# FL SWITCH SFN 4TX/FX ST - Industrial Ethernet Switch

2891453

https://www.phoenixcontact.com/us/products/2891453

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Ethernet switch, 4 TP RJ45 ports, 1 FO port, 100 Mbps full duplex in ST-D format, automatic detection of data transmission speed of 10 or 100 Mbps (RJ45), autocrossing function

## Your advantages

- RJ45 ports support a transmission speed of 10/100 Mbps
- Fiber-optic ports support 100 Mbps
- QoS-prioritized (Quality of Service) messages
- Local diagnostic indicators with LEDs
- The switch also offers cable locking and port blocking
- Auto negotiation and autocrossing detection simplifies installation and setup

## Commercial data

| | |
|---|---|
| Item number | 2891453 |
| Packing unit | 1 pc |
| Sales key | DN19 |
| Product key | DNN113 |
| Catalog page | Page 291 (C-6-2019) |
| GTIN | 4046356100816 |
| Weight per piece (including packing) | 291.5 g |
| Weight per piece (excluding packing) | 265 g |
| Customs tariff number | 85176200 |
| Country of origin | TW |

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## Technical data

### Dimensions

| | |
|---|---|
| Width | 30 mm |
| Height | 131 mm |
| Depth | 70 mm |

### Material specifications

| | |
|---|---|
| Housing material | Aluminum |

### Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |

### Interfaces

#### Ethernet (RJ45)

| | |
|---|---|
| Connection method | RJ45 |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed | 10/100 Mbps |
| Transmission physics | Ethernet in RJ45 twisted pair |
| Transmission length | 100 m (per segment) |
| Signal LEDs | Data receive, link status |
| No. of channels | 4 (RJ45 ports) |

#### Fiber optic interface

| | |
|---|---|
| Connection method | ST |
| Transmission speed | 100 Mbps (full duplex) |
| Transmission physics | multi-mode fiberglass |
| Transmission length | 2000 m (Fiberglass 50/125) |
| | 2000 m (Fiberglass 62.5/125) |
| Wavelength | 1300 nm |
| No. of channels | 1 (ST multi-mode) |

### Product properties

| | |
|---|---|
| Product type | Switch |
| Product family | Unmanaged Switch SFN |
| Type | Block design |
| MTTF | 193 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) |

#### Insulation characteristics

| | |
|---|---|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |

#### Switch functions

| | |
|---|---|
| Basic functions | Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode |

| Status and diagnostic indicators | LEDs: $U_S$, link and activity per port |
|---|---|
| Additional functions | Autonegotiation |

Security functions

| Basic functions | Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode |
|---|---|

## Electrical properties

| Local diagnostics | US Supply voltage Green LED |
|---|---|
| | LNK/ACT Link status/data transmission Green LED |
| | 100 Data transmission speed Yellow LED |
| Maximum power dissipation for nominal condition | 3.36 W |
| Test section | 500 V DC 1 min. |
| Transmission medium | Copper |
| | FO |

Supply

| Supply voltage (DC) | 24 V DC |
|---|---|
| Supply voltage range | 9 V DC ... 32 V DC |
| Residual ripple | 3.6 $V_{PP}$ (within the permitted voltage range) |
| Typical current consumption | 140 mA (at $U_S$ = 24 V DC) |

## Connection data

Connection technology

| Connection name | Power supply |
|---|---|
| pluggable | yes |

Power supply

| Connection method | Screw connection |
|---|---|
| Conductor cross section, rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section, flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section AWG | 24 ... 12 |
| Stripping length | 7 mm |

## Environmental and real-life conditions

Ambient conditions

| Degree of protection | IP20 |
|---|---|
| Ambient temperature (operation) | 0 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| Vibration (operation) | in acc. with IEC 60068-2-6: 5g, 150 Hz |
| Air pressure (operation) | 86 kPa ... 108 kPa (up to 1500 m above sea level) |
| Air pressure (storage/transport) | 66 kPa ... 108 kPa (up to 3500 m above sea level) |

| Resistance to gases that may endanger the functions, in acc. with DIN 40046-36, DIN 40046-37 | Sulfur dioxide ($SO_2$) 10 ±0.3 $cm^3/m^3$, hydrogen sulfide ($H_2S$) 1 ±0.3 $cm^3/m^3$, at 25°C and 75% humidity and exposure of four days |
|---|---|

## EMC data

| Noise immunity | EN 61000-6-2:2005 |
|---|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Noise emission | EN 61000-6-4 |

## System properties

### Functionality

| Basic functions | Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode |
|---|---|

