

# IB IL 24 DI 16-PAC - Digital module



2861250

<https://www.phoenixcontact.com/in/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	DRI
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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### Material specifications

Color	green
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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

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## Digital

Input name	Digital inputs
Description of the input	EN 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)
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

Type	modular
Product type	I/O component
Product family	Inline
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

No. of channels	16
Maximum power dissipation for nominal condition	14.5 W

## 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)

## 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 <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

## 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
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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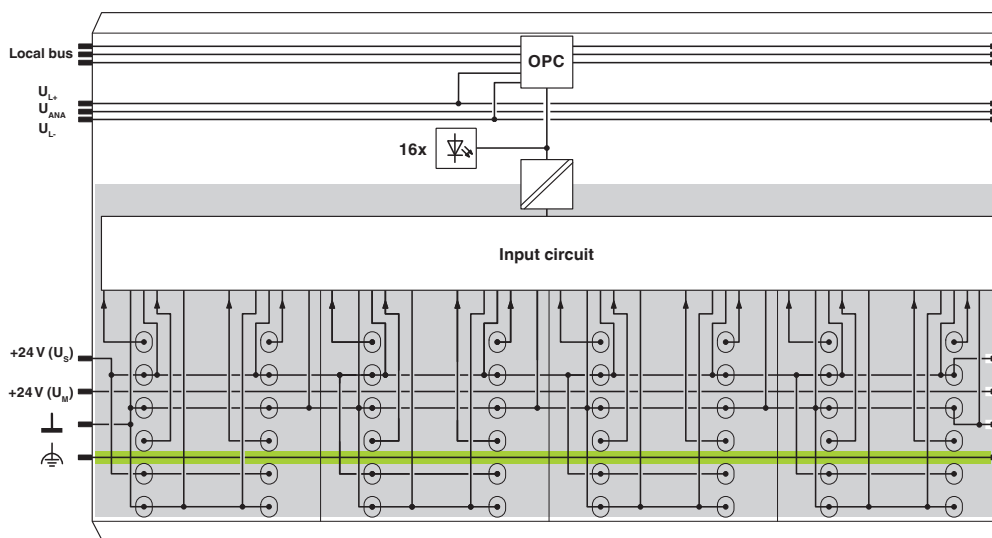
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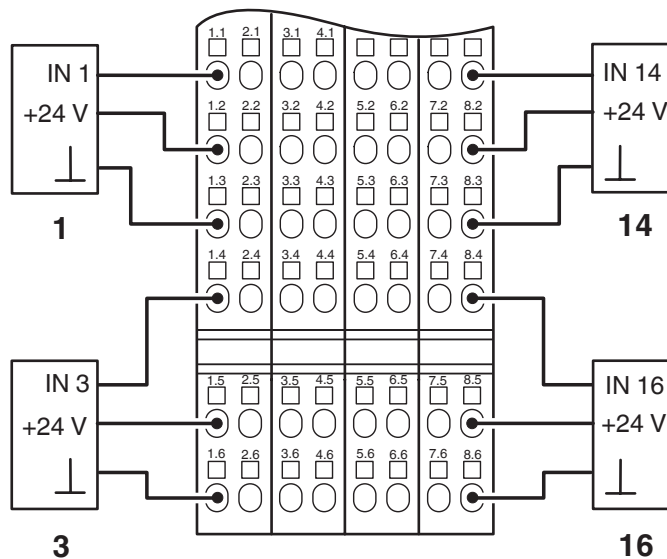
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## Drawings

