

# AXL P BK ETH - Bus coupler



1213488

<https://www.phoenixcontact.com/us/products/1213488>

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Axioline P, Bus coupler, Modbus/TCP, RJ45 jack, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and connectors

## Product description

The bus coupler is intended for use within a Modbus/TCP network. The bus coupler creates the link to the Axioline P I/O system and the industrial I/O signals connected to it. Up to 22 Axioline P I/O modules can be connected to the bus coupler.

## Your advantages

- 2 Ethernet ports (with integrated switch)
- Transmission speed of 100 Mbps
- Web-based management
- Firmware can be updated through Web-based manager
- Configuring the connected Axioline P I/O modules via web-based management
- Hot-swappable
- Bus coupler redundancy available with a second AXL P BK ETH
- Redundancy manager function block library available in PLCnext Engineer
- High temperature operating range

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1213488       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DR06          |
| Product key                          | DRIP1B        |
| GTIN                                 | 4063151284497 |
| Weight per piece (including packing) | 325 g         |
| Weight per piece (excluding packing) | 191.2 g       |
| Customs tariff number                | 85176200      |
| Country of origin                    | TW            |

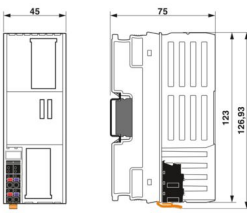
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## Technical data

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 45 mm  |
| Height              | 126.93 mm  |
| Depth               | 75 mm  |
| Note on dimensions  | The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715). |

### Notes

|                         |   |
|-------------------------|---|
| Note on application     |   |
| Note on application     | Only for industrial use   |
| Utilization restriction |   |
| EMC note                | EMC: class A product, see manufacturer's declaration in the download area |
| Utilization restriction |   |
| CCCex note              | Use in potentially explosive areas is not permitted in China.             |

### Material specifications

|                 |                 |
|-----------------|-----------------|
| Color (Housing) | gray (RAL 7042) |
|-----------------|-----------------|

### Interfaces

|                     |            |
|---------------------|------------|
| Supported protocols | Modbus/TCP |
|                     | HTTP       |
|                     | BootP      |
|                     | DHCP       |

#### Modbus/TCP

|                               |                                   |
|-------------------------------|-----------------------------------|
| Number of interfaces          | 2                                 |
| Connection method             | RJ45 jack                         |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed            | 100 Mbps (full duplex)            |
| Transmission physics          | Ethernet in RJ45 twisted pair     |

#### Axioline P local bus

|                      |                 |
|----------------------|-----------------|
| Number of interfaces | 1               |
| Connection method    | Bus base module |

# AXL P BK ETH - Bus coupler



1213488

<https://www.phoenixcontact.com/us/products/1213488>

|                    |          |
|--------------------|----------|
| Transmission speed | 100 Mbps |
|--------------------|----------|

## System properties

### System limits

|                             |                       |
|-----------------------------|-----------------------|
| Number of supported devices | max. 22 (per station) |
|-----------------------------|-----------------------|

## Product properties

|                   |  |
|-------------------|--|
| Product type      | I/O component                            |
| Product family    | Axioline P                               |
| Type              | block modular                            |
| Mounting position | any (observe temperature derating)       |
| Scope of supply   | including bus base module and connectors |

### 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 | 5 W |
|---|-----|

### Potentials: Supply of the bus coupler ( $U_L$ )

|                      |   |
|----------------------|---|
| Supply voltage       | 24 V DC   |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple)      |
| Current draw         | max. 4.15 A (19.2 V DC)<br>typ. 125 mA (24 V DC)                        |
| Protective circuit   | Surge protection; electronic<br>Reverse polarity protection; electronic |

### Potentials: Axioline P local bus supply ( $U_{BUS}$ )

|                   |                                |
|-------------------|--------------------------------|
| Supply voltage    | 5 V DC (via bus base module)   |
| Power supply unit | max. 3 A (via bus base module) |

### 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 / 24 V communications voltage ( $U_L$ ) feed-in | 1500 V AC, 50 Hz, 1 min |
| Test voltage: Ethernet interface 2 / 24 V communications voltage ( $U_L$ ) feed-in | 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 / functional ground                             | 1500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V communications voltage ( $U_L$ ) feed-in / functional ground    | 500 V AC, 50 Hz, 1 min  |

## Connection data

### Connection technology

|                 |              |
|-----------------|--------------|
| Connection name | Power supply |
|-----------------|--------------|

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1213488

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|                               |  |
|-------------------------------|--|
| Note on the connection method | Please observe the information provided on conductor cross-sections in the "Axoline P: System and installation" user manual. |
|-------------------------------|--|

## Power supply

|                                   |  |
|-----------------------------------|--|
| Connection method                 | Push-in connection   |
| Note on the connection method     | Please observe the information provided on conductor cross-sections in the "Axoline P: System and installation" user manual. |
| Conductor cross-section, rigid    | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross-section, flexible | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross-section AWG       | 24 ... 16  |
| Stripping length                  | 8 mm   |

