

# FL SWITCH 1005N - Industrial Ethernet Switch



1085039  
<https://www.phoenixcontact.com/us/products/1085039>

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

## Your advantages

- RJ45 ports support a transmission speed of 10/100 Mbps
- QoS-prioritized (Quality of Service) messages
- Local diagnostic indicators with LEDs
- Enhanced traffic prioritization for automation protocols
- PROFINET PTCP filter for reliable communication on PROFINET networks
- 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                          | 1085039       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DN20          |
| Product key                          | DNN116        |
| GTIN                                 | 4055626834320 |
| Weight per piece (including packing) | 210.13 g      |
| Weight per piece (excluding packing) | 131 g         |
| Customs tariff number                | 85176200      |
| Country of origin                    | TW            |

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## Technical data

### Dimensions

|        |         |
|--------|---------|
| Width  | 22.5 mm |
| Height | 117 mm  |
| Depth  | 84 mm   |

### Notes

#### Note on application

|                     |                         |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

#### 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          | 5                                 |
| 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               | 5 (RJ45 ports)                    |
| Input buffer                  | 768 Kbits                         |
| Output buffer                 | 768 Kbits                         |

### Product properties

|                |                                                                                                       |
|----------------|-------------------------------------------------------------------------------------------------------|
| Product type   | Switch                                                                                                |
| Product family | Unmanaged Switch 1000                                                                                 |
| MTTF           | 167.2 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)                          |
|                | 1627 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)                                 |
|                | 1526 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
|                | Unmanaged switch                                                                                      |

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|                 |                                  |
|-----------------|----------------------------------|
| Basic functions | Autonegotiation                  |
|                 | Store and Forward switching mode |

## Switch functions

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Basic functions                  | Unmanaged switch                                      |
|                                  | Autonegotiation                                       |
|                                  | Store and Forward switching mode                      |
| PROFINET conformance class       | Conformance-Class A                                   |
| MAC address table                | 2k                                                    |
| Status and diagnostic indicators | LEDs: U <sub>S</sub> , link and activity per port     |
| Additional functions             | 100 BASE-TX/100BASE-FX (IEEE 802.3u)                  |
|                                  | Quality of Service (QoS) prioritization (IEEE 802.1p) |
|                                  | Energy-efficient Ethernet (IEEE 802.3az)              |
|                                  | 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 | 0.99 W (at 24 V DC) |
| Transmission medium                             | Copper              |

## Supply

|                             |                                                                |
|-----------------------------|----------------------------------------------------------------|
| Supply voltage (DC)         | 24 V DC                                                        |
| Supply voltage (AC)         | 24 V AC (50/60 Hz)                                             |
| Supply voltage range        | 9 V DC ... 32 V DC                                             |
|                             | 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    | 110 mA (at 9 V DC)                                             |
| Typical current consumption | 19 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> |

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|                                                                       |                      |
|-----------------------------------------------------------------------|----------------------|
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 2.5 mm² |
| Stripping length                                                      | 10 mm                |

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

|                                                                   |                               |
|-------------------------------------------------------------------|-------------------------------|
| Free from substances that could impair the application of coating | In acc. with VW specification |
|-------------------------------------------------------------------|-------------------------------|

## Approvals

### Conformity/Approvals

|                  |                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------|
| UL, USA / Canada | UL 61010-1, UL 61010-2-201, UL 62368-1<br>Class I, Div. 2, Groups A, B, C, D, T4<br>Class I, Zone 2, Group IIC, T4 |
| FCC              | Title 47 Part 15 Subpart B:2018 Class A                                                                            |

## EMC data

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| Electromagnetic compatibility   | Conformance with EMC Directive 2014/30/EU                      |
| 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 B                  |
|                                 | EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A    |
|                                 | EN 61000-6-4 Class A                                           |
|                                 | EN 61000-6-4 Conducted noise emission Class A                  |
| Noise immunity                  | FCC/CFR 47, Part 15.109 Class A                                |
|                                 | EN 61000-6-2:2019                                              |

### Noise emission

|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | EN_61000-6-4:2019 |
|-----------------------|-------------------|

## System properties

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## Functionality

|                 |                                  |
|-----------------|----------------------------------|
| Basic functions | Unmanaged switch                 |
|                 | Autonegotiation                  |
|                 | 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/1085039>



**IECEE CB Scheme**

Approval ID: DK-91138-UL



**IECEE CB Scheme**

Approval ID: DK-91246-UL



**KC**

Approval ID: R-R-PCK-1085039



**CC-Link IE Field**

Approval ID: NRT-IT-00068



**cULus Listed**

Approval ID: E238705



**cULus Listed**

Approval ID: E140304



**cUL Listed**

Approval ID: E196811



**UL Listed**

Approval ID: E196811

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 19170402 |
| ECLASS-15.0 | 19170402 |

### ETIM

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

### UNSPSC

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

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                                    | 2cf6e074-8e85-4498-87aa-8a0ef94111a5                                                                                                                                                                                              |
| EF3.0 Climate Change                    |                                                                                                                                                                                                                                   |
| CO2e kg                                 | 11.27 kg CO2e                                                                                                                                                                                                                     |

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## Accessories

### MVSTBW 2,5/ 3-ST-5,08 GY - PCB connector

1783685

<https://www.phoenixcontact.com/us/products/1783685>

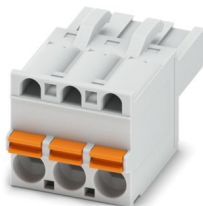


PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MVSTBW 2,5/...-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: 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 gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, 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 method: without, type of packaging: packed in cardboard

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## FL DIN-RAIL ADAPTER 22.5 - Mounting panel

1085485

<https://www.phoenixcontact.com/us/products/1085485>



The FL DIN-RAIL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

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## FL PANEL ADAPTER 22.5 - Mounting panel

1085488

<https://www.phoenixcontact.com/us/products/1085488>



The FL PANEL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a panel, in any orientation.

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

2881007

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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, DS1. Suitable for Power over Ethernet (PoE++/4PPoE) "Mode A" and "Mode B". RJ45 intermediate plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails. Products with similar requirements: DT-LAN-CAT.6A (2908726) und D-LAN-CAT.5-HC (2800763).

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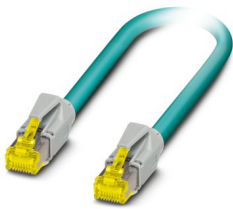
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## NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

<https://www.phoenixcontact.com/us/products/1411854>



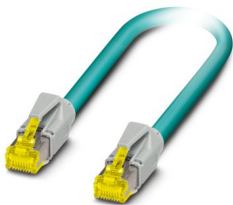
Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet

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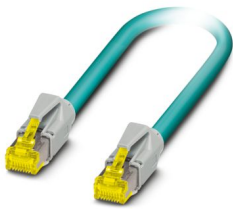
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## NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

1408365

<https://www.phoenixcontact.com/us/products/1408365>



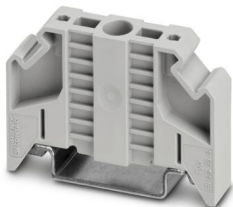
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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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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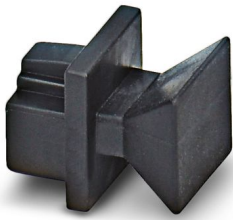
<https://www.phoenixcontact.com/us/products/1085039>



## FL RJ45 PROTECT CAP - Dust protection

2832991

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Dust protection caps for RJ45 socket

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