

Analog module - IB IL AI 2/SF-PAC



2861302

<https://www.phoenixcontact.com/nz/products/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 technology: 2-conductor, 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-conductor technology
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ± 20 mA
- Voltage ranges: 0 V ... 10 V, ± 10 V
- The 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

Commercial Data

Item number	2861302
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DNI141
Product Key	DRI141
Catalog Page	Page 134 (C-6-2019)
GTIN	4017918894245
Weight per Piece (including packing)	95.8 g
Weight per Piece (excluding packing)	95.8 g
Customs tariff number	85369000
Country of origin	DE

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Technical Data

Dimensions

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

Notes

Utilization restriction

CCcex note	Use in potentially explosive areas is not permitted in China.
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Material specifications

Color	green
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Interfaces

Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps

System properties

Module

ID code (dec.)	127
ID code (hex)	7F
Length code (hex)	02
Length code (dec)	02
Process data channel	32 Bit
Input address area	4 Byte
Output address area	4 Byte
Register length	32 Bit
Required parameter data	6 Byte
Required configuration data	4 Byte

Input data

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Analog

Input name	Analog inputs
Description of the input	Single-ended inputs, voltage or current
Number of inputs	2
A/D conversion time	typ. 120 µs (per channel)
Connection method	Inline shield connector
Connection technology	2-conductor
Note regarding the connection technology	shielded
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
Data formats	IB IL, IB ST, IB RT, standardized representation
Limit frequency (3 dB)	40 Hz
Common mode voltage range signal - ground	40 V (Between current input and functional ground) 40 V (between voltage input and functional ground)
Measuring principle	Successive approximation
Measured value resolution	16 bits (15 bits + sign bit)
Measured value representation	16 bit two's complement
Protective circuit	Surge protection; Suppressor diodes in the analog inputs

Product properties

Type	modular
Product type	I/O component
Scope of delivery	including Inline connector and labeling field
Operating mode	Process data operation with 2 words
Diagnosics 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

Electrical properties

Maximum power dissipation for nominal condition	1.87 W
Potentials	
Power consumption	typ. 662 mW max. 882 mW
Potentials: Communications power (U_L)	
Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA typ. 45 mA

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Potentials: 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 draw	max. 18 mA
	typ. 13 mA

Connection data

Connection technology

Connection name	Inline connector
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Conductor connection

Connection method	Spring-cage connection
Conductor cross section solid	0.08 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16
Stripping length	8 mm

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm ² ... 1.5 mm ²
Stripping length	8 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Degree of protection	IP20
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)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

Mounting type	DIN rail mounting
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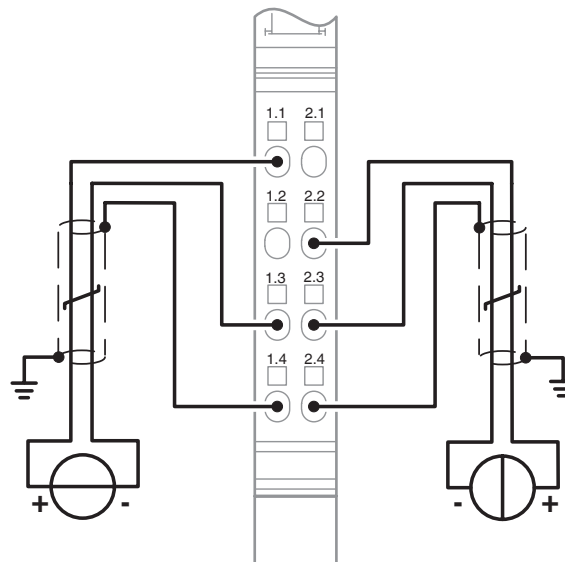
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Drawings

