

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 PROFIsafe
- Supports PROFIenergy
- PROFINET RT and IRT
- Minimum cycle time of PROFINET for RT and IRT is 250 µs
- Firmware can be updated
- Runtime in bus coupler is negligible (almost 0 µs)
- Typical cycle time of the Axioline F local bus is around 10 µs
- 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	DRI21A
Catalog page	Page 101 (C-6-2017)
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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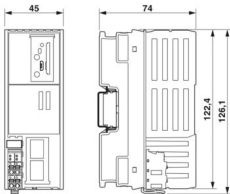


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Technical data

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

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	
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 _{hex}
Vendor ID	00B0 _{hex}

Product properties

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Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any
Scope of delivery	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)
Power consumption	max. 14.64 W (2.0 A on U_{Bus} , $U_L = 24$ 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.

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

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 ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Environmental and real-life conditions

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Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Mounting position: wall 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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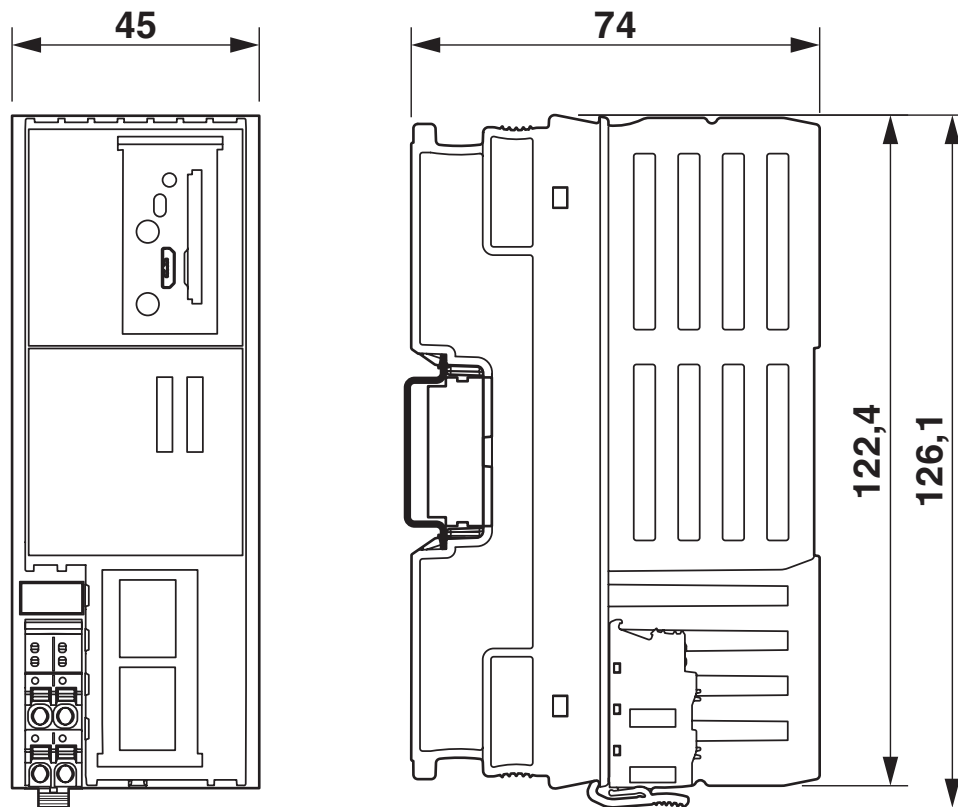
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Drawings

