

POWER SOLUTIONS FOR LIFE SCIENCES





For over 25 years, Schweitzer Engineering Laboratories has delivered solutions that make electric power systems safer, more reliable, and more economical. Pharmaceutical and biotechnology facilities worldwide take advantage of advanced power management solutions from SEL and are supported by SEL engineers who know their industry and business.

Headquartered in Pullman, Washington, USA, and with three world-class manufacturing centers, SEL has sales offices in more than 15 countries and technical service centers in over 30. We provide power solutions for critical operations in over 125 countries and for some of the most recognizable companies in the world.

With our worldwide, ten-year, no-questions-asked warranty, SEL's quality and service are legendary among our customers.



## CONFIDENCE

SEL provides innovative, technologically advanced power management solutions for pharmaceutical and biotechnology companies, including:

- Bayer
- GlaxoSmithKline
- Johnson & Johnson
- Pfizer
- Sanofi-Aventis

## PERSONALIZED SERVICE

**SEL** provides personalized service and ongoing technical support, consistently ranked by our customers as best in the industry. SEL engineers have field experience and engineering expertise in providing application-specific solutions for industrial electric power systems.

**SEL Engineering Services** provides cost-effective engineering, procurement, and construction (EPC) capabilities, and supports the application and operation of SEL equipment and other intelligent electronic devices (IEDs) applied on electric power systems. Many projects are currently installed and commissioned in industrial facilities around the world.

**SEL University** was established to provide power systems training to engineers and technicians. Courses have since grown to include product application, testing, and integration and automation. Our qualified instructors address current issues in managing power systems by focusing on practical applications and real-world problem solving.



## RESULTS

### Before SEL

“At one of our distribution centers, we used to have a utility partial outage (one of the two lines) every six weeks. Every power outage would trigger a response plan involving numerous phone calls to engineering and management. A trip to the substation by the shift electrician was needed to confirm the problem. Investigative work related to the cause and timing of the event was always ‘guesswork.’ At the same time, outages under one minute were considered by the utility as ‘momentary’; therefore, they were unreported toward reliability data. Constant and repeated communication was needed with the utility as to the cause of the outage, when the normal power could be manually restored, and how to ensure it would not happen again in the future.”

### With SEL

“The utility outages still occur, pretty much with the same frequency. However, with the automatic reclosing and communications scheme provided by SEL, events are registered on the HMI, and only key engineering personnel are being notified about the event, the cause, and the timing. The notification is routed in sequence until a receipt of message from one of the first responders is acknowledged. For 99 percent of the situations, no emergency dispatch or intervention is needed. The analysis of the event can be performed and discussed with the utility during normal business hours.”

