

<https://www.phoenixcontact.com/gb/products/2861412>



Inline terminal - IB IL AI 8/SF-PAC - 2861412

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Inline, Analog input terminal, Analog inputs: 8, 0 V ... 5 V, -5 V ... 5 V, 0 V ... 10 V, -10 V ... 10 V, 0 V ... 25 V, -25 V ... 25 V, 0 V ... 50 V, 0 mA ... 20 mA, 4 mA ... 20 mA, -20 mA ... 20 mA, 0 mA ... 40 mA, -40 mA ... 40 mA, connection method: 2-wire, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connectors and marking fields


Product Description

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

Your advantages

- ✓ 8 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, 0 mA ... 40 mA, ± 40 mA
- ✓ Voltage ranges: 0 V ... 5 V, ± 5 V, 0 V ... 10 V, ± 10 V, 0 V ... 25 V, ± 25 V, 0 V ... 50 V
- ✓ Channels are parameterized independently of one another via the bus system
- ✓ Measured values can be represented in five different formats
- ✓ 16-bit analog/digital converter
- ✓ Process data multiplex mode
- ✓ High measuring accuracy

Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 894351
GTIN	4017918894351
Weight per Piece (excluding packing)	213.000 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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Inline terminal - IB IL AI 8/SF-PAC - 2861412

Technical data

Dimensions

Width	48.8 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)
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	213 g
Note on weight specifications	with connectors
Operating mode	Process data operation with 2 words
Diagnostics messages	Failure of the power supply at U_{ANA}
	I/O error Error message in the process data
	User 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. 48 mA
	max. 55 mA
Designation	Supply of analog modules (U_{ANA})
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption	typ. 24 mA
	max. 35 mA
Power consumption	typ. 936 mW (entire device)

Analog inputs

Inline terminal - IB IL AI 8/SF-PAC - 2861412

Technical data

Analog inputs

Description of the input	Single-ended inputs, voltage or current
Input name	Analog inputs
Number of inputs	8
Connection method	Inline shield connector
Connection technology	2-wire
Note regarding the connection technology	shielded
A/D conversion time	approx. 10 µs
A/D converter resolution	16 bit
Limit frequency (3 dB)	3.5 kHz
Type of protection	Surge protection, overcurrent protection
Data formats	IB IL, IB ST, IB RT, standardized representation, PIO format
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
	0 mA ... 40 mA
	-40 mA ... 40 mA
Input resistance current input	25 Ω (Shunt)
Voltage input signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V
	0 V ... 25 V
	-25 V ... 25 V
	0 V ... 50 V
Input resistance of voltage input	> 240 kΩ
Filtering	1st order low pass

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

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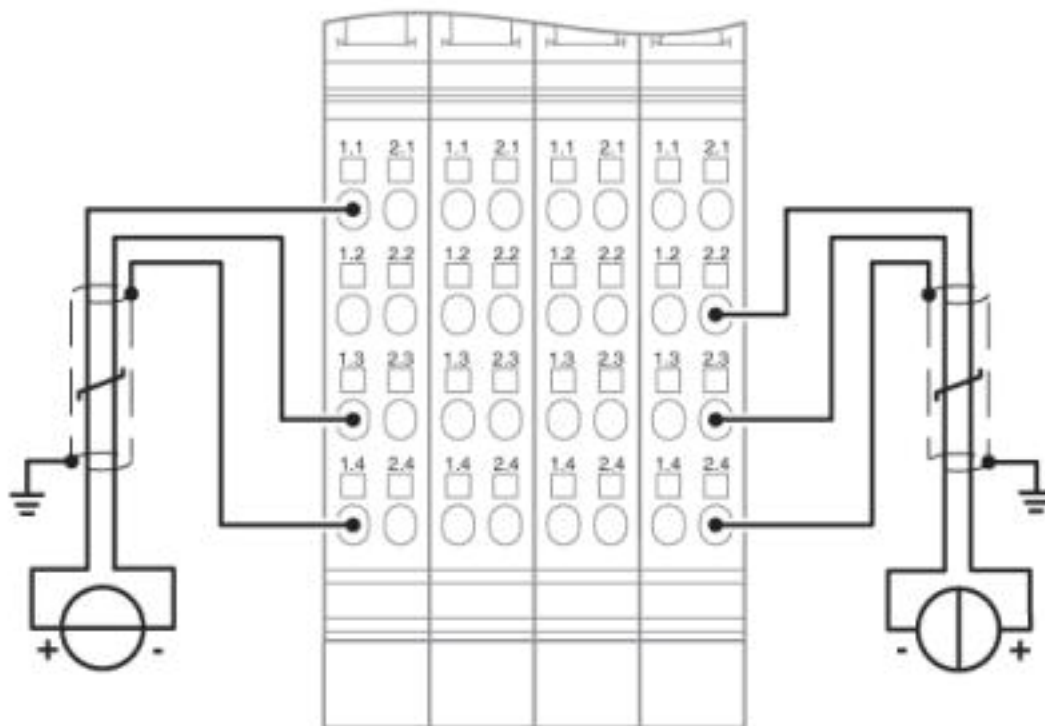
Technical data

