

# AXL F BK PN SC-RJ - Bus coupler



2400165

<https://www.phoenixcontact.com/us/products/2400165>

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Axioline F, Bus coupler, PROFINET, SC-RJ socket, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connector

## Product description

The bus coupler is intended for use within a PROFINET network. The bus coupler creates the link to the Axioline F I/O system and the industrial I/O signals connected to it. Up to 63 Axioline F devices can be connected to the bus coupler. Device descriptions for Phoenix Contact controllers are integral parts of the engineering tools PC Worx and PLCnext Engineer. Corresponding GSDML files are available for integrating the Axioline F station into other programming systems. These files can be downloaded at: [phoenixcontact.net/product/2400165](https://www.phoenixcontact.net/product/2400165).

## Your advantages

- 2 x fiber optic connection according to SC-RJ standard for polymer and HCS (PCF) fibers
- Supports PROFI-safe
- Supports PROFI-energy
- PROFINET RT and IRT
- Minimum cycle time of PROFINET for RT and IRT is 250  $\mu$ s
- Firmware can be updated
- Runtime in bus coupler is negligible (almost 0  $\mu$ s)
- Typical cycle time of the Axioline F local bus is around 10  $\mu$ s
- Web-based management
- Safe analog value processing with SAFE AI and other components

## Commercial data

Item number	2400165
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DR14
Product key	DR121A
GTIN	4055626048000
Weight per piece (including packing)	227.6 g
Weight per piece (excluding packing)	144 g
Customs tariff number	85389091
Country of origin	DE

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## Technical data

### Dimensions

Dimensional drawing	
Width	45 mm
Height	126.1 mm
Depth	74 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

### Interfaces

Supported protocols	PROFINET
	TFTP
	PTCP
	LLDP
	SNMP
	MRP
	DCP
	DDI
	BootP (BootP only to perform firmware updates)

#### PROFINET

Number of interfaces	2
Connection method	SC-RJ socket
Transmission speed	100 Mbps (acc. to PROFINET standard)
Wavelength	660 nm

#### Axioline F local bus

Number of interfaces	1
Connection method	Bus base module
Transmission speed	100 Mbps

#### Service

Number of interfaces	1
Connection method	Micro USB type B

## System properties

### System limits

Amount of process data ()	max. 262 Byte (Input)
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Amount of process data ()	max. 262 Byte (Output)
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63

## PROFINET

Device function	PROFINET device
Conformance Class	Conformance Class C
Device ID	1002 <sub>hex</sub>
Vendor ID	00B0 <sub>hex</sub>

## Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any
Scope of supply	including bus base module and Axioline F connector

## Insulation characteristics

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

## Electrical properties

Potentials: Communications power  $U_L$  feed-in (the supply of the Axioline F local bus  $U_{BUS}$  is generated from  $U_L$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 610 mA (with 2 A at $U_{BUS}$ for the I/Os and $U_L = 24$ V)
Protective circuit	Surge protection; electronic Reverse polarity protection; electronic

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

Supply voltage	5 V DC (via bus base module)
Power supply unit	max. 2 A

## Connection data

### Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline F: system and installation" user manual.

### Axioline F connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline F: 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

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Stripping length	8 mm
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## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Mounting position: panel mounting on horizontal DIN rail)
	-25 °C ... 55 °C (Mounting position: any)
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)	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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## Mounting

Mounting type	DIN rail mounting
	DIN rail mounting
Mounting position	any

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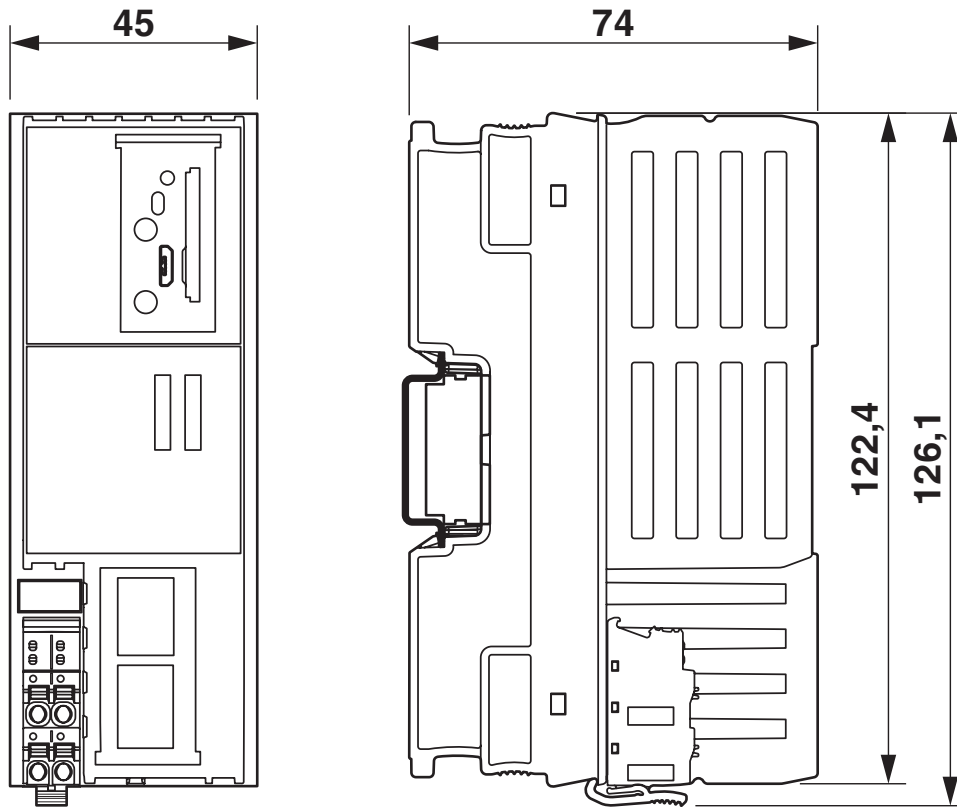


