

# SLX-5MS Industrial Ethernet Switches

Sixnet® Networking Series



## Managed Fast Ethernet Switches

Red Lion's Sixnet® series SLX-5MS managed Fast Ethernet switches features five ports with up to two fiber ports and Modbus monitoring, providing reliable connectivity options in harsh environments.

Rugged SLX-5MS managed switches feature 5 ports (up to 2 fiber ports) and are housed in slim, hardened metal DIN-rail enclosures with redundant 10-30 VDC power inputs. Designed to handle harsh environments, SLX-5MS switches offer wire-speed throughput, high MTBF and wide -40° to 75°C operating temperature ratings. Real-Time Ring, Modbus/TCP and HTTPS ensure reliable and secure operation in industrial applications.



### APPLICATIONS

- > Alternative Energy
- > Maritime
- > Oil & Gas
- > Transportation
- > Utility
- > Water/Wastewater

### PRODUCT HIGHLIGHTS

- > Hardened Industrial Design
- > Wide -40° to 75°C Operating Temperature
- > Redundant 10 to 30 VDC Power Inputs
- > Modbus/TCP Remote Monitoring
- > Real-Time Ring and Rapid Spanning Tree Protocol for network redundancy

### FEATURES & BENEFITS

- > 5 Fast Ethernet Ports
  - Up to Five 10/100Base-T(X) copper ports
  - Up to two 100Base-FX fiber ports
- > Redundant Power Inputs
  - 10-30VDC
  - Reverse polarity protection
- > Robust Industrial Design
  - -40° to 75°C operating temperature
  - Hardened IP40 enclosure
  - Extended shock and vibration specs
  - Electrical noise and surge immunity
  - LED status indicators
  - Configurable alarm output
  - DIN-Rail or panel mount
  - >2 million hours MTBF
  - UL/CSA: Class 1, Div 2
- > Fully Managed Features Include:
  - Web browser or CLI management
  - Secure web (HTTPS/SSL) and Telnet (SSH)
  - Broadcast and multicast storm protection
  - SNMP v1, v2, v3
  - DHCP Server
  - Real-Time Ring fast-healing ring technology
  - RSTP - 802.1w and 802.1D
  - 802.1p QoS/CoS/DS
  - IGMP multicast filtering
  - SNTP (Simple Network Time Protocol)
  - RMON & port mirroring for advanced diagnostics
  - Modbus/TCP monitoring for port, power and ring status

industrial  
networking



# ▶▶▶ SLX-5MS Industrial Ethernet Switch Specifications

## SWITCH PROPERTIES

Operation: Managed  
Number of MAC Addresses: 2048  
IEEE Compliance: 802.3, 802.3u, 802.3x, 802.1D/w, 802.1p and 802.1Q  
Industrial Connectivity: Modbus registers for port, power and ring status  
Latency (Typical): 5  $\mu$ s + frame time  
Switching Method: Store-and-Forward  
LED Status Indicators  
Configurable Alarm Contact  
Supports Full/Half Duplex Operation  
Ethernet isolation 1500 VRMS 1 minute  
Maximum Throughput: 1 Gb/s  
MDIX Auto Sensing Cable  
Auto Sensing Speed and Flow Control  
Communications: Full Wire Speed  
MTBF: > 2M hours GB @ 40°C per MIL HNDBK-217F2

## POWER INPUT

Input Voltage Range: Dual 10-30 VDC power inputs  
Input Power (Max): 7 W  
Input Power (Typical):  
3.6 W (without fiber)  
5.6 W (with fiber)  
Transient Protection (Peak): 15,000 watts  
Spike Protection: 5,000 watts (10 times for 10 us)

## CONNECTORS

10/100Base-T: Up to five (5) RJ-45 ports  
100Base-FX: Up to two (2) ST or SC duplex fiber ports  
Configuration Port: One (1) RS-232 (RJ-45) and one (1) USB (mini)

## NETWORK MEDIA

10BaseT:  $\geq$  Cat3 cable  
100BaseTX:  $\geq$  Cat5 cable  
100Base-FX Multimode: 50-62.5/125  $\mu$ m  
100Base-FX Singlemode: 9-10/125  $\mu$ m

## RECOMMENDED WIRING CLEARANCE

Front: 4" (10.2 cm)  
Top: 4" (10.2 cm)

## ENVIRONMENTAL

Operating Temperature: -40°C to 75°C  
Storage Temperature: -40°C to 85°C  
Operating Humidity: 5% to 95% (non condensing)  
Operating Altitude: 0 to 30,000 ft.  
Shock and Vibration: IEC 60068-2-6, -27