Environmental Product Compliance

No hazardous substances above threshold values

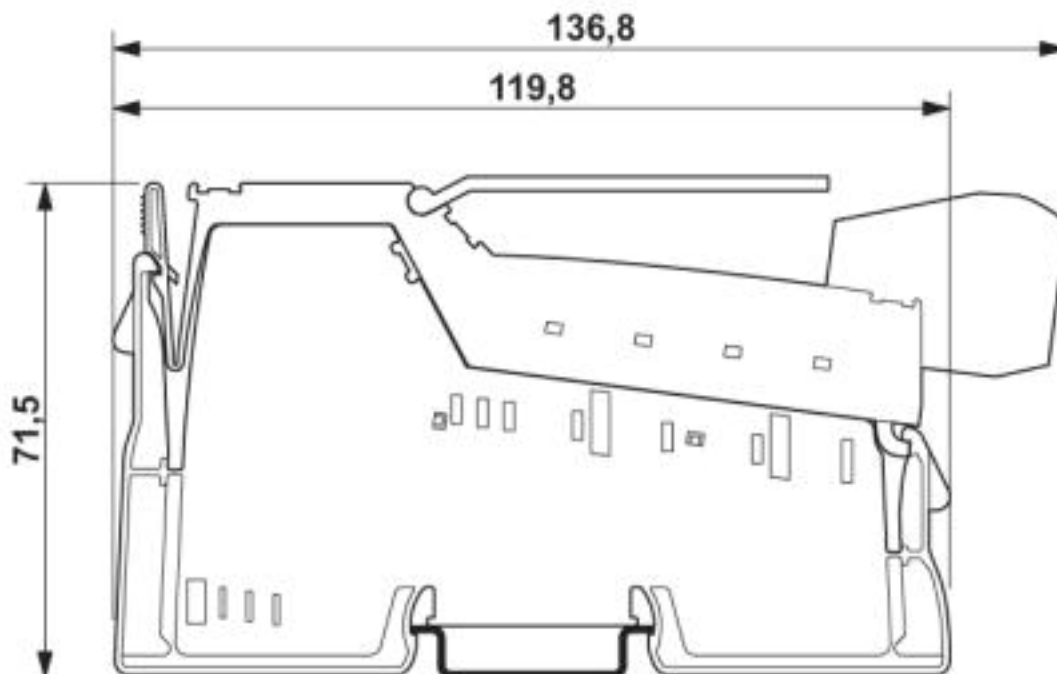
Drawings

Connection diagram



Inline terminal - IB IL AI 8/SF-PAC - 2861412

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



Inline terminal - IB IL AI 8/SF-PAC - 2861412

Classifications

UNSPSC

UNSPSC 12.01	43201404
UNSPSC 13.2	32151602

Approvals

Approvals






Approvals

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

Ex Approvals


ATEX


Approval details


DNV GL		https://approvalfinder.dnvgl.com/	TAA00000BN
BSH		http://www.bsh.de/de/index.jsp	Anwenderhinweis
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	20977/B1 BV
LR		http://www.lr.org/en	08/20033
ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1621871-PDA
BSH		http://www.bsh.de/de/index.jsp	658
RINA		http://www.rina.org/en	ELE183315XG
UL Recognized		http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm	FILE E 140324

Inline terminal - IB IL AI 8/SF-PAC - 2861412

Approvals

cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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EAC		EAC-Zulassung
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cULus Recognized	
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