

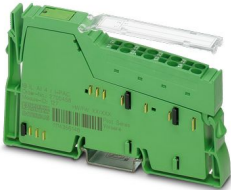
IB IL AI 4/U-PAC - Analog module



2700459

<https://www.phoenixcontact.com/pc/products/2700459>

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Inline, Analog input terminal, Analog inputs: 4, 0 V ... 10 V, -10 V ... 10 V, connection technology: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

Your advantages

- 4 analog, bipolar input channels for the connection of voltage signals
- Connection of sensors in 2-conductor technology
- Voltage ranges: 0 V ... 10 V, ± 10 V
- Mean-value generation of the inputs
- Process data update of all channels in 250 μ s
- Diagnostic and status indicators

Commercial data

Item number	2700459
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DRI141
Catalog page	Page 135 (C-6-2019)
GTIN	4046356566537
Weight per piece (including packing)	90 g
Weight per piece (excluding packing)	88 g
Customs tariff number	85389091
Country of origin	DE

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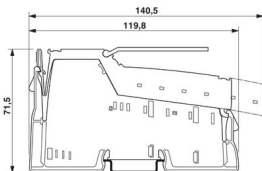
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Technical data

Dimensions

Dimensional drawing	
Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

Interfaces

Inline local bus

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

System properties

Module

ID code (dec.)	127
ID code (hex)	7F
Length code (hex)	04
Length code (dec)	04
Process data channel	64 bit
Input address area	8 Byte
Output address area	8 Byte
Register length	64 bit
Required parameter data	10 Byte
Required configuration data	5 Byte

Input data

Analog

Input name	Analog inputs
Description of the input	Differential inputs, voltage
Number of inputs	4
A/D conversion time	max. 6.5 µs
A/D converter resolution	12 bit
Connection method	Inline connector

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Connection technology	2-conductor
Voltage input signal	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	typ. 324 k Ω
Data formats	IB IL, S7-compatible
Filtering	None or mean-value generation over 4, 16, or 32 measured values
Limit frequency (3 dB)	300 Hz
Common mode voltage range signal - ground	max. 50 V
Measured value resolution	12 bits (11 bits + sign bit)
Measured value representation	12 bits (11 bits + sign bit)
Protective circuit	Overload protection; ± 30 V DC, maximum

Product properties

Type	modular
Product type	I/O component
Product family	Inline
Scope of delivery	including Inline connector and labeling field
Diagnostics messages	Failure of the internal I/O supply I/O error message sent to the bus coupler
	I/O supply failure Message in the diagnostic code (in the IB IL format)
	Overrange or underrange Message in the diagnostic code (in the IB IL format)
	Configuration invalid Message in the diagnostic code (in the IB IL format)

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	7.68 W
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Potentials

Power consumption	typ. 0.94 W (total)
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Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA
	typ. 55 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. 35 mA
	typ. 30 mA

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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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Conductor connection

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

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 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

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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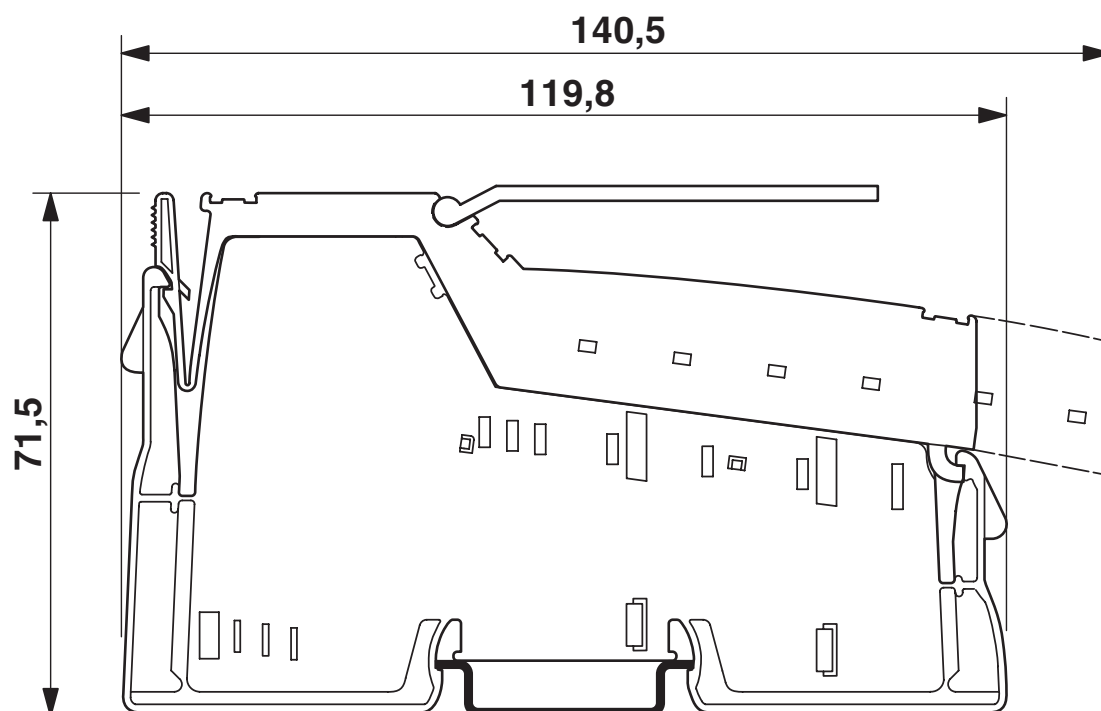
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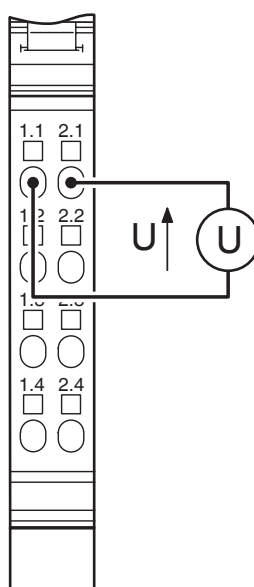


Drawings

Dimensional drawing



Connection diagram



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Approvals

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EAC

Approval ID: TR TS_D_01921-19



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242601
ECLASS-12.0	27242601
ECLASS-13.0	27242601

ETIM

ETIM 9.0	EC001596
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
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