Connection diagram



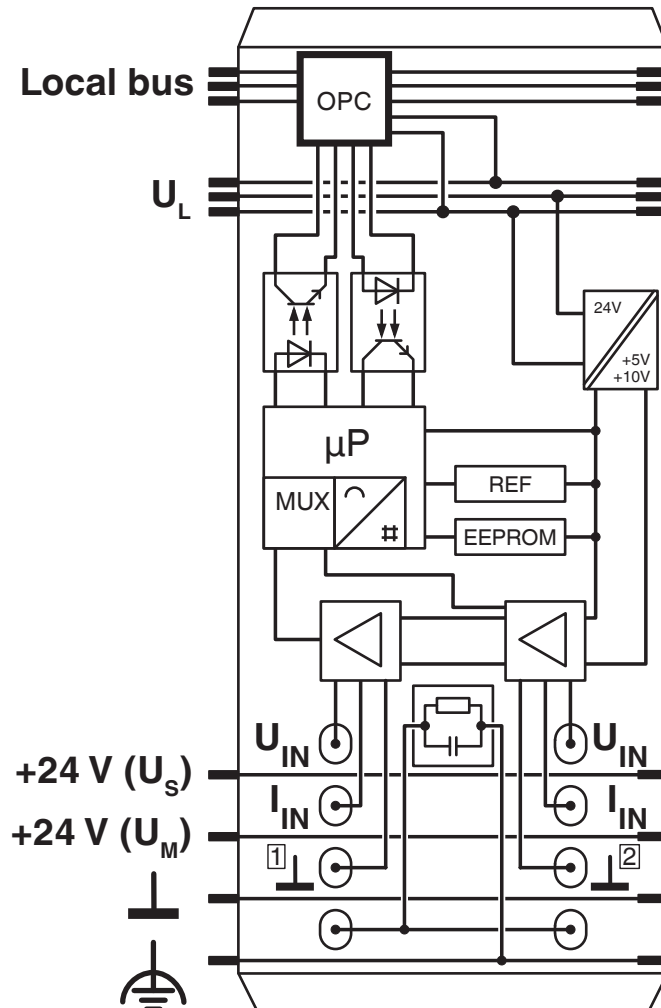
Connection example

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Block diagram



Internal wiring of the terminal points

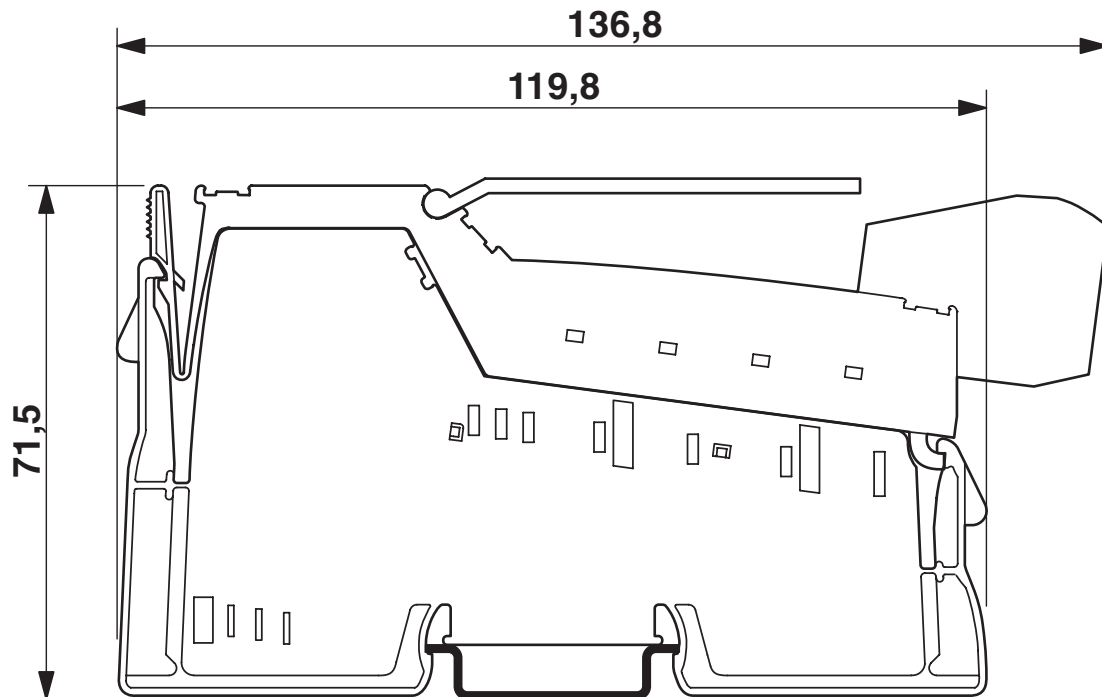
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Dimensional drawing



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Approvals



UL Recognized

Approval ID: FILE E 140324



EAC

Approval ID: TR TS_D_01921-19



DNV GL

Approval ID: TAA00000BN



LR

Approval ID: LR22191720TA



BV

Approval ID: 20989/B2_BV

BSH

Approval ID: 658a



RINA

Approval ID: ELE121121XG

ABS

Approval ID: 22-2226444-PDA

BSH

Approval ID: Anwenderhinweis



ATEX

Approval ID: PxCIF04ATEX2726298X



cUL Listed

Approval ID: FILE E 199827



UL Listed

Approval ID: FILE E 199827

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Classifications

ECLASS

ECLASS-9.0	27242601
ECLASS-10.0.1	27242601
ECLASS-11.0	27242601
ECLASS-12.0	27242601

ETIM

ETIM 8.0	EC001596
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UNSPSC

UNSPSC 21.0	32151600
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Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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Accessories

Inline shield connector

Inline shield connector - IB IL SCN 6-SHIELD-TWIN - 2740245

<https://www.phoenixcontact.com/nz/products/2740245>



Inline shield connector

Labeling field

Labeling field - IB IL FIELD 2 - 2727501

<https://www.phoenixcontact.com/nz/products/2727501>



Labeling field, width: 12.2 mm

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Insert strip

Insert strip - ESL 62X10 - 0809492

<https://www.phoenixcontact.com/nz/products/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



Inline shield connector

Inline shield connector - IB IL SCN-6 SHIELD - 2726353

<https://www.phoenixcontact.com/nz/products/2726353>

Inline shield connector



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