

RAD-DOR4-IFS - I/O extension module

2901536

<https://www.phoenixcontact.com/us/products/2901536>



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Radioline - I/O extension module, four digital relay outputs (5 A, 250 V AC/DC). Product is being prepared for compliance with the Cyber Resilience Act (CRA).

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)
- Digital wide range outputs (0 ... 250 V AC/DC)
- Approved for use in zone 2



ELEKTROGERÄTE
RÜCKNAHME



Commercial data

Item number	2901536
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN26
Product key	DNC61D

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GTIN	4046356610483
Weight per piece (including packing)	180 g
Weight per piece (excluding packing)	123.91 g
Customs tariff number	85177900
Country of origin	DE

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Set consists of

ME 17,5 TBUS 1,5/ 5-ST-3,81 KMGY - DIN rail bus connector

2713645

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DIN rail bus connector, color: light gray, nominal current: 8 A (parallel contacts), rated voltage (III/2): 125 V, number of positions: 5, product range: TBUS5-17,5..., pitch: 3.81 mm, mounting: DIN rail mounting, locking: without, mounting method: without, type of packaging: packed in cardboard, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 5 parallel contacts

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Technical data

Notes

Note on application

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Product properties

Product type	Extension module
MTTF	1087 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	523 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	204 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Insulation characteristics

Overvoltage category	II
Degree of pollution	2

Electrical properties

Electrical isolation	300 V (Rated insulation voltage (in each case between the digital outputs // TBUS supply, reinforced insulation in accordance with EN/IEC 61010))
	300 V (Rated insulation voltage (to adjacent devices, basic insulation in accordance with EN/IEC 61010))
Test voltage for digital I/Os	2.5 kV AC (50 Hz, 1 min.)
Maximum power dissipation for nominal condition	1.32 W
Transient surge protection	yes

Supply

Supply voltage range	19.2 V DC ... 30.5 V DC (DIN rail bus connector)
Max. current consumption	≤ 55 mA (At 24 V DC, at 25°C)

Output data

Digital

Output name	Relay output
Number of outputs	4
Contact switching type	Changeover contact
Contact material	AgSnO ₂
Maximum switching voltage	250 V AC/DC
Min. switching current	≥ 10 mA
	5 A (250 V AC)

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Max. switching current	0.168 A (250 V DC)
	5 A (24 V DC)
Mechanical service life	1x 10 ⁷ cycles
Electrical service life	1x 10 ⁵ cycles (At 5 A, 250 V AC, ohmic)
	2x 10 ⁵ cycles (At 2 A, 250 V AC, cosφ 0.4)
	2x 10 ⁵ cycles (At 1 A, 24 V DC, L/R = 48 ms)
Maximum switching frequency	2 Hz
Switching power	120 W (24 V DC)
	120 W (30 V DC)
	20 W (48 V DC)
	18 W (60 V DC)
	22 W (110 V DC)
	40 W (220 V DC)
	42 W (250 V DC)
	1250 VA
Behavior of the outputs (adjustable via DIP switch)	Hold / Reset

Connection data

Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb _f -in. ... 7 lb _f -in.
Connection method	Screw connection
Stripping length	7 mm
Conductor cross-section, rigid min.	0.2 mm ²
Conductor cross-section, rigid 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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb _f -in. ... 7 lb _f -in.

Signaling

Status display	LED supply voltage, PWR (green)
	Green LED (bus communication, DAT)
	LED periphery error, ERR (red)
	Yellow LED (digital output, DO1)
	Yellow LED (digital output, DO2)
	Yellow LED (digital output, DO3)
	Yellow LED (digital output, DO4)

Dimensions

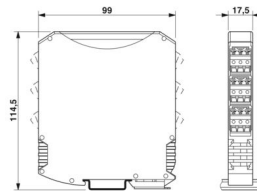
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Dimensional drawing



Width	17.5 mm
Height	113 mm
Depth	114.5 mm

Material specifications

Color (Housing)	gray (RAL 7042)
Material (Housing)	PA 6.6-FR
Flammability rating according to UL 94	V0

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (>55°C derating, see technical documentation) -40 °F ... 158 °F (>131°F derating, see technical documentation)
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

Approvals

CE

Certificate	CE-compliant
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ATEX

Identification	Ex II 3 G Ex ec nC IIC T4 Gc
Certificate	IBExU 15 ATEX B008 X
Note	Please follow the special installation instructions in the documentation!

