

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



Narrow Ethernet switch, four RJ45 ports with 10/100 Mbps on all ports, one SFP port with 100 Mbps, automatic data transmission speed detection, autocrossing function, and QoS

## Your advantages

- QoS-prioritized (Quality of Service) messages
- RJ45 ports support a transmission speed of 10/100 Mbps
- Local diagnostic indicators with LEDs
- Enhanced traffic prioritization for automation protocols
- PROFINET PTCP filter for reliable communication on PROFINET networks
- 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	1085177
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNN116
GTIN	4055626834719
Weight per Piece (including packing)	214 g
Weight per Piece (excluding packing)	134 g
Customs tariff number	85176200
Country of origin	TW

## Technical Data

### Dimensions

Width	22.5 mm
Height	117 mm
Depth	84 mm

### Notes

#### 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)

#### SFP module

Number of interfaces	1
Connection method	SFP ports
Transmission speed	100 Mbps (full duplex)
Transmission physics	Depending on the SFP module
Transmission length	up to 40 km (Depending on the fiber/SFP module used)
Signal LEDs	Data receive, link status
No. of channels	1 (SFP ports)

### Product properties

Product type	Switch
MTTF	138.3 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) 1647 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)

1085177

<https://www.phoenixcontact.com/pc/products/1085177>

	1503.6 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
--	---

## Switch functions

Basic functions	Unmanaged switch
	Autonegotiation
	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)
	Quality of Service (QoS) prioritization (IEEE 802.1p)
	Energy-efficient Ethernet (IEEE 802.3az)
	10Base-T (IEEE 802.3)

## Security functions

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode

## Electrical properties

### Supply

Supply voltage	24 V DC
	24 V AC (50/60 Hz)
Supply voltage range	9 V DC ... 32 V DC
	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)
Max. current consumption	162 mA (at 9 V DC)
Typical current consumption	21 mA (at 24 V DC)

## Connection data

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, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Stripping length	10 mm

## 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)

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

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)

## EMC data

Conformance with EMC directives	EN 61000-6-2 EN 61000-4-2 (ESD) Criterion B
	EN 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A
	EN 61000-6-2 EN 61000-4-4 (EFT burst) Criterion A
	EN 61000-6-2 EN 61000-4-5 (surge) Criterion B
	EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A
	EN 61000-6-2 EN 61000-4-8 (electromagnetic fields) Criterion A
	EN 61000-6-2 Class A
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4:2007 + A1:2011
Noise immunity	EN 61000-6-2:2005

## LED signaling

Status display	LEDs: U <sub>S</sub> , link and activity per port
----------------	---

1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Approvals



**EAC**

Approval ID: RU D-DE.GB09.B.00312



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 140403



**UL Listed**

Approval ID: FILE E 140403



**cUL Listed**

Approval ID: FILE E 196811



**UL Listed**

Approval ID: FILE E 196811

**cULus Listed**

1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Classifications

### ECLASS

ECLASS-9.0	19170106
ECLASS-10.0.1	19170402
ECLASS-11.0	19170402

### ETIM

ETIM 8.0	EC000734
----------	----------

### UNSPSC

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

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

1085177

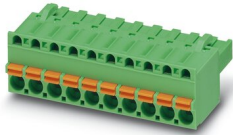
<https://www.phoenixcontact.com/pc/products/1085177>

## Accessories

### PCB connector

PCB connector - FKCT 2,5/ 3-ST KMGY BD:US,GND - 1087544

<https://www.phoenixcontact.com/pc/products/1087544>

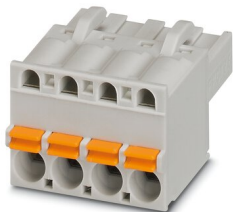


PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, 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

### PCB connector

PCB connector - FKCT 2,5/ 3-ST KMGY - 1998263

<https://www.phoenixcontact.com/pc/products/1998263>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, 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



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Surge protection device

Surge protection device - DT-LAN-CAT.6+ - 2881007

<https://www.phoenixcontact.com/pc/products/2881007>



Surge protection in accordance with Class E<sub>A</sub> (CAT6<sub>A</sub>), 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.

---

## Mounting plate

Mounting plate - FL DIN-RAIL ADAPTER 22.5 - 1085485

<https://www.phoenixcontact.com/pc/products/1085485>



The FL DIN-RAIL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Mounting plate

Mounting plate - FL PANEL ADAPTER 22.5 - 1085488

<https://www.phoenixcontact.com/pc/products/1085488>



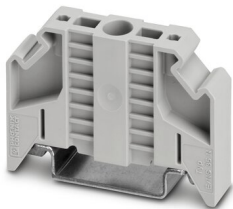
The FL PANEL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a panel, in any orientation.

