

# Digital module - IB IL DI 8/S0-PAC

2897020

<https://www.phoenixcontact.com/us/products/2897020>



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Inline, Digital input terminal, Digital inputs: 8 (S0 counter inputs), 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 IB IL DI 8/S0-PAC terminal is designed for use within an Inline station. It is ideal for recording counting pulses from impulse encoders with an S0 interface in acc. with DIN 43864 and for Class A impulse encoders in acc. with IEC 62053-31.

## 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
- 32-bit counter (up and down)
- Diagnostic and status indicators

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2897020             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | C21                 |
| Product Key                          | DRHABA              |
| Catalog Page                         | Page 125 (C-6-2019) |
| GTIN                                 | 4046356133098       |
| Weight per Piece (including packing) | 205.933 g           |
| Weight per Piece (excluding packing) | 118 g               |
| Customs tariff number                | 85389099            |
| Country of origin                    | DE                  |

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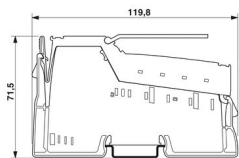
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## Technical Data

### Dimensions

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

### Notes

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction |                                                                           |
| EMC note                | EMC: class A product, see manufacturer's declaration in the download area |

### Interfaces

|                    |                    |
|--------------------|--------------------|
| Inline local bus   |                    |
| Connection method  | Inline data jumper |
| Transmission speed | 500 kbps           |

### System properties

|                             |        |
|-----------------------------|--------|
| Module                      |        |
| ID code (dec.)              | 191    |
| ID code (hex)               | BF     |
| Length code (hex)           | 02     |
| Length code (dec)           | 02     |
| Process data channel        | 32 Bit |
| Input address area          | 4 Byte |
| Output address area         | 4 Byte |
| Register length             | 4 Byte |
| Required parameter data     | 1 Byte |
| Required configuration data | 5 Byte |

### Input data

|                          |                            |
|--------------------------|----------------------------|
| Digital                  |                            |
| Input name               | Digital inputs             |
| Description of the input | IEC 62053-31 and DIN 43864 |

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|                                   |                        |
|-----------------------------------|------------------------|
| Number of inputs                  | 8 (S0 counter inputs)  |
| Connection method                 | Spring-cage connection |
| Connection technology             | 4-conductor            |
| Input voltage                     | 24 V DC                |
| Nominal input voltage $U_{IN}$    | 24 V DC                |
| Nominal input current at $U_{IN}$ | 9 mA                   |

## Product properties

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

## Electrical properties

|                 |   |
|-----------------|---|
| No. of channels | 8 |
|-----------------|---|

### Potentials

|  |                                                   |
|--|---------------------------------------------------|
|  | max. 70 mA (without sensor supply, inputs active) |
|--|---------------------------------------------------|

### Potentials: Communications power ( $U_L$ )

|                |                               |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw   | max. 55 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 (incl. sensor supply)                                     |
|                      | max. 70 mA (without sensor supply, inputs active)                  |

## Connection data

### Connection technology

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

### Conductor connection

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection method                | Spring-cage connection                       |
| Conductor cross section solid    | 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> |
| Stripping length               | 8 mm                                         |

