

# AXL P BK PN AF - Bus coupler



2316390

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Axioline P, Bus coupler, PROFINET, RJ45 socket, auto negotiation and auto crossing, 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 PROFINET network. The bus coupler creates the link to the Axioline P PROFIBUS PA segments and the PROFIBUS PA signals connected to them. Up to eight redundant Axioline P PROFIBUS PA segments can be connected to the bus coupler.

## Your advantages

- 2 Ethernet ports (with integrated switch)
- PROFINET RT
- Supports S2 system redundancy
- Supports eight redundant PROFIBUS PA segments with up to 256 PROFIBUS PA instruments
- Hot-swappable
- Firmware can be updated
- High temperature operating range

## Commercial data

Item number	2316390
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR06
Product key	DRIP1A
GTIN	4055626368382
Weight per piece (including packing)	321 g
Weight per piece (excluding packing)	259 g
Customs tariff number	85176200
Country of origin	US

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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.

### Interfaces

Supported protocols	PROFINET
	LLDP
	SNMP
	MRP
	DCP

Axioline P local bus	
Number of interfaces	1
Connection method	Bus base module
Transmission speed	100 Mbps

PROFINET	
Number of interfaces	2
No. of channels	2
Connection method	RJ45 socket, auto negotiation and auto crossing
Transmission speed	100 Mbps (Full duplex)
Transmission physics	Ethernet in RJ45 twisted pair

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## Fieldbus: Local bus gateway

Max. number of local bus devices	63 (Redundant PROFIBUS PA segments and AXL P I/O modules. Consider the logic current consumed by the devices.)
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## System properties

### System limits

Number of supported devices	max. 8 (per redundant PROFIBUS PA segments)
	max. 63 (per station)

### PROFINET

Device function	PROFINET device
Specification	Version 2.3
Conformance Class	Conformance Class C
Device ID	0148 <sub>hex</sub>
Vendor ID	00B0 <sub>hex</sub>

## Product properties

Product type	I/O component
Product family	Axioline P
Type	block modular
Mounting position	any
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
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### 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)
	max. 3 A (via bus base module)
	125 mA (24 V DC)
Protective circuit	Surge protection; electronic
	Reverse polarity protection; electronic

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

Supply voltage	5 V DC (via bus base module)
Power supply unit	2 A
Current draw	3 A (via bus base module)

### Electrical isolation/isolation of the voltage ranges

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

## Standards and regulations

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

### ATEX

Identification	⊕ II 3 G Ex ec IIC T4 Gc
Certificate	IBExU 18ATEXB018 X

### IECEX

Identification	Ex ec IIC T4 Gc
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Certificate	IECEX IBE 18.0023X
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## UKCA Ex (UKEX)

Identification	II 3G Ex ec IIC T4 Gc X
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Certificate	PxCAI22UKEEx2316390X
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## Ex data

UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T4 Class I, Zone 2, IIC T4
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## Mounting

