E-MAX SER

The Powerful, High-Speed Event Recording Solution

Now Available with Touchscreen Annunciator

The E-MAX Sequential Event Recorder (SER) is a high-speed, high-resolution, system which records relay and power system equipment alarms and status contacts. The E-MAX SER uses a fully isolated 16-point input card. The 16-point layout isolates individual points from each other and from the system electronics by opto-couplers.

Event Input Cage

A remote fiber optic Input Module is available. The direct wire module is designed for individual enclosure installations while the fiber optic design allows for remote point installations. Fiber optics give this system a 1600 meter multi-mode and 19,000 meter single-mode capability and result in lower installed costs over multipair wire installations. The SER fiber optic design provides electrical isolation and is immune to electrical noise and ground potential rise.

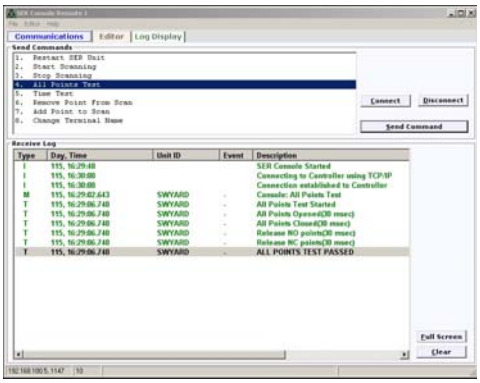
Annunciator Screen

The E-MAX SER is designed to monitor from 16 up to 2048 events. The 19 inch rack mount unit may be combined with our newest accessory the E-MAX Touchscreen Annunciator. This accessory uses the SER display and may be switched to display a full featured annunciator. Coupled with the Touchscreen Annunciator, the E-MAX SER represents the most cost-effective solution in the industry.

SER with Touchscreen Annunciator

Processing & Communications

Scanning of the inputs is in groups of 16 points at a rate of 25 microseconds/group. The SER is triggered by changes of state in the digital inputs. A log of events is created and stored in chronological order. The E-MAX Sequence of Events Recorder may monitor up to 2048 Events in a single system.

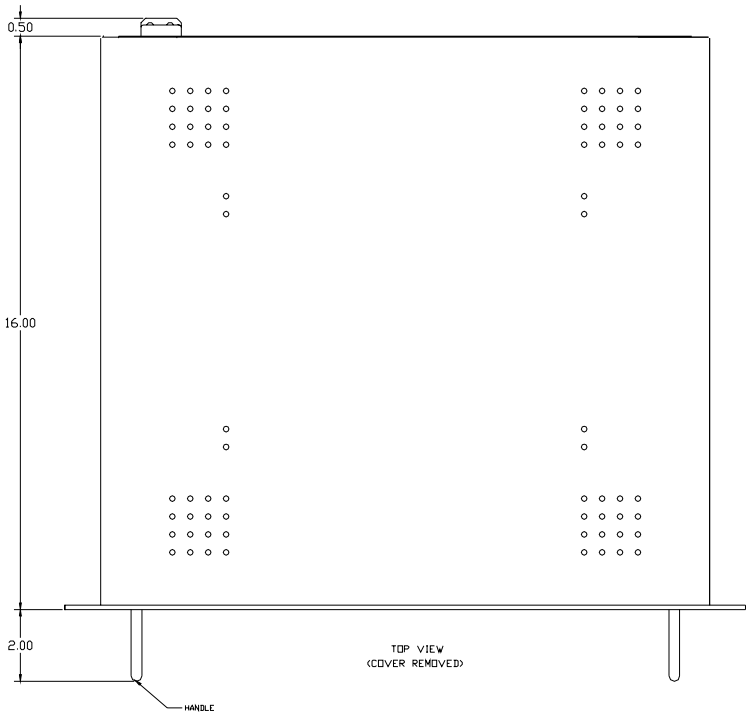


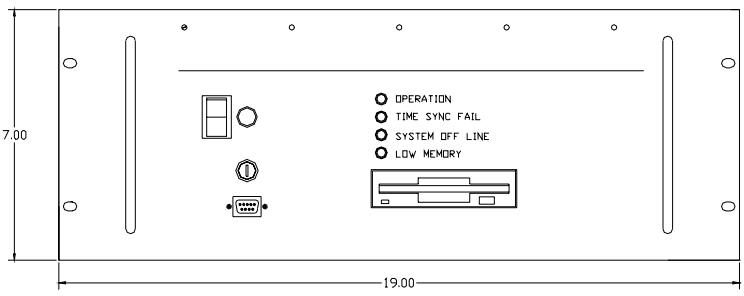
Scanning, control and communications functions are managed by a Pentium CPU based single-board computer running Windows 2000. The SER can be controlled remotely using the included ***SER Console*** software. Utilizing a network or modem connection, configuration settings and reports may be remotely monitored and controlled.

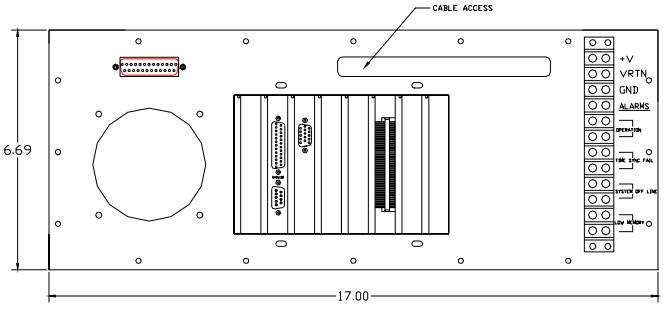
The E-MAX SER includes ethernet, RS-232 and USB ports. The SER can be controlled remotely using communication software from any PC connected to it by any of the above ports.

