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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.

#### Your advantages

- 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
- ✓ VLANs
- Web-based management, SNMP

#### **Key Commercial Data**

Packing unit	1 pc
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

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## 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)
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### Interfaces

Interface	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
Signal LEDs	Data receive, link status
Interface	SFP module
No. of ports	2 (SFP ports)
Transmission physics	Depending on the SFP module
Transmission speed	100/1000 Mbps (full duplex)
Transmission length	up to 80 km (Depending on the fiber/SFP module used)
Signal LEDs	Data receive, link status

### Function

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
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 current	7.8 mA (200 µs)

### General

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



## Technical data

### General

Housing material	Aluminum
MTTF	49.9 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

### Connection data

Connection method	Pluggable COMBICON screw connections
Conductor cross section solid min.	0.2 mm²
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



## Approvals

Ex Approvals

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

ECEx / ATEX / UL Listed / cUL Listed / cULus Listed					
Approval details					
UL Listed	UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324		
cUL Listed	C. UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324		
EAC	EAC		EAC-Zulassung		
EAC	EAC		RU *- DE.A*30.B.01735		
cULus Listed	C UL US				

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