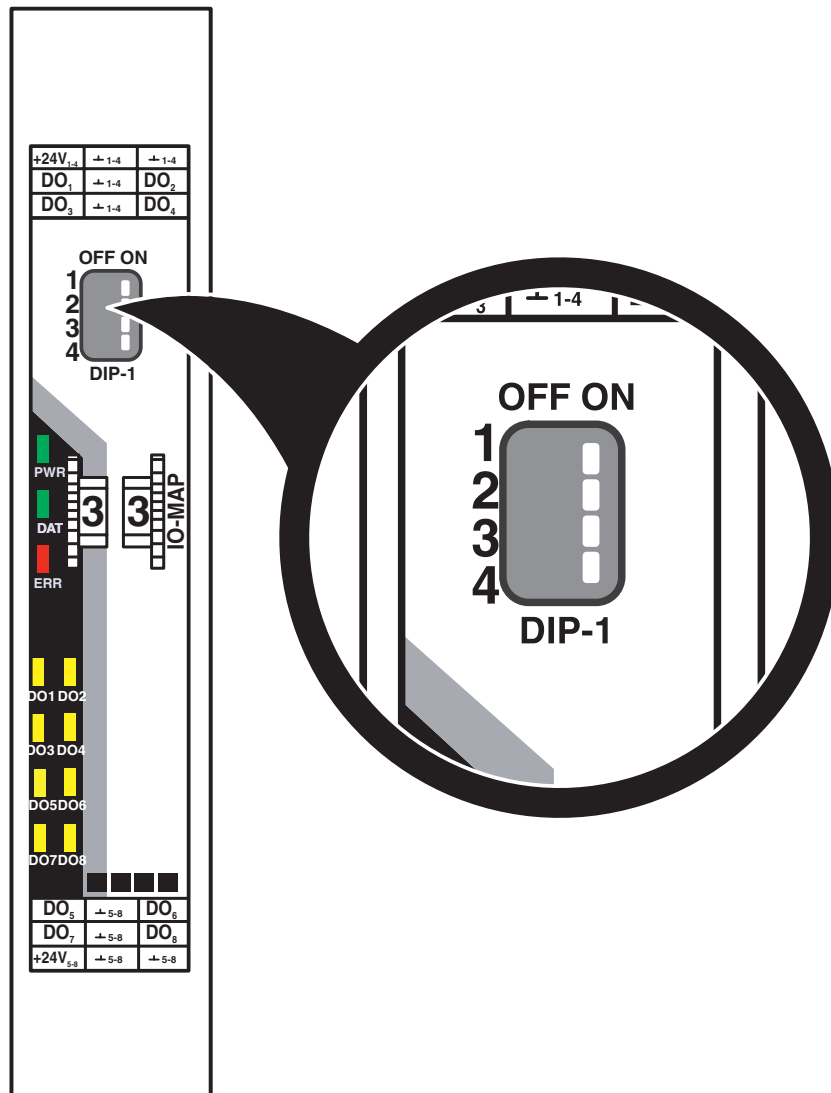
Wireless module in I/O data mode

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Schematic diagram



DIP switches

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Approvals



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705



IECEX

Approval ID: IECEX IBE 13.0019X



cUL Listed

Approval ID: FILE E 196811



UL Listed

Approval ID: FILE E 196811



ATEX

Approval ID: IBExU 15 ATEX B008 X



EAC Ex

Approval ID: RU*HB49.B00033/20

cULus Listed

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27242604
ECLASS-10.0.1	27242604
ECLASS-11.0	27242604

ETIM

ETIM 8.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Mandatory Accessories

Wireless module

Wireless module - RAD-2400-IFS - 2901541

<https://www.phoenixcontact.com/pc/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

Wireless module

Wireless module - RAD-900-IFS - 2901540

<https://www.phoenixcontact.com/pc/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

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Wireless module

Wireless module - RAD-868-IFS - 2904909

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

Communication module - RAD-RS485-IFS - 2702184

<https://www.phoenixcontact.com/pc/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

I/O extension module - RAD-DO8-IFS

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Wireless module

Wireless module - RAD-2400-IFS-JP - 2702863

<https://www.phoenixcontact.com/pc/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

Wireless module

Wireless module - RAD-900-IFS-AU - 2702878

<https://www.phoenixcontact.com/pc/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.

Accessories

I/O extension module - RAD-DO8-IFS

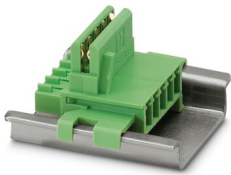
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DIN rail bus connectors

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

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



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

I/O extension module

I/O extension module - RAD-DI8-IFS - 2901539

<https://www.phoenixcontact.com/pc/products/2901539>



Radioline - I/O extension module, 8 digital inputs (0 ... 30.5 V DC) or 2 pulse inputs up to 100 Hz

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I/O extension module

I/O extension module - RAD-DI8-IFS - 2901539

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Radioline - I/O extension module, 8 digital inputs (0 ... 30.5 V DC) or 2 pulse inputs up to 100 Hz

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