

# IBS IL 24 BK DIO 16/16 - Bus coupler



2742586

<https://www.phoenixcontact.com/us/products/2742586>

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Inline, Bus coupler, INTERBUS, Inline shield connector, Digital inputs: 16, 24 V DC, connection technology: 3-conductor, Digital outputs: 16, 24 V DC, 500 mA, 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 complete Inline station consists of an INTERBUS bus terminal, a digital output terminal with 16 outputs, and a digital input terminal with 16 inputs. This package contains all the necessary Inline connector to connect the bus, the supply and the I/Os. The Inline terminals can be labeled using hinged labeling fields. The fields have insert cards that can be labeled individually to suit the application. Additionally, there is the ZBFM -6... Zack strip for labeling the terminal points.

## Your advantages

- 16 digital inputs
- 16 digital outputs
- Connection of sensors in 2- and 3-conductor technology
- Connection of actuators in 2- and 3-conductor technology
- Maximum permissible load current per sensor: 250 mA
- Nominal current per output: 500 mA
- Diagnostic and status indicators

## Commercial data

Item number	2742586
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI111
GTIN	4017918603984
Weight per piece (including packing)	710.9 g
Weight per piece (excluding packing)	394 g
Customs tariff number	85389091
Country of origin	DE

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## Technical data

### Dimensions

Dimensional drawing	
Width	146.4 mm
Height	140.5 mm
Depth	71.5 mm

### Notes

#### Note on application

Note on application	Only for industrial use
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#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Material specifications

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

#### INTERBUS

Number of interfaces	2
Connection method	Inline shield connector
Transmission speed	500 kbps

#### Inline local bus

Number of interfaces	1
Connection method	Inline data jumper
Transmission speed	500 kbps

### System properties

#### System limits

Number of local bus devices that can be connected	63 (observe total permissible current consumption)
Number of devices with parameter channel	16
Number of supported branch terminals with remote bus branch	max. 15

#### Programming data

Register length (bus)	32 bit
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Register length (master)	8192 bit
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## Input data

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 "1" signal	15 V DC ... 30 V DC
Nominal input voltage $U_{IN}$	24 V DC
Typical input current per channel	typ. 3 mA
Protective circuit	Polarity reversal; Suppressor diode

## Output data

Digital:

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	3-conductor
Number of outputs	16
Protective circuit	Short-circuit and overload protection; Free running circuit
Output voltage	24 V DC -1 V (At nominal current)
Max. current carrying capacity per output	max. 500 mA
Maximum output current per module	max. 8 A
Nominal output voltage	24 V DC
Nominal load, inductive	12 VA
Nominal load, lamp	12 W
Nominal load, ohmic	12 W

## 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

## Electrical properties

Maximum power dissipation for nominal condition	8 W
Protective circuit	Reverse polarity protection

Potentials: Bus coupler supply  $U_{BK}$ ; Communications power  $U_L$  (7.5 V) and the analog supply  $U_{ANA}$  (24 V) are generated from the bus coupler supply.

Supply voltage	24 V DC (via Inline connector)
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Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 1.25 A (with max. number of connected I/O terminal blocks (24 V DC supply))
	typ. 100 mA (without connected Inline I/O terminals)

## Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC $\pm 5\%$
Power supply	max. 2 A DC

## Potentials: Supply of analog modules ( $U_{ANA}$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 0.5 A DC (observe derating)

## Potentials: Main circuit supply ( $U_M$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A DC (sum of $U_M + U_S$ )

## 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)
Power supply	max. 8 A DC (sum of $U_M + U_S$ )

## Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus / 5 V supply outgoing remote bus	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply incoming remote bus / 7.5 V communications power, 24 V analog supply, 24 V bus coupler supply	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, incoming remote bus / 24 V main supply, 24 V segment supply	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply incoming remote bus / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply outgoing remote bus / communications power ( $U_{BK}$ , $U_L$ , $U_{ANA}$ )	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply outgoing remote bus / I/O ( $U_M$ , $U_S$ )	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply outgoing remote bus / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V communications power, 24 V analog supply, 24 V bus coupler supply/functional ground	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V logics supply, 24 V analog supply, 24 V bus terminal module supply / 24 V main supply, 24 V segment supply	500 V AC, 50 Hz, 1 min
Test voltage: 24 V main supply, 24 V segment supply/functional ground	500 V AC, 50 Hz, 1 min

## Connection data

### Connection technology

Connection name	Inline connector
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### Inline connector

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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)	80 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)
Permissible humidity (operation)	95 % (non-condensing)
Permissible humidity (storage/transport)	95 % (non-condensing)

### Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Operation: 25g, 11 ms duration, semi-sinusoidal shock impulse

