

# FL SWITCH 1016N - Industrial Ethernet Switch



1085255

<https://www.phoenixcontact.com/us/products/1085255>

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Narrow Ethernet switch, sixteen RJ45 ports with 10/100 Mbps on all ports, automatic data transmission speed detection, autocrossing function, and QoS

## Your advantages

- QoS-prioritized (Quality of Service) messages
- RJ45 ports support a transmission speed of 10/100 Mbps
- Local diagnostic indicators with LEDs
- PROFINET PTCP filter for reliable communication on PROFINET networks
- Enhanced traffic prioritization for automation protocols
- Energy-efficient Ethernet in accord. with IEEE 802.3az
- PROFINET Conformance Class A for real-time data exchange
- Auto negotiation and autocrossing detection simplifies installation and setup

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1085255       |
| Packing unit                         | 1 pc          |
| Sales key                            | DN20          |
| Product key                          | DNN116        |
| GTIN                                 | 4055626835037 |
| Weight per piece (including packing) | 350 g         |
| Weight per piece (excluding packing) | 266 g         |
| Customs tariff number                | 85176200      |
| Country of origin                    | TW            |

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## Technical data

### Dimensions

|        |          |
|--------|----------|
| Width  | 40 mm    |
| Height | 140.4 mm |
| Depth  | 92.4 mm  |

### Notes

#### 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)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Number of interfaces          | 16                                |
| 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 (per segment)               |
| Signal LEDs                   | Data receive, link status         |
| No. of channels               | 16 (RJ45 ports)                   |

### Product properties

|                |  |
|----------------|--|
| Product type   | Switch   |
| Product family | Unmanaged Switch 1000  |
| MTTF           | 63.7 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)                          |
|                | 729 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)                                 |
|                | 639 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |

### Switch functions

|                            |                                  |
|----------------------------|----------------------------------|
| Basic functions            | Unmanaged switch                 |
|                            | Autonegotiation                  |
|                            | Store and Forward switching mode |
| PROFINET conformance class | Conformance-Class A              |

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|                                  |  |
|----------------------------------|--|
| MAC address table                | 8k   |
| Status and diagnostic indicators | LEDs: $U_S$ , link and activity per port   |
| Additional functions             | 100 BASE-TX/100BASE-FX (IEEE 802.3u)<br>Quality of Service (QoS) prioritization (IEEE 802.1p)<br>Energy-efficient Ethernet (IEEE 802.3az)<br>10Base-T (IEEE 802.3) |

|                    |                                  |
|--------------------|----------------------------------|
| Security functions |                                  |
| Basic functions    | Unmanaged switch                 |
|                    | Autonegotiation                  |
|                    | Store and Forward switching mode |

## Electrical properties

|   |                      |
|---|----------------------|
| Maximum power dissipation for nominal condition | 6.384 W (at 24 V DC) |
| Transmission medium                             | Copper               |

|                             |  |
|-----------------------------|--|
| Supply                      |  |
| Supply voltage (DC)         | 24 V   |
| Supply voltage (AC)         | 24 V AC (50/60 Hz)   |
| Supply voltage range        | 9 V DC ... 32 V DC<br>18 V AC ... 30 V AC (50/60 Hz)           |
| Power supply connection     | Via COMBICON, max. conductor cross section 2.5 mm <sup>2</sup> |
| Residual ripple             | 3.6 V <sub>PP</sub> (within the permitted voltage range)       |
| Max. current consumption    | 266 mA (at 9 V DC)   |
| Typical current consumption | 273 mA (at 24 V DC)  |

## Connection data

|                       |              |
|-----------------------|--------------|
| Connection technology |              |
| Connection name       | Power supply |
| pluggable             | yes          |

|   |  |
|---|--|
| Power supply  |  |
| Connection method   | Push-in spring connection                    |
| Conductor cross section, rigid  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section, flexible                                     | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG   | 24 ... 12                                    |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Stripping length  | 10 mm  |

## Environmental and real-life conditions

|                                 |                  |
|---------------------------------|------------------|
| Ambient conditions              |                  |
| Degree of protection            | IP30             |
| Ambient temperature (operation) | -10 °C ... 60 °C |

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|  |   |
|--|---|
| Ambient temperature (storage/transport)  | -40 °C ... 85 °C  |
| Altitude                                 | 2000 m (maximum)  |
| Permissible humidity (operation)         | 5 % ... 95 % (non-condensing)   |
| Permissible humidity (storage/transport) | 5 % ... 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)                 | 79 kPa ... 108 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) |

