

# IBS IL 24 BK-T/U - Bus coupler

2742094

<https://www.phoenixcontact.com/us/products/2742094>

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INTERBUS bus coupler, copper connection, 24 V DC, without accessories

## Product description

The INTERBUS bus terminal connects the terminals of an Inline station to the INTERBUS network. Either a copper or a fiber optic connection is used for connecting to the INTERBUS remote bus. Accordingly, the connection is made using an INTERBUS Inline shield plug (copper). The bus terminal performs the following functions within an Inline station:

- Updates the INTERBUS remote bus signals
- Disconnects the outgoing remote bus or the connected I/O modules via software commands
- Supplies the connected I/O modules using an integrated power supply unit
- Connects to the functional ground by snapping onto the DIN rail.

The Inline terminals can be marked using hinged marking fields. The fields have insert cards that can be marked individually according to the application. In addition, the ZB-FM-6- zack marker strip is available for marking the terminal points.

Note the following during configuration:

The total logic current of all the terminals connected to an Inline bus terminal must not exceed the permissible total current of 2 A. Depending on the station configuration, the number of terminals that can be connected may be less than 63.

## Your advantages

- Remote bus connections using copper technology
- Electrical isolation

## Commercial data

Item number	2742094
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRI111
Catalog page	Page 39 (AX-2007)
GTIN	4017918810863
Weight per piece (including packing)	188 g
Weight per piece (excluding packing)	161.01 g
Customs tariff number	85389091
Country of origin	DE

## Technical data

### Product properties

Type	modular
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### System properties

#### INTERBUS-Master

Number of devices with parameter channel	63
Number of supported branch terminals with remote bus branch	max. 15

#### Module

ID code (dec.)	04
ID code (hex)	4
Length code (hex)	00
Input address area	0 Byte
Output address area	0 Byte

### Electrical properties

Protective circuit	Reverse polarity protection
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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)
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) typ. 100 mA (without connected Inline I/O terminals)

#### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC $\pm 5\%$
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#### 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)

#### 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)

#### Potentials: Segment circuit supply ( $U_S$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)

#### 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	500 V AC, 50 Hz, 1 min.

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supply	
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 / I/O ( $U_M$ , $U_S$ )	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 / 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: Communications power ( $U_{BK}$ , $U_L$ , $U_{ANA}$ ) / I/O ( $U_M$ , $U_S$ )	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

### 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

## Interfaces

### INTERBUS

No. of channels	2 (Connected to functional ground with a capacitor)
Connection method	Inline shield connector
Number of positions	6
Transmission speed	500 kbps
Transmission physics	Copper

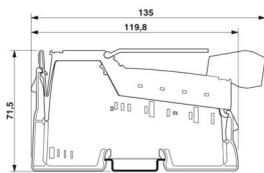
### Inline local bus

Connection method	Inline data jumper
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### Supply

Connection method	8-pos. Inline connector
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## Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm

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Depth	71.5 mm
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## Material specifications

Color	green
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## 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)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	75 % ... 85 % (in the range of -25°C ... +55°C, appropriate measures against increased humidity (> 85%) must be taken.)
Permissible humidity (storage/transport)	75 % ... 85 % (Slight temporary condensation may sometimes appear on the housing, e.g. when the terminal block is brought out of a vehicle into an enclosed room.)

## Mounting

Mounting type	DIN rail mounting
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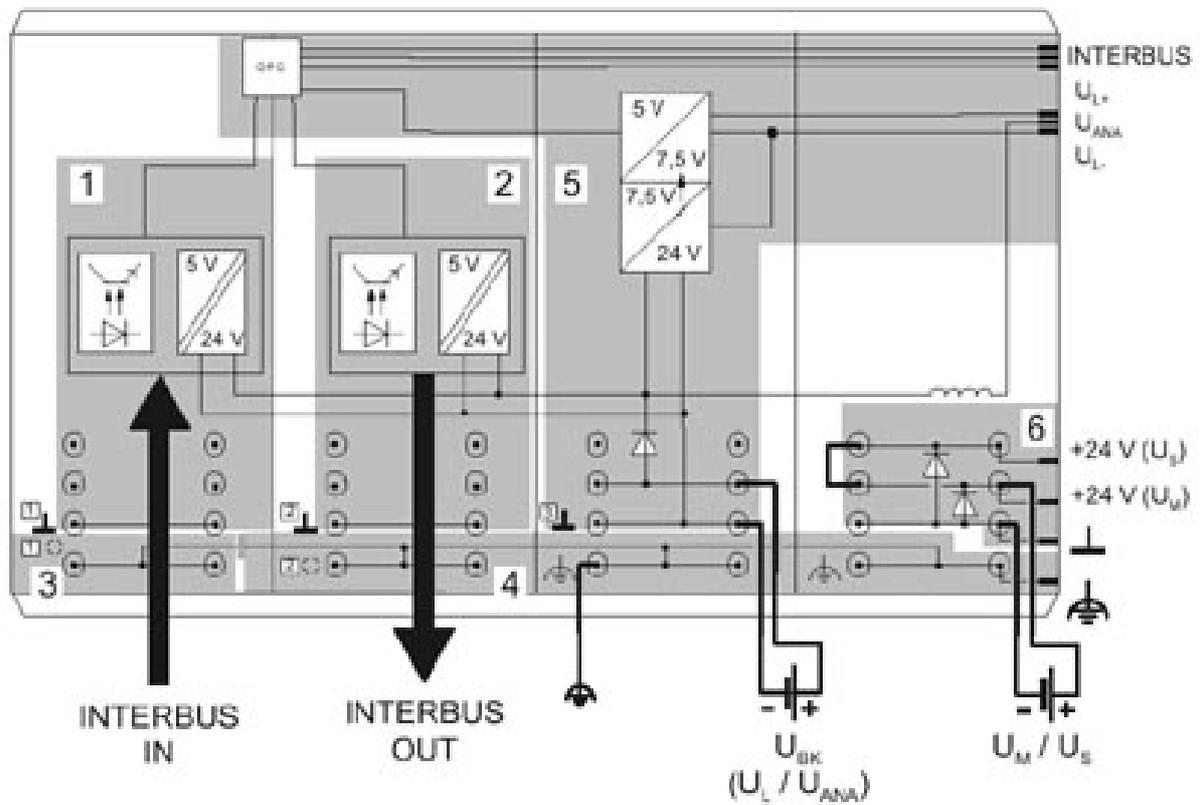
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## Drawings

