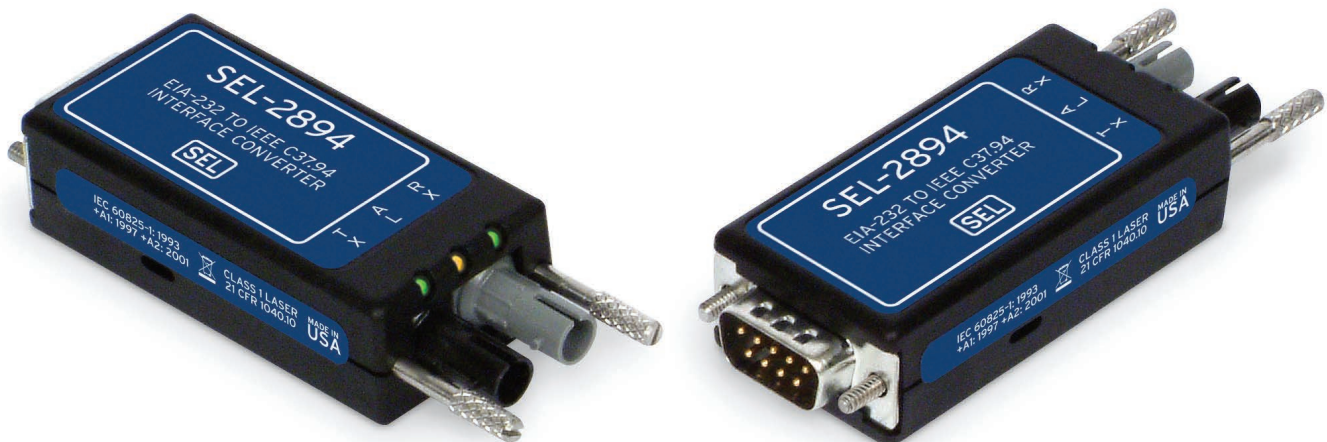


SEL-2894

Interface Converter



High-speed data conversion to optical interface that improves safety and signal integrity.

- EIA-232 serial link conversion to IEEE C37.94 optical interface supports up to 2 km communications.
- Low-latency data conversion in just 375 μ s supports MIRRORED BITS[®] communications.
- ST[®] connectors and multimode fiber-optic cable provide compatibility with IEEE C37.94 devices.
- Fiber-optic communications eliminate the effects of ground potential rise and electromagnetic interference.
- EIA-232 serial connector and external power supply options simplify installation.



Features

High-Speed Communications

Reduce latency, adding only 375 μ s of through delay back to back. The SEL-2894 Interface Converter works with EIA-232 signals from 300 bps to 19200 bps.

Three Status Indicators

Verify the incoming (TX) and outgoing (RX) communications status via green LEDs. Detect a transmission problem with a yellow alarm LED.

Selectable Time Reference

Configure the internal clock for either external or internal C37.94 time reference with a side-mounted selector switch.

Multiple Power-Input Options

Many SEL relays and controllers can directly provide power on Pin 1 of the serial connector. With other devices, connect external power to the 0.7 mm power jack.

Flexible

Use with any EIA-232 device. The SEL-2894 uses ST connectors and multimode fiber-optic cable to support the IEEE C37.94 optical interface. The Interface Converter works with SEL relays, other asynchronous EIA-232 devices, and IEEE C37.94 compliant devices.