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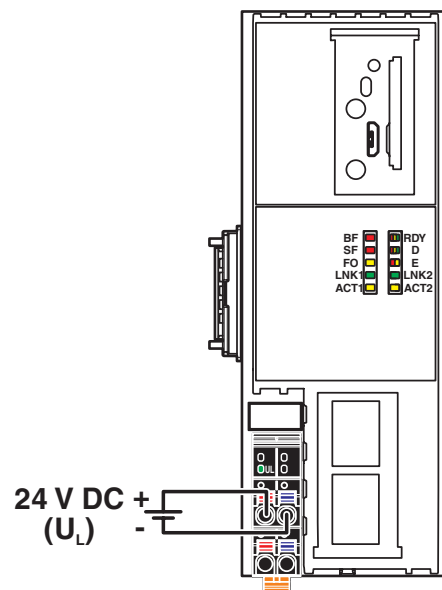
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## Drawings

Dimensional drawing



Connection diagram



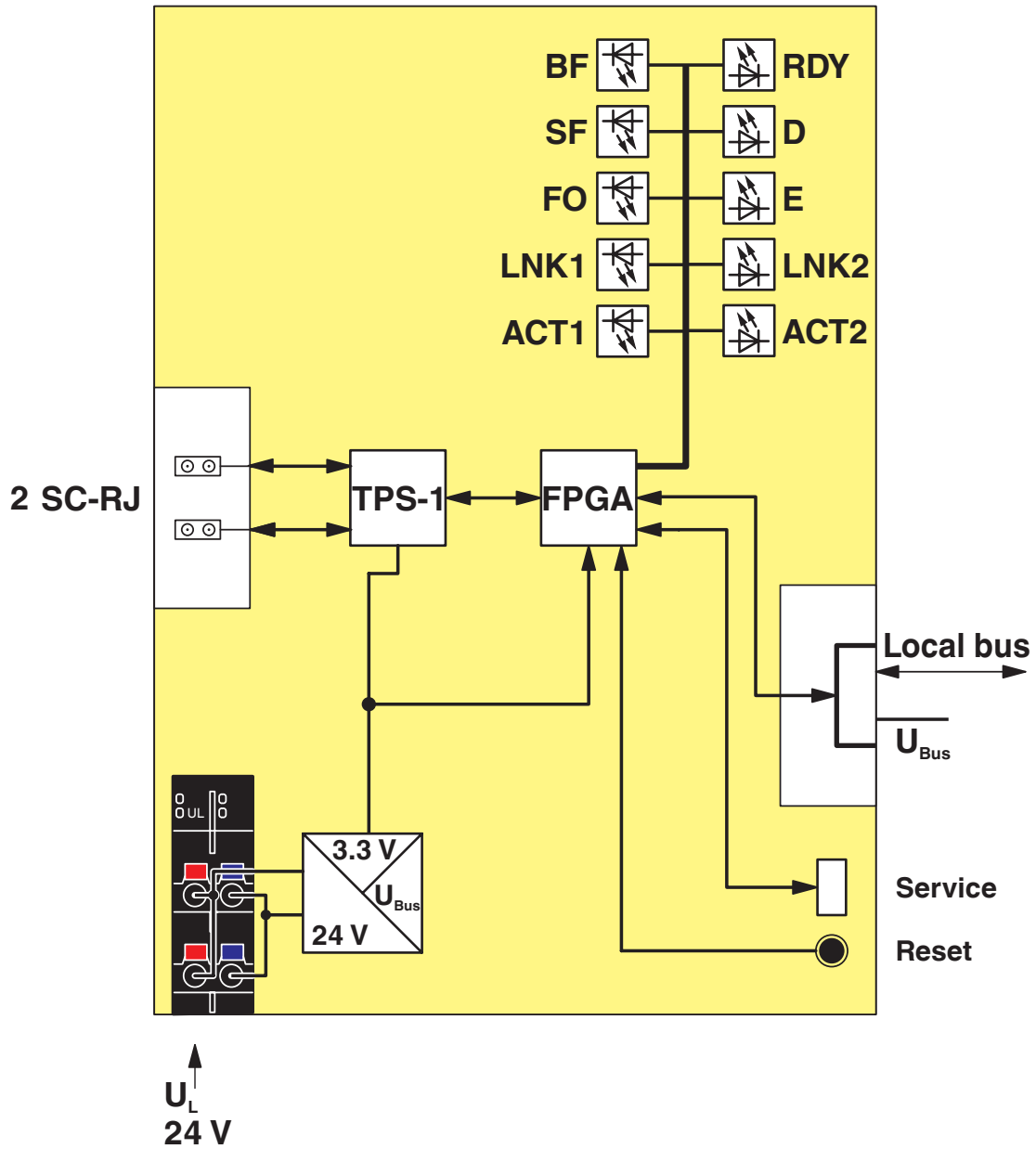
Connection of the cables

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Block diagram



Internal wiring of the terminal points

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## Classifications

### ECLASS

ECLASS-13.0	27242608
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## Environmental product compliance

### 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.)	No substance above 0.1 wt%
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