

FL SWITCH 2105 - Industrial Ethernet Switch



2702665

<https://www.phoenixcontact.com/gb/products/2702665>

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Managed Switch 2000, 5 RJ45 ports 10/100/1000 Mbps, PROFINET Conformance-Class A



Your advantages

- VLANs
- RSTP
- DHCP client, DHCP server (port-based)
- MRP client
- Unmanaged Mode
- 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 | 2702665 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DNN121 |
| Product key | DNN121 |
| Catalog page | Page 305 (C-6-2019) |
| GTIN | 4055626283425 |
| Weight per piece (including packing) | 382.8 g |
| Weight per piece (excluding packing) | 240 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

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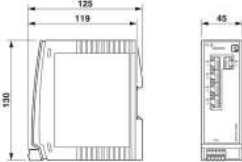


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Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 45 mm |
| Height | 130 mm |
| Depth | 119 mm |

Notes

| | |
|-------------------------|---|
| General | Support by phone or on-site (fee is charged) |
| Utilization restriction | |
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |

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 | 5 (RJ45 ports) |

Product properties

| | |
|----------------|---|
| Type | Book type |
| Product type | Switch |
| Product family | Managed Switch 2000 |
| MTTF | 398.76 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) 174.97 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |

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| | |
|--------------|--|
| | 31.76 Years (SN 29500 standard, temperature 55°C, operating cycle 100%) |
| 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 |
| PROFINET conformance class | Conformance-Class A |
| Filter functions | Quality of Service (8 priority classes) |
| | Class of Service |
| | DiffServ/DSCP |
| | Port-Priorisierung |
| | VLAN (up to 8 VLANs) |
| | IGMP Snooping/Querier (v1/v2) |
| | Auto-Query-Port |
| IP parameterization | Extended Multicast Filtering |
| | DHCP-Client |
| | DHCP server (port based) |
| MAC address table | 8k |
| Management | Web-based management (HTTP/HTTPS) |
| | Role-based user management (LDAP) |
| | SNMPv1/v2/v3 |
| | Command Line Interface (Telnet, SSH) |
| Redundancy | MRP (Media Redundancy Protocol) |
| | RSTP (Rapid Spanning Tree Protocol) |
| Status and diagnostic indicators | LEDs: US (power supply), 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

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

Electrical properties

| | |
|---|--|
| Local diagnostics | US Supply voltage Green LED |
| | LNK/ACT Link status Green LED |
| | SPD Data transmission speed Green/orange LED |
| Maximum power dissipation for nominal condition | 6.12 W (At $U_S = 18$ V DC and 60°C ambient temperature) |
| Test voltage | 500 V DC |
| Test section | for one minute 500 V DC |
| Transmission medium | Copper |

Supply

| | |
|-----------------------------|--|
| Supply voltage (DC) | 24 V DC (single) |
| Supply voltage range | 18 V DC ... 32 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 | 0.35 A (At $U_S = 18$ V DC and 60°C ambient temperature) |
| Typical current consumption | 225 mA (at $U_S = 24$ V DC and 25 °C ambient temperature) |
| Current consumption | 225 mA |

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) | 0 °C ... 60 °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) | 2g, according to IEC 60068-2-6 |
| Air pressure (operation) | 86 kPa ... 108 kPa (1500 m above sea level) |
| Air pressure (storage/transport) | 86 kPa ... 108 kPa (1500 m above sea level) |

Standards and regulations

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

Approvals

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UL, USA/Canada

| | |
|----------------|---|
| Identification | cULus |
| Note | UL 61010-1, Ed. 3 / UL 61010-2-201, Ed. 1, CSA C22.2 NO. 61010-2-201:14, Ed. 1 / CSA C22.2 NO.61010-1-12, Ed. 3 |

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: US (power supply), 2 LEDs per Ethernet port (Link/Activity and Speed) |
|----------------|---|

