

Industrial Ethernet Switch - FL SWITCH 7008-EIP - 2701418

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Managed Switch 7000, 8 RJ45 ports 10/100 Mbps, degree of protection: IP20, EtherNet/IP™

Product Description

The FL SWITCH 7008-EIP is a managed Ethernet switch suitable for industrial applications with eight Fast Ethernet ports in RJ45 format. The switches communicate directly via the Common Industrial Protocol (CIP) in the EtherNet/IP™ network. Via CIP, the switch can be integrated into an EtherNet/IP™ control system from where it can be configured and diagnosed. Multicast functions which are important for EtherNet/IP™, such as IGMP snooping, multicast source detection, and auto query port, are also available. The switch can also be used universally in other automation networks. For maximum network availability, the switches support the non-proprietary Device Level Ring (DLR) redundancy protocol for EtherNet/IP™ with switch-over times <3 ms. In addition, the switch supports Rapid Spanning Tree (RSTP) with fast ring detection (FRD) extension. Thanks to the extended temperature range of -40 °C to 70 °C and the robust metal housing, it can also be used in harsh industrial environments.

Why buy this product

- Device Level Ring (DLR)
- Common Industrial Protocol (CIP)
- DHCP client, DHCP server (pool-based and port-based), DHCP option 82
- VLANs
- RSTP with fast switch-over
- 40°C ... +70°C ambient temperature
- Slim design
- Web-based management, SNMP



Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4046356749732

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Industrial Ethernet Switch - FL SWITCH 7008-EIP - 2701418

Technical data

Dimensions

Width	60 mm
Height	130 mm
Depth	135.5 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Air pressure (operation)	86 kPa ... 108 kPa (1500 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (3500 m above sea level)

Interfaces

Interface 1	Ethernet (RJ45)
No. of ports	8 (RJ45 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status

Function

Basic functions	Store-and-forward switch, complies with IEEE 802.3
Management	Web-based management (HTTP/HTTPS)
	SNMPv1/v2/v3
Diagnostic functions	Remanente Event-Table
	RMON History
	N:1-Portmirroring
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
Filter functions	ACD (Address Conflict Detection)
	Quality of Service (8 priority classes)
	Port-Priorisierung
	VLAN (up to 32 VLANs)
	IGMP Snooping (512 groups)
	IGMP Query
	Auto-Query-Port
	Extended Multicast Filtering
Static Multicast Filtering (32 groups)	
	Link Aggregation (up to 4 trunks)
MAC address table	16k

Industrial Ethernet Switch - FL SWITCH 7008-EIP - 2701418

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Function

Redundancy	DLR (Device Level Ring)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support
IP parameterization	DHCP-Client
	DHCP Option 82 (Relay Agent)
	DHCP server (pool-based, port-based)
	BootP
PROFINET device function	Fast Startup
PROFINET conformance class	Conformance-Class A
EtherNet/IP™ supported protocols	Common Industrial Protocol (CIP)
Time synchronization	PTP 1588 (Transparent clock on the DLR ports)
Additional functions	MAC-based Port Security
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link and switchable Activity/Speed/Duplex) EtherNet/IP™ status LED: Net, Mod
Signal contact control voltage	24 V DC (typical)
Signal contact control current	1 A (maximum)

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 (redundant)
Residual ripple	3.6 V _{pp} (within the permitted voltage range)
Supply voltage range	12 V DC ... 58 V DC
Typical current consumption	350 mA (at U _S = 24 V DC)
Current consumption	350 mA

General

Mounting type	DIN rail
Type AX	Book type
Net weight	900 g
MTTF	209.8 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	105.79 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	14.78 Years (SN 29500 standard, temperature 70 °C, operating cycle 100 % (7 days a week, 24 hours a day))

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²

Industrial Ethernet Switch - FL SWITCH 7008-EIP - 2701418

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Connection data

Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm

Standards and Regulations

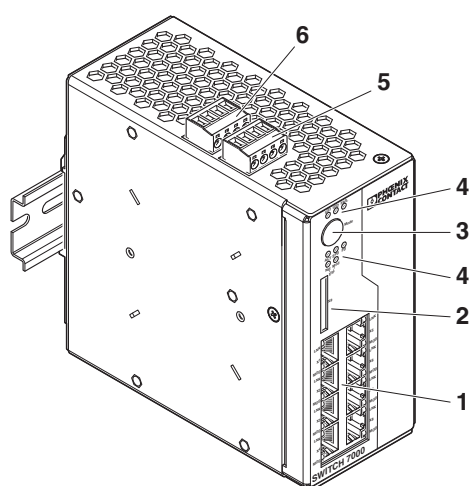
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	Operation/Storage/Transport: 5g, 150 Hz, Criterion 3
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Vibration (storage/transport)	5g, 150 Hz, in acc. with IEC 60068-2-6
Free from substances that could impair the application of coating	Yes
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz

Environmental Product Compliance

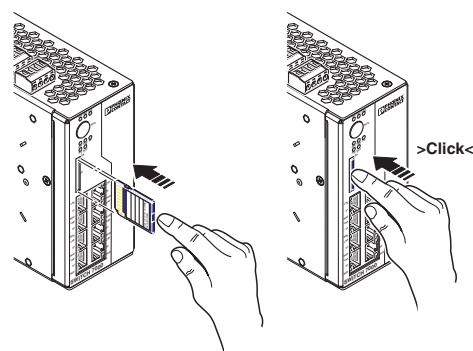
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Schematic diagram



Schematic diagram



Inserting/removing the SD card

Key:
 1 Ethernet ports
 2 Slot for optional SD memory card

Industrial Ethernet Switch - FL SWITCH 7008-EIP - 2701418

- 3 Mode switch with LEDs
- 4 Diagnostics and status indicators
- 5 Connection of the supply voltage
- 6 Floating signal contact

Approvals

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UL Listed / cUL Listed / EtherNet/IP CONFORMANCE TESTED TM / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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EtherNet/IP CONFORMANCE TESTED TM			11221.01
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cULus Listed			
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