

FL SWITCH 1012NT-2SFP - Industrial Ethernet Switch



1249598

<https://www.phoenixcontact.com/us/products/1249598>

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Narrow Ethernet switch, wide temperature range, twelve RJ45 ports with 10/100 Mbps on all ports, two SFP ports with 100/1000 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	1249598
Packing unit	200 pc
Minimum order quantity	1 pc
Sales key	DN20
Product key	DNN116
GTIN	4063151355104
Weight per piece (including packing)	528.7 g
Weight per piece (excluding packing)	433 g
Customs tariff number	85176200
Country of origin	TW

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Technical data

Dimensions

Width	40 mm
Height	140.4 mm
Depth	92.4 mm

Notes

Note on application	
Note on application	Only for industrial use

Material specifications

Housing material	Polycarbonate fiber reinforced
	Aluminum / steel sheet DC01

Mounting

Mounting type	DIN rail mounting
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Interfaces

Ethernet (RJ45)	
Number of interfaces	12
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	12 (RJ45 ports)

Ethernet (SFP)	
Number of interfaces	2
Connection method	SFP
Transmission speed	100/1000 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	2 (SFP ports)

Product properties

Product type	Switch
Product family	Unmanaged Switch 1000
MTTF	64.3 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

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	298.8 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	560.1 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))

Data management status

Article revision	02
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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	8k
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	4.32 W (at 24 V DC)
Transmission medium	Copper

Supply

Supply voltage (DC)	24 V DC
Supply voltage range	9 V DC ... 32 V DC
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm ²
Residual ripple	3.6 V _{PP} (within the permitted voltage range)
Max. current consumption	480 mA (at 9 V DC)
Typical current consumption	25 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 ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12

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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

Conformance	CE-compliant
ATEX	II 3 G Ex ec IIC T4 Gc
EU-type examination certificate	UL 21 ATEX 2638X
IECEX	Ex ec IIC T4 Gc
IECEX certificate	IECEX UL 21.0120X
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

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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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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC000734
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UNSPSC

UNSPSC 21.0	43222600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	15(a), 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	278fd7c9-b119-4b9f-af7a-df7a2d0644c1

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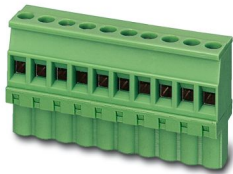
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Accessories

MVSTBW 2,5/ 3-ST-5,08 GY - PCB connector

1783685

<https://www.phoenixcontact.com/us/products/1783685>

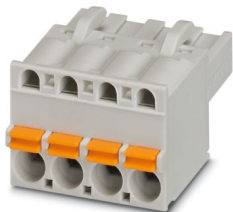


PCB connector, nominal cross section: 2.5 mm², color: gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MVSTBW 2,5/...-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, 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 mm², color: light gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, 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

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

2881007

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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 PANEL ADAPTER 40 - Mounting panel

1085486

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The FL PANEL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a panel, in any orientation.

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FL DIN-RAIL ADAPTER 40 - Mounting panel

1085484

<https://www.phoenixcontact.com/us/products/1085484>

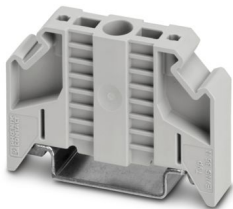


The FL DIN-RAIL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

E/NS 35 N - End bracket

0800886

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End clamp, width: 9.5 mm, color: gray

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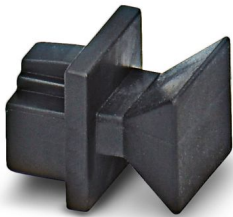
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FL RJ45 PROTECT CAP - Dust protection

2832991

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Dust protection caps for RJ45 socket

FL SFP FX - Media module

2891081

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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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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

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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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FL CAT5 PATCH 0,5 - Patch cable

2832263

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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

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Patch cable, CAT5, assembled, 2 m

