FL SWITCH 4000T-4POE-SFP - Industrial Ethernet Switch

1026924

https://www.phoenixcontact.com/us/products/1026924

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Managed PoE Switches 4000, 1 SFP port 100/1000 Mbps, 4 RJ45 ports 10/100 Mbps

Product description

FL SWITCH 4000 managed industrial PoE Ethernet switches combine Gigabit interfaces with extensive network performance for the most demanding applications. Extensive user and device access control security features with complete IEEE redundancy and 15 ms recovery time extended ring redundancy optimize network uptime. POE control is optimized with POE diagnostics, watchdog, and scheduling, functions. A comprehensive mix of 10/100 Mbps and Gigabit fiber optic connections combine performance with installed cost savings.

Your advantages

- Four 10/100 Mbps RJ45 ports for device connections and one SFP-based fiber optic LC interfaces for network trunk lines.
- -40 °C to 75 °C ambient temperature
- Redundant power supply
- Wide -40° ... +75°C temperature range
- VLANs
- DHCP client
- MSTP
- RSTP
- Web-based management, SNMP
- Secure web-based and SNMP-based management
- Extensive web diagnostics with configurable LED and remote alarm contacts
- Unique cleanup function hides unused configuration pages, reducing complexity, maintenance and startup times

Commercial data

Item number	1026924
Packing unit	1 pc
Sales key	DN17
Product key	DNN125
Catalog page	Page 319 (C-6-2019)
GTIN	4055626519968
Weight per piece (including packing)	1,949.4 g
Weight per piece (excluding packing)	1,818 g
Customs tariff number	85176200
Country of origin	TW

Technical data

Dimensions

Width	75 mm
Height	170 mm
Depth	152 mm

Notes

General	Designed to function with all 48 V DC QUINT and TRIO power supplies.
General	Mode A or Mode B PoE

Utilization restriction

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

Material specifications

Housing material	Aluminum

Mounting

Mounting type	DIN rail mounting

Interfaces

Ethernet (SFP)

Number of interfaces	1
Connection method	SFP
Transmission speed	100/1000 Mbps (full duplex)
Transmission physics	Depending on the SFP module
Transmission length	up to 80 km (Depending on the fiber/SFP module used)
Signal LEDs	Data receive, link status
No. of channels	1 (SFP port)

Ethernet (PoE)

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
No. of channels	4 (RJ45 ports)

Product properties

Product type	Switch
Product family	Managed PoE Switches 4000
Type	Block design
MTTF	21.3 Years (MIL-HDBK-217F standard, temperature 25°C,

	operating cycle 100%)

Switch functions

Diagnostic functions	RMON History
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	N:1-Portmirroring
Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts, Modbus/TCP, PoE according to IEEE 802.3at/af.
Filter functions	Quality of Service (8 and 64 priority classes)
	Port prioritization
	VLAN (up to 64 VLANs)
	IGMP Snooping (256 groups)
	IGMP Query
IP parameterization	DHCP-Client
	BootP
Management	Web-based management (HTTP/HTTPS)
	SNMPv1/v2/v3
Redundancy	ERR (Extended ring redundancy (15 ms))
	RSTP (Rapid Spanning Tree Protocol)
	MSTP (Multiple Spanning Tree Protocol)
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (redundant voltage supply), Alarm (alarm contact), Link/Activity and PoE per Ethernet port
Additional functions	Transmission of MMS and GOOSE (IEC 61850-8-1)
Time synchronization	SNTP (Simple Network Time Protocol)

Security functions

Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts, Modbus/TCP, PoE according to IEEE 802.3at/af.

Electrical properties

Local diagnostics	US1, US2 Supply voltage Green LED
	LNK/ACT Link status/data transmission Green LED
	PoE PoE detection Orange LED
	Alarm Power failure at US1 or US2/Link failure
Transmission medium	Copper
	FO

Supply

Supply voltage (DC)	55 V DC (redundant)
Supply voltage range	52 V DC ... 57 V DC (> 52 V DC for PoE+ or 60 W output recommended)

Inrush current	43.6 A (52 V DC for 1830 µs)
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Max. current consumption	3.9 A (Maximum, nominal load)
Typical current consumption	142 mA (U_S = 55 V DC)

Connection data

Connection technology

Connection name	Power supply
pluggable	yes

Power supply

Connection method	Screw 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
Stripping length	7 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
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Air pressure (operation)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)
Air pressure (storage/transport)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)

