

IL S3 BK DI8 DO4 2TX-PAC - Bus coupler

2692380

<https://www.phoenixcontact.com/gb/products/2692380>

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Inline, Bus coupler, Sercos, RJ45 jack, Digital inputs: 8, 24 V DC, connection technology: 3-conductor, Digital outputs: 4, 24 V DC, 500 mA, connection technology: 3-conductor, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including inline connectors, marking fields, and end plate

Product description

The bus coupler with integrated I/Os is intended for use within a Sercos® network and represents the link to the Inline I/O system. Up to 63 Inline devices can be connected to the bus coupler. The bus coupler supports a maximum of 16 PCP devices. A corresponding SDDML file is available for integrating the Inline station into the programming system. This file can be downloaded at: phoenixcontact.net/product/2692380.

Your advantages

- 2 Ethernet ports
- Automatic detection of the transmission speed in the local bus (500 kbps or 2 Mbps)
- 8 digital inputs, 4 digital outputs (on-board)
- Minimum Sercos cycle time of 250 µs
- FSP-IO (Function Specific Profile-IO) for modular I/O devices
- Maximum of 6 realtime connections
- Hot plugging of participants in Sercos network
- Diagnostics trace
- Internet Protocol Services (IPS)
- Sercos specification V1.3.1
- Sercos diagnostic LED S and communication phase LED CP

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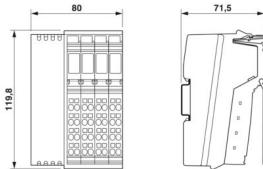


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Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 80 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |
| Note on dimensions | Specifications with connectors |

Notes

Note on application

| | |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

Interfaces

Sercos

| | |
|----------------------|-----------|
| Number of interfaces | 2 |
| Connection method | RJ45 jack |

Inline local bus

| | |
|----------------------|---|
| Number of interfaces | 1 |
| Connection method | Inline data jumper |
| Transmission speed | 500 kbps / 2 Mbps (automatic detection, no combined system) |

Sercos

| | |
|----------------|--------------|
| Equipment type | Sercos slave |
|----------------|--------------|

System properties

System limits

| | |
|---|-----------------------|
| Number of supported devices | max. 63 (per station) |
| Number of local bus devices that can be connected | max. 63 |
| Number of devices with parameter channel | max. 16 |
| Number of supported branch terminals with remote bus branch | 0 |

Module

| | |
|---------------|------|
| ID code (hex) | none |
|---------------|------|

Input data

Digital:

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| | |
|-----------------------------------|---|
| Input name | Digital inputs |
| Description of the input | EN 61131-2 type 1 |
| Number of inputs | 8 |
| Connection method | Inline connector |
| Connection technology | 3-conductor |
| Input voltage | 24 V DC |
| Input voltage range "0" signal | -30 V DC ... 5 V DC |
| Input voltage range "1" signal | 15 V DC ... 30 V DC |
| Nominal input voltage U_{IN} | 24 V DC |
| Nominal input current at U_{IN} | typ. 3 mA |
| Typical input current per channel | typ. 3 mA |
| Typical response time | approx. 500 μ s |
| Protective circuit | Reverse polarity protection; Suppressor diode |

Output data

Digital:

| | |
|---|--|
| Output name | Digital outputs |
| Connection method | Inline connector |
| Connection technology | 3-conductor |
| Number of outputs | 4 |
| Protective circuit | Short-circuit and overload protection; Freewheeling circuit in the output driver |
| Output voltage | 24 V DC -1 V (At nominal current) |
| Maximum output current per module | max. 2 A |
| Nominal output voltage | 24 V DC |
| Output voltage when switched off | max. 500 mV |
| Output current when switched off | max. 500 μ A (When not loaded, a voltage can be measured even at an output that is not set.) |
| Nominal load, inductive | 12 VA (1.2 H, 48 Ω) |
| Nominal load, lamp | 12 W |
| Nominal load, ohmic | 12 W |
| Reverse voltage resistance to short pulses | Reverse voltage proof |
| Behavior with overload | Auto restart |
| Behavior with inductive overload | Output can be destroyed |
| Behavior at voltage switch-off | The output follows the power supply without delay |
| Signal delay | < 40 μ s (t_{on} , no load) < 50 μ s (t_{on} , load = 0.5 A) < 350 μ s (t_{off} , no load) < 235 μ s (t_{off} , load = 0.5 A) |
| Overcurrent shut-down | min. 0.7 A |
| Output current with ground connection interrupt when switched off | max. 25 mA |

