

# IB IL 24 DI 4-XC-PAC - Digital module

2701152

<https://www.phoenixcontact.com/us/products/2701152>

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The figure shows the standard item

Inline, Digital input terminal, Digital inputs: 4, 24 V DC, connection technology: 3-conductor, Extreme conditions version, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

## Product description

The terminal is designed for use within an Inline station. It is used to acquire digital signals. Thanks to special engineering measures and tests, the terminal can be used under extreme ambient conditions.

## Your advantages

- 4 digital inputs
- Connection of sensors in 2- and 3-conductor technology
- Maximum permissible load current per sensor: 250 mA
- Maximum permissible load current from the terminal: 1 A
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs

## Commercial data

Item number	2701152
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI131
GTIN	4046356713795
Weight per piece (including packing)	92.3 g
Weight per piece (excluding packing)	66 g
Customs tariff number	85389091
Country of origin	DE

## Technical data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	140.5 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Notes

#### Note on application

Note on application	Only for industrial use
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### Material specifications

Color (Housing)	green (RAL 6021)
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### Interfaces

#### Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps

### System properties

#### Programming data (LocalbusSlave)

Length code (hex)	41
ID code (dec.)	190
Length code (dec)	65
Process data channel	4 bit
Input address area	4 bit
Output address area	0 Byte
Parameter channel (PCP)	0 Byte
Register length (bus)	4 bit

#### Fieldbus data telegram

Required parameter data	1 Byte
Required configuration data	4 Byte

## Input data

### Digital:

Input name	Digital inputs
Description of the input	IEC 61131-2 type 1
Number of inputs	4
Connection method	Spring-cage connection
Connection technology	3-conductor
Input voltage	24 V DC
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	15 V DC ... 30 V DC
Nominal input voltage $U_{IN}$	24 V DC
Nominal input current at $U_{IN}$	min. 3 mA (at nominal voltage)
Sensor current per channel	max. 250 mA
Typical response time	< 1 ms
Protective circuit	Short-circuit and overload protection

## Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connector and labeling field
No. of channels	4
Operating mode	Process data operation with 4 bits
Special properties	Extreme conditions version

## Electrical properties

Protective circuit	Surge protection; Protective elements in the power terminal or the bus coupler
	Reverse polarity protection; Protective elements in the power terminal or the bus coupler

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

Supply voltage	7.5 V DC
Current draw	max. 40 mA

### Potentials: Segment circuit supply ( $U_S$ )

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. 1 A
	0 A

### 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

logics)	
Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (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 <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
Stripping length	8 mm

## Environmental and real-life conditions

### 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.)
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)	-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)

## Standards and regulations

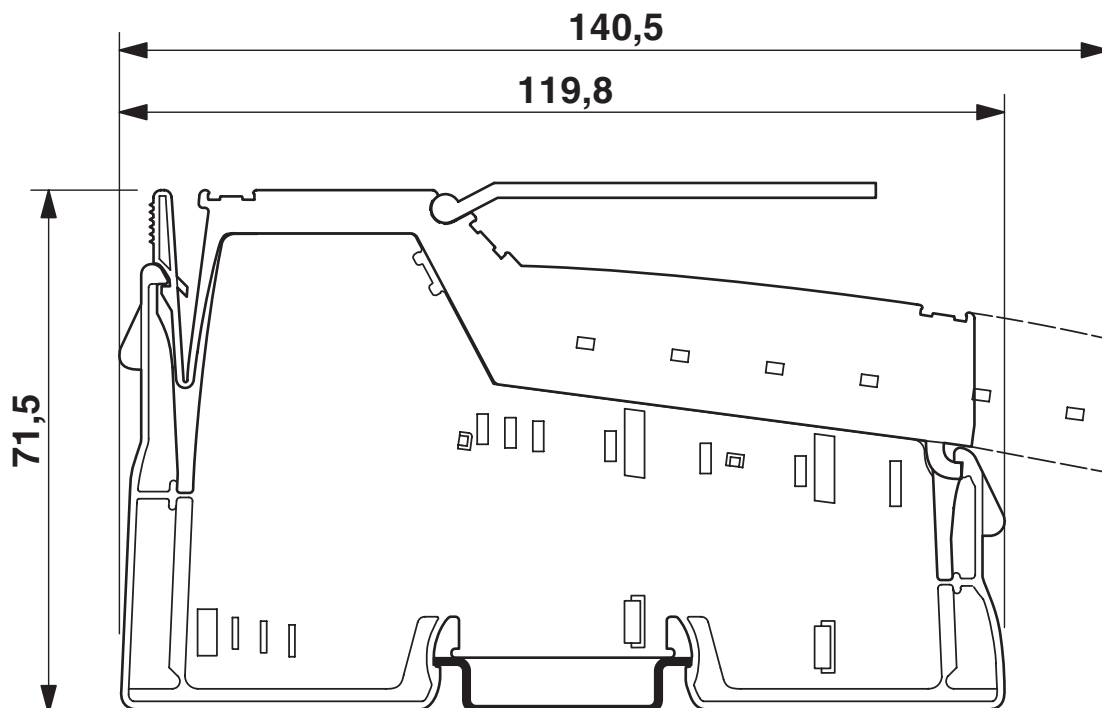
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