## Environmental and real-life conditions

### Ambient conditions

|  |  |
|--|--|
| Ambient temperature (operation)          | -40 °C ... 70 °C (Mounting position: panel mounting on horizontal DIN rail)<br>-40 °C ... 50 °C (Mounting position: any) |
| Degree of protection                     | IP20   |
| Air pressure (operation)                 | 70 kPa ... 106 kPa (up to 2000 m above sea level)  |
| Air pressure (storage/transport)         | 70 kPa ... 106 kPa (up to 2000 m above sea level)  |
| Ambient temperature (storage/transport)  | -40 °C ... 85 °C   |
| Permissible humidity (operation)         | 5 % ... 95 % (non-condensing)  |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)  |

### Mechanical test

|  |     |
|--|-----|
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | 2g  |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27              | 15g |
| Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27   | 10g |

## Standards and regulations

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

## Approvals

### ATEX

|                |                          |
|----------------|--------------------------|
| Identification | Ⓜ II 3 G Ex ec IIC T4 Gc |
| Certificate    | IBExU 18ATEXB018 X       |

### IECEX

|                |                    |
|----------------|--------------------|
| Identification | Ex ec IIC T4 Gc    |
| Certificate    | IECEX IBE 18.0023X |

### UKCA Ex (UKEX)

|                |                         |
|----------------|-------------------------|
| Identification | II 3G Ex ec IIC T4 Gc X |
| Certificate    | PxCAI22UKEx2316390X     |

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## Ex data

|                  |  |
|------------------|--|
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D T4<br>Class I, Zone 2, IIC T4 |
|------------------|--|

## Mounting

|                   |                                    |
|-------------------|------------------------------------|
| Mounting type     | DIN rail mounting                  |
| Mounting position | any (observe temperature derating) |

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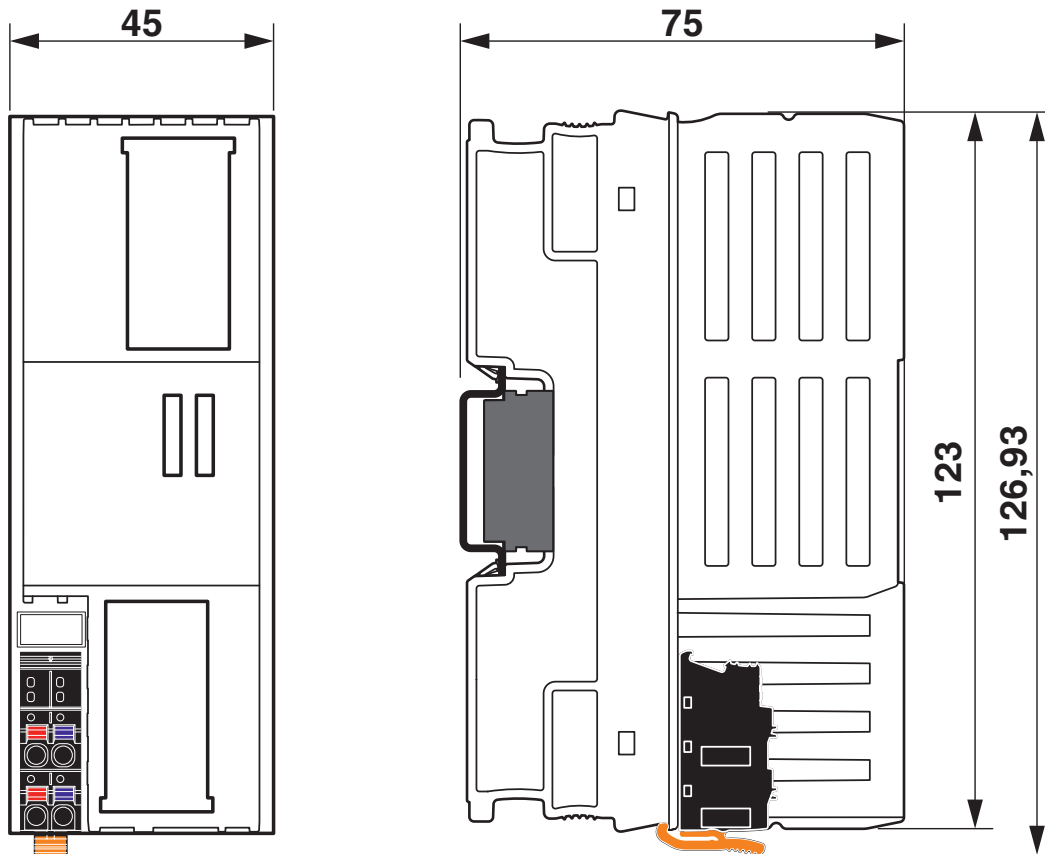
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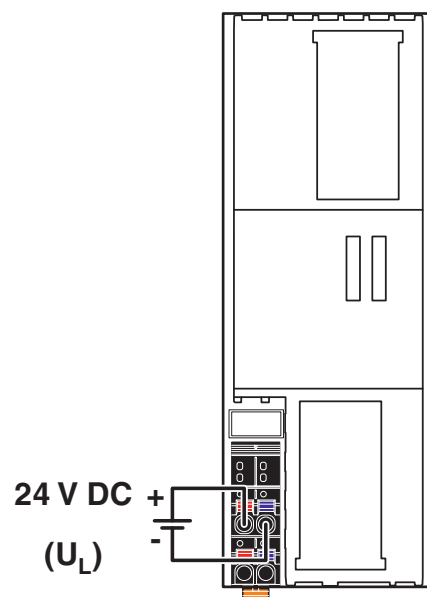


