

IB IL 24 DO 4/EF-ECO - Digital module



2702825

<https://www.phoenixcontact.com/us/products/2702825>

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Inline, Digital output terminal, Digital outputs: 4, 24 V DC, connection technology: 3-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector

Product description

The terminal is designed for use within an Inline station. It is used to output digital signals. Inline ECO terminals are approved for the temperature range from 0°C to +55°C. The electronics base and Inline connector are supplied as standard.

Your advantages

- 4 digital outputs
- Connection of actuators in 2- and 3-conductor technology
- Nominal current per output: 500 mA
- Total current of the terminal: 2 A
- Short-circuit and overload-protected outputs
- Approved for use in a safety-related segment circuit

Commercial data

Item number	2702825
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI132
GTIN	4055626381473
Weight per piece (including packing)	83.85 g
Weight per piece (excluding packing)	83.85 g
Customs tariff number	85389099
Country of origin	DE

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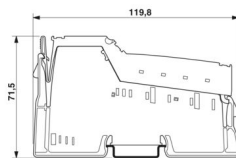
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Technical data

Dimensions

Dimensional drawing	
Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm

Notes

Note on application

Note on application	Only for industrial use
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Interfaces

Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps

System properties

Module

ID code (dec.)	189
ID code (hex)	BD
Length code (hex)	41
Length code (dec)	65
Process data channel	4 bit
Input address area	0 Byte
Output address area	4 bit
Register length	4 bit
Required parameter data	3 Byte
Required configuration data	4 Byte

Output data

Digital:

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	3-conductor

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Number of outputs	4
Protective circuit	Overload protection, short-circuit protection of outputs; electronic
Output voltage	24 V DC ($U_S - 1\text{ V}$)
Limitation of the voltage induced on circuit interruption	-46 V ... -15 V
Maximum inrush current	max. 1.5 A (for 20 ms)
Maximum output current per channel	500 mA
Maximum output current per module	2 A
Nominal output voltage	24 V DC
Output voltage when switched off	max. 2 V
Output current when switched off	max. 300 μA
Nominal load, inductive	12 VA (1.2 H, 50 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W (48 Ω)
Maximum operating frequency with ohmic nominal load	max. 300 Hz (this switching frequency is limited by the number of bus devices, the structure of the bus, the software used and the control or computer system used)
Reverse voltage resistance to short pulses	Reverse voltage proof
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Behavior at voltage switch-off	The output follows the power supply without delay
Overcurrent shut-down	min. 0.7 A
Output current with ground connection interrupt when switched off	max. 25 mA

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connector
No. of channels	4
Operating mode	Process data operation with 4 bits
Diagnostics messages	Short-circuit or overload of the digital outputs Error message in the diagnostic code (bus) and display (2 Hz) via the LED (D) on the module

Electrical properties

Maximum power dissipation for nominal condition	1.15 W
Protective circuit	Short-circuit protection, overload protection in the segment circuit; Electronic, for each module

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 44 mA

Potentials: Segment circuit supply (U_S)

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)

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Current draw	max. 2 A
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Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min

Connection data

Connection technology

Connection name	Inline connector
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Conductor connection

Connection method	Spring-cage connection
Conductor cross-section rigid	0.08 mm ² ... 1.5 mm ²
Conductor cross-section flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16
Stripping length	8 mm

Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm ² ... 1.5 mm ²
Conductor cross-section, flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	0 °C ... 55 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)

Standards and regulations

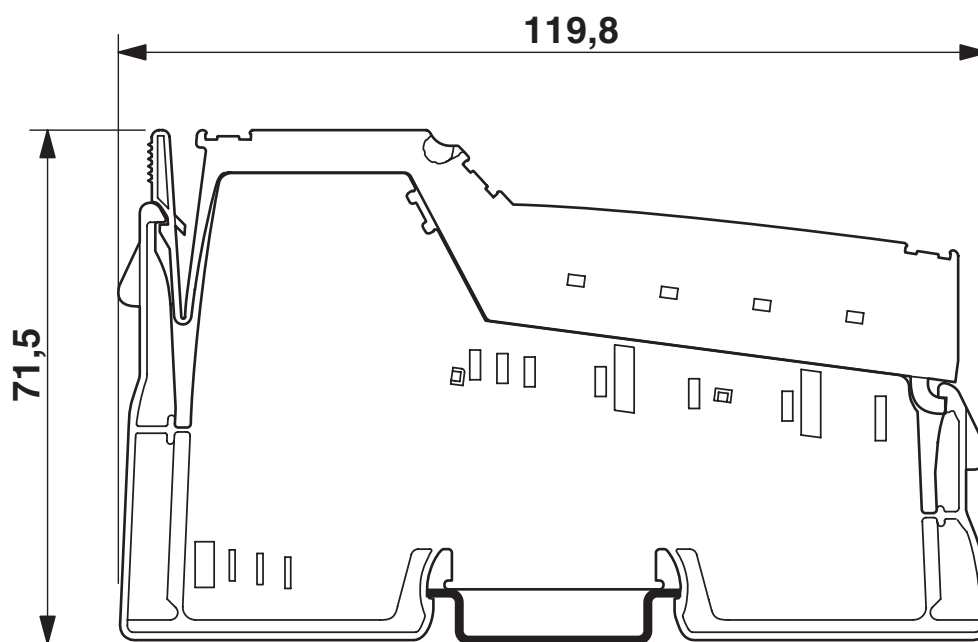
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