## Mounting

Mounting type	DIN rail mounting
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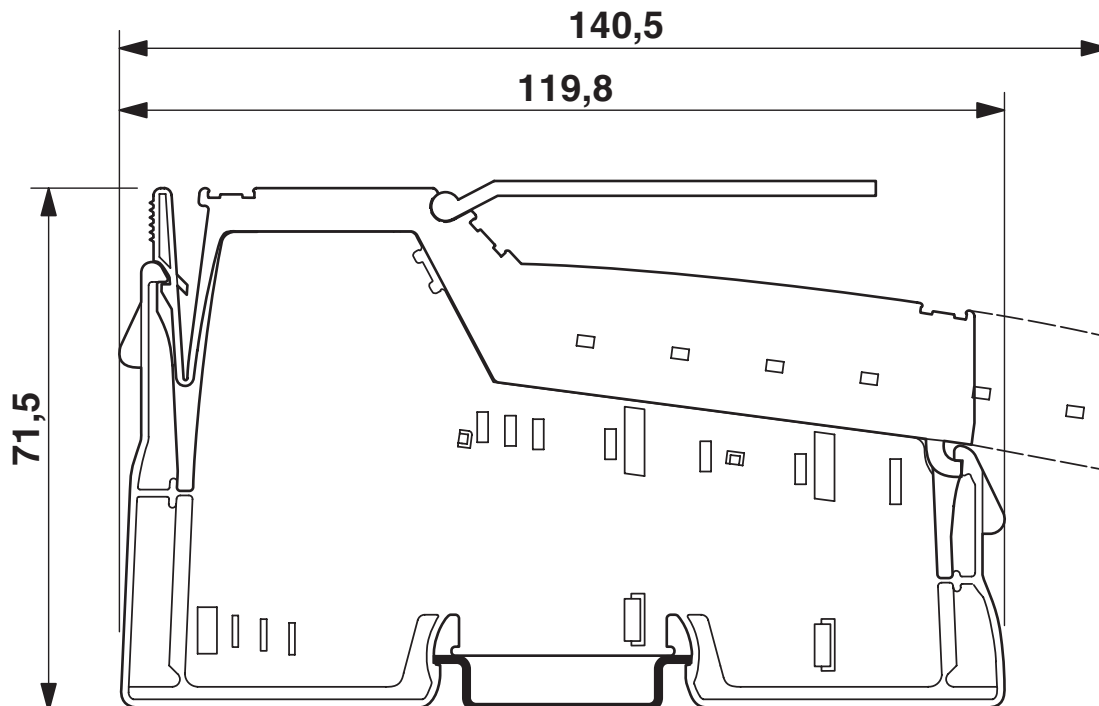
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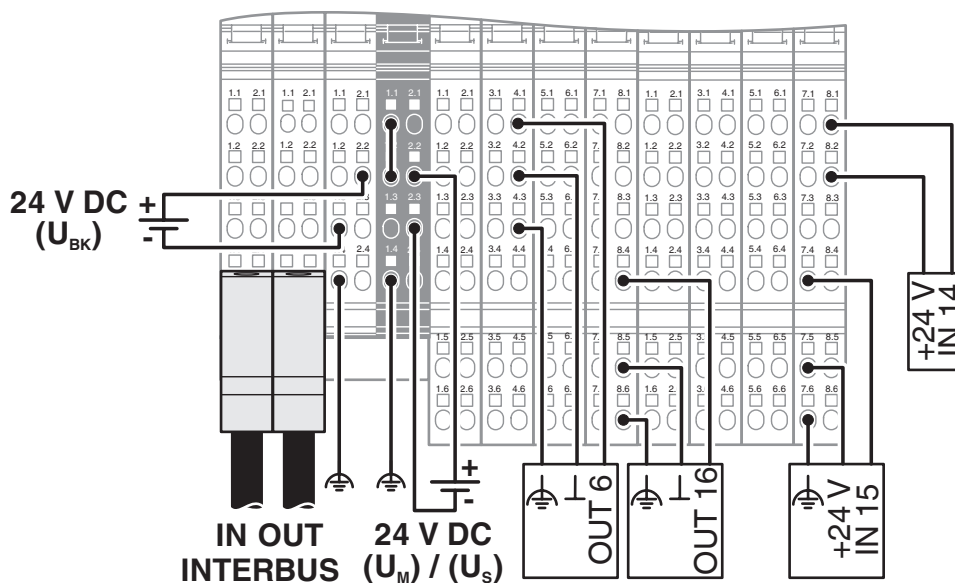
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## Drawings

Dimensional drawing



Connection diagram



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## Classifications

### ECLASS

ECLASS-13.0

27242608

### ETIM

ETIM 9.0

EC001604

### 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	f1954fae-d152-4898-a18a-e5cf7d1b9838

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