---

## End clamp

End clamp - E/NS 35 N - 0800886

<https://www.phoenixcontact.com/pc/products/0800886>



End clamp, width: 9.5 mm, color: gray

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



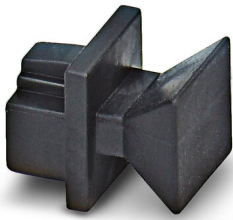
1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Dust protection

Dust protection - FL RJ45 PROTECT CAP - 2832991

<https://www.phoenixcontact.com/pc/products/2832991>



Dust protection caps for RJ45 socket

---

## Media module

Media module - FL SFP FX - 2891081

<https://www.phoenixcontact.com/pc/products/2891081>



The small form-factor plug-in module provides a fiber optic interface with a data transmission speed of 100 Mbps with a wavelength of 1310 nm (long).

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Media module

Media module - FL SFP FX SM - 2891082

<https://www.phoenixcontact.com/pc/products/2891082>



The small form-factor plug-in module provides a fiber optic interface with a data transmission speed of 100 Mbps with a wavelength of 1310 nm (long).

---

## Media module

Media module - FL SFP FE WDM20-SET - 2702439

<https://www.phoenixcontact.com/pc/products/2702439>



Fast Ethernet SFP WDM set for transmission up to a maximum of 20 km on a single fiber with a wavelength of 1310/1550 nm.

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

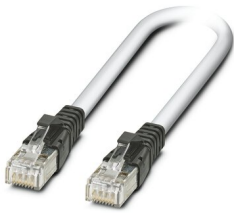
<https://www.phoenixcontact.com/pc/products/1085177>

## Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

<https://www.phoenixcontact.com/pc/products/2832263>

Patch cable, CAT5, assembled, 0.5 m



---

## Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

<https://www.phoenixcontact.com/pc/products/2832276>

Patch cable, CAT5, assembled, 1 m



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



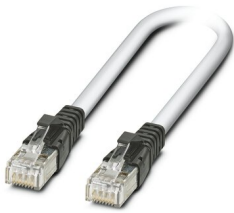
1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

<https://www.phoenixcontact.com/pc/products/2832289>



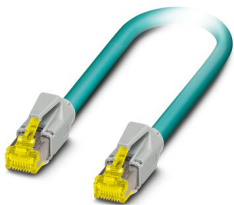
Patch cable, CAT5, assembled, 2 m

---

## Patch cable

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854

<https://www.phoenixcontact.com/pc/products/1411854>



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



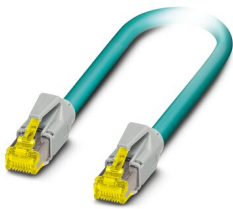
1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 1408360

<https://www.phoenixcontact.com/pc/products/1408360>



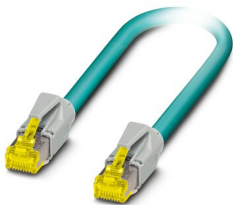
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

---

## Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365

<https://www.phoenixcontact.com/pc/products/1408365>



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

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Patch cable

Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968

<https://www.phoenixcontact.com/pc/products/1408968>



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

---

## Patch cable

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969

<https://www.phoenixcontact.com/pc/products/1408969>



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



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

<https://www.phoenixcontact.com/pc/products/1085177>

## Patch cable

Patch cable - NBC-R4AC/5,0-93B/R4AC - 1408970

<https://www.phoenixcontact.com/pc/products/1408970>



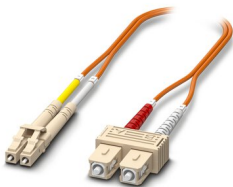
Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

---

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OM2:D01/1 - 1115607

<https://www.phoenixcontact.com/pc/products/1115607>



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

# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

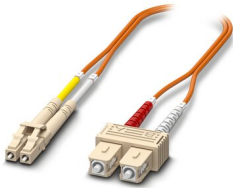
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OM2:D01/2 - 1115605

<https://www.phoenixcontact.com/pc/products/1115605>

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



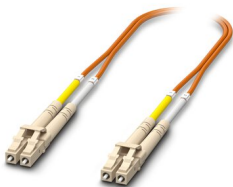
---

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OM2:D01/1 - 1115633

<https://www.phoenixcontact.com/pc/products/1115633>

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



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

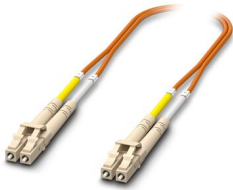
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OM2:D01/2 - 1115634

