

## Bus coupler - IL EC BK-PAC - 2702507

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Inline, Bus coupler, EtherCAT<sup>®</sup>, RJ45 jack, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including Inline connector and labeling field

### Product Description

The bus coupler is intended for use within an EtherCAT<sup>®</sup> network and represents the link to the Inline I/O system. Up to 63 Inline devices can be connected to the bus coupler.

EtherCAT<sup>®</sup> is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany. A corresponding ESI 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

- 2 RJ45 connections
- Automatic addressing
- Station mapped as a modular EtherCAT<sup>®</sup> device using a modular device profile (MDP)
- Acyclic data communication (mailbox protocols)
- SafetyBridge V3 supported
- Firmware can be updated



EtherCAT<sup>®</sup>

### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 258683
GTIN	4055626258683

### Technical data

#### Note

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

Width	40 mm
Height	119.4 mm

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## Technical data

### Dimensions

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 (per manufacturer's declaration)

### General

Mounting type	DIN rail
Color	green
Net weight	168 g
Note on weight specifications	with connectors
Diagnostics messages	Messages via object 10F3 <sub>hex</sub> Diagnosis history

### Interfaces

Designation	EtherCAT®
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	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (automatic detection, no combined system)

### 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. 70.6 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 DC

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### Technical data

#### Inline potentials

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 DC (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 DC (sum of $U_M + U_S$ )
Power consumption	typ. 1.7 W (entire device)

#### Standards and Regulations

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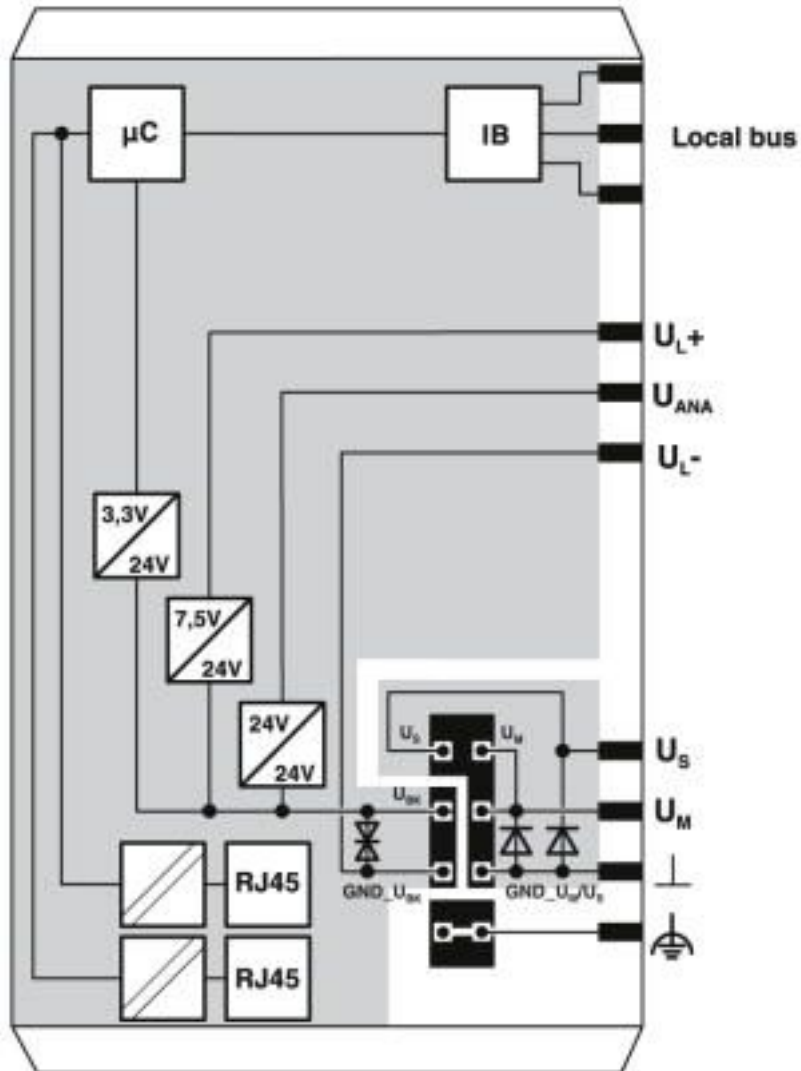
#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