Product properties

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| | |
|----------------------|--|
| Product type | I/O component |
| Product family | Inline |
| Type | modular |
| Scope of delivery | including inline connectors, marking fields, and end plate |
| No. of channels | 12 |
| Diagnostics messages | Short-circuit or overload of the digital outputs yes |
| | Sensor supply failure yes |
| | Failure of the actuator supply yes |

Data management status

| | |
|------------------|----|
| Article revision | 21 |
|------------------|----|

Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 6.8 W |
| Protective circuit | Surge protection, protection against polarity reversal of the supply voltage; 35 V suppressor diode |

Potentials: Bus coupler supply U_{BK} ; Communications power U_L (7.5 V) and the analog supply U_{ANA} (24 V) are generated from the bus coupler supply.

| | |
|----------------------|--|
| Supply voltage | 24 V DC (via Inline connector) |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 1 A (with max. number of connected I/O terminal blocks) |
| | typ. 60 mA (without connected I/O terminal blocks) |

Potentials: Communications power (U_L)

| | |
|----------------|----------|
| Supply voltage | 7.5 V DC |
|----------------|----------|

Potentials: Supply of analog modules (U_{ANA})

| | |
|----------------------|--|
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |

Potentials: Main circuit supply (U_M)

| | |
|----------------------|--|
| Supply voltage | 24 V DC (via Inline connector) |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 8 A |
| | min. 3 mA (without connected peripherals) |

Potentials: Segment circuit supply (U_S)

| | |
|----------------------|--|
| Supply voltage | 24 V DC (via Inline connector) |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 8 A |
| | min. 3 mA (without connected peripherals) |

Connection data

Connection technology

| | |
|-----------------|------------------|
| Connection name | Inline connector |
|-----------------|------------------|

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Conductor connection

| | |
|----------------------------------|--|
| Connection method | Spring-cage connection |
| Conductor cross section rigid | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross section flexible | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |
| Stripping length | 8 mm |

Inline connector

| | |
|-----------------------------------|--|
| Connection method | Spring-cage connection |
| Conductor cross section, rigid | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |
| Stripping length | 8 mm |

Environmental and real-life conditions

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 60 °C |
| 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) | 10 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing) |

Standards and regulations

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

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
| | DIN rail mounting |

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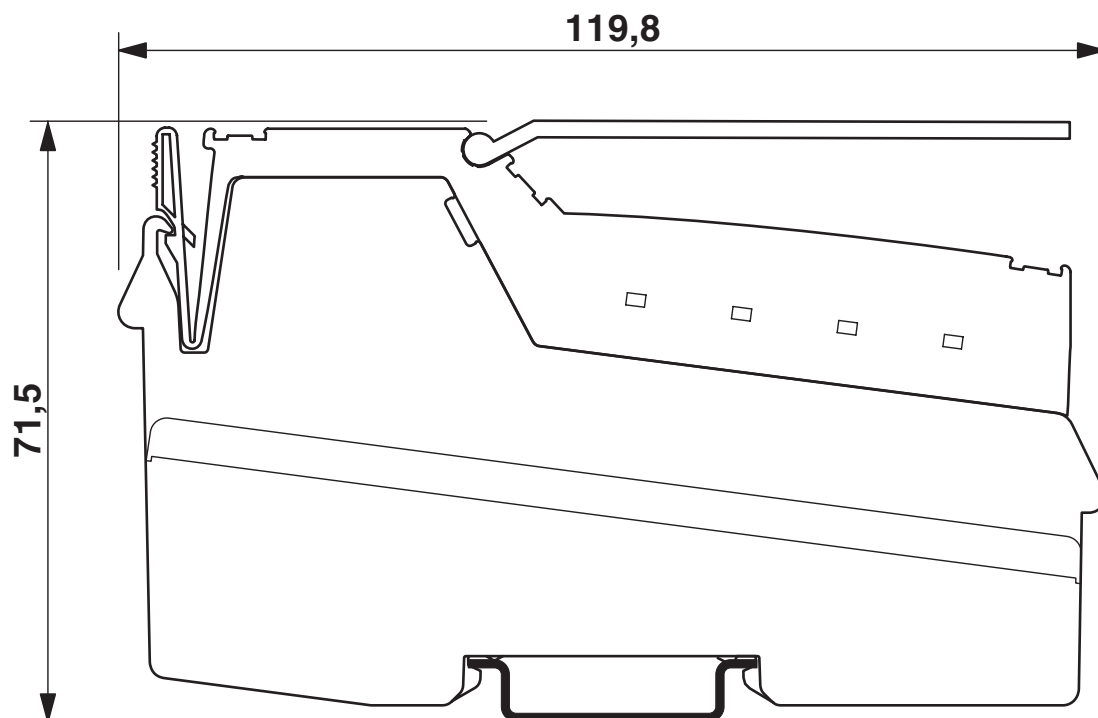


