

## Inline terminal - IB IL SGI 2/P-PAC - 2884907

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Inline analog strain gauge input terminal, complete with accessories (connector and labeling field), two precise inputs, 4, 6-conductor connection method

### Why buy this product

- 2 high-precision inputs for strain gauge
- Typical deviation of the measuring range final value of  $\pm 0.01\%$
- Serial interface for external weight displays
- Zero point, tare, and standstill display
- Optional: 4, 16, and 32-sample mean-value generation



### Key commercial data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 046356 296878 |
| Weight per Piece (excluding packing) | 220.0 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

|        |         |
|--------|---------|
| Width  | 48.8 mm |
| Height | 136 mm  |
| Depth  | 71.5 mm |

#### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (operation)         | -25 °C ... 55 °C                            |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C                            |
| Permissible humidity (operation)        | 10 % ... 95 % (according to DIN EN 61131-2) |

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## Technical data

### Ambient conditions

|  |   |
|--|---|
| 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

|                      |  |
|----------------------|--|
| Weight               | 220 g  |
| Mounting type        | DIN rail   |
| Operating mode       | Process data operation with 3 words, PCP with 1 word   |
| Protection class     | III, IEC 61140, EN 61140, VDE 0140-1   |
| Test section         | Logic/analog I/O (digital isolator) 500 V AC 50 Hz 1 min   |
|                      | RS-485/analog I/O (isolating distance) 500 V AC 50 Hz 1 min  |
|                      | N/O contact $K_{a1}$ - $K_{b1}$ / analog I/O (isolating distance) 500 V AC 50 Hz 1 min                     |
|                      | N/O contact $K_{a2}$ - $K_{b2}$ / analog I/O (isolating distance) 500 V AC 50 Hz 1 min                     |
|                      | Functional earth ground/analog I/O (isolating distance) 500 V AC 50 Hz 1 min                               |
|                      | Logic/RS-485 (digital isolator) 500 V AC 50 Hz 1 min   |
|                      | N/O contact $K_{a1}$ - $K_{b1}$ / RS-485 (isolating distance) 500 V AC 50 Hz 1 min                         |
|                      | N/O contact $K_{a2}$ - $K_{b2}$ / RS-485 (isolating distance) 500 V AC 50 Hz 1 min                         |
|                      | Functional earth ground/RS-485 (isolating distance) 500 V AC 50 Hz 1 min                                   |
|                      | Logic / N/O contact $K_{a1}$ - $K_{b1}$ (optocoupler) 500 V AC 50 Hz 1 min                                 |
|                      | N/O contact $K_{a2}$ - $K_{b2}$ /N/O contact $K_{a1}$ - $K_{b1}$ (isolating distance) 500 V AC 50 Hz 1 min |
|                      | Functional earth ground / N/O contact $K_{a1}$ - $K_{b1}$ (isolating distance) 500 V AC 50 Hz 1 min        |
|                      | Logic / N/O contact $K_{a2}$ - $K_{b2}$ (optocoupler) 500 V AC 50 Hz 1 min                                 |
|                      | Functional earth ground / N/O contact $K_{a2}$ - $K_{b2}$ (isolating distance) 500 V AC 50 Hz 1 min        |
|                      | Logic/functional earth ground (isolating distance) 500 V AC 50 Hz 1 min                                    |
| Diagnostics messages | Failure of the power supply at $U_{ANA}$ Error message in the process data                                 |
|                      | Failure of or insufficient communications power $U_L$ I/O error message sent to the bus coupler            |
|                      | Peripheral fault Error message in the process data   |

### Interfaces

|                      |                    |
|----------------------|--------------------|
| Designation          | Inline local bus   |
| Connection method    | Inline data jumper |
| Transmission speed   | 500 kBit/s         |
| Transmission physics | Copper             |

### Serial interface

|             |                                |
|-------------|--------------------------------|
| Designation | V.24 (RS-485) serial interface |
|-------------|--------------------------------|

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### Technical data

#### Serial interface

|                       |                                      |
|-----------------------|--------------------------------------|
| Network               | Yes                                  |
| Addressing            | Address 1 = Measured gross/net value |
|                       | Address 2 = Measured tare value      |
| Termination resistor  | 120 $\Omega$                         |
| Transmission protocol | STX/ETX                              |

#### Inline potentials

|                                    |  |
|------------------------------------|--|
| Communications power $U_L$         | 7.5 V DC   |
| Current consumption from $U_L$     | max. 100 mA  |
|                                    | typ. 85 mA   |
| I/O supply voltage $U_{ANA}$       | 24 V DC  |
| Current consumption from $U_{ANA}$ | max. 100 mA  |
|                                    | 25 mA (in case of typical load of 350 Ohm per channel)       |
|                                    | 7 mA (for no-load operation without strain gauge or display) |
|                                    | 80 mA (For a maximum load of 55 $\Omega$ and display)        |
| Power consumption                  | typ. 1.2 W (Device in nominal operation)                     |
|                                    | max. 3.2 W (Device with maximum load)                        |