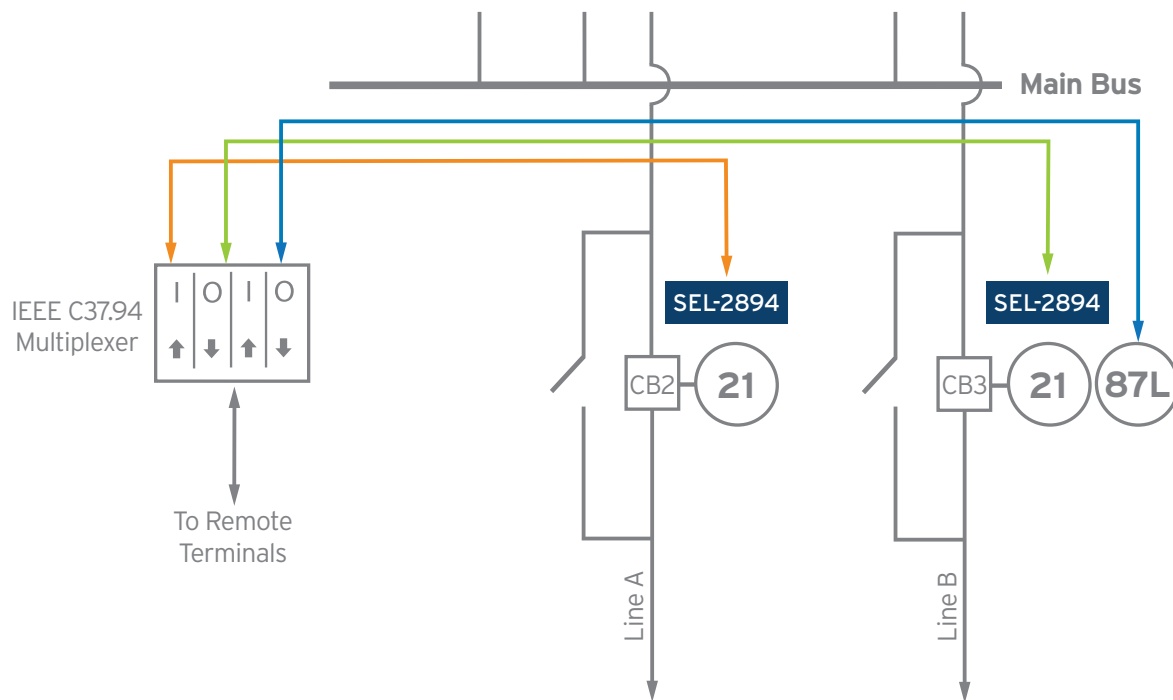
Applications

Fast MIRRORRED BITS Communications With Low Latency

Connect the SEL-2894 to any relay with MIRRORRED BITS communications. The SEL-2894 provides fast end-to-end data transport, making MIRRORRED BITS applications fast and seamless. The delay is less than 375 μ s in back-to-back tests.

SEL-2126 Fiber-Optic Transfer Switch Compatibility

Connect the SEL-2894 fiber-optic interface directly to the SEL-2126 Fiber-Optic Transfer Switch to reroute MIRRORRED BITS communications links between relays with the EIA-232 electrical interface during bypass operations.



Fiber-optic communications isolate devices from ground-potential rise and electromagnetic interference (EMI)/radio frequency interference (RFI).

Specifications

General

Power Supply	Range	4.5–5.5 Vdc
	Burden	<300 mW
	Connections	0.7 mm power jack or Pin 1 of EIA-232 connector

Data Link	Electrical Connection	
	Connector	DB-9
	Interface	EIA-232 standard
	Optical Connection	
	Connector	2 ST connectors
	Interface	IEEE C37.94 standard
	Speed and Delay	
	Speed	300–19200 bps (EIA-232)
	Delay	<200 μ s

Laser Safety Standards	Class 1 laser product
	USA—21 CFR 1040.10
	Europe—IEC 608251-1:1993 + A1:1997 + A2:2001

Fiber-Optic Link Budget	Optical Fiber	
	Core Size	Optical budget
	50 μ m	9.0 dB
	62.5 μ m	13.0 dB

Optical Source	850 nm VCSEL transmitter
	Typical transmit level: –23 dBm to –11 dBm

Fiber-Optic Receiver Sensitivity	Typical: –32 dBm
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Distance	Up to 2 km
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Operating Temperature	–40° to +85°C (–40° to +185°F)
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Making Electric Power Safer,
More Reliable, and More Economical

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