# IL ETH BK-PAC - Bus coupler

2702372

https://www.phoenixcontact.com/nl/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

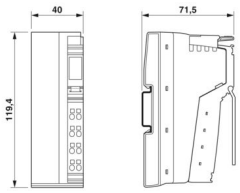
- 2 Ethernet ports (with integrated switch)
- Transmission speed of 10 Mbps and 100 Mbps
- Automatic detection of the transmission speed in the local bus (500 kbps or 2 Mbps)
- Support for three branch terminals as a remote bus branch (32 remote bus devices in total)
- Firmware can be updated
- Data 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 | DRI11B |
| 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 |

## Technical data

### Dimensions

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

### Notes

Note on application

| | |
|---|---|
| Note on application | Only for industrial use |

### 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 |
| Number of supported branch terminals with remote bus branch | 3 |

Module

| | |
|---|---|
| ID code (hex) | none |

## Product properties

| | |
|---|---|
| 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 |

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 |
| 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 |

### Inline connector

| | |
|---|---|
| Connection method | Spring-cage connection |
| Conductor cross-section, rigid | 0.08 mm² ... 1.5 mm² |
| Conductor cross-section, flexible | 0.08 mm² ... 1.5 mm² |
| 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) |

## Standards and regulations

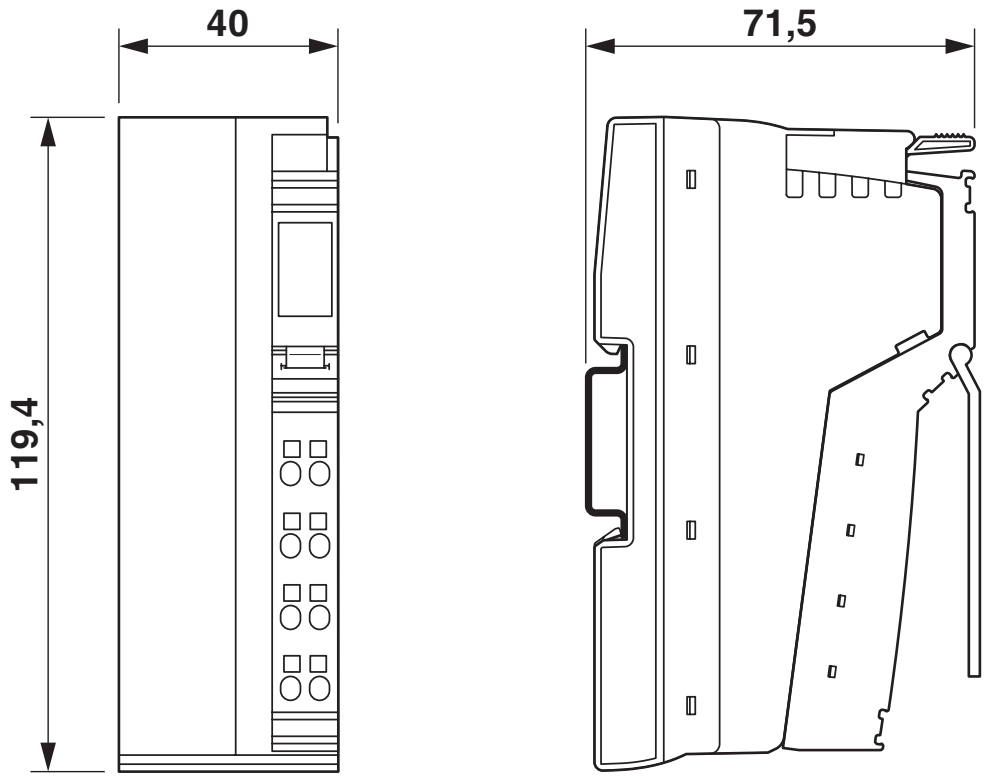
| | |
|---|---|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |

