

Inline function terminal - IB IL SGI 2/P/EF-PAC - 2702373

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Inline analog strain gauge input terminal, complete with accessories (connector and marking field), 2 precise and fast inputs, 4, 6-conductor connection technology

The figure shows the standard item

Product Description

The terminal is designed for use within an Inline station. This terminal is a precise and fast input module. It is designed to connect load cells, force transducers, mass pressure transducers, and similar devices. The terminal is based on strain gauges. You can connect the strain gauges using 6 or 4-wire technology. The measured value can be output directly on a weight display via a serial interface. There are two options for data exchange:
- via process data
- via PCP Compact (both inputs in the "Analog Values" PCP object)The measured values are represented by standardized 16-bit values. The measured values are represented by standardized 16-bit values.

Your advantages

- 2 high-precision inputs for strain gauge
- Measuring ranges adjusted with nominal characteristic values upon delivery
- Manual entry of characteristic values
- Process data update can be parameterized in increments between 200 µs and 100 ms
- Path adjustment in the process environment
- 2-point adjustment
- Connection of the strain gauges with 6- and 4-wire technology
- Advanced open circuit detection
- Sensor supply of up to 115 mA (8 load cells with 350 Ω per channel)
- Per channel: low-resistance, floating N/O contact
- Channels are parameterized independently of one another via the bus system
- Tara device
- Serial interface for external weight displays
- Status message when zero point is reached and resting of measured value



Key Commercial Data

| | |
|--------------|------|
| Packing unit | 1 pc |
| GTIN | |

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| | |
|--------------------------------------|---------------|
| GTIN | 4055626228464 |
| Weight per Piece (excluding packing) | 241.000 g |
| Custom tariff number | 85389099 |
| 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 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing) |
| 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 | 241 g |
| Operating mode | Process data operation with 3 words, PCP with 1 word |
| 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 |
| | I/O error Error message in the process data |

Interfaces

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

Inline potentials

| | |
|---------------------|--|
| Designation | Communications power (U_L) |
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current consumption | typ. 80 mA |
| | max. 95 mA |
| Designation | Supply of analog modules (U_{ANA}) |

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Technical data

Inline potentials

| | |
|----------------------|--|
| 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 | 14 mA (for no-load operation without strain gauge or display) |
| | typ. 32 mA (in case of typical load of 350 Ohm per channel) |
| | 115 mA (with maximum load of 43 Ω and display) |
| Power consumption | typ. 1.4 W (Device in nominal operation) |

Analog inputs

| | |
|-------------------------------|--|
| Description of the input | Input channels for strain gauge |
| Number of inputs | 2 |
| Connection technology | 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 | ± 1 mV/V, ± 2 mV/V, ± 3 mV/V, ± 3.33 mV/V, ± 4 mV/V, ± 5 mV/V, ± 6 mV/V, manual characteristic value specification |
| Measured value representation | 16 bit, 20 bit, ASCII data record |

Analog outputs

| | |
|--------------------|---------------------------|
| Output description | Jumper supply |
| Number of outputs | 2 |
| Impedance | > 43 Ω (per channel) |
| Output voltage | typ. 5 V |
| Output current | max. 115 mA (per channel) |

Electrical isolation

| | |
|--------------|---|
| Test section | Logic 500 V AC 50 Hz 1 min. |
| | Analog I/O 500 V AC 50 Hz 1 min. |
| | RS-485 500 V AC 50 Hz 1 min. |
| | N/O contact K_{a1} - K_{b1} 500 V AC 50 Hz 1 min. |
| | N/O contact K_{a2} - K_{b2} 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) |
|------------------|---------------------------------------|

