

RAD-DO8-IFS - I/O extension module



2902811

<https://www.phoenixcontact.com/us/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
Sales key	DN26
Product key	DNC61D
GTIN	4046356681544
Weight per piece (including packing)	178.77 g
Weight per piece (excluding packing)	128.56 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

<https://www.phoenixcontact.com/us/products/2713645>



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
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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

Rated insulation voltage	60 V (In accordance with EN/IEC 60079-7)
Electrical isolation	50 V (Rated insulation voltage (in each case between channel groups 1...4 and 5...8 / TBUS supply, reinforced insulation in accordance with EN 61010))
	300 V (Rated insulation voltage (to adjacent devices, basic insulation in accordance with EN/IEC 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

Supply voltage range	19.2 V DC ... 30.5 V DC (DIN rail bus connector)
Max. current consumption	≤ 22 mA (At 24 V DC, at 25°C)

Output data

Digital

Output name	Transistor output, active
Number of outputs	8
Contact switching 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	0.2 A (per channel)
Output current when switched off	≤ 300 µA
Output voltage when switched off	≤ 2 V
Maximum switching frequency	10 Hz

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Behavior of the outputs (adjustable via DIP switch)	Hold / Reset
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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)
	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 (Housing)	gray (RAL 7042)
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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 -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

Approvals

CE

Certificate	CE-compliant
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ATEX

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

IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX IBE 13.0019X

UL, USA/Canada

Identification	508 Listed Class I, Div. 2, Groups A, B, C, D T4A Class I, Zone 2, IIC T4
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CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	2022122310115625

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

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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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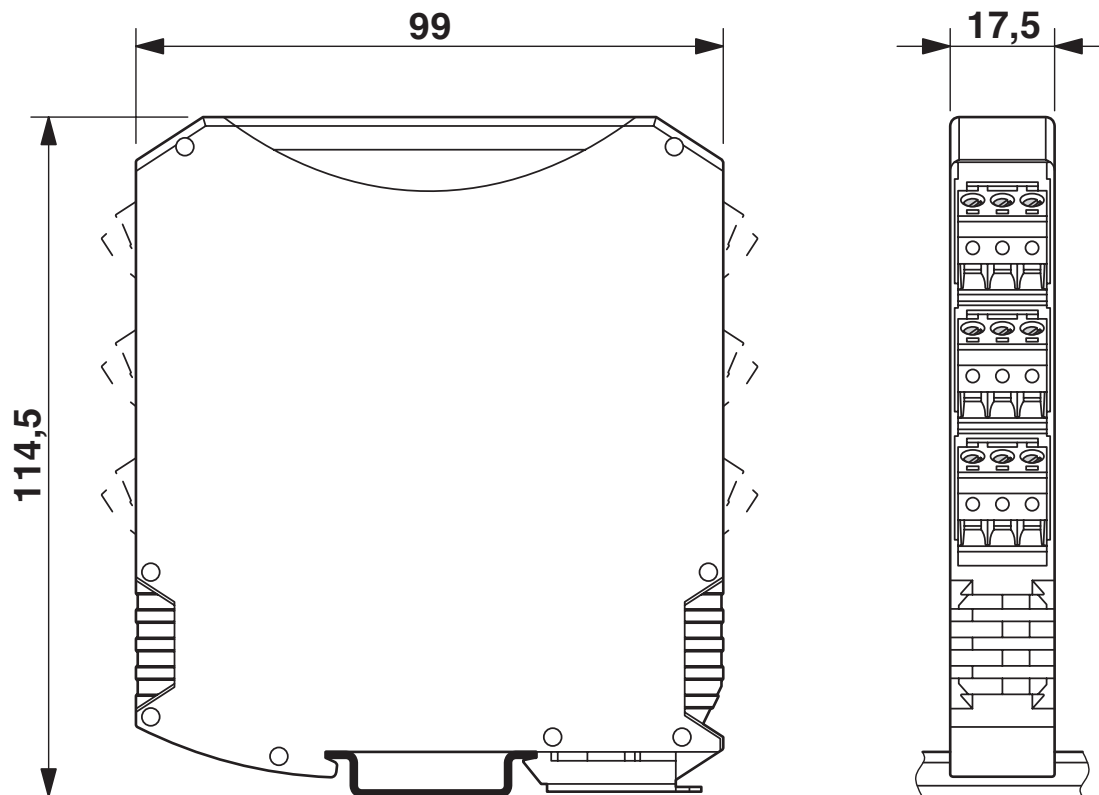
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Drawings