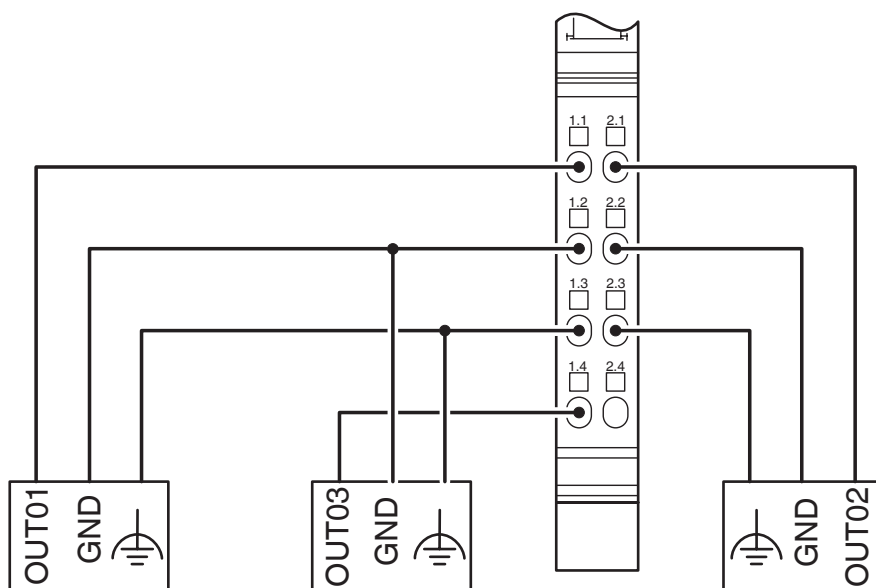
Mounting type	DIN rail mounting
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Drawings

Dimensional drawing



Connection diagram



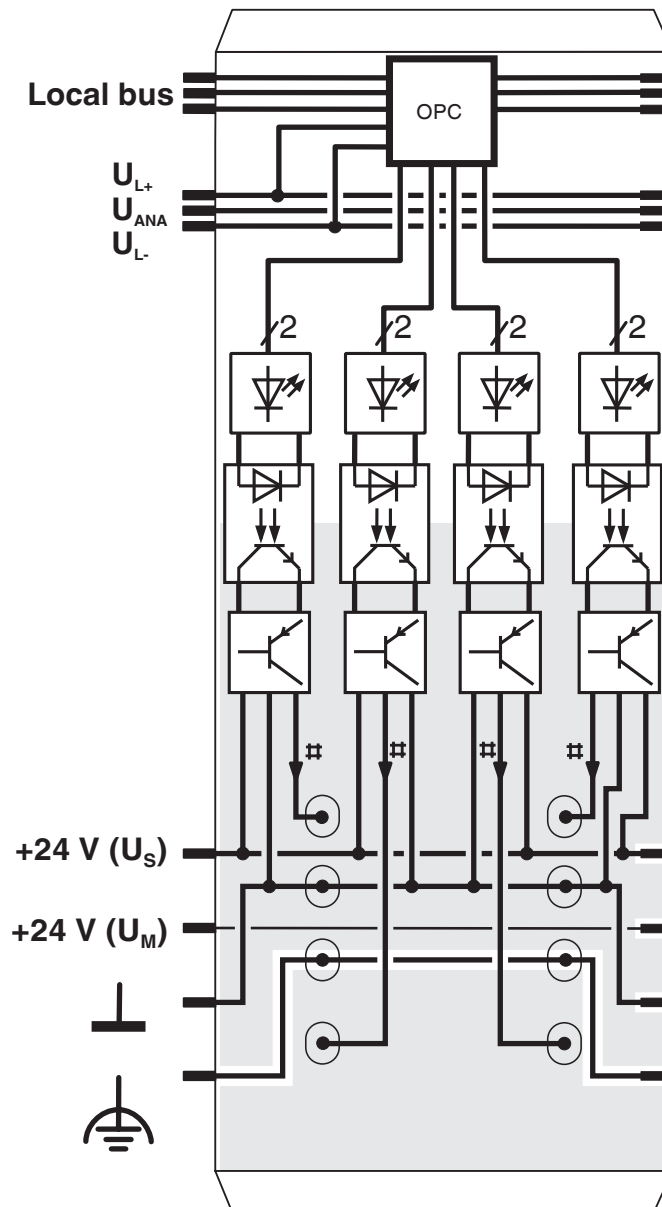
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Block diagram



Internal wiring of the terminal points

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Approvals

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cULus Listed

Approval ID: E140324



Functional Safety

Approval ID: 968/EL 711.08/23

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Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 9.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I, 7(c)-II

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	a8d9972b-3b06-4871-95ac-8a5cee92b3b0