

Bus coupler - IL ETH BK DI8 DO4 2TX-PAC - 2703981

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Inline, Bus coupler, Modbus/TCP(UDP), RJ45 socket, Digital inputs: 8 , 24 V DC, connection method: 3-wire, Digital outputs: , 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 a Modbus/TCP (UDP) 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 16 PCP devices.

Your advantages

- 2 Ethernet ports (with integrated switch)
- Auto negotiation
- Autocrossing
- Transmission speed of 10 Mbps and 100 Mbps
- Automatic detection of the transmission speed in the local bus (500 kbps or 2 Mbps)
- 8 digital inputs, 4 digital outputs onboard
- Data exchange via OPC server supported
- Software interfaces for access via TCP/IP: Device Driver Interface (DDI) and High-Level Language Fieldbus Interface (HFI)
- Web-based management



Modbus/TCP (UDP)

Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 041157
GTIN	4046356041157
Weight per Piece (excluding packing)	341.140 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Bus coupler - IL ETH BK DI8 DO4 2TX-PAC - 2703981

Technical data

Dimensions

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

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	341.14 g
Note on weight specifications	with connectors
Diagnostics messages	Short-circuit / overload of the digital outputs Yes
	Sensor supply failure Yes
	Failure of the actuator supply Yes

Interfaces

Designation	Modbus/TCP (UDP)
No. of channels	2
Connection method	RJ45 socket
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps
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)

System limits of the bus coupler

Designation	System limits of the bus coupler
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 61 (on board I/Os are two devices)
Number of devices with parameter channel	max. 16
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.
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Inline potentials

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	min. 80 mA (without connected I/O terminal blocks)
	max. 0.98 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 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 $U_M + U_S$; 4 A, maximum, when used in potentially explosive areas.)
Current consumption	min. 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 $U_M + U_S$; 4 A, maximum, when used in potentially explosive areas.)
Current consumption	max. 8 A DC
Type of protection	Surge protection (segment supply, main supply, bus coupler supply)
	Reverse polarity protection (segment supply, main supply, bus coupler supply)
Power consumption	typ. 3 W (entire device)
Current consumption	min. 3 mA (without actuators)

Digital inputs

Input name	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 μ s
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

Bus coupler - IL ETH BK DI8 DO4 2TX-PAC - 2703981

Technical data

Digital inputs

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
	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)