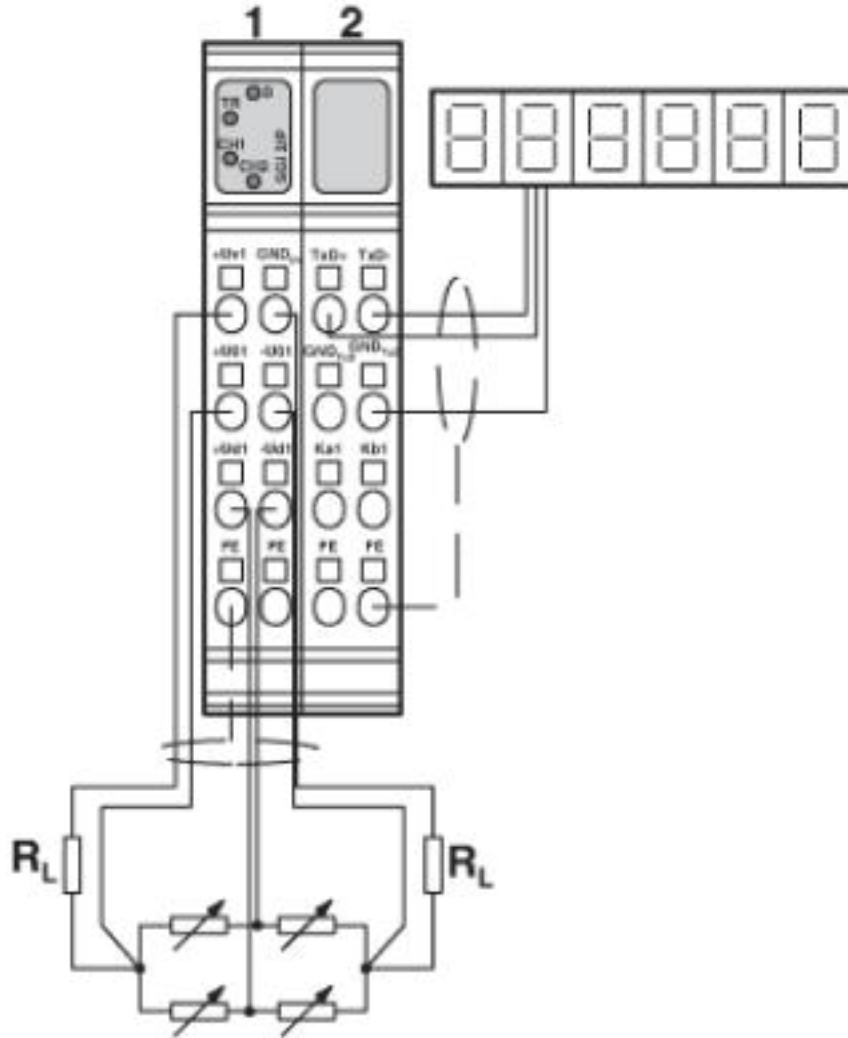
Environmental Product Compliance

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

Drawings

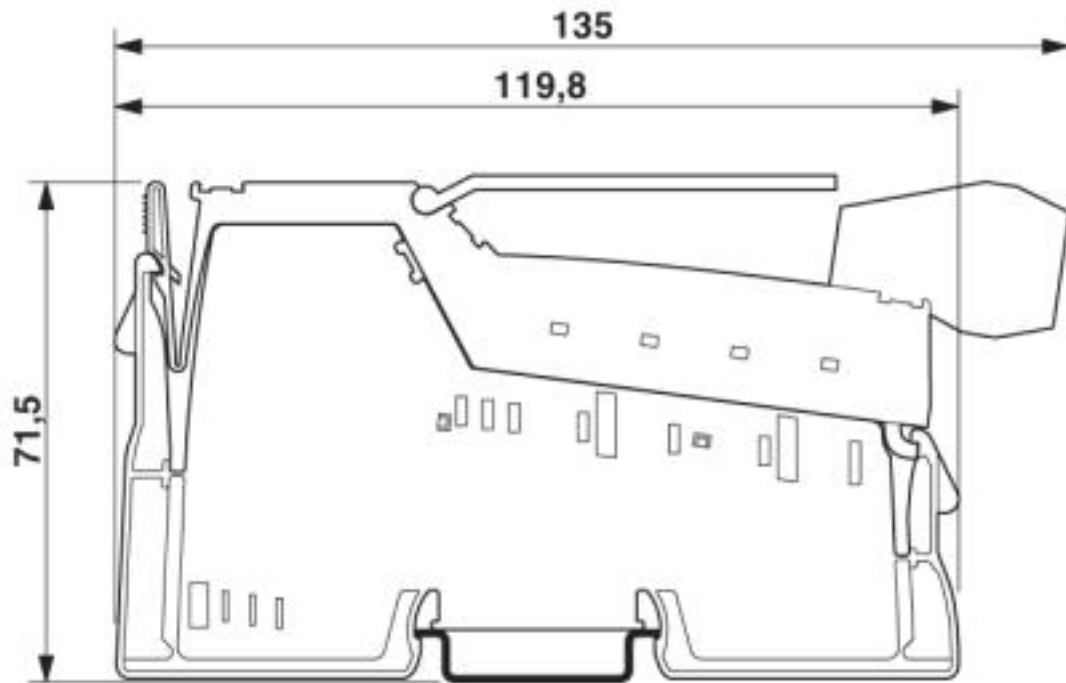
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Connection diagram



