

Annunciator



Compact, ten-window communicating annunciator

- Enhance situational awareness with superbright LEDs that display alarm notifications in any lighting condition.
- Reduce wiring expenses with programmable logic to combine inputs and communications data.
- Meet the demands of challenging environments with a product that exceeds stringent vibration, electrostatic discharge, electromagnetic interference, and temperature requirements.





Features

Communications

The SEL-2533 Annunciator can communicate with up to four high-speed serial ports via DNP3, Modbus, or SEL protocols. Two EIA-232 ports are standard; one EIA-485 or EIA-232 port is optional and one fiber-optic serial port is optional.

Reliability

Meet the demands of your harshest environments. The SEL-2533 exceeds stringent vibration, electrostatic discharge, electromagnetic interference, and temperature requirements.

Comprehensive Annunciation

Select from eight ISA-18.1 standard sequences. You can also implement other ISA sequences with custom sequence settings. Superbright LEDs provide easily visible alarm indication in any lighting condition, and red or amber bicolor LEDs add flexibility.

Time-Tagged Sequential Events Recording

The SEL-2533 can time-tag alarm events to the nearest millisecond and report them with DNP3 or SEL Fast SER protocols.

Logic Processing

Create custom alarm conditions using programmable logic to combine inputs and communications data without costly wiring.

Configurable Labels

Print custom alarm labels using the terminology that matches your application. You can easily reprint labels to accommodate expansions, reconfigurations, or other changes.



Event Alarming, Recording, and Analysis

Notifications generated by the SEL-2533 can speed up repairs and troubleshooting, reducing costs and the time it takes to get units and processes back online. Accurate records of operations and events help you identify the root cause of system problems. Use the SEL-2533 to:

- Improve operation analysis with time-stamped records of the last 1,024 operations of 96 different internal and external events.
- Use the built-in Sequential Events Recorder (SER) to verify process sequencing, routine and emergency operations, and alarm timing.
- Receive automatic alarm messages triggered by selectable events using SEL Fast SER.
- Rename SER elements with custom aliases that match your system terminology and practices.

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Control Window		0500		P		
	DEUTCE			Dace: 01/18/2008	TIME: 16:25:10	
	DEVICE					
	Serial No = 2008159224					
	ETD = 9EL-2523-D100-00-2001001-			-020080115	CTD = B52A	
	110 000 0000 0000000 000000			00000110	CID DOIN	
	#	DATE	TIME	ELEMENT	STATE	
	24	01/10/2008	09:51:58.0124	RB01	Asserted	
	23	01/10/2008	09:51:58.0124	SV01T	Asserted	
	22	01/10/2008	09:51:58.0124	SV01	Asserted	
	21	01/10/2008	09:51:58.0164	RB01	Deasserted	
	20	01/10/2008	09:51:58.0164	SV01T	Deasserted	
	19	01/10/2008	09:51:58.0164	SV01	Deasserted	
	18	01/10/2008	10:22:04.8598	Device Settings Change	bd	
	17	01/14/2008	21:20:57.0035	Device Powered Up		
	16	01/15/2008	14:44:55.5421	Device Settings Change	ed.	
	15	01/15/2008	14:45:27.3468	Device Settings Change	ad	
	14	01/15/2008	14:45:41.2108	RB01	Asserted	
	13	01/15/2008	14:45:41.2108	SV01T	Asserted	
	12	01/15/2008	14:45:41.2108	SV01	Asserted	
	11	01/15/2008	14:45:41.2149	RB01	Deasserted	
	10	01/15/2008	14:45:41.2149	SVUIT	Deasserted	
	9	01/15/2008	14:45:41.2149	SVUL Descend V	Deasserted	
	8	01/17/2008	10:10:55.0035	Device Fowered Up		
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	5	01/10/2008	10:53:27.1779	STID 1 m	Asserted	
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L-2523 001 HMI Drive	er Driv	ver Version: 4.3.8.1	Driver Date: 1/16/2008 3	:06:22 PM Configuration: Default 1		

Log important, user-defined system activities using the SER.

