

IB IL 24 DO 2-2A-2MBD-PAC - Digital module



2861700

<https://www.phoenixcontact.com/us/products/2861700>

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Inline, Digital output terminal, Digital outputs: 2, 24 V DC, 2 A, connection technology: 4-conductor, transmission speed in the local bus: 2 Mbps, degree of protection: IP20, including Inline connector and labeling field

The figure shows the version IB IL 24 DO 2-2A-PAC

Product description

Inline terminals with "2 MBD" added to their item designation work with a transmission speed of 2 Mbps. These terminal blocks are discontinued or no longer in the range. If you require this transmission speed, please ask your local Phoenix Contact representative. If you can work with a transmission speed of 500 kbps, select as a replacement the corresponding variant that does not have "2MBD" added to its item designation. Please note that a uniform transmission speed must always be used within one inline station. The terminal is designed for use within an Inline station. It is used to output digital signals.

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2861700 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR01 |
| Product key | DRI132 |
| GTIN | 4017918974602 |
| Weight per piece (including packing) | 86.95 g |
| Weight per piece (excluding packing) | 42 g |
| Customs tariff number | 85389099 |
| Country of origin | DE |

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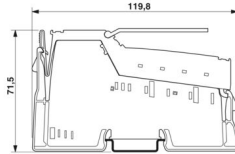


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Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 12.2 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |
| Note on dimensions | Housing dimensions |

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 | 2 Mbps |

System properties

Programming data (LocalbusSlave)

| | |
|-------------------------|--------|
| Length code (hex) | C2 |
| ID code (dec.) | 189 |
| Length code (dec) | 194 |
| Process data channel | 2 bit |
| Input address area | 0 Byte |
| Output address area | 2 bit |
| Parameter channel (PCP) | 0 bit |
| Register length (bus) | 2 bit |

Fieldbus data telegram (PROFIBUS)

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

Output data

Digital:

| | |
|---|---|
| Output name | Digital outputs |
| Connection method | Spring-cage connection |
| Connection technology | 4-conductor |
| Number of outputs | 2 |
| Protective circuit | Overload protection, short-circuit protection of outputs |
| Output voltage | 24 V DC ($U_S - 1$ V) |
| Output current | max. 2 A (per channel) max. 4 A (per device) |
| Maximum output current per channel | 2 A |
| Maximum output current per module | 4 A |
| Nominal output voltage | 24 V DC |
| Nominal load, inductive | 48 VA (1,2 H, 12 Ω) |
| Nominal load, lamp | 48 W |
| Nominal load, ohmic | 48 W (12 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 |

Product properties

| | |
|----------------------|--|
| Product type | I/O component |
| Product family | Inline |
| Type | modular |
| Scope of supply | including Inline connector and labeling field |
| No. of channels | 2 |
| Operating mode | Process data mode with 2 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 | 1.05 W |
|---|--------|

Potentials: Communications power (U_L)

| | |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw | max. 60 mA |

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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. 4 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) | -25 °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

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

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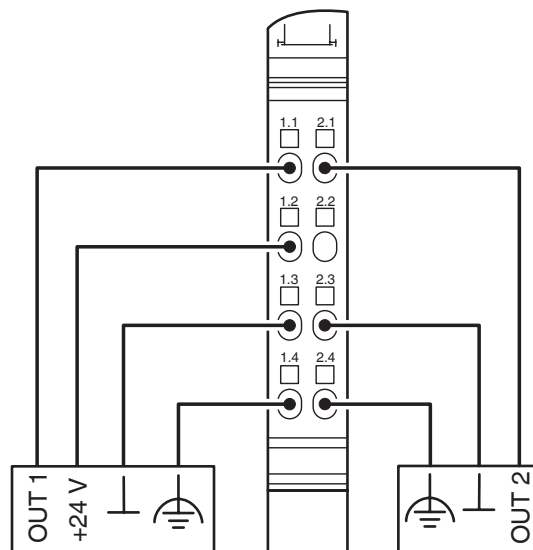
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Drawings

Dimensional drawing



Connection diagram



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Block diagram



Internal wiring of the terminal points

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2861700>



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 | 18e63add-9855-4603-9466-f9511ddd1a65 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 2.358 kg CO2e |
|---------|---------------|

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