

Inline terminal - IB IL AI 2/SF-PAC - 2861302

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Inline, Analog input terminal, Analog inputs: 2, 0 V ... 10 V, -10 V ... 10 V, 0 mA ... 20 mA, 4 mA ... 20 mA, -20 mA ... 20 mA, connection method: 2-wire, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

Product Description

The terminal is designed for use within an Inline station. It is used to acquire analog voltage and current signals.

Your advantages

- ✓ 2 analog single-ended signal inputs for the connection of either voltage or current signals
- ✓ Connection of sensors in 2-wire technology
- ✓ Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ± 20 mA
- ✓ Voltage ranges: 0 V ... 10 V, ± 10 V
- ✓ Channels are parameterized independently of one another via the bus system
- ✓ Measured values can be represented in four different formats
- ✓ Resolution depends on the representation format and the measuring range
- ✓ Process data update of both channels within a max. of 1.5 ms



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 894245
GTIN	4017918894245
Weight per Piece (excluding packing)	10.180 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

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Technical data

Dimensions

Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

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)
	80 kPa ... 106 kPa (up to 3000 m above sea level, in ATEX Zone 2)
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	10.18 g
Note on weight specifications	with connector
Operating mode	Process data operation with 2 words
Diagnostics messages	Failure of the internal I/O supply Yes
	I/O error Error message in the process data
	User 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

Inline potentials

Designation	Communications power (U_L)
Supply voltage	7.5 V DC (via voltage jumper)
Current consumption	typ. 45 mA
	max. 60 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	typ. 13 mA
	max. 18 mA
Power consumption	typ. 662 mW

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Technical data

Analog inputs

Description of the input	Single-ended inputs, voltage or current
Input name	Analog inputs
Number of inputs	2
Connection method	Inline shield connector
Connection technology	2-wire
Note regarding the connection technology	shielded
A/D conversion time	typ. 120 µs (per channel)
Limit frequency (3 dB)	40 Hz
Type of protection	Surge protection
Data formats	IB IL, IB ST, IB RT, standardized representation
Measuring principle	Successive approximation
Measured value resolution	16 bits (15 bits + sign bit)
Measured value representation	16 bit two's complement
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	50 Ω (Shunt)
Voltage input signal	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	> 220 kΩ
Common mode voltage range signal - ground	40 V (between current input and functional earth ground)

Electrical isolation

Test section	7.5 V supply (bus logic), 24 V supply U_{ANA} / I/O 500 V AC 50 Hz 1 min.
	7.5 V supply (bus logic), 24 V supply U_{ANA} /functional earth ground 500 V AC 50 Hz 1 min.
	I/O / functional earth ground 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

