PROFINET

Ethernet

IP67
waterproof

INNOVATIVELY NETWORKING AUTOMATION
with the Helmholz PROFINET and Ethernet switches

Helmholz®
C O M P A T I B L E   W I T H   Y O U

ETHERNET SWITCH, 5/8/16-PORT, UNMANAGED, 10/100/1000 MBPS

Thanks to their very compact design, the new Helmholz unmanaged Ethernet switches can be used for a variety of industrial applications.

The light and yet robust industrial design is suitable for installation on the DIN rail and can be very easily integrated into the network. Once plugged in, they are immediately ready for operation with the simple plug&play solution. The tool-free push-in connection for the power supply supports installation.

Ethernet switch 5/8/16-port

Features

- Store-and-forward architecture
- 10/100/1000Base-T/TX, Full/Half-Duplex (Autonegotiation)
- HP Auto MDI/MDI-X & IEEE 802.3u automatic crossover support
- CoS according to IEEE 802.1Q
- QoS Priority Queues
- LLDP & PTCP Delay Traffic blocking (for PROFINET networks)

TECHNICAL DATA / ORDERING INFORMATION

	Ethernet switch, 5-port, unmanaged	Ethernet switch, 8-port, unmanaged	Ethernet switch, 16-port, unmanaged
Variants up to 100 Mbps	700-840-5ES01	700-840-8ES01	700-840-16S01
- Transmission rate	10/100 Mbps	10/100 Mbps	10/100 Mbps
- Certifications	CE, UL	CE, UL	CE, UL
Variants up to 1000 Mbps	700-841-5ES01	700-841-8ES01	—
- Transmission rate	10/100/1000 Mbps	10/100/1000 Mbps	—
- Certifications	CE	CE	CE
Dimensions (D x W x H)	32 x 49 x 76 mm	32 x 65 x 76 mm	32 x 123 x 76 mm
Weight	Approx. 110 g	Approx. 150 g	Approx. 270 g
LAN interface			
- Number	5	8	16
- Type	10/1001000Base-T/TX, Full/Half-Duplex (Autonegotiation) Auto MDI/MDI-X; IEEE automatic crossover	10/1001000Base-T/TX, Full/Half-Duplex (Autonegotiation) Auto MDI/MDI-X; IEEE automatic crossover	10/1001000Base-T/TX, Full/Half-Duplex (Autonegotiation) Auto MDI/MDI-X; IEEE automatic crossover
- Connection	5 x RJ45, integrated switch	8 x RJ45, integrated switch	16 x RJ45, integrated switch
Status indicator	1 LED power display, 10 LEDs Ethernet status	1 LED power display, 16 LEDs Ethernet status	1 LED power display, 32 LEDs Ethernet status
Voltage supply	24 V DC, (18...30 V DC)	24 V DC, (18...30 V DC)	24 V DC, (18...30 V DC)
Current draw	max. 60 mA with 24 V DC	max. 100 mA with 24 V DC	max. 150 mA with 24 V DC
Ambient conditions			
- Permissible ambient temperature	-25 °C ... +75 °C	-25 °C ... +75 °C	-25 °C ... +75 °C
- Transport and storage temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C
- Relative air humidity	95 % r H without condensation	95 % r H without condensation	95 % r H without condensation
- Pollution degree	2	2	2
- Protection rating	IP 20	IP 20	IP 20

PROFINET SWITCH, 4/8/16-PORT, MANAGED

PROFINET switch 5/8/16-port

Connect up to 16 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. The supported PROFINET protocols, such as LLPD, DCP, or even diagnosis alarms, can be easily configured and administered.

Features

- PROFINET Conformance Class B
- Managed switch with 4/8/16 x 100 Mbps RJ45 ports
- Integration into the automation network with GSDML file
- Quick, simple configuration and diagnosis via PROFINET and web interface
- LLPD, DCP, SNMP, diagnosis alarms
- Media redundancy: MRP client
- Port mirroring
- Network statistics (frames and errors)

Technical advantages when using a PROFINET switch

- Prioritizing of PROFINET frames
- Assignment of a configuration via the device name
- Neighborhood detection
- Device exchange without programming device
- Ring redundancy
- Each port can be activated or deactivated
- Diagnostic messages for network problems
- Identification and maintenance data

