



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	
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Tool changer	Yes; Docking station and docking unit
• Local coupling, IO data	Yes
— Number of coupling modules	16
— Number of coupling submodules per module	4; 1x write, 3x read
• Local coupling, data records	Yes
— Number of coupling modules	16
— Number of coupling submodules per module	4; 1x write, 3x read
— Record length, max.	4 096 byte
— FIFO depth in storage mode	8
Engineering with	

<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version PROFINET as of GSD version/GSD revision 	STEP 7 V15.1 or higher V2.3
Installation type/mounting	
Mounting	Mounting rail 7.5 mm and 15 mm
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	
<ul style="list-style-type: none"> 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)
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	254 byte; max. 254 bytes of input data and 253 bytes of output data
Address space per station	
<ul style="list-style-type: none"> Address space per station, max. 	1 440 byte; per input / output
Hardware configuration	
Submodules	
<ul style="list-style-type: none"> Number of submodules per station, max. 	116
Interfaces	
Number of PROFINET interfaces	2; One PROFINET interface per line side
With optical interface	Yes; Via SIMATIC BusAdapter
Supports protocol for PROFINET IO	
<ul style="list-style-type: none"> automatic detection of transmission rate Transmission rate, max. 	Yes 100 Mbit/s
1. Interface	
Interface types	

<ul style="list-style-type: none"> • Number of ports • integrated switch • BusAdapter (PROFINET) 	2; via BusAdapter Yes 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	
<ul style="list-style-type: none"> • PROFINET IO Device • Open IE communication • Media redundancy 	Yes Yes Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
2. Interface	
Interface types	
<ul style="list-style-type: none"> • Number of ports • integrated switch 	2; via BusAdapter Yes
Protocols	
<ul style="list-style-type: none"> • PROFINET IO Device • Open IE communication • Media redundancy 	Yes Yes Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
Interface types	
RJ 45 (Ethernet)	
<ul style="list-style-type: none"> • Transmission procedure • 10 Mbps • 100 Mbps • Autonegotiation • Autocrossing 	PROFINET with 100 Mbit/s full duplex (100BASE-TX) No Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) Yes Yes
Protocols	
Supports protocol for PROFINET IO	Yes
Protocols (Ethernet)	
<ul style="list-style-type: none"> • TCP/IP • SNMP • LLDP • ping • ARP 	Yes Yes Yes Yes Yes
PROFINET IO Device	
Services	
<ul style="list-style-type: none"> — Isochronous mode — Open IE communication — IRT — PROFIenergy — Prioritized startup — Shared device 	No Yes Yes No Yes Yes

— Number of IO Controllers with shared device, max.	4; per line side
Redundancy mode	
• MRP	Yes
• MRPD	Yes
• PROFINET system redundancy (S2)	Yes; NAP S2 acc. to IEC
• H-Sync forwarding	Yes
Open IE communication	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No; For operation on isochronous bus
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:	12/14/2019