

# Industrial Ethernet Switch - FL SWITCH 1104N-SFP



1085173

<https://www.phoenixcontact.com/pc/products/1085173>

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Narrow Ethernet switch, four RJ45 ports, one SFP port, with 10/100/1000 Mbps on all ports, automatic data transmission speed detection, autocrossing function, and QoS

## Your advantages

- Jumbo frame support (frame size up to 9216 bytes/frame)
- RJ45 ports support a transmission speed of 10/100/1000 Mbps
- QoS-prioritized (Quality of Service) messages
- Local diagnostic indicators with LEDs
- 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	1085173
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNN116
GTIN	4055626834665
Weight per Piece (including packing)	218 g
Weight per Piece (excluding packing)	136 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
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### Material specifications

Housing material	Polycarbonate fiber reinforced
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### Mounting

Mounting type	DIN rail mounting
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### Interfaces

#### Ethernet (RJ45)

Number of interfaces	4
Connection method	RJ45
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100/1000 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 or 1000 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	77.4 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) 949.7 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)

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	828.9 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
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## Switch functions

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode
PROFINET conformance class	Conformance-Class A
MAC address table	4k
Status and diagnostic indicators	LEDs: U <sub>S</sub> , link and activity per port
Additional functions	100 BASE-TX/100BASE-FX (IEEE 802.3u)
	Jumbo frames (Max. 9,216 bytes)
	Quality of Service (QoS) prioritization (IEEE 802.1p)
	Energy-efficient Ethernet (IEEE 802.3az)
	Gigabit Ethernet 1000BASE-T (IEEE 802.3ab)
	10Base-T (IEEE 802.3)

## Security functions

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode

## Electrical properties

Transmission medium	Copper
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## 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	474 mA (at 9 V DC)
Typical current consumption	48 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

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1085173

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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)

## Approval data

### Conformity/Approvals

UL, USA / Canada	UL 61010-1, UL 61010-2-201, UL 62368-1 Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Group IIC, T4
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## LED signaling

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



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**cULus Listed**

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC000734
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### UNSPSC

UNSPSC 21.0	43222600
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## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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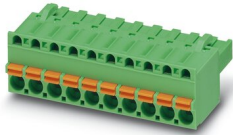
<https://www.phoenixcontact.com/pc/products/1085173>

## Accessories

### PCB connector

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

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

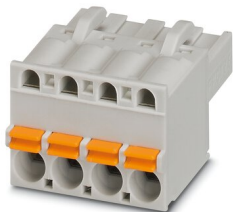


PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in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



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## 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.

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## 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.

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## 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.

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## Port Guard Security Element

Port Guard Security Element - FL SEC PAC 4TX - 2832865

<https://www.phoenixcontact.com/pc/products/2832865>



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

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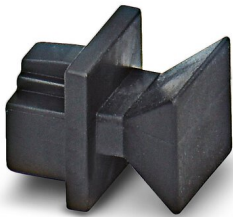
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## Dust protection

Dust protection - FL RJ45 PROTECT CAP - 2832991

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



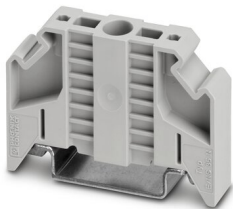
Dust protection caps for RJ45 socket

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## End clamp

End clamp - E/NS 35 N - 0800886

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



End clamp, width: 9.5 mm, color: gray

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## 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).

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## 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).

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## Media module

Media module - FL SFP SX - 2891754

<https://www.phoenixcontact.com/pc/products/2891754>



Gigabit SFP module for transmission up to 1 km with a wavelength of 850 nm.

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## Media module

Media module - FL SFP SX2 - 2702397

<https://www.phoenixcontact.com/pc/products/2702397>



Gigabit SFP module for transmission up to 2 km with a wavelength of 1310 nm.

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## Media module

Media module - FL SFP LX10-B - 1025401

<https://www.phoenixcontact.com/pc/products/1025401>



Gigabit SFP module for transmission up to 10 km with a wavelength of 1310 nm.

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## Media module

Media module - FL SFP LX - 2891767

<https://www.phoenixcontact.com/pc/products/2891767>



Gigabit SFP module for transmission up to 30 km with a wavelength of 1310 nm.

