

IL CO BK-PAC - Bus coupler

2702230

<https://www.phoenixcontact.com/us/products/2702230>

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Inline, Bus coupler, CANopen[®], MINI COMBICON, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including network connector, Inline connector, and marking field

Product Description

The bus coupler is intended for use within a CANopen[®] network. It is the link to the Inline I/O system. Up to 63 Inline devices can be connected to the bus coupler. A corresponding EDS file is available for integrating the Inline station into the programming system. This file can be downloaded via the product at [phoenixcontact.net/products](https://www.phoenixcontact.net/products).

Your advantages

- Automatic detection of the baud rate in the CANopen[®] network
- Programmable modes for behavior in the event of an error
- Emergency messages
- Integrated termination resistor can be switched on or off via DIP switch
- Supports two SDO servers simultaneously
- Trigger modes: event, timer, remote request
- Node and life guarding
- Heartbeat
- Connection to CANopen[®] with 5-pos. MINI COMBICON connector

Commercial Data

Item number	2702230
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DR01
Product Key	DRI113
Catalog Page	Page 106 (C-6-2019)
GTIN	4055626134949
Weight per Piece (including packing)	177 g
Weight per Piece (excluding packing)	168.5 g
Customs tariff number	85176200
Country of origin	DE

Technical Data

Dimensions

Dimensional drawing	
Width	40 mm
Height	119.4 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

Material specifications

Color	green
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Interfaces

CANopen[®]

Number of interfaces	1 (Connected to functional ground with a capacitor)
Connection method	MINI COMBICON
Number of positions	5
Transmission speed	1 Mbps, 800 kbps, 500 kbps, 250 kbps, 125 kbps, 50 kbps, 20 kbps, 10 kbps (Can be set via DIP switch or automatic detection)

Inline local bus

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

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
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Product properties

Type	modular
Product type	I/O component
Product family	Inline

Scope of delivery	including network connector, Inline connector, and marking field
Diagnostics messages	CRC error Message about the emergency object
	I/O error Message about the emergency object
	Power error Message about the emergency object
	Module change errors Message about the emergency object
	Inactive local bus Message about the emergency object
	Inline connection error Message about the emergency object
	Faulty Inline cycles Message about the emergency object

Electrical properties

Potentials

Power consumption	typ. 1.3 W (entire device)
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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. 0.9 A (with max. number of connected I/O terminal blocks)
	typ. 51 mA (No local bus devices connected)

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC
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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)

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)

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

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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 ... 55 °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)
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Mounting

