

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

## Why buy this product

- Unique cleanup function hides unused configuration pages, reducing complexity, maintenance and startup times
- Secure web-based and SNMP-based management
- Extensive web diagnostics with configurable LED and remote alarm contacts
- 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 to 75°C ambient temperature



## Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4046356764315

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

Width	66 mm
Height	173 mm
Depth	140 mm

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### 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)

### Interfaces

Interface 1	Ethernet (RJ45)
No. of ports	12 (RJ45 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Ethernet in RJ45 twisted pair
Transmission speed	10/100 Mbps
Transmission length	100 m
Interface 2	Fiber optic interface
No. of ports	2 (SC multi-mode)
Transmission physics	multi-mode fiberglass
Transmission speed	100 Mbps (full duplex)
Transmission length	8 km (fiberglass with F-G 62.5/125 0.7 dB/km F1000)
	3.3 km (fiberglass with F-G 62.5/125 2.6 dB/km F600)
	9.6 km (fiberglass with F-G 50/125 0.7 dB/km F1200)
	5.3 km (fiberglass with F-G 50/125 1.6 dB/km F800)
Wavelength	1300/1310 nm
Transmission length	6400 m
Interface 4	Ethernet (RJ45)
No. of ports	2 (RJ45 ports)
Connection method	RJ45
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Ethernet in RJ45 twisted pair
Transmission speed	10/100/1000 Mbps
Transmission length	100 m

### Function

Basic functions	Managed switch
Redundancy	ERR (Extended ring redundancy)
Status and diagnostic indicators	LEDs: U <sub>S1</sub> , U <sub>S2</sub> (redundant voltage supply), link and activity per port

### Network expansion parameters

Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m

### Supply voltage

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### Supply voltage

Supply voltage	24 V DC (redundant)
Residual ripple	3.6 V <sub>pp</sub> (within the permitted voltage range)
Supply voltage range	12 V DC ... 48 V DC
Typical current consumption	474 mA (24 V DC)
Inrush surge current	7.7 A (200 µs)

### General

Mounting type	DIN rail
Type AX	Block design
Net weight	1285 g
Housing material	Aluminum

### Connection data

Connection method	Pluggable COMBICON screw connections
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm

### Standards and Regulations

Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	30g, 11 ms half-sine shock pulse
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 150 Hz, Criterion 3
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc
IECEX	Ex nA nC IIC T4 Gc
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 10;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

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#### Ex Approvals

UL Listed / cUL Listed / IECEx / ATEX / cULus Listed

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### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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EAC			EAC-Zulassung
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EAC			RU *- DE.A*30.B.01735
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cULus Listed			
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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>