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Drawings

Dimensional drawing

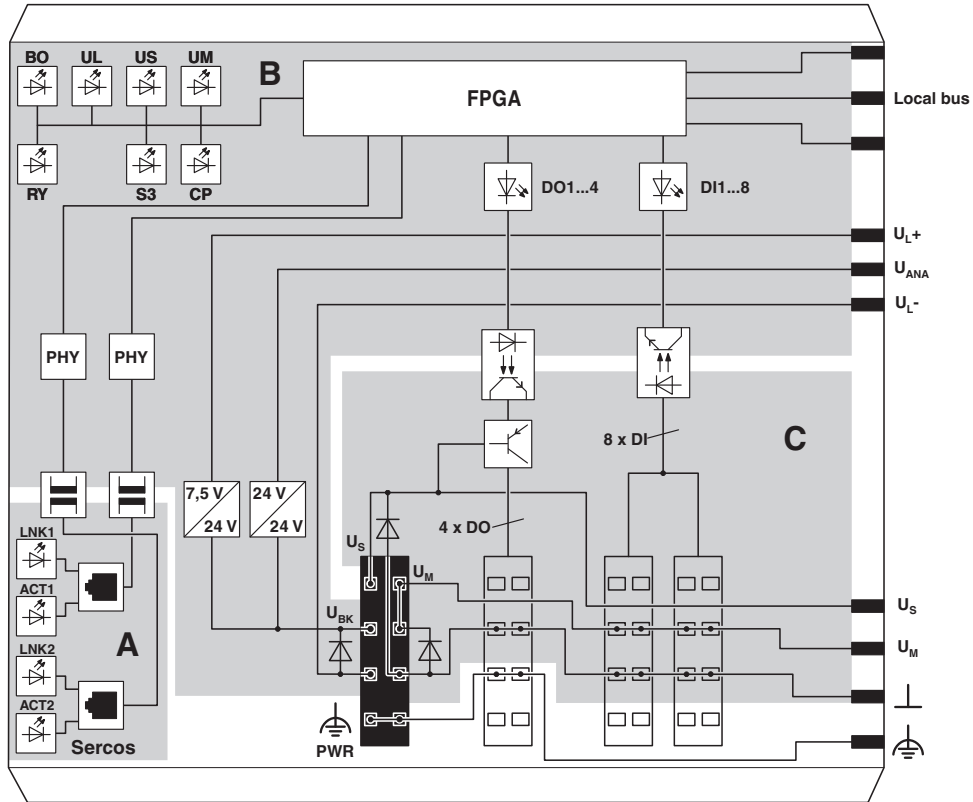


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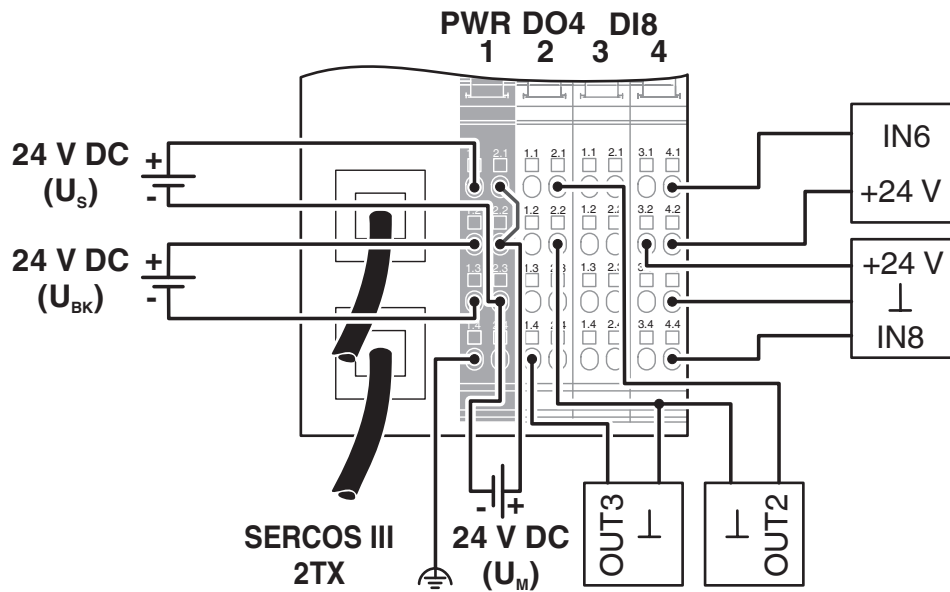
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Block diagram



Connection diagram



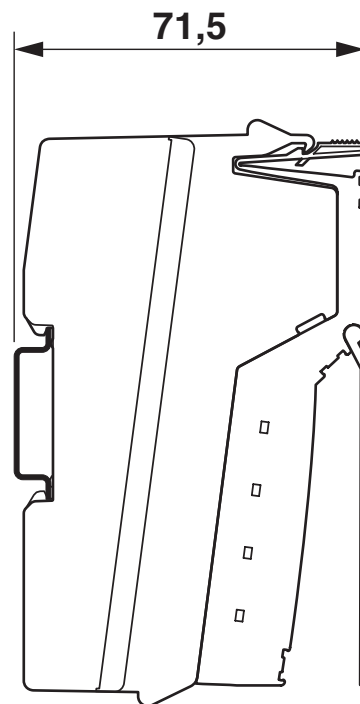
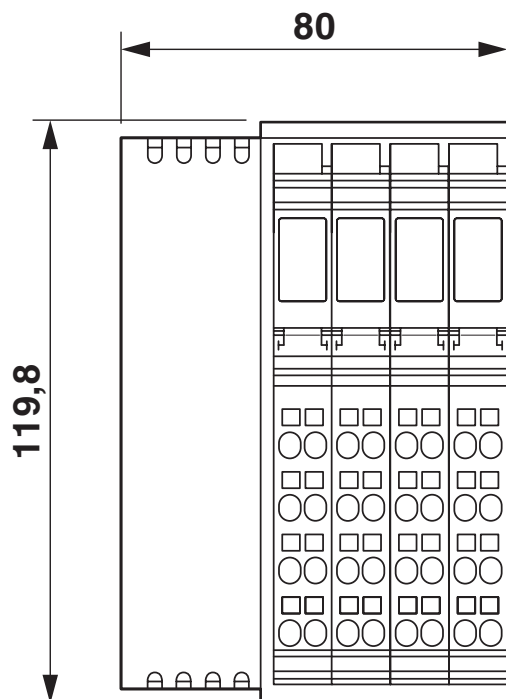
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Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2692380>



EAC-RoHS

Approval ID: RU*-DE*HB.B.00386/20



EAC

Approval ID: TR_TS_D_00850-20



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324

UAE-RoHS

Approval ID: 22-04-13087

cULus Listed

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | 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-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 304c9b95-6ddf-430e-8bc3-3711d6286f17 |

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