

# IB IL 24 DI 8-PAC - Digital module



2861247

<https://www.phoenixcontact.com/us/products/2861247>

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Inline, Digital input terminal, Digital inputs: 8, 24 V DC, connection technology: 4-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

- 8 digital inputs
- Connection of sensors in 2-, 3-, and 4-conductor technology
- Maximum permissible load current per sensor: 250 mA
- Maximum permissible load current from the terminal: 2 A

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2861247             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | DR01                |
| Product key                          | DRI131              |
| Catalog page                         | Page 123 (C-6-2019) |
| GTIN                                 | 4017918894184       |
| Weight per piece (including packing) | 202.4 g             |
| Weight per piece (excluding packing) | 118 g               |
| Customs tariff number                | 85389099            |
| Country of origin                    | DE                  |

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## Technical data

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 48.8 mm  |
| Height              | 119.8 mm   |
| Depth               | 71.5 mm  |
| Note on dimensions  | Housing dimensions   |

### Notes

#### Utilization restriction

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

### Interfaces

#### Inline local bus

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

### System properties

#### Module

|                             |        |
|-----------------------------|--------|
| ID code (dec.)              | 190    |
| ID code (hex)               | BE     |
| Length code (hex)           | 81     |
| Length code (dec)           | 129    |
| Process data channel        | 8 bit  |
| Input address area          | 1 Byte |
| Output address area         | 0 Byte |
| Register length             | 8 bit  |
| Required parameter data     | 1 Byte |
| Required configuration data | 4 Byte |

### Input data

#### Digital

|                          |                   |
|--------------------------|-------------------|
| Input name               | Digital inputs    |
| Description of the input | EN 61131-2 type 1 |

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|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Number of inputs                  | 8                                     |
| Cable length                      | max. 30 m (to the sensor)             |
| Connection method                 | Spring-cage connection                |
| Connection technology             | 4-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                               |
| Nominal input current at $U_{IN}$ | min. 5 mA (at nominal voltage)        |
| Sensor current per channel        | max. 250 mA                           |
| Typical response time             | < 1 ms                                |
| Protective circuit                | Short-circuit and overload protection |

## Product properties

|                   |  |
|-------------------|--|
| Type              | modular  |
| Product type      | I/O component                                  |
| Product family    | Inline   |
| Scope of delivery | including Inline connectors and marking fields |
| No. of channels   | 8  |
| Operating mode    | Process data mode with one byte                |

## 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 | 24.12 W |
|---|---------|

## Potentials: Communications power ( $U_L$ )

|                   |                               |
|-------------------|-------------------------------|
| Supply voltage    | 7.5 V DC (via voltage jumper) |
| Current draw      | max. 50 mA                    |
| Power consumption | max. 0.375 W                  |

## 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   |
|                      | 0 A (without sensors)  |

## 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 |  |
|-----------------------|--|

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|                 |                  |
|-----------------|------------------|
| Connection name | Inline connector |
|-----------------|------------------|

## Conductor connection

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

## Inline connector

|                                   |  |
|-----------------------------------|--|
| Connection method                 | Spring-cage connection                       |
| Conductor cross section, rigid    | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section, flexible | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 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)                    |

## Standards and regulations

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

## Mounting

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27242604 |
| ECLASS-12.0 | 27242604 |
| ECLASS-13.0 | 27242604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001599 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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## Environmental product compliance

REACH SVHC

Lead 7439-92-1

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