

IB IL AI 8/SF-2MBD - Inline terminal

2855648

<https://www.phoenixcontact.com/us/products/2855648>

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Inline analog input terminal, without accessories, 8 inputs, 0-20 mA, 4-20 mA, ± 20 mA, 0-10 V, ± 10 V, (also 0-40 mA, ± 40 mA, 0-5 V, ± 5 V, 0-25 V, ± 25 V, 0-50 V), transmission speed 2 Mbaud, 2-conductor connection method

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 voltage and current signals.

Your advantages

- 8 analog single-ended signal inputs for the connection of either voltage or current signals
- From hardware version 02, approved for use in potentially explosive areas of zone 2
- Diagnostic and status indicators
- 16-bit analog-to-digital converter
- Connection of sensors in 2-conductor technology
- Measured values can be represented in five different formats

Commercial data

Item number	2855648
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRI141
GTIN	4017918876883
Weight per piece (including packing)	156.7 g
Weight per piece (excluding packing)	213 g
Customs tariff number	85389091
Country of origin	DE

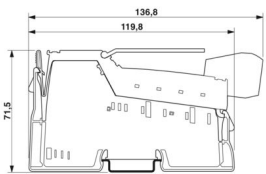
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Technical data

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Material specifications

Color	green
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Interfaces

Inline local bus

No. of channels	8
Connection method	Inline data jumper
Transmission speed	2 Mbps
Transmission physics	Copper

System properties

Module

ID code (dec.)	95
ID code (hex)	5F
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

Input data

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Analog: General

Input name	Analog inputs
Number of inputs	max. 8 (single ended)
A/D conversion time	approx. 10 μ 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
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
Data formats	IB IL, IB ST, IB 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: Voltage inputs

Number of inputs	8 (Single-ended voltage inputs)
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 k Ω 0.01 %

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 Ω 0.01 %

Product properties

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Product type	I/O component
Type	modular
	Inline

Electrical properties

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 85 mA
	typ. 68 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. 38 mA
	typ. 24 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

Connection data

Connection technology

Connection name	Inline connector
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Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	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

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)

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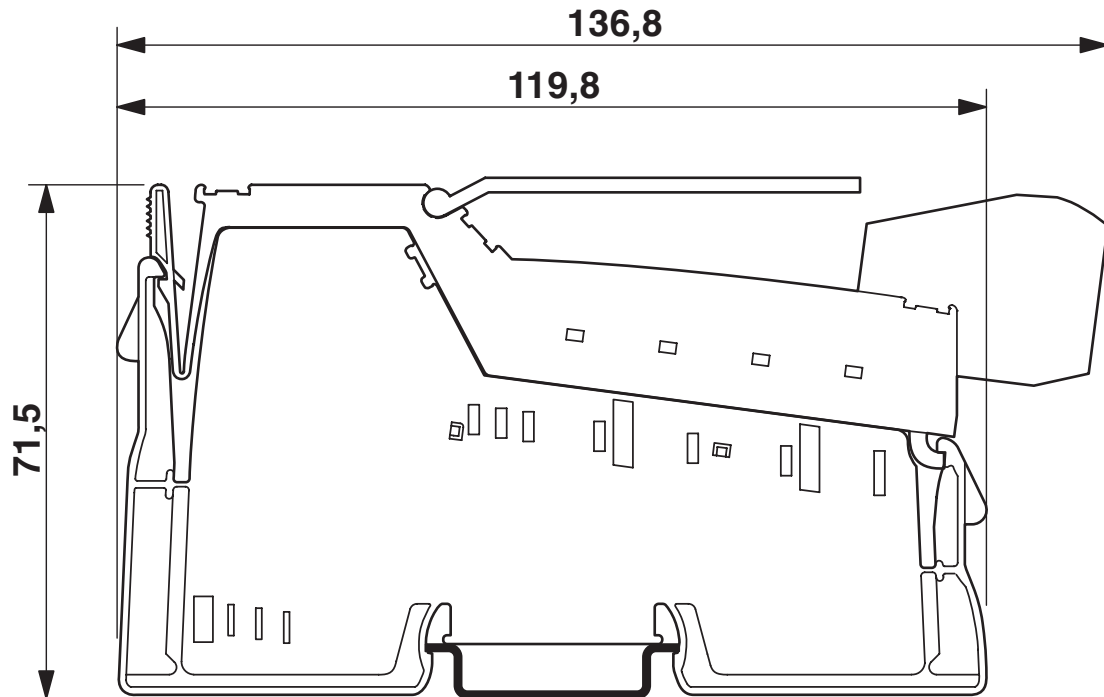
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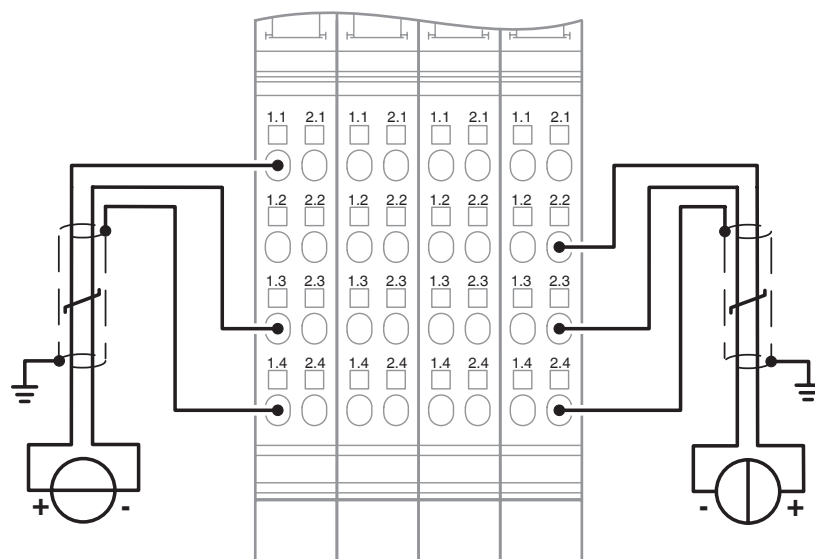
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Drawings

Dimensional drawing



Connection diagram



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Environmental product compliance

EU REACH SVHC

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