

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

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, 12 RJ45 ports 10/100/1000 Mbps, 2 SFP ports 100/1000 Mbps, 2 Combo ports 10/100/1000 Mbps, PROFINET Conformance-Class B, Extended temperature range

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2702910 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DN17 |
| Product key | DNN121 |
| Catalog page | Page 313 (C-6-2019) |
| GTIN | 4055626402642 |
| Weight per piece (including packing) | 676 g |
| Weight per piece (excluding packing) | 480 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch

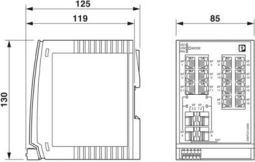


2702910

<https://www.phoenixcontact.com/us/products/2702910>

Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 85 mm |
| Height | 130 mm |
| Depth | 119 mm |

Notes

| | |
|---------|--|
| General | Support by phone or on-site (fee is charged) |
|---------|--|

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 | 10/100/1000 Mbps |
| Transmission physics | Copper |
| 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 80 km (Depending on the fiber/SFP module used) |
| Signal LEDs | Data receive, link status |
| No. of channels | 2 (SFP ports) |

Ethernet (combo)

| | |
|----------------------|----------|
| Number of interfaces | 2 |
| Connection method | SFP/RJ45 |

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

| | |
|-------------------------------|--|
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed | 10/100/1000 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 | 2 (Combo ports) |

Output data

Digital

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

Product properties

| | |
|--------------------|--|
| Type | Book type |
| Product type | Switch |
| Product family | Managed Switch 2000 |
| MTTF | 379.84 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) |
| | 199.41 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
| | 27.52 Years (SN 29500 standard, temperature 55°C, operating cycle 100%) |
| Special properties | Extended temperature range |
| Signal delay | ≥ 1.9 μs (Store-and-Forward mode, 10/100/1000 Mbps, depending on the frame size) |

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 |
| | CRC-Surveillance |
| Basic functions | Store-and-forward switch, complies with IEEE 802.3 |
| Signal contact control voltage | typ. 24 V DC |
| PROFINET conformance class | Conformance-Class B |
| PROFINET device function | PROFINET device |
| | Fast Startup |
| Filter functions | Quality of Service (8 priority classes) |
| | Class of Service |
| | DiffServ/DSCP |

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

| | |
|----------------------------------|---|
| | 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 | Jumbo frames (max. 9,600 bytes) |
| | 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

| | |
|---|---|
| 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 | 15.6 W ($U_S = \text{Min}$, $T_{\text{amb}} = \text{Max}$, $DO_1 = \text{Max}$) |
| 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) |
|---------------------|---------------------|

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

| | |
|-----------------------------|---|
| Supply voltage range | 12 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 | 2 A (U _S = Min, T _{amb} = Max, DO ₁ = Max) |
| Typical current consumption | 475 mA (at U _S = 24 V DC and 25 °C ambient temperature) |
| Current consumption | 475 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 |

IECEX

| | |
|----------------|---------------------|
| Identification | Ex ec IIC T4 Gc |
| Certificate | IECEX ULD 16.0018 X |

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

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 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 |

FL SWITCH 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

| | |
|-------------------------------|---|
| | EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A |
| | EN 61000-6-2 EN 61000-6-3 (noise emission) Class B |
| | EN 61000-6-2 EN 61000-6-3 (conducted emissions) Class B |
| 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 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

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 2312-2GC-2SFP - Industrial Ethernet Switch



2702910

<https://www.phoenixcontact.com/us/products/2702910>

Environmental product compliance

| | |
|------------|--|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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