## CERTIFICATION & COMPLIANCE

Electrical Safety: UL508/CSA C22.2/142; IEC61010-1, CE  
EMI Emissions: FCC part 15, ICES-003; EN61000-6-4, CE  
EMC Immunity: EN61000-6-2, CE  
Hazardous Locations: ANSI/ISA 12.12.01, CSA C22.2/213 (Class 1, Division 2); EN60079-0, -15 (zone 2; category 3), CE (ATEX)  
Marine: Offshore rated per ABS  
Eye Safety (Fiber Models): IEC60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

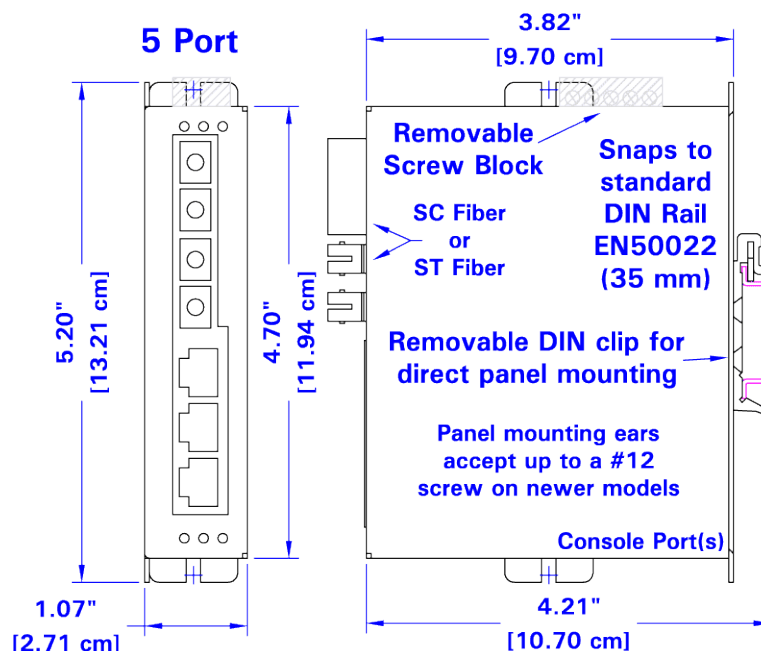
## MECHANICAL

Case Dimensions:  
Height: 4.7" (11.94 cm)  
Width: 1.07" (2.71 cm)  
Depth: 3.82" (9.70 cm)  
Weight: 8 oz (0.23 kg)  
Mount: DIN rail (35 mm) and panel mount

## WARRANTY

5 Years on Design and Manufacturing Defects

## DIMENSIONS in inches (mm)



# ▶▶▶ SLX-5MS Industrial Ethernet Switch Specifications

## ORDER GUIDE

PART NUMBER	PRODUCT LINE
SLX-5MS-1	5-Port Industrial Fast Ethernet Managed Switch (5 10/100Base-T Copper Ports)
SLX-5MS-4XX	5-Port Industrial Fast Ethernet Managed Switch (3 10/100Base-T, 2 100Base-FX, Multimode 2km Ports)
SLX-5MS-5XX	5-Port Industrial Fast Ethernet Managed Switch (3 10/100Base-T, 2 100Base-FX, Singlemode 30km Ports)
SLX-5MS-5XXL	5-Port Industrial Fast Ethernet Managed Switch (3 10/100Base-T, 2 100Base-FX, Singlemode 60km Ports)
ET-PS-024-02	Power supply – AC to 24VDC, 2A
SP-ETH-2	Dual port Ethernet surge & lightning protection for the 10/100 ports only
RJ45-DB9F-CBL	Console port cable, DB9 to RJ45

Where XX = ST or SC connector

## FIBER TRANSCEIVER CHARACTERISTICS

FIBER MODE	MM	SM	SM
Fiber Length	2 km	30 km	60 km
TX Power Min	-23.5 dBm	-15 dBm	-5 dBm
RX Sensitivity Max	-32 dBm	-34 dBm	-35 dBm
Wavelength	1310 nm	1310 nm	1310 nm

\* Fiber Length distances represent typical performance. Link budgets should be evaluated based on specific application conditions.



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**Connect. Monitor. Control.**

**Americas**  
sales@redlion.net

**Asia-Pacific**  
asia@redlion.net

**Europe**  
**Middle East**  
**Africa**  
europe@redlion.net

**+1 (717) 767-6511**

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