—Abbott Laboratories



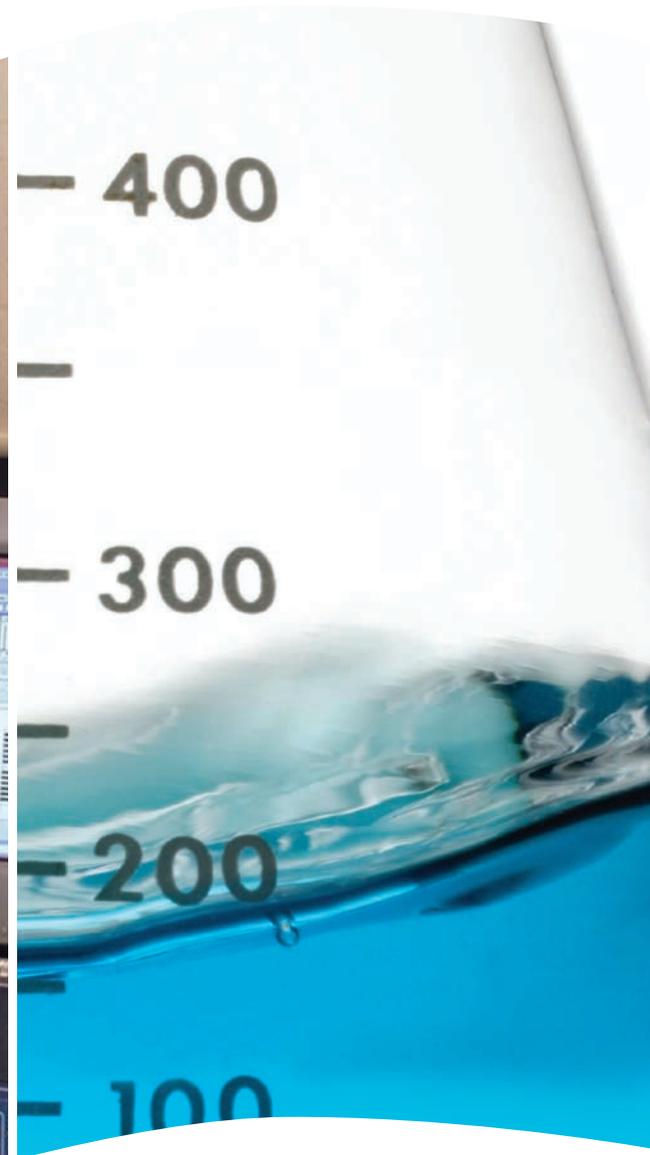
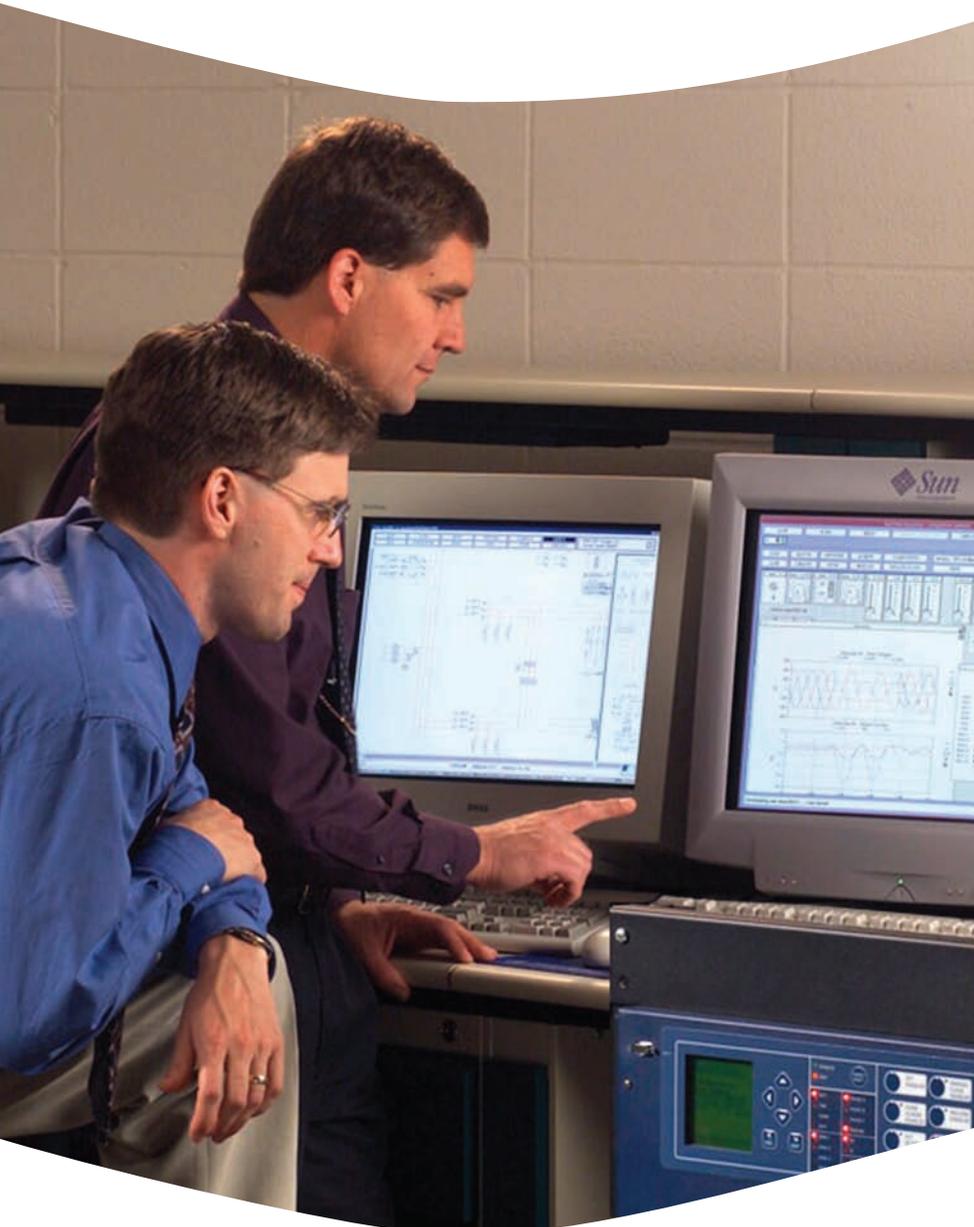
## SOLUTIONS

SEL power protection, control, and metering solutions meet the specific needs of the life sciences industry. These solutions provide highly reliable, flexible options capable of meeting all your application requirements:

- Power Management
- Power Protection
- Automation and Integration
- Precise Timing
- Revenue Metering/Submetering
- Generator Protection
- Motor Protection
- Cybersecurity

## RELIABILITY

SEL designs and manufactures products for the world's most challenging production environments to exceed all industry standards for temperature, shock, and electric stress. SEL products operate in a temperature range of  $-40^{\circ}$  to  $+85^{\circ}\text{C}$  ( $-40^{\circ}$  to  $+185^{\circ}\text{F}$ ). They can withstand electrostatic shock up to 15 kV and are vibration/shock resistant up to 15 g.





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