

# IB IL AI 8-I/S - Inline terminal

2742748

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Inline analog input terminal, without accessories, 8 inputs, 0 - 20 mA, 4 - 20 mA, 0 - 40 mA,  $\pm 20$  mA,  $\pm 40$  mA, 2-, 3-conductor connection technology

The figure shows version IB IL AI 8/SF

## Product description

The terminal is designed for use within an Inline station. It is used to acquire analog current signals from active and passive sensors. Features - Eight analog single-ended signal inputs for the connection of active and passive current sensors - Connection of sensors in 2 and 3-conductor technology - Provision of a short-circuit protected supply voltage for passive sensors (UiS; default 24 V) - Various current measuring ranges - Channels are configured independently of one another via INTERBUS - Measured values can be represented in five different formats - 16-bit analog/digital converter - Diagnostic indicators

## Commercial data

Item number	2742748
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRI141
GTIN	4017918876623
Weight per piece (including packing)	158.05 g
Weight per piece (excluding packing)	131.06 g
Customs tariff number	85389091
Country of origin	DE

## Technical data

### Product properties

Type	modular
	Inline

### System properties

#### Programming data

Length code (hex)	02
ID code (dec.)	95
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Parameter channel (PCP)	0 Byte
Register length (bus)	32 bit

#### Fieldbus data telegram

Required parameter data	6 Byte
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### Electrical properties

#### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 65 mA
	typ. 52 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. 40 mA
	typ. 31 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

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Test voltage: I/O/functional ground	500 V AC, 50 Hz, 1 min
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## Input data

### Analog: General

Input name	Analog inputs
Number of inputs	max. 8 (single ended)
A/D conversion time	approx. 10 $\mu$ s
Connection technology	2-conductor (shielded)
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA -20 mA ... 20 mA 0 mA ... 40 mA -40 mA ... 40 mA
Data formats	IBS IL, IBS ST, IBS RT, standardized representation, PIO format
Limit frequency (3 dB)	3.5 kHz
Measuring principle	Successive approximation
Measured value resolution	16 bits (15 bits + sign bit)
Measured value representation	16 bit two's complement

### Analog: Current inputs

Number of inputs	8 (single-ended current inputs)
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 $\Omega$ 0.01 %

## Connection data

### Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	28 ... 16

## Interfaces

### Inline local bus

No. of channels	8
Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

## Dimensions

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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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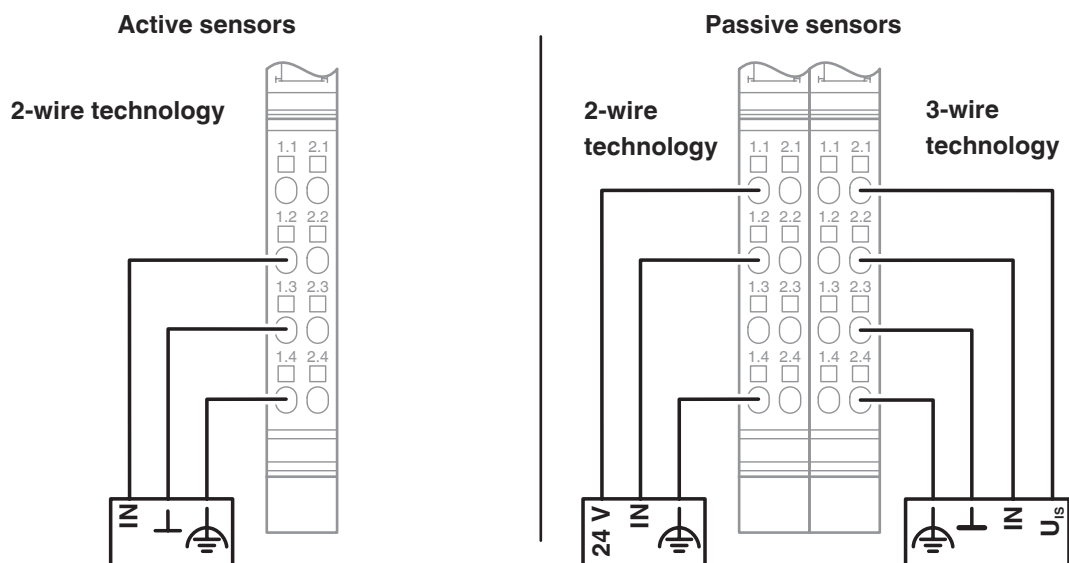
<https://www.phoenixcontact.com/us/products/2742748>

## Drawings

Dimensional drawing



Connection diagram

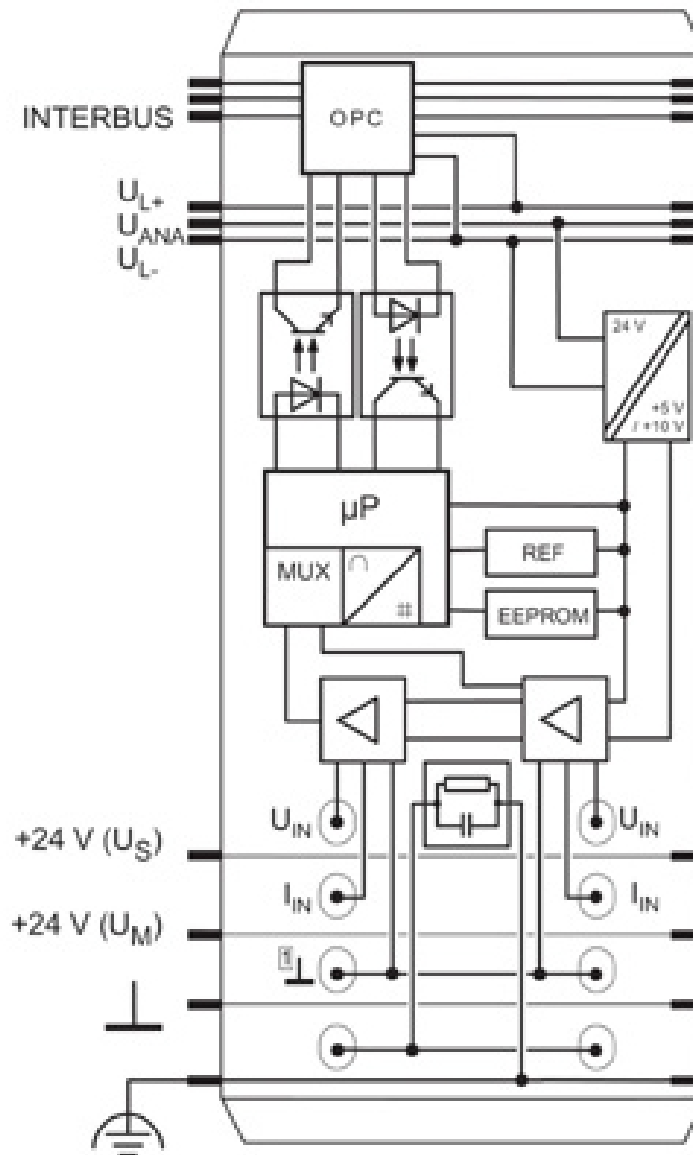


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Block diagram



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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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