CONNECTING NETWORKS

PROFIBUS/PROFINET coupler

With the new DP/PN coupler, a simple and uncomplicated connection of PROFIBUS to PROFINET is possible.

It allows data transfer between the PROFIBUS master and the PROFINET controller. The maximum size of the transmitted data is 244 bytes of input data and 244 bytes of output data.

The DP/PN coupler is projected via a GSD file on the PROFIBUS side and a GSDML file on the PROFINET side. No additional configuration software is necessary.

- Very compact design for DIN rail mounting
- Exchange of up to 244 bytes I/O data
- Redundant power supply
- Galvanic separation of the networks
- No influencing of the opposite side in the event of bus system failure
- Setting of the PROFIBUS addresses using DIP switches or software
- Configuration only with GSD/GSDML file; no additional software necessary
- PROFIBUS up to 12 Mbps
- PROFINET transmission rates of 100 Mbps

PROFINET/PROFINET coupler

The PN/PN coupler connects two PROFINET networks with one another and enables data transmission between the controllers of the two networks.

The maximum size of the transmitted I/O data is 1,024 bytes.

The PN/PN coupler is projected via a GSDML file; no additional configuration software is necessary.

- Very compact design for DIN rail mounting
- Exchange of up to 1024 bytes I/O data
- Redundant power supply
- Galvanic separation of the networks
- Configuration only with GSD/GSDML file; no additional software necessary
- No influencing of the opposite side in the event of bus system failure
- PROFINET transmission rates of 100 Mbps

ORDERING DATA

PROFINET SWITCH	ORDER NO.
PROFINET switch, 4-port, managed (incl. Quick Start Guide, CD with GSDML file)	700-850-4PS01
PROFINET switch, 8-port, managed (incl. Quick Start Guide, CD with GSDML file)	700-850-8PS01
PROFINET switch, 16-port, managed (incl. Quick Start Guide, CD with GSDML file)	700-850-16P01

PROFINET/CAN GATEWAY	ORDER NO.
PN/CAN gateway, PROFINET/CANopen (incl. Quick Start Guide, CD with GSDML file and manual)	700-670-PNC01
PN/CAN gateway, PROFINET/CAN Layer 2 (incl. Quick Start Guide, CD with GSDML file and manual)	700-671-PNC01
PN/CAN gateway, PROFINET/CANopen Slave (incl. Quick Start Guide, CD with GSDML file and manual)	700-672-PNC01

COUPLER	ORDER NO.
DP/PN coupler (incl. Quick Start Guide, CD with GSD and GSDML file)	700-158-3DP01
PN/PN coupler (incl. Quick Start Guide, CD with GSDML file)	700-158-3PN01

PROFINET CONNECTOR	ORDER NO.
PROFINET connector, RJ45, EasyConnect®, 90°	700-901-1BB20
PROFINET connector, RJ45, EasyConnect®, 180°	700-901-1BB10

TB20, DISTRIBUTED FIELDBUS I/O SYSTEM	ORDER NO.
TB20 starter kit, PROFINET IO	600-990-STRT3
Our TB20 starter kit will enable you to become familiar with our TB20 system and test it extensively without breaking the bank. This starter kit includes the most common modules, all required software, and the accessories you will need to get started. You can find everything else and the complete system overview under www.helmholz.de.	

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for your PROFINET application

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COMPATIBLE WITH YOU

PROFINET SWITCH

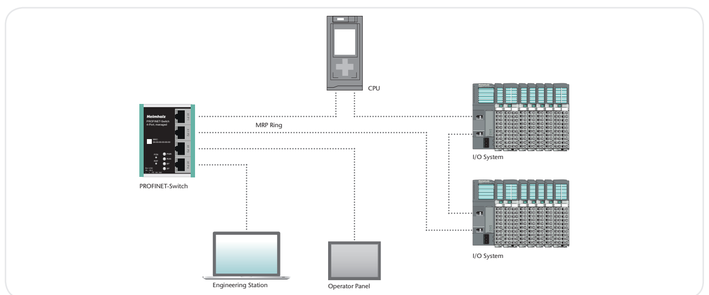
4/8/16 port, managed

Connect up to sixteen network participants to save time and costs with the managed PROFINET switch. It supports PROFINET according to Conformance Class B and offers transmission security through ring redundancy as an MRP client.

One of the most important functions of a PROFINET switch is the prioritizing of the PROFINET frame traffic in the machine network. The switch can differentiate whether the frame is a web query, an FTP file transmission, a media stream, or a PROFINET frame. In the case of a high transmission load, the important PROFINET frames can thus be prioritized in order to prevent frame losses.