IECEx

Identification	Ex ec nC IIC T4 Gc
Certificate	IECEx IBE 13.0019X

UL, USA/Canada

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

CCC / China-Ex

Identification	Ex ec nC IIC T4 Gc
Certificate	2022122310115625

KC approval for South Korea

Certificate	R-R-PCK-2901536
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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 immunity	EN 61000-6-2

Noise emission

Standards/regulations	EN 61000-6-4
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Standards and regulations

EMC

Standard designation	EMC – Immunity for industrial areas
Standards/specifications	EN 61000-6-2

EMC

Standard designation	EMC interference emissions for industrial environments
Standards/specifications	EN 61000-6-4

Explosive atmospheres

Standard designation	Ex areas, essential requirements
Standards/specifications	EN 60079-0

Explosive atmospheres

Standard designation	Ex areas, type of protection n
Standards/specifications	EN 60079-15

Mounting

Mounting type	DIN rail mounting
Assembly note	on standard DIN rail NS 35 in accordance with EN 60715
Mounting position	any
Useable DIN rail type	DIN rail: 35 mm

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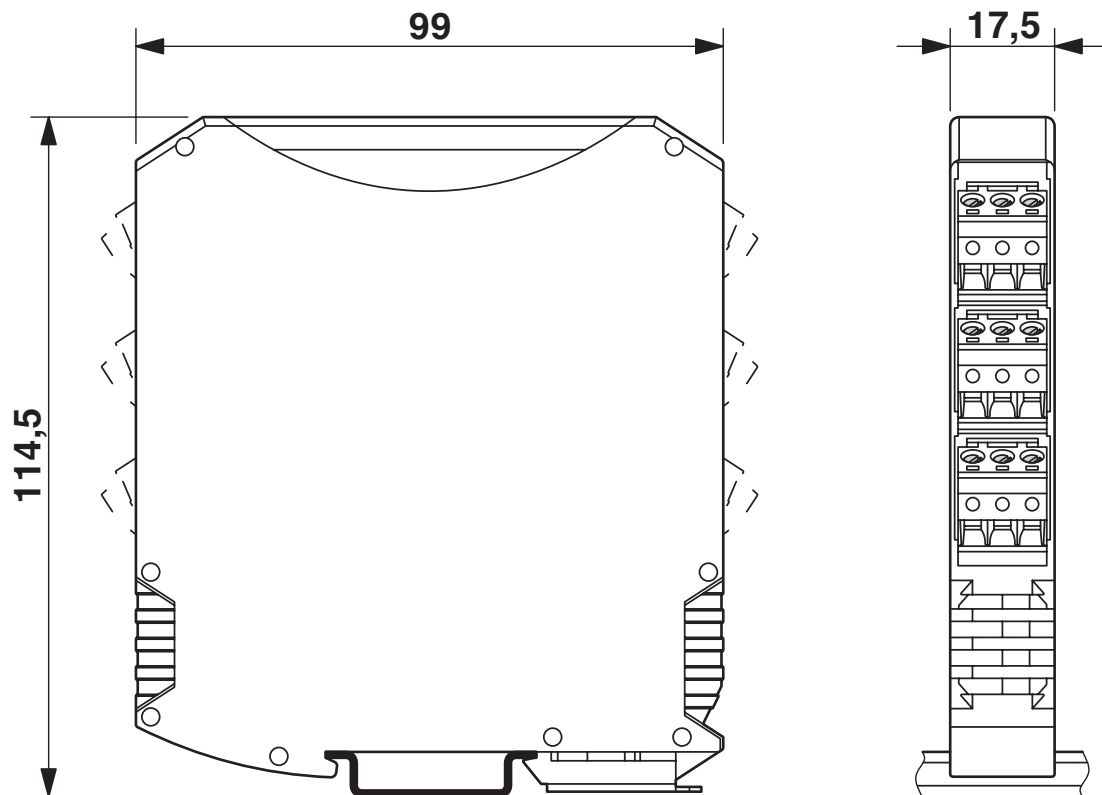
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Drawings