Mounting type	DIN rail mounting
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Mounting position	any
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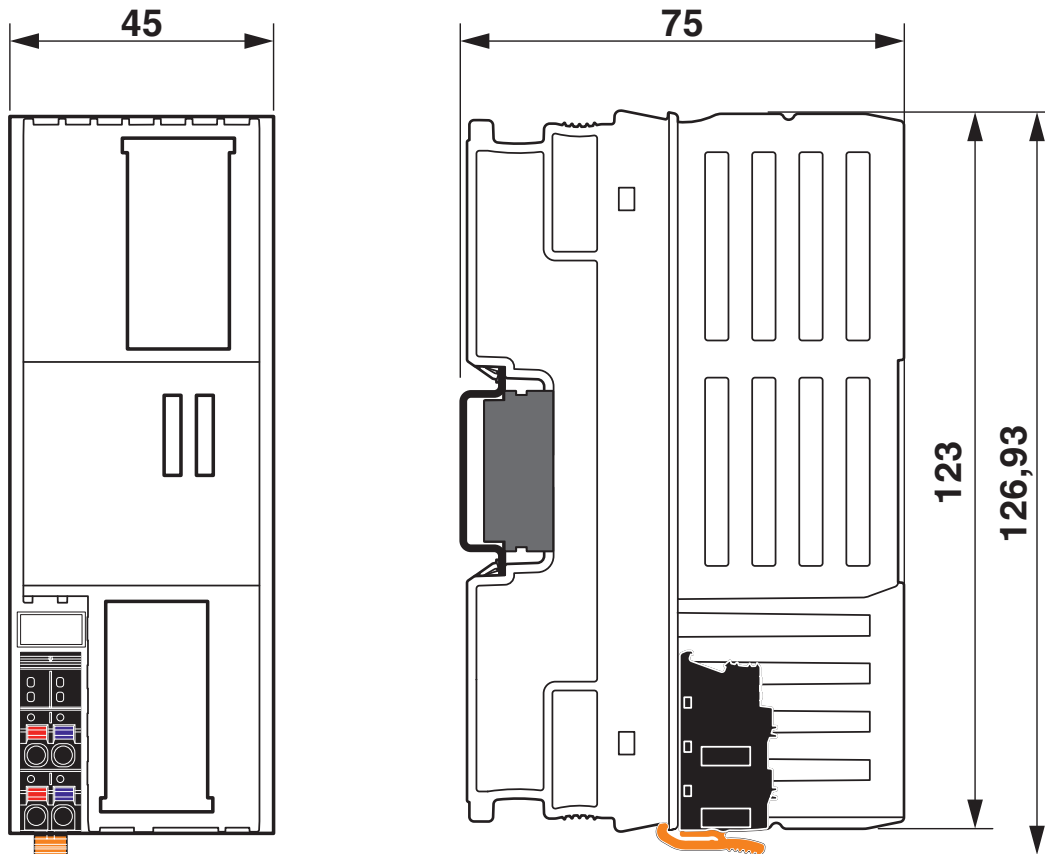
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## Drawings

