

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



EtherNet/IP™ bus coupler, 8 inputs, 24 V DC, 4 outputs, 24 V DC, 500 mA, complete with I/O connectors

Product Description

The bus coupler for the EtherNet/IP™ protocol has 4 digital outputs and 8 digital inputs. This package contains all the necessary Inline plugs for connecting the supply and the I/Os.

The Inline terminals can be labeled using pull-out labeling fields. The fields have insert cards that can be labeled individually to suit the application. Additionally, there is the ZBFM-6... Zack marker strip for labeling the terminal points.

Product Features

- ✓ Up to 61 terminals (16 PCP devices) can be connected
- ✓ 8 digital inputs, 4 digital outputs onboard
- ✓ EtherNet/IP™, Version 1.2
- ✓ Web-based management
- ✓ 2 RJ45 connections
- ✓ Automatic speed detection of the system bus
- ✓ Diagnostic and status indicators
- ✓ 80 mm design width



EtherNet/IP

Key Commercial Data

| | |
|--------------------------------------|----------|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 340.0 g |
| Custom tariff number | 85389091 |
| Country of origin | Germany |

Technical data

Note

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

Dimensions

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

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 % (according to DIN EN 61131-2) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (according to DIN EN 61131-2) |
| 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

| | |
|---------------------------------|---|
| Net weight | 320 g |
| Note on weight specifications | with connectors |
| Mounting type | DIN rail |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Conformance with EMC directives | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge |
| | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m |
| | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion A; all interfaces 1 kV Criterion B; all interfaces 2 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; supply lines DC: 0.5 kV/0.5 kV (symmetrical/asymmetrical); fieldbus cable shield 1 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V |
| | Noise emission test as per EN 61000-6-4 EN 55011 Class A |
| 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 |
| Diagnostics messages | Short-circuit / overload of the digital outputs Yes |
| | Sensor supply failure Yes |
| | Failure of the actuator supply Yes |

Interfaces

| | |
|-----------------|--------------|
| Fieldbus system | EtherNet/IP™ |
|-----------------|--------------|

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

Technical data

Interfaces

| | |
|-------------------------------------|---|
| Designation | EtherNet/IP™ |
| Connection method | RJ45 socket, auto negotiation and auto crossing |
| Transmission speed | 10/100 MBit/s (half or full duplex (automatic detection)) |
| Transmission physics | Ethernet in RJ45 twisted pair |
| Permissible conductor cross section | 0.14 mm ² ... 0.22 mm ² (twisted pair) |
| Fieldbus system | Lokalbus |
| Designation | Inline local bus |
| Connection method | Inline data jumper |
| Transmission speed | 500 kBit/s / 2 MBit/s (Automatic detection, no combined system) |

System limits of the bus coupler

| | |
|---|---|
| Designation | System limits of the bus coupler |
| 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 (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 |

Power supply for module electronics

| | |
|-------------------------------------|---|
| Connection method | Spring-cage connection |
| 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) |
| Supply current | typ. 70 mA |
| Current consumption | max. 0.98 A (from U _{BK}) |
| Power loss | typ. 3 W (entire device) |
| Communications power U _L | 7.5 V DC |
| Current consumption | 0.8 A |
| Power consumption | typ. 1.7 W |

Inline potentials

| | |
|---|--|
| Communications power U _L | 7.5 V DC ±5 % |
| Power supply at U _L | max. 0.8 A DC |
| Main circuit supply U _M | 24 V DC |
| Supply voltage range U _M | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Power supply at U _M | max. 8 A DC (Sum of U _M + U _S) |
| Current consumption from U _M | max. 8 A DC |
| Segment supply voltage U _S | 24 V DC |

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

Technical data

Inline potentials

| | |
|--------------------------------|--|
| Supply voltage range U_S | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Power supply at U_S | max. 8 A DC (Sum of $U_M + U_S$) |
| Current consumption from U_S | max. 8 A DC |
| I/O supply voltage U_{ANA} | 24 V DC |
| Supply voltage range U_{ANA} | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Power supply at U_{ANA} | max. 0.5 A DC |

Digital inputs

| | |
|------------------------------------|---|
| Input name | Digital inputs |
| Connection method | Inline connector |
| | 2, 3-wire |
| Number of inputs | 8 (EN 61131-2 type 1) |
| Typical response time | approx. 500 μ s |
| Protective circuit | Protection against polarity reversal Suppressor diode |
| 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 |
| Nominal input current at U_{IN} | typ. 3 mA |
| 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 |
| | 2, 3-wire |
| Number of outputs | 4 |
| Protective circuit | Short-circuit and overload protection Free running circuit |
| 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 |

Standards and Regulations

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

Technical data

Standards and Regulations

| | |
|----------------------------------|---|
| Conformance with EMC directives | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge |
| | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m |
| | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion A; all interfaces 1 kV Criterion B; all interfaces 2 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; supply lines DC: 0.5 kV/0.5 kV (symmetrical/asymmetrical); fieldbus cable shield 1 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V |
| | Noise emission test as per EN 61000-6-4 EN 55011 Class A |
| | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge |
| | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m |
| | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion A; all interfaces 1 kV Criterion B; all interfaces 2 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; supply lines DC: 0.5 kV/0.5 kV (symmetrical/asymmetrical); fieldbus cable shield 1 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V |
| | Noise emission test as per EN 61000-6-4 EN 55011 Class A |
| 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 |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27250203 |
| eCl@ss 4.1 | 27250203 |
| eCl@ss 5.0 | 27250203 |
| eCl@ss 5.1 | 27242608 |
| eCl@ss 6.0 | 27242608 |
| eCl@ss 7.0 | 27242608 |

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

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 8.0 | 27242604 |
|------------|----------|

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001434 |
| ETIM 3.0 | EC001604 |
| ETIM 4.0 | EC001604 |
| ETIM 5.0 | EC001599 |

UNSPSC

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

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / cULus Recognized


Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

| |
|---|
| UL Recognized  |
|---|

| |
|--|
| cUL Recognized  |
|--|

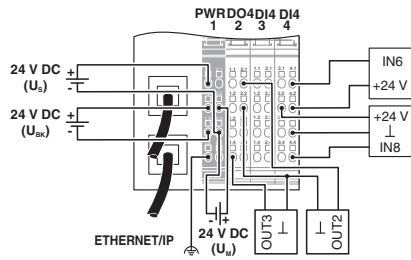
Bus coupler - IL EIP BK DI8 DO4 2TX-PAC - 2897758

Approvals



Drawings

Connection diagram



Dimensional drawing