Dimensional drawing



Slim design

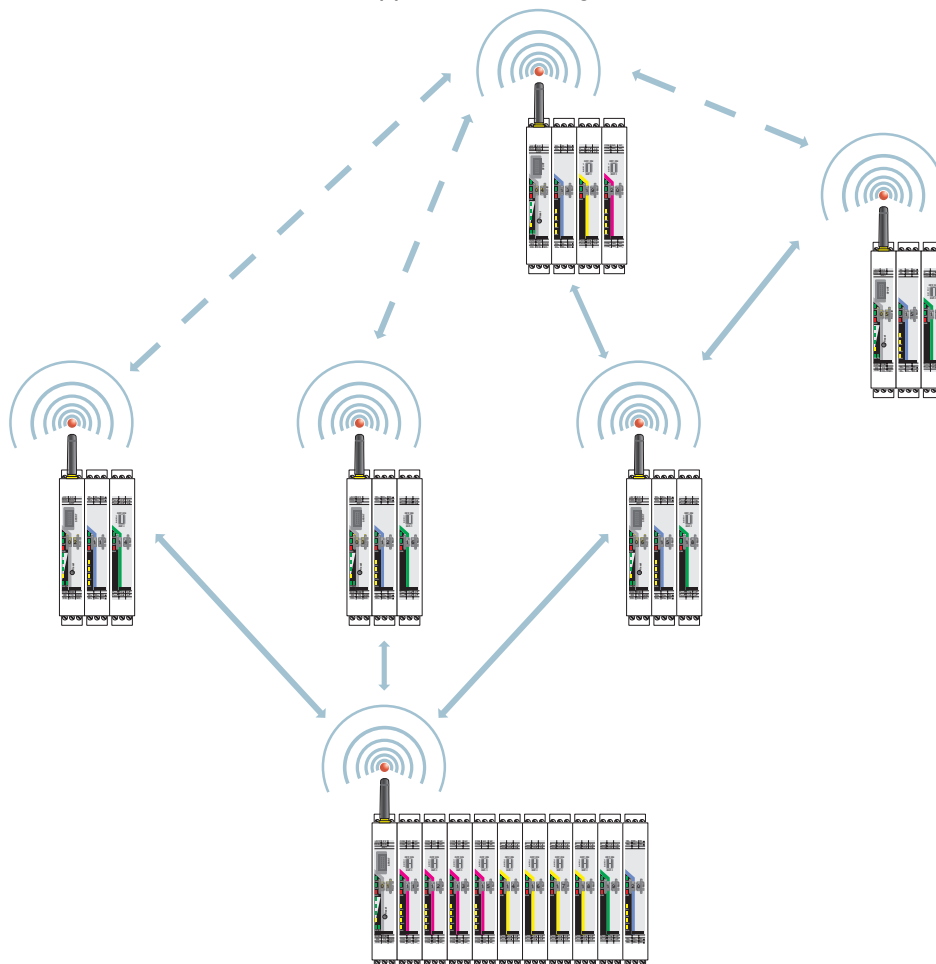
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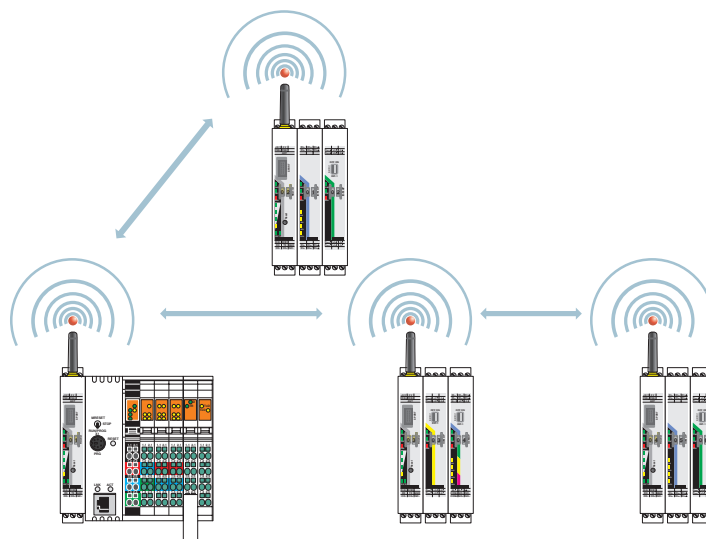