## Drawings

Dimensional drawing



Connection diagram

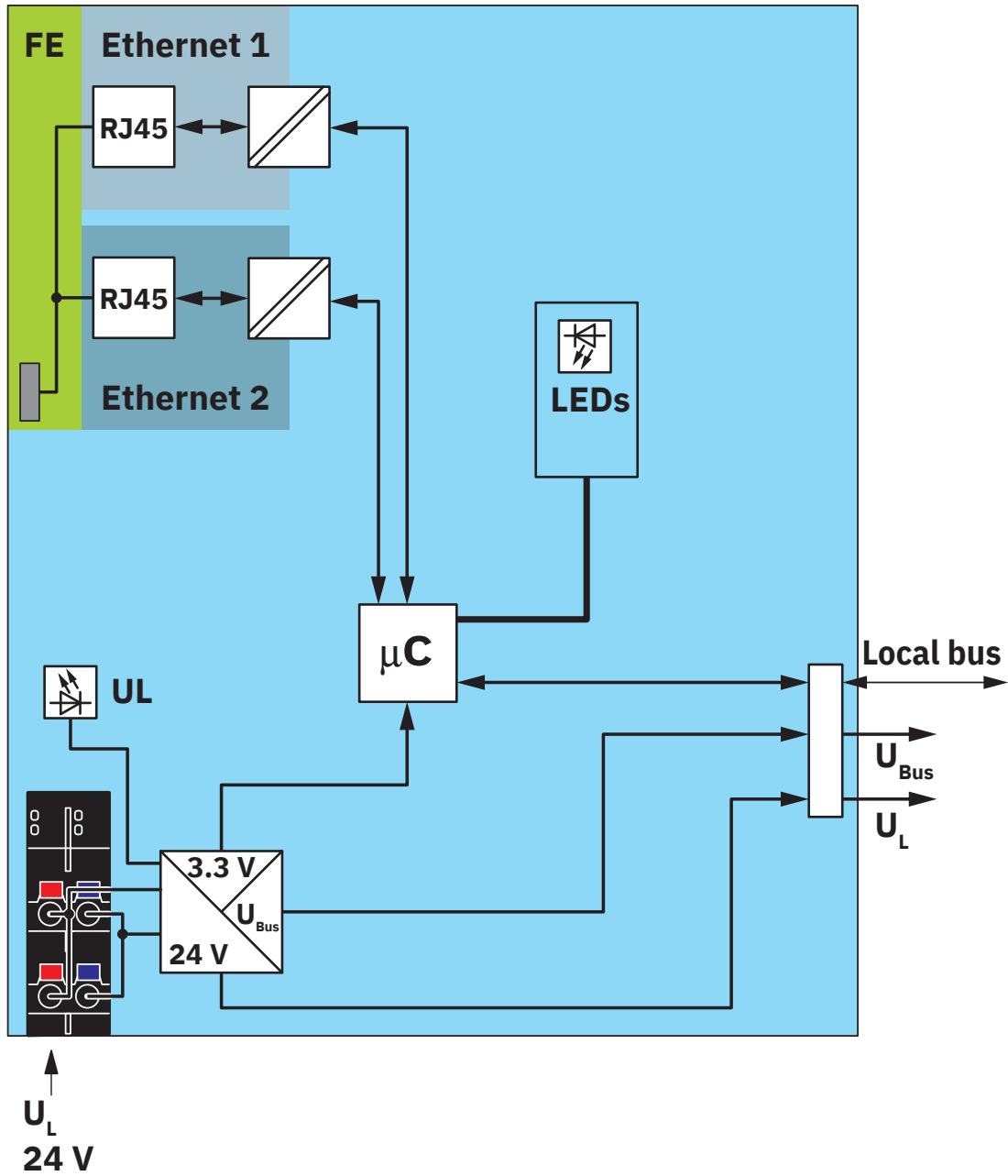


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Block diagram



Internal wiring of the terminal points

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1213488>



**cULus Listed**

Approval ID: E238705



**IECEX**

Approval ID: IECEX IBE 18.0023X



**CCC**

Approval ID: 2021122310114877



**cUL Listed**

Approval ID: E196811



**UL Listed**

Approval ID: E196811



**ATEX**

Approval ID: IBExU 18 ATEX B018 X

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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-25   |
|  | 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)  |
|                                     | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |

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