

# FL SWITCH 3012E-2FX SM - Industrial Ethernet Switch



2891119

<https://www.phoenixcontact.com/us/products/2891119>

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Managed Ethernet switch meets IEC 61850-3 and IEEE 1613 standards. Provides 12 RJ45 ports at 10/100 Mbps, two SC-D SM fiber optic ports and operating temperature of -40°C ... +70°C.

## Product description

FL SWITCH 3000 managed industrial Ethernet switches combine extensive network performance and security features with complete IEEE redundancy (STP/RSTP/MST) and 15 ms recovery time extended ring redundancy. Unique web customization provides a simplified user interface for today's applications and scalable functionality for future needs. A comprehensive mix of fiber optic and copper port connections meets a wide range of applications.

## Your advantages

- Network structure according to IEC 61850
- IEEE 1613

## Commercial data

Item number	2891119
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN17
Product key	DNN125
GTIN	4055626292762
Weight per piece (including packing)	1,657 g
Weight per piece (excluding packing)	1,657 g
Customs tariff number	85176200
Country of origin	TW

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## Technical data

### Dimensions

Width	78.6 mm
Height	145 mm
Depth	125 mm

### Material specifications

Housing material	Aluminum
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### Mounting

Mounting type	DIN rail mounting
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### 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	Single-mode fiberglass
Transmission length	40 km (fiberglass with F-G 9/125 0.36 dB/km)
Wavelength	1300 nm
No. of channels	2 (SC single mode)

### Product properties

Product type	Switch
Product family	Managed Switch 3000
Type	Block design
MTTF	29 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

#### 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)

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Status and diagnostic indicators	LEDs: U <sub>S1</sub> , U <sub>S2</sub> (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
Test section	Supply voltage/functional ground 500 V 1 min
Transmission medium	Copper

### Supply

Supply voltage (DC)	24 V DC (redundant)
Supply voltage range	12 V DC ... 48 V DC
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Typical current consumption	320 mA (at U <sub>S</sub> = 24 V DC)

### Function

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

## Connection data

### 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 ... 70 °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
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## EMC data

Noise immunity	IEC 61850-3, IEEE 1613, 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 VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts
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## 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	43222612
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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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