

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



2692380

<https://www.phoenixcontact.com/us/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](http://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

## Commercial data

Item number	2692380
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI11C
GTIN	4046356325882
Weight per piece (including packing)	343.6 g
Weight per piece (excluding packing)	298 g
Customs tariff number	85389091
Country of origin	DE

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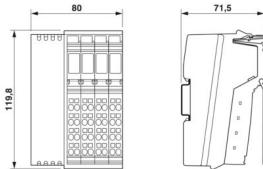


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## Technical data

### 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
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### Material specifications

Color (Housing)	green (RAL 6021)
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### 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
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### 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

#### Programming data

Register length (master)	512 Byte
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2692380

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

## Input data

Digital:

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
Current flow	Limited to 3 mA, maximum
Typical input current per channel	typ. 3 mA
Typical response time	approx. 500 $\mu$ 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)
Max. current carrying capacity per output	max. 500 mA
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 $\mu$ 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 $\Omega$ )
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 $\mu$ s ( $t_{on}$ , no load) < 50 $\mu$ s ( $t_{on}$ , load = 0.5 A) < 350 $\mu$ s ( $t_{off}$ , no load) < 235 $\mu$ s ( $t_{off}$ , load = 0.5 A)

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2692380

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Overcurrent shut-down	min. 0.7 A
Output current with ground connection interrupt when switched off	max. 25 mA

## Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	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

## 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	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
Power supply	max. 0.8 A

## 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)
Power supply	max. 0.5 A

## 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)
Power supply	max. 8 A (sum of $U_M + U_S$ )
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)
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Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A (sum of $U_M + U_S$ )
Current draw	max. 8 A min. 3 mA (without connected peripherals)

## Connection data

### Connection technology

Connection name	Inline connector
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### Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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)

### Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	25g

## Standards and regulations

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

Mounting type	DIN rail mounting
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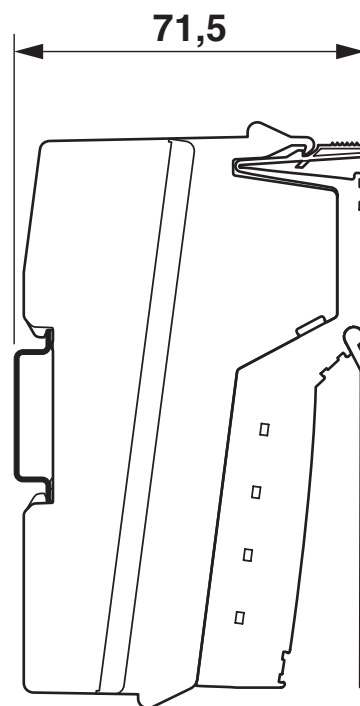
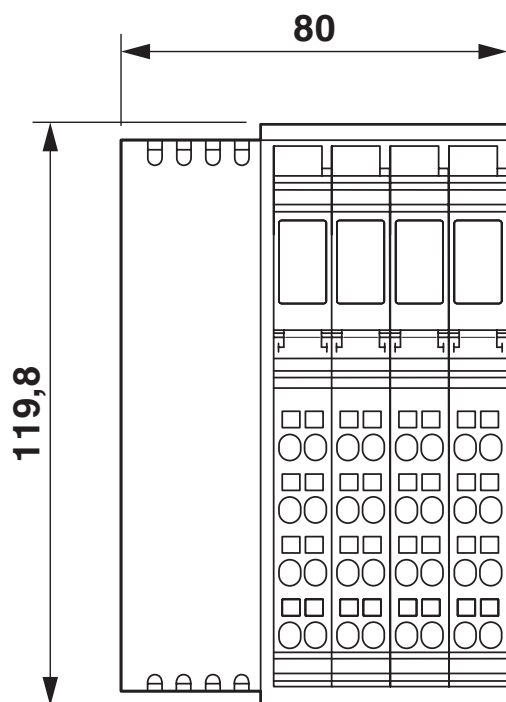
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## Drawings