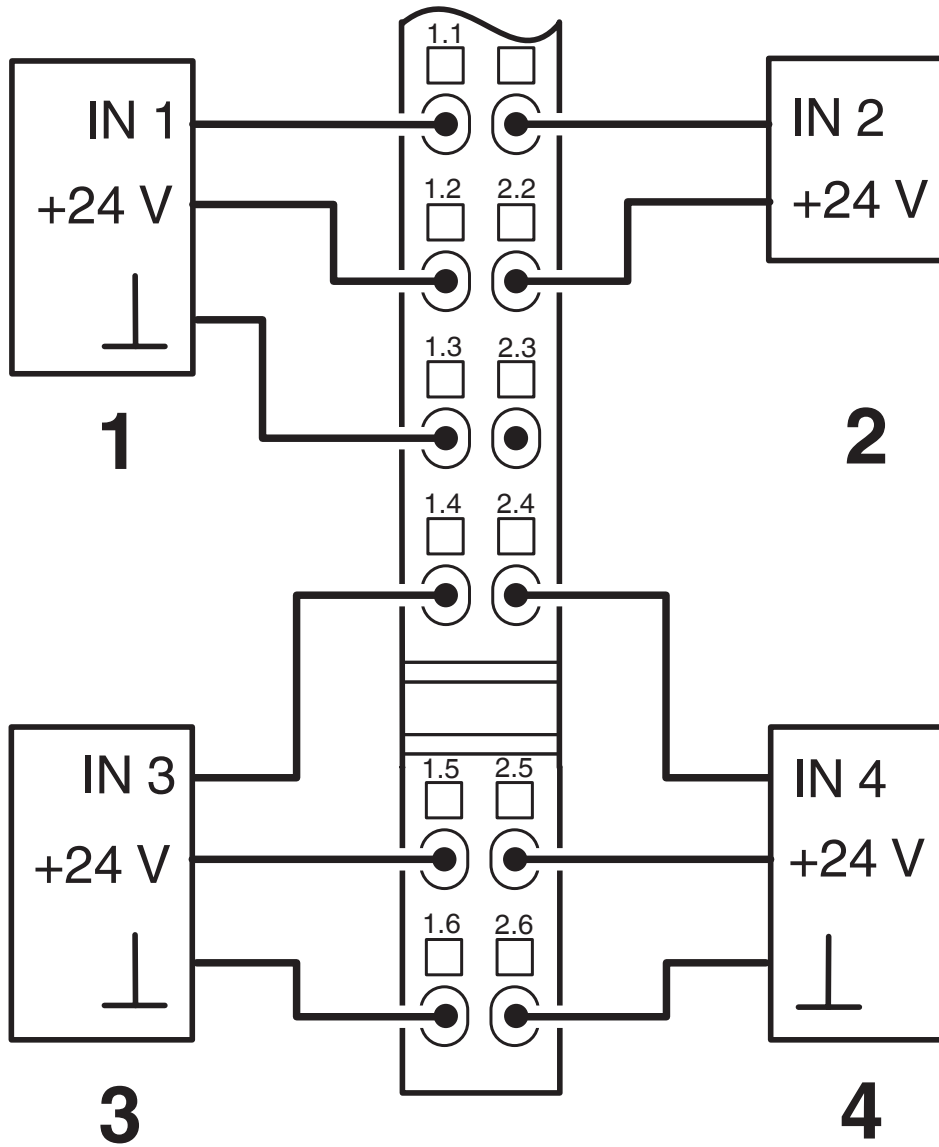
Mounting type	DIN rail mounting
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## Drawings

