

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

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.



Managed Switch 7000, 5 RJ45 ports 10/100 Mbps, 1 SC multi-mode 100 Mbps, 2 SC single mode 100 Mbps, PROFINET Conformance-Class A, EtherNet/IP™

## Your advantages

- VLANs
- Common Industrial Protocol (CIP)
- Device Level Ring (DLR)
- Ambient temperature -40 °C ... 70 °C
- RSTP with fast switch-over
- DHCP client, DHCP server (pool-based and port-based), DHCP option 82
- Web-based management, SNMP
- Slim design

## Commercial data

Item number	2701420
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	DN17
Product key	DNN122
Catalog page	Page 327 (C-6-2019)
GTIN	4046356749756
Weight per piece (including packing)	1,167.2 g
Weight per piece (excluding packing)	1,000 g
Customs tariff number	85176200
Country of origin	DE

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

## Technical data

### Dimensions

Width	60 mm
Height	130 mm
Depth	135.5 mm

### Mounting

Mounting type	DIN rail mounting
---------------	-------------------

### Interfaces

#### Ethernet (RJ45)

Connection method	RJ45
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps
Transmission physics	Copper
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status
No. of channels	5 (RJ45 ports)

#### Ethernet FO

Connection method	SC
Transmission speed	100 Mbps (full duplex)
Transmission physics	multi-mode fiberglass
Transmission length	11000 m (fiberglass with F-G 62.5/125 0.7 dB/km F1000)
	6400 m (fiberglass with F-G 50/125 0.7 dB/km F1200)
	3000 m (fiberglass with F-G 62.5/125 2.6 dB/km F600)
	2800 m (fiberglass with F-G 50/125 1.6 dB/km F800)
Wavelength	1300 nm
Signal LEDs	Data receive, link status
No. of channels	1 (SC multi-mode)

#### Ethernet FO

Connection method	SC
Transmission speed	100 Mbps (full duplex)
Transmission physics	Single-mode fiberglass
Transmission length	36000 m (fiberglass with F-G 9/125 0.36 dB/km)
	32000 m (fiberglass with F-G 9/125 0.4 dB/km)
	26000 m (fiberglass with F-G 9/125 0.5 dB/km)
Wavelength	1300 nm
No. of channels	2 (SC single mode)

### Product properties

Type	Book type
------	-----------

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

Product type	Switch
Product family	Managed Switch 7000
MTTF	117.48 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) 61.64 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) 8.89 Years (SN 29500 standard, temperature 70°C, operating cycle 100%)
Special properties	EtherNet/IP™

## Insulation characteristics

Protection class	III (VDE 0106, IEC 60536)
------------------	---------------------------

## Switch functions

Diagnostic functions	Remanente Event-Table
	RMON History
	N:1-Portmirroring
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	ACD (Address Conflict Detection)
EtherNet/IP™ supported protocols	Common Industrial Protocol
Basic functions	Store-and-forward switch, complies with IEEE 802.3
Signal contact control voltage	24 V DC (typical)
Signal contact control current	1 A (maximum)
PROFINET conformance class	Conformance-Class A
PROFINET device function	Fast Startup
Filter functions	Quality of Service (8 priority classes)
	Port-Priorisierung
	VLAN (up to 32 VLANs)
	IGMP Snooping/Querier (v1/v2)
	Auto-Query-Port
	Extended Multicast Filtering
	Static Multicast Filtering (32 groups)
	Link Aggregation (up to 4 trunks)
IP parameterization	DHCP-Client
	DHCP Option 82 (Relay Agent)
	DHCP server (pool-based, port-based)
	BootP
MAC address table	16k
Management	Web-based management (HTTP/HTTPS)
	SNMPv1/v2/v3
Redundancy	DLR (Device Level Ring)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

	Ethernet port (Link and switchable Activity/Speed/Duplex) EtherNet/IP™ status LED: Net, Mod
Additional functions	MAC-based Port-Security
Time synchronization	PTP 1588 (Transparent clock on the DLR ports)

## Security functions

Basic functions	Store-and-forward switch, complies with IEEE 802.3
-----------------	--

