

# FL SWITCH 4012T-2GT-2FX - Industrial Ethernet Switch



2891063

<https://www.phoenixcontact.com/gb/products/2891063>

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Managed Ethernet switch with 12 RJ45 ports at 10/100 Mbps, two RJ45 ports at 10/100/1000 Mbps and two SC-D fiber optic ports at 100 Mbps. Wide operating temperature of -40°C ... +75°C.

## Product description

FL SWITCH 4000 managed industrial Ethernet switches combine Gigabit interfaces with extensive network performance for the most demanding applications. Security features with complete IEEE redundancy (STP/RSTP/MST) and 15 ms recovery time extended ring redundancy optimize network uptime. Unique web customization provides a simplified user interface for today's applications and scalable functionality for future needs. A comprehensive mix of 10/100 Mbps and Gigabit fiber optic connections combine performance with installed cost savings.

## Your advantages

- Twelve 10/100 Mbps ports for device connections, two Gigabit RJ45 ports for network trunk lines, and two 100 Mbps multi-mode fiber optic SC interfaces for remote connections
- -40 °C to 75 °C ambient temperature
- Extensive web diagnostics with configurable LED and remote alarm contacts
- Secure web-based and SNMP-based management
- Unique cleanup function hides unused configuration pages, reducing complexity, maintenance and startup times

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2891063                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | DNN125                         |
| Product key                          | DNN125                         |
| GTIN                                 | 4046356764315                  |
| Weight per piece (including packing) | 1,702.9 g                      |
| Weight per piece (excluding packing) | 1,285 g                        |
| Customs tariff number                | 85176200                       |
| Country of origin                    | TW                             |

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## Technical data

### Dimensions

|        |        |
|--------|--------|
| Width  | 66 mm  |
| Height | 173 mm |
| Depth  | 140 mm |

### Notes

#### Utilization restriction

|            |   |
|------------|---|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---|

### Material specifications

|                  |          |
|------------------|----------|
| Housing material | Aluminum |
|------------------|----------|

### 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          | Ethernet in RJ45 twisted pair     |
| Transmission length           | 100 m                             |
| No. of channels               | 12 (RJ45 ports)                   |

#### Fiber optic interface

|                      |  |
|----------------------|--|
| Connection method    | SC   |
| Transmission speed   | 100 Mbps (full duplex)   |
| Transmission physics | multi-mode fiberglass  |
| Transmission length  | 8 km (fiberglass with F-G 62.5/125 0.7 dB/km F1000)<br>3.3 km (fiberglass with F-G 62.5/125 2.6 dB/km F600)<br>9.6 km (fiberglass with F-G 50/125 0.7 dB/km F1200)<br>5.3 km (fiberglass with F-G 50/125 1.6 dB/km F800) |
| Wavelength           | 1300 nm  |
| No. of channels      | 2 (SC multi-mode)  |
| Transmission length  | 6400 m   |

#### Ethernet (RJ45)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Connection method             | RJ45                              |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed            | 10/100/1000 Mbps                  |
| Transmission physics          | Ethernet in RJ45 twisted pair     |
| Transmission length           | 100 m                             |

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|                 |                |
|-----------------|----------------|
| No. of channels | 2 (RJ45 ports) |
|-----------------|----------------|

## Product properties

|                |   |
|----------------|---|
| Product type   | Switch  |
| Product family | Managed Switch 4000   |
| Type           | Block design  |
| MTTF           | 18.8 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) |

## Insulation characteristics

|                  |                           |
|------------------|---------------------------|
| Protection class | III (VDE 0106, IEC 60536) |
|------------------|---------------------------|

## Switch functions

|                                  |  |
|----------------------------------|--|
| Basic functions                  | Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts |
| Signal contact control voltage   | 24 V DC  |
| Signal contact control current   | 100 mA   |
| Redundancy                       | ERR (Extended ring redundancy)   |
| Status and diagnostic indicators | LEDs: $U_{S1}$ , $U_{S2}$ (redundant voltage supply), link and activity per port   |