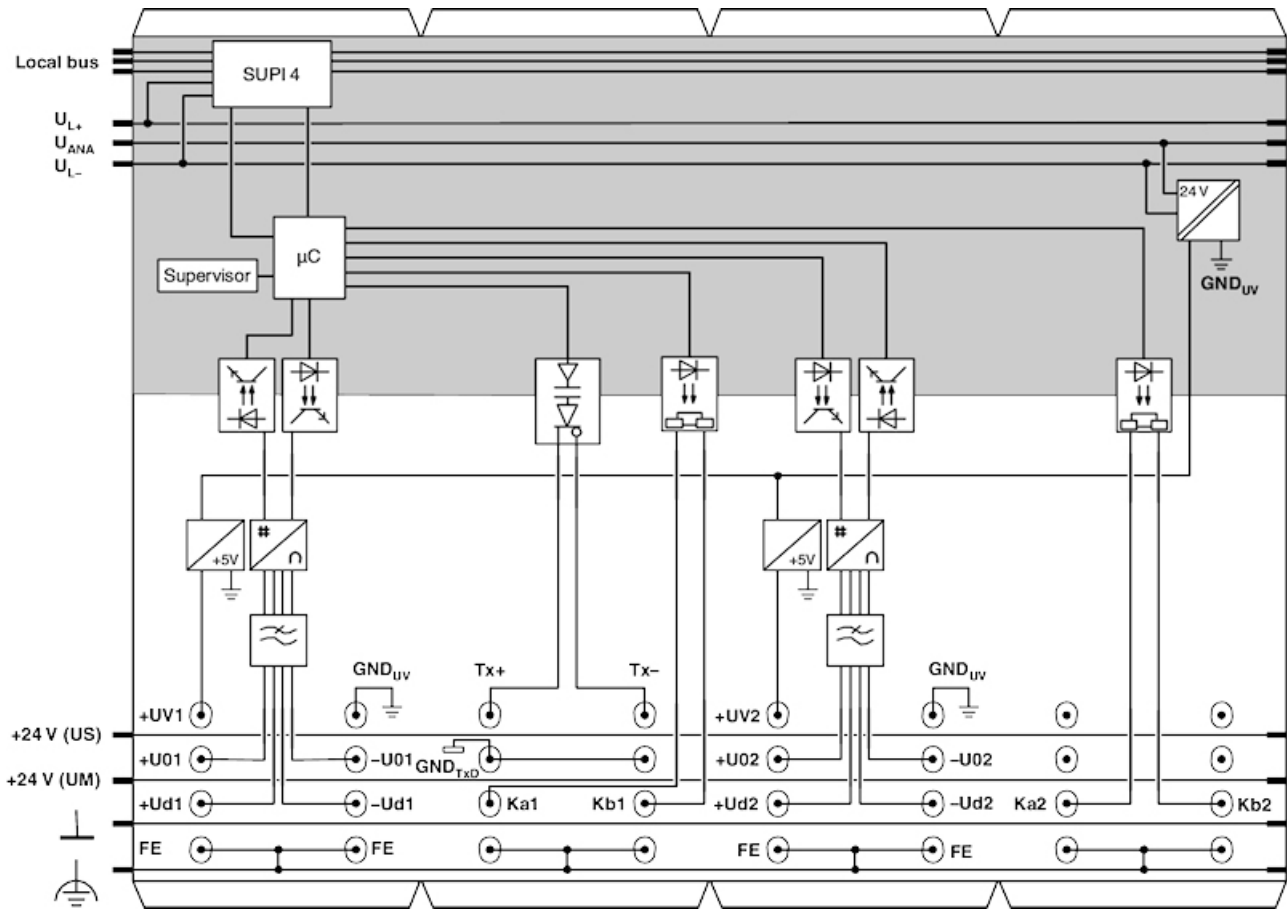
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Dimensional drawing



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Block diagram



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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27250300 |
| eCl@ss 4.1 | 27250300 |
| eCl@ss 5.0 | 27250300 |
| eCl@ss 5.1 | 27242600 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242601 |
| eCl@ss 8.0 | 27242601 |
| eCl@ss 9.0 | 27242601 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001599 |
| 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 |
| 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

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Approvals

| | | | |
|-----------|--|---|---------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140324 |
|-----------|--|---|---------------|

| | | | |
|------------|--|---|---------------|
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140324 |
|------------|--|---|---------------|

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

Accessories

Accessories

Device parameterization

Software - AX+ BASIC - 2985068



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

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 mm² - 6 mm², width: 7 mm, color: green-yellow

Connection terminal block - AKG 4 BK - 0421032



Connection terminal block, connection method: Screw connection, load current: 41 A, cross section: 0.5 mm² - 6 mm², width: 7 mm, color: black

Labeling panel

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Accessories

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

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 mm² - 6 mm², width: 7 mm, color: silver

Plug

Inline shield connector - IB IL SCN-6 SHIELD - 2726353



Inline shield connector

Inline connector - IB IL SCN-8 - 2726337



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

Programming

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Accessories

Software - AX DTM LIB - 2988065



DTM library

Shield connection clamp

Shield connection clamp - SK 8 - 3025163



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

Shield connection clamp - SK 14 - 3025176



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

Shield connection clamp - SK 20 - 3025189



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

Shield connection clamp - SK 35 - 3026463



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

Support

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Accessories

Support bracket - AB-SK - 3025341

Support bracket for busbars



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



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



Terminal marking

Insert strip - ESL 62X10 - 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

