

MISSION-CRITICAL FACILITY SOLUTIONS





40+ YEARS OF INNOVATION

6,500+ EMPLOYEES WORLDWIDE

100% EMPLOYEE-OWNED

170+ COUNTRIES WITH SEL SOLUTIONS AND SERVICES

100+ OFFICES WORLDWIDE

SCHWEITZER ENGINEERING LABORATