

SIMATIC PN/PN Coupler for deterministic data exchange between max.4 PN-Controller per subnet, also from subnet to subnet, PROFI-safe data exchange, I/O-, MSI-, MSO- and data record communication, redundant power supply, PN-connection via SIMATIC BusAdapter (BA), delivery w/o BusAdapter



General information	
Product type designation	PN/PN coupler
Firmware version	
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Tool changer</li> </ul>	Yes; Docking station and docking unit
<ul style="list-style-type: none"> <li>Local coupling, IO data</li> </ul>	Yes
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling modules</li> </ul> </li> </ul>	16
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling submodules per module</li> </ul> </li> </ul>	4; 1x write, 3x read
<ul style="list-style-type: none"> <li>Local coupling, data records</li> </ul>	Yes
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling modules</li> </ul> </li> </ul>	16
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling submodules per module</li> </ul> </li> </ul>	4; 1x write, 3x read
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Record length, max.</li> </ul> </li> </ul>	4 096 byte
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>FIFO depth in storage mode</li> </ul> </li> </ul>	8
Engineering with	

- STEP 7 TIA Portal configurable/integrated as of version STEP 7 V15.1 or higher
- PROFINET as of GSD version/GSD revision V2.3

## Installation type/mounting

Mounting	Mounting rail 7.5 mm and 15 mm
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## Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes

### Mains buffering

- Mains/voltage failure stored energy time 10 ms

## Input current

Current consumption, max.	360 mA; For 19.2 V input voltage at the right-hand supply terminal, including 2 plugged BA 2x LC
Inrush current, max.	1.6 A
$I^2t$	0.031 A <sup>2</sup> ·s
from supply voltage 1L+, max.	320 mA; For 19.2 V input voltage at the left-hand supply terminal, including 2 plugged BA 2x LC

## Power loss

Power loss, typ.	4 W; For 24 V input voltage and 2 plugged BA 2x RJ45 If BusAdapters with an optical interface are plugged, there is an additional 750 mW per optical interface (3 W with 2 plugged BA 2x LC)
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## Address area

### Address space per module

- Address space per module, max. 254 byte; max. 254 bytes of input data and 253 bytes of output data

### Address space per station

- Address space per station, max. 1 440 byte; per input / output

## Hardware configuration

### Submodules

- Number of submodules per station, max. 116

## Interfaces

Number of PROFINET interfaces	2; One PROFINET interface per line side
Optical interface	Yes; Via SIMATIC BusAdapter
Supports protocol for PROFINET IO	
• automatic detection of transmission rate	Yes
• Transmission rate, max.	100 Mbit/s

## 1. Interface

### Interface types

- Number of ports 2; via BusAdapter
- integrated switch Yes
- BusAdapter (PROFINET) Yes; Compatible BusAdapter: BA 2x RJ45, BA 2x FC, BA 2x SCRJ, BA SCRJ / RJ45, BA SCRJ / FC, BA 2x LC, BA LC / RJ45, BA LC / FC

#### Protocols

- PROFINET IO Device Yes
- Open IE communication Yes
- Media redundancy Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring

## 2. Interface

#### Interface types

- Number of ports 2; via BusAdapter
- integrated switch Yes

#### Protocols

- PROFINET IO Device Yes
- Open IE communication Yes
- Media redundancy Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring

#### Interface types

##### RJ 45 (Ethernet)

- Transmission procedure PROFINET with 100 Mbit/s full duplex (100BASE-TX)
- 10 Mbps No
- 100 Mbps Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)
- Autonegotiation Yes
- Autocrossing Yes

#### Protocols

Supports protocol for PROFINET IO Yes

##### Protocols (Ethernet)

- TCP/IP Yes
- SNMP Yes
- LLDP Yes
- ping Yes
- ARP Yes

##### PROFINET IO Device

##### Services

- Isochronous mode No
- Open IE communication Yes
- IRT Yes
- PROFIenergy No
- Prioritized startup Yes
- Shared device Yes

— Number of IO Controllers with shared device, max.	4; per line side
<b>Redundancy mode</b>	
• MRP	Yes
• MRPD	Yes
• PROFINET system redundancy (S2)	Yes; NAP S2 acc. to IEC
• H-Sync forwarding	Yes
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	No; For operation on isochronous bus
<b>Interrupts/diagnostics/status information</b>	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes; Parameterizable
<b>Diagnostics indication LED</b>	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Connection to network LINK (green)	Yes; 2x green link LEDs on BusAdapter
<b>Potential separation</b>	
between supply voltage and electronics	Yes; to power input 2
between Ethernet and electronics	Yes
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.4
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	-30 °C; From FS05
• max.	60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 50 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	2 000 m; On request: Installation altitudes greater than 2 000 m
<b>Mechanics/material</b>	

Strain relief	Yes; Optional, for RJ45 and FC BusAdapter only
<b>Dimensions</b>	
Width	100 mm; Minimized with good handling
Height	117 mm
Depth	74 mm; with mounting rail
<b>Weights</b>	
Weight, approx.	200 g; without BusAdapter
<b>last modified:</b>	03/03/2020