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

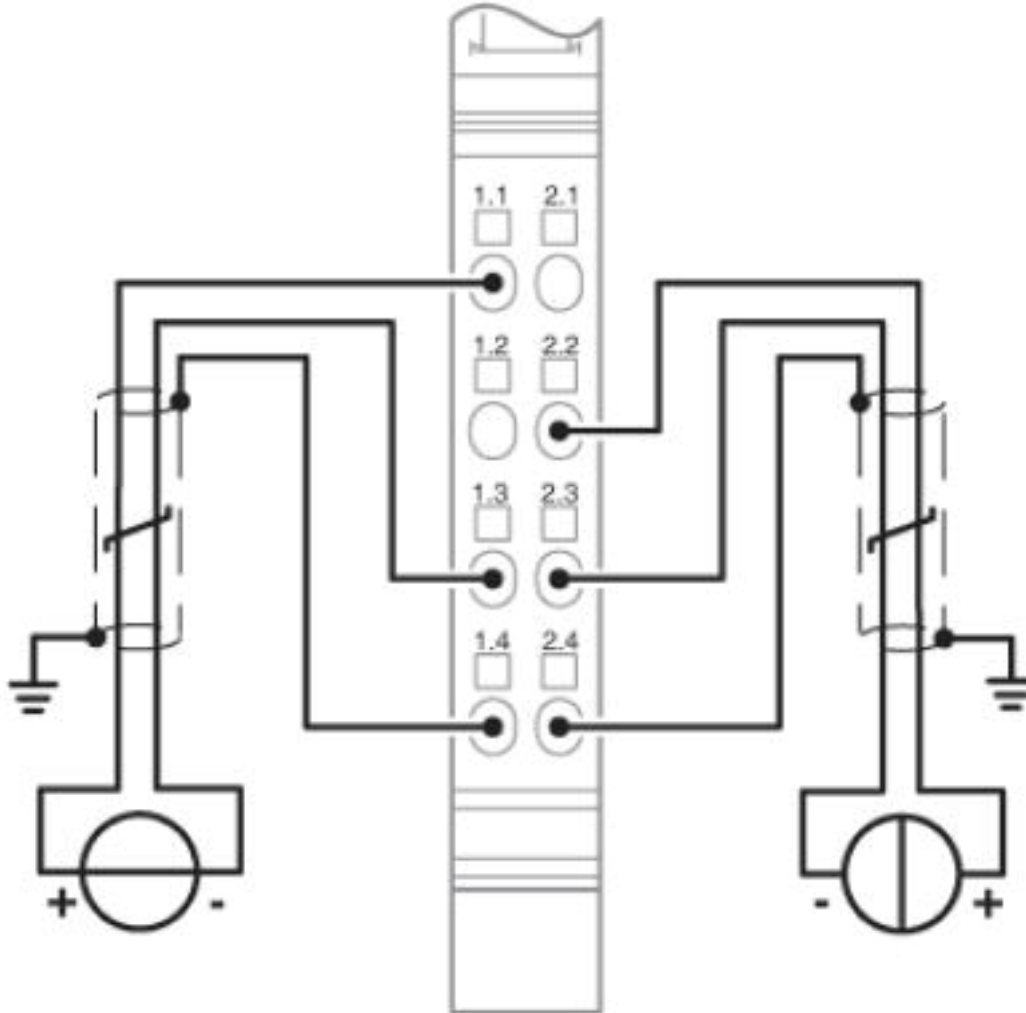
Drawings

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Block diagram

Connection diagram

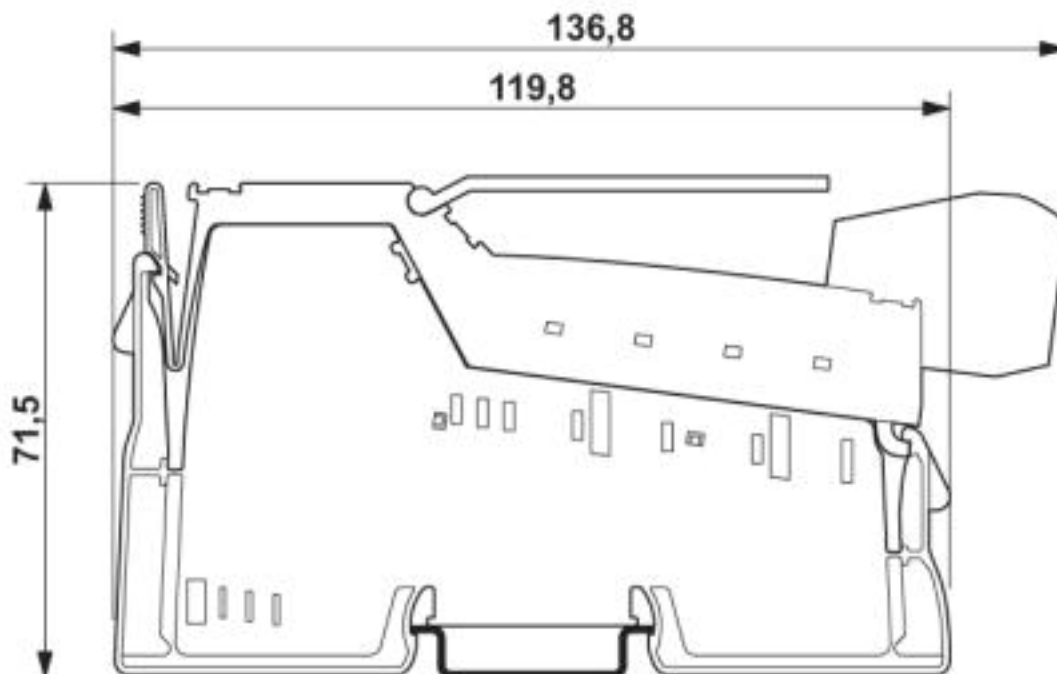
Internal wiring of the terminal points



Connection example

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Dimensional drawing



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 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



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Classifications

UNSPSC

UNSPSC 12.01	43201404
UNSPSC 13.2	32151602

Approvals

Approvals

Approvals

DNV GL / BSH / BV / LR / ABS / BSH / RINA / UL Recognized / EAC

Ex Approvals


UL Listed / cUL Listed / ATEX / cULus Listed

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAA00000BN
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BSH		http://www.bsh.de/de/index.jsp	Anwenderhinweis
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BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	20989/B2_BV
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LR		http://www.lr.org/en	08/20033
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ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1621871-PDA
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BSH		http://www.bsh.de/de/index.jsp	658
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RINA		http://www.rina.org/en	ELE183315XG
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UL Recognized		http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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<https://www.phoenixcontact.com/gb/products/2861302>



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Approvals

EAC	The EAC (Eurasian Conformity) logo, consisting of the letters "EAC" in a bold, stylized font.	EAC-Zulassung
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