

## Industrial Ethernet Switch - FL SWITCH LM 4TX/1FX SM ST - 2989925

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

### 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  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ , 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
- $-40^{\circ}\text{C}$  ...  $+70^{\circ}\text{C}$  ambient temperature
- Configurable alarm contact



Ethernet EtherNet/IP

### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	320.0 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	1 (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 <sub>pp</sub> (within the permitted voltage range)
Supply voltage range	18.5 V DC ... 30.5 V DC
Typical current consumption	250 mA (at U <sub>S</sub> = 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

### Approvals

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#### Approvals

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

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#### Ex Approvals

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#### Approvals submitted

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#### Approval details

UL Listed 
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## Approvals

cUL Listed 


GL

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