

# FL SWITCH 1004N-FX ST - Industrial Ethernet Switch

1085179

<https://www.phoenixcontact.com/us/products/1085179>



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Ethernet switch, four RJ45 ports, one ST fiber port



## Your advantages

- RJ45 ports support a transmission speed of 10/100 Mbps
- QoS-prioritized (Quality of Service) messages
- PROFINET PTCP filter for reliable communication on PROFINET networks
- Enhanced traffic prioritization for automation protocols
- Energy-efficient Ethernet in accord. with IEEE 802.3az
- PROFINET conformance Class A for real-time data exchange, alarms, and diagnostics
- Auto negotiation and autocrossing detection simplifies installation and setup

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1085179       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DN20          |
| Product key                          | DNN116        |
| GTIN                                 | 4055626835105 |
| Weight per piece (including packing) | 216.96 g      |
| Weight per piece (excluding packing) | 134 g         |
| Customs tariff number                | 85176200      |
| Country of origin                    | TW            |

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## Technical data

### Dimensions

|        |         |
|--------|---------|
| Width  | 22.5 mm |
| Height | 117 mm  |
| Depth  | 84 mm   |

### Notes

#### Note on application

|                     |                         |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

#### Utilization restriction

|          |   |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

### Material specifications

|                  |                                |
|------------------|--------------------------------|
| Housing material | Polycarbonate fiber reinforced |
|------------------|--------------------------------|

### Mounting

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

### Interfaces

#### Ethernet (RJ45)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Number of interfaces          | 4                                 |
| 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)                    |
| Input buffer                  | 768 Kbits                         |
| Output buffer                 | 768 Kbits                         |

#### Ethernet FO

|                              |   |
|------------------------------|---|
| Number of interfaces         | 1   |
| Connection method            | ST  |
| Transmission speed           | 100 Mbps (full duplex)                              |
| Transmit capacity, minimum   | -20 dBm   |
| Transmit capacity, maximum   | -14 dBm   |
| Minimum receiver sensitivity | -32 dBm   |
| Maximum receiver sensitivity | 0 dBm   |
| Transmission physics         | multi-mode fiberglass                               |
| Transmission length          | 8 km (fiberglass with F-G 62.5/125 0.7 dB/km F1000) |

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|                 |  |
|-----------------|--|
|                 | 5.71 km (fiberglass with F-G 50/125 0.7 dB/km F1200) |
| Wavelength      | 1300 nm  |
| No. of channels | 1 (ST multi-mode)                                    |

## Product properties

|                 |  |
|-----------------|--|
| Product type    | Switch   |
| Product family  | Unmanaged Switch 1000  |
| MTTF            | 115.1 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)<br>427.5 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)<br>279.5 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
| Basic functions | Unmanaged switch<br>Autonegotiation<br>Store and Forward switching mode  |

## Switch functions

|                                  |  |
|----------------------------------|--|
| Basic functions                  | Unmanaged switch<br>Autonegotiation<br>Store and Forward switching mode  |
| PROFINET conformance class       | Conformance Class A  |
| MAC address table                | 2k   |
| Status and diagnostic indicators | LEDs: U <sub>S</sub> , link and activity per port  |
| Additional functions             | 100 BASE-TX/100BASE-FX (IEEE 802.3u)<br>Quality of Service (QoS) prioritization (IEEE 802.1p)<br>Energy-efficient Ethernet (IEEE 802.3az)<br>10Base-T (IEEE 802.3) |

## Security functions

|                 |   |
|-----------------|---|
| Basic functions | Unmanaged switch<br>Autonegotiation<br>Store and Forward switching mode |
|-----------------|---|

## Electrical properties

|   |                      |
|---|----------------------|
| Maximum power dissipation for nominal condition | 2.196 W (at 24 V DC) |
| Transmission medium                             | Copper<br>FO         |
|   |                      |

## Supply

|                         |  |
|-------------------------|--|
| Supply voltage (DC)     | 24 V DC  |
| Supply voltage (AC)     | 24 V AC (50/60 Hz)   |
| Supply voltage range    | 9 V DC ... 32 V DC<br>18 V AC ... 30 V AC (50/60 Hz)           |
| Power supply connection | Via COMBICON, max. conductor cross-section 2.5 mm <sup>2</sup> |
| Residual ripple         | 3.6 V <sub>PP</sub> (within the permitted voltage range)       |

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|                             |                    |
|-----------------------------|--------------------|
| Max. current consumption    | 244 mA (at 9 V DC) |
| Typical current consumption | 60 mA (at 24 V DC) |

## Connection data

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

## Power supply

|   |  |
|---|--|
| Connection method   | Push-in spring connection                    |
| Conductor cross-section, rigid  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross-section, flexible                                     | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross-section AWG   | 24 ... 12                                    |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Stripping length  | 10 mm  |

## Environmental and real-life conditions

|  |   |
|--|---|
| Ambient conditions                       |   |
| Degree of protection                     | IP30  |
| Ambient temperature (operation)          | -10 °C ... 60 °C  |
| Ambient temperature (storage/transport)  | -40 °C ... 85 °C  |
| Altitude                                 | 2000 m (maximum)  |
| Permissible humidity (operation)         | 5 % ... 95 % (non-condensing)   |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)   |
| Shock (operation)                        | 30g (EN 60068-2-27)   |
| Vibration (operation)                    | in acc. with IEC 60068-2-6: 5g, 150 Hz                                  |
| Air pressure (operation)                 | 79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating) |
| Air pressure (storage/transport)         | 79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating) |

## Approvals

|                      |  |
|----------------------|--|
| Conformity/Approvals |  |
| UL, USA / Canada     | UL 61010-1, UL 61010-2-201, UL 62368-1<br>Class I, Div. 2, Groups A, B, C, D, T4<br>Class I, Zone 2, Group IIC, T4 |
| FCC                  | Title 47 Part 15 Subpart B:2018 Class A  |

## EMC data

|                       |                   |
|-----------------------|-------------------|
| Noise immunity        | EN 61000-6-2:2019 |
| Noise emission        |                   |
| Standards/regulations | EN_61000-6-4:2019 |

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## System properties

### Functionality

|                 |                                  |
|-----------------|----------------------------------|
| Basic functions | Unmanaged switch                 |
|                 | Autonegotiation                  |
|                 | Store and Forward switching mode |

## Signaling

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

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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1085179>



**KC**

Approval ID: R-R-PCK-1085179



**cULus Listed**

Approval ID: E238705



**cUL Listed**

Approval ID: E140403



**UL Listed**

Approval ID: E196811

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 19170402 |
| ECLASS-15.0 | 19170402 |

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

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

### China RoHS

|   |         |
|---|---------|
| Environment friendly use period (EFUP)  | EFUP-50 |
| 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)                 |
| SCIP                                | baad7a33-4893-4c0f-8ccf-c9147dac659b |

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