

<https://www.phoenixcontact.com/gb/products/2878447>



Inline terminal - IB IL AI 4/EF-PAC - 2878447

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Inline, Analog input terminal, Analog inputs: 4, 0 V ... 5 V, -5 V ... 5 V, 0 V ... 10 V, -10 V ... 10 V, 0 mA ... 20 mA, 4 mA ... 20 mA, -20 mA ... 20 mA, connection method: 2, 3, 4-wire, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connectors and marking fields

Product Description


The terminal is designed for use within an Inline station. It is used to acquire analog voltage and current signals.

Your advantages

- ✓ 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 µs)
- ✓ Measured value acquisition with 16-bit resolution
- ✓ 4 differential signal inputs
- ✓ Connection of sensors in 2, 3, and 4-wire technology
- ✓ Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ±20 mA
- ✓ Voltage ranges: 0 V ... 10 V, ±10 V, 0 V ... 5 V, ±5 V
- ✓ Short-circuit
- ✓ Diagnostic and status indicators



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 996376
GTIN	4017918996376
Weight per Piece (excluding packing)	210.000 g
Custom tariff number	85389091
Country of origin	Germany

Technical data

Note

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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
Depth	71.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
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)
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
Color	green
Net weight	210 g
Note on weight specifications	with connectors
Operating mode	Process data mode with 5 words/1 word PCP

Interfaces

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

Inline potentials

Designation	Communications power (U_L)
Supply voltage	7.5 V DC (via voltage jumper)
Current consumption	typ. 85 mA
	max. 100 mA
Designation	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 consumption	typ. 13 mA
	max. 20 mA
Designation	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 consumption	0 A

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Technical data

Inline potentials

	max. 200 mA
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Analog inputs

Description of the input	Differential input, including sensor supply (24 V DC)
Input name	Analog inputs
Number of inputs	4
Connection method	Inline shield connector
Connection technology	2, 3, 4-wire
Note regarding the connection technology	shielded
A/D conversion time	max. 10 µs
A/D converter resolution	16 bit
Limit frequency (3 dB)	500 Hz
Type of protection	Transient protection
	Overload protection
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

Electrical isolation

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.

Standards and Regulations

Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e

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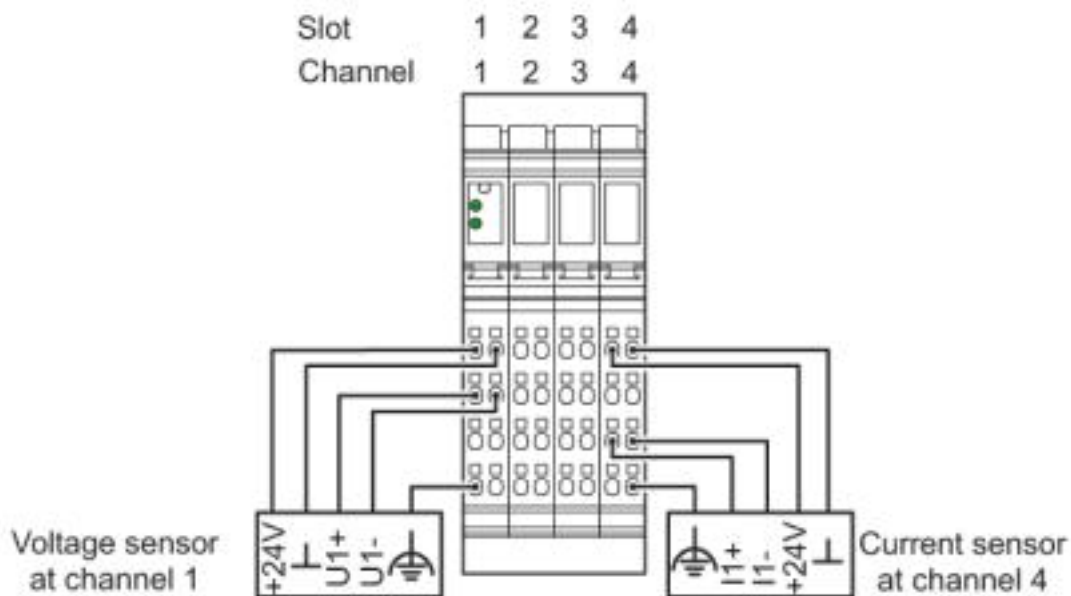
Technical data

