

# IB IL 24 DI 16-XC-PAC - Digital module



2701154

<https://www.phoenixcontact.com/us/products/2701154>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



The figure shows the standard item

Inline, Digital input terminal, Digital inputs: 16, 24 V DC, connection technology: 3-conductor, Extreme conditions version, 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 digital signals. Thanks to special engineering measures and tests, the terminal can be used under extreme ambient conditions.

## Your advantages

- 16 digital inputs
- Connection of sensors in 2- and 3-conductor technology
- Maximum permissible load current per sensor: 250 mA
- Diagnostic and status indicators
- 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	2701154
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DR01
Product key	DRI131
GTIN	4046356713801
Weight per piece (including packing)	234.8 g
Weight per piece (excluding packing)	210 g
Customs tariff number	85389091
Country of origin	DE

## Technical data

### Dimensions

Dimensional drawing	
Width	48.8 mm
Height	140.5 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Material specifications

Color (Housing)	green (RAL 6021)
-----------------	------------------

### 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)	01
ID code (dec.)	190
Length code (dec)	01
Process data channel	16 bit
Input address area	2 Byte
Output address area	0 Byte
Parameter channel (PCP)	0 Byte
Register length (bus)	16 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	16
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
Delay at signal change from 0 to 1	1 ms
Delay at signal change from 1 to 0	1 ms

## Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connectors and marking fields
No. of channels	16
Operating mode	Process data mode with one word
Special properties	Extreme conditions version

## Electrical properties

Maximum power dissipation for nominal condition	14.5 W
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. 60 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. 4 A
	0 A

### Electrical isolation/isolation of the voltage ranges

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
Test voltage: 7.5 V supply (bus logic)/functional ground	500 V AC, 50 Hz, 1 min

## Connection data

Connection technology

2701154

<https://www.phoenixcontact.com/us/products/2701154>

Connection name	Inline connector
-----------------	------------------

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

## Standards and regulations

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

## Mounting

Mounting type	DIN rail mounting
---------------	-------------------

# IB IL 24 DI 16-XC-PAC - Digital module

2701154

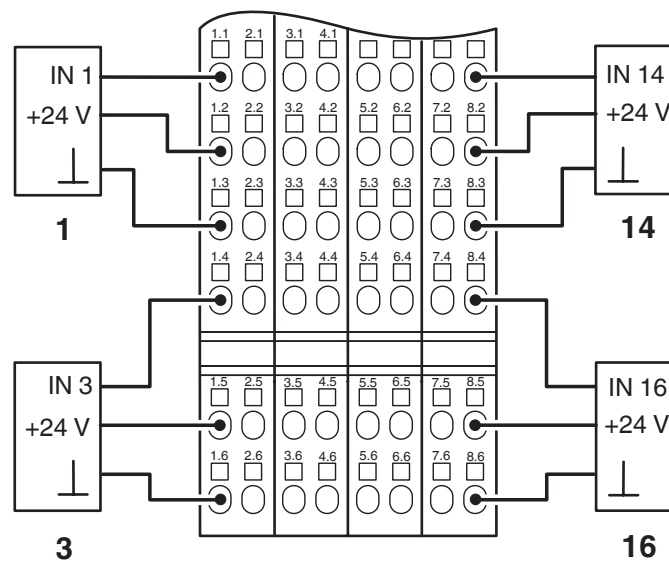
<https://www.phoenixcontact.com/us/products/2701154>

## Drawings

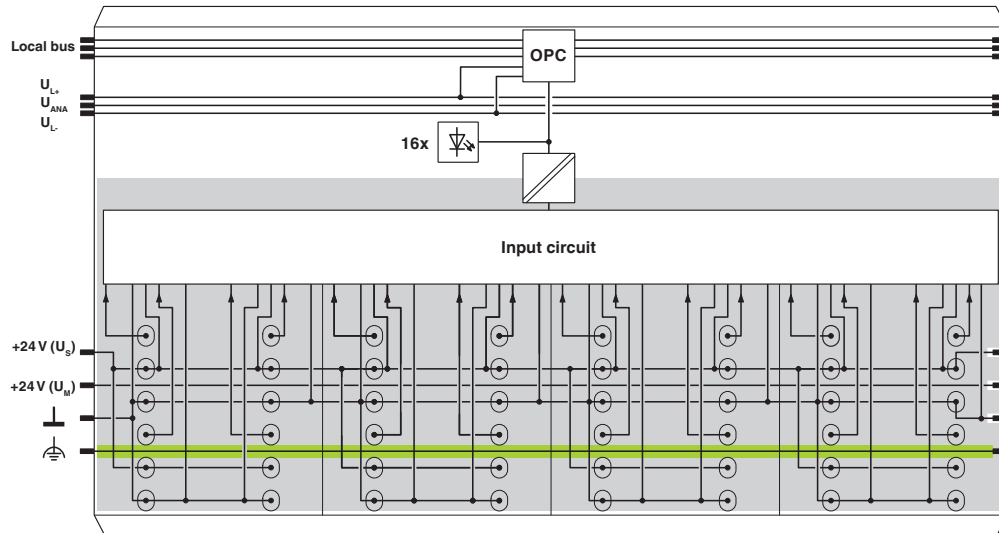
Dimensional drawing



Connection diagram



## Block diagram



# IB IL 24 DI 16-XC-PAC - Digital module



2701154

<https://www.phoenixcontact.com/us/products/2701154>

## Classifications

### UNSPSC

UNSPSC 21.0	32151602
-------------	----------

2701154

<https://www.phoenixcontact.com/us/products/2701154>

## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

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

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)