Dimensional drawing



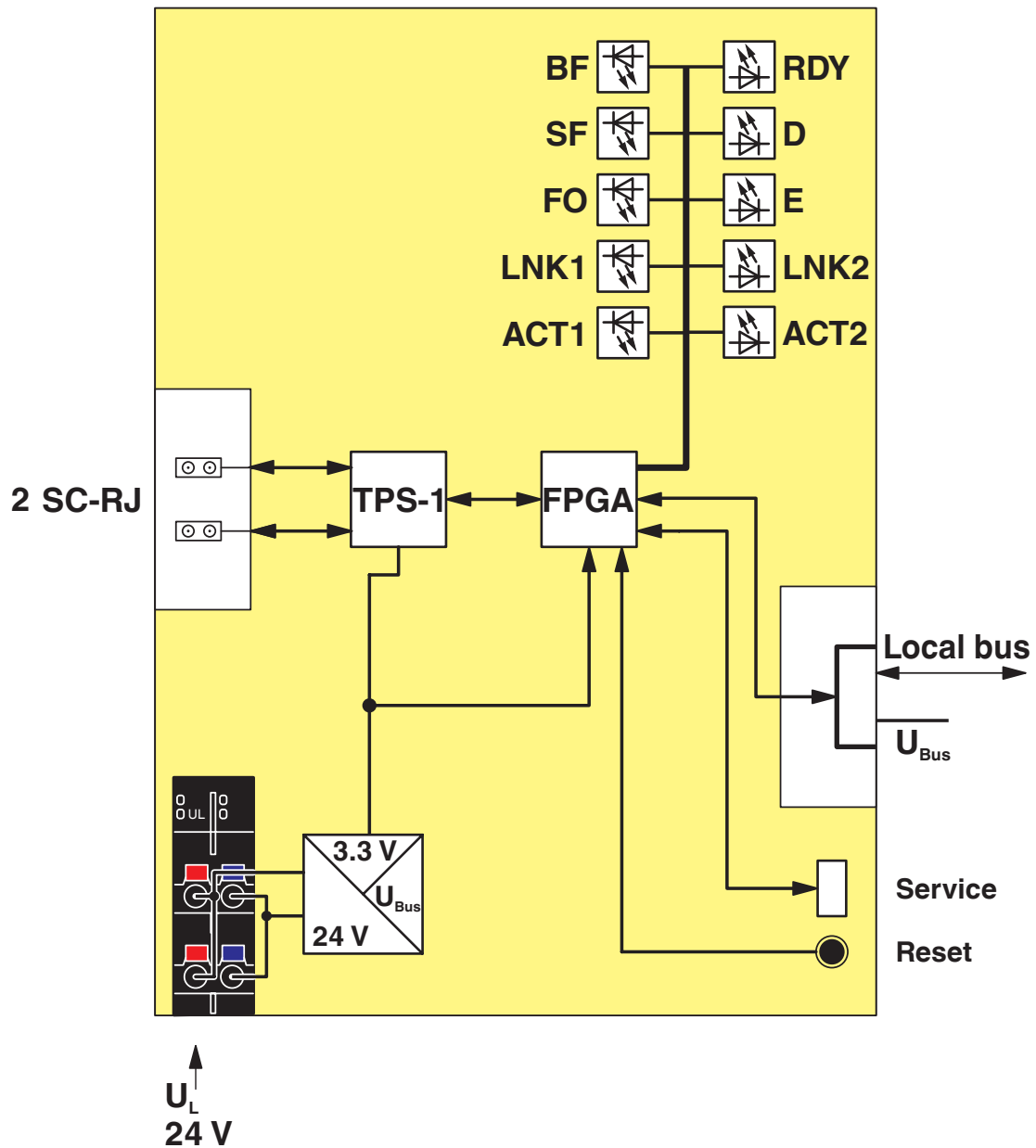
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Block diagram



Internal wiring of the terminal points

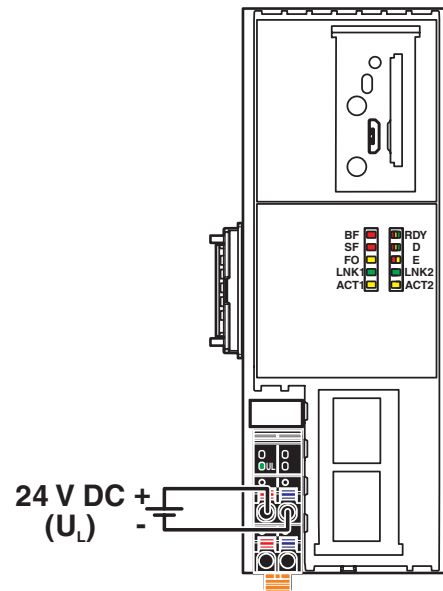
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Connection diagram



Connection of the cables

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Classifications

ECLASS

ECLASS-11.0	27242608
ECLASS-12.0	27242608
ECLASS-13.0	27242608

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Environmental product compliance