Application drawing



Wireless module in I/O data mode

Application drawing



Wireless module in PLC/Modbus RTU mode

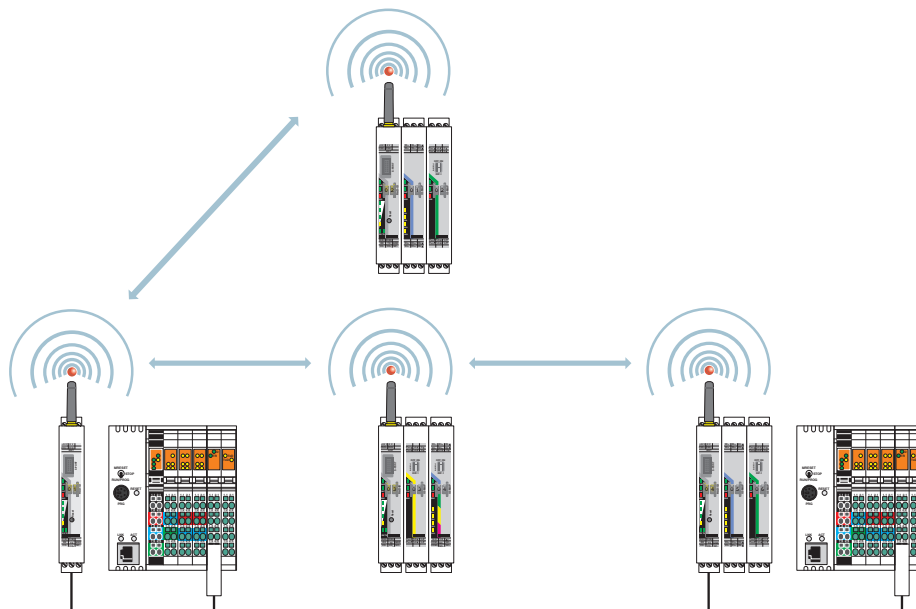
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Application drawing



Wireless module in PLC/Modbus RTU dual mode

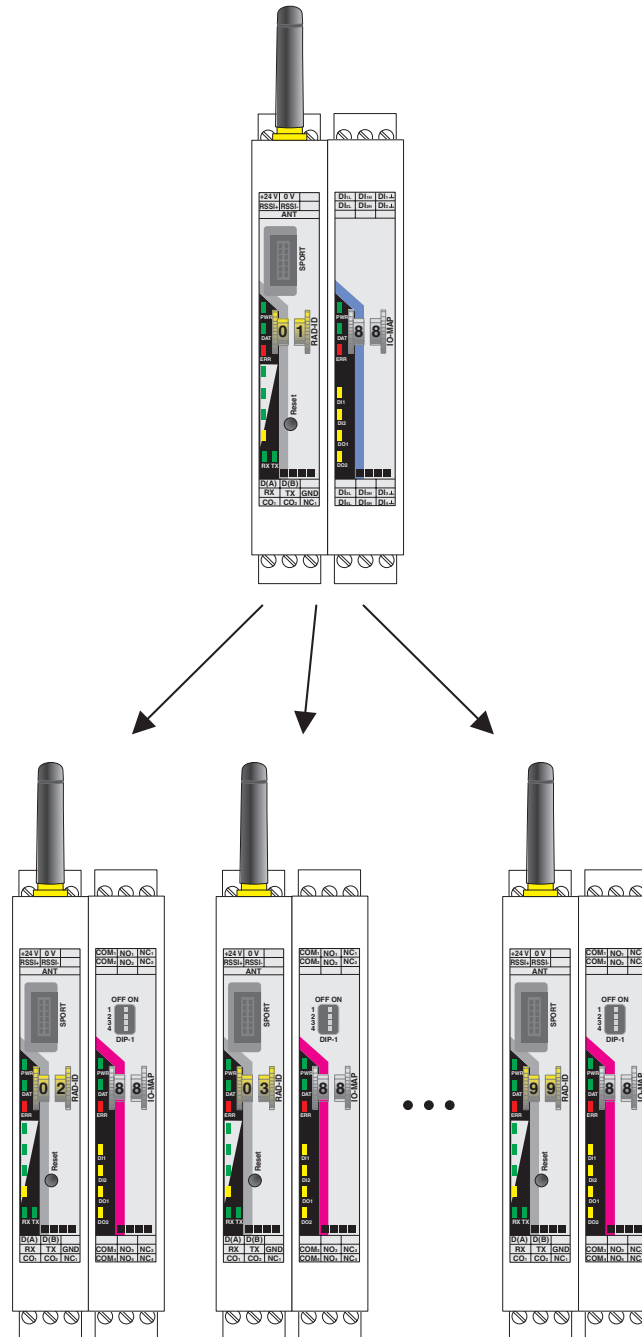
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Functional drawing



