



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>Isochronous mode</li> </ul>	No; For operation on isochronous bus
<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	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	STEP 7 V15.1 or higher
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	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"> <li>Mains/voltage failure stored energy time</li> </ul>	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 <sup>2</sup> t	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)
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
<b>Address space per station</b>	
• Address space per station, max.	1 440 byte; per input / output
<b>Hardware configuration</b>	
<b>Submodules</b>	
• Number of submodules per station, max.	116
<b>Interfaces</b>	
Number of PROFINET interfaces	2; One PROFINET interface per line side
Optical interface	Yes; Via SIMATIC BusAdapter
Transmission rate, max.	100 Mbit/s
<b>1. Interface</b>	
<b>Interface types</b>	
• 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
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
<b>2. Interface</b>	
<b>Interface types</b>	
• Number of ports	2; via BusAdapter
• integrated switch	Yes
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
• 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
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
<b>Protocols (Ethernet)</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
• ping	Yes
• ARP	Yes
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	Yes
— PROFINergy	No
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4; per line side
<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	Yes; NAP S2 acc. to IEC
• H-Sync forwarding	Yes
<b>Media redundancy</b>	
— MRP	Yes
— MRPD	Yes
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes

Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes; Parameterizable
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>• RUN LED</li> <li>• ERROR LED</li> <li>• MAINT LED</li> <li>• LINK LED</li> <li>• Monitoring of the supply voltage (PWR-LED)</li> </ul>	<ul style="list-style-type: none"> <li>Yes; green LED</li> <li>Yes; red LED</li> <li>Yes; Yellow LED</li> <li>Yes; 2x green link LEDs on BusAdapter</li> <li>Yes; green PWR LED</li> </ul>
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
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	<ul style="list-style-type: none"> <li>-30 °C; From FS05</li> <li>60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 50 °C</li> </ul>
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> </ul>	5 000 m; restrictions for installation altitudes > 2 000 m, see section "Climatic and mechanical environmental conditions"
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
<b>last modified:</b>	8/8/2023 