

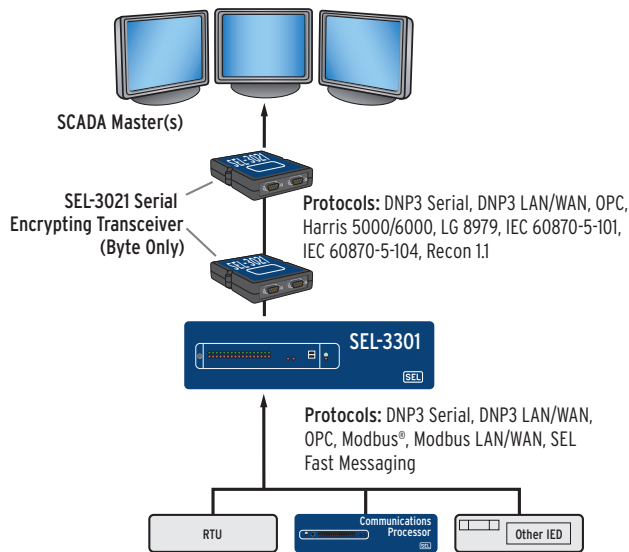


SEL-3301 Protocol Gateway

Convert Protocols With Highly Reliable, Robust Gateways



Designed and tested for substation environments.



Contact SEL today for other protocols.

Features and Benefits

■ Reliable Substation Operation—Meets IEEE C37.90 and IEC 60255 Protective Relay Standards

Install the SEL-3301 in your substations instead of desktop and rack-mount computers designed for controlled office environments. The SEL-3301 is designed for harsh substation environments and withstands vibration, electrical surges, fast transients, and extreme temperatures.

■ No Fans, No Moving Parts, Ten-Year Warranty

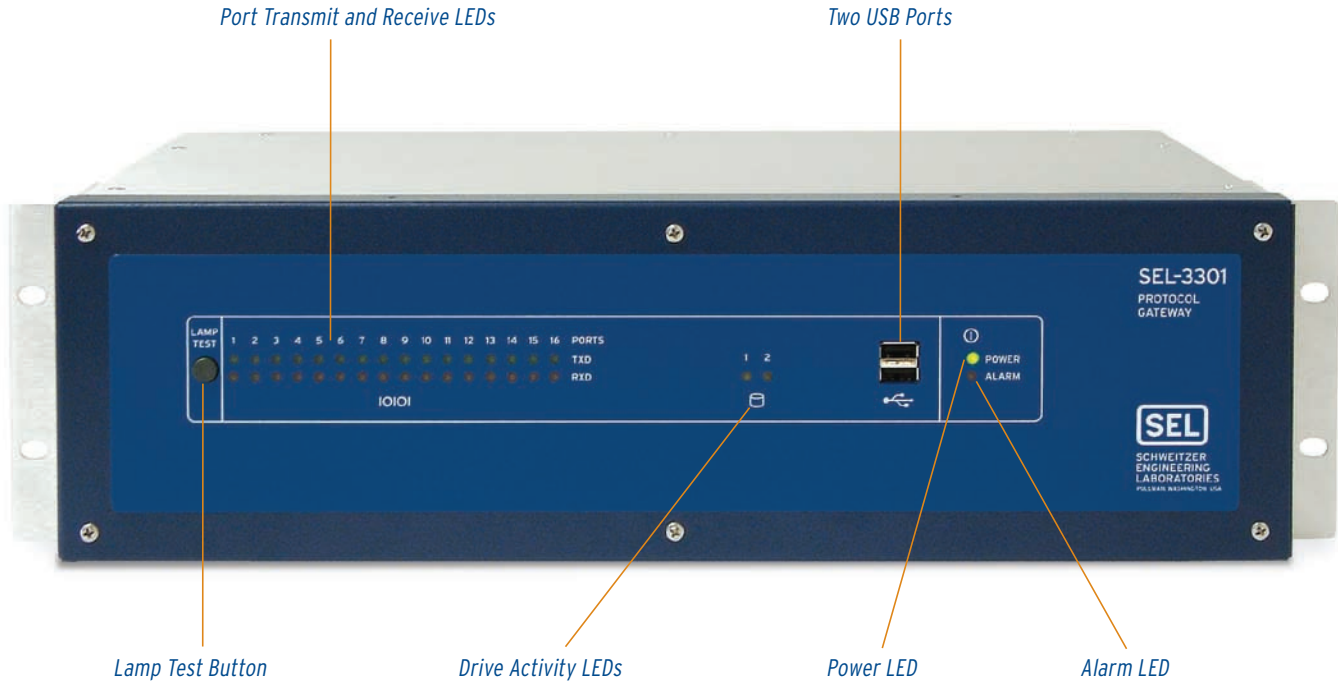
Improve reliability with the SEL-3301, which has a predicted mean time between failures (MTBF) of at least five times that of typical computers. An independent diagnostics watchdog processor improves system availability by detecting and alarming for problems, detecting system crashes, and restarting the main processor. Eliminate inverters by using station dc power.