## Electrical properties

Power consumption	12.8 W
Local diagnostics	US1/2 Supply voltage US1, US2 Green LED
	FAIL Div. LED red
	LINK Link status Green LED
Maximum power dissipation for nominal condition	12.8 W
Test voltage	500 V DC
Test section	for one minute 500 V DC
Transmission medium	Copper
	FO

## Supply

Supply voltage (DC)	24 V DC (redundant)
Supply voltage range	12 V DC ... 58 V DC
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm²
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Typical current consumption	445 mA (at U <sub>S</sub> = 24 V DC)

## Function

Signal contact control voltage	24 V DC (typical)
Signal contact control current	1 A (maximum)

## Connection data

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	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

Air pressure (operation)	86 kPa ... 108 kPa (1500 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (3500 m above sea level)

## Standards and regulations

Free from substances that could impair the application of coating	Yes
---	-----

## Approvals

### Conformity/Approvals

Noxious gas test	ISA S71.04.2013 G3 Harsh Group A
------------------	----------------------------------

## EMC data

Conformance with EMC directives	IEC 61000-6-2 IEC 61000-4-2 (ESD) Criterion B
	IEC 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A
	IEC 61000-6-2 IEC 61000-4-4 (burst) Criterion A
	IEC 61000-6-2 IEC 61000-4-5 (surge) Criterion A
	IEC 61000-6-2 IEC 61000-4-6 (immunity to conducted 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, complies with IEEE 802.3
-----------------	--

## Signaling

Status display	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link and switchable Activity/Speed/Duplex) EtherNet/IP™ status LED: Net, Mod
----------------	--

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420  
<https://www.phoenixcontact.com/us/products/2701420>

## Classifications

### ECLASS

ECLASS-11.0	19170401
-------------	----------

### ETIM

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

### UNSPSC

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

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420  
<https://www.phoenixcontact.com/us/products/2701420>

## Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

## Accessories

### SD FLASH 512MB - Program / configuration memory

2988146

<https://www.phoenixcontact.com/us/products/2988146>

Program and configuration memory, plug-in, 512 Mbyte.



---

### SD FLASH 2GB - Program / configuration memory

2988162

<https://www.phoenixcontact.com/us/products/2988162>

Program and configuration memory, for extending the internal flash memory, pluggable, 2 GB.





# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



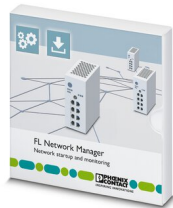
2701420

<https://www.phoenixcontact.com/us/products/2701420>

## FL NETWORK MANAGER BASIC - Network management software

2702889

<https://www.phoenixcontact.com/us/products/2702889>



SNMP-based software for easy commissioning and monitoring of network components such as switches, routers, and WLAN access points

---

## FL SNMP OPC SERVER V3 - Driver and interface software

2701139

<https://www.phoenixcontact.com/us/products/2701139>



SNMP-OPC server, German and English, for monitoring and configuration of SNMP-capable equipment in HMI and SCADA systems

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



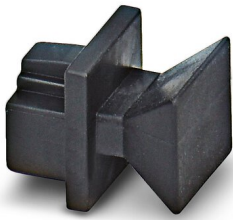
2701420

<https://www.phoenixcontact.com/us/products/2701420>

## FL RJ45 PROTECT CAP - Dust protection

2832991

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



Dust protection caps for RJ45 socket

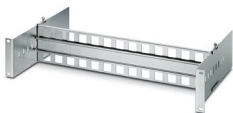
---

## 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 SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

## 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 SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

## FL CAT5 PATCH 2,0 - Patch cable

2832289

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

Patch cable, CAT5, assembled, 2 m



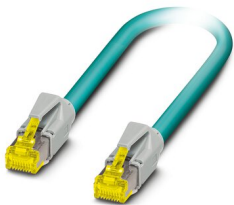
---

## 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<sub>A</sub>, cable outlet: straight, Ethernet



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



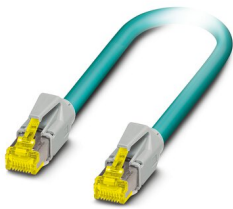
2701420

<https://www.phoenixcontact.com/us/products/2701420>

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

1408360

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



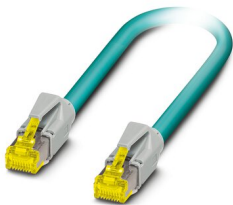
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

