

IB IL 24 DI 32/HD-NPN-PAC - Digital module



2878243

<https://www.phoenixcontact.com/us/products/2878243>

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Inline, Digital input terminal, Digital inputs: 32 (NPN), 24 V DC, connection technology: 1-conductor, 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.

Your advantages

- 32 digital inputs, NPN-wired
- Connection of sensors in 1-conductor technology

Commercial data

Item number	2878243
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI131
GTIN	4046356048507
Weight per piece (including packing)	208.3 g
Weight per piece (excluding packing)	191.31 g
Customs tariff number	85389099
Country of origin	DE

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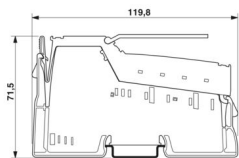


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Technical data

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

Notes

Note on application	
Note on application	Only for industrial use

Interfaces

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

System properties

Module	
ID code (dec.)	190
ID code (hex)	BE
Length code (hex)	02
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	0 Byte
Register length	32 bit
Required parameter data	1 Byte
Required configuration data	4 Byte

Input data

Digital:	
Input name	Digital inputs
Description of the input	EN 61131-2 type 1

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Number of inputs	32 (NPN)
Connection method	Spring-cage connection
Connection technology	1-conductor
Input voltage	24 V DC
Input voltage range "0" signal	-30 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}	typ. 2.6 mA
Typical input current per channel	2.6 mA
Typical response time	< 1 ms
Delay at signal change from 0 to 1	2 ms
Delay at signal change from 1 to 0	4 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	32
Operating mode	Process data operation with 2 words

Electrical properties

Maximum power dissipation for nominal condition	3.1 W
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Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 90 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. 100 mA

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

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

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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

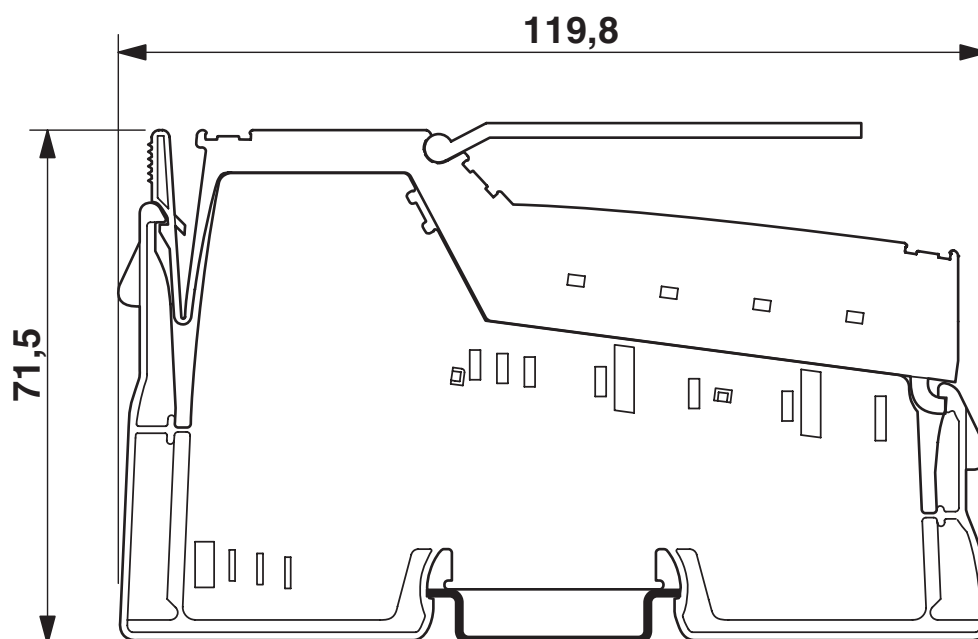
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

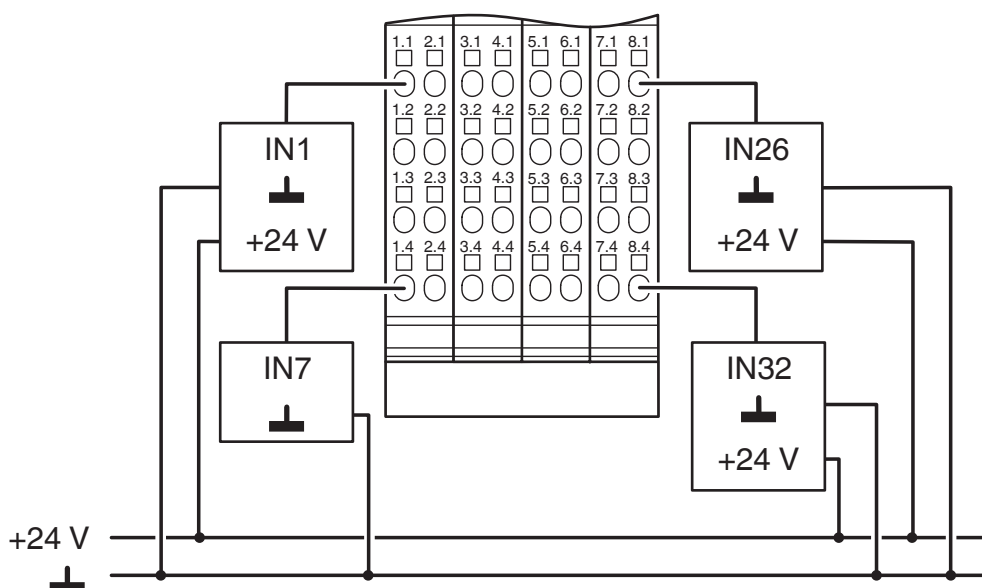
Mounting type	DIN rail mounting
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Drawings

Dimensional drawing



Connection diagram



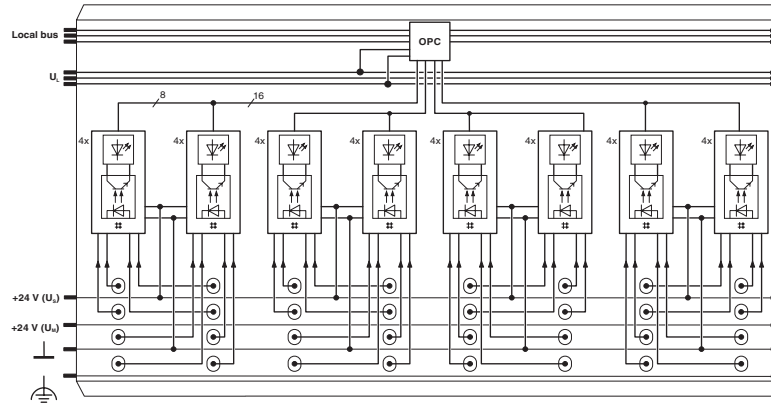
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Block diagram



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Approvals

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BV

Approval ID: 20989_C1 BV

ABS

Approval ID: 22-2226444-PDA

DNV

Approval ID: TAA00002CU



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-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: n/a)
SCIP	7f82c62c-c12c-4c65-b65c-3146b1534fe5

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