

# 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

The figure shows a product version of the article

## 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
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

#### Programming data

Length code (hex)	00
ID code (dec.)	04
Input address area	0 Byte
Output address area	0 Byte
Parameter channel (PCP)	0 Byte
Register length (master)	8192 bit

### 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 $\pm 5\%$
Power supply	max. 2 A DC (observe derating)

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 (sum of $U_M + U_S$ )

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

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## 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 / 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

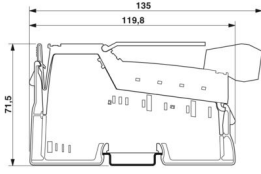
Connection method	8-pos. Inline connector
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## Dimensions

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Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm

## 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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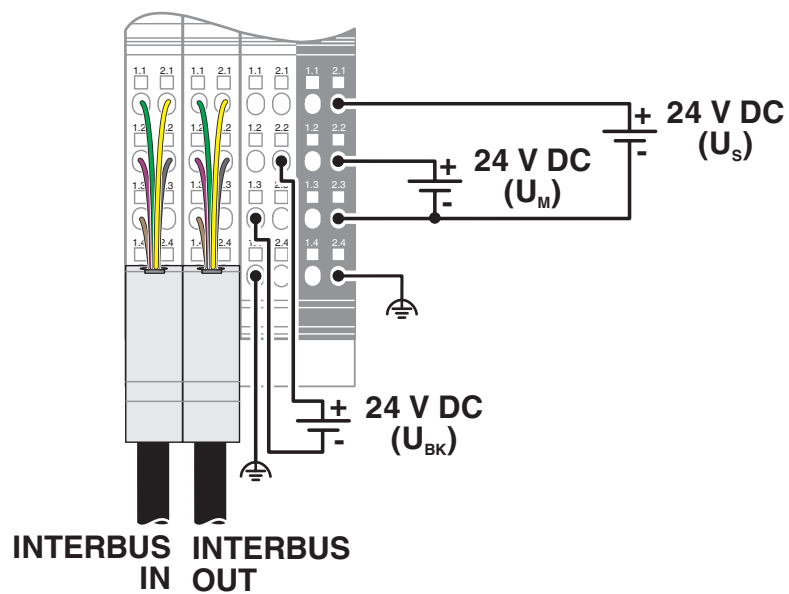
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## Drawings

Dimensional drawing



Connection diagram

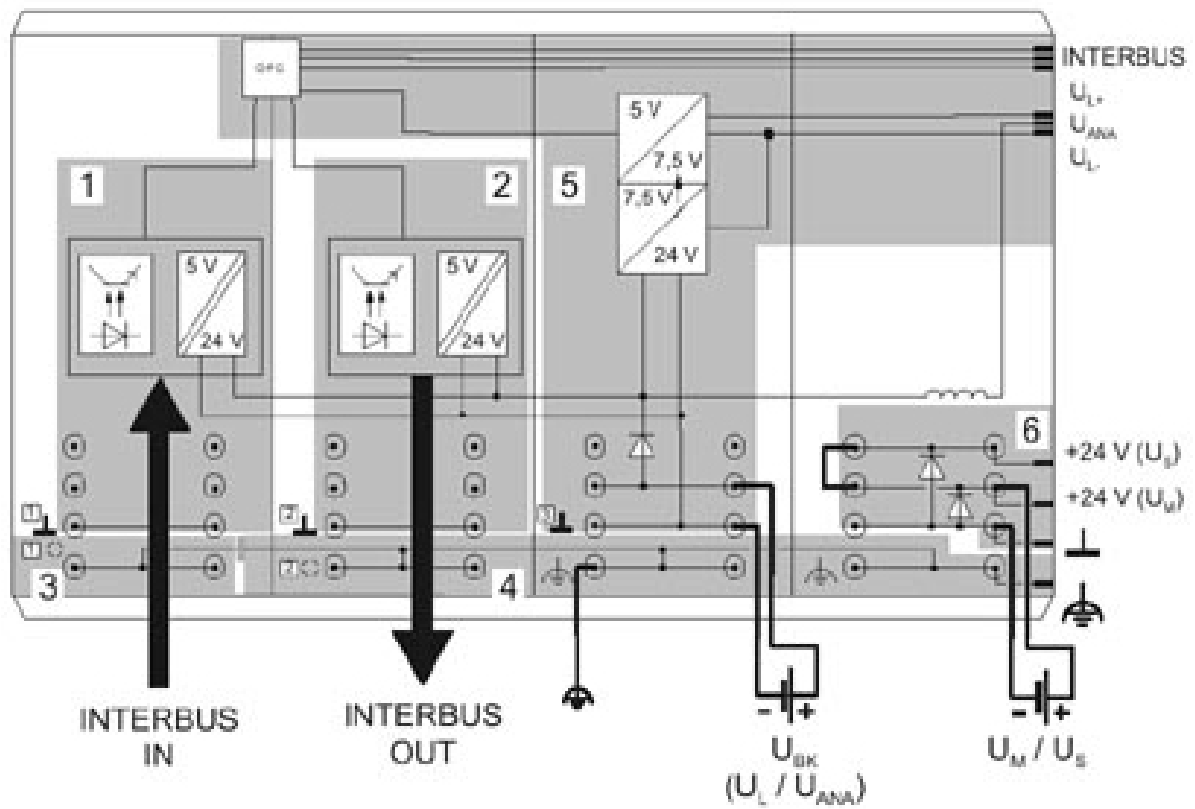


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Block diagram



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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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