---

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

1408365

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

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

## 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

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

<https://www.phoenixcontact.com/us/products/2701420>

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

1408970

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



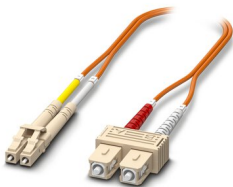
Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

---

## 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

# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

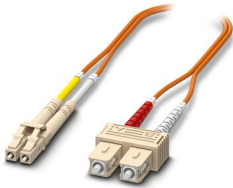
<https://www.phoenixcontact.com/us/products/2701420>

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



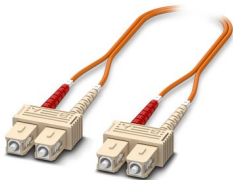
---

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

1115536

<https://www.phoenixcontact.com/us/products/1115536>

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





# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

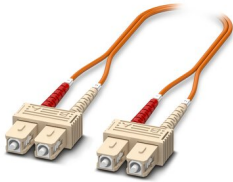
<https://www.phoenixcontact.com/us/products/2701420>

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

1115535

<https://www.phoenixcontact.com/us/products/1115535>

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



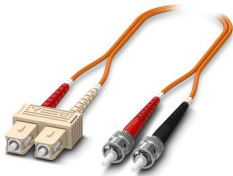
---

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

1115574

<https://www.phoenixcontact.com/us/products/1115574>

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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

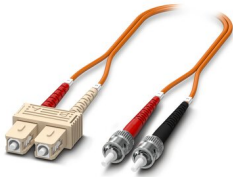
<https://www.phoenixcontact.com/us/products/2701420>

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

1115573

<https://www.phoenixcontact.com/us/products/1115573>

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



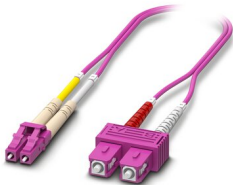
---

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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

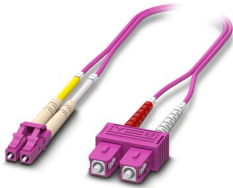
<https://www.phoenixcontact.com/us/products/2701420>

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



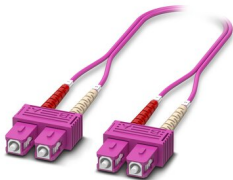
---

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

1115424

<https://www.phoenixcontact.com/us/products/1115424>

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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

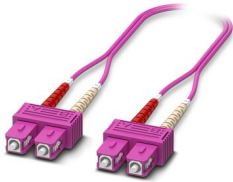
<https://www.phoenixcontact.com/us/products/2701420>

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

1115423

<https://www.phoenixcontact.com/us/products/1115423>

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



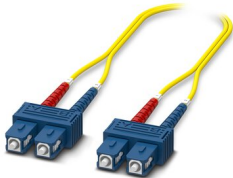
---

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

1115550

<https://www.phoenixcontact.com/us/products/1115550>

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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

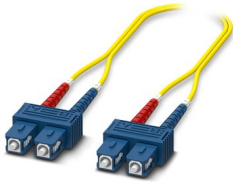
<https://www.phoenixcontact.com/us/products/2701420>

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

1115548

<https://www.phoenixcontact.com/us/products/1115548>

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



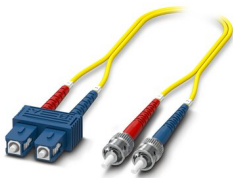
---

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

1115582

<https://www.phoenixcontact.com/us/products/1115582>

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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

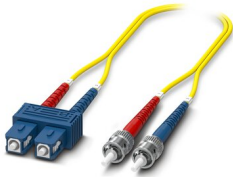
<https://www.phoenixcontact.com/us/products/2701420>

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

1115581

<https://www.phoenixcontact.com/us/products/1115581>

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



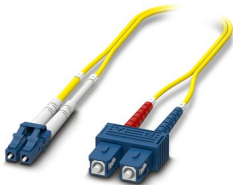
---

## 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



# FL SWITCH 7005/FX-2FXSM-EIP - Industrial Ethernet Switch



2701420

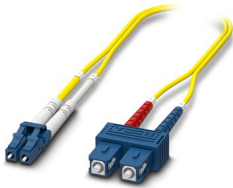
<https://www.phoenixcontact.com/us/products/2701420>

## 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



---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

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