

IB IL AI 4/EF - Inline terminal

2863478

<https://www.phoenixcontact.com/pc/products/2863478>



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Inline analog input terminal with differential input channels, 4 inputs, 0-20 mA, 4-20 mA, ± 20 mA, 0-10 V, ± 10 V, 0-5 V, ± 5 V, 2, 3 or 4-conductor connection method



Your advantages

- Short-circuit
- Voltage ranges: 0 V ... 10 V, ± 10 V, 0 V ... 5 V, ± 5 V
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ± 20 mA
- Connection of sensors in 2-, 3-, and 4-conductor technology
- 4 differential signal inputs
- Measured value acquisition with 16-bit resolution
- Diagnostic and status indicators
- Bus-synchronous provision of input values with very low jitter ($\leq 10 \mu\text{s}$)

Commercial data

Item number	2863478
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DRI141
Catalog page	Page 74 (AX-2007)
GTIN	4017918996321
Weight per piece (including packing)	155.6 g
Weight per piece (excluding packing)	128.61 g
Customs tariff number	85389091
Country of origin	DE

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Technical data

Product properties

Type	modular
	Inline

System properties

Module

ID code (dec.)	223
ID code (hex)	DF
Length code (hex)	05
Length code (dec)	05
Input address area	10 Byte
Output address area	10 Byte
Register length	96 bit
Required parameter data	28 Byte
Required configuration data	4 Byte

Electrical properties

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 100 mA
	typ. 85 mA

Potentials: 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 draw	max. 20 mA
	typ. 13 mA

Potentials: Main circuit supply (U_M)

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. 200 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min.
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min.
Test voltage: 7.5 V supply (bus logic), 24 V supply U_{ANA} / I/O	500 V AC, 50 Hz, 1 min.
Test voltage: 7.5 V supply (bus logic), 24 V supply U_{ANA} / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: I/O/functional ground	500 V AC, 50 Hz, 1 min.

Input data

Analog: General

Input name	Analog inputs
Description of the input	Differential input, including sensor supply (24 V DC)
Number of inputs	max. 4
A/D conversion time	max. 10 µs
Connection method	Inline shield connector
Connection technology	2-, 3-, 4-conductor (shielded)
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA -20 mA ... 20 mA
Voltage input signal	0 V ... 5 V -5 V ... 5 V 0 V ... 10 V -10 V ... 10 V
Data formats	IB IL, IB ST, standardized representation, S7 compatible
Limit frequency (3 dB)	500 Hz
Measured value resolution	16 bits (15 bits + sign bit)
Protective circuit	Transient protection; Yes, via arresters

Analog: Voltage inputs

Number of inputs	4 (differential inputs, voltage)
A/D converter resolution	15 bit
Voltage input signal	0 V ... 5 V -5 V ... 5 V 0 V ... 10 V -10 V ... 10 V
Input resistance of voltage input	300 kΩ
Measured value resolution	16 bits (15 bits + sign bit)

Analog:

Number of inputs	4 (Differential inputs, current)
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA -20 mA ... 20 mA
Input resistance current input	approx. 110 Ω
Protective circuit	Overload protection

Connection data

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm² ... 1.5 mm²
Conductor cross section, flexible	0.08 mm² ... 1.5 mm²

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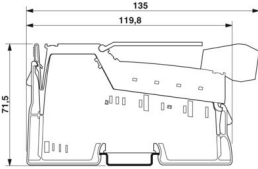


Conductor cross section AWG	28 ... 16
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Interfaces

Inline local bus	
Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm

Material specifications

Color	green
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Environmental and real-life conditions

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)
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 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)

