

Inline 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-conductor 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.

Product Features

- 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)
- Channels are parameterized independently of one another via the bus system
- Bus-synchronous process data update
- Diagnostic and status indicators



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	234.5 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 % (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
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
	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

Inline potentials

Communications power U_L	7.5 V DC
Current consumption from U_L	max. 85 mA
	typ. 75 mA
I/O supply voltage U_{ANA}	24 V DC
Current consumption from U_{ANA}	typ. 32 mA (with maximum load of 58.3 Ω when $U_V = 5$ V)
	typ. 8 mA (Without strain gauge)
Power consumption	typ. 0.76 W (Device in nominal operation)

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Technical data

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 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)

Standards and Regulations

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

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
eCl@ss 8.0	27242601

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Classifications

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

Approvals

UL Recognized / cUL Recognized / cULus Recognized


Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted


Approval details

UL Recognized 

cUL Recognized 
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Approvals

cULus Recognized 

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, 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, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: black

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Accessories

Neutral conductor rail

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



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

Pick-off terminal block

Connection terminal block - AK 4 - 0404017



Connection terminal block, Connection method Screw connection, 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

Shield connection clamp

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Accessories

Shield connection terminal block - SK 8 - 3025163



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

Shield connection terminal block - SK 14 - 3025176



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

Shield connection terminal block - SK 20 - 3025189



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

Shield connection terminal block - SK 35 - 3026463



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

Support

Support bracket - AB-SK - 3025341



Support bracket for busbars

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Accessories

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



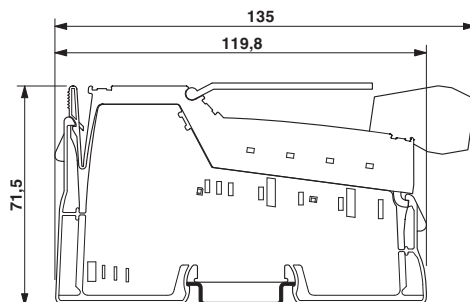
Support bracket - AB-SK/E - 3026476

Support bracket, Bracket for busbars, set every 20 cm, Length: 10 mm, Width: 56 mm, Height: 20 mm, Color: silver

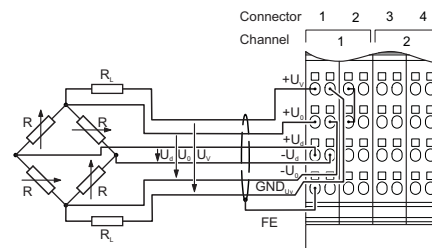


Drawings

Dimensional drawing



Connection diagram



Mouser Electronics

Authorized Distributor

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