



SEL-3021-1 Serial Encrypting Transceiver

Protect Serial Data Links Against Intrusion



*Easily protect SCADA,
metering, monitoring,
and control links.*

*Now With 115200 bps Data
Rate and Your Choice of
Wireless Ethernet or Wired
USB 2.0 Management Port*

Features and Benefits

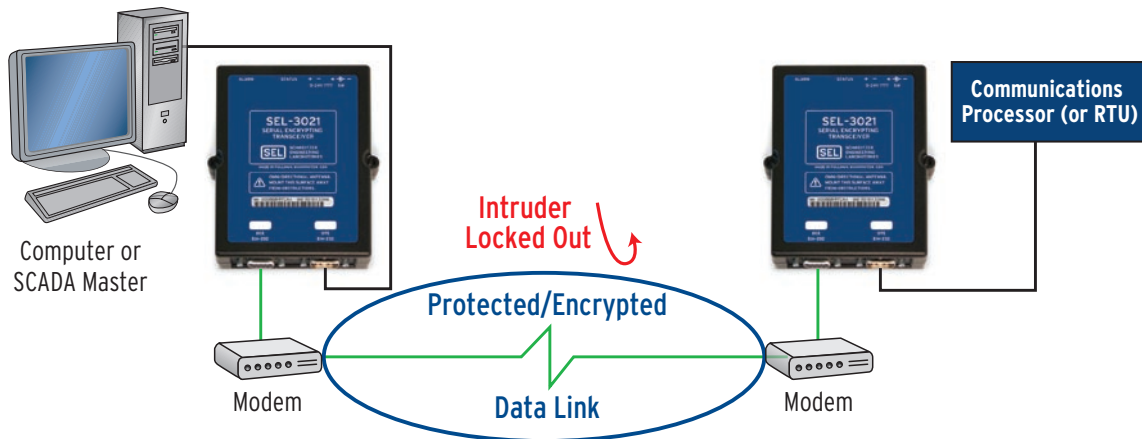
- **Secure Protection of Serial Communications**
Use encryption and session authentication to protect point-to-point or multidrop data links from attacks.
- **Optimal for SCADA Applications**
Includes support for multidrop protocols, with low latency for time-sensitive requirements.
- **Easy Installation**
Use surface or DIN rail mounting and options to power from ac, station dc, or low-level dc sources.
- **Secure, Nonintrusive Setting and Monitoring**
Set and monitor through encrypted, authenticated wireless Ethernet or wired USB 2.0 link and PC software.



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

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Application Example: Lock Intruders Out of SCADA Link



General Specifications

Encryption

Advanced Encryption Standard (AES) and NIST-approved Federal Information Processing Standard (FIPS 197) with 128-bit keys

Data Ports

Connectors	DB-9 Male (DTE) DB-9 Female (DCE)
Interface	EIA-232 for unencrypted data
	<ul style="list-style-type: none">Data rate: 300 to 115200 bpsPoint-to-point and multidropDNP3Modbus® RTUOther byte-oriented protocols
Interface	EIA-232 for encrypted data

Configuration Port*

Wi-Fi/802.11b	
Protocol	IEEE 802.11b
Modulation	DSSS
Frequency Band	2.4 GHz
Encryption	128-bit WEP and 128-bit AES
Authentication	HMAC SHA-1 128-bit key

USB

USB 2.0-compliant management port	
Encryption	128-bit AES
Authentication	HMAC SHA-1 128-bit key

*Depending on management port option ordered.

Power

5-24 Vdc
External ac and dc supplies optional
AC power adapter (#230-0600)
DC power adapter (SEL-9321)

Security

FIPS 140-2 Security Requirements for Cryptographic Modules (security level 2).

Substation- and Plant-Grade Equipment

Designed, built, and tested with the same practices, processes, and standards that are used for SEL protective relays, communications processors, and other products.

Certifications

ISO	Device designed and manufactured using ISO 9001 certified quality program
Listings	CE Mark CTUVUS listed to UL 61010-1 CAN/CSA C22.2 No. 1010-1-03 EN 61010-1 C-Tick
FCC	15.247
IC	ICES-003, RSS-210
FIPS	140-2, Security Level 2 #782



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