## Security functions

|                 |  |
|-----------------|--|
| Basic functions | Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts |
|-----------------|--|

## Electrical properties

|   |   |
|---|---|
| Local diagnostics                               | US1, US2 Supply voltage Green LED               |
|   | LNK/ACT Link status/data transmission Green LED |
| Maximum power dissipation for nominal condition | 11.38 W   |
| Test section                                    | Supply voltage/functional ground 500 V 1 min    |
| Transmission medium                             | Copper  |
|   | FO  |

## Supply

|                             |  |
|-----------------------------|--|
| Supply voltage (DC)         | 24 V DC (redundant)                                      |
| Supply voltage range        | 12 V DC ... 48 V DC                                      |
| Inrush current              | 7.7 A (200 $\mu$ s)                                      |
| Residual ripple             | 3.6 V <sub>PP</sub> (within the permitted voltage range) |
| Typical current consumption | 474 mA (at $U_S = 24$ V DC)                              |

## Function

|                                |         |
|--------------------------------|---------|
| Signal contact control voltage | 24 V DC |
| Signal contact control current | 100 mA  |

## Connection data

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## Power supply

|                                   |   |
|-----------------------------------|---|
| Connection method                 | Pluggable COMBICON screw connections        |
| 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                                   |
| Stripping length                  | 7 mm  |

## Environmental and real-life conditions

### Ambient conditions

|  |  |
|--|--|
| Degree of protection                     | IP20   |
| Ambient temperature (operation)          | -40 °C ... 75 °C                                       |
| Ambient temperature (storage/transport)  | -40 °C ... 85 °C                                       |
| Permissible humidity (operation)         | 5 % ... 95 % (non-condensing)                          |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)                          |
| Air pressure (operation)                 | 57 kPa ... 108 kPa (up to 4850 m above mean sea level) |
| Air pressure (storage/transport)         | 57 kPa ... 108 kPa (up to 4850 m above mean sea level) |

## Approvals

### Conformity/Approvals

|                                 |                                    |
|---------------------------------|------------------------------------|
| Conformance                     | CE-compliant                       |
| ATEX                            | Ⓜ II 3 G Ex nA nC IIC T4 Gc        |
| EU-type examination certificate | DEMKO 16 ATEX 1616X                |
| IECEX                           | Ex nA nC IIC T4 Gc                 |
| IECEX certificate               | IECEX UL 16.0094X                  |
| UL, USA / Canada                | Class I, Div. 2, Groups A, B, C, D |

## EMC data

|                                 |  |
|---------------------------------|--|
| Conformance with EMC directives | IEC 61000-6-2 IEC 61000-4-2 (ESD) Criterion B                  |
|                                 | IEC 61000-4-3 (immunity to radiated interference) Criterion A  |
|                                 | IEC 61000-4-4 (burst) Criterion A                              |
|                                 | IEC 61000-4-5 (surge) Criterion B                              |
|                                 | IEC 61000-4-6 (immunity to conducted interference) Criterion A |
|                                 | IEC 61000-4-8 (immunity to magnetic fields) Criterion A        |
|                                 | EN 55022 (emitted interference) Class A                        |
| Noise immunity                  | EN 61000-6-2:2005  |

### Noise emission

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-6-4 |
|-----------------------|--------------|

## System properties

### Functionality

|                 |   |
|-----------------|---|
| Basic functions | Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging |
|-----------------|---|

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|  |  |
|--|--|
|  | VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts |
|--|--|

---

## Signaling

|                |  |
|----------------|--|
| Status display |  |
|----------------|--|

|  |  |
|--|--|
|  | LEDs: U <sub>S1</sub> , U <sub>S2</sub> (redundant voltage supply), link and activity per port |
|--|--|

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## Classifications

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |                           |
|---|---------------------------|
| Fulfills EU RoHS substance requirements | Yes                       |
| Exemption                               | 15(a), 6(c), 7(a), 7(c)-I |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-10   |
|  | 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) |
|-------------------------------------|----------------------|

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