

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

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 2000, 6 RJ45 ports 10/100 Mbps, 2 ST single mode 100 Mbps, PROFINET Conformance-Class B, Extended temperature range

Your advantages

- Ambient temperature -40 °C ... 70 °C
- RSTP
- MRP (client and manager)
- VLANs
- DHCP client, DHCP server (pool-based and port-based), DHCP option 82
- Configuration memory
- Web-based management, SNMP
- Slim design
- Easy and fast startup and commissioning with the FL NETWORK MANAGER software
- Suitable for PROFINET and EtherNet/IP™ networks

Commercial data

Item number	2702333
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN17
Product key	DNN121
Catalog page	Page 309 (C-6-2019)
GTIN	4055626136493
Weight per piece (including packing)	442.4 g
Weight per piece (excluding packing)	260 g
Customs tariff number	85176200
Country of origin	DE

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch

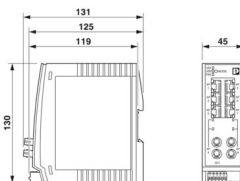


2702333

<https://www.phoenixcontact.com/us/products/2702333>

Technical data

Dimensions

Dimensional drawing	
Width	45 mm
Height	130 mm
Depth	119 mm

Notes

General	Support by phone or on-site (fee is charged)
Note on application	
Note on application	Only for industrial use

Material specifications

Housing material	Polycarbonate fiber reinforced
------------------	--------------------------------

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	6 (RJ45 ports)

Ethernet FO

Number of interfaces	2
Connection method	ST
Transmission speed	100 Mbps (full duplex)
Transmit capacity, minimum	-15 dBm
Transmit capacity, maximum	-7 dBm
Minimum receiver sensitivity	-34 dBm
Maximum receiver sensitivity	-3 dBm
Transmission physics	Single-mode fiberglass

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

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
Signal LEDs	Data receive, link status
No. of channels	2 (ST single mode)

Output data

Digital:

Output name	Alarm output
-------------	--------------

Product properties

Product type	Switch
Product family	Managed Switch 2000
Type	Book type
MTTF	343.16 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	153.37 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	18.66 Years (SN 29500 standard, temperature 70°C, operating cycle 100%)
Special properties	Extended temperature range
Signal delay	≥ 6.5 μs (Store and Forward mode, 10/100 Mbps, depending on the frame size)

Data management status

Article revision	07
------------------	----

Insulation characteristics

Protection class	III (VDE 0106)
Degree of pollution	2

Switch functions

Diagnostic functions	RMON History
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	N:1-Portmirroring
	ACD (Address Conflict Detection)
	SysLog
Basic functions	Store-and-forward switch, complies with IEEE 802.3
	Signal contact control voltage
PROFINET conformance class	Conformance-Class B
PROFINET device function	PROFINET device
	Fast Startup
	Quality of Service (8 priority classes)

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

Filter functions	Class of Service
	DiffServ/DSCP
	Port-Priorisierung
	VLAN (up to 32 VLANs)
	IGMP Snooping/Querier (v1/v2)
	Auto-Query-Port
	Extended Multicast Filtering
IP parameterization	DHCP-Client
	DHCP Option 82 (Relay Agent)
	DHCP server (pool-based, port-based)
	BootP
	DCP (Discovery and Configuration Protocol)
MAC address table	8k
Management	Web-based management (HTTP/HTTPS)
	Role-based user management (LDAP, RADIUS)
	SNMPv1/v2/v3
	Command Line Interface (Telnet, SSH)
Redundancy	MRP (Media Redundancy Protocol)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support
	LACP (Link Aggregation Control Protocol)
	PROFINET S2 system redundancy
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link/Activity and Speed)
Additional functions	Transmission of MMS and GOOSE (IEC 61850-8-1)
	Transmission of Modbus/TCP
Time synchronization	SNTP (Simple Network Time Protocol)
Security functions	
Port security	MAC-based, RADIUS (IEEE 802.1X), MAC Authentication Bypass
Basic functions	Store-and-forward switch, complies with IEEE 802.3

Electrical properties

Current consumption	260 mA
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	6.75 W ($U_S = \text{Min}$, $T_{\text{amb}} = \text{Max}$, $DO_1 = \text{Max}$)
Test section	24 V supply / functional ground 500 V DC 1 min.
	Ethernet interface/all other potentials 2.25 kV DC 1 min.
Transmission medium	Copper
	FO

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

Supply

Supply voltage (DC)	24 V DC (redundant)
Supply voltage range	9 V DC ... 57 V DC
Power supply connection	via COMBICON, max. conductor cross section 1.5 mm ²
Residual ripple	3.6 V _{PP} (within the permitted voltage range)
Max. current consumption	1.5 A (U _S = Min, T _{amb} = Max, DO _I = Max)
Typical current consumption	235 mA (at U _S = 24 V DC and 25 °C ambient temperature)
Current consumption	260 mA

Function

Signal contact control voltage	typ. 24 V DC
--------------------------------	--------------

Connection data

Connection method	Push-in spring connection
Note on the connection method	Use only copper connecting cables providing the permitted temperature range (-40 °C ... 75 °C).
Conductor cross section, rigid	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	9 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)
Shock (operation)	30g (EN 60068-2-27)
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
Air pressure (operation)	80 kPa ... 110 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)

Standards and regulations

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

Approvals

Shipbuilding approval	Tested in accordance with IEC 60945 and IACS E10
-----------------------	--

ATEX

Identification	Ⓜ II 3 G Ex ec IIC T4 Gc
Certificate	DEMKO 16 ATEX 1709X
References to standards	EN 60079-0

