

# FLEXtra SLIM SPE-Switch, unmanaged, 6-Port, 4x SPE 10 Mbit (T1L) + 2x RJ45, 1 Gbit (700-848-6ES11)

Version 1b for Hardware 1

## Application area

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 LLPD (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.

## 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,  $\downarrow$ ) is for the functional earth. Connect this properly to the reference potential.

## Features

- SPE 10Base-T1L (IEEE 802.3cg)
- SPE 10 Mbps, up to 1000m cable length
- SPE Stecker as of IEC 63171-2 („Phoenix Contact“)
- SPoE Power Klassen 10, 11, 12 (SCCP); up to 8,4 W (24V)
- 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
- VLAN, supported VIDs: 0-62
- QoS-Priority Queues: 8
- 2K MAC address lookup table
- 32KB frame buffer
- Max. frame size 10240 bytes



## LEDs

**PWR-LED**                      On = Power supply available  
                                         Off = No voltage or the device is defective

### SPE LEDs (X1 P1 – X1 P4)

|                                    |                |                              |                       |
|------------------------------------|----------------|------------------------------|-----------------------|
| Top LED orange (Power/Error):      | Off = No SPoE  | On = SPoE active             | Flashing = SPoE error |
| Bottom LED Orange (Link/Activity): | On = Connected | Flashing = Data transmission |                       |

### RJ45 LEDs (X1 P5 + X1 P6)

|                  |                              |
|------------------|------------------------------|
| Orange (Link):   | On = Connected               |
| Green (Traffic): | Flashing = Data transmission |

## Technical data

|                                  |                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Order no.</b>                 | <b>700-848-6ES11</b>                                                                                                                                              |
| Name                             | FLEXtra SLIM SPE-Switch, unmanaged, 6-Port<br>4x SPE 10 Mbit (T1L) + 2x RJ45, 1 Gbit                                                                              |
| Scope of delivery                | SPE Switch with power supply plug                                                                                                                                 |
| Dimensions (DxWxH)               | 35,1 mm x 25 mm x 109 mm (without connector)                                                                                                                      |
| Weight                           | Approx. 120 g                                                                                                                                                     |
| <b>SPE Interface (X1 P1-P4)</b>  |                                                                                                                                                                   |
| Number                           | 4                                                                                                                                                                 |
| Connection                       | SPE-Socket, IEC 63171-2 („Phoenix Contact“), IP20                                                                                                                 |
| Transmission rate                | 10 Mbit/s                                                                                                                                                         |
| Type                             | 10Base-T1L, IEEE 802.3cg; Autonegotiation<br>up to 1000 m cable length, Cable according to IEC 61156-13/14                                                        |
| SPoE, Power Classes (24V)        | 10: 1.23 W, 1000 m, 18 AWG<br>11: 3.2 W, 1000 m, 14 AWG<br>12: 8.4 W, 400 m, 14 AWG                                                                               |
| <b>RJ45 Interface (X1 P5+P6)</b> |                                                                                                                                                                   |
| Number                           | 2                                                                                                                                                                 |
| Connection                       | RJ45                                                                                                                                                              |
| Transmission rate                | 100/1000 Mbit/s                                                                                                                                                   |
| Type                             | 100Base-TX, 1000Base-T, Full-/Half-Duplex, Autonegotiation,<br>Auto MDI/MDI-X; IEEE Auto crossover;<br>LLDP & PTCP Delay-Traffic blocking (for PROFINET networks) |
| <b>Status indication</b>         |                                                                                                                                                                   |
| Power display                    | 1 LED, green                                                                                                                                                      |
| RJ45 Status                      | 4 LEDs, orange/green                                                                                                                                              |
| SPE Status                       | 8 LED, Orange top/bottom                                                                                                                                          |
| <b>Power supply</b>              |                                                                                                                                                                   |
| Voltage supply                   | 24 V DC (22...30 V DC)                                                                                                                                            |
| Current draw                     | max. 200 mA at 24 V DC + max. 2.6 A for SPoE                                                                                                                      |
| Power loss                       | max. 4,5 W + max. 61 W for SPoE                                                                                                                                   |
| <b>Ambient conditions</b>        |                                                                                                                                                                   |
| Ambient temperature              | -25 °C ... +75 °C                                                                                                                                                 |
| Transport and storage temp.      | -40 °C ... +85 °C                                                                                                                                                 |
| Relative air humidity            | 95 % r. H. without condensation                                                                                                                                   |
| Pollution degree                 | 2                                                                                                                                                                 |
| Protection rating                | IP20                                                                                                                                                              |
| Approvals                        | CE                                                                                                                                                                |



*Attention: If the device is used in a manner not specified by the manufacturer, the protection provided by the device may be affected. Pay special attention to the correct contact during cable installation. If you have problems, always read the latest documentation first, which can be found on the Internet at [www.helmholz.com](http://www.helmholz.com). Connected circuits shall meet the requirements of Limited energy circuits acc. UL61010-1, section 9.4 or LPS in conformance with UL60950-1 or Class 2 in accordance with UL1310 or UL1585.*

*Note:*

*The contents of this document have been checked by us for matching with the hardware and software described. However, we assume no liability for any existing differences, as these cannot be fully ruled out. The information in this document is, however, updated on a regular basis. When using your purchased products, please make sure to use the latest version of the document, which can be viewed and downloaded on the Internet at [www.helmholz.de](http://www.helmholz.de).*