Assignment of digital inputs and digital outputs

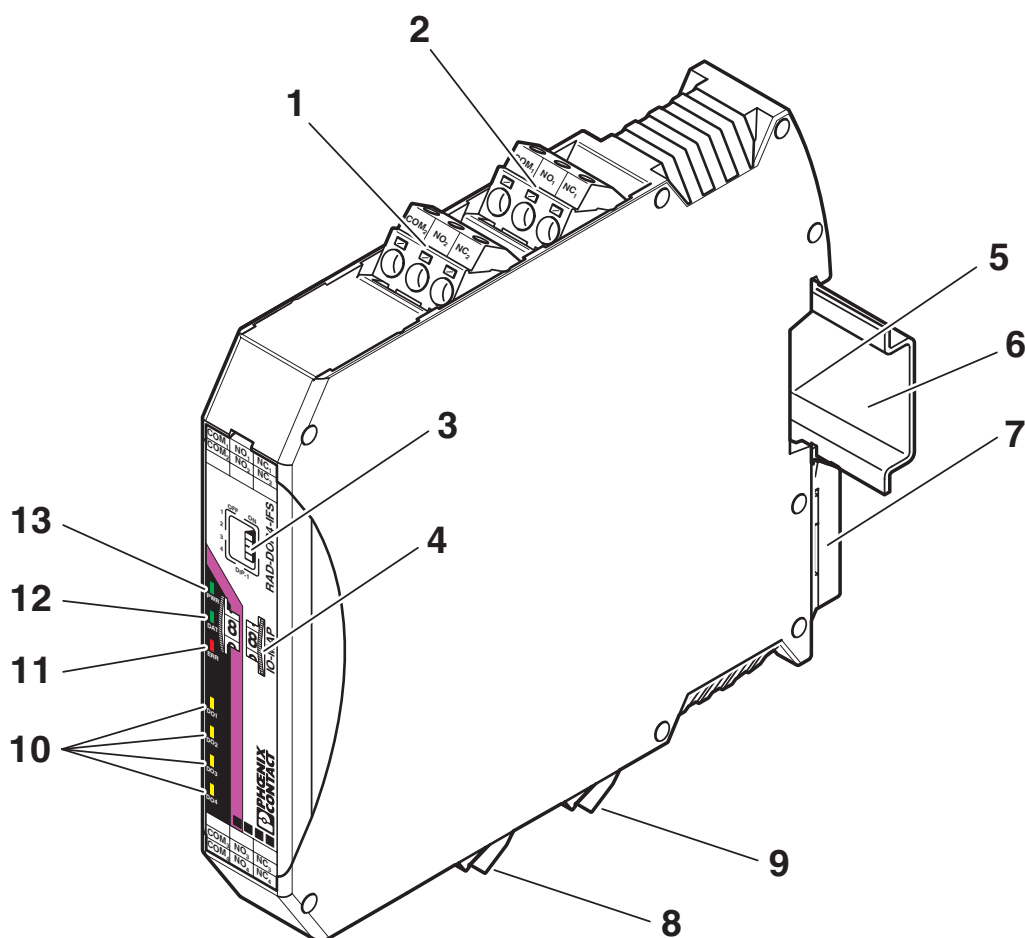