<https://www.phoenixcontact.com/pc/products/1115634>

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



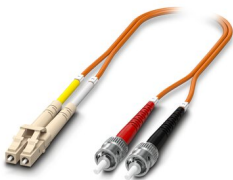
---

## Fiber optic cable

Fiber optic cable - FOC-LC:PA-ST:PA-OM2:D01/1 - 1115588

<https://www.phoenixcontact.com/pc/products/1115588>

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



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

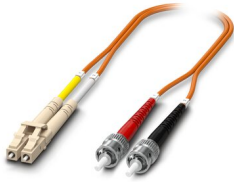
<https://www.phoenixcontact.com/pc/products/1085177>

## Fiber optic cable

Fiber optic cable - FOC-LC:PA-ST:PA-OM2:D01/2 - 1115587

<https://www.phoenixcontact.com/pc/products/1115587>

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



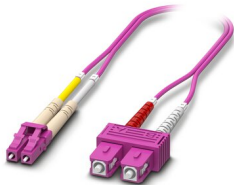
---

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OM4:D01/1 - 1115601

<https://www.phoenixcontact.com/pc/products/1115601>

Multi-mode OM4 duplex jumper, LC-SC, UPC polishing, length 1 m



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

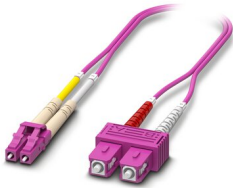
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OM4:D01/2 - 1115600

<https://www.phoenixcontact.com/pc/products/1115600>

Multi-mode OM4 duplex jumper, LC-SC, UPC polishing, length 2 m



---

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OM4:D01/1 - 1115625

<https://www.phoenixcontact.com/pc/products/1115625>

Multi-mode OM4 duplex jumper, LC-LC, UPC polishing, length 1 m



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

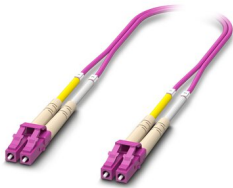
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OM4:D01/2 - 1115624

<https://www.phoenixcontact.com/pc/products/1115624>

Multi-mode OM4 duplex jumper, LC-LC, UPC polishing, length 2 m



---

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OS2:D01/1 - 1115636

<https://www.phoenixcontact.com/pc/products/1115636>

Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 1 m



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

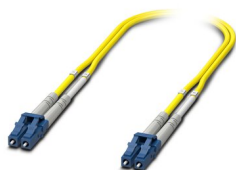
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-LC:PA-OS2:D01/2 - 1115629

<https://www.phoenixcontact.com/pc/products/1115629>

Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 2 m



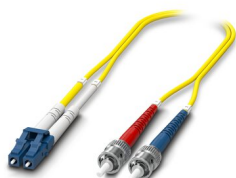
---

## FO patch cable

FO patch cable - FOC-LC:PA-ST:PA-OS2:D01/1 - 1115596

<https://www.phoenixcontact.com/pc/products/1115596>

Single-mode OS2 duplex jumper, LC-ST, UPC polishing, length 1 m



# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

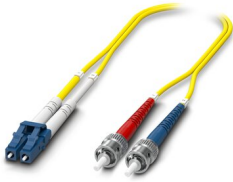
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-ST:PA-OS2:D01/2 - 1115595

<https://www.phoenixcontact.com/pc/products/1115595>

Single-mode OS2 duplex jumper, LC-ST, UPC polishing, length 2 m



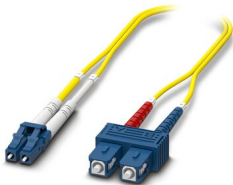
---

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OS2:D01/1 - 1115618

<https://www.phoenixcontact.com/pc/products/1115618>

Single-mode OS2 duplex jumper, LC-SC, UPC polishing, length 1 m





# Industrial Ethernet Switch - FL SWITCH 1004N-SFX



1085177

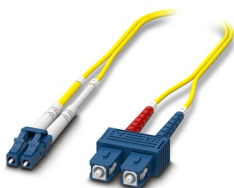
<https://www.phoenixcontact.com/pc/products/1085177>

## FO patch cable

FO patch cable - FOC-LC:PA-SC:PA-OS2:D01/2 - 1115617

<https://www.phoenixcontact.com/pc/products/1115617>

Single-mode OS2 duplex jumper, LC-SC, UPC polishing, length 2 m



---

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

[info@phoenixcontact.com](mailto:info@phoenixcontact.com)