

## Bus coupler - IL CO BK-PAC - 2702230

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Inline, Bus coupler, CANopen<sup>®</sup>, 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<sup>®</sup> 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](http://phoenixcontact.net/products).

### Your advantages

- Automatic detection of the baud rate in the CANopen<sup>®</sup> 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<sup>®</sup> with 5-pos. MINI COMBICON connector



CANopen

### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626134949

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

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## Technical data

### Dimensions

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

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 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

### General

Mounting type	DIN rail
Color	green
Net weight	168.5 g
Note on weight specifications	with connectors
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

### Interfaces

Designation	CANopen®
No. of channels	1
Connection method	MINI COMBICON
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)
Number of positions	5
Designation	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (automatic detection, no combined system)

### Network/bus system

Amount of process data	max. 512 Byte (Sum of the inputs and outputs for 64 PDOs with 8 bytes each)
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63

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## Technical data

### Network/bus system

Number of devices with parameter channel	max. 16
Number of supported branch terminals with remote bus branch	0
Designation	CANopen®
Device profile	CiA 401 V3.0

### Inline potentials

Designation	Bus coupler supply $U_{BC}$ ; 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 consumption	typ. 51 mA (No local bus devices connected) max. 0.9 A (with max. number of connected I/O terminal blocks)
Designation	Communications power ( $U_L$ )
Supply voltage	7.5 V DC
Power supply unit	max. 0.8 A
Designation	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 unit	max. 0.5 A
Designation	Main circuit supply ( $U_M$ )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A (sum of $U_M + U_S$ )
Designation	Segment circuit supply ( $U_S$ )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A (sum of $U_M + U_S$ )
Power consumption	typ. 1.3 W (entire device)

### Standards and Regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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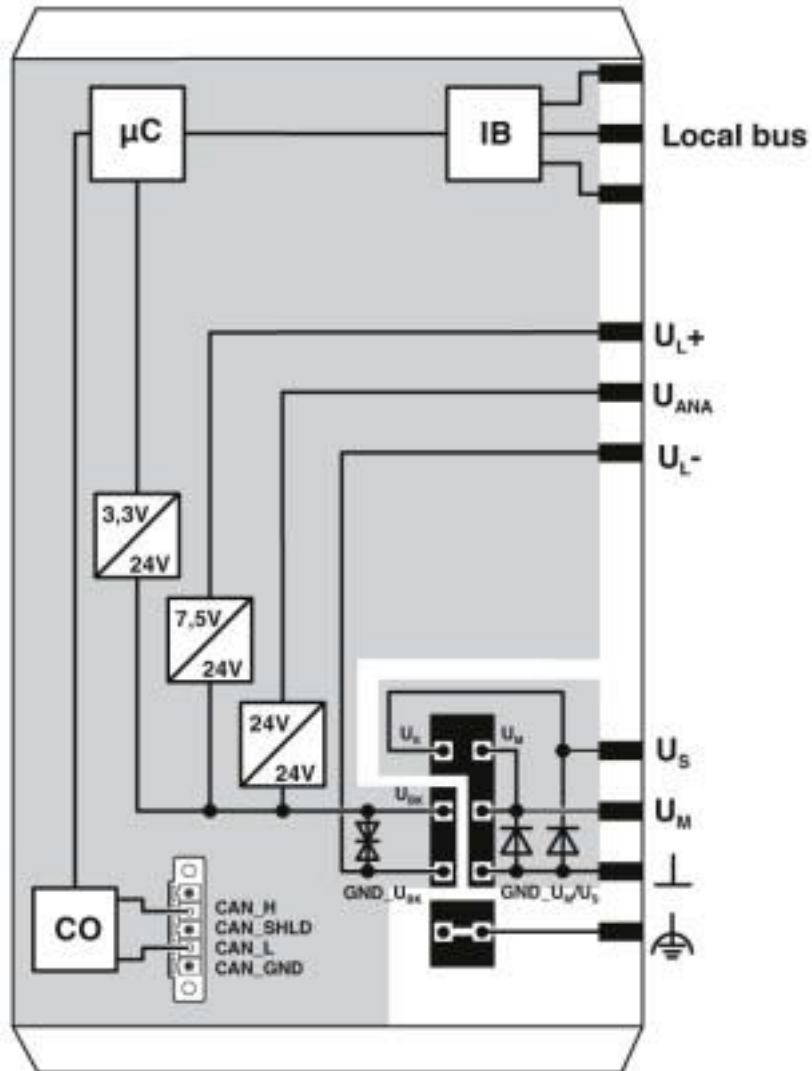
### Environmental Product Compliance

