

# IL ETH BK-PAC - Bus coupler



2702372

<https://www.phoenixcontact.com/us/products/2702372>

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Inline, Bus coupler, Modbus/TCP (UDP), RJ45 jack, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including Inline connector and labeling field

## Product description

The bus coupler is intended for use within a Modbus/TCP (UDP) network. The bus coupler creates the link to the Inline I/O system and the industrial I/O signals connected to it. Up to 63 Inline devices can be connected to the bus coupler. The bus coupler supports a maximum of 16 PCP devices.

## Your advantages

- 2 Ethernet ports (with integrated switch)
- Transmission speed of 10 Mbps and 100 Mbps
- Automatic detection of the transmission speed in the local bus (500 kbps or 2 Mbps)
- Support for three branch terminals as a remote bus branch (32 remote bus devices in total)
- Firmware can be updated
- Data exchange via OPC server supported
- Software interface for access via TCP/IP: Device Driver Interface (DDI)
- Web-based management
- Security in the network: Port disconnection possible via web-based management

## Commercial data

Item number	2702372
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI11B
GTIN	4055626399386
Weight per piece (including packing)	167 g
Weight per piece (excluding packing)	131 g
Customs tariff number	85176200
Country of origin	DE

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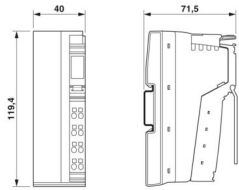


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## Technical data

### Dimensions

Dimensional drawing	
Width	40 mm
Height	119.4 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Material specifications

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

Supported protocols	Modbus/TCP (UDP)
	SNMP
	HTTP
	TFTP
	FTP
	BootP
	DHCP
DCP	

#### Modbus/TCP (UDP)

Number of interfaces	2
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps
Transmission physics	Ethernet in RJ45 twisted pair

#### Inline local bus

Number of interfaces	1
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (automatic detection, no combined system)

## System properties

### System limits

Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63
Number of devices with parameter channel	max. 16

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Number of supported branch terminals with remote bus branch	3
Programming data	
Register length (master)	512 Byte

## Product properties

Product type	I/O component
Product family	Inline
Type	modular
Mounting position	any
Scope of supply	including Inline connector and labeling field

## Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

## Electrical properties

Maximum power dissipation for nominal condition	3.8 W
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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. 0.95 A (with max. number of connected I/O terminal blocks) typ. 74 mA (no local bus devices connected)

## Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC
Power supply	max. 0.8 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

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

Supply voltage	24 V DC (via Inline connector)
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 Inline connector)
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: Ethernet interface 1 / Ethernet interface 2	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / logic ( $U_{BK}$ , $U_L$ , $U_{ANA}$ )	1500 V AC, 50 Hz, 1 min

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Test voltage: Ethernet interface 1 / I/O ( $U_M$ , $U_S$ )	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / functional ground	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / logic ( $U_{BK}$ , $U_L$ , $U_{ANA}$ )	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / I/O ( $U_M$ , $U_S$ )	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / functional ground	1500 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: Communications power ( $U_{BK}$ , $U_L$ , $U_{ANA}$ ) / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: I/O ( $U_M$ , $U_S$ ) / 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 <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)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 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	25g

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any

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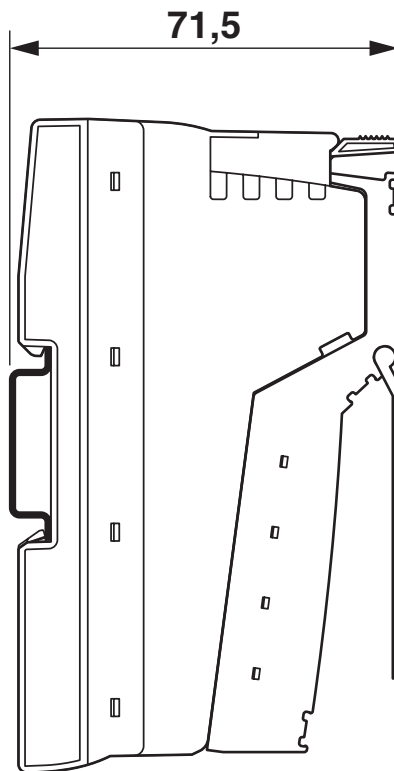
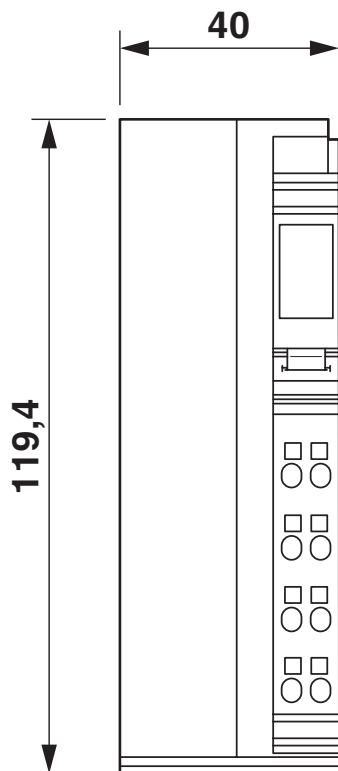
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## Drawings

