



SEL-3332 Relay Guideform Specification

The SEL-3332 Intelligent Server shall operate in star, ring, and multidrop communications networks and provide a combination of functions including automatic transmission of outgoing messages and parsing of responses, data aggregation, simultaneous collection of data from serial and Ethernet server devices (both SEL and non-SEL), and simultaneous data access for multiple client devices. The Intelligent Server shall provide the operational and functional requirements as follows:

Power Supply. The Intelligent Server shall be capable of operating on a wide range of power supply voltages and shall be available with one of three power supply types: 24/48 Vdc, 48/125 Vdc or 120 Vac, or 125/250 Vdc or 120/240 Vac.

Temperature. The Intelligent Server shall be capable of continuous operation over a temperature range of -40° to $+75^{\circ}\text{C}$ at 50 percent processor burden in order to allow mounting in an outdoor control cubicle. The Intelligent Server shall be type tested to IEC 60068-2-1:1990 (Test Ad 16 hr @ -40°C), IEC 60068-2-2:1974 (Test Bd 16 hr @ $+75^{\circ}\text{C}$), and IEC 60068-2-30:1980 (Test Db 12 + 12-hour cycle @ 25° to 55°C , 6 cycles).

Environmental Testing. The Intelligent Server shall be tested to the same standards as protective relays including IEC 60255-21-1, IEC 60255-21-2, IEC 60255-21-3, IEC 60255-22-1, IEC 60255-22-2, EN 61000-4-2, IEC 60255-22-3, IEC 60255-22-4, EN 61000-4-4, and IEEE C37.90.1 (see the SEL-3332 Data Sheet for details).

Communication Ports. The Intelligent Server shall have two USB front-panel ports. Two USB ports, sixteen serial ports, and two Ethernet ports shall be located on the rear panel. Two pins on each serial port shall be available as a demodulated IRIG-B time-synchronization signal. Sixteen rear ports shall have a selectable +5 Vdc output on Pin 1. Each rear serial port shall be capable of operation at 300–115200 bps. Ethernet ports shall be independent. All communication ports shall be ESD and RFI protected.

Password Security. The Intelligent Server shall have a standard Microsoft® Windows® logon system. The passwords shall be user configurable and allow up to 12 characters including case sensitive letters, digits, and special characters including !@#\$%^&*()-_+=+;:;<.>/?'"\. This password scheme meets or exceeds all of the requirements of the DOE Password Guide (DOE G 205.3-1).

Database. Each port shall have a separate database that allows data collection and labeling.

Configuration. Configuration of messages and data processing functions shall be through a simple GUI interface. Configuration interface shall be through local keyboard, mouse, and monitor port or via Windows Remote Desktop.

Configuration Storage. The Intelligent Server shall store all settings and configuration in nonvolatile memory allowing recovery after prolonged loss of power including failure of the internal battery.

Alarm Output. There shall be an alarm contact output to signal internal errors and malfunctions. The alarm contact shall be controlled by an internal watchdog system that independently monitors the operating system.

Warranty. The Intelligent Server shall be warranted for a minimum of 10 years.