#### Contacts

|                       |   |
|-----------------------|---|
| Description           | Floating N/O contact                            |
| Quantity              | 2 ( $K_{a1}$ - $K_{b1}$ , $K_{a2}$ - $K_{b2}$ ) |
| Contact resistance    | < 1 $\Omega$ (typical)                          |
| Typical response time | 100 ms (typical)                                |

#### Analog inputs

|                               |   |
|-------------------------------|---|
| Description of the input      | Input channels for strain gauge   |
| Number of inputs              | 2   |
| Connection method             | 6 or 4-wire, twisted pair shielded cable  |
| Bridge difference $U_d$       | Measuring range specified by selecting the characteristic   |
| Bridge voltage $U_0$          | 5 V   |
| Characteristics               | $\pm 1$ mV/V, $\pm 2$ mV/V, $\pm 3$ mV/V, $\pm 3.33$ mV/V, $\pm 4$ mV/V, $\pm 5$ mV/V                             |
| Measured value representation | 15 bits + sign bit (process data); 15 bits + sign bit and measured display value in the ASCII character set (PCP) |
| Process data update           | typ. 100 ms (12.5 ms, depends on the configuration)   |

#### Analog outputs

|                              |   |
|------------------------------|---|
| Type of protection           | Short-circuit protection of the voltage outputs       |
| Protective circuit/component | Yes, at least 1 minute through temperature monitoring |
| Output description           | Voltage output  |
| Number of outputs            | 2   |
| Impedance                    | > 55 $\Omega$ (per channel)                           |
| Output voltage               | typ. 5 V  |
| Output current               | max. 90 mA (per channel)                              |

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## Technical data

### Analog outputs

|                        |                          |
|------------------------|--------------------------|
| Maximum output current | max. 90 mA (per channel) |
|------------------------|--------------------------|

## 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 | 27242601 |
| eCl@ss 7.0 | 27242601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001431 |
| ETIM 3.0 | EC001596 |
| ETIM 4.0 | EC001596 |
| ETIM 5.0 | EC001596 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 43172015 |
| UNSPSC 12.01  | 43201404 |
| UNSPSC 13.2   | 43201404 |

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

#### ATEX

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#### Approvals submitted

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#### Approval details

## Inline terminal - IB IL SGI 2/P-PAC - 2884907

### Approvals

UL Listed 

cUL Listed 

cULus Listed 

### Accessories

#### Accessories

#### Device parameterization

Software - AX+ BASIC - 2985068



Software CD for FDT container for integrating device DTMs (free download)

Software - AX DTM LIB - 2988065



DTM library

### 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

## Inline terminal - IB IL SGI 2/P-PAC - 2884907

### Accessories

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



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### Neutral conductor rail

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



PEN conductor busbar, 3mm x 10 mm, length: 1000 mm

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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 shield connector - IB IL SCN-6 SHIELD - 2726353



Inline shield connector

## Inline terminal - IB IL SGI 2/P-PAC - 2884907

### Accessories

Inline connector - IB IL SCN-8 - 2726337



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

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### Shield connection clamp

Shield connection terminal block - SK 8 - 3025163



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

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Shield connection terminal block - SK 14 - 3025176



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

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Shield connection terminal block - SK 20 - 3025189



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

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Shield connection terminal block - SK 35 - 3026463



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

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### Support

## Inline terminal - IB IL SGI 2/P-PAC - 2884907

### Accessories

Support bracket - AB-SK - 3025341

Support bracket for busbars



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Support bracket - AB-SK 65 - 3026489

Support bracket, Bracket for busbars, set every 20 cm, Length: 95.5 mm, Width: 6.2 mm, 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, Color: silver



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### Terminal marking

Insert strip - ESL 62X10 - 0809492

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, Plotter: Laser printer, Mounting type: Insert, Lettering field: 62 x 10 mm

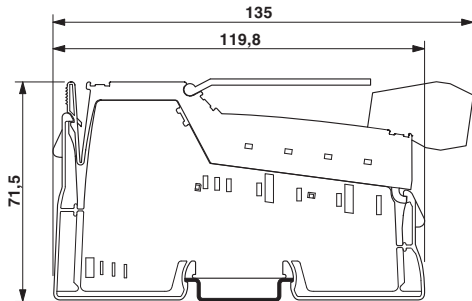


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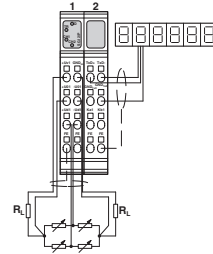
### Drawings

# Inline terminal - IB IL SGI 2/P-PAC - 2884907

Dimensioned drawing



Connection diagram



Block diagram

