

## Inline terminal - IB IL AI 4/I/4-20-ECO - 2702495

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Inline ECO, Analog input terminal, Analog inputs: 4, 4 mA ... 20 mA, connection method: 2-wire, 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.

The measured values are depicted in standardized representation format.


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 analog input channels
- Connection of sensors in 2-wire technology
- Current range: 4 mA ... 20 mA
- Data format: standardized representation
- Resolution: 12 bits
- Diagnostic indicator



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 055626 306759 |
| GTIN                                 | 4055626306759   |
| Weight per Piece (excluding packing) | 69.000 g  |
| Custom tariff number                 | 85389091  |
| Country of origin                    | Germany   |

### Technical data

#### Note

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

### Dimensions

# Inline terminal - IB IL AI 4/I/4-20-ECO - 2702495

## Technical data

### Dimensions

|        |          |
|--------|----------|
| Width  | 12.2 mm  |
| Height | 119.8 mm |
| Depth  | 71.5 mm  |

### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)          | 0 °C ... 55 °C                                    |
| 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)       |
| 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) |
| Degree of protection                     | IP20  |

### General

|                               |  |
|-------------------------------|--|
| Mounting type                 | DIN rail   |
| Color                         | green  |
| Net weight                    | 69 g   |
| Note on weight specifications | with connector   |
| Diagnostics messages          | Failure of the internal I/O supply I/O error message sent to the bus coupler |
|                               | Checksum error I/O error message sent to the bus coupler                     |

### Interfaces

|                    |                    |
|--------------------|--------------------|
| Designation        | Inline local bus   |
| No. of channels    | 2                  |
| Connection method  | Inline data jumper |
| Transmission speed | 500 kbps           |

### Inline potentials

|                      |  |
|----------------------|--|
| Designation          | Communications power ( $U_L$ )                                     |
| Supply voltage       | 7.5 V DC (via voltage jumper)                                      |
| Current consumption  | typ. 60 mA   |
|                      | max. 70 mA   |
| Designation          | Supply of analog modules ( $U_{ANA}$ )                             |
| Supply voltage       | 24 V DC (via voltage jumper)                                       |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption  | typ. 15 mA   |
|                      | max. 20 mA   |
| Power consumption    | typ. 0.8 W   |

### Analog inputs

|                          |                              |
|--------------------------|------------------------------|
| Description of the input | Single-ended inputs, current |
| Input name               | Analog inputs                |
| Number of inputs         | 4                            |

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### Technical data

#### Analog inputs

|  |                             |
|--|-----------------------------|
| Connection method                        | Inline connector            |
| Connection technology                    | 2-wire                      |
| Note regarding the connection technology | shielded, twisted pair      |
| A/D converter resolution                 | 12 bit                      |
| Type of protection                       | Overload protection         |
|  | Transient protection        |
| Data formats                             | Standardized representation |
| Measured value representation            | 16 bits                     |
| Current input signal                     | 4 mA ... 20 mA              |
| Input resistance current input           | 200 Ω                       |

#### Electrical isolation

|              |   |
|--------------|---|
| Test section | Bus logic (local bus, communications power) 500 V AC 50 Hz 1 min. |
|              | Analog I/O 500 V AC 50 Hz 1 min.                                  |
|              | Functional earth ground 500 V AC 50 Hz 1 min.                     |