## Ambient conditions

|                                          |                                                   |
|------------------------------------------|---------------------------------------------------|
| Ambient temperature (operation)          | -25 °C ... 55 °C                                  |
| Degree of protection                     | IP20                                              |
| Air pressure (operation)                 | 80 kPa ... 106 kPa (up to 2000 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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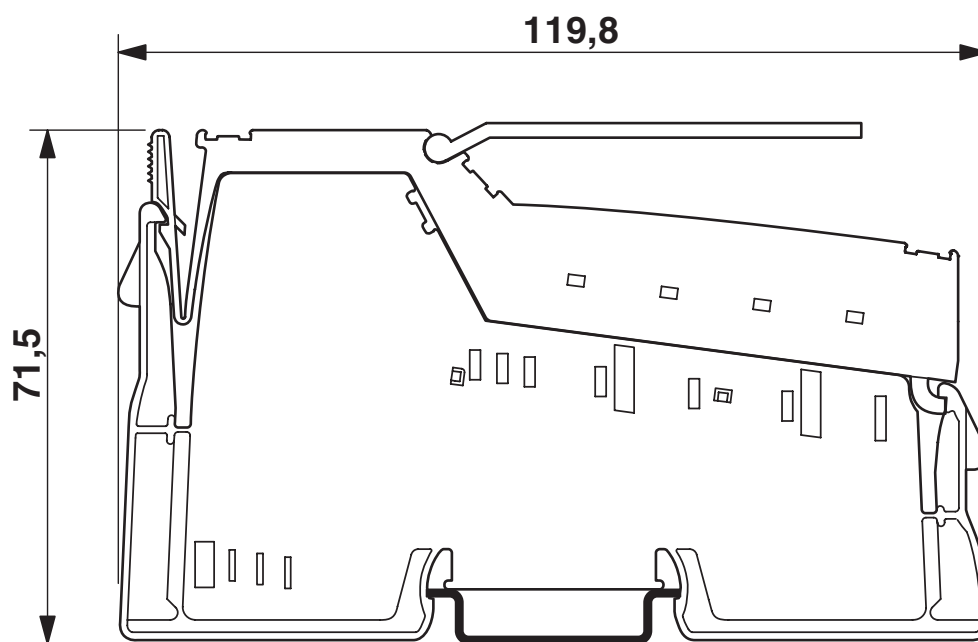
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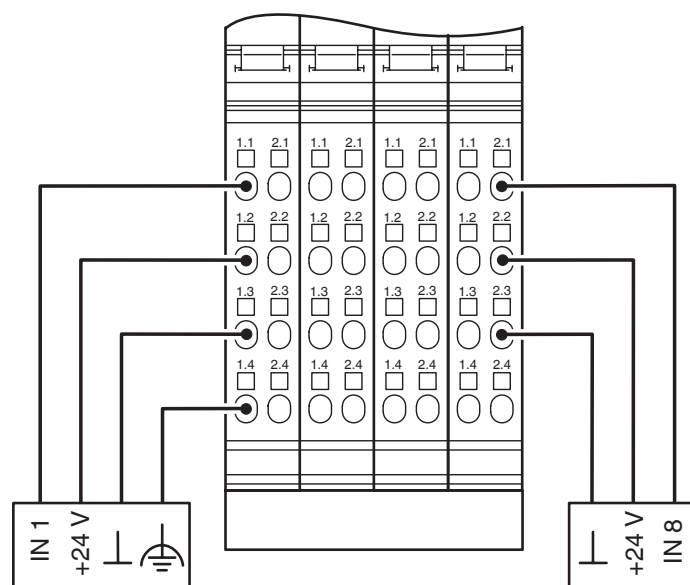


## Drawings

Dimensional drawing



Connection diagram



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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27242605 |
| ECLASS-10.0.1 | 27242605 |
| ECLASS-11.0   | 27242605 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001601 |
|----------|----------|

### UNSPSC

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

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## Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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## Accessories

### Inline connector

Inline connector - IB IL SCN-8 - 2726337

<https://www.phoenixcontact.com/us/products/2726337>

Connector, for digital 1, 2 or 8-channel Inline terminals



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### Inline connector

Inline connector - IB IL SCN-8-CP - 2727608

<https://www.phoenixcontact.com/us/products/2727608>

Inline connector, colored





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## Connector set

Connector set - IB IL DI/DO 8-PLSET - 2860950

<https://www.phoenixcontact.com/us/products/2860950>



Connector set

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## Connector set

Connector set - IB IL DI/DO 8-PLSET/CP - 2860963

<https://www.phoenixcontact.com/us/products/2860963>



Connector set, for IB IL DI/DO 8, copper, with color print.

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## Labeling field

Labeling field - IB IL FIELD 2 - 2727501

<https://www.phoenixcontact.com/us/products/2727501>

Labeling field, width: 12.2 mm



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## Labeling field

Labeling field - IB IL FIELD 8 - 2727515

<https://www.phoenixcontact.com/us/products/2727515>

Labeling field, width: 48.8 mm



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## Insert strip

Insert strip - ESL 62X10 - 0809492

<https://www.phoenixcontact.com/us/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:  
Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of  
individual labels: 72



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## Insert strip

Insert strip - ESL 62X46 - 0809502

<https://www.phoenixcontact.com/us/products/0809502>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:  
Laser printer, mounting type: insert, lettering field size: 62 x 46 mm, Number of  
individual labels: 15



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