Dimensional drawing



Connection diagram



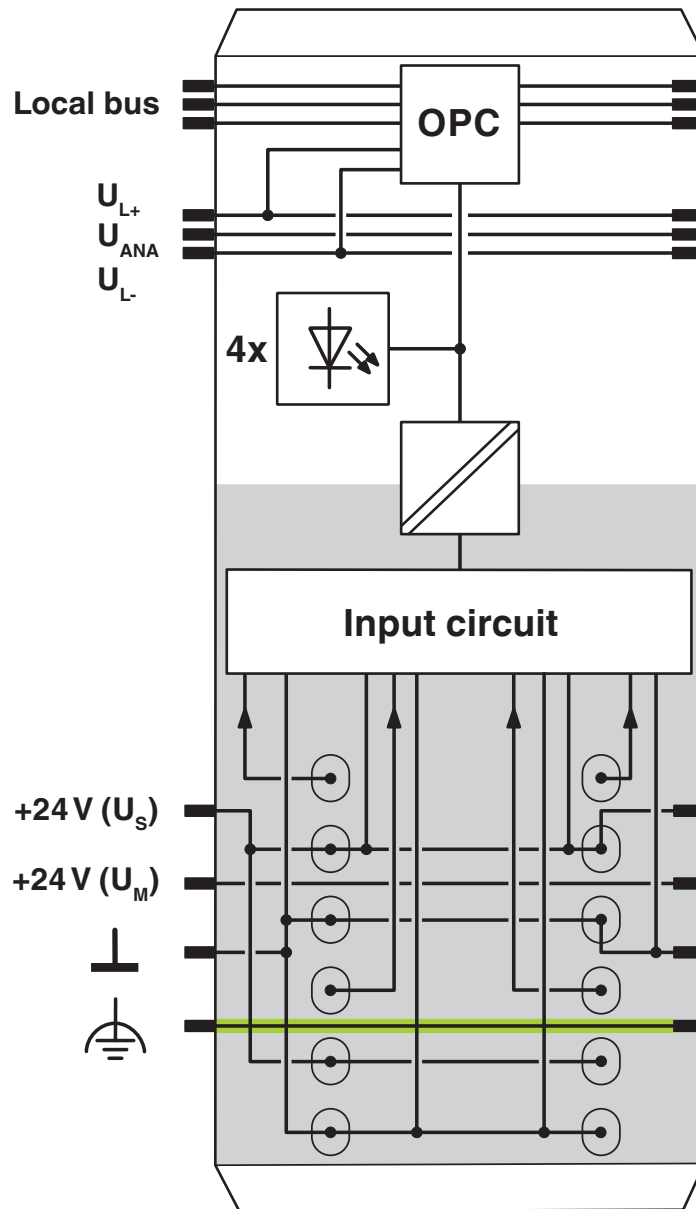
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Block diagram



Internal wiring of the terminal points

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2701152>



**cULus Recognized**  
Approval ID: E140324

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## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	1db0305f-dfd2-4321-88b0-a53f3760fed0

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