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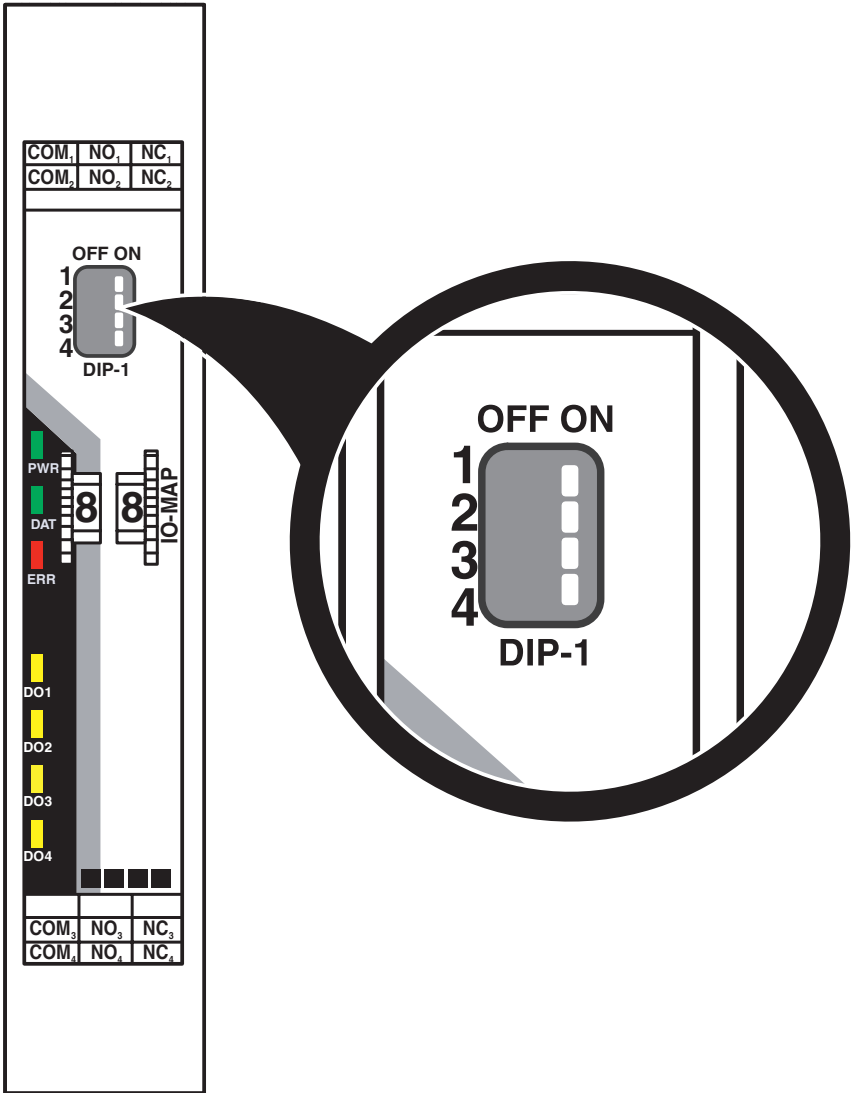


