SL & SLX Unmanaged Industrial Ethernet Switches

Sixnet Networking Series

▶▶▶ Unmanaged Ethernet Switches

The SL/SLX-5ES and SL/SLX-8/9ES are 5 and 8/9 port industrial Ethernet switches that provide advanced performance that enables you to achieve real-time deterministic operation. These ruggedized switches are hardened to provide superior reliability. They require no user setup and immediately start operating as soon as you power them up. Sixnet switches are designed to make your job easier, ensuring your system will keep running for many years to come.

PRODUCT HIGHLIGHTS

- Slim packaging fits on your Din-rail
- High performance and value
- Truly industrial hardened design
- Plug & play saves you time and money

REAL-TIME ETHERNET PERFORMANCE

- Fast wire-speed switching
- Intelligent message routing - No collisions!
- Ideal for any system

PLUG & PLAY SIMPLICITY

- Auto-sensing for speed and duplex
- Auto-mdi/mdix-crossover works with straight or crossed cables
- Auto-polarity corrects for crossed signals

TROUBLE FREE OPERATION

- Ultra-reliable 1,000,000+ hours MTBF
- Dual power inputs with industrial spike protection
- DIN-rail or direct panel mounting
- UL/CSA (CUL), CE, hazardous locations (Zone 2) and maritime rated
- -40 to 85°C operating range (SLX models)

SLX Models

Sixnet Knows Industrial

We have been designing industrial hardware such as Remote Terminal Units for over 30 years and have used this expertise to design the toughest Ethernet switches on the market. Don't trust your critical communications to so-called industrial hardware from commercial switch manufacturers. Sixnet switches give you proven assurance that your system will keep running for years to come.

SL Models

industrial networking

SL & SLX Unmanaged Industrial Ethernet Switch Specifications

ETHERNET PERFORMANCE

- Unmanaged with 5, 8 or 9 Ethernet ports
- Store & forward wire-speed switching
- Automatic address learning, aging and migration
- Full duplex operation with flow control (no collisions)
- All IEEE 802.3 Ethernet protocols supported
- 1024 MAC addresses supported
- Memory bandwidth 3.2 Gbps
- Typical latency (varies on load)
  - @ 100 Mbps: 5 µs + frame time
  - @ 10 Mbps: 16 µs + frame time
- Ethernet isolation 1500 VRMS 1 minute

ETHERNET PORTS

- Shielded RJ45 ports for 10/100BaseTX
  - Auto-negotiation for 10 or 100 Mbps
  - Auto- MDI/MDIX-crossover for either cable type
  - Auto-polarity corrects for crossed +/- signals
- Fiber optic port speed 100BaseFX (100 Mbps)
- Fiber duplex operation: Full duplex
- Fiber wavelength: 1300 nm center (typical)
- Fiber max. distance (full duplex) (see web for details)
  - 4 km for multimode 50 or 62.5/125 µm (SC or ST)
  - 20 km for singlemode 9 or 10/125 µm (SC or ST)
  - 40 km (long haul) or more (contact Sixnet)

ETHERNET COMPLIANCE

- IEEE 802.3 (10Mbps Ethernet supports legacy devices)
- IEEE 802.3u (Fast Ethernet 100Mbps for newer devices)
- IEEE 802.3x (Full-Duplex with Flow Control)

POWER INPUT

- Power input voltage: 10-30 VDC
- Redundant input terminals
- Input power (typical - all ports active at 100 Mbps)
  - 2.0 W (5-port without fiber)
  - 3.0 W (5-port including 1 fiber)
  - 4.0 W (8-port without fiber)
  - 5.0 W (9-port including 1 fiber)
- Transient protection: 15,000 watts peak
- Spike protection: 5,000 watts (10 times for 10 uS)

ENVIRONMENTAL

- Operating temperature
  - SL models: -40 to +60°C
  - SLX models: -40 to +85°C (cold startup at -40)
- Storage temperature: -40 to +85 °C
- Humidity (non-condensing) 5 to 95% RH
- Vibration and shock: IEC60068-2-6
- Maximum Operating Altitude: 30,000 ft. (SLX models)

STANDARDS COMPLIANCE

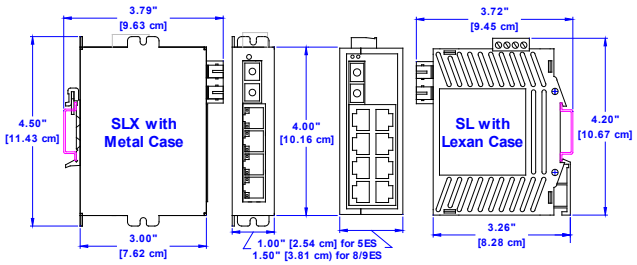
- Electrical safety - UL508/CSA C22.2/14, EN61010-1, CE
- EMC - FCC part 15, ICES-003, EN55022, EN61000-6, CE
- Hazardous locations: UL1604/CSA C22.2/213 (Class I, Div. 2); EN60079-15 (Zone 2, Category 3), CE (ATEX)
- Maritime rated for marine & offshore per ABS
- Eye safety (fiber models) - IEC60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

PHYSICAL

- Din-rail or direct panel mounting
- Ingress protection: IP40
- Case: UL94V0 Lexan (SL) or Aluminum (SLX)
- Weight:
  - 4 oz (0.11 kg) – SL-5ES
  - 6 oz (0.17 kg) – SLX-5ES, SL-8/9ES
  - 8 oz (0.23 kg) – SLX-8/9ES
- Dimensions – see mechanical diagram below

All specifications are subject to change. Consult factory for latest info.

MECHANICAL DRAWINGS



ORDERING GUIDE

SLX-5ES-1	5 RJ45 10/100 ports
SLX-5ES-2SC	4 RJ45 ports and 1 mm fiber SC, 4 Km
SLX-5ES-2ST	4 RJ45 ports and 1 mm fiber ST, 4 Km
SLX-5ES-3SC	4 RJ45 ports and 1 sm fiber SC, 20 Km
SLX-5ES-3ST	4 RJ45 ports and 1 sm fiber ST, 20 Km
SLX-6ES-4/5	Dual fiber - see separate datasheet
SLX-8ES-1	8 RJ45 10/100 ports
SLX-8ES-6/7	Three fiber - see separate datasheet
SLX-9ES-2SC	8 RJ45 ports and 1 mm fiber SC, 4 Km
SLX-9ES-2ST	8 RJ45 ports and 1 mm fiber ST, 4 Km
SLX-9ES-3SC	8 RJ45 ports and 1 sm fiber SC, 20 Km
SLX-9ES-3ST	8 RJ45 ports and 1 sm fiber ST, 20 Km
SL-	w/Lexan case and limited temperature
ET-PS-024-02	2 Amp, AC to 24 VDC Power Supply
SP-ETH-2	Dual Ethernet port surge & lightning protector

Contact Sixnet for special or long haul fiber transeivers up to 120 Km.

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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit www.redlion.net.

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