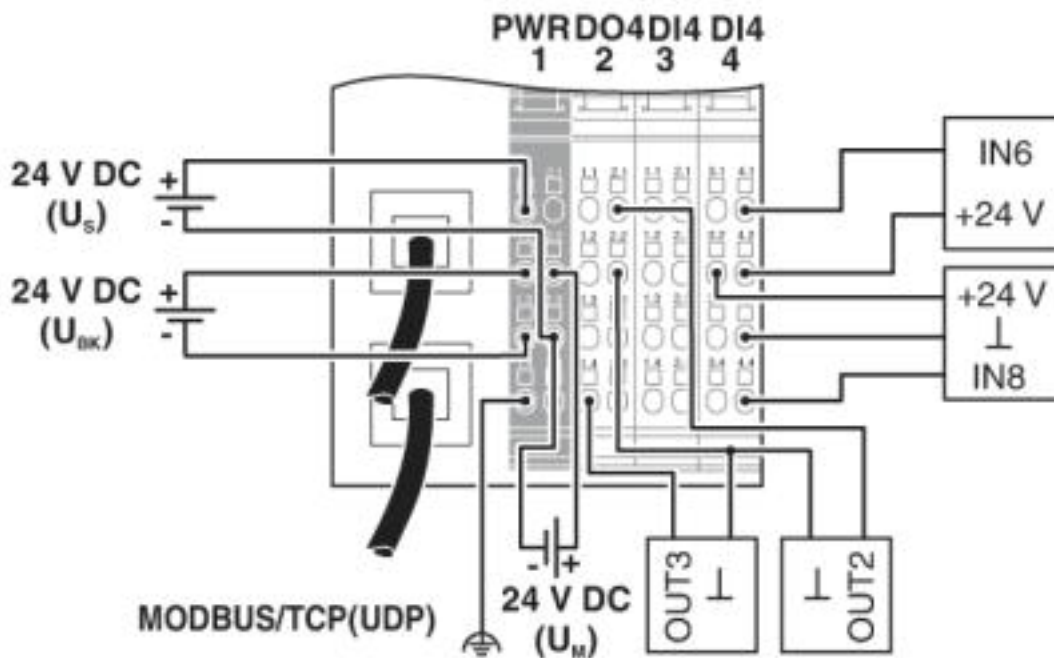
Environmental Product Compliance

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

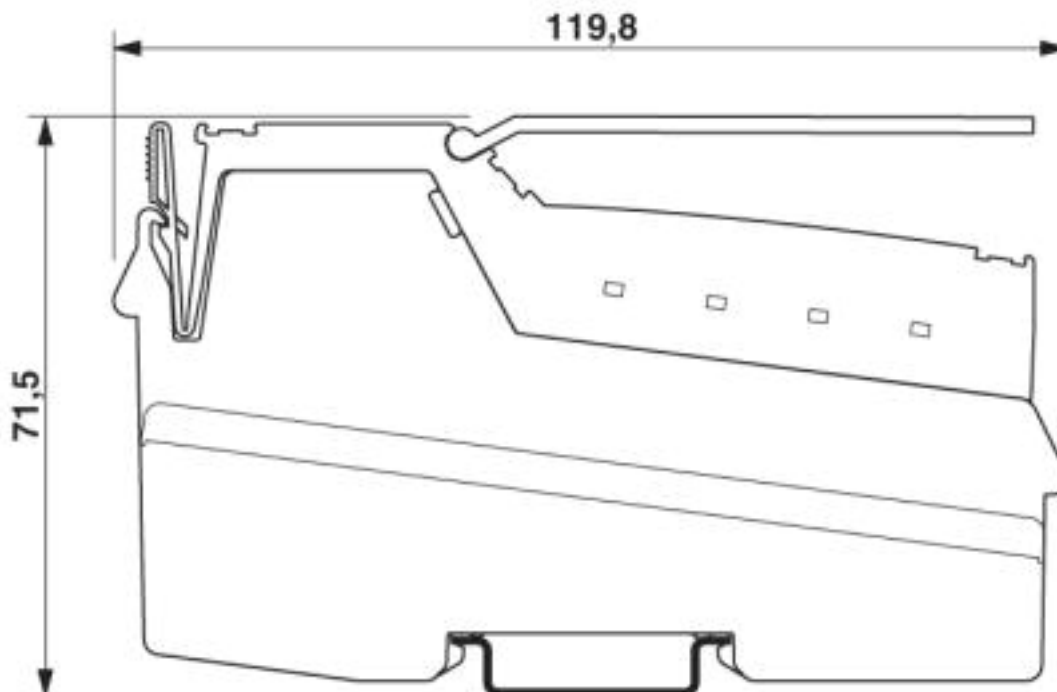
Drawings

Bus coupler - IL ETH BK DI8 DO4 2TX-PAC - 2703981

Connection diagram

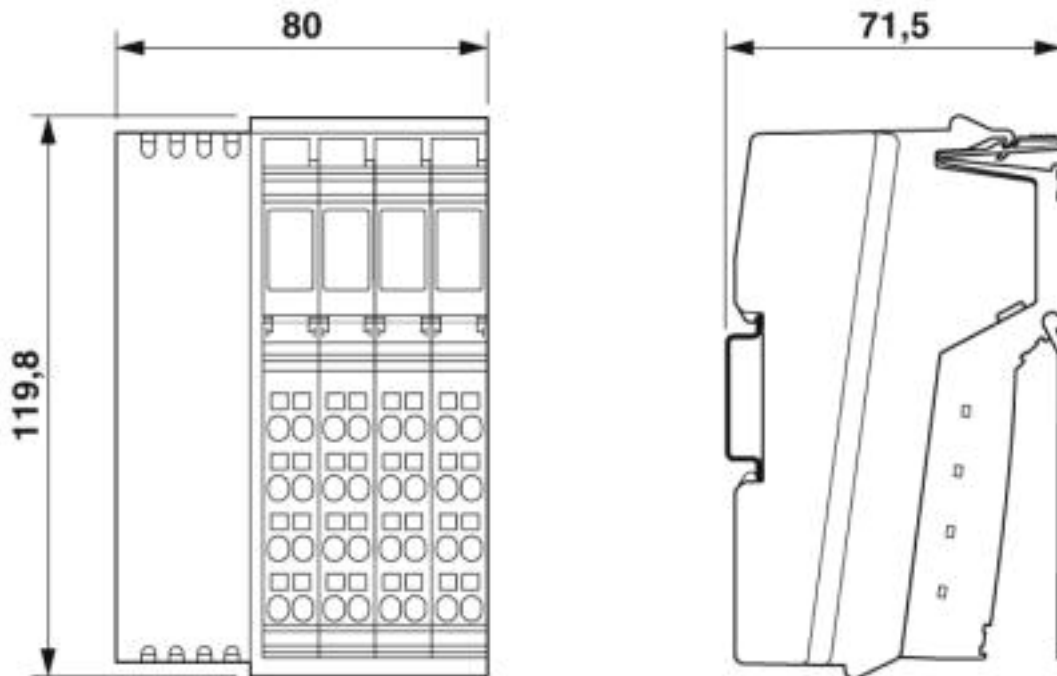


Dimensional drawing



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Dimensional drawing



Classifications

eCl@ss

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



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Classifications

UNSPSC

UNSPSC 12.01	43201404
UNSPSC 13.2	32151602

Approvals

Approvals





Approvals

DNV GL / BV / GL / LR / GL-SW / RINA / UL Recognized / cUL Recognized / EAC / cULus Recognized / GL

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAA00002CU
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	21725/B0 BV
GL		https://approvalfinder.dnvgl.com/	19910-11 HH
LR		http://www.lr.org/en	08/20033
GL-SW			19910-11 HH
RINA		http://www.rina.org/en	ELE096514XG
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324

<https://www.phoenixcontact.com/gb/products/2703981>



Bus coupler - IL ETH BK DI8 DO4 2TX-PAC - 2703981

Approvals

cUL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 140324

EAC



EAC-Zulassung

cULus Recognized



GL



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