With a GSDML file you can integrate the switch into your automation environment in the usual way. It is also possible to carry out a diagnosis and/or configuration via Telnet or SSH. The supported PROFINET protocols, such as LLPD, DCP, or even diagnosis alarms, can be easily configured and administered.

- Prioritizing of PROFINET frames
- Neighborhood detection
- Integration into the automation network with GSDML file
- Quick, simple configuration and diagnosis via PROFINET and web interface
- Media redundancy: MRP client
- Port mirroring and diagnostic alarms for network problems
- PROFINET Conformance Class B
- Managed switch with 4/8 x 100 Mbps RJ45 ports
- Assignment of a configuration via the device name
- Device exchange without programming device



Application example PROFINET switch 4-port

PROFINET/CAN GATEWAY

PN/CANopen, PN/CANopen Slave, PN/CAN Layer 2

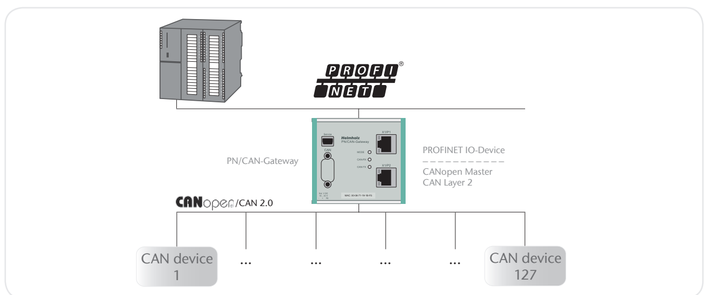
With the PN/CAN gateway, the connection of CAN devices to PROFINET is easy and straightforward.

The product spectrum encompasses versions for CANopen® master, CANopen Slave or Layer 2 protocols.

The I/O data of the CAN participants is transparently displayed in a freely configurable manner on the PROFINET network and can thus be processed directly in the PLC.

The PN/CAN gateway is integrated with a GSDML file in the hardware configurator and can be fully configured there. Other software tools for configuration or handling blocks for programming are not required.

- CANopen master, CANopen Slave, or CAN Layer 2 protocols
- Up to 127 CANopen slaves possible
- SDO communication, emergency messages, participant monitoring with heartbeat and node guarding
- Up to 512 CAN messages can be configured (Layer 2)
- SAE J1939 protocol (Layer 2)
- CANopen Slave profile 402, or customized
- Easy configuration using a GSDML file; no handling blocks or configuration software necessary
- Can be used with all PROFINET-compatible projecting tools



Application example PN/CAN gateway CANopen master and Layer 2

QUICK CONNECTION OF FIELD DEVICES

PROFINET connector, RJ45, EasyConnect®

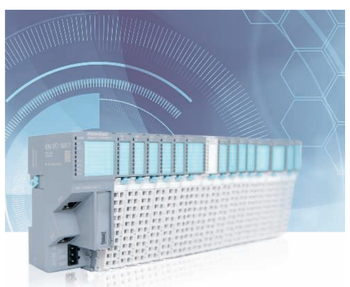
The industrial-grade metal housing provides the necessary ruggedness so that the plug can be used in many industrial applications.

To save the user time in wiring, the RJ45 connectors can be assembled in a single step using the fast connection technology EasyConnect®. Solid single wires and strands can be used. The color-coded contact elements also help avoid connection errors.

In addition, the RJ45 connectors are designed in protection class IP20 and for transmission rates up to 100 Mbps.

- Color-coded connector contact elements help to prevent connection errors
- Transmission rates up to 100 Mbps
- No loose individual parts
- Tool-free installation
- EasyConnect® RJ45 connection (IDC) for industrial applications
- For PROFINET, Modbus, and EtherCAT
- 90° angle cable outlet or 180° axial cable outlet

PROFINET I/O



TB20, distributed Fieldbus I/O system

With the TB20 I/O system, you generate efficient and functional added value for a variety of application areas – irrespective of the fieldbus and proven in practice!

The PROFINET bus coupler is designed to connect a PROFINET bus to TB20 peripheral modules. but can accommodate up to 63 modules of any kind connected in series with the bus coupler. It recognizes the connected peripheral modules and assigns each module the inputs/outputs from the process image table.

A functioning TB20 configuration will always require a bus coupler and at least one peripheral module, The bus coupler supports hot-swapping for replacing modules during operation.

- Reduced maintenance and idle times thanks to hot-swapping modules
- Freely definable auxiliary contact (auxiliary terminal)
- TB20 ToolBox – simple configuration, simulation, and diagnosis of the system
- Compact system configuration with 16-channel I/O modules