Standards and regulations

Standards/specifications	EN 50121 for railway applications

Approvals

Conformity/Approvals

Conformance	CE-compliant

EMC data

Conformance with EMC directives	IEC 61000-6-2 IEC 61000-4-2 (ESD) Criterion B
	IEC 61000-4-3 (immunity to radiated interference) Criterion A
	IEC 61000-4-4 (burst) Criterion A
	IEC 61000-4-5 (surge) Criterion B
	IEC 61000-4-6 (immunity to conducted interference) Criterion A
	IEC 61000-4-8 (immunity to magnetic fields) Criterion A
	EN 55022 (emitted interference) Criterion A
Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC

Noise emission	EN 61000-6-4

System properties

Functionality

Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts, Modbus/TCP, PoE according to IEEE 802.3at/af.

Signaling

Status display	LEDs: U_{S1}, U_{S2} (redundant voltage supply), Alarm (alarm contact), Link/Activity and PoE per Ethernet port

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1026924

EAC
Approval ID: RU*-DE.*.B.00741/19

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

UAE-RoHS
Approval ID: 23-09-84494

cULus Listed

Classifications

ECLASS

ECLASS-11.0	19170401
ECLASS-12.0	19170401
ECLASS-13.0	19170401

ETIM

ETIM 9.0	EC000734

UNSPSC

UNSPSC 21.0	43222600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-10
	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

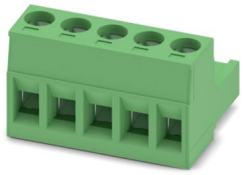
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	bf99a97b-de0c-4787-affc-82812c22c6c2

Accessories

MSTB 2,5/ 5-ST - PCB connector

1754504

https://www.phoenixcontact.com/us/products/1754504



PCB connector, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, 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

QUINT4-PS/1AC/48DC/5 - Power supply unit

2904610

https://www.phoenixcontact.com/us/products/2904610



Primary-switched QUINT POWER power supply for DIN rail mounting with free choice of output characteristic curve and SFB (Selective Fuse Breaking) technology, input: 1-phase, output: 48 V DC / 5 A

QUINT4-PS/1AC/48DC/10 - Power supply unit

2904611

https://www.phoenixcontact.com/us/products/2904611



Primary-switched QUINT POWER power supply for DIN rail mounting with free choice of output characteristic curve and SFB (Selective Fuse Breaking) technology, input: 1-phase, output: 48 V DC / 10 A

TRIO-PS-2G/1AC/48DC/5 - Power supply unit

2903159

https://www.phoenixcontact.com/us/products/2903159



Primary-switched TRIO power supply for DIN rail mounting, input: 1-phase, output: 48 V DC / 5 A, dynamic boost, tool-free fast connection technology for solid and stranded conductors with ferrule

TRIO-PS-2G/1AC/48DC/10 - Power supply unit

2903160

https://www.phoenixcontact.com/us/products/2903160



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: single phase, output: 48 V DC/10 A

UNO2-PS/1AC/48DC/240W - Power supply unit

1110155

https://www.phoenixcontact.com/us/products/1110155



Primary-switched power supply unit, UNO POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 48 V DC / 5 A, adjustable from 42 V DC ... 56 V DC

FL PD 1001 T GT - Ethernet module

2891042

https://www.phoenixcontact.com/us/products/2891042



Factoryline Power over Ethernet splitter (PD) for separating power and data according to IEEE 802.3af and at, no configuration required, can be used with 10, 100, 1000 Mbps networks, 24 V DC output voltage

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 SEC PAC 4TX - Port Guard Security Element

2832865

https://www.phoenixcontact.com/us/products/2832865

Layer1 security elements for 4 RJ45 network connections for use with patch boxes and panels



FL DIN RA - DIN rail adapter

2891053

https://www.phoenixcontact.com/us/products/2891053

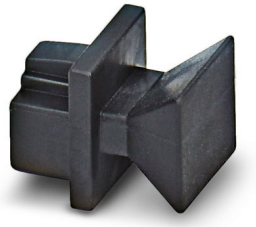
The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.



