



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	

<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	254 byte; max. 254 bytes of input data and 253 bytes of output data
<b>Address space per station</b>	
<ul style="list-style-type: none"> <li>Address space per station, max.</li> </ul>	1 440 byte; per input / output
<b>Hardware configuration</b>	
<b>Submodules</b>	
<ul style="list-style-type: none"> <li>Number of submodules per station, max.</li> </ul>	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>	
<ul style="list-style-type: none"> <li>Number of ports</li> <li>integrated switch</li> <li>BusAdapter (PROFINET)</li> </ul>	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
<b>Protocols</b>	
<ul style="list-style-type: none"> <li>PROFINET IO Device</li> <li>Open IE communication</li> <li>Media redundancy</li> </ul>	Yes Yes Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
<b>2. Interface</b>	
<b>Interface types</b>	
<ul style="list-style-type: none"> <li>Number of ports</li> <li>integrated switch</li> </ul>	2; via BusAdapter Yes
<b>Protocols</b>	
<ul style="list-style-type: none"> <li>PROFINET IO Device</li> <li>Open IE communication</li> <li>Media redundancy</li> </ul>	Yes Yes Yes; As MRP or MRPD client; max. 50 or 30 devices in the ring
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
<ul style="list-style-type: none"> <li>Transmission procedure</li> <li>10 Mbps</li> <li>100 Mbps</li> <li>Autonegotiation</li> <li>Autocrossing</li> </ul>	PROFINET with 100 Mbit/s full duplex (100BASE-TX) No Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) Yes Yes
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
<b>Protocols (Ethernet)</b>	
<ul style="list-style-type: none"> <li>TCP/IP</li> <li>SNMP</li> <li>LLDP</li> <li>ping</li> <li>ARP</li> </ul>	Yes Yes Yes Yes Yes
<b>PROFINET IO Device</b>	
<b>Services</b>	
<ul style="list-style-type: none"> <li>IRT</li> <li>PROFIenergy</li> <li>Prioritized startup</li> <li>Shared device</li> <li>Number of IO Controllers with shared device, max.</li> </ul>	Yes No Yes Yes 4; per line side
<b>Redundancy mode</b>	
<ul style="list-style-type: none"> <li>PROFINET system redundancy (S2)</li> <li>H-Sync forwarding</li> </ul>	Yes; NAP S2 acc. to IEC Yes
<b>Media redundancy</b>	
<ul style="list-style-type: none"> <li>MRP</li> <li>MRPD</li> </ul>	Yes Yes
<b>Open IE communication</b>	
<ul style="list-style-type: none"> <li>TCP/IP</li> <li>SNMP</li> <li>LLDP</li> </ul>	Yes Yes Yes
<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
• LINK LED	Yes; 2x green link LEDs on BusAdapter
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
<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>	
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.	5 000 m; restrictions for installation altitudes > 2 000 m, see section "Climatic and mechanical environmental conditions"
<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>	3/22/2021 