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Managed Ethernet switch with eight RJ45 ports at 10/100 Mbps and two SFP ports at 1000 Mbps. Wide operating temperature of -40 $^{\circ}$ C ... +75 $^{\circ}$ 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

- ☑ Eight 10/100 Mbps RJ45 ports for device connections and two SFP-based fiber optic LC interfaces for network trunk lines.
- -40 to 75°C ambient temperature

## **Ethernet**

### **Key Commercial Data**

Packing unit	1 STK
GTIN	4 046356 764308
GTIN	4046356764308

#### Technical data

#### Note

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

Width	54.4 mm
Height	146.4 mm
Depth	125 mm

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C 75 °C



## Technical data

## Ambient conditions

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	8 (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 (SFP ports)
Transmission physics	multi-mode fiberglass
Transmission speed	1000 Mbps (full duplex)
Transmission length	up to 80 km (Depending on the fiber/SFP module used)

#### 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

Supply voltage	24 V DC (Hazardous locations)
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Supply voltage range	12 V DC 48 V DC (Ordinary locations)
Typical current consumption	278 mA (at U <sub>S</sub> = 24 V DC)
Inrush surge current	7.8 mA (200 µs)

#### General

Mounting type	DIN rail
Type AX	Block design
Net weight	1280 g
Housing material	Aluminum

#### Connection data

Connection method	Pluggable COMBICON screw connections
Conductor cross section solid min.	0.2 mm <sup>2</sup>



## Technical data

## Connection data

Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
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"

## Approvals

Approvals

Approvals

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

Ex Approvals

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

Approval details



## **Approvals**

UL Listed	UL) LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed	CUL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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EAC	EAC		EAC-Zulassung
EAC	EAC		RU *- DE.A*30.B.01735
cULus Listed	CULUS		

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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