

Inline terminal - IB IL AI 4/EF-XC-PAC - 2701215

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Inline analog input terminal with differential input channels, version for extreme conditions, complete with accessories (connector plug and labeling field), 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 technology

The figure shows the standard item

Product Features

- Short update time of 1 ms, maximum for all channels
- Sensor supply with channel-specific integrated short-circuit and overload protection
- Bus-synchronous provision of input values with very low jitter ($< 10 \mu\text{s}$)
- Measured value acquisition with 16-bit resolution
- 4 differential signal inputs
- Connection of sensors in 2, 3, and 4-wire technology
- Can be used under extreme ambient conditions
- Extended temperature range of $-40^\circ\text{C} \dots +70^\circ\text{C}$ (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	260.0 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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Dimensions

Width	48.8 mm
Height	135 mm

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Technical data

Dimensions

Depth	71.5 mm
Note on dimensions	Housing dimensions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C (Standard)
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
Ambient temperature (storage/transport)	-40 °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)
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
Net weight	210 g
Note on weight specifications	with connectors
Operating mode	Process data mode with 5 words/1 word PCP

Interfaces

Fieldbus system	Lokalbus
Designation	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kBit/s
Transmission physics	Copper

Inline potentials

Communications power U_L	7.5 V DC (via voltage jumper)
Current consumption from U_L	max. 100 mA
	typ. 85 mA
Main circuit supply U_M	24 V DC
Current consumption from U_M	max. 200 mA
I/O supply voltage U_{ANA}	24 V DC
Current consumption from U_{ANA}	max. 20 mA
	typ. 13 mA

Analog inputs

Description of the input	Differential input, including sensor supply (24 V DC)
Input name	Analog inputs

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Technical data

Analog inputs

Number of inputs	4 (Differential inputs, voltage or current can be chosen separately)
Connection method	Inline shield connector
	2, 3, 4-wire (shielded)
A/D conversion time	max. 10 µs
Resolution A/D	16 bit
Limit frequency (3 dB)	500 Hz
Type of protection	Transient protection
Protective circuit/component	Yes, via arresters
Data formats	IB IL, IB ST, standardized representation, S7 compatible
Measured value resolution	16 bits (15 bits + sign bit)
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	approx. 110 Ω
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

Standards and Regulations

Test section	5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min.
	5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min.
	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.
Connection in acc. with standard	CUL
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

Classifications

eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
eCl@ss 5.1	27242601

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Classifications

eCl@ss

eCl@ss 6.0	27242601
eCl@ss 7.0	27242601
eCl@ss 8.0	27242601

ETIM

ETIM 3.0	EC001596
ETIM 4.0	EC001599
ETIM 5.0	EC001596

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

UL Recognized 

cUL Recognized 
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Approvals

cULus Recognized  US

Accessories

Accessories

Labeling panel

Labeling field - IB IL FIELD 8 - 2727515

Labeling field, width: 48.8 mm



Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



Plug

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



Inline shield connector

Terminal marking

Insert strip - ESL 62X46 - 0809502

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, Plotter: Laser printer, Mounting type: Insert, Lettering field: 62 x 46 mm



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Accessories

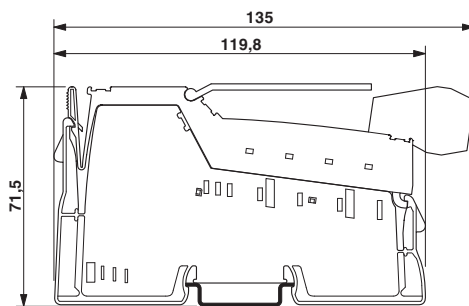
Insert strip - ESL 62X10 - 0809492

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, Plotter: Laser printer, Mounting type: Insert, Lettering field: 62 x 10 mm

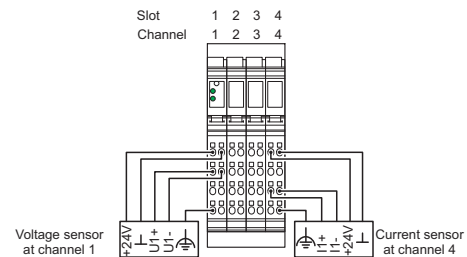


Drawings

Dimensional drawing



Connection diagram



Mouser Electronics

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