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

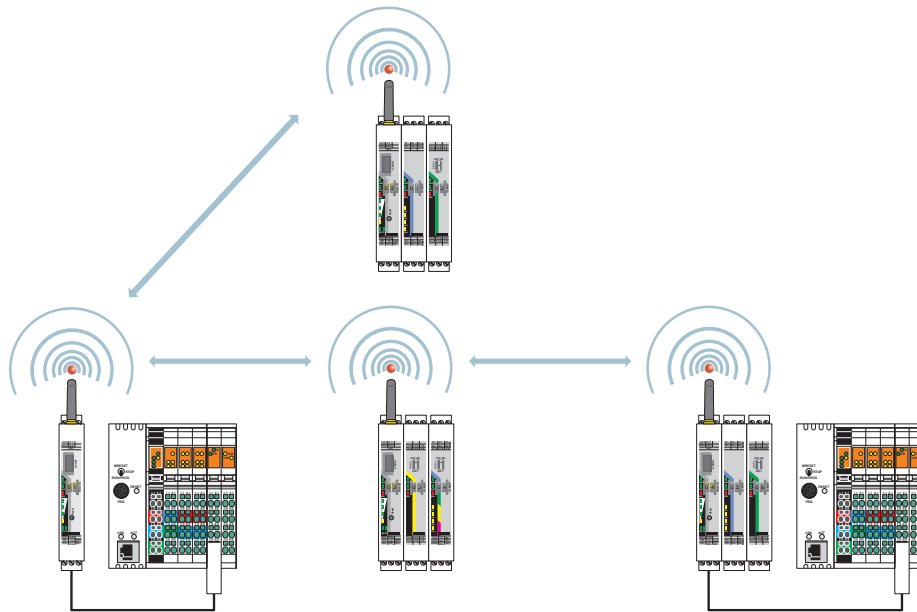
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Application drawing



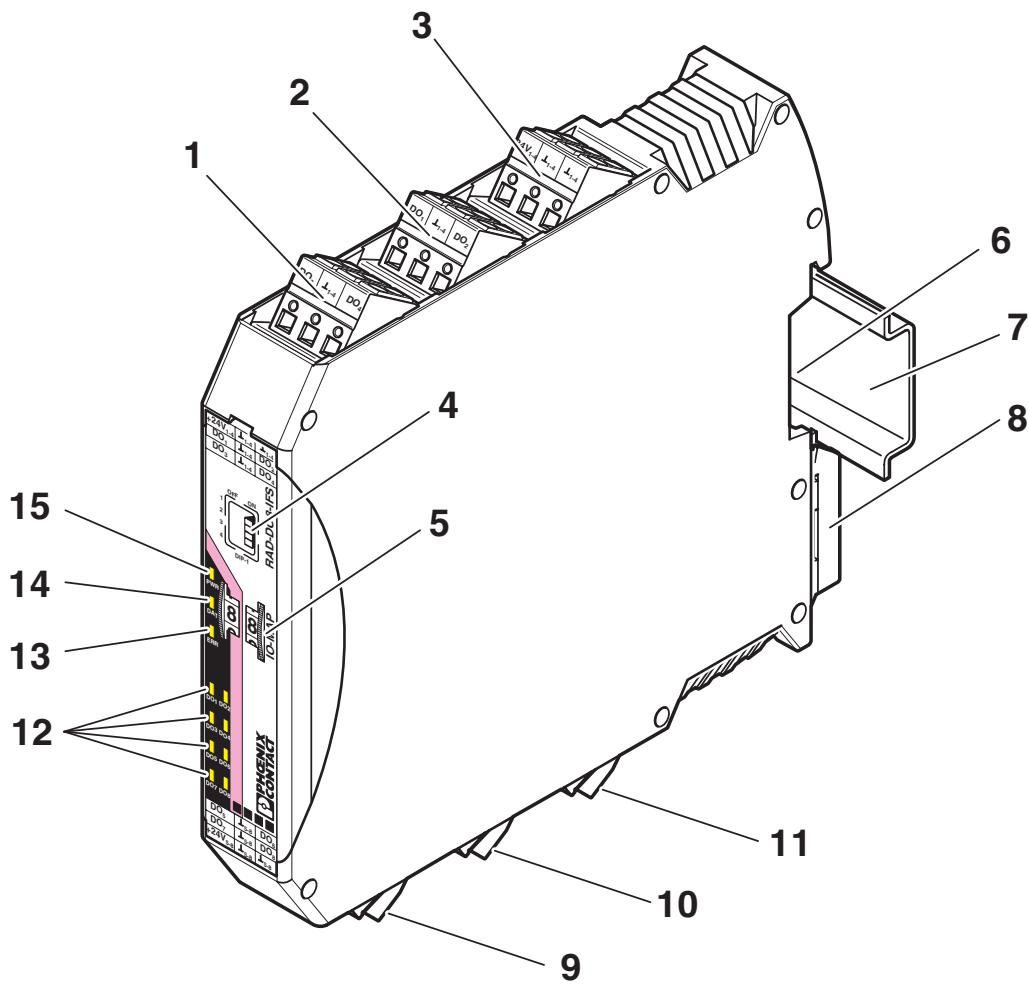
Wireless module in PLC/Modbus RTU dual mode