#### Standards and Regulations

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

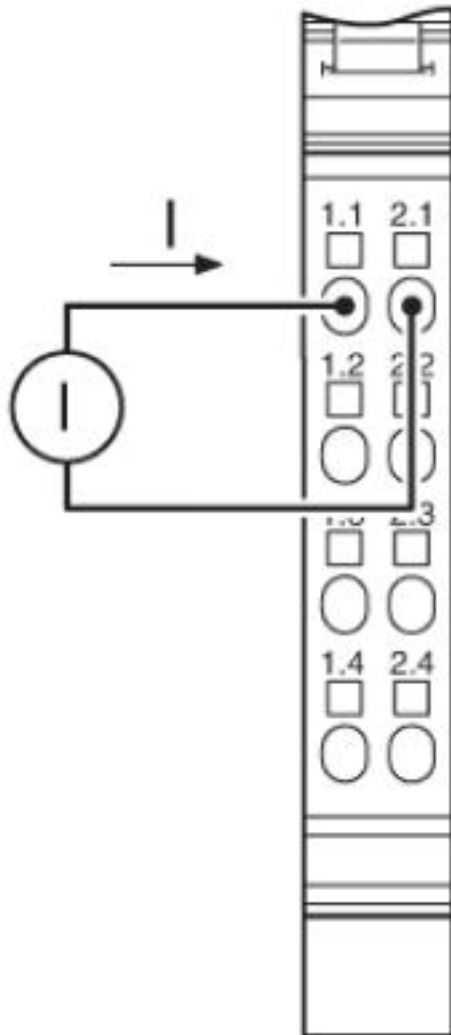
#### Environmental Product Compliance

|            |   |
|------------|---|
|            | Lead 7439-92-1  |
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