■ Flexible Communications

Use any combination of eight serial ports, two Ethernet ports, four USB ports, and an IRIG-B time-synchronization input. An option adds eight more serial ports. All serial ports include IRIG-B outputs to synchronize clocks in attached devices.

Making Electric Power Safer, More Reliable, and More Economical®

Front View



Port Transmit and Receive LEDs

Show activity to aid commissioning and problem solving.

Lamp Test Button

Verifies LEDs are operational.

Drive Activity LEDs

Indicate activity of Flash memory drive.

Two USB Ports

Accommodate plug-in memory for updates or mouse for configuration.

Power LED

Illuminates when power is applied.

Alarm LED

Annunciates alarm state.

SEL-3021 Serial Encrypting Transceiver

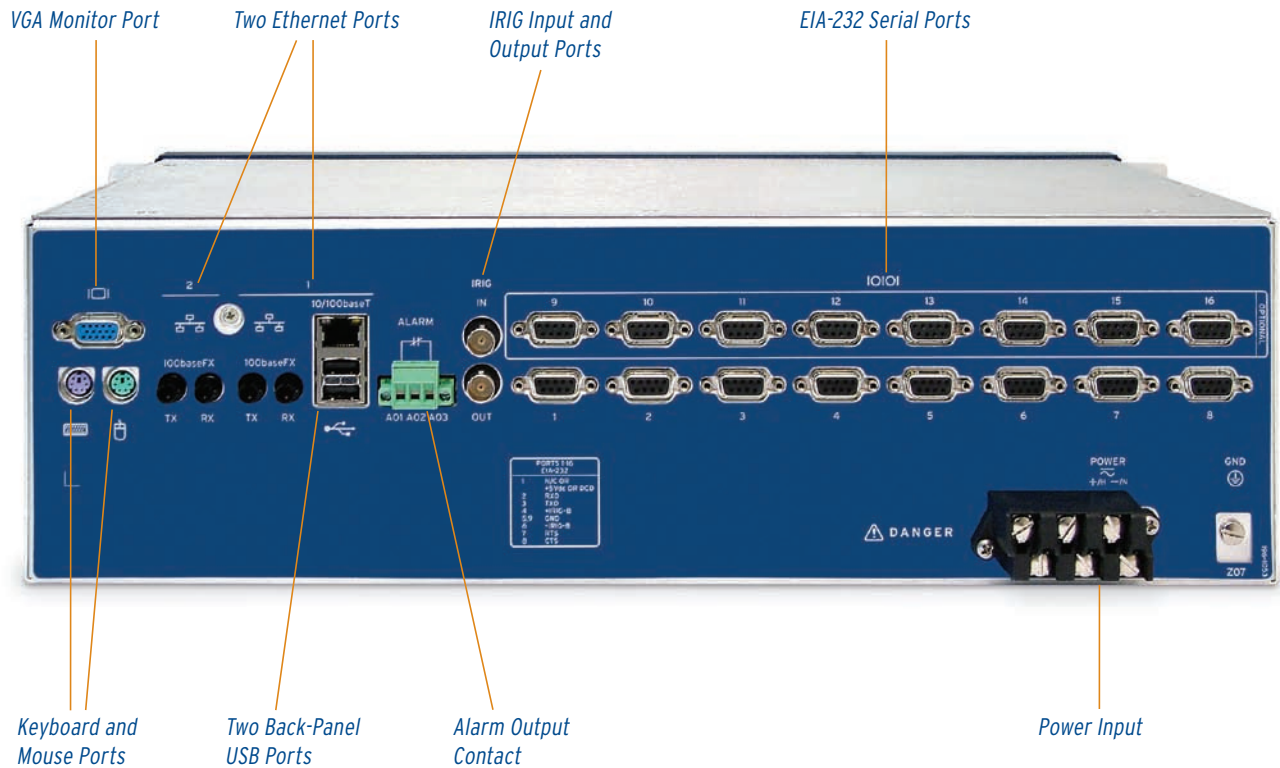
Connect an SEL-3021 to the SCADA master and another SEL-3021 to the SEL-3301 Protocol Gateway to easily protect the data link.



