



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                                                                                                                                                                            |
| • Isochronous mode                                       | No; For operation on isochronous bus                                                                                                                                                         |
| • 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                                         |                                                                                                                                                                                              |
| • 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                                                                                                                                                               |
| 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 <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                                                            |
| Address space per station                           |                                                                                                                                |
| • Address space per station, max.                   | 1 440 byte; per input / output                                                                                                 |
| <b>Hardware configuration</b>                       |                                                                                                                                |
| Submodules                                          |                                                                                                                                |
| • 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>                                 |                                                                                                                                |
| 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                                                                  |
| <b>2. Interface</b>                                 |                                                                                                                                |
| 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                                                                  |
| <b>Interface types</b>                              |                                                                                                                                |
| 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                                                                                                                            |
| <b>Protocols</b>                                    |                                                                                                                                |
| Supports protocol for PROFINET IO                   | Yes                                                                                                                            |
| Protocols (Ethernet)                                |                                                                                                                                |
| • TCP/IP                                            | Yes                                                                                                                            |
| • SNMP                                              | Yes                                                                                                                            |
| • LLDP                                              | Yes                                                                                                                            |
| • ping                                              | Yes                                                                                                                            |
| • ARP                                               | Yes                                                                                                                            |
| <b>PROFINET IO Device</b>                           |                                                                                                                                |
| Services                                            |                                                                                                                                |
| — IRT                                               | Yes                                                                                                                            |
| — PROFIenergy                                       | 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                                                                                                                        |
| <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                                                                                                                          |
| <b>Ambient conditions</b>                              |                                                                                                                            |
| <b>Ambient temperature during operation</b>            |                                                                                                                            |
| • min.                                                 | -30 °C; From FS05                                                                                                          |
| • max.                                                 | 60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 50 °C                                          |
| <b>Altitude during operation relating to sea level</b> |                                                                                                                            |
| • 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>                                  | 7/24/2024                               |