Easy Settings and Use

ACSELERATOR QuickSet[®] SEL-5030 Software is a free software package that lets you set, monitor, and control the SEL-2533. QuickSet is included with each SEL-2533. This software includes a settings interface, event analysis tool, and remote user interface. Use QuickSet to:

- Save engineering time while keeping flexibility. You can communicate with the SEL-2533 through any ASCII terminal or use the QuickSet graphical user interface.
- Develop settings offline with a menu-driven interface and completely documented help screens. Speed up installation by copying existing settings files and modifying application-specific items.
- Quickly test and commission annunciator panels with live device status information on the software HMI screen.



The configurable HMI screen aids commissioning, testing, and maintenance with live data from devices.

Applications

Remote Annunciation

Messages received on the serial communications ports provide input data to SELogic[®] control equations that feed alarm sequences. The sequences define the operation of the LEDs in the windows and the pushbuttons. For example, different alarm sequences take different actions when the acknowledge (ACK) button is pushed. Contact outputs drive external horns or other warning devices. The internal time clock is synchronized with an IRIG-B time source to support the time tagging of SER records. Through the communications ports, the annunciator gets data to use in its logic equations and sends data to feed a SCADA system or distributed control system (DCS), perform SMS or email notification via the SEL-3530 Real-Time Automation Controller (RTAC), or drive another remote annunciator.



Standard Annunciation

Field devices connected to digital inputs or messages received on the communications ports provide data to SELOGIC equations that feed alarm sequences. Through the local digital inputs and communications ports, the SEL-2533 gets data to use in its logic equations and sends data to feed a SCADA system or DCS, perform SMS or email notification via the SEL-3530 RTAC, or drive a remote annunciator.







Contact Follower

The SEL-2533 provides a digital output corresponding to each digital input to repeat the state of the input for connection to an SEL-2240 Axion[®] node, programmable logic controller (PLC), remote terminal unit (RTU), interlocking device, or other device.



SEL-2533 Overview



Field-configurable alarm window labels

access to settings and status



to 1 millisecond

SEL-2533 Specifications

General				
Front-Panel Pushbuttons	Silence, acknowledge, reset, and test pushbuttons			
Contact-Sensing	2 (base) or 14 (optional) optically isolated status inputs			
Inputs	Input range options: 24, 48, 110, 125, 220, or 250 Vdc			
Contact Outputs	3, 7, or 15 contacts; 6 A continuous carry			
Serial	One rear and one front EIA-232 ports			
Communications Ports	Optional multimode fiber-optic serial port			
	Optional rear EIA-232/EIA-485 port			
	Connectors: 9-pin female			
	Data rate: 300 to 38,400 bps			
	Protocols: SEL Fast Meter, SEL Fast SER, SEL Fast Operate, SEL Mirrored Bits [®] communications, ASCII, Modbus RTU			
	Optional protocol: DNP3 Level 2 Outstation			
Environment	-40° to +85°C (-40° to +185°F) operating temperature			
	IEEE C37.90-compliant			
	IEC 60255-compliant			
Alarm Windows	10 display windows with slide-in labels			
	Window dimensions: 32 mm H \times 70 mm W (1.25 \times 2.75 in)			
Power Supply Options	24/48 Vdc Range: 19.2–52.8 Vdc			
	110–250 Vdc, 110–240 Vac Range: 85–264 Vac, 85–275 Vdc			
Label Generation	Use the included software template to print slide-in labels on any printer.			
Dimensions	156 mm W × 204 mm H × 164.3 mm D (6.142 × 8.032 × 6.47 in)			
	Panel cutout: 139 mm W × 187 mm H (5.47 × 7.36 in)			

SEL SCHWEITZER ENGINEERING LABORATORIES

Making Electric Power Safer, More Reliable, and More Economical +1.509.332.1890 | info@selinc.com | selinc.com