Dimensional drawing



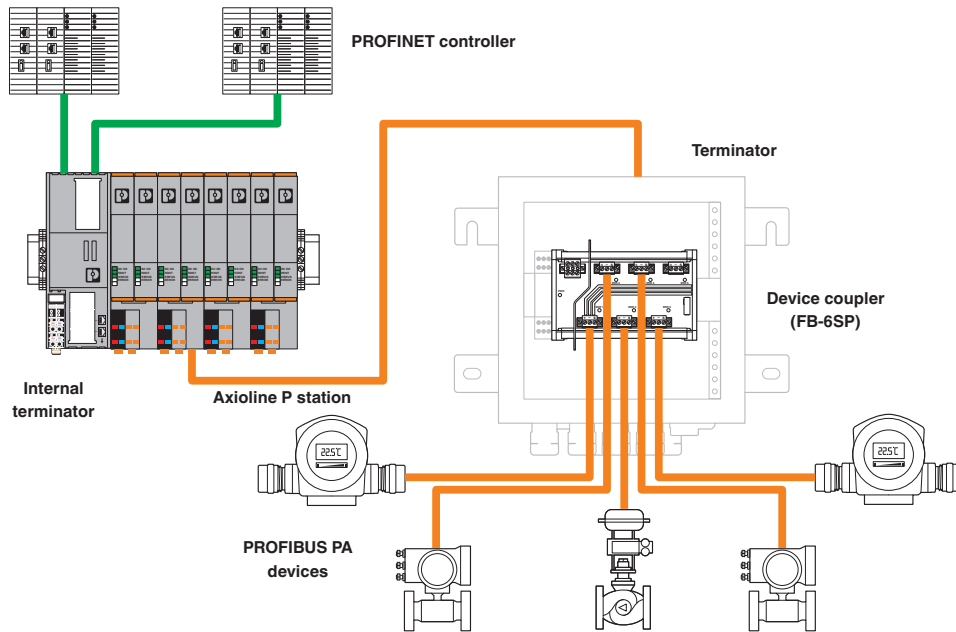
# AXL P BK PN AF - Bus coupler

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## Application drawing



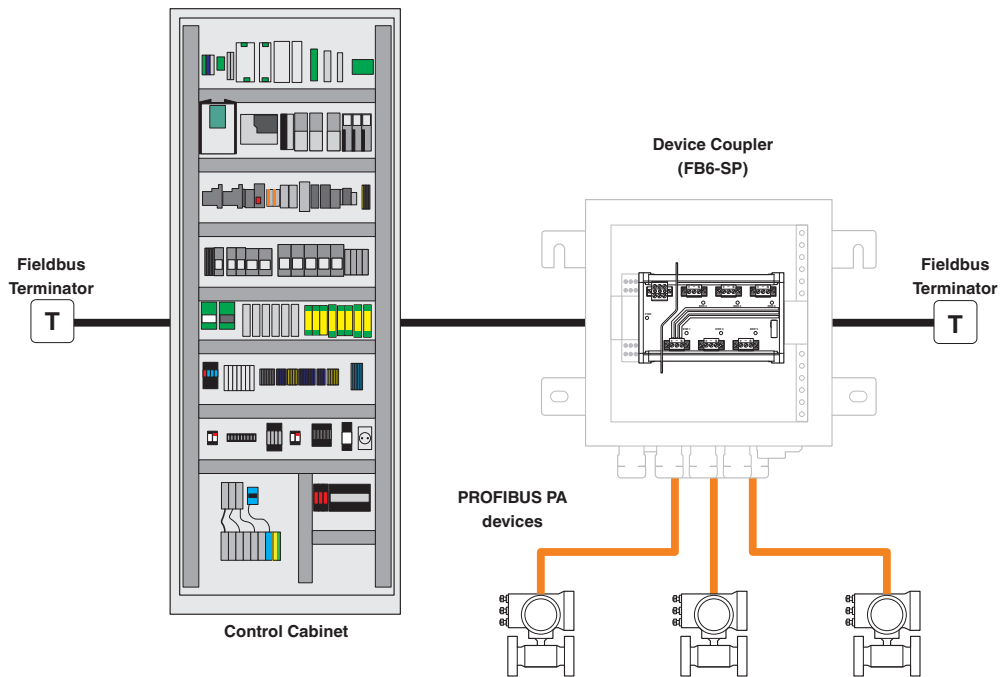
# AXL P BK PN AF - Bus coupler

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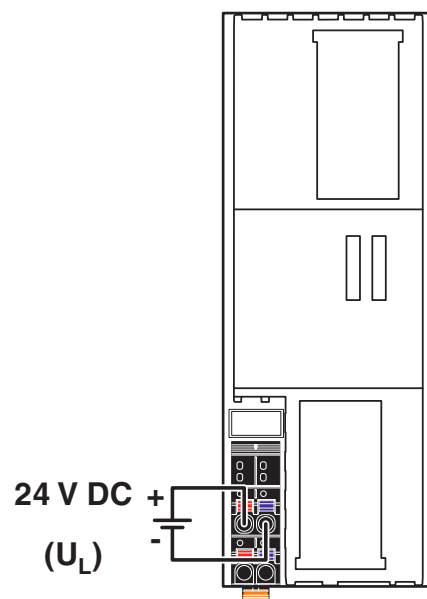
<https://www.phoenixcontact.com/us/products/2316390>



