

## ►►► Unmanaged Industrial Ethernet Switches

The SL/SLX-6ES-4/5 is a 6 port industrial Ethernet switch featuring 2 fast fiber optic ports. It provides advanced performance for real-time deterministic operation and is ruggedized to provide superior reliability. This switch requires no user setup and immediately starts operating as soon as you power it up. Sixnet switches are designed to make your job easier, ensuring your system will keep running for many years to come.

### PRODUCT HIGHLIGHTS

- 4 fast RJ45 and 2 noise-immune fiber ports
- Truly industrial hardened design
- Slim case for DIN rail or direct panel mounting
- High performance and value
- Plug and play saves you time and money

### REAL-TIME SECURE PERFORMANCE

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

### TROUBLE FREE OPERATION

- Ultra-reliable 1,000,000 + hours MTBF
- -40 to +85 °C operating range (SLX model)
- UL/CSA (CUL), CE and Hazloc (Zone 2) rated
- Dual power inputs keeps you running
- Industrial surge and spike protection
- Self-test/alarm output contact

### 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.



SLX-6ES-4/5  
Aluminum Case  
Wide Temperature



SL-6ES-4/5  
Lexan Case  
Standard Temperature

# ▶▶▶ SL/SLX-6ES-4/5 Industrial Ethernet Switch Specifications

## ETHERNET PERFORMANCE

- 4 fast RJ45 and 2 fiber optic ports
- Unmanaged, store & forward, wire-speed
- All IEEE 802.3 Ethernet protocols supported
- RJ45 ports (shielded) 10/100BaseTX
- RJ45 port speed auto-negotiation
- RJ45 MDI/MDIX auto-crossover
- RJ45 TD and RD auto-polarity
- Fiber on ports 5 and 6
- Fiber optic port speed: 100 Mbps
- Fiber typical specs (see separate datasheet for details)
  - Multimode, 4 km, 1310 nm, 50-62.5/125  $\mu$ m
  - Singlemode, 20 km, 1310 nm, 9-10/125  $\mu$ m
  - Singlemode, 60 km, 1310 nm, 9-10/125  $\mu$ m
  - Long haul, up to 120 km, 1550 nm, 9-10/125  $\mu$ m
- Typical latency (varies on load & settings)
  - @ 10 Mbps: 16 us + frame time
  - @ 100 Mbps: 5 us + frame time
- Full duplex operation with flow control
- MAC addresses supported 1024
- Memory bandwidth 3.2 Gbps
- Ethernet isolation 1500 VRMS 1 minute

## ETHERNET COMPLIANCE

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

## POWER INPUT

- Redundant input terminals
- Reverse polarity protection
- Input power (typ. with all ports active)
  - 5 W (-4/5 model w/ 2 fiber)
- Power input voltage 10-30 VDC
- Transient protection 15,000 watts peak
- Spike protection 5,000 watts (10x for 10 uS)

## ENVIRONMENTAL

- Operating temperature:
  - SLX models: -40 to +85°C (cold startup at -40°C)
  - SL models: -40 to +60°C
- Storage temperature: -40 to +85°C
- Humidity (non-condensing) 5 to 95% RH (optional conformal coating is available)
- Vibration and shock – IEC60068-2-6, and -27
- Maximum Operating Altitude: 30,000 ft. (SLX models)

## “OK” ALARM OUTPUT

- Indicates power & operational status
- Voltage same as switch input voltage
- Maximum current output 0.5 Amp

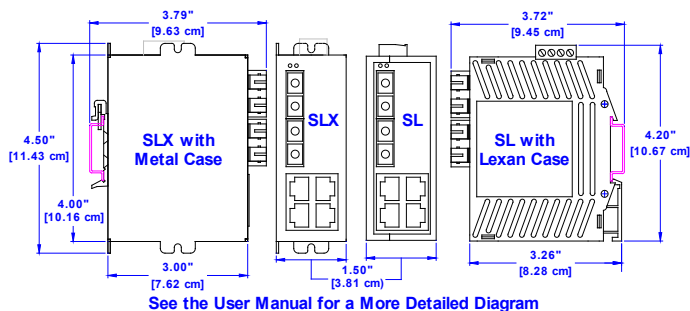
## PHYSICAL

- DIN rail or direct panel mounting
- Case – Aluminum (SLX) or Lexan (SL)
- Ingress protection:
  - SL models: IP30
  - SLX models: IP40
- Weight – SLX: 0.23 kg (8 oz.); SL: 0.17 kg (6 oz.)
- Dimensions – see mechanical diagram

## STANDARDS COMPLIANCE

- Electrical safety – UL508 / CSA C22.2/142; EN61010-1, CE
- EMC – FCC part 15, ICES-003; EN61000-6-2/4
- Hazardous locations – ANSI/ ISA 12.12.01 / CSA C22.2/213 (Class I, Div. 2); EN60079-15 (Zone 2, Category 3), CE (ATEX)
- Maritime – designed for marine and offshore per ABS
- RoHS and WEEE compliant

## MECHANICAL DRAWING



## ORDERING GUIDE

<b>SLX-6ES-4SC</b>	4 RJ45 ports, 2 multimode SC, 4 km
<b>SLX-6ES-4ST</b>	4 RJ45 ports, 2 multimode ST, 4 km
<b>SLX-6ES-5SC</b>	4 RJ45 ports, 2 singlemode SC, 20 km
<b>SLX-6ES-5ST</b>	4 RJ45 ports, 2 singlemode ST, 20 km
<b>SLX-6ES-5SCL</b>	4 RJ45 ports, 2 singlemode SC, 60 km
<b>SLX-6ES-5STL</b>	4 RJ45 ports, 2 singlemode ST, 60 km
<b>SL-</b>	w/ Lexan case and limited temperature
<b>ET-PS-024-02</b>	Power supply – AC to 24VDC, 2A
<b>SP-ETH-2</b>	Dual port Ethernet surge and lightning protector for the 10/100 ports only

All specifications are subject to change. Contact Sixnet to learn more.

**NOTE:** Contact Sixnet for special or long haul fiber transceivers up to 120 km