

Industrial Ethernet Switch - FL SWITCH 7005/FX-2FXSM-EIP - 2701420

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Managed Switch 7000, 5 RJ45 ports 10/100 Mbps, 2 SC single mode 100 Mbps, 1 SC multi-mode 100 Mbps, degree of protection: IP20, EtherNet/IP™

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	 4 046356 749756
GTIN	4046356749756

Technical data

Note

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

Width	60 mm
Height	130 mm
Depth	135.5 mm

Ambient conditions

Degree of protection	IP20
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Technical data

Ambient conditions

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	5 (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
Interface 2	Ethernet FO
No. of ports	1 (SC multi-mode)
Transmission physics	multi-mode fiberglass
Transmission speed	100 Mbps (full duplex)
Transmission length	11000 m (fiberglass with F-G 62.5/125 0.7 dB/km F1000)
	6400 m (fiberglass with F-G 50/125 0.7 dB/km F1200)
	3000 m (fiberglass with F-G 62.5/125 2.6 dB/km F600)
	2800 m (fiberglass with F-G 50/125 1.6 dB/km F800)
Wavelength	1300 nm
Signal LEDs	Data receive, link status
Interface 3	Ethernet FO
No. of ports	2 (SC single mode)
Connection method	SC
Transmission physics	Single-mode fiberglass
Transmission speed	100 Mbps (full duplex)
Transmission length	36000 m (fiberglass with F-G 9/125 0.36 dB/km)
	32000 m (fiberglass with F-G 9/125 0.4 dB/km)
	26000 m (fiberglass with F-G 9/125 0.5 dB/km)
Wavelength	1300 nm

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

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Function

	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	ACD (Address Conflict Detection)
Filter functions	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
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
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	520 mA (at U _S = 24 V DC)
Current consumption	520 mA

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General

Mounting type	DIN rail
Type AX	Book type
Net weight	1000 g
MTTF	117.48 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	61.64 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	8.89 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
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"

Approvals

Approvals

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

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Approvals

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

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