Dimensional drawing

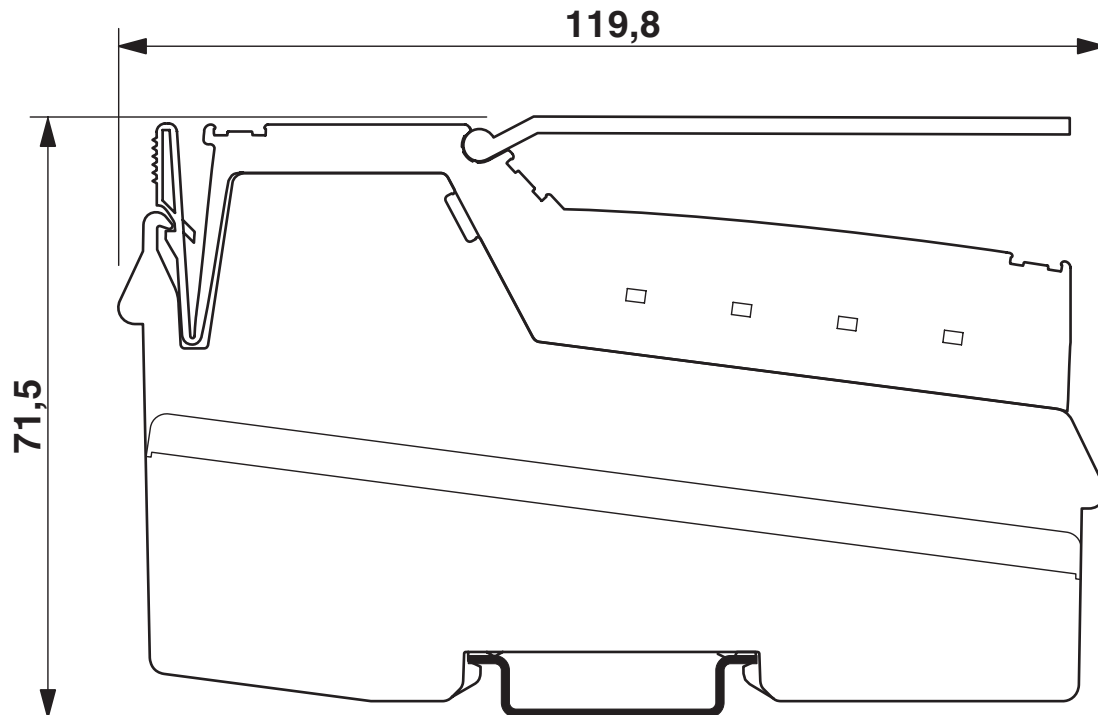


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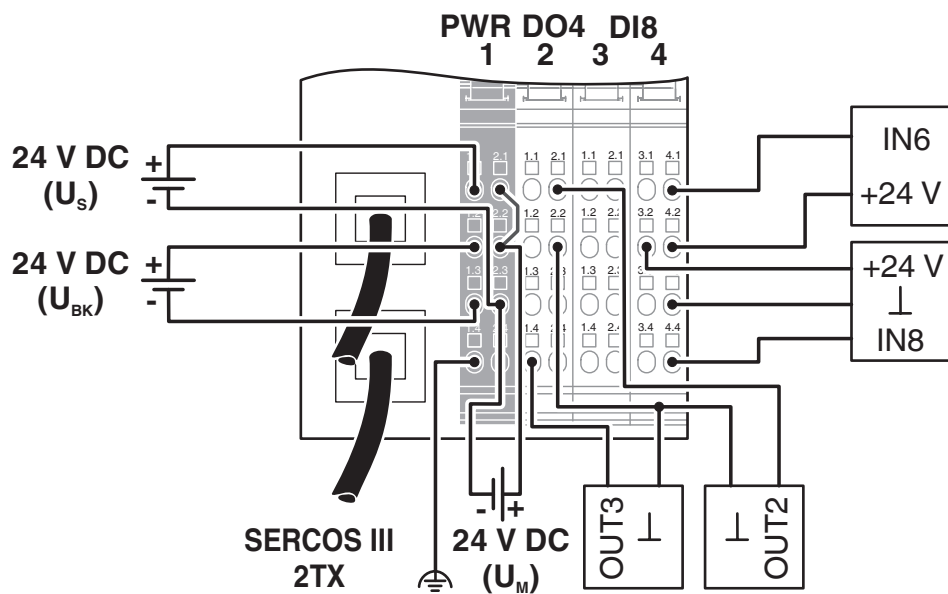
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Dimensional drawing



Connection diagram

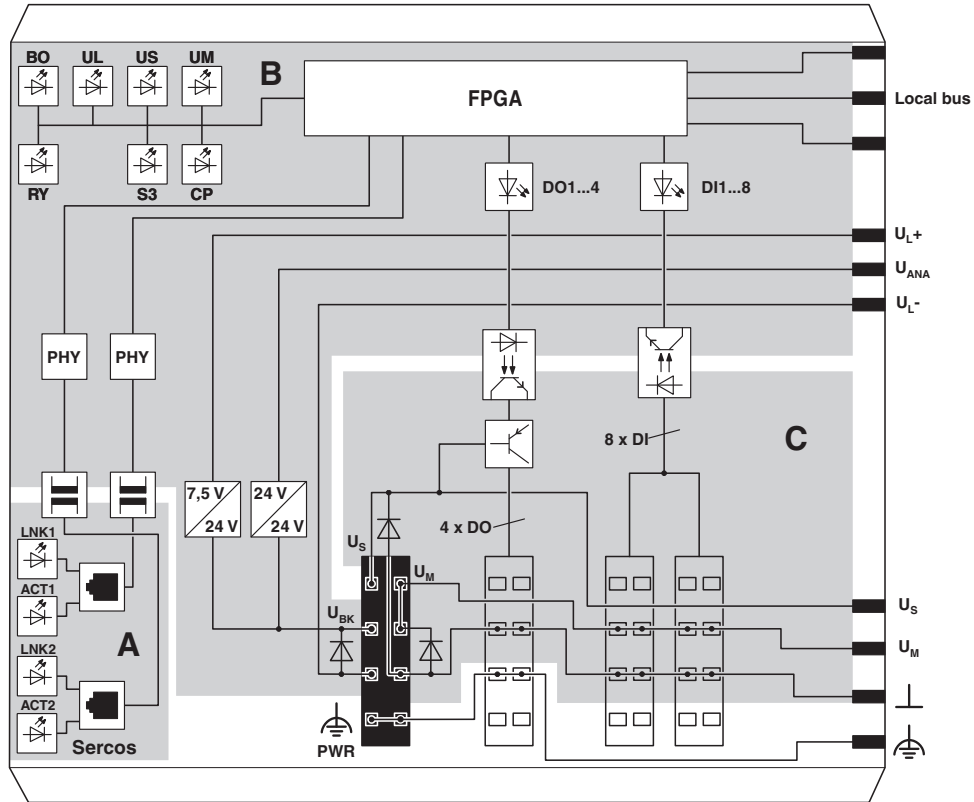


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Block diagram



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## Approvals

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



**EAC**

Approval ID: TR\_TS\_D\_00850-20



**UL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 140324

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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-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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