

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

Product Description

The terminal is designed for use within an Inline station. This terminal provides a precise 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
- ✔ Path adjustment in the process environment
- ✔ Connection of the strain gauges with 6- and 4-wire technology
- ✔ Sensor supply voltage provided by the terminal, no external power supply required
- ✔ Per channel: low-resistance, floating N/O contact
- ✔ Serial interface for external weight displays
- ✔ Channels are parameterized independently of one another via the bus system
- ✔ Tara device
- ✔ Status message when zero point is reached and resting of measured value

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356296878

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Weight per Piece (excluding packing)	243.800 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
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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	243 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

Serial interface

Designation	V.24 (RS-485) serial interface
Network	Yes
Addressing	Address 1 = Measured gross/net value

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Technical data

Serial interface

	Address 2 = Measured tare value
Termination resistor	120 Ω
Transmission protocol	STX/ETX

Inline potentials

Designation	Communications power (U_L)
Supply voltage	7.5 V DC (via voltage jumper)
Current consumption	typ. 85 mA
	max. 100 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	7 mA (for no-load operation without strain gauge or display)
	typ. 25 mA (in case of typical load of 350 Ohm per channel)
	80 mA (for a maximum load of 55 Ω and display)
	max. 100 mA
Power consumption	typ. 1.2 W (Device in nominal operation)

Contacts

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

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
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

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Analog outputs

Impedance	> 55 Ω (per channel)
Output voltage	typ. 5 V
Output current	max. 90 mA (per channel)
Maximum output current	max. 90 mA (per channel)

Electrical isolation

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.

Standards and Regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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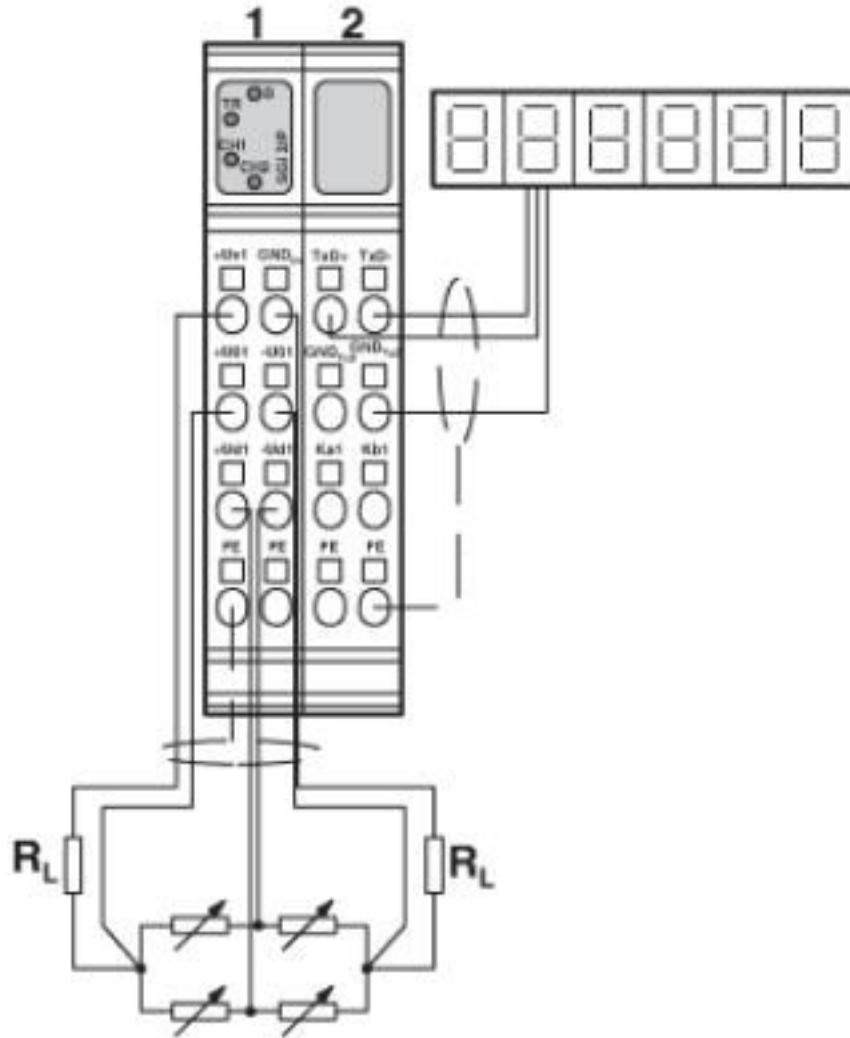
Environmental Product Compliance