### Block diagram



### Connection diagram



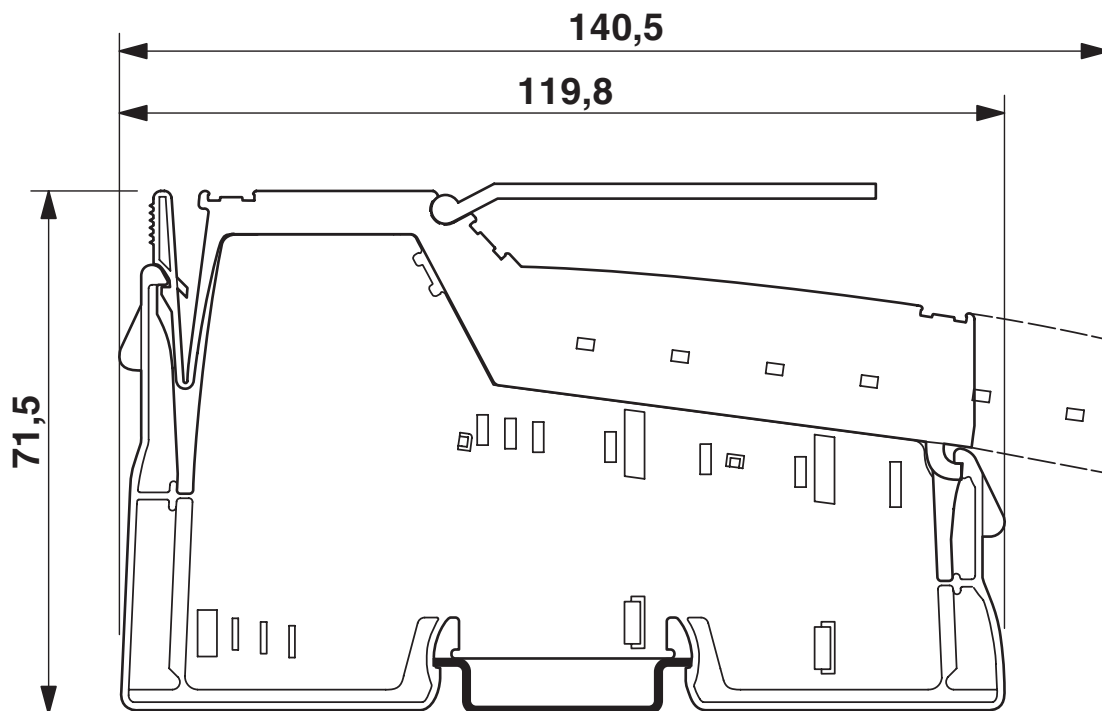
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Dimensional drawing



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## Approvals



**UL Recognized**

Approval ID: FILE E 140324



**EAC**

Approval ID: TR TS\_D\_01921-19



**DNV GL**

Approval ID: TAA00000BN



**LR**

Approval ID: LR22191720TA



**BV**

Approval ID: 20989/B2\_BV



**RINA**

Approval ID: ELE121121XG



**LR**

Approval ID: LR22191720TA



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Approval ID: LR22191720TA

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**LR**

Approval ID: LR22191720TA



**ATEX**

Approval ID: PxCIF07ATEX2862835X



**cUL Listed**

Approval ID: FILE E 199827



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Approval ID: FILE E 199827



**UL Listed**

Approval ID: FILE E 199827



**cUL Listed**

Approval ID: FILE E 199827



**ATEX**

Approval ID: PxCIF07ATEX2862835X



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## Classifications

### ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

### ETIM

ETIM 8.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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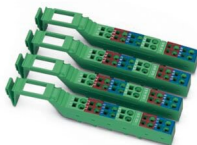


## Accessories

### IB IL DI16-PLSET/ICP - Connector set

2860989

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



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

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### IB IL SCN-12-ICP - Inline connector

2727611

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



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

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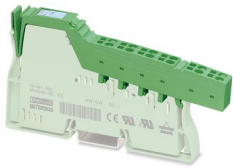


## IB IL SCN-12 - Inline connector

2726340

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

Connector, for digital 4 or 16-channel Inline terminals



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## IB IL FIELD 2 - Labeling field

2727501

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

Labeling field, width: 12.2 mm



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## IB IL FIELD 8 - Labeling field

2727515

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

Labeling field, width: 48.8 mm



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## ESL 62X10 - Insert strip

0809492

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

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:  
Laser printer, 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/in/products/0809502>

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



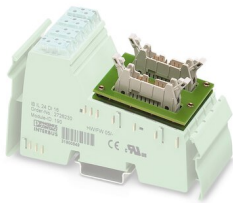
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## FLKM 14-PA-INLINE/IN16 - Front adapters

2302751

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

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



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