

Bus coupler - AXL F BK S3 - 2701686

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Axioline F, Bus coupler, Sercos, RJ45 jack, 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 third-generation Sercos® network. It is the link to the Axioline F I/O system. Up to 63 Axioline F devices can be connected to the bus coupler. A corresponding SDDML file is available for integrating the Axioline F station into the programming system. It can be downloaded at: phoenixcontact.net/product/2701686

Your advantages

- ✓ 2 RJ45 connections
- ✓ Rotary encoding switch
- ✓ Supports Sercos V1.3
- ✓ FSP-IO (Function Specific Profile-IO) for modular I/O devices
- ✓ 8 connections
- ✓ Firmware can be updated
- ✓ Typical cycle time of the Axioline F local bus is around 10 µs



Key Commercial Data

| | |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc |
| GTIN |  4 046356 790109 |
| GTIN | 4046356790109 |
| Weight per Piece (excluding packing) | 220.000 g |
| Custom tariff number | 85389091 |
| Country of origin | Germany |

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Technical data

Dimensions

| | |
|--------------------|-------------------------------------------------------------------------------|
| Width | 45 mm |
| Height | 126.1 mm |
| Depth | 74 mm |
| Note on dimensions | The depth is valid when a TH 35-7,5 DIN rail is used (according to EN 60715). |

Ambient conditions

| | |
|------------------------------------------|----------------------------------------------------------------------------|
| Ambient temperature (operation) | -25 °C ... 60 °C (Mounting position: wall mounting on horizontal DIN rail) |
| | -25 °C ... 55 °C (Mounting position: any) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| 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) |
| Degree of protection | IP20 |

Connection data

| | |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Designation | 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 solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 1.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 1.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 16 |
| Stripping length | 8 mm |

General

| | |
|-------------------------------|------------------------------------|
| Mounting type | DIN rail mounting |
| Color | traffic grey A RAL 7042 |
| Net weight | 177 g |
| Note on weight specifications | with connector and bus base module |
| Degree of pollution | 2 (IEC 60664-1, EN 60664-1) |
| Mounting type | DIN rail mounting |
| Mounting position | any (observe temperature derating) |

Interfaces

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Technical data

Interfaces

| | |
|-------------------------------|-----------------------------------|
| Designation | Sercos |
| 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 |
| Designation | Axioline F local bus |
| Number of interfaces | 1 |
| Connection method | Bus base module |
| Transmission speed | 100 Mbps |
| Designation | Service |
| Number of interfaces | 1 |
| Connection method | Micro USB type B |

Network/bus system

| | |
|---------------------------------------------------|---------------------------|
| Number of supported devices | max. 63 (per station) |
| Number of local bus devices that can be connected | max. 63 |
| Designation | Sercos |
| Equipment type | Sercos slave |
| Device profile | FSP_IO |
| System-specific protocols | Sercos protocols Sercos |
| Specification | Sercos specification 1.31 |
| Protocol | Sercos |
| | TFTP |

Axioline potentials

| | |
|----------------------|----------------------------------------------------------------------------------------------------------------|
| Designation | 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 consumption | max. 570 mA (with 2 A at U_{BUS} for the I/Os and $U_L = 24$ V) |
| Power consumption | max. 13.7 W (2.0 A on U_{BUS} , $U_L = 24$ V) |
| Type of protection | Surge protection |
| | Reverse polarity protection |
| Designation | Axioline F local bus supply (U_{BUS}) |
| Supply voltage | 5 V DC (via bus base module) |
| Power supply unit | 2 A |

Standards and Regulations

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Technical data

Standards and Regulations

| | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunity to ESD | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge |
| Immunity to EF | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m |
| Immunity to burst | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV |
| Immunity to surge | Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, DC supply lines: ± 0.5 kV/ ± 0.5 kV (symmetrical/asymmetrical), fieldbus cable shield: ± 1 kV |
| Immunity to conducted interference | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V |
| Interference emission | Noise emission test according to EN 61000-6-3 Class B |
| Mechanical tests | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g |
| | Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g |
| | Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g |
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |
| Overvoltage category | II (IEC 60664-1, EN 60664-1) |