## Mounting

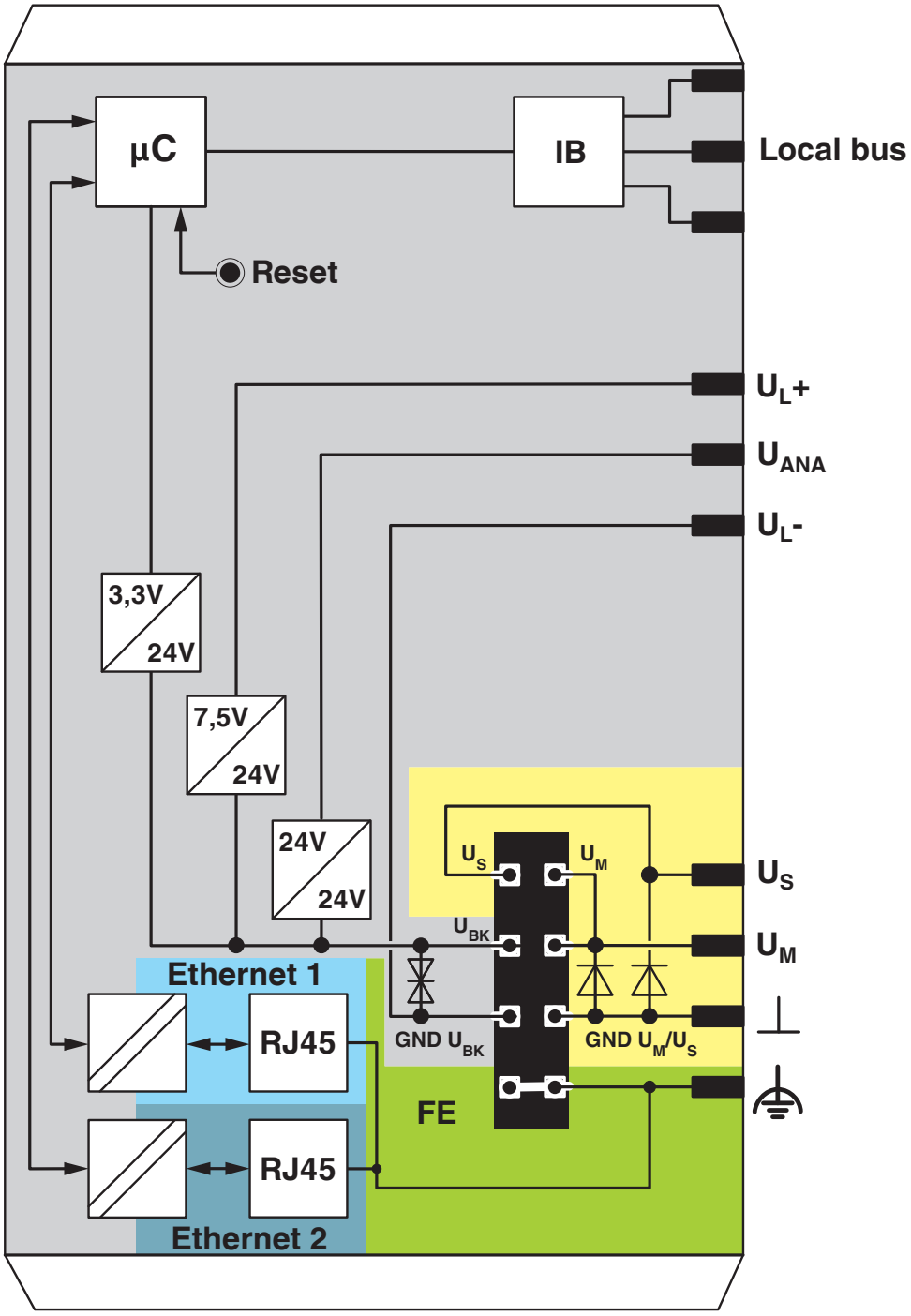
| | |
|---|---|
| Mounting type | DIN rail mounting |
| Mounting position | any |

## Drawings

Dimensional drawing



Block diagram




Internal wiring of connections

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/nl/products/2702372

**cULus Listed**
Approval ID: E238705

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27242608 |
| ECLASS-15.0 | 27242608 |

### ETIM

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|---|---|
| ETIM 10.0 | EC001604 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 32151600 |

## 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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