



Features

- ✓ 4x SPE 10Base-T1L (IEEE 802.3cg), 10 MBit, up to 1000m cable length
- ✓ SPE connector according to IEC 63171-2 ("Phoenix Contact")
- ✓ SPoE power classes 10, 11, 12 (SCCP); up to 8.4 W (24V)
- ✓ 2x RJ45 Ethernet 100Base-TX/ 1000Base-T, up to 1Gbit
- ✓ Store-and-forward architecture
- ✓ Full/half duplex, autonegotiation
- ✓ Auto MDI/MDI-X (IEEE 802.3u Auto crossover support)
- ✓ LLDP & PTCP Delay-Traffic blocking (for PROFINET networks)
- ✓ PROFINET Conformance Class A

FLEXtra SLIM SPE-Switch, unmanaged 4x SPE, 2x RJ45

The Helmholz "FLEXtra SLIM SPE-Switch, unmanaged, 6-Port" enables the data exchange of up to 4 SPE Ethernet devices with 10 Mbit and 2 Ethernet devices via RJ45 with up to 1000 MBit. It operates as an unmanaged switch between all connections.

Single Pair Ethernet (SPE) enables the transmission of data via Ethernet with only one twisted pair of wires. Transmission rates of 10 Mb/s to 1 GBit/s are currently possible. Conventional Ethernet technology, as used in industrial applications, requires two or four cable pairs. The two-wire design of Single Pair Ethernet cables therefore significantly reduces the cabling weight compared to conventional Ethernet cables.

The Helmholz "FLEXtra SLIM SPE-Switch, unmanaged, 6-Port" is suitable for installation on a DIN rail and connects up to 4 Ethernet devices via SPE with 10 Mbit and 2 Ethernet devices with up to 1000 Mbps via RJ45. The FLEXtra SLIM SPE switch is also suitable for PROFINET networks. The LLDP (neighbourhood detection) and PTCP (time synchronization) functions are handled correctly with the switch in accordance with the PROFINET standard. The FLEXtra SLIM SPE switch therefore complies with PROFINET Conformance Class A.

With the 10Mbit SPE standard "T1L", cable lengths of up to 1000m are possible, 10 times longer than with standard Ethernet. The compact, industrial-grade and lockable connectors of SPE cabling also reduce the space required for cabling.

SPE also enables power transmission to the end device via the same cable pair. With Power over Dateline (PoDL or SPoE), energy and data are sent via one cable, with an output of up to 18 W.

Connections

The FLEXtra SLIM Ethernet SPE switch has 4 SPE connections (X1 P1 - X1 P4) and 2 RJ45 connections (X1 P5 & X1 P6). The switch must be supplied with 24 V DC at the wide range input "Ext. V DC 18...30 V" via the supplied

connector plug. The connection (FE,) is for the functional earth. Connect this properly to the reference potential.

General Information

Order number	700-848-6ES11
Article name	FLEXtra SLIM SPE-Switch, unmanaged, 6-Port, 4x SPE 10 Mbit (T1L) + 2x RJ45, 1 Gbit
Scope of delivery	SPE Switch with power supply plug
Dimensions (DxWxH)	35,1 x 25 x 109 mm (without connector)
Weight	Approx. 120g

SPE interface (X1 P1-P4)

Number	4
Connexion	SPE-Socket, IEC 63171-2 („Phoenix Contact“), IP20
Transmission rate	10 Mbit/s
Type	10Base-T1L
	IEEE 802.3cg; Autonegotiation up to 1000m cable length
	Cable according to IEC 61156-13/14
SPoE, Power Classes (24V)	10: 1.23 W, 1000m, 18AWG
	11: 3.2 W, 1000m, 14AWG
	12: 8.4 W, 400m, 14AWG

RJ45 interface (X1 P5+P6)

Number	2
Connexion	RJ45
Transmission rate	100/1000 Mbit/s
Type	100Base-TX, 1000Base-T,
	Full-/Half-Duplex, Autonegotiation,
	Auto MDI/MDI-X, IEEE Auto crossover,
	LLDP & PTCP Delay-Traffic blocking (for PROFINET networks)

Status indication

Power display	1 LED, green
RJ45 Status	4 LEDs, orange/green
SPE Status	8 LEDs, orange top/bottom

Power supply

Voltage supply	DC 24 V (22...30 V DC)
Current draw	max. 200 mA at 24 V DC + max. 2,6A SPoE
Power loss	Max. 4,5 W + max. 61 W for SPoE

Ambient conditions

Ambient temperature	-25 °C ... +75 °C
Transport and storage temperature	-40 °C ... +85 °C
Relative air humidity	95 % r. H. without condensation
Pollution degree	2
Protection rating	IP20
Approvals	CE