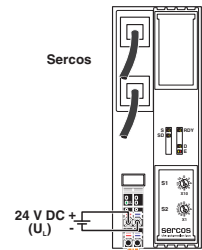
Environmental Product Compliance

| | |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

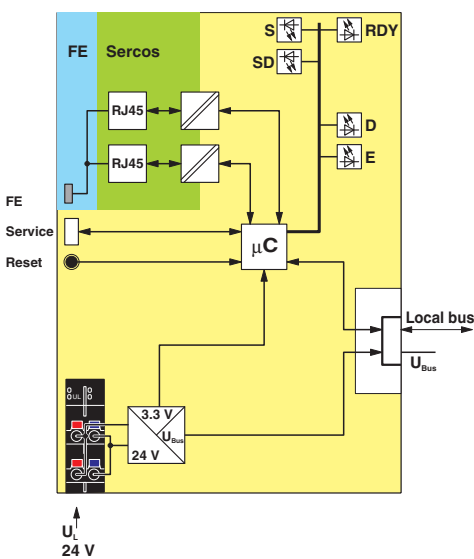
Drawings

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Connection diagram

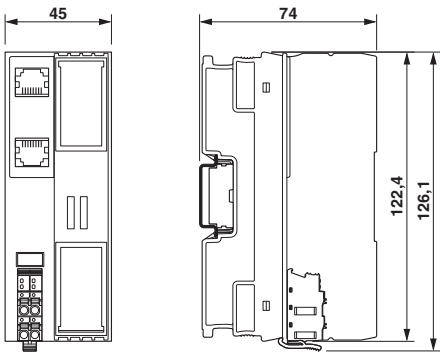


Block diagram



Internal wiring of the terminal points

Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27242608 |
| eCl@ss 11.0 | 27242608 |
| eCl@ss 4.0 | 27240400 |
| eCl@ss 4.1 | 27240400 |
| eCl@ss 5.0 | 27242200 |
| eCl@ss 5.1 | 27242600 |
| eCl@ss 6.0 | 27242600 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 7.0 | 27242608 |
| eCl@ss 9.0 | 27242608 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001604 |
| ETIM 4.0 | EC001604 |
| ETIM 6.0 | EC001604 |
| ETIM 7.0 | EC001604 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 39121311 |
| UNSPSC 12.01 | 39121311 |
| UNSPSC 13.2 | 32151602 |
| UNSPSC 18.0 | 32151602 |
| UNSPSC 19.0 | 32151602 |
| UNSPSC 20.0 | 32151602 |
| UNSPSC 21.0 | 32151602 |

Approvals

Approvals

Approvals

LR / KR / NK / ABS / BSH / RINA / PRS / BV / DNV GL / UL Listed / cUL Listed / UL Listed / cUL Listed










Ex Approvals

Approval details

| | | | |
|----|-------------------------------------------------------------------------------------|---------------------------------------------------------|-------------|
| LR |  | http://www.lr.org/en | LR2001902TA |
|----|-------------------------------------------------------------------------------------|---------------------------------------------------------|-------------|

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Approvals

| | | | |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| KR |  | http://www.krs.co.kr/eng/main/main.aspx | HMB17372-AC002 |
| NK |  | http://www.classnk.or.jp/hp/en/ | 14A006 |
| ABS | | http://www.eagle.org/eagleExternalPortalWEB/ | 18-HG1767360-PDA |
| BSH | | | 840 |
| RINA |  | http://www.rina.org/en | ELE030120XG |
| PRS |  | http://www.prs.pl/ | TE/1117/880590/20 |
| BV |  | http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials | 36433/B2 BV |
| DNV GL |  | https://approvalfinder.dnvgl.com/ | TAA00000DF |
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |

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Approvals

cUL Listed



<http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

Accessories

Accessories

Data cable by the meter

Network cable - FL CAT5 HEAVY - 2744814



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

Installation cable - FL CAT5 FLEX - 2744830



By the meter, Installation cable, Ethernet CAT5 (100 Mbps), shielded, PUR halogen-free, water blue RAL 5021, 4-wire (2x2xAWG26/7; SF/UTP), color single wire: white/orange-orange, white/green-green, cable length: Free entry (1.0 ... 1000.0 m)

Data plug

Assembly tool - FL CRIMPTOOL - 2744869



Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site

Device marking

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Accessories

Insert label - EMT (35X18,7)R - 0801831



Insert label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped into marker carrier, lettering field size: 35 x 18.7 mm, Number of individual labels: 500

DIN rail connector

Bus connector - AXL BS BK - 2701422



Axioline F bus base module for housing type BK

Plug

RJ45 connector - FL PLUG RJ45 GR/2 - 2744856



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, gray for straight cables, for assembly on site. For connections that are not crossed, it is recommended that you use the connector set with gray bend protection sleeve.

RJ45 connector - FL PLUG RJ45 GN/2 - 2744571



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, green for crossed cables, for assembly on site. For connections that are crossed, it is recommended that the connector set with green bend protection sleeves is used.

Programming cable

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Accessories

Connecting cable - CAB-USB A/MICRO USB B/2,0M - 2701626



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

Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 10.15 mm, lettering field size: 4 of 10.15 x 5 mm and 1 of 5.8 x 5 mm, Number of individual labels: 50