TECHNICAL SPECIFICATIONS / ORDERING INFORMATION

	PROFINET switch, 4-port, managed 700-850-4PS01	PROFINET switch, 8-port, managed 700-850-8PS01	PROFINET switch, 16-port, managed 700-850-16PS01
Dimensions (D x W x H)	32 x 59 x 76 mm	32 x 82 x 76 mm	32 x 146 x 76 mm
Weight	Approx. 130 g	Approx. 180 g	Approx. 310 g
PROFINET ports			
- Protocol	PROFINET IO as defined in IEC 61158-6-10	PROFINET IO as defined in IEC 61158-6-10	PROFINET IO as defined in IEC 61158-6-10
- Physical layer	Ethernet	Ethernet	Ethernet
- Transmission rate	100 Mbps, full duplex	100 Mbps, full duplex	100 Mbps, full duplex
- Connection	4 x RJ45, integrated switch	8 x RJ45, integrated switch	16 x RJ45, integrated switch
- Features	Media Redundancy Protocol (MRP), automatic addressing / topology detection (LLDP, DCP)	Media Redundancy Protocol (MRP), automatic addressing / topology detection (LLDP, DCP)	Media Redundancy Protocol (MRP), automatic addressing / topology detection (LLDP, DCP)
Status indicator	4 LEDs function status 8 LEDs Ethernet status	4 LEDs function status 16 LEDs Ethernet status	4 LEDs function status 32 LEDs Ethernet status
Voltage supply	DC 24 V (18 ... 30 V DC)	DC 24 V (18 ... 30 V DC)	DC 24 V (18 ... 30 V DC)
Current draw	Max. 250 mA at 24 V DC	Max. 350 mA at 24 V DC	Max. 400 mA at 24 V DC
Ambient conditions			
- Permissible ambient temperature	-40 °C ... +75 °C	-40 to +75 °C	0°C ... +60°C
- Transport and storage temperature	-40 to +85°C	-40 to +85°C	-40°C ... +85°C
- Protection rating	IP 20	IP 20	IP20
- Certifications	CE, UL	CE, UL	CE, UL

PROFINET SWITCH, 8-PORT, MANAGED, IP67

SCAN
QR CODE
TO GET MORE
INFORMATION

*PROFINET switch
8-port, IP67*

IP67
waterproof

One of the most important functions of a PROFINET switch is the prioritizing of the PROFINET frame traffic in the machine network. The managed 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 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.

The supported PROFINET protocols, such as LLPD, DCP, or even diagnosis alarms, can be easily configured and administered.

Thanks to the high protection class of IP67 and the temperature range from –40 °C to +75 °C, the PROFINET switch, 8-port, IP67 is optimally designed for use in rough industrial environments. The product is ideally suited for installation without a control cabinet and thereby offers a variety of possibilities for usage.

Features

- PROFINET Conformance Class B
- Integration into the automation network with GSDML file
- Quick, simple configuration and diagnosis via PROFINET and web interface
- LLPD, DCP, SNMP, diagnosis alarms
- Media redundancy: MRP client
- Port mirroring
- Network statistics (frames and errors)
- Managed switch with 8 x 100 Mbps M12 ports
- Protection class IP67
- Installation without control cabinet possible

TECHNICAL DATA / ORDERING INFORMATION

	PROFINET switch, 8-port, managed, IP67 700-857-8PS01
Dimensions (D x W x H)	24 x 62 x 190 mm
Weight	Approx. 410 g
PROFINET ports	
- Protocol	PROFINET IO as defined in IEC 61158-6-10
- Physical layer	Ethernet
- Type	10Base-T/ 100Base-T
- Transmission rate	10/100 Mbps
- Connection	M12 D-coded
- Features	Media redundancy (MRP) Automatic addressing / topology detection (LLDP, DCP)
Status indicator	3 LEDs, function status 16 LEDs, Ethernet status
Voltage supply	DC 24 V (18 ... 30 V DC)
- Connection	M12 L-coded
Current draw	Max. 130 mA at 24 V DC
Power dissipation	Max. 3.5 W
Ambient conditions	
- Permissible ambient temperature	-40°C ... +75°C
- Transport and storage temperature	-40°C ... +85°C
- Protection rating	IP67
- Certifications	CE