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Schematic diagram



Function elements

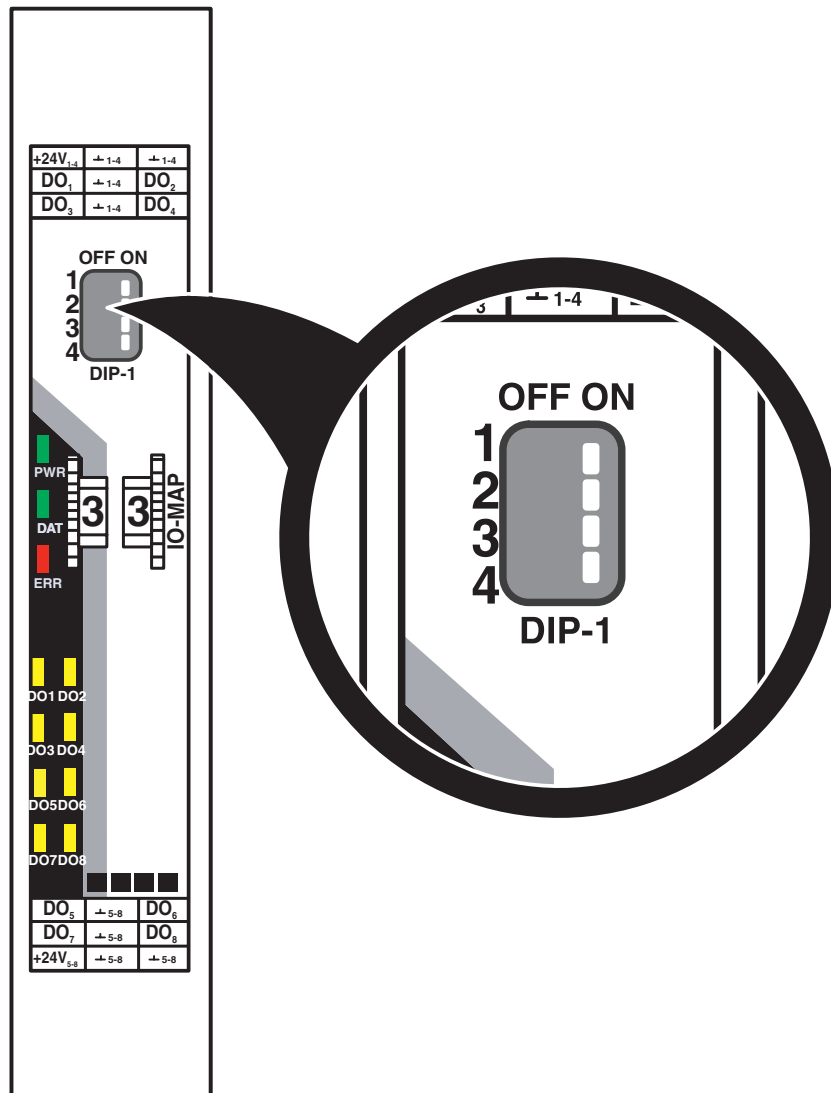
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Schematic diagram



