

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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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 |
|---------------------|-------------------------|

Material specifications

| | |
|-----------------|------------------|
| Color (Housing) | green (RAL 6021) |
|-----------------|------------------|

Interfaces

Inline local bus

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

System properties

Programming data (LocalbusSlave)

| | |
|-------------------------|--------|
| Length code (hex) | 41 |
| ID code (dec.) | 189 |
| Length code (dec) | 65 |
| Process data channel | 4 bit |
| Input address area | 0 Byte |
| Output address area | 4 bit |
| Parameter channel (PCP) | 0 bit |
| Register length (bus) | 4 bit |

Fieldbus data telegram (PROFIBUS)

| | |
|-----------------------------|--------|
| Required parameter data | 3 Byte |
| Required configuration data | 4 Byte |

Output data

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Digital:

| | |
|---|---|
| Output name | Digital outputs |
| Connection method | Spring-cage connection |
| Connection technology | 3-conductor |
| Number of outputs | 4 |
| Protective circuit | Overload protection, short-circuit protection of outputs; electronic |
| Output voltage | 24 V DC ($U_S - 1$ 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 μ A |
| 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 |

Insulation characteristics

| | |
|----------------------|------------------------------|
| Overvoltage category | II (IEC 60664-1, EN 60664-1) |
| Pollution degree | 2 (IEC 60664-1, EN 60664-1) |

Electrical properties

| | |
|---|--|
| Maximum power dissipation for nominal condition | 1.15 W |
| Protective circuit | Short-circuit protection, overload protection in the segment |

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| | |
|---|--|
| | 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) |
| Current draw | max. 2 A |
| Electrical isolation/isolation of the voltage ranges | |
| Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 7.5 V supply (bus logic)/functional ground | 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 |
| 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 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing) |
| Mechanical test | |
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | 5g |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27 | 25g |

Standards and regulations

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

Mounting

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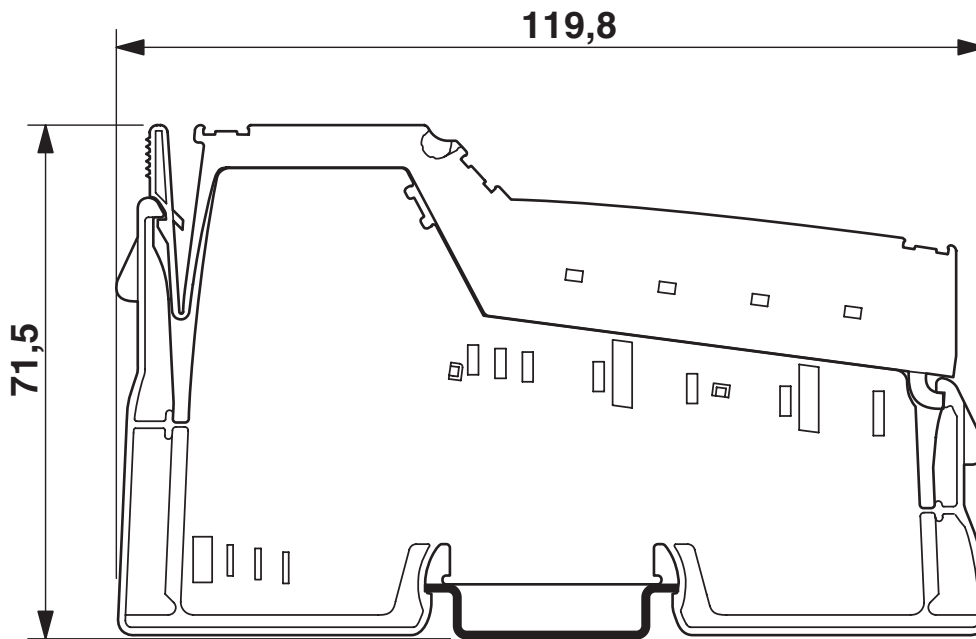
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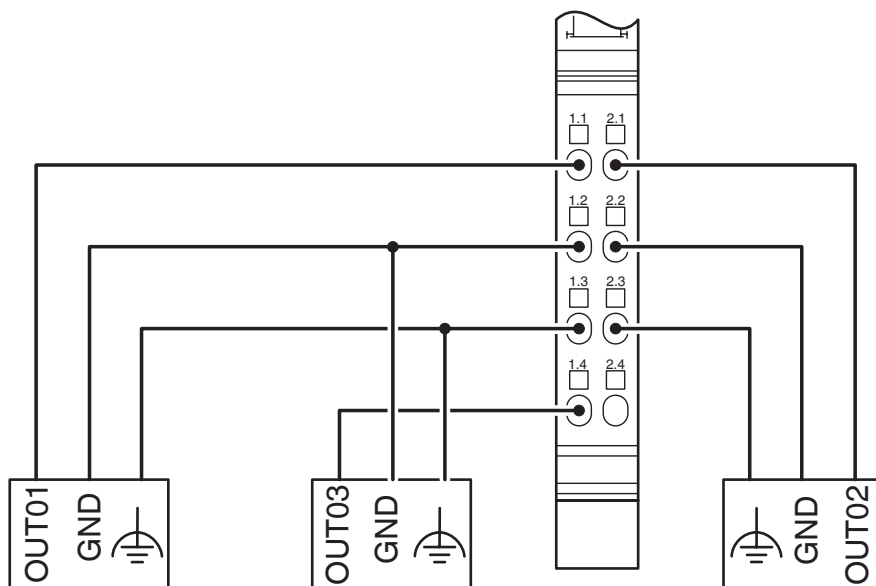
| Mounting type | DIN rail mounting |
|---------------|-------------------|
|---------------|-------------------|