Application drawing



Connection diagram

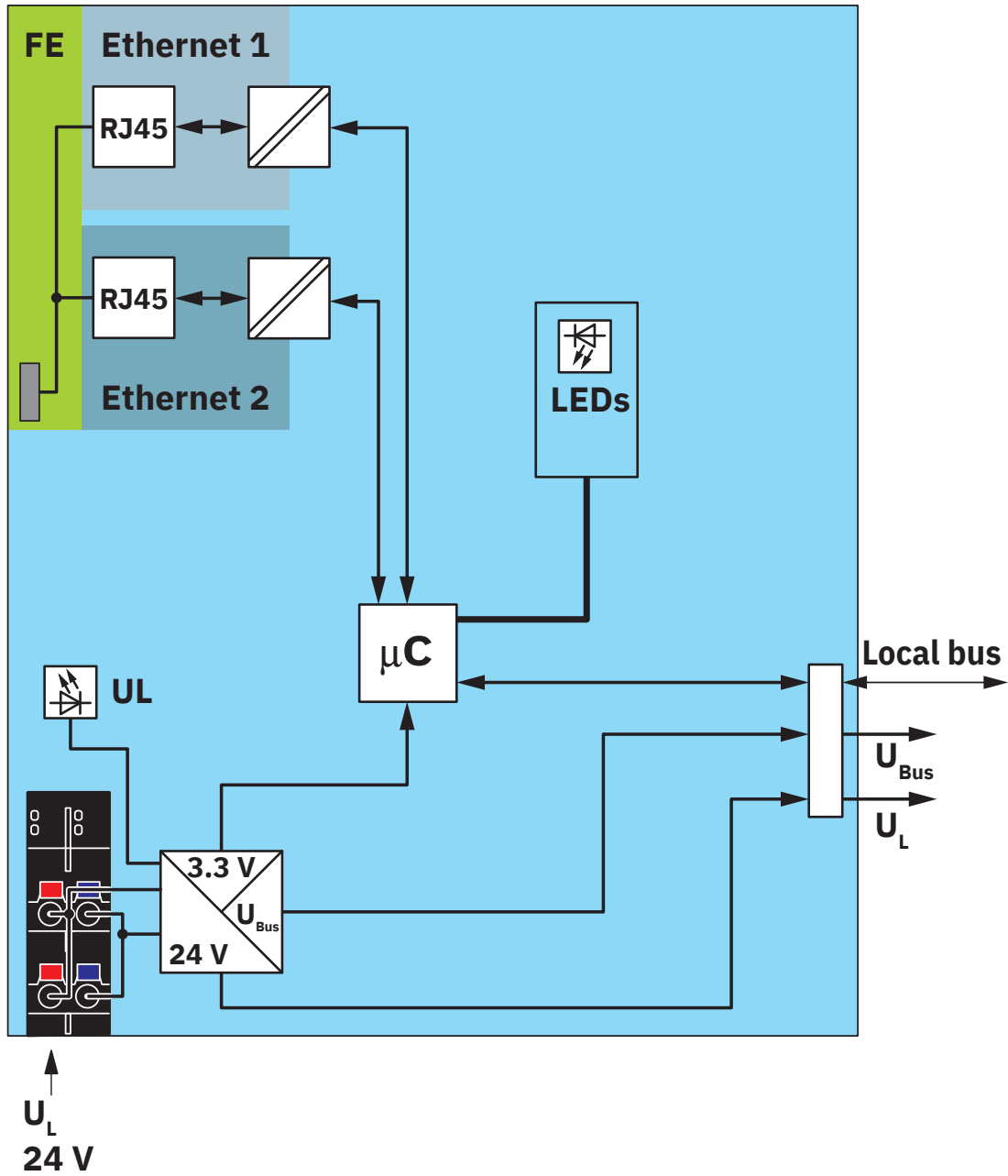


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Block diagram



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/2316390>



**cULus Listed**

Approval ID: E238705



**IECEX**

Approval ID: IECEX IBE 18.0023X



**cUL Listed**

Approval ID: E196811



**UL Listed**

Approval ID: E196811



**ATEX**

Approval ID: IBExU 18 ATEX B018 X



**CCC**

Approval ID: 2021122310114877

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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-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)
SCIP	0ed5392b-61dc-4898-8cab-de1bf8266d85

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