DIP switches

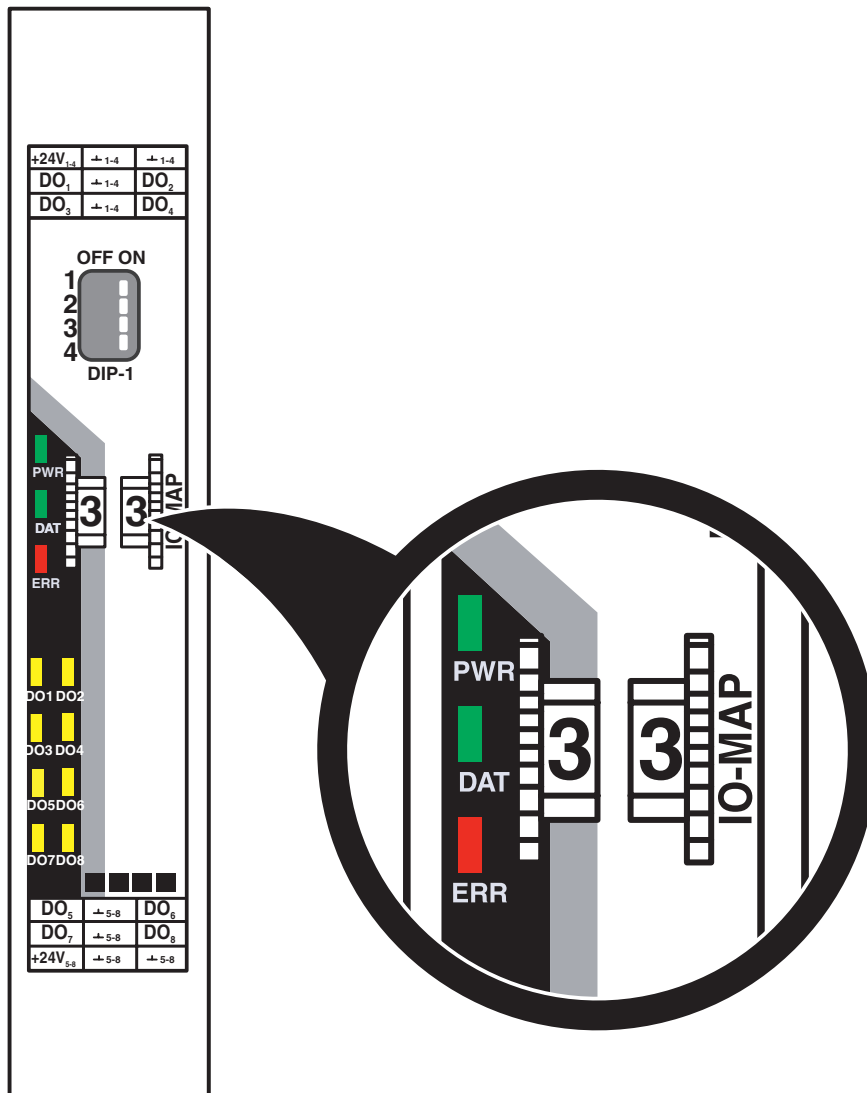
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Schematic diagram