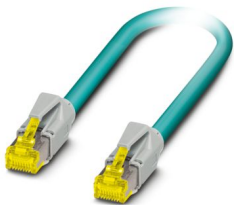


NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

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



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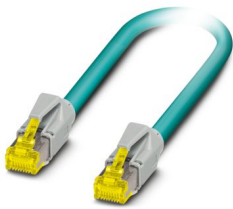
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NBC-R4AC/10G-R4AC/10G-94F/2,0 - Patch cable

1408360

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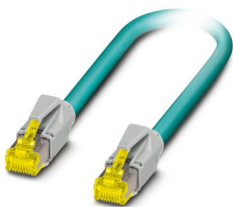


Patch cable, CAT6_A, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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

1408365

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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

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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

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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>

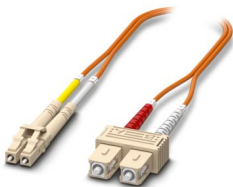


Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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

1115607

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

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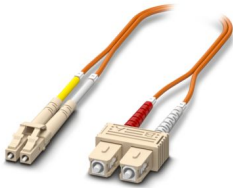
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FOC-LC:PA-SC:PA-OM2:D01/2 - FO patch cable

1115605

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

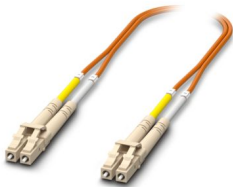


FOC-LC:PA-LC:PA-OM2:D01/1 - FO patch cable

1115633

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



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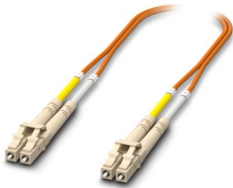
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FOC-LC:PA-LC:PA-OM2:D01/2 - FO patch cable

1115634

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

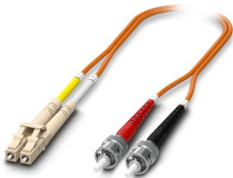


FOC-LC:PA-ST:PA-OM2:D01/1 - Fiber optic cable

1115588

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



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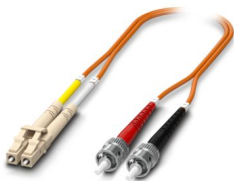
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FOC-LC:PA-ST:PA-OM2:D01/2 - Fiber optic cable

1115587

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

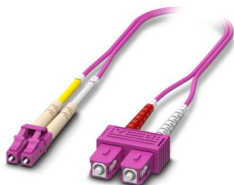


FOC-LC:PA-SC:PA-OM4:D01/1 - FO patch cable

1115601

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



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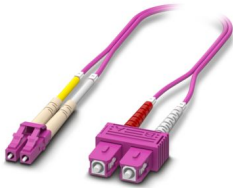
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FOC-LC:PA-SC:PA-OM4:D01/2 - FO patch cable

1115600

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

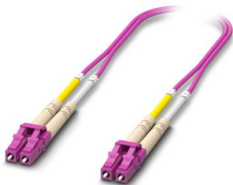


FOC-LC:PA-LC:PA-OM4:D01/1 - FO patch cable

1115625

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



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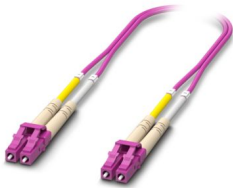
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FOC-LC:PA-LC:PA-OM4:D01/2 - FO patch cable

1115624

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



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

1115636

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



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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

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



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

1115595

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

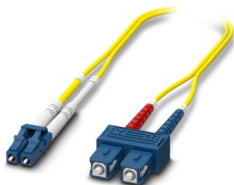


FOC-LC:PA-SC:PA-OS2:D01/1 - FO patch cable

1115618

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



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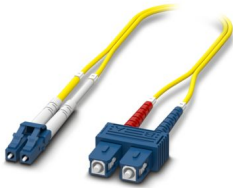
<https://www.phoenixcontact.com/us/products/1249598>

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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