

Inline function terminal - IB IL SGI 2/F-PAC - 2878638

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Inline analog strain gauge input terminal, complete with accessories (connector and labeling field), 2 fast inputs, 4, 6-wire connection method

Product Description

The terminal is designed for use within an Inline station.

This terminal is a fast input module used to connect load cells, force transducers, mass pressure transducers, and similar devices based on strain gauges.

The strain gauges can be connected using 6 or 4-wire technology.

The strain gauge output signals are measured in each bus cycle and updated in the process data (bus-synchronous process data update).

The terminal is suitable for control applications with increased speed requirements.

There are two options for data exchange:

- via process data (both inputs in one bus cycle)

- via PCP Compact (both inputs in the "Analog Values" PCP object) The measured values are represented by standardized 16-bit values.

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Your advantages

- ✓ 2 fast inputs for strain gauge
- ✓ Connection of the strain gauges with 6- and 4-wire technology
- ✓ Sensor supply voltage provided by the terminal, no external power supply required
- ✓ Communication either via process data or parameter channel (PCP Compact)
- ✓ Channels are parameterized independently of one another via the bus system
- ✓ Bus-synchronous process data update

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 996406
GTIN	4017918996406
Weight per Piece (excluding packing)	234.500 g
Custom tariff number	85389091
Country of origin	Germany

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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	190 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
No. of channels	2
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. 75 mA
	max. 85 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	typ. 8 mA (without strain gauge)
	typ. 32 mA (with maximum load of 58.3 Ω when $U_V = 5$ V)
Power consumption	typ. 0.76 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 and the bridge voltage
Bridge voltage U_0	3.3 V
Characteristics	+1 mV/V, +2 mV/V, +3 mV/V, +4 mV/V
	± 1 mV/V, ± 2 mV/V, ± 3 mV/V, ± 4 mV/V
Measured value representation	15 bit + sign bit

Analog outputs

Output description	Voltage output
Number of outputs	2
Impedance	> 58.3 Ω (typical; permissible total resistance of the strain gauge)
Output voltage	5 V
	3.3 V
Output current	typ. 55 mA (with $U_V = 3.3$ V)
	typ. 85 mA (with $U_V = 5$ V)

Electrical isolation

Test section	Logic/analog I/O (digital isolator) 500 V AC 50 Hz 1 min.
	Functional earth ground/analog I/O (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

Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

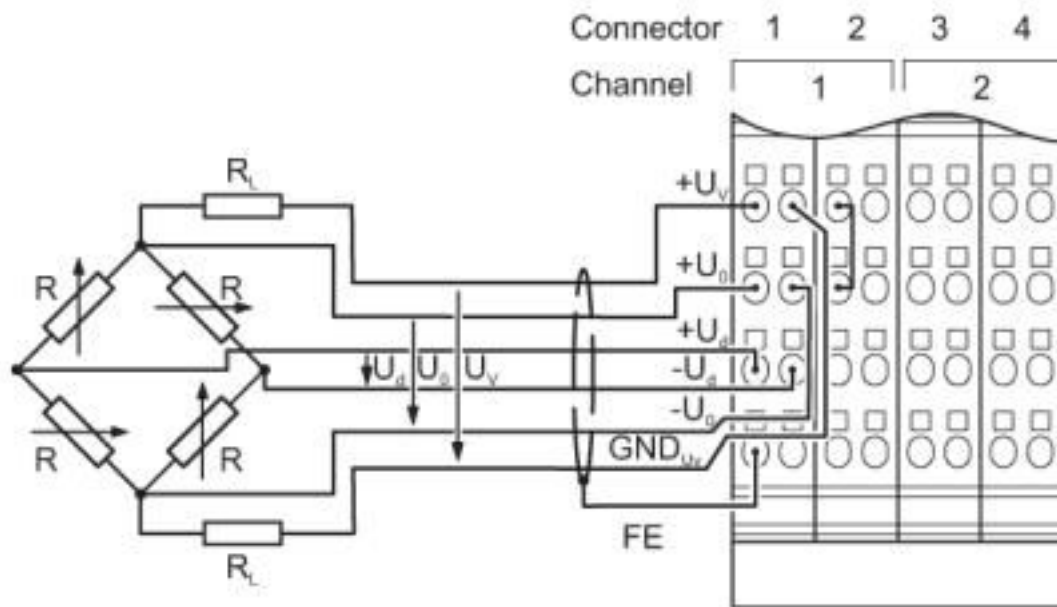
Environmental Product Compliance

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

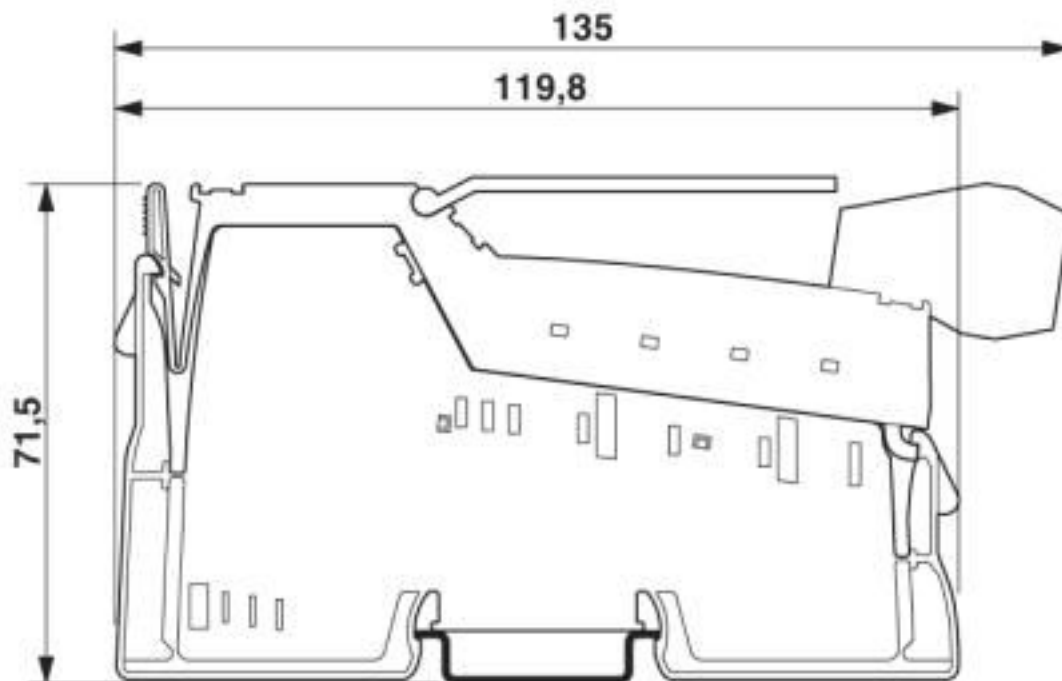
Drawings

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Connection diagram



Dimensional drawing



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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

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

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UL Recognized / cUL Recognized / cULus Recognized

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Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 140324

cUL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 140324

cULus Recognized



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

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Accessories

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

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

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Accessories

Inline connector - IB IL SCN-8 - 2726337



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

Programming

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 mΩ

Shield connection clamp - SK 14 - 3025176



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

Shield connection clamp - SK 20 - 3025189



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

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Accessories

Shield connection clamp - SK 35 - 3026463



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

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