

SIMATIC PN/PN Coupler for deterministic data exchange between max.4 PN-Controller per subnet, also from subnet to subnet, PROFIsafe 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"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No; For operation on isochronous bus
<ul style="list-style-type: none"> Tool changer 	Yes; Docking station and docking unit
<ul style="list-style-type: none"> Local coupling, IO data 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling modules 	16
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling submodules per module 	4; 1x write, 3x read
<ul style="list-style-type: none"> Local coupling, data records 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling modules 	16
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling submodules per module 	4; 1x write, 3x read
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Record length, max. 	4 096 byte
<ul style="list-style-type: none"> <ul style="list-style-type: none"> FIFO depth in storage mode 	8
Engineering with	

- STEP 7 TIA Portal configurable/integrated from version
- STEP 7 V15.1 or higher
- PROFINET from 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 ² ·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
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

- IRT Yes
- PROFIenergy No
- Prioritized startup Yes
- Shared device Yes
- Number of IO Controllers with shared device, max. 4; per line side

Redundancy mode

- PROFINET system redundancy (S2) Yes; NAP S2 acc. to IEC
- H-Sync forwarding Yes

Media redundancy	
— MRP	Yes
— MRPD	Yes
Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes; Parameterizable
Diagnostics indication LED	
• 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
Potential separation	
between supply voltage and electronics	Yes; to power input 2
between Ethernet and electronics	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.4
Ambient conditions	
Ambient temperature during operation	
• min.	-30 °C; From FS05
• max.	60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 50 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	2 000 m; On request: Installation altitudes greater than 2 000 m
Mechanics/material	
Strain relief	Yes; Optional, for RJ45 and FC BusAdapter only
Dimensions	
Width	100 mm; Minimized with good handling
Height	117 mm
Depth	74 mm; with mounting rail
Weights	

Weight, approx.

200 g; without BusAdapter

last modified:

08/24/2020