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

	EN 60079-7
--	------------

IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX ULD 16.0018 X
References to standards	IEC 60079-0 IEC 60079-7

UL, USA/Canada

Identification	cULus
----------------	-------

UL Ex, USA / Canada

Identification	Class I, Division 2, Groups A, B, C, and D, T4
	Class I, Zone 2, AEx ec IIC T4
	Ex ec IIC T4 Gc X
Certificate	E366272
Note	UL 60079-0 Ed. 6 / UL 60079-7 Ed. 5, CSA 22.2 No. 60079-0 Ed. 3 / CSA C22.2 No. 60079-7 Ed. 2

EAC Ex

Identification	2Ex e IIC T4 Gc X
Certificate	RU C-DE.HB49.B.00118/21

The following continue to apply for EAC Ex:

Identification	При монтаже использовать подходящий допущенный корпус со степенью защиты не ниже IP66.
	На корпусе/шкафу управления должна быть размещена предупреждающая надпись, запрещающая открывать корпус или шкаф во взрывоопасной зоне.
	Эксплуатация устройства допускается только при условии, что все оптические порты заняты подключенными устройствами или закрыты прилагаемыми заглушками.

CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	2022122310115629

Corrosive gas test

Identification	ISA S71.04.2013 G3 Harsh Group A
----------------	----------------------------------

UKCA Ex (UKEX)

Identification	Ⓜ II 3 G Ex ec IIC T4 Gc
Certificate	PxCIMA22UKEX2702910X

DNV GL data

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	Required protection according to the Rules shall be provided

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

upon installation on board

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 A
	EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A
	EN 61000-6-2 EN 61000-6-4 (interference) Class A
	EN 61000-6-2 EN 61000-6-4 (conducted interference) Class A
Noise immunity	EN 61000-6-2
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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/Activity and Speed)
----------------	---

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch

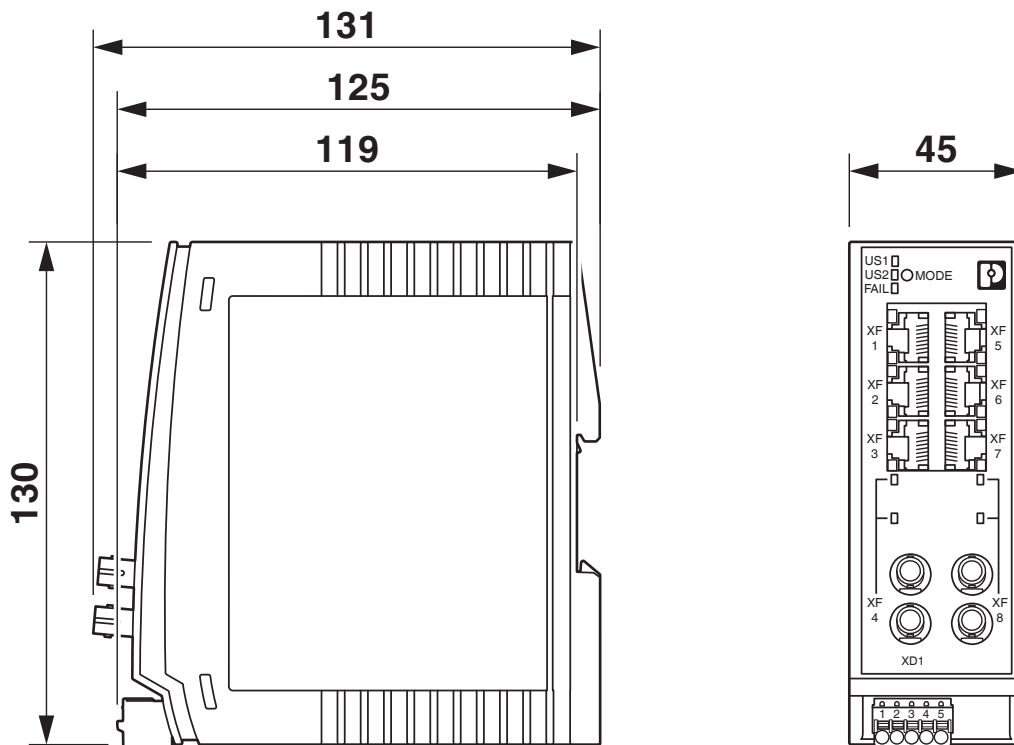


2702333

<https://www.phoenixcontact.com/us/products/2702333>

Drawings

Dimensional drawing



FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702333>



EAC

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



DNV GL

Approval ID: TAA00000YV



LR

Approval ID: LR22250919TA



NK

Approval ID: TA24215M



BV

Approval ID: 48146_B0 BV

BSH

Approval ID: Nr. 966



RINA

Approval ID: ELE014724XG001

ABS

Approval ID: 21_2066186_1_PDA

UAE-RoHS

Approval ID: 23-02-63230



cULus Listed

Approval ID: E238705



cUL Listed

Approval ID: E366272

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>



IECEx

Approval ID: IECEx ULD 16.0018X



ATEX

Approval ID: DEMKO 16 ATEX 1709X



CCC

Approval ID: 2022122310115629

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC000734
----------	----------

UNSPSC

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

FL SWITCH 2206-2FX SM ST - Industrial Ethernet Switch



2702333

<https://www.phoenixcontact.com/us/products/2702333>

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)
SCIP	ba4361ca-1180-4260-8edb-49c6a326f884

Phoenix Contact 2024 © - 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