Bus coupler - IL EIP BK DI8 DO4 2TX-PAC - 2897758

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Inline, Bus coupler, EtherNet/IP™, RJ45 jack, Digital inputs: 8, 24 V DC, connection method: 3-wire, Digital outputs: 4, 24 V DC, 500 mA, connection method: 3-wire, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including Inline connectors and marking fields

Product Description

The bus coupler with integrated I/Os is intended for use within an EtherNet/IP™ network and represents the link to the Inline I/O system.
Up to 61 Inline devices can be connected to the bus coupler.
The bus coupler supports a maximum of 8 PCP devices.
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.

Your advantages

- Eight digital inputs, four digital outputs (on-board)
- EtherNet/IP™, Version 1.2
- Web-based management
- 2 RJ45 connections
- Automatic detection of the transmission speed in the local bus (500 kbps or 2 Mbps)

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 157926
GTIN	4046356157926
Weight per Piece (excluding packing)	340.000 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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Technical data

Note

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

Dimensions

Width	80 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Specfications with connectors

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °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	320 g
Note on weight specifications	with connectors
Diagnostics messages	Short-circuit or overload of the digital outputs Yes
	Sensor supply failure Yes
	Failure of the actuator supply Yes

Interfaces

Designation	EtherNet/IP™
No. of channels	2
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps (half or full duplex (automatic detection))
Transmission physics	Ethernet in RJ45 twisted pair
Permissible conductor cross section	0.14 mm² ... 0.22 mm² (twisted pair)
Designation	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (automatic detection, no combined system)

Network/bus system

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Network/bus system

Amount of process data	max. 512 Byte (per station)
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 61 (The on-board I/Os are two devices)
Number of devices with parameter channel	max. 8
Number of supported branch terminals with remote bus branch	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	80 mA (without connected I/O terminal blocks)
	max. 0.98 A
Designation	Communications power (U_L)
Supply voltage	7.5 V DC
Power supply unit	max. 0.8 A DC
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
Designation	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 unit	max. 8 A DC (sum of U_M + U_S)
Current consumption	3 mA (without sensors)
	max. 8 A DC
Designation	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)
Power supply unit	max. 8 A DC (sum of U_M + U_S)
Current consumption	max. 8 A DC
Type of protection	Short-circuit protection of the communications power
	Short-circuit protection of the analog supply
Power consumption	typ. 3 W (entire device)
Current consumption	6 mA (without connected peripherals)

Digital inputs

Input name	Digital inputs

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Digital inputs

Description of the input	EN 61131-2 type 1
Connection method	Inline connector
Connection technology	3-wire
Number of inputs	8
Typical response time	approx. 500 µs
Protective circuit	Reverse polarity protection Suppressor diode
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	typ. 3 mA
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
Typical input current per channel	typ. 3 mA
Delay at signal change from 0 to 1	1.2 ms
Delay at signal change from 1 to 0	1.2 ms

Digital outputs

Output name	Digital outputs
Connection method	Inline connector
Connection technology	3-wire
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)
Nominal output voltage	24 V DC
Maximum output current per channel	500 mA
Maximum output current per module / terminal block	2 A
Maximum output current per module	2 A
Nominal load, inductive	12 VA (1.2 H, 48 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W
Limitation of the voltage induced on circuit interruption	approx. -30 V
Output current when switched off	max. 10 µA (When not loaded, a voltage can be measured even at an output that is not set.)
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Reverse voltage resistance to short pulses	Reverse voltage proof