FL RJ45 PROTECT CAP - Dust protection

2832991

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

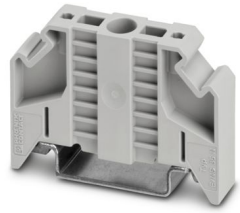


Dust protection caps for RJ45 socket

E/NS 35 N - End bracket

0800886

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



End clamp, width: 9.5 mm, color: gray

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 SX - Media module

2891754

https://www.phoenixcontact.com/us/products/2891754



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

FL SFP SX2 - Media module

2702397

https://www.phoenixcontact.com/us/products/2702397



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

FL SFP LX10-B - Media module

1025401

https://www.phoenixcontact.com/us/products/1025401



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

FL SFP LX - Media module

2891767

https://www.phoenixcontact.com/us/products/2891767



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

FL SFP LH - Media module

2989912

https://www.phoenixcontact.com/us/products/2989912



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

FL SFP WDM10-SET - Media module

2702442

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

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 SFP GT - Media module

2989420

https://www.phoenixcontact.com/us/products/2989420



Gigabit SFP module for transmission up to 100 m.

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

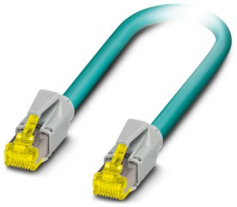


Patch cable, CAT5, assembled, 2 m

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

1411854

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

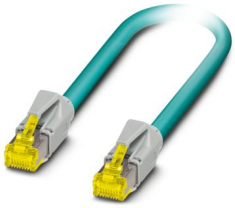


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet

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

1408360

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

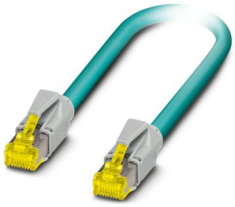


Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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



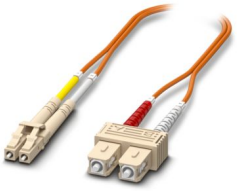
Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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

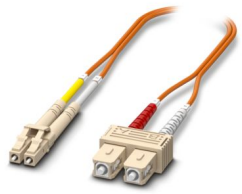


FOC-LC:PA-SC:PA-OM2:D01/2 - FO patch cable

1115605

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

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

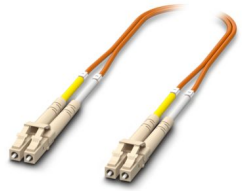


FOC-LC:PA-LC:PA-OM2:D01/1 - FO patch cable

1115633

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

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

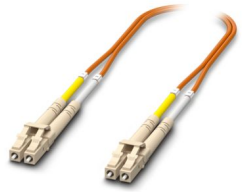


FOC-LC:PA-LC:PA-OM2:D01/2 - FO patch cable

1115634

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

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

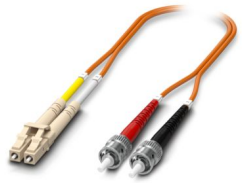


FOC-LC:PA-ST:PA-OM2:D01/1 - Fiber optic cable

1115588

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

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

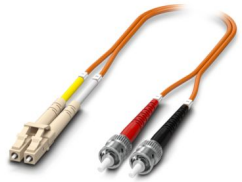


FOC-LC:PA-ST:PA-OM2:D01/2 - Fiber optic cable

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

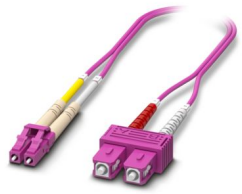


FOC-LC:PA-SC:PA-OM4:D01/2 - FO patch cable

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

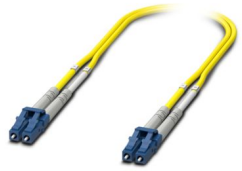


FOC-LC:PA-LC:PA-OS2:D01/1 - FO patch cable

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

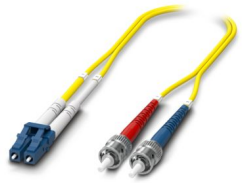


FOC-LC:PA-ST:PA-OS2:D01/1 - FO patch cable

1115596

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

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

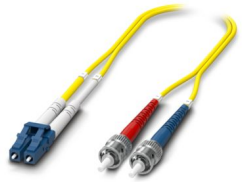


FOC-LC:PA-ST:PA-OS2:D01/2 - FO patch cable

1115595

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

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

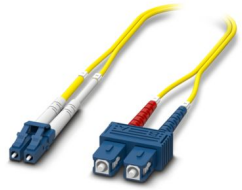


FOC-LC:PA-SC:PA-OS2:D01/1 - FO patch cable

1115618

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

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



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1026924

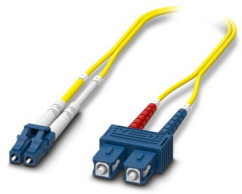
https://www.phoenixcontact.com/us/products/1026924

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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com