

IB IL 24 DI 16-PAC - Digital module



2861250

<https://www.phoenixcontact.com/gb/products/2861250>

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Inline, Digital input terminal, Digital inputs: 16, 24 V DC, connection technology: 3-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

- 16 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: 4 A

Commercial data

Item number	2861250
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRI131
Product key	DRI131
Catalog page	Page 123 (C-6-2019)
GTIN	4017918894191
Weight per piece (including packing)	231.6 g
Weight per piece (excluding packing)	210 g
Customs tariff number	85389099
Country of origin	DE

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Technical data

Dimensions

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

Notes

Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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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)	01
Length code (dec)	01
Process data channel	16 bit
Input address area	2 Byte
Output address area	0 Byte
Register length	16 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	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 delivery	including Inline connectors and marking fields
No. of channels	16
Operating mode	Process data mode with one word

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	14.5 W
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Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA
Power consumption	max. 0.45 W

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 (without sensors)

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	
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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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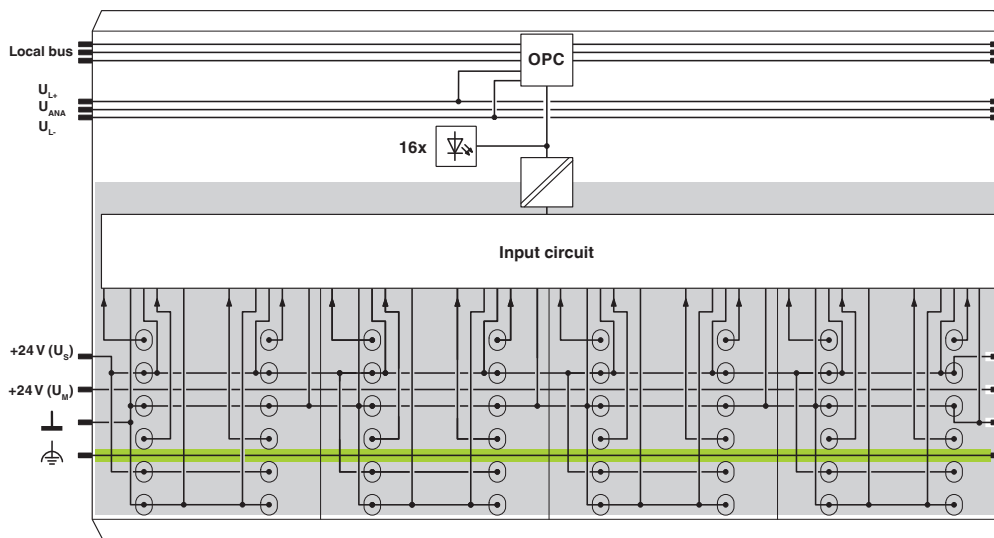
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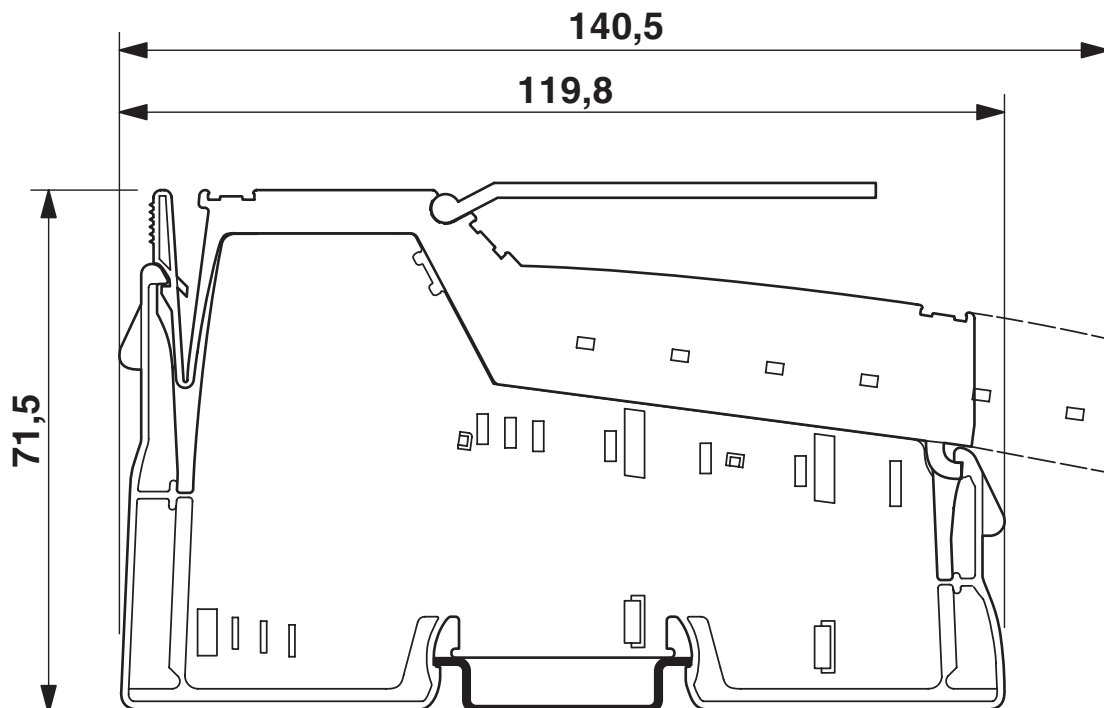
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Drawings

