SEL-8029 Crypto Module

Protect SONET Links in the Most Rugged Environments

**Features and Benefits**

**WAN SONET Communications Protection**
The SEL-8029 Crypto Module protects SONET links in the most rugged environments. Using AES-128/256 technology, the Crypto Module can simultaneously encrypt two independent SONET lines to support network ring topologies. The extremely low-latency and zero-overhead features allow the Crypto Module to be used in time-critical networks. The Crypto Module integrates seamlessly into the SEL ICON™ Integrated Communications Optical Network, simplifying device management and reducing costs.

**Low Latency**
Less than 1 microsecond of latency per encryption module.

**AES Encryption**
The Crypto Module supports line SONET encryption, protecting the entire payload section.

**Network Security Management**
Automatic session key updates can be configured down to hourly key exchanges. Public key technology eliminates the need to store and distribute private keys. Support audits with logging of all user access. Alarm management includes time-stamped logging.

**FIPS**
Designed to 140-2 Level 2 requirements.

**Integrated Solution**
The Crypto Module provides a completely integrated security solution for the SEL ICON.

**Ruggedized for Harsh Environments**
Withstands vibration, electrical surges, electrostatic discharges, fast transients, and extreme temperatures. Meets or exceeds IEEE 1613 and IEC 61850-3 standards for communications networking devices in electric power substations.

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

Cryptographic Protocols
- Authentication: DSA (2048-bit)/HMAC (SHA-256)
- Encryption: AES-128, AES-256
- Key Exchange: Diffie Hellman

Line Ports
- Port A: OC-48 (2.5 Gbps)
- Port B: OC-48 (2.5 Gbps)

Supported Modes
- OC-48 Line Encryption

Latency
- Less than 1 microsecond

Resynchronization
- Less than 10 milliseconds

Session Management
- Automatic session key updates
- Public key session exchange: no private key storage or distribution is required

Operating Requirements
- Operating Temperature: —20° to +65°C ambient
- Storage Temperature: —40° to +85°C
- Relative Humidity: 5–95%, noncondensing