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

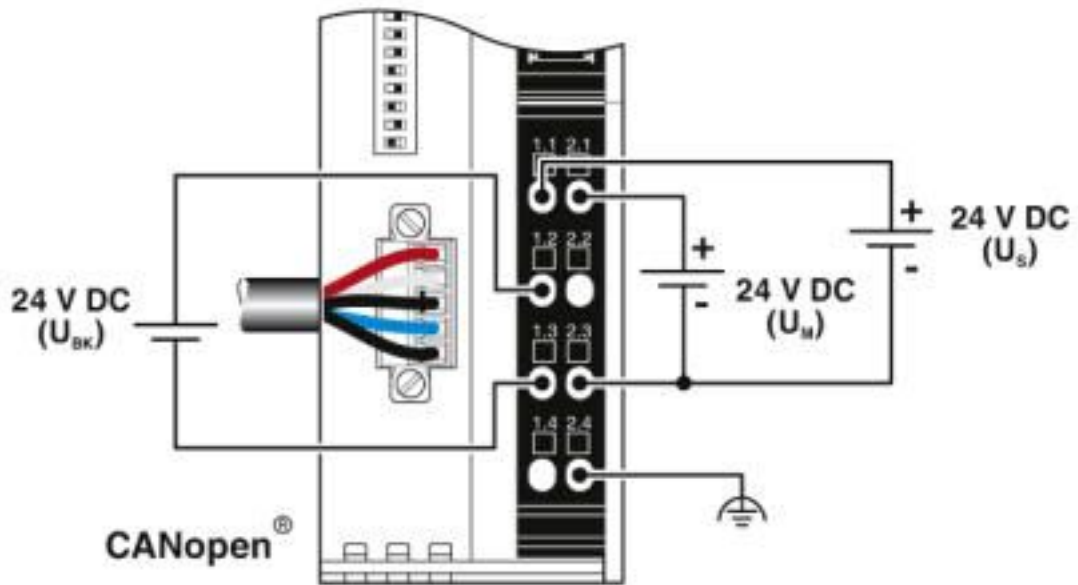
# Bus coupler - IL CO BK-PAC - 2702230

Block diagram

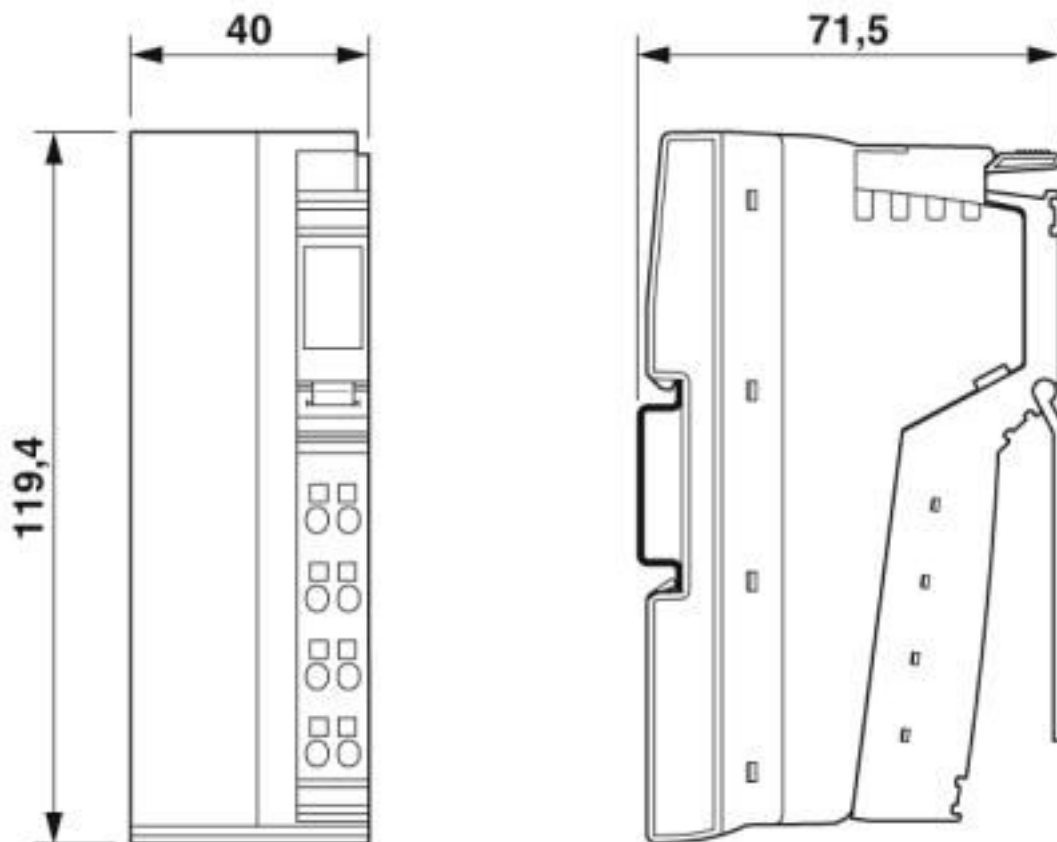


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Connection diagram



Dimensional drawing



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27242608
eCl@ss 4.0	27250200
eCl@ss 4.1	27250200
eCl@ss 5.0	27250200
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242608
eCl@ss 8.0	27242608
eCl@ss 9.0	27242608

### ETIM

ETIM 2.0	EC001434
ETIM 3.0	EC001604
ETIM 4.0	EC001604
ETIM 5.0	EC001604
ETIM 6.0	EC001604
ETIM 7.0	EC001604

### UNSPSC

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

## Approvals

### Approvals

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Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals

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### Approval details

# Bus coupler - IL CO BK-PAC - 2702230

## Approvals

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cULus Listed			
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## Accessories

### Accessories

#### End block

End clamp - CLIPFIX 35-5 - 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

End clamp - CLIPFIX 35 - 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

#### Labeling panel

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



#### PCB plug

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### Accessories

Printed-circuit board connector - MC 1,5/ 5-STF-3,5 - 1847084



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 5, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FMC 1,5/ 5-STF-3,5 - 1966127



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 5, pitch: 3.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - TFMC 1,5/ 5-STF-3,5 - 1772731



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 5, pitch: 3.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

### Terminal marking

Insert strip - ESL 62X10 - 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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