Schematic diagram



Function elements

Schematic diagram



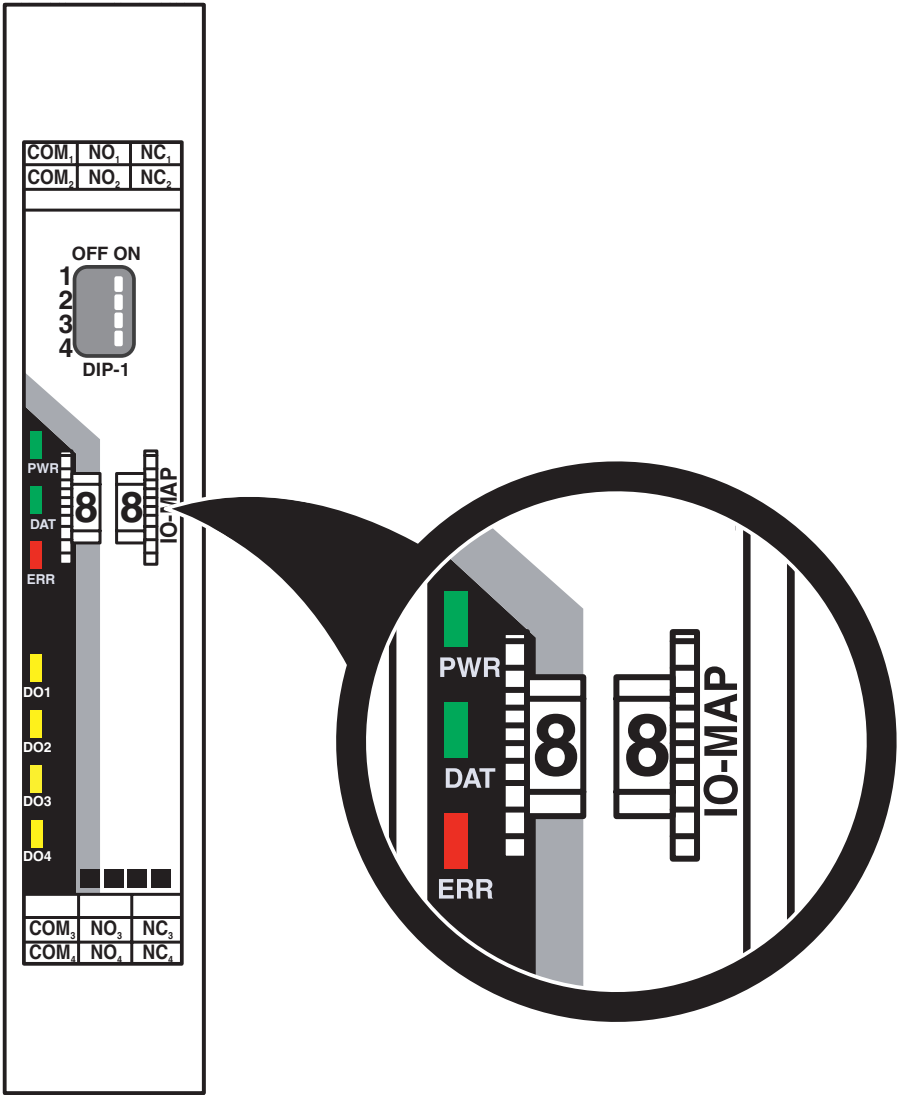
DIP switches

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Schematic diagram



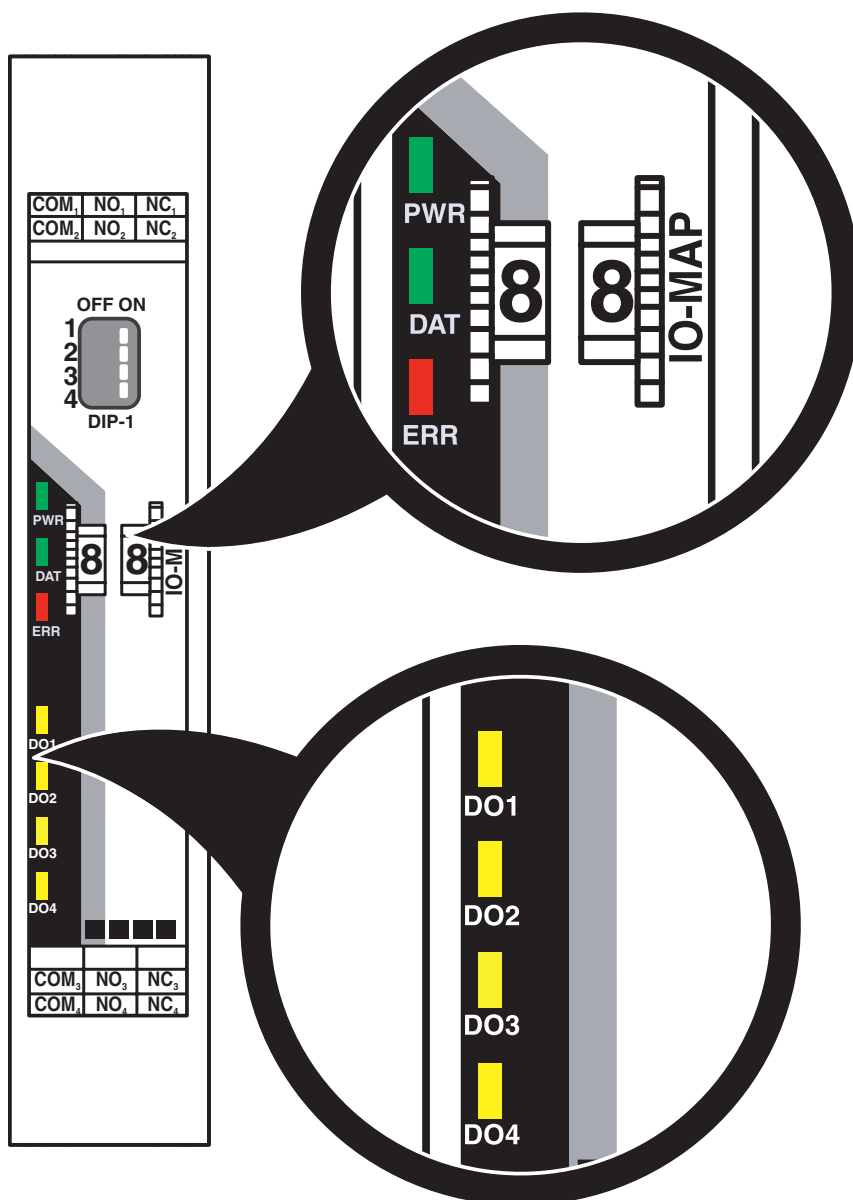
Thumbwheel

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Schematic diagram



LED indicators

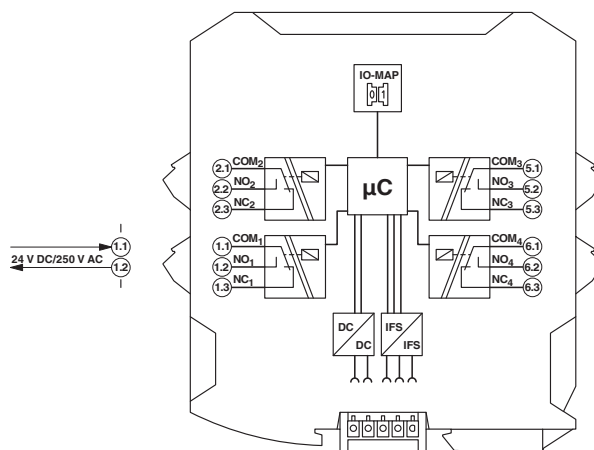
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Circuit diagram



Basic circuit diagram

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Approvals

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 **UL Listed**
Approval ID: E238705

 **cUL Listed**
Approval ID: E238705

 **KC**
Approval ID: R-R-PCK-2901536

 **IECEx**
Approval ID: IECEx IBE 13.0019X

 **cUL Listed**
Approval ID: E196811

 **UL Listed**
Approval ID: E196811

 **ATEX**
Approval ID: IBEExU15ATEXB008 X

 **CCC**
Approval ID: 2022122310115625

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Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 10.0	EC001599
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UNSPSC

UNSPSC 21.0	32151602
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	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	5be948c7-bfdf-40a9-b368-e14214c3fb9f

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