FL SWITCH 1004NT-SFX - Industrial Ethernet Switch

1085169

https://www.phoenixcontact.com/us/products/1085169

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Narrow Ethernet switch, wide temperature range, 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

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

Commercial data

Item number	1085169
Packing unit	1 pc
Sales key	DN20
Product key	DNN116
GTIN	4055626834917
Weight per piece (including packing)	286 g
Weight per piece (excluding packing)	204 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
	Aluminum / steel sheet DC01

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)

Ethernet (SFP)

Number of interfaces	1
Connection method	SFP
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 port)

Product properties

Product type	Switch
Product family	Unmanaged Switch 1000
MTTF	143.4 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

	1664.2 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	1582.8 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_S, 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

Maximum power dissipation for nominal condition	1.935 W (at 24 V DC)
Transmission medium	Copper

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
	18 V AC ... 30 V AC (50/60 Hz)
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm²
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Max. current consumption	215 mA (at 9 V DC)
Typical current consumption	21 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 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12

Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²
Stripping length	10 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP30
Ambient temperature (operation)	-40 °C ... 75 °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 Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Group IIC, T4
FCC	Title 47 Part 15 Subpart B:2018 Class A

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
Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4:2007 + A1:2011

System properties

Functionality

Basic functions	Unmanaged switch
	Autonegotiation
	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/1085169

DNV GL
Approval ID: TAA000034U

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

KC
Approval ID: R-R-PCK-1085169

UAE-RoHS
Approval ID: 23-09-84495

IECEx
Approval ID: IECEx UL 21.0120X

cUL Listed
Approval ID: File E 196811

UL Listed
Approval ID: File E 196811

ATEX
Approval ID: UL 21 ATEX 2638X

cULus Listed

cULus Listed

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	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

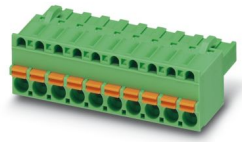
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)

Accessories

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

1087544

https://www.phoenixcontact.com/us/products/1087544



PCB connector, nominal cross section: 2.5 mm^2, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, 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

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

1998263

https://www.phoenixcontact.com/us/products/1998263



PCB connector, nominal cross section: 2.5 mm^2, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, 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

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.

FL DIN-RAIL ADAPTER 22.5 - Mounting panel

1085485

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

FL PANEL ADAPTER 22.5 - Mounting panel

1085488

https://www.phoenixcontact.com/us/products/1085488

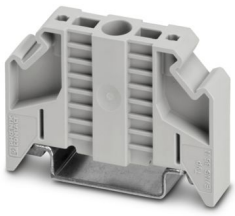


The FL PANEL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a panel, in any orientation.

E/NS 35 N - End bracket

0800886

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

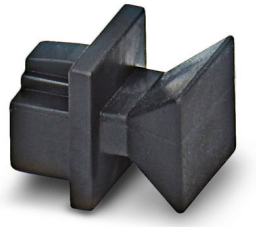


End clamp, width: 9.5 mm, color: gray

FL RJ45 PROTECT CAP - Dust protection

2832991

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



Dust protection caps for RJ45 socket

FL SFP FX - Media module

2891081

https://www.phoenixcontact.com/us/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).

FL SFP FX SM - Media module

2891082

https://www.phoenixcontact.com/us/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).

FL SFP FE WDM20-SET - Media module

2702439

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

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

FL CAT5 PATCH 2,0 - Patch cable

2832289

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

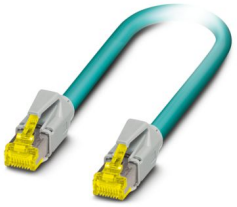


Patch cable, CAT5, assembled, 2 m

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

1411854

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

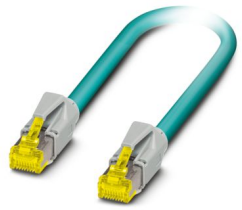


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet

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

1408360

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

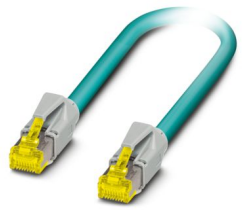


Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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

