

# FL SWITCH 1005NT-2SFX - Industrial Ethernet Switch



1085164

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

## Your advantages

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



## Commercial data

Item number	1085164
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN20
Product key	DNN116
GTIN	4055626832883
Weight per piece (including packing)	349.2 g
Weight per piece (excluding packing)	261 g
Customs tariff number	85176200

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Country of origin	TW
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## Technical data

### Dimensions

Width	22.5 mm
Height	140.4 mm
Depth	92.4 mm

### Notes

#### Note on application

Note on application	Only for industrial use
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#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Material specifications

Color (Housing)	gray (RAL 7042)
Color (Cover)	light gray (RAL 7035)
Housing material	Polycarbonate fiber reinforced
	Aluminum / steel sheet DC01

### Mounting

Mounting type	DIN rail mounting
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### 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)

#### Ethernet (SFP)

Number of interfaces	2
Connection method	SFP
Transmission speed	100 Mbps (full duplex)
Transmission physics	Depending on the SFP module
Transmission length	up to 40 km (Depending on the fiber/SFP module used)
Signal LEDs	Data receive, link status
No. of channels	2 (SFP ports)

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## Product properties

Product type	Switch
Product family	Unmanaged Switch 1000
MTTF	115.8 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)
	1350.4 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	1335.2 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
Special properties	Extended temperature range

## 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	2.79 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	310 mA (at 9 V DC)
Typical current consumption	25 mA (at 24 V DC)

## Connection data

### Power supply

Connection method	Push-in spring connection
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pluggable	yes
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>
	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with 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)	-40 °C ... 75 °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)

## Approvals

### Conformity/Approvals

UL, USA / Canada	UL 61010-1, UL 61010-2-201 Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Group IIC, T4
FCC	Title 47 Part 15 Subpart B:2018 Class A
FCC certificate	T190905D11-C

## 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 61000-6-2 EN 61000-4-8 (electromagnetic fields) Criterion A
	EN 61000-6-2 EN 55032 Class A
Noise immunity	EN 61000-6-2:2019

### Noise emission

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Standards/regulations	EN_61000-6-4:2019
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## System properties

### 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/1085164>



**DNV GL**

Approval ID: TAA000034U



**UL Listed**

Approval ID: E238705



**cUL Listed**

Approval ID: E238705



**KC**

Approval ID: R-R-PCK-1085164



**IECEx**

Approval ID: IECEx UL 21.0120X



**cUL Listed**

Approval ID: E196811



**UL Listed**

Approval ID: E196811



**ATEX**

Approval ID: UL 21 ATEX 2638X

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## Classifications

### ECLASS

ECLASS-13.0	19170402
ECLASS-15.0	19170402

### ETIM

ETIM 10.0	EC000734
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### UNSPSC

UNSPSC 21.0	43222600
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## 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	8bc4641b-a96f-46bf-8b11-fd219344ab3e

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