Mounting type	DIN rail mounting
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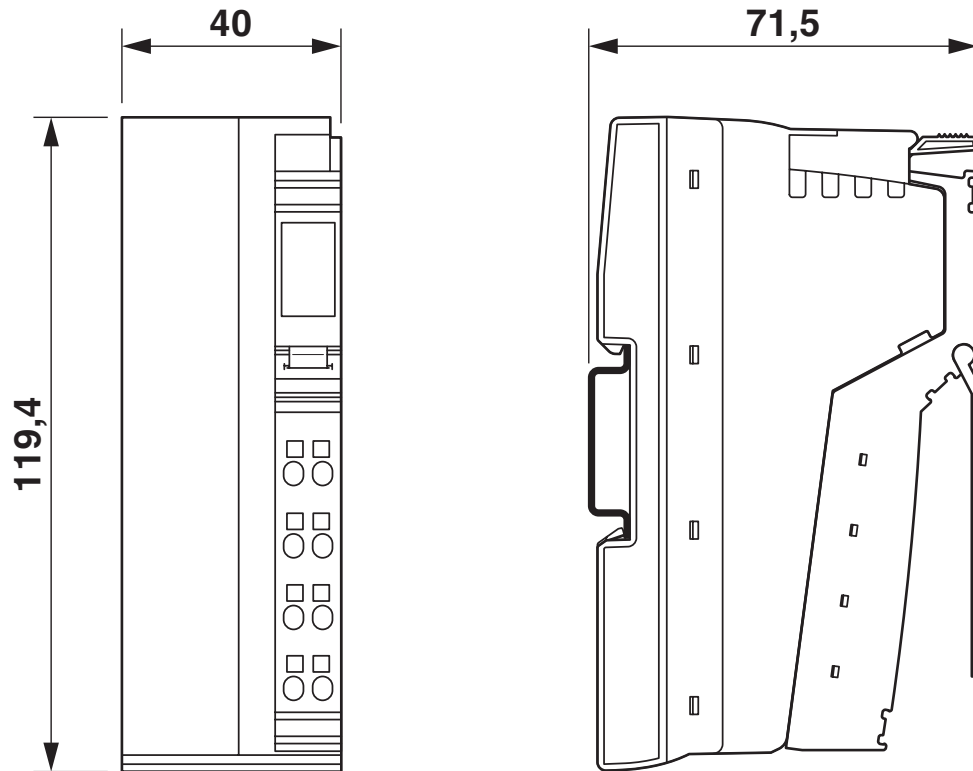
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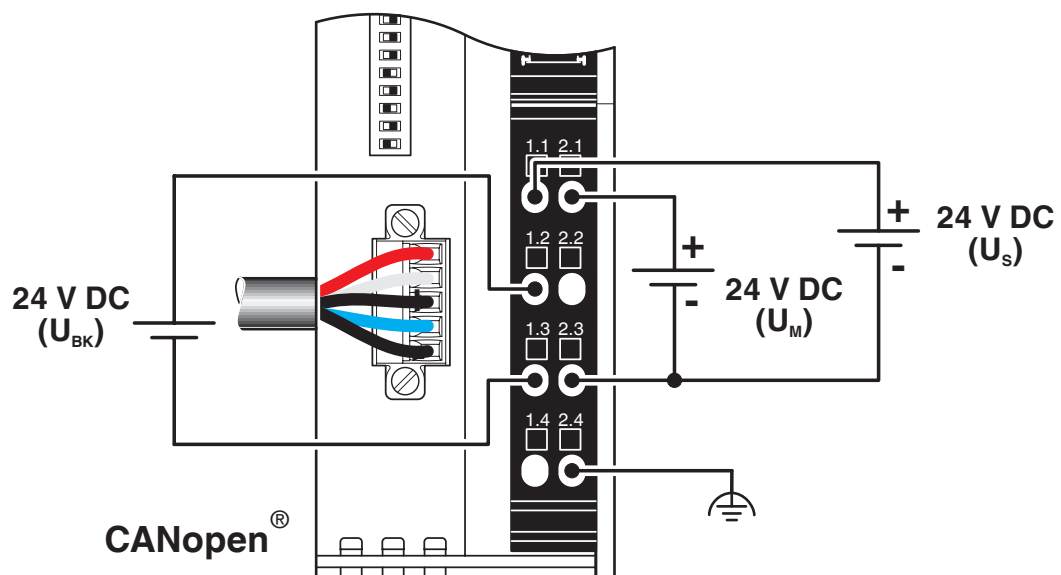