## Approvals

### Conformity/Approvals

|                  |  |
|------------------|--|
| Conformance      | CE-compliant   |
| UL, USA / Canada | UL 61010-1, UL 61010-2-201<br>Class I, Div. 2, Groups A, B, C, D, T4<br>Class I, Zone 2, Group IIC, T4 |

## EMC data

|                                 |  |
|---------------------------------|--|
| Conformance with EMC directives | EN 61000-6-2 EN 61000-4-2 (ESD) Criterion B<br>EN 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A<br>EN 61000-6-2 EN 61000-4-4 (EFT burst) Criterion A<br>EN 61000-6-2 EN 61000-4-5 (surge) Criterion B<br>EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A<br>EN 61000-6-2 EN 61000-4-8 (electromagnetic fields) Criterion A<br>EN 61000-6-2 Class A |
| Noise immunity                  | EN 61000-6-2:2005  |
| Electromagnetic compatibility   | Conformance with EMC Directive 2014/30/EU  |
| Noise emission                  | EN 61000-6-4:2007 + A1:2011  |

## System properties

### Functionality

|                 |   |
|-----------------|---|
| Basic functions | Unmanaged switch<br>Autonegotiation<br>Store and Forward switching mode |
|-----------------|---|

## Signaling

|                |   |
|----------------|---|
| Status display | LEDs: U <sub>S</sub> , link and activity per port |
|----------------|---|

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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1085255>



**IECEE CB Scheme**

Approval ID: DK-91138-UL



**EAC**

Approval ID: RU \*-DE.A\*08.B.00731



**IECEE CB Scheme**

Approval ID: DK-91246-UL



**UL Listed**

Approval ID: FILE E 140403



**cUL Listed**

Approval ID: FILE E 140403



**KC**

Approval ID: R-R-PCK-1085255



**cUL Listed**

Approval ID: FILE E 238705



**UL Listed**

Approval ID: FILE E 238705

**CC-Link IE Field**

**CC-Link IE Field**

Approval ID: NRT-IT-00068

**UAE-RoHS**

Approval ID: 23-09-84493



**cUL Listed**

Approval ID: FILE E 196811

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**UL Listed**

Approval ID: FILE E 196811

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 19170402 |
| ECLASS-13.0 | 19170402 |

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

REACH SVHC

Lead 7439-92-1

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## Accessories

### FKCT 2,5/ 3-ST KMGY BD:US,GND - PCB connector

1087544

<https://www.phoenixcontact.com/us/products/1087544>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, 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

### FKCT 2,5/ 3-ST KMGY - PCB connector

1998263

<https://www.phoenixcontact.com/us/products/1998263>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, 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

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## FL PANEL ADAPTER 40 - Mounting panel

1085486

<https://www.phoenixcontact.com/us/products/1085486>

The FL PANEL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a panel, in any orientation.



## FL DIN-RAIL ADAPTER 40 - Mounting panel

1085484

<https://www.phoenixcontact.com/us/products/1085484>

The FL DIN-RAIL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.



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## DT-LAN-CAT.6+ - Surge protection device

2881007

<https://www.phoenixcontact.com/us/products/2881007>



Surge protection in accordance with Class E<sub>A</sub> (CAT6<sub>A</sub>), 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 CAT5 PATCH 0,5 - Patch cable

2832263

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

Patch cable, CAT5, assembled, 0.5 m



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## FL CAT5 PATCH 1,0 - Patch cable

2832276

<https://www.phoenixcontact.com/us/products/2832276>

Patch cable, CAT5, assembled, 1 m



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## FL CAT5 PATCH 2,0 - Patch cable

2832289

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

Patch cable, CAT5, assembled, 2 m



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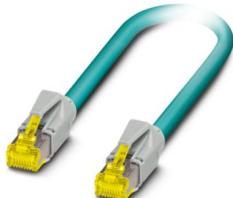
<https://www.phoenixcontact.com/us/products/1085255>

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



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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



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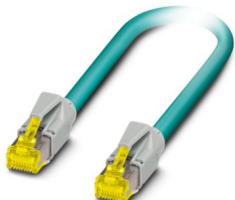
<https://www.phoenixcontact.com/us/products/1085255>

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



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E/NS 35 N - End bracket

0800886

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

End clamp, width: 9.5 mm, color: gray



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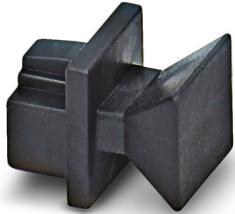
<https://www.phoenixcontact.com/us/products/1085255>

## FL RJ45 PROTECT CAP - Dust protection

2832991

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

Dust protection caps for RJ45 socket



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