Environmental Product Compliance

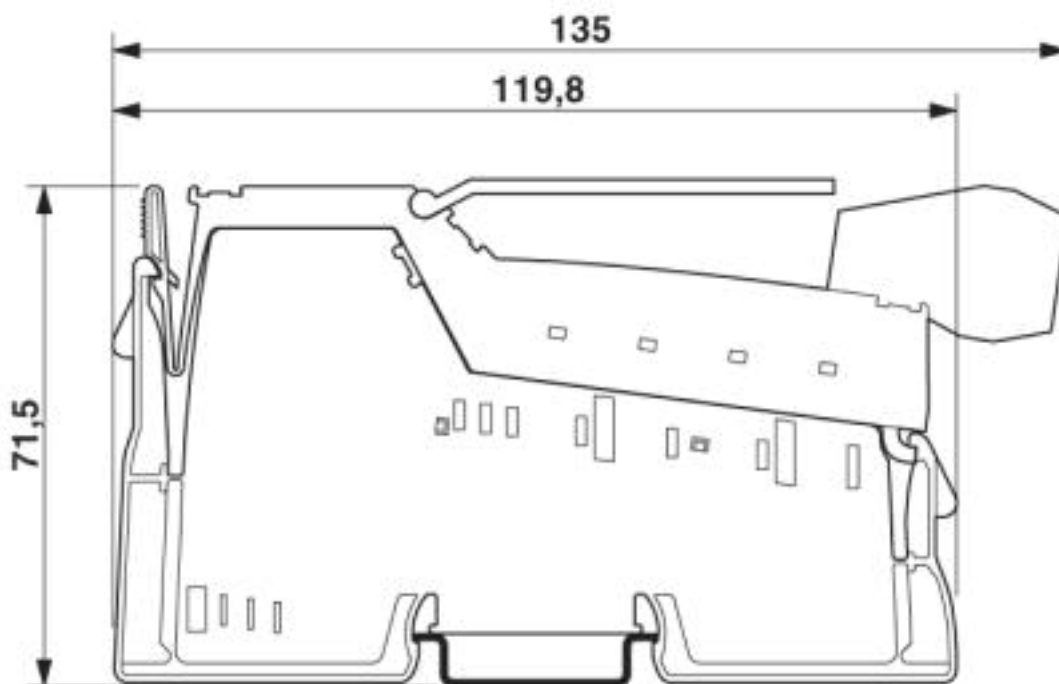
	No hazardous substances above threshold values
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Drawings

Connection diagram



Dimensional drawing



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Classifications

eCl@ss

eCl@ss 4.0	27250300
eCl@ss 4.1	27250300
eCl@ss 5.0	27250300
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242601
eCl@ss 8.0	27242601
eCl@ss 9.0	27242601

ETIM

ETIM 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	EC001596
ETIM 5.0	EC001596
ETIM 6.0	EC001596
ETIM 7.0	EC001596

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602

Approvals

Approvals

Approvals

DNV GL / BSH / BV / LR / ABS / BSH / RINA / UL Recognized / cUL Recognized / EAC / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details








DNV GL		https://approvalfinder.dnvgl.com/	TAA00000BN
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BSH	http://www.bsh.de/de/index.jsp	658
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Approvals

BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	20989/B2_BV
LR		http://www.lr.org/en	08/20033
ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1621871-PDA
BSH		http://www.bsh.de/de/index.jsp	Anwenderhinweis
RINA		http://www.rina.org/en	ELE183315XG
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
EAC			EAC-Zulassung
cULus Recognized			



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