China RoHS	
Environment friendly use period (EFUP)	<div>EFUP-50</div> <div>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.</div>
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

AXL F BS BK - Bus connector

2701422

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Axioline F bus base module for housing type BK



VS-SCRJ-POF-FA-IP20 - FO connectors

1654879

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FO connectors, degree of protection: IP20, number of positions: 2, MM, material: Metal, connection method: Push-pull, cable outlet: straight, color: black



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VS-SCRJ-HCS-FA-IP20 - FO connectors

1654866

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FO connectors, degree of protection: IP20, number of positions: 2, MM, material: Plastic, connection method: Cable connection, cable outlet: straight, color: black

VS-SCRJ-HCS-FA-IP20-PN - FO connectors

1404087

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FO connectors, degree of protection: IP20, number of positions: 2, MM, material: Plastic, connection method: mechanical splice, cable outlet: straight, color: black, Ethernet

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VS-PC-2XHCS-200-SCRJ/SCRJ-1 - FO connecting cable

1654934

<https://www.phoenixcontact.com/us/products/1654934>



Assembled FO cable, breakout cable, 200/230 μm PCF fiber, SC-RJ/IP20 to SC-RJ/IP20, for installation inside control cabinets, length: 1 m

VS-PC-2XHCS-200-SCRJ/SCRJ-2 - FO connecting cable

1654947

<https://www.phoenixcontact.com/us/products/1654947>



Assembled FO cable, breakout cable, 200/230 μm PCF fiber, SC-RJ/IP20 to SC-RJ/IP20, for installation inside control cabinets, length: 2 m

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VS-PC-2XHCS-200-SCRJ/SCRJ-5 - FO connecting cable

1654950

<https://www.phoenixcontact.com/us/products/1654950>



Assembled FO cable, breakout cable, 200/230 μ m PCF fiber, SC-RJ/IP20 to SC-RJ/IP20, for installation inside control cabinets, length: 5 m

VS-SCRJ-POF-KONFTOOL-CUT - FO accessories

1657096

<https://www.phoenixcontact.com/us/products/1657096>



SC-RJ cutting tool set, for polymer fiber, for field assembly of SC-RJ/IP20 and SC-RJ/IP67. Push-Pull connectors with fast connection technology, consisting of stripping tool, aramid scissors, SC-RJ cutting tool, microscope, 2x SC-RJ connectors IP20

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VS-SCRJ-POF-KONFTOOL-POLISH - FO accessories

1658820

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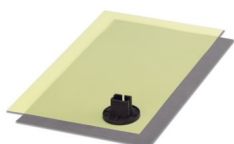


SC-RJ polishing tool set, for polymer fiber, for field assembly of the SC-RJ connector (IP20/IP67) with fast connection technology, with stripping tool, diagonal cutter, aramid scissors, polishing materials, microscope, 2x SC-RJ connector IP20

VS-SCRJ-POF-POLISH - FO accessories

1656673

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Refilling set for VS-SC-RJ-POF-KONFTOOL-POLISH, consisting of two polishing discs and a polisher

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PSM-SET-SCRJ-DUP/2-POF - FO connectors

2708656

<https://www.phoenixcontact.com/us/products/2708656>

FO connectors, degree of protection: IP20, number of positions: 2, MM, material: Metal, connection method: Push-pull, cable outlet: straight



PSM-HCS-KONFTOOL/SC-RJ - Assembly tool

2708876

<https://www.phoenixcontact.com/us/products/2708876>



HCS assembly kit for SC-RJ quick mounting connectors, including stripping blade, stripping pliers, aramide yarn scissors, fiber stripper, microscope, fiber cleaving tool for standard HCS and HCS GI fibers, two SC-RJ connectors for standard HCS fiber, and documentation

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CAB-USB A/MICRO USB B/2,0M - Connecting cable

2701626

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Connecting cable, for connecting the controller to a PC for PC Worx and LOGIC+, USB A to micro USB B, 2 m in length.

SAFE AI - Function block

2400057

<https://www.phoenixcontact.com/us/products/2400057>



Function block library for safety-related analog value acquisition with standard I/O modules. **Please contact the safety hotline (+49 5281 9-462777) before ordering the SAFE AI article.**

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