

Industrial Ethernet Switch - FL SWITCH LM 4TX/2FX SM ST - 2989239

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Ethernet Lean Managed Switch with four 10/100 Mbps RJ45 ports and two 10/100 Mbps FX-ST single-mode ports

Product description

The compact Lean Managed Switches (LM) enable the flexible and cost-effective creation of managed Ethernet networks in automation applications. Thanks to the wide range of connection versions and the extended temperature range of -40°C to +70°C, it optimally meets the requirements of industrial applications. It supports PROFINET conformance class A. And its integrated software enables the redundant creation, diagnostics, and monitoring of networks using IT standard protocols.

Product Features

- ✓ Web-based management, SNMP
- ✓ Compact housing
- ✓ Comprehensive fiber optic versions
- ✓ Configuration can be stored externally
- ✓ -40°C ... +70°C ambient temperature
- ✓ Configurable alarm contact



Ethernet EtherNet/IP

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	340.0 GRM
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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

Width	45 mm
Height	99 mm

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Technical data

Dimensions

Depth	112 mm
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Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	30 % ... 95 % (non-condensing)
Air pressure (operation)	80 kPa ... 108 kPa (2000 above sea level)
Air pressure (storage/transport)	70 kPa ... 108 kPa (3000 above sea level)
Noise immunity	EN 61000-6-2:2005

Interfaces

Interface 1	Ethernet (RJ45)
No. of ports	4 (RJ45 ports)
Connection method	RJ45
Note on connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 MBit/s
Transmission length	100 m (per segment)
Interface 2	Ethernet FO
No. of ports	2 (ST single mode)
Connection method	ST
Transmission physics	Single mode fiberglass
Transmission speed	100 MBit/s (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
Interface 5	Serial (V.24 (RS-232))
Connection method	V.24 (RS-232-C), 6-pos. MINI-DIN socket (PS/2)

Function

Basic functions	Store-and-forward switch complies with IEEE 802.3 2, priority classes according to IEEE 802.1 P TCP/IP protocol, BootP-compatible, port mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), DHCP server, PTCP filter
Supported browsers	Internet Explorer 5.5 or higher
Status and diagnostic indicators	Per Ethernet 2 status LEDs: LINK and status activity, 100, full duplex, supply voltage U _{S1} and U _{S2} (redundant supply voltage)

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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
Residual ripple	3.6 V _{pp} (within the permitted voltage range)
Supply voltage range	18.5 V DC ... 30.5 V DC
Typical current consumption	250 mA (at U _S = 24 V DC)

General

Mounting type	DIN rail
Type AX	Block design
Weight	230 g
Noise emission	EN 61000-6-3/-4

Mechanical tests

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

Conformity with EMC directives

Developed in acc. with standard	IEC 61000-6.2
Test standard	IEC 61000-4-2 (ESD)
Test result	Criterion B
Test standard	IEC 61000-4-3 (immunity to radiated interference)
Test result	Criterion A
Test standard	IEC 61000-4-4 (burst)
Test result	Criterion B
Test standard	IEC 61000-4-5 (surge)
Test result	Criterion B
Test standard	IEC 61000-4-6 (immunity to conducted interference)
Test result	Criterion A

Classifications

eCl@ss

eCl@ss 4.0	27250501
eCl@ss 4.1	27250501
eCl@ss 5.0	19030117
eCl@ss 5.1	19030117

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Classifications

eCl@ss

eCl@ss 6.0	19170106
eCl@ss 7.0	19170106
eCl@ss 8.0	19170106

ETIM

ETIM 2.0	EC000734
ETIM 3.0	EC000734
ETIM 4.0	EC000734
ETIM 5.0	EC000734

UNSPSC

UNSPSC 6.01	43172901
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201410
UNSPSC 13.2	43201410

Approvals

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UL Listed / cUL Listed / GL / BV / DNV / GL-SW / UL Listed / cUL Listed / GL / BV / DNV / GL-SW / GL / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed 

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Approvals

cUL Listed 
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Accessories

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Accessories

Drivers and interfaces

Software - FL SNMP OPC SERVER V3 - 2701139



SNMP-OPC server, German and English, for monitoring and configuration of SNMP-capable equipment in HMI and SCADA systems

Software - FL SNMP OPC AGENT V3 - 2701136



SNMP-OPC agent, German and English, for integrating OPC-based automation solutions in company-wide network management systems

End block

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

Network management software

Software - FL VIEW 32 LITE - 2701744



FL VIEW, SNMP-based software in English, for the detection and display of Ethernet networks. 32 nodes (network devices) can be monitored in one Class C subnetwork with this version.

Patch cable

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Accessories

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1.0 m

Programming cable

Connecting cable - PRG CAB MINI DIN - 2730611



Connecting cable, for connecting the controller to a PC (RS-232) for PC Worx, 3 m in length

Protective cap

Dust protection - FL RJ45 PROTECT CAP - 2832991



Dust protection caps for RJ45 socket

Services

Service material - FL START-UP SUPPORT - 2701426



Startup of Phoenix Contact network components and support regarding analysis, consultation/planning or configuration/startup together with a responsible person employed by the initiator.

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Accessories

Service material - FL MAINTENANCE SUPPORT - 2701424



Troubleshooting in an Ethernet communication network together with a responsible person employed by the initiator.

Service material - FL TRAINING - 2701427



Training for network standards, Ethernet security or wireless with Phoenix Contact components

Software - IPASSIGN - 2701094



IPAssign is an easy to use tool for setting the IP address of devices which rely on BOOTP. No installation or administrative rights are required to use IPAssign.

This product is free and only available from the "Downloads" tab.