Drawings

Dimensional drawing



Connection diagram



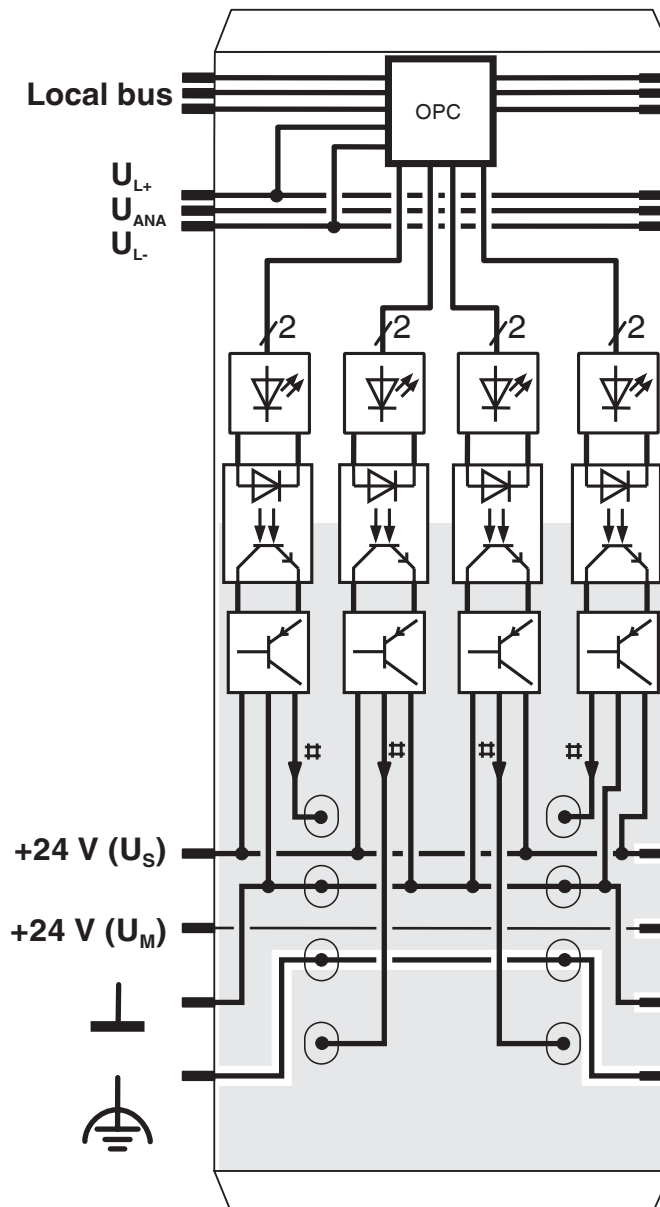
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Block diagram



Internal wiring of the terminal points

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702825>



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 10.0 | EC001599 |
|-----------|----------|

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 |

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 |

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