Utilities Telecom Council
2004 Telecom Product
of the Year

Protect serial data links
against intrusion.

Back View



VGA Monitor, Keyboard, and Mouse Ports

Facilitate setup and diagnostics with resident software.

Two Ethernet Ports

Both support 100 Mbps fiber-optic connections; one port also has a 10/100 Mbps electrical connection.

Transfer data and edit configuration using Microsoft® Remote Desktop.

Back-Panel USB Ports

Support pointing devices and plug-in memory for updates.

Alarm Output Contact

Indicates system failures (detected by an independent watchdog processor), login accesses, and power failures.

IRIG Input and Output Ports

Connect IRIG-B time-synchronization signal to IRIG IN to set the computer clock.

Send a time signal to synchronize the clocks of other devices through the serial ports and the IRIG OUT connector.

EIA-232 Serial Ports

Connect to remote links or local devices with eight or 16 EIA-232 serial ports.

Include full-duplex data communications plus an IRIG-B time-synchronization output.

SEL-3301 Protocol Gateway

General Specifications

General

733 Mhz single-board computer with 256 MB RAM
512 MB plug-in Flash RAM
Watchdog processor, independent of single-board computer
Operating temperature range of -40° to +75°C
No fans or other moving parts

Operating System

Windows® XP Embedded

Protocols

Included

Master

DNP3 Serial, DNP3 LAN/WAN, OPC Client, OPC Server,
Recon 1.1, LG 8979

Slave

DNP3 Serial, DNP3 LAN/WAN, OPC Client, OPC Server,
Harris 5000/6000, IEC 60870-5-101, IEC 60870-5-104,
Modbus®, Modbus WAN/LAN,
SEL Fast Messaging

Ethernet Ports

Ports 2
Data Rate 10 or 100 Mbps
Standard IEEE 801-2

Ethernet Port 1

Connectors RJ-45 Female and 2 ST® Connectors
Interface 10/100BASE-T and 100BASE-FX

Ethernet Port 2

Connectors 2 ST Connectors
Interface 100BASE-FX

Serial Ports

Ports 8 or 16
Connectors DB-9 Female
Data Rate 300 to 115000 bps
Data Signals EIA-232 full-duplex data
Time Output Demodulated IRIG-B
Other Power output on Pin 1

IRIG Ports

Connectors Female BNC
IRIG Input Modulated or Demodulated IRIG-B
IRIG Output Demodulated IRIG-B

Power Supply Options

125/240 Vdc or Vac
48/125 Vdc or 125 Vac
24/48 Vdc

Substation- and Plant-Grade Equipment

Designed, built, and tested with the same practices, processes, and standards that we use for our protective relays, communications processors, and other products. This includes compliance with IEEE and IEC standards for electrostatic discharge, fast transients, radiated emissions, surge withstand capability, dielectric strength, pulsed magnetic fields, and disturbances.

Refer to the SEL-3301 Data Sheet for detailed test data. Specifications and tests are per the ANSI/IEEE C37.90-1989 and IEC 60255 protective relay standards, and the ANSI/IEEE 1613-2003 standard covering communications and networking devices.



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