Dimensional drawing



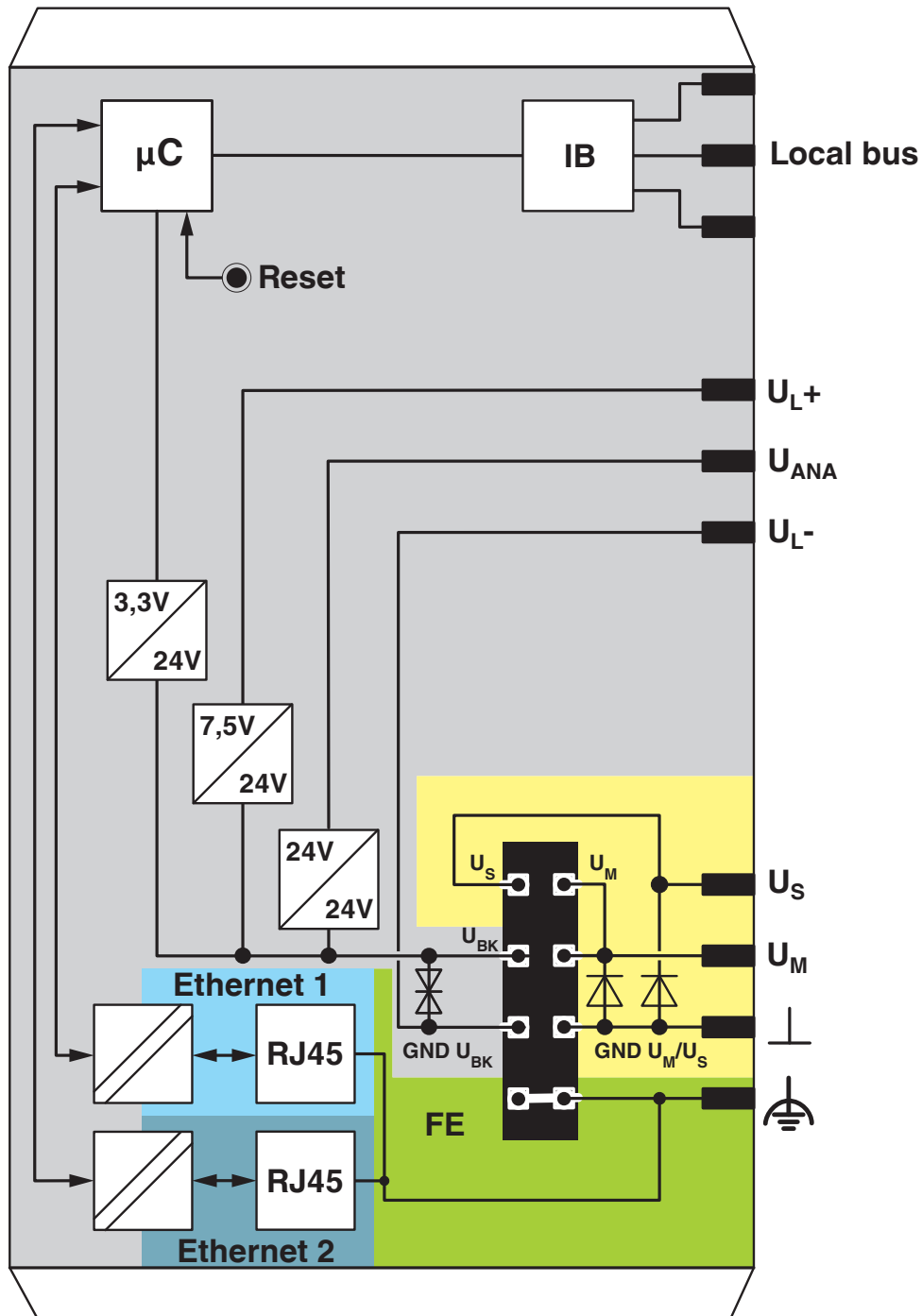
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Block diagram



Internal wiring of connections

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## Approvals

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**cULus Listed**

Approval ID: E238705

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## Classifications

### ECLASS

ECLASS-13.0	27242608
ECLASS-15.0	27242608

### ETIM

ETIM 10.0	EC001604
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### 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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