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

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

1408970

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



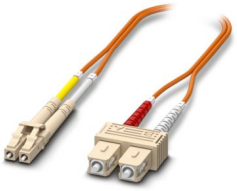
Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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

1115607

https://www.phoenixcontact.com/us/products/1115607

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

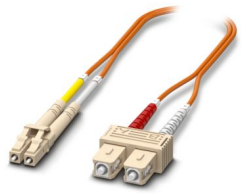


FOC-LC:PA-SC:PA-OM2:D01/2 - FO patch cable

1115605

https://www.phoenixcontact.com/us/products/1115605

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

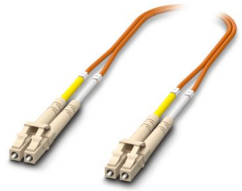


FOC-LC:PA-LC:PA-OM2:D01/1 - FO patch cable

1115633

https://www.phoenixcontact.com/us/products/1115633

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

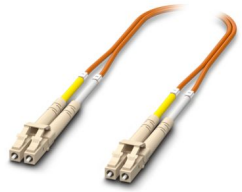


FOC-LC:PA-LC:PA-OM2:D01/2 - FO patch cable

1115634

https://www.phoenixcontact.com/us/products/1115634

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

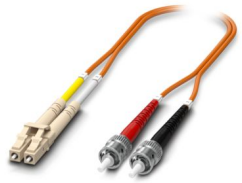


FOC-LC:PA-ST:PA-OM2:D01/1 - Fiber optic cable

1115588

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

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

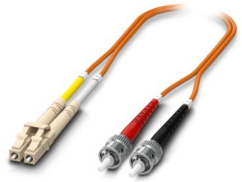


FOC-LC:PA-ST:PA-OM2:D01/2 - Fiber optic cable

1115587

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

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



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

1115601

https://www.phoenixcontact.com/us/products/1115601

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

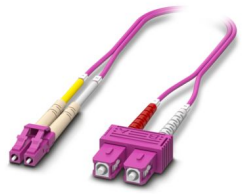


FOC-LC:PA-SC:PA-OM4:D01/2 - FO patch cable

1115600

https://www.phoenixcontact.com/us/products/1115600

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



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

1115625

https://www.phoenixcontact.com/us/products/1115625

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



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

1115624

https://www.phoenixcontact.com/us/products/1115624

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

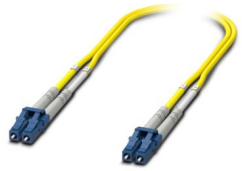


FOC-LC:PA-LC:PA-OS2:D01/1 - FO patch cable

1115636

https://www.phoenixcontact.com/us/products/1115636

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



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

1115629

https://www.phoenixcontact.com/us/products/1115629

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

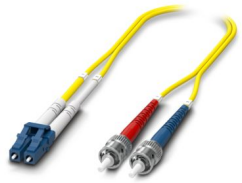


FOC-LC:PA-ST:PA-OS2:D01/1 - FO patch cable

1115596

https://www.phoenixcontact.com/us/products/1115596

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

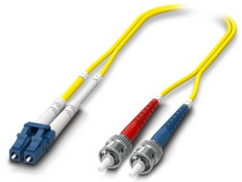


FOC-LC:PA-ST:PA-OS2:D01/2 - FO patch cable

1115595

https://www.phoenixcontact.com/us/products/1115595

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

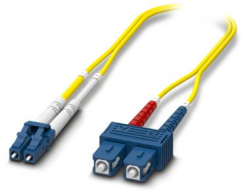


FOC-LC:PA-SC:PA-OS2:D01/1 - FO patch cable

1115618

https://www.phoenixcontact.com/us/products/1115618

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

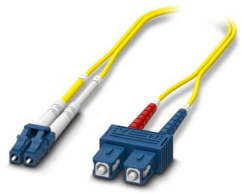


FOC-LC:PA-SC:PA-OS2:D01/2 - FO patch cable

1115617

https://www.phoenixcontact.com/us/products/1115617

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



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