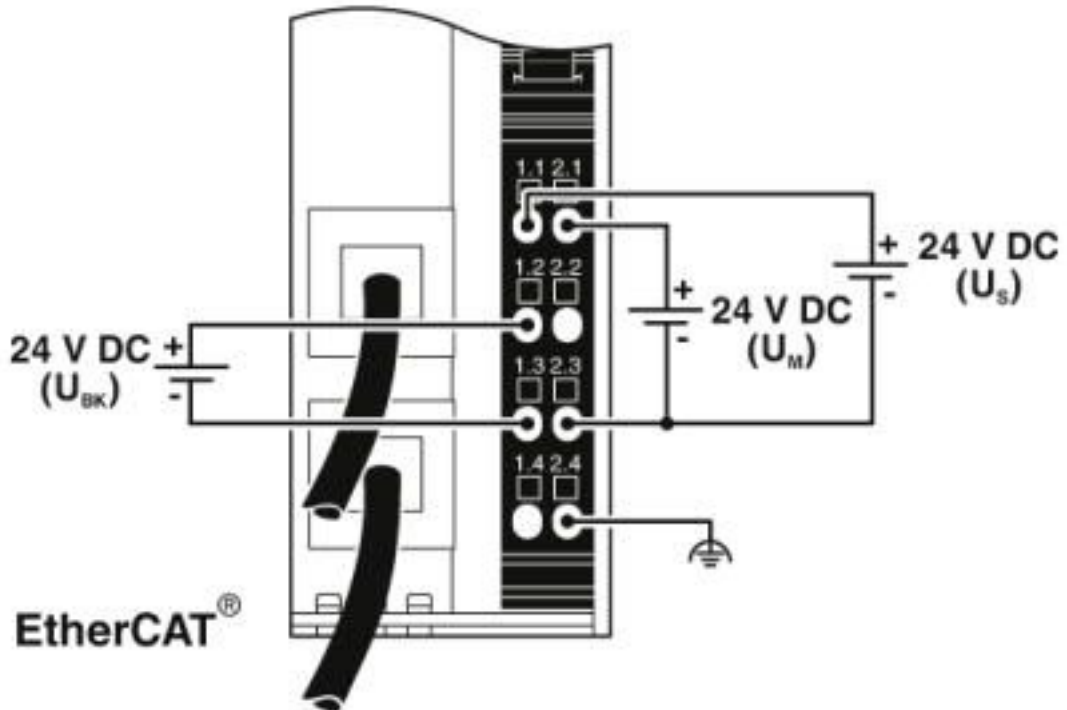
# Bus coupler - IL EC BK-PAC - 2702507

Block diagram



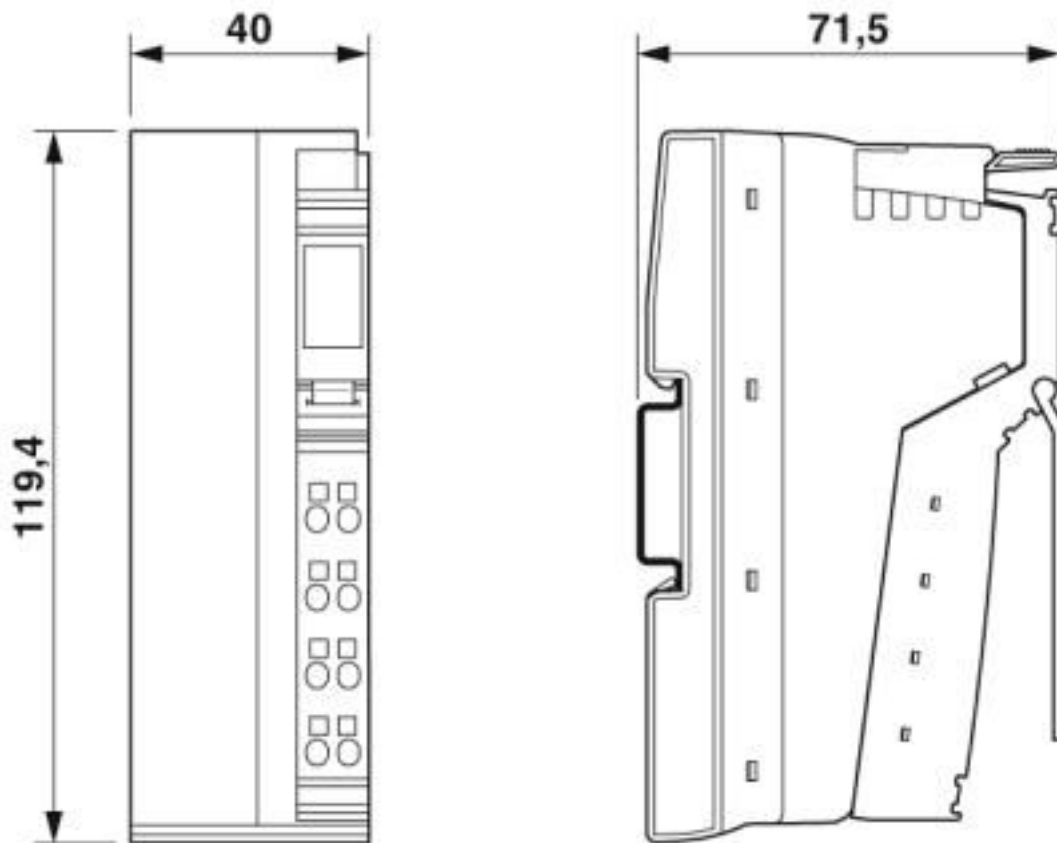
# Bus coupler - IL EC BK-PAC - 2702507

Connection diagram



## Bus coupler - IL EC BK-PAC - 2702507

Dimensional drawing



### Classifications

eCl@ss

eCl@ss 10.0.1	27242608
eCl@ss 4.0	27250203
eCl@ss 4.1	27250203
eCl@ss 5.0	27250203
eCl@ss 5.1	27242608
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

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## Classifications

### ETIM

ETIM 7.0	EC001604
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### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404
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

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

Data cable by the meter

## Bus coupler - IL EC BK-PAC - 2702507

### Accessories

#### 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 mm<sup>2</sup>, solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

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#### 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)

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#### Data plug

#### Assembly tool - FL CRIMPTOOL - 2744869



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

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#### 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

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#### 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

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#### Labeling panel



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### Accessories

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



### 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.



### Surge protection for information technology

Surge protection device - D-LAN-CAT.5-FP - 2800723



Fine surge protection for data networks up to 1 Gbps. For use in Ethernet, Power over Ethernet (PoE, mode A and mode B), token ring, ISDN, and DS1. RJ45 attachment plug with separate grounding cable and snap-on foot for NS 35 DIN rails.

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### 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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