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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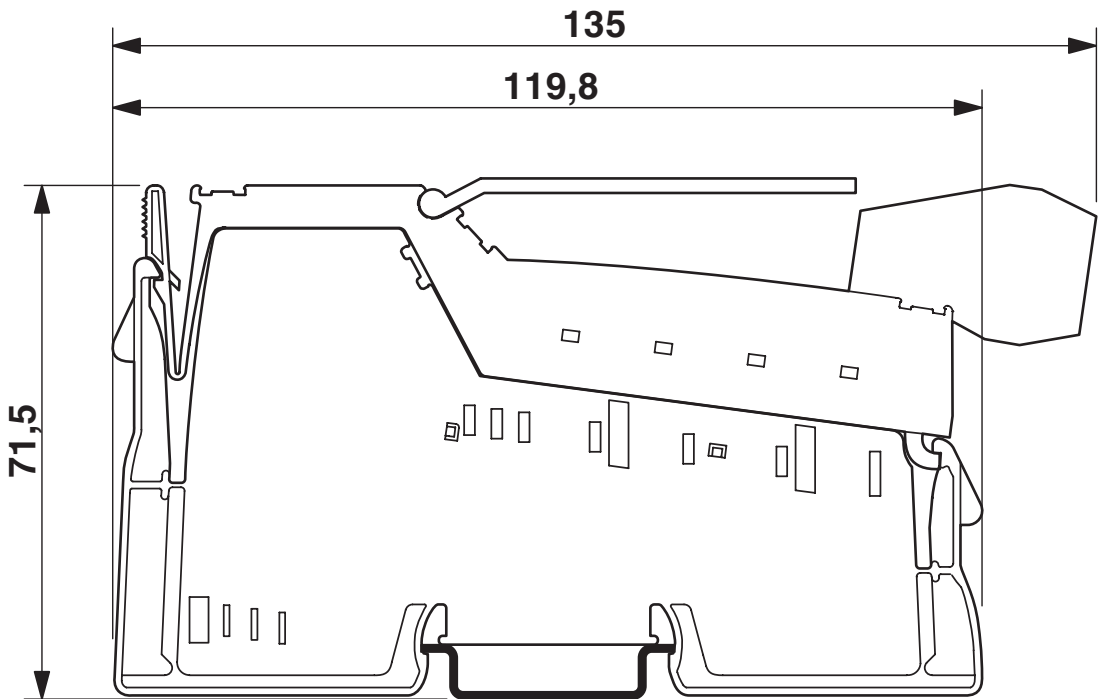


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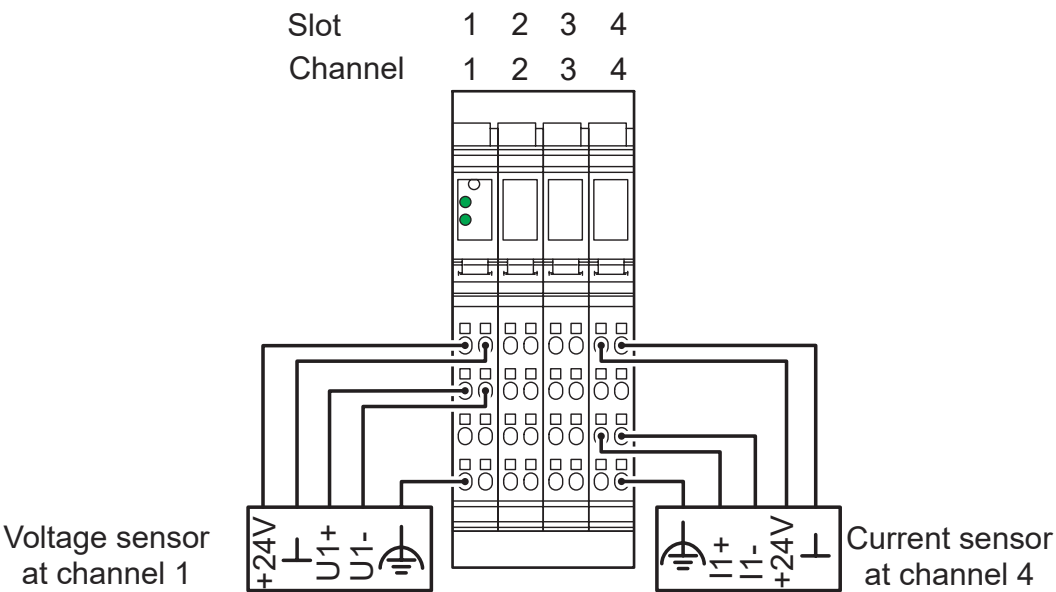
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Drawings

Dimensional drawing



Connection diagram



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Accessories

IB IL SCN-6 SHIELD - Inline shield connector

2726353

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Inline shield connector



IB IL FIELD 8 - Marking field

2727515

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Marking field, width: 48.8 mm



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ESL 62X46 - Insert strip

0809502

<https://www.phoenixcontact.com/pc/products/0809502>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, CMS-P1-PLOTTER, mounting type: insert, lettering field size: 62 x 46 mm, Number of individual labels: 15



IB IL FIELD 2 - Marking field

2727501

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Marking field, width: 12.2 mm



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ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/pc/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, CMS-P1-PLOTTER, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72



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