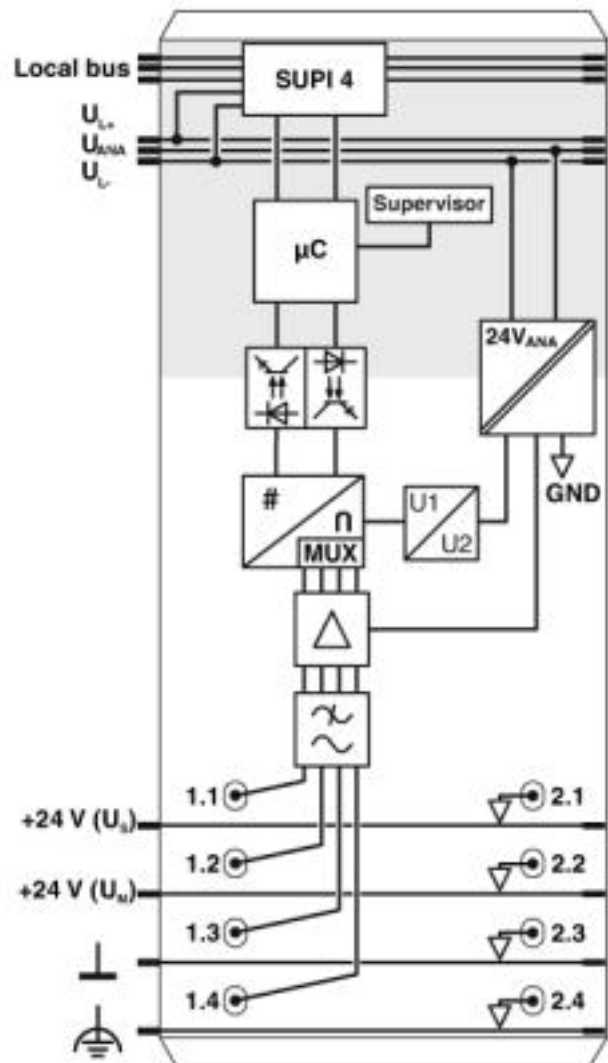
### Drawings

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Connection diagram



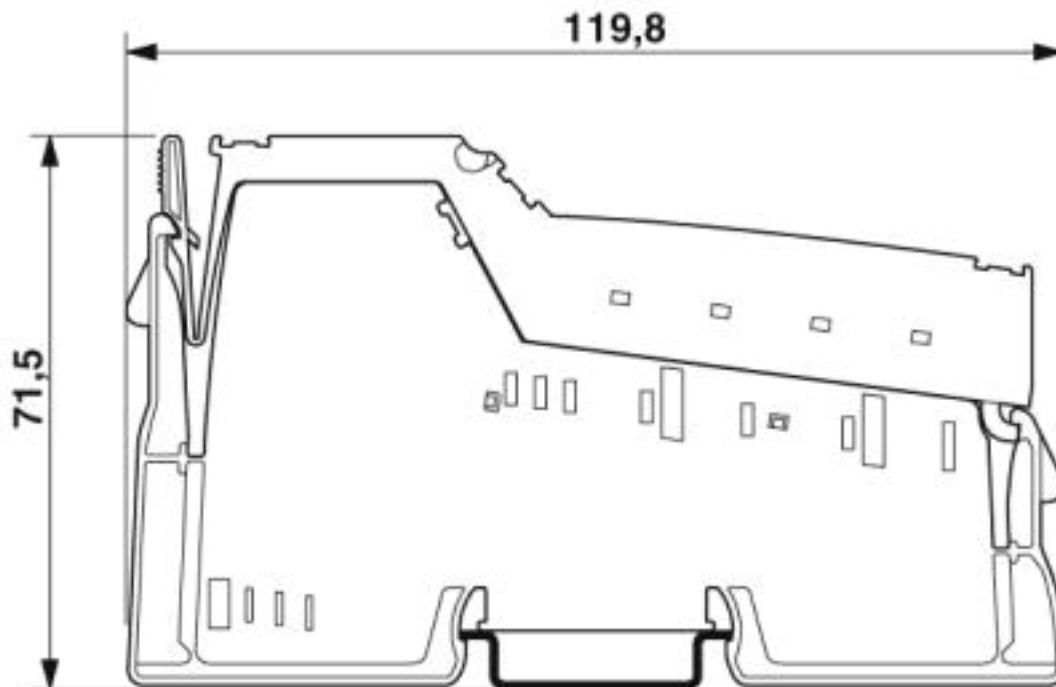
Block diagram



Connecting the sensors

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Dimensional drawing



## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27250303 |
| eCl@ss 4.1 | 27250303 |
| eCl@ss 5.0 | 27250303 |
| eCl@ss 5.1 | 27242601 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242601 |
| eCl@ss 8.0 | 27242601 |
| eCl@ss 9.0 | 27242601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001596 |
| ETIM 4.0 | EC001599 |
| ETIM 5.0 | EC001596 |
| ETIM 6.0 | EC001596 |
| ETIM 7.0 | EC001596 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 43172015 |

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## Classifications

### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 12.01 | 43201404 |
| UNSPSC 13.2  | 32151602 |
| UNSPSC 18.0  | 32151602 |
| UNSPSC 19.0  | 32151602 |
| UNSPSC 20.0  | 32151602 |
| UNSPSC 21.0  | 32151602 |

## Approvals

### Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

### Approval details

|           |  |   |               |
|-----------|--|---|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|-----------|--|---|---------------|

|            |  |   |               |
|------------|--|---|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|------------|--|---|---------------|

|              |  |  |  |
|--------------|--|--|--|
| cULus Listed |  |  |  |
|--------------|--|--|--|

## Accessories

### Accessories

#### Installation terminal block

Connection terminal block - AKG 4 GNYE - 0421029



Connection terminal block, connection method: Screw connection, load current: 41 A, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, width: 7 mm, color: green-yellow

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### Accessories

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Connection terminal block - AKG 4 BK - 0421032



Connection terminal block, connection method: Screw connection, load current: 41 A, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, width: 7 mm, color: black

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### Labeling panel

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



### Neutral conductor rail

Neutral busbar - NLS-CU 3/10 SN 1000MM - 0402174



Neutral busbar, width: 10 mm, height: 3 mm, DIN VDE 0611-4: 1991-02, material: Copper, tin-plated, length: 1000 mm, color: silver

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### Pick-off terminal block

Connection terminal block - AK 4 - 0404017



Connection terminal block, connection method: Screw connection, load current: 41 A, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, width: 7 mm, color: silver

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### Plug

Inline connector - IB IL SCN-8 - 2726337

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



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### Accessories

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#### Shield connection clamp

Shield connection clamp - SK 8 - 3025163



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

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Shield connection clamp - SK 14 - 3025176



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

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Shield connection clamp - SK 20 - 3025189



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

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Shield connection clamp - SK 35 - 3026463



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

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#### Support

Support bracket - AB-SK - 3025341



Support bracket for busbars

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## Inline terminal - IB IL AI 4/I/4-20-ECO - 2702495

### Accessories

Support bracket - AB-SK 65 - 3026489



Support bracket, Bracket for busbars, set every 20 cm, length: 95.5 mm, width: 6.2 mm, number of positions: 1, color: gray

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Support bracket - AB-SK/E - 3026476



Support bracket, Bracket for busbars, set every 20 cm, length: 10 mm, width: 56 mm, height: 20 mm, number of positions: 2, color: silver

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