

IBS IL 24 BK-T/U-XC-PAC - Bus coupler



2701150

<https://www.phoenixcontact.com/us/products/2701150>

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Inline, Bus coupler, INTERBUS, Inline shield connector, Extreme conditions version, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connectors and marking fields

Product description

The bus coupler connects an Inline station to the INTERBUS remote bus and provides the supply voltages for the connected devices.

Your advantages

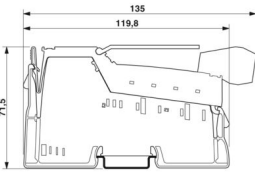
- Remote bus connections using copper technology
- Electrical isolation
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs

Commercial data

Item number	2701150
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI111
GTIN	4046356713771
Weight per piece (including packing)	283.3 g
Weight per piece (excluding packing)	214 g
Customs tariff number	85389091
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	135 mm
Depth	71.5 mm

Notes

Note on application

Note on application	Only for industrial use
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Material specifications

Color (Housing)	green (RAL 6021)
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Interfaces

INTERBUS

Number of interfaces	2 (Connected to functional ground with a capacitor)
Connection method	Inline shield connector
Transmission speed	500 kbps
Transmission physics	Copper

Inline local bus

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

System properties

System limits

Number of supported devices	max. 63
Number of local bus devices that can be connected	max. 63
Number of devices with parameter channel	62
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 (bus)	0 bit
Register length (master)	1024 Byte

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connectors and marking fields
Special properties	Extreme conditions version

Electrical properties

Maximum power dissipation for nominal condition	30 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)
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 DC (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 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

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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

Connection technology

Connection name	Inline connector
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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
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
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)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)

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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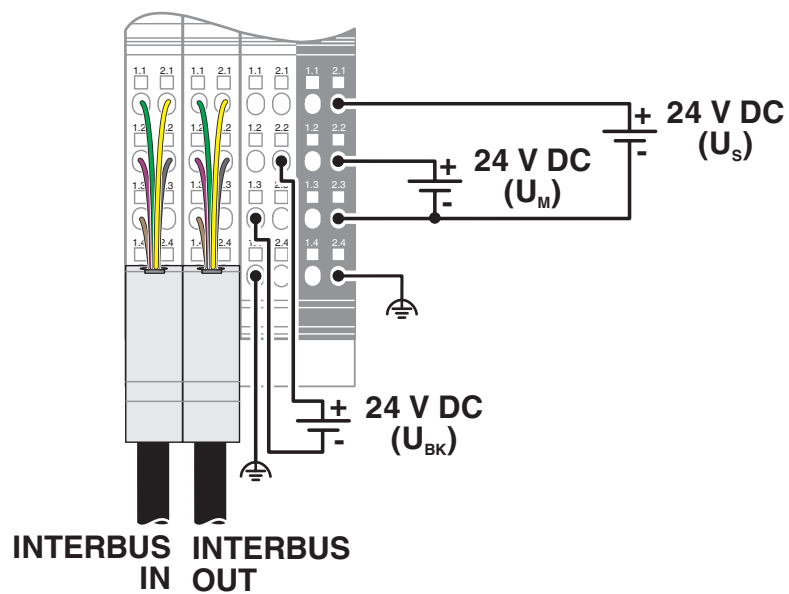
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Drawings

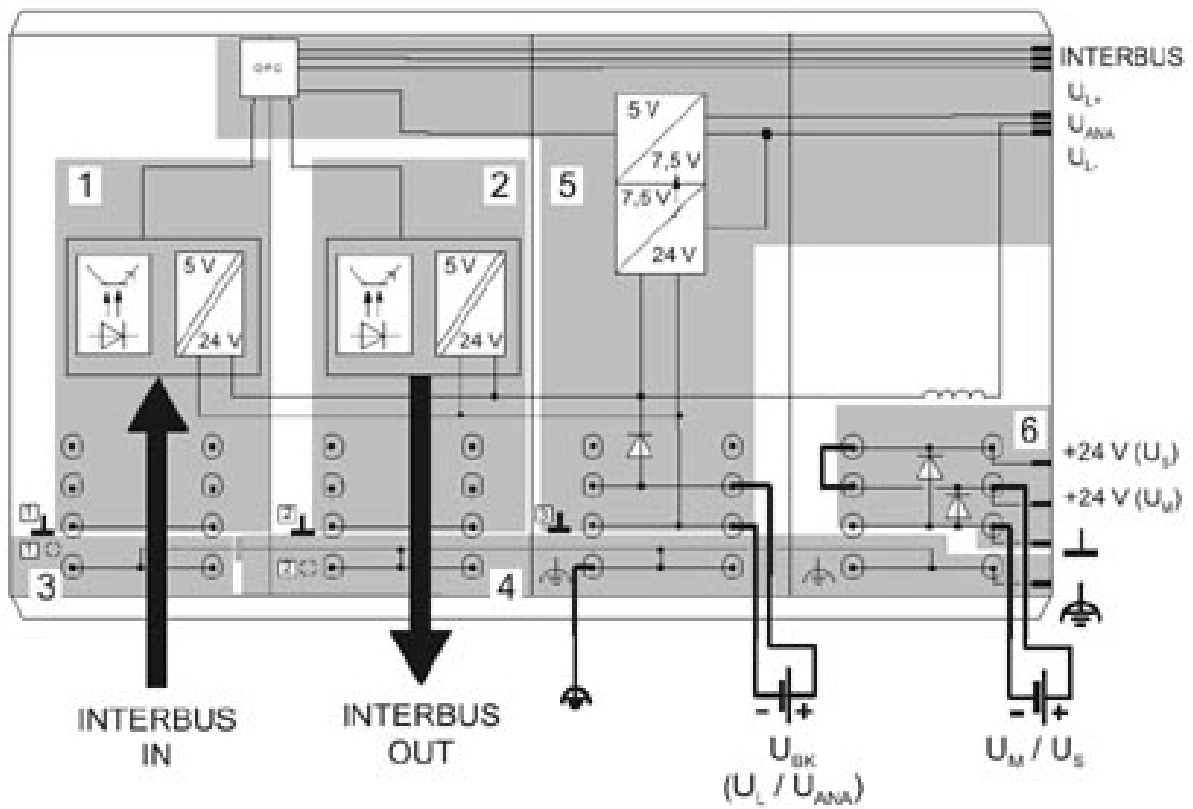
Dimensional drawing



Connection diagram



Block 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)
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com