Standards and Regulations

Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g

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Technical data

Standards and Regulations

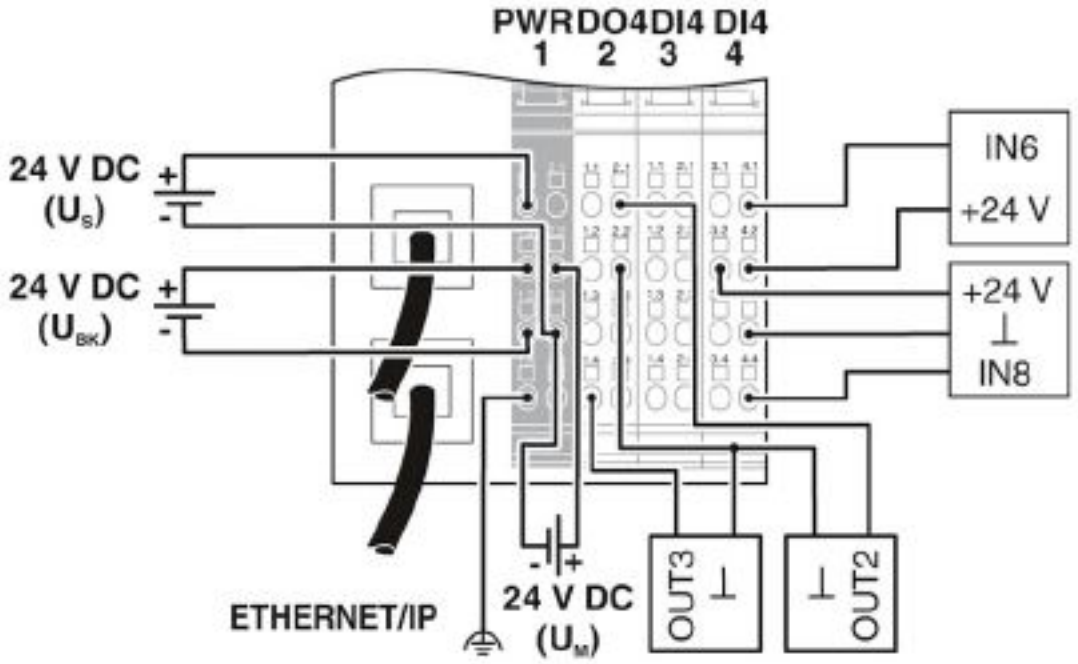
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 Operation: 25g, 11 ms duration, semi-sinusoidal shock impulse
Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