## Signaling

| Status display | LEDs: $U_S$, link and activity per port |
|---|---|

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2891453

**EAC**
Approval ID: RU*-DE.*.B.00741/19

**UL Listed**
Approval ID: FILE E 140324

**cUL Listed**
Approval ID: FILE E 140324

**KC**
Approval ID: MSIP-REI-PCK-2891453

**cUL Listed**
Approval ID: FILE E 199827

**UL Listed**
Approval ID: FILE E 199827

**cULus Listed**

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## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 19170402 |
| ECLASS-12.0 | 19170402 |
| ECLASS-13.0 | 19170402 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC000734 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 43222600 |

## Environmental product compliance

### EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(a), 7(c)-I |

### China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-10 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |

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## Accessories

### MSTB 2,5/ 4-ST - PCB connector

1754481

https://www.phoenixcontact.com/us/products/1754481

PCB connector, nominal cross section: 2.5 mm$^2$, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### DT-LAN-CAT.6+ - Surge protection device

2881007

https://www.phoenixcontact.com/us/products/2881007

Surge protection in accordance with Class $E_A$ (CAT6$_A$), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE++ / 4PPoE) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

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## FL SEC PAC 4TX - Port Guard Security Element

2832865

https://www.phoenixcontact.com/us/products/2832865

Layer1 security elements for 4 RJ45 network connections for use with patch boxes and panels

## FL DIN RA - DIN rail adapter

2891053

https://www.phoenixcontact.com/us/products/2891053

The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

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## FL RJ45 PROTECT CAP - Dust protection

2832991

https://www.phoenixcontact.com/us/products/2832991

Dust protection caps for RJ45 socket

## E/NS 35 N - End bracket

0800886

https://www.phoenixcontact.com/us/products/0800886

End clamp, width: 9.5 mm, color: gray

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## FL CAT5 PATCH 0,5 - Patch cable

2832263

https://www.phoenixcontact.com/us/products/2832263

Patch cable, CAT5, assembled, 0.5 m

## FL CAT5 PATCH 1,0 - Patch cable

2832276

https://www.phoenixcontact.com/us/products/2832276

Patch cable, CAT5, assembled, 1 m

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## FL CAT5 PATCH 2,0 - Patch cable

2832289

https://www.phoenixcontact.com/us/products/2832289

Patch cable, CAT5, assembled, 2 m

## NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

https://www.phoenixcontact.com/us/products/1411854

Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet

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## NBC-R4AC/10G-R4AC/10G-94F/2,0 - Patch cable

1408360

https://www.phoenixcontact.com/us/products/1408360

Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

## NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

1408365

https://www.phoenixcontact.com/us/products/1408365

Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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## NBC-R4AC/1,0-93B/R4AC - Patch cable

1408968

https://www.phoenixcontact.com/us/products/1408968

Patch cable, degree of protection: IP20, cable length: 1 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

## NBC-R4AC/2,0-93B/R4AC - Patch cable

1408969

https://www.phoenixcontact.com/us/products/1408969

Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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## NBC-R4AC/5,0-93B/R4AC - Patch cable

1408970

https://www.phoenixcontact.com/us/products/1408970

Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

## FOC-ST:PA-SC:PA-OM2:D01/1 - FO patch cable

1115574

https://www.phoenixcontact.com/us/products/1115574

Multi-mode OM2 duplex jumper, ST-SC, UPC polishing, length 1 m

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## FOC-ST:PA-SC:PA-OM2:D01/2 - FO patch cable

1115573

https://www.phoenixcontact.com/us/products/1115573

Multi-mode OM2 duplex jumper, ST-SC, UPC polishing, length 2 m

## FOC-ST:PA-ST:PA-OM2:D01/1 - FO patch cable

1115560

https://www.phoenixcontact.com/us/products/1115560

Multi-mode OM2 duplex jumper, ST-ST, UPC polishing, length 1 m

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## FOC-ST:PA-ST:PA-OM2:D01/2 - FO patch cable

1115557

https://www.phoenixcontact.com/us/products/1115557

Multi-mode OM2 duplex jumper, ST-ST, UPC polishing, length 2 m

## FOC-LC:PA-ST:PA-OM2:D01/1 - Fiber optic cable

1115588

https://www.phoenixcontact.com/us/products/1115588

Multi-mode OM2 duplex jumper, LC-ST, UPC polishing, length 1 m

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## FOC-LC:PA-ST:PA-OM2:D01/2 - Fiber optic cable

1115587

https://www.phoenixcontact.com/us/products/1115587

Multi-mode OM2 duplex jumper, LC-ST, UPC polishing, length 2 m

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