

IB IL 24 DI 16-NPN-PAC - Digital module



2863520

<https://www.phoenixcontact.com/us/products/2863520>

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Inline, Digital input terminal, Digital inputs: 16 (NPN), 24 V DC, connection technology: 3-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connectors and marking fields

Product description

The terminal is designed for use within an Inline station. It is used to acquire digital signals.

Your advantages

- 16 digital inputs, NPN-wired
- Connection of sensors in 2- and 3-conductor technology
- Maximum permissible load current per sensor: 250 mA
- Diagnostic and status indicators

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2863520 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR01 |
| Product key | DRI131 |
| GTIN | 4017918941208 |
| Weight per piece (including packing) | 224.4 g |
| Weight per piece (excluding packing) | 210 g |
| Customs tariff number | 85389099 |
| Country of origin | DE |

Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 48.8 mm |
| Height | 140.5 mm |
| Depth | 71.5 mm |
| Note on dimensions | Housing dimensions |

Notes

Note on application

| | |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

Utilization restriction

| | |
|------------|---|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---|

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) | 01 |
| ID code (dec.) | 190 |
| Length code (dec) | 01 |
| Process data channel | 16 bit |
| Input address area | 2 Byte |
| Output address area | 0 Byte |
| Parameter channel (PCP) | 0 Byte |
| Register length (bus) | 16 bit |

Fieldbus data telegram

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| | |
|-----------------------------|--------|
| Required parameter data | 1 Byte |
| Required configuration data | 4 Byte |

Input data

Digital:

| | |
|--------------------------------|---------------------------------------|
| Input name | Digital inputs |
| Description of the input | IEC 61131-2 type 1 |
| Number of inputs | 16 (NPN) |
| Connection method | Spring-cage connection |
| Connection technology | 3-conductor |
| Input voltage | 24 V DC |
| Input voltage range "0" signal | -3 V DC ... 5 V DC |
| Input voltage range "1" signal | 15 V DC ... 30 V DC |
| Nominal input voltage U_{IN} | 24 V DC |
| Typical response time | < 1 ms |
| Protective circuit | Short-circuit and overload protection |

Product properties

| | |
|-----------------|--|
| Product type | I/O component |
| Product family | Inline |
| Type | modular |
| Scope of supply | including Inline connectors and marking fields |
| No. of channels | 16 |

Electrical properties

| | |
|---|-------|
| Maximum power dissipation for nominal condition | 1.6 W |
|---|-------|

Potentials: Communications power (U_L)

| | |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw | max. 60 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. 4 A |

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

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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 % (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) |
|------------------|---------------------------------------|

Mounting

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

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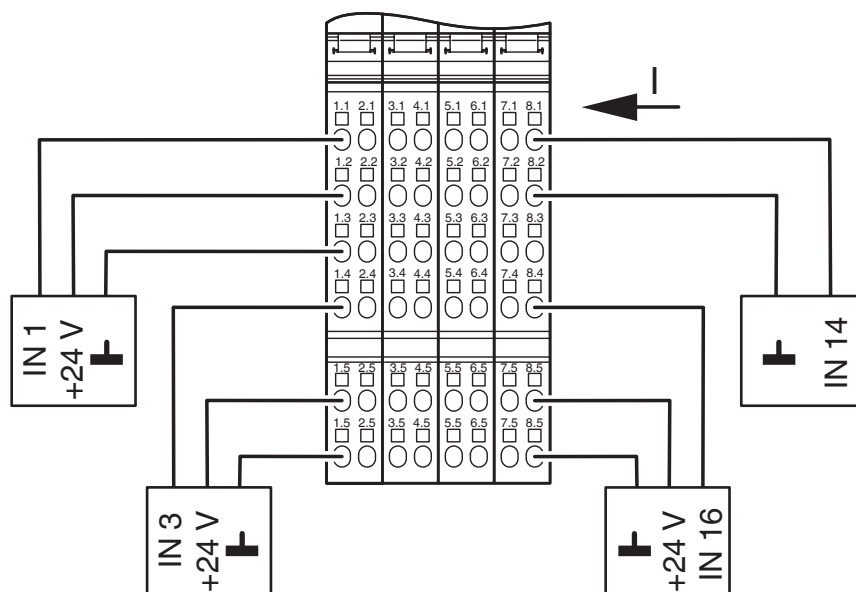
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Drawings

Dimensional drawing



Connection diagram



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Approvals

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BV

Approval ID: 20989_C1 BV

ABS

Approval ID: 22-2226444-PDA

DNV

Approval ID: TAA00002CU



cULus Recognized

Approval ID: E140324



cULus Listed

Approval ID: E199827

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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 | 398c065b-dd4d-42fd-8e8c-f4e5d2f384cb |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 6.779 kg CO2e |
|---------|---------------|

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