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

Drawings

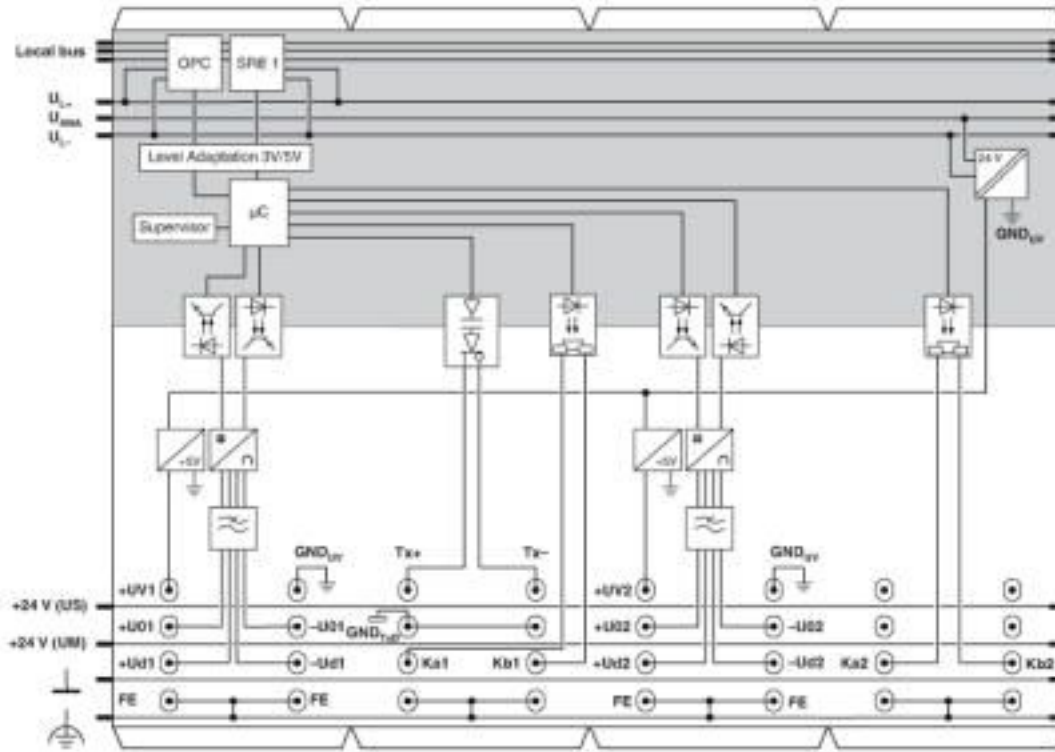
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Connection diagram



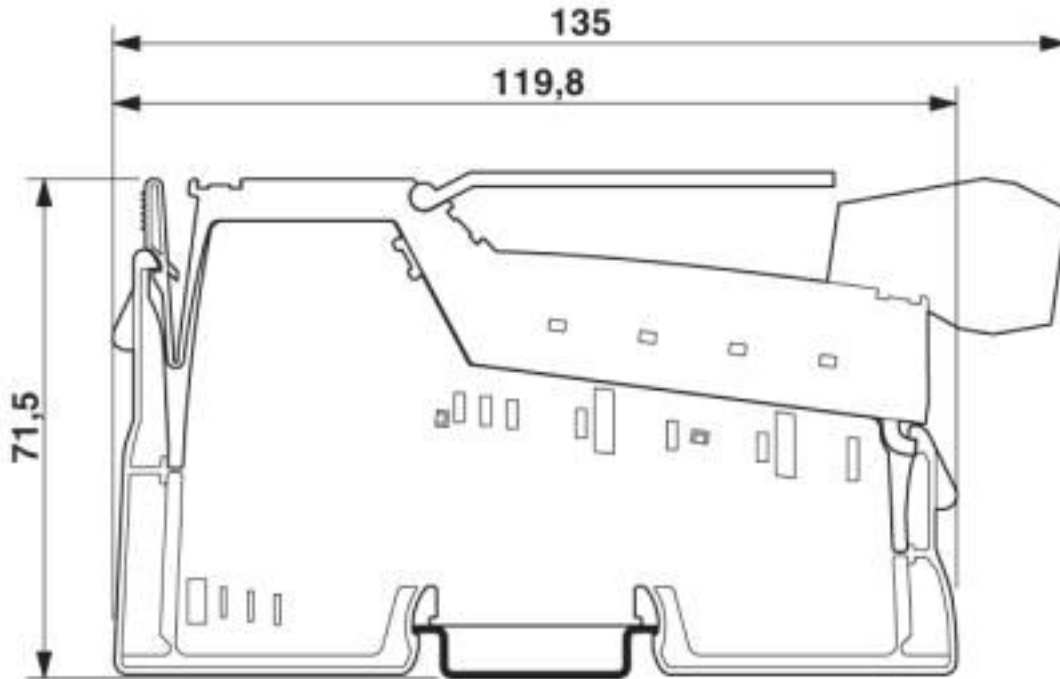
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Block diagram



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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27242601
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 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	EC001596
ETIM 5.0	EC001596
ETIM 6.0	EC001596
ETIM 7.0	EC001596

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Classifications

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

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

Accessories

Device parameterization

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Accessories

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

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



Neutral conductor rail

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Accessories

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 $< 1 \text{ m}\Omega$

Shield connection clamp - SK 14 - 3025176



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

Shield connection clamp - SK 20 - 3025189



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

Shield connection clamp - SK 35 - 3026463



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

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Accessories

Support

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