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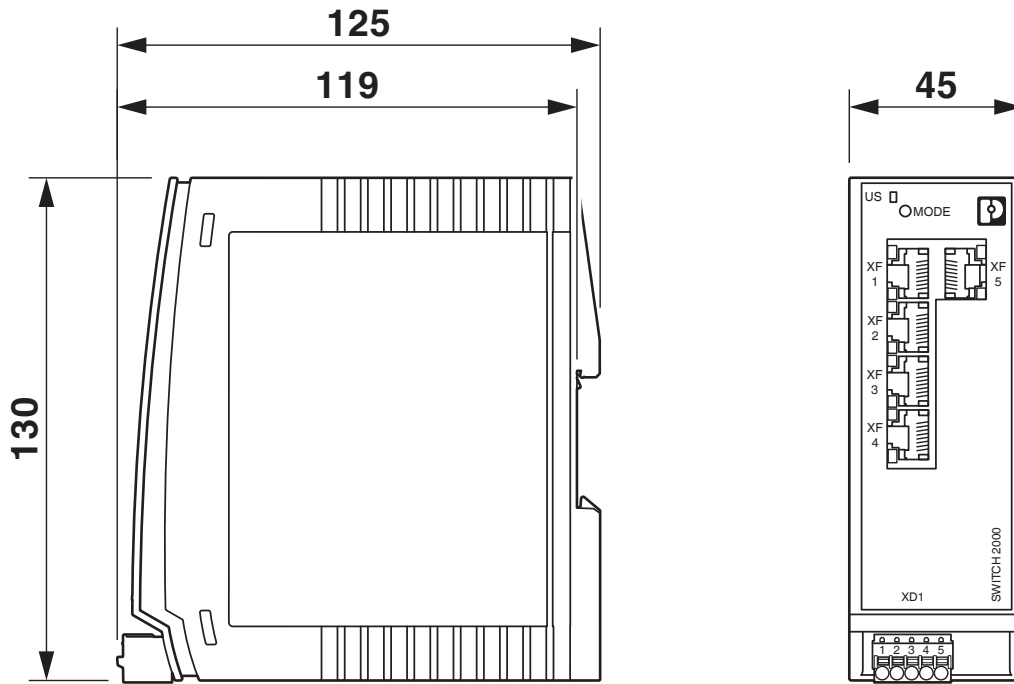
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Drawings

Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2702665>



EAC

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



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705



CC-Link IE Field

Approval ID: Ref. No. 100



cUL Listed

Approval ID: FILE E 238705



UL Listed

Approval ID: FILE E 238705

UAE-RoHS

Approval ID: 23-02-63230

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Classifications

ECLASS

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

ETIM

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

UNSPSC

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

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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" |

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Accessories

SD FLASH 2GB - Program / configuration memory

2988162

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



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

FL NETWORK MANAGER BASIC - Network management software

2702889

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



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

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FL DIN RA - DIN rail adapter

2891053

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

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Dust protection caps for RJ45 socket



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E/NS 35 N - End clamp

0800886

<https://www.phoenixcontact.com/gb/products/0800886>

End clamp, width: 9.5 mm, color: gray



FK-MCP 1,5/ 5-ST-3,81GY35BD1-5 - PCB connector

1015782

<https://www.phoenixcontact.com/gb/products/1015782>



PCB connector, nominal cross section: 1.5 mm², color: light grey, nominal current: 8 A, rated voltage (III/2): 160 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: FK-MCP 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

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MCVW 1,5/ 5-ST-3,81GY7035BD2US - PCB connector

1034103

<https://www.phoenixcontact.com/gb/products/1034103>



PCB connector, nominal cross section: 1.5 mm², color: light grey, nominal current: 8 A, rated voltage (III/2): 160 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: MCVW 1,5/..-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

FL CAT5 PATCH 0,5 - Patch cable

2832263

<https://www.phoenixcontact.com/gb/products/2832263>



Patch cable, CAT5, assembled, 0.5 m

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FL CAT5 PATCH 1,0 - Patch cable

2832276

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Patch cable, CAT5, assembled, 1 m



FL CAT5 PATCH 2,0 - Patch cable

2832289

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

Patch cable, CAT5, assembled, 2 m



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

1411854

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

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

1408365

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

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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

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NBC-R4AC/2,0-93B/R4AC - Patch cable

1408969

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

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

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VS-08-RJ45-5-Q/IP20 - RJ45 connector

1656725

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RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

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