Block diagram



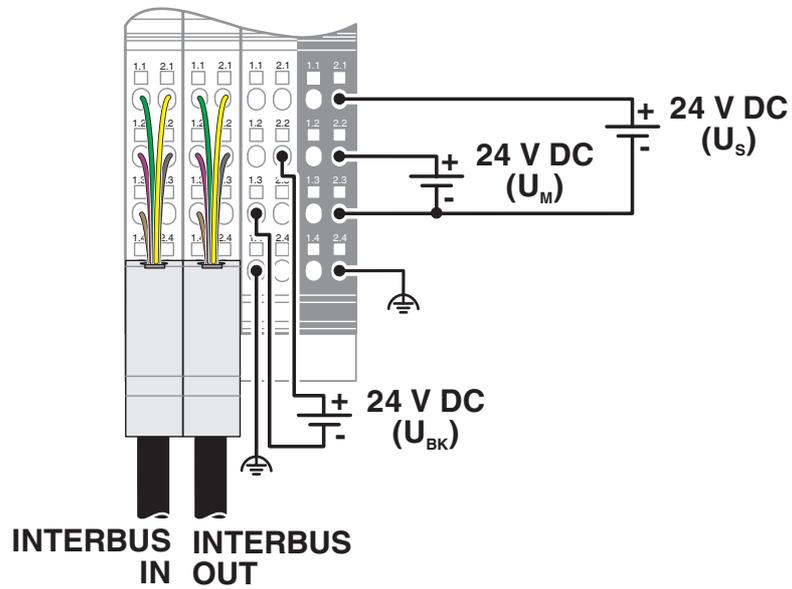
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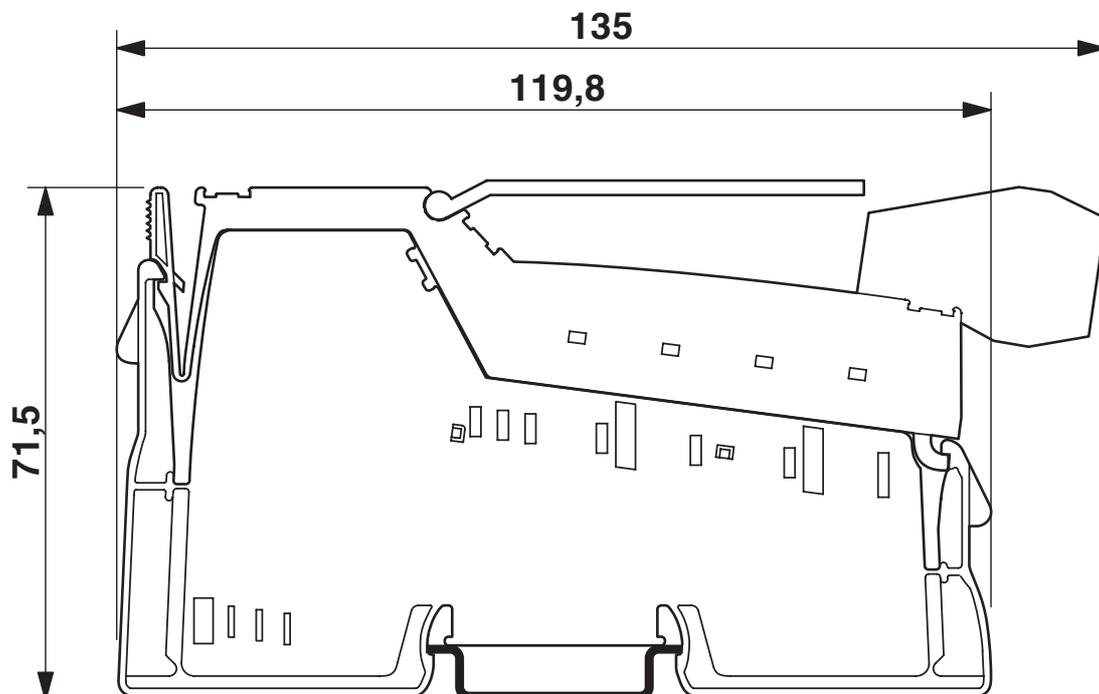
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Connection diagram



Dimensional drawing



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## Environmental product compliance

EU REACH SVHC

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

### IB IL BK-PLSET/CP - Connector set

2860374

<https://www.phoenixcontact.com/us/products/2860374>



Connector set for Inline bus coupler, color-coded

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### IB IL FIELD 2 - Marking field

2727501

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



Marking field, width: 12.2 mm

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## ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/us/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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## E/UK - End bracket

1201442

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End bracket, Mounting on a DIN rail NS 32 or NS 35, material: PA, color: gray



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