Drawings

Dimensional drawing



Connection diagram



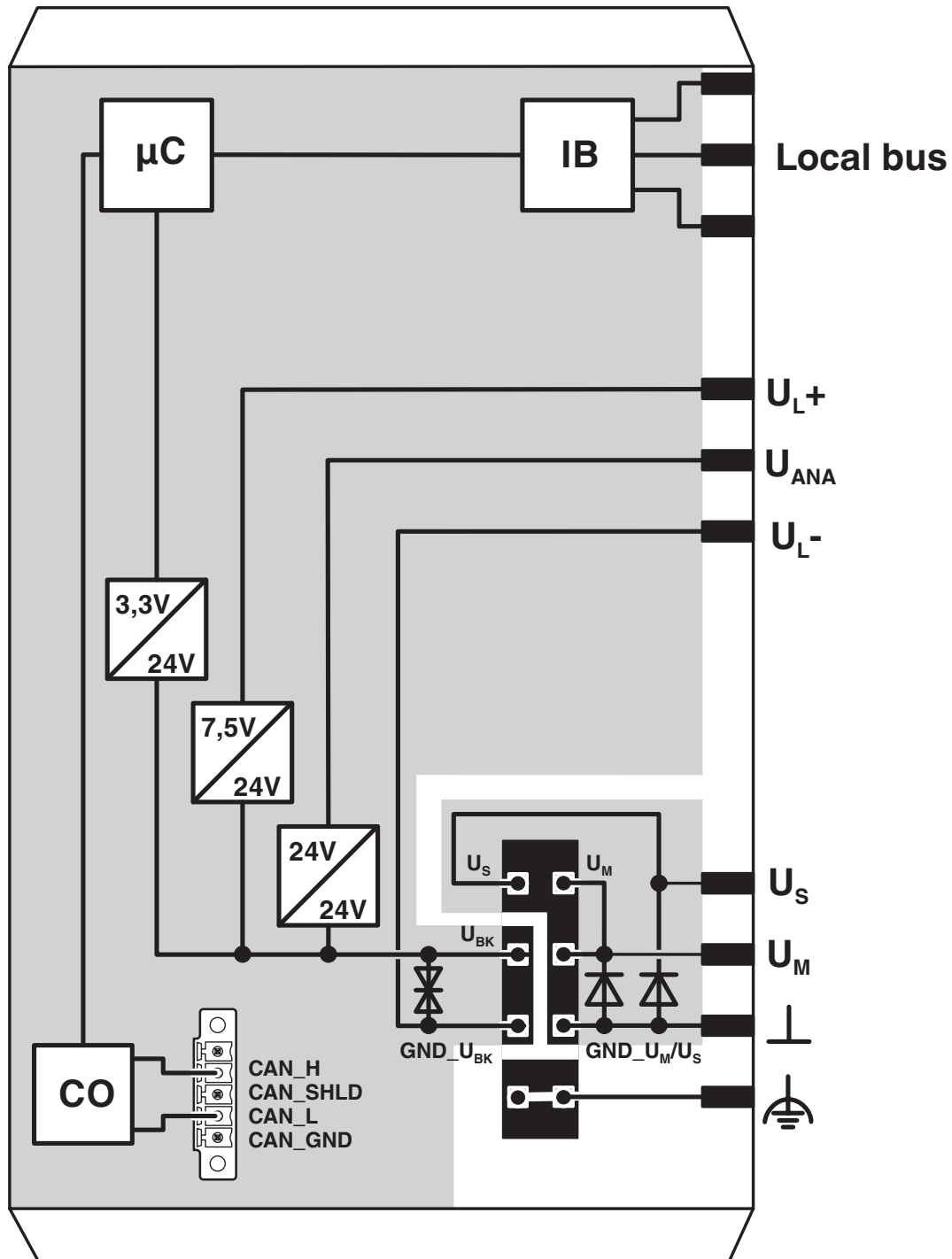
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Block diagram



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Approvals



UL Listed

Approval ID: FILE E 238705



cUL Listed

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC001604
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UNSPSC

UNSPSC 21.0	32151600
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

IB IL FIELD 2 - Labeling field

2727501

<https://www.phoenixcontact.com/us/products/2727501>

Labeling field, width: 12.2 mm



ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/us/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:
Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of
individual labels: 72



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CLIPFIX 35-5 - End clamp

3022276

<https://www.phoenixcontact.com/us/products/3022276>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

CLIPFIX 35 - End clamp

3022218

<https://www.phoenixcontact.com/us/products/3022218>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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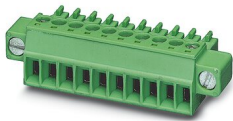
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MC 1,5/ 5-STF-3,5 - PCB connector

1847084

<https://www.phoenixcontact.com/us/products/1847084>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MC 1,5/..-STF, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

FMC 1,5/ 5-STF-3,5 - Printed-circuit board connector

1966127

<https://www.phoenixcontact.com/us/products/1966127>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FMC 1,5/..-STF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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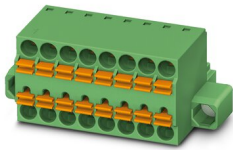
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TFMC 1,5/ 5-STF-3,5 - Printed-circuit board connector

1772731

<https://www.phoenixcontact.com/us/products/1772731>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TFMC 1,5/...-STF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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