SER Chassis Dimensions

All Dimensions in inches







Touchscreen Annunciator

The Touchscreen Annunciator is the newest accessory to the E-MAX SER. Easy to configure, the Annunciator displays up to 64 points on one convenient screen. Additional page windows for large systems may be accessed through the screen interface. No need for delay or film, each window may be user set. Available in 15 and 17 inch monitors, the switchable display conveniently toggles between the SER and the Annunciator.

Customized Annunciator settings include

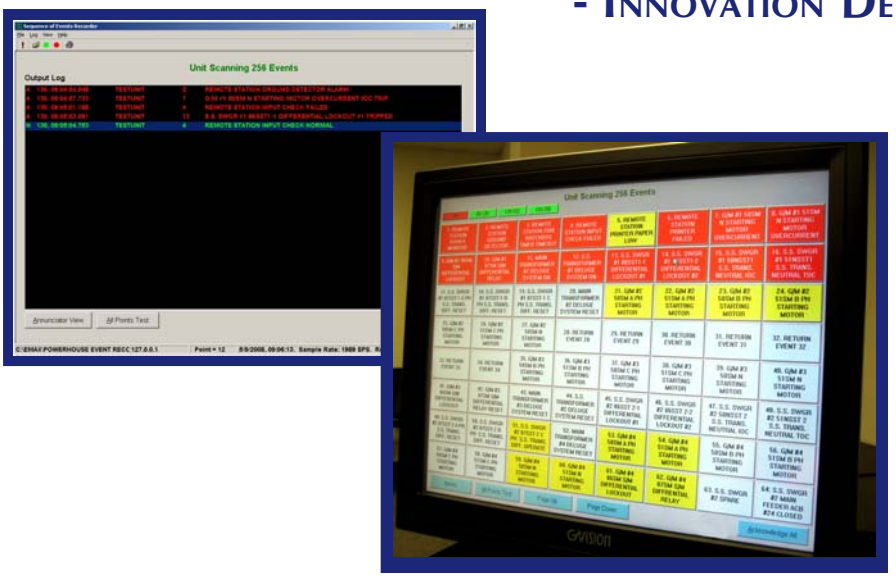
- Window Label
- Window size
- Number of Windows per Page
- Window color

The simplicity of the E-MAX Touchscreen Annunciator places the unit into operation with no required training. Operators may acknowledge individual alarms by simply tapping on the window of the event indicator. Unique to the Touchscreen Annunciator is the multiple status notification ability. The screen displays normal condition and each window will independently flash alarm. Once the alarm is acknowledged by the user, the window background will change to red. As the alarm condition is cleared, the window will return to the chosen default color. If the alarm condition is cleared without operator intervention the window will flash yellow until acknowledged by the operator.

Multiple Status Notification

- Normal
- Alarm
- Acknowledge without Alarm Clear
- Alarm Clear without Acknowledge

The new E-MAX SER with Touchscreen Annunciator - Innovation Defined



SPECIFICATIONS

Input Points	16 isolated or 32 non-isolated per Input Card. 16 isolated points for Fiber Optic Input Module. 2048 points maximum per recorder.
Input Point Configuration	N.O. or N.C. Software Selectable
Wetting Voltage	125 Vdc nominal ◆ 48 Vdc, 250 Vdc, 120 Vac available
Event Resolution	Better than 1 millisecond
Digital Filtering	Up to 32 milliseconds maximum (Factory default 1 millisecond)
System Power Input	DC/DC Converter: 20%.(+ 12V, ± 15V, ± 5V dc supplies) Current Limited Overvoltage protected - 75 W Available for 48 Vdc, 125 Vdc/120 Vrms or 250 Vdc,125 Vdc/120 Vrms
Event Input Module Power	24 Vdc - 3.4 mA/point ◆ 48 Vdc - 1.2 mA/point 125 Vdc - 4.0 mA/point ◆250 Vdc - 1.67 mA/point. Fiber Optic Event Module Supply Power - 5W
Operating System	Pentium compatible computer running Windows 2000
Data Storage	EIDE Hard Disk Drive, 3-1/2 inch 1.44 Mb Floppy Disk. 128 Mb solid state disk (optional)
Memory	128 Mb RAM (Optional to 256)
Programming Input	Keyboard and LCD display (Optional)
Display	Color LCD screen (Optional)
I/O Ports	2 USB 2.0 Ports◆Parallel Printer Port ◆ RS-232C Communication Port
Printer	24 pin printer (Optional), Color Inkjet (Optional)
Time of Event	IRIG-B synchronized Clock, Line Sync or Contact Sync Clock available. Crystal backup
Time Accuracy	1 Minute/year
Surge Withstand Capability	ANSI/IEEE C37.90-1989 Input Points 100 percent tested for Common and Transverse Mode
Environment	**Operating Temperature** -20° to 60° C **Storage Temperature** -40° to 70° C **Humidity** 95 % R.H. maximum non-condensing **Shock and Vibration** Consult factory for seismic qualification data
Configuration	19 inch rack mountable.
Burn-in Test	100 hour minimum
Reporting Capability	Periodic or on Demand /Local or Remote Selection Event Summary Period Activity Summary Historical Summary Period Capability (1 min-1 yr)
Communications Capability	Auto Reporting ◆ Responding to Polling Multiple Station Reporting Fax Report Output (optional) Ethernet, Internet, Modem - 33.6 kbps V. 90
Communications Protocol	LAN - TCP/IP, Modem or Serial Connect E-MAX SER Proprietary Software Remote Control - VNC Communications Software