Block diagram



Dimensional drawing



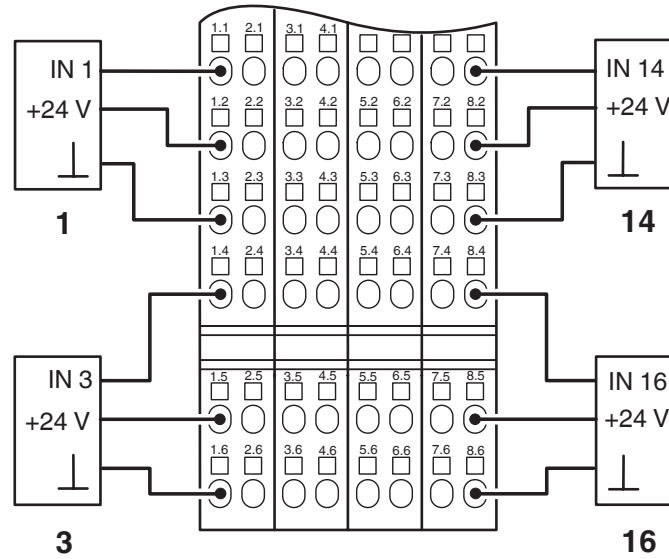
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Connection diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2861250>



UL Recognized

Approval ID: FILE E 140324



EAC

Approval ID: TR TS_D_01921-19



DNV GL

Approval ID: TAA00000BN



LR

Approval ID: LR23398855TA

BSH

Approval ID: 658a



RINA

Approval ID: ELE121121XG

ABS

Approval ID: 22-2226444-PDA



cUL Listed

Approval ID: FILE E 199827



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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	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	135fe2a1-5cdf-4679-894a-a6566ad7594b

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Accessories

IB IL DI16-PLSET/ICP - Connector set

2860989

<https://www.phoenixcontact.com/gb/products/2860989>



Connector set, for IB IL DI 16, copper, colored identification.

IB IL SCN-12-ICP - Inline connector

2727611

<https://www.phoenixcontact.com/gb/products/2727611>



Connector, color coded, for digital 4, or 16-channel Inline input terminals

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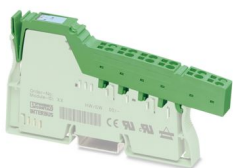


IB IL SCN-12 - Inline connector

2726340

<https://www.phoenixcontact.com/gb/products/2726340>

Connector, for digital 4 or 16-channel Inline terminals



IB IL FIELD 2 - Marking field

2727501

<https://www.phoenixcontact.com/gb/products/2727501>

Marking field, width: 12.2 mm



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IB IL FIELD 8 - Marking field

2727515

<https://www.phoenixcontact.com/gb/products/2727515>

Marking field, width: 48.8 mm



ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/gb/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, CMS-P1-PLOTTER, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72



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ESL 62X46 - Insert strip

0809502

<https://www.phoenixcontact.com/gb/products/0809502>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, CMS-P1-PLOTTER, mounting type: insert, lettering field size: 62 x 46 mm, Number of individual labels: 15

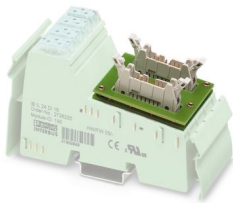


FLKM 14-PA-INLINE/IN16 - Front adapter

2302751

<https://www.phoenixcontact.com/gb/products/2302751>

VARIOFACE front adapter for Inline modules, for transferring 16 (2 x 8) digital input signals.



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