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

Connection diagram



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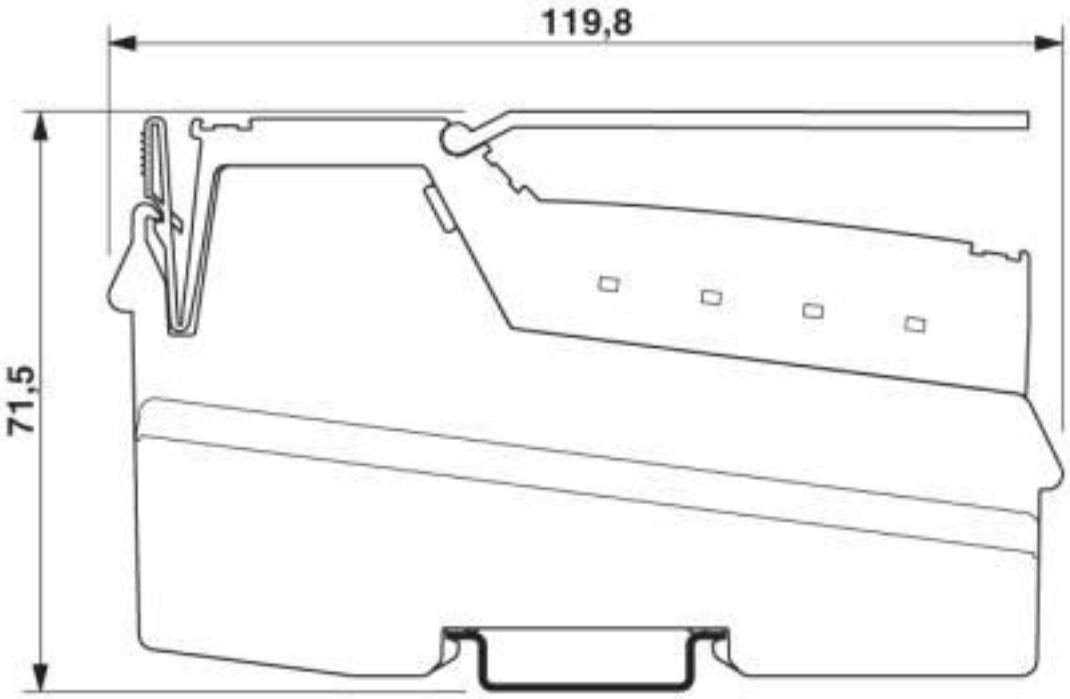
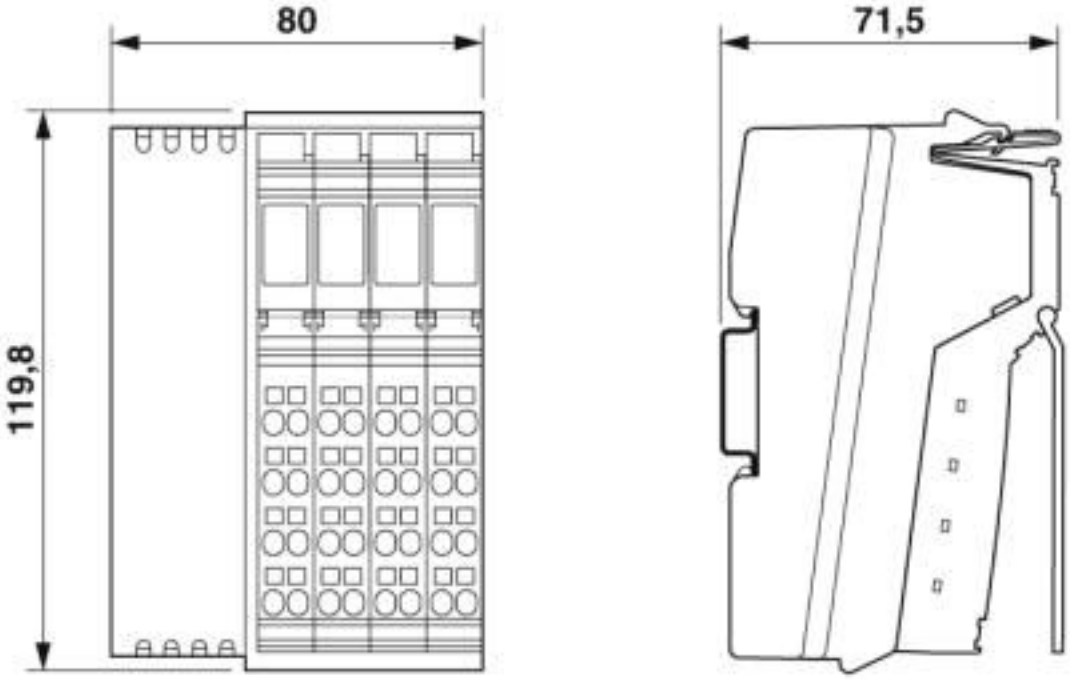
Dimensional drawing



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

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UL Recognized / cUL Recognized / cULus Recognized

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Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cULus Recognized		

Accessories

Accessories

Connector set

Connector set - IL BKDIO-PLSET - 2878599

Connector set, for Inline bus coupler with I/Os mounted in rows

Data cable by the meter

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 mm², 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)

End block

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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End clamp - E/UK - 1201442

End clamp, width: 9.5 mm, height: 35.3 mm, material: PA, length: 50.5 mm, Mounting on a DIN rail NS 32 or NS 35, color: gray

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Labeling panel

Labeling field - IB IL FIELD 8 - 2727515

Labeling field, width: 48.8 mm

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm

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Accessories

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.

Terminal marking

Insert strip - ESL 62X46 - 0809502

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 46 mm, Number of individual labels: 120

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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Accessories

Assembly tool - FL CRIMPTOOL - 2744869

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

Software - IPASSIGN - 2701094

IPAssign is an easy to use tool for setting the IP address of devices which rely on BOOTP. No installation or administrative rights are required to use IPAssign.

This product is free and only available from the "Downloads" tab.