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## Media module

Media module - FL SFP LH - 2989912

<https://www.phoenixcontact.com/pc/products/2989912>



Gigabit SFP module for transmission up to 80 km with a wavelength of 1,550 nm.

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## Media module

Media module - FL SFP WDM10-SET - 2702442

<https://www.phoenixcontact.com/pc/products/2702442>



Gigabit SFP WDM set for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm.

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## 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.



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## Media module

Media module - FL SFP GT - 2989420

<https://www.phoenixcontact.com/pc/products/2989420>

Gigabit SFP module for transmission up to 100 m.





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## Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

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

Patch cable, CAT5, assembled, 0.5 m



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## Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

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

Patch cable, CAT5, assembled, 1 m



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## Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

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



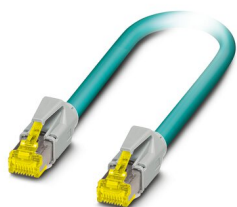
Patch cable, CAT5, assembled, 2 m

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## 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

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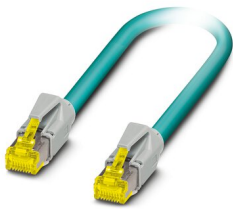
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<https://www.phoenixcontact.com/pc/products/1085173>

## Patch cable

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

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



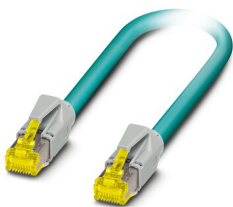
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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## 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

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## 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

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## 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

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## Patch cable

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

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



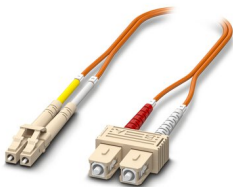
Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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## 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

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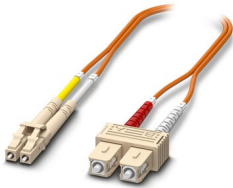
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## FO patch cable

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



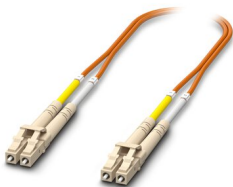
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## FO patch cable

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



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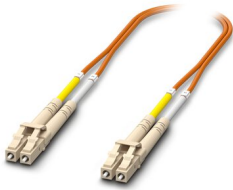
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## FO patch cable

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



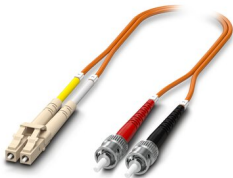
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## Fiber optic cable

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



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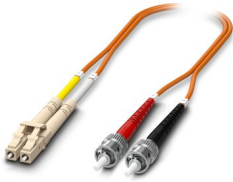
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## Fiber optic cable

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



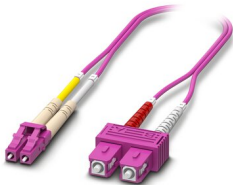
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## FO patch cable

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





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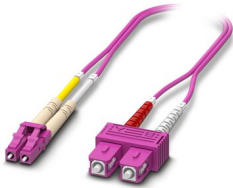
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## FO patch cable

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



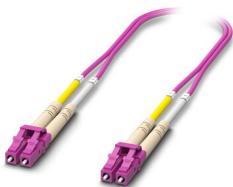
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## FO patch cable

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



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1085173

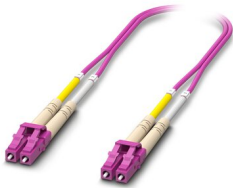
<https://www.phoenixcontact.com/pc/products/1085173>

## 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



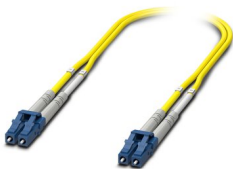
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## FO patch cable

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



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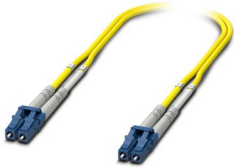
<https://www.phoenixcontact.com/pc/products/1085173>

## 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



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## 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



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## 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



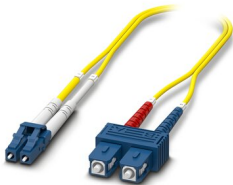
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## FO patch cable

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 1104N-SFP



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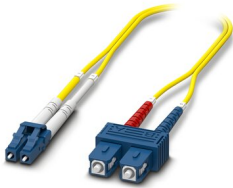
<https://www.phoenixcontact.com/pc/products/1085173>

## 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



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PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

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