




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"> 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 | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version | STEP 7 V15.1 or higher |
| <ul style="list-style-type: none"> PROFINET from GSD version/GSD revision | 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 ² t | 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 | |
| • 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 | |

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| • 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 |
| • LINK LED | Yes; 2x green link LEDs on BusAdapter |
| • Monitoring of the supply voltage (PWR-LED) | Yes; green PWR LED |
| 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. | 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 |
| last modified: | 3/22/2021  |