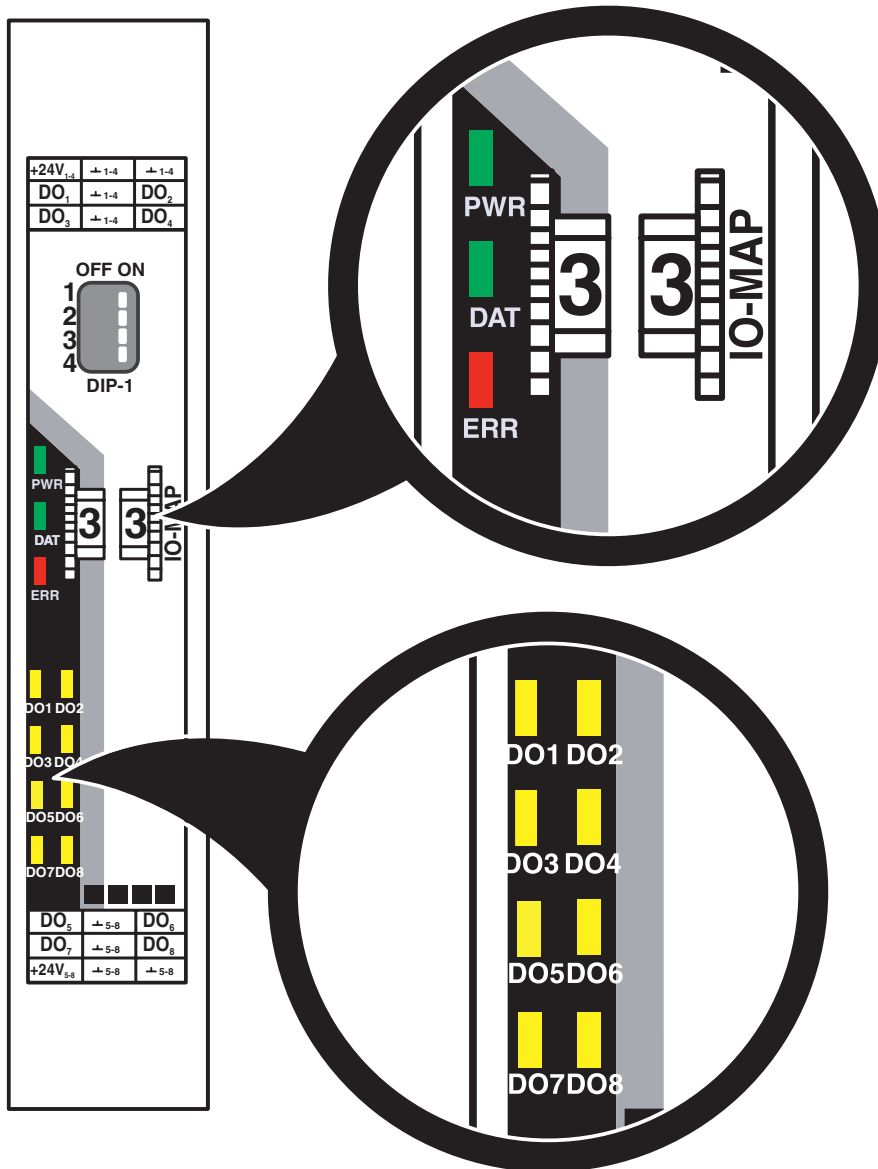
Thumbwheel

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Schematic diagram



LED indicators

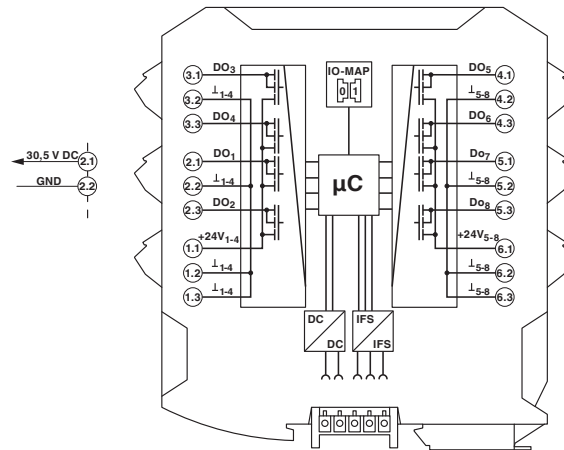
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Circuit diagram



Basic circuit diagram

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Approvals


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 **UL Listed**
Approval ID: E238705


 **cUL Listed**
Approval ID: E238705

 **IECEX**
Approval ID: IECEX IBE 13.0019X

 **cUL Listed**
Approval ID: E196811

 **UL Listed**
Approval ID: E196811

 **ATEX**
Approval ID: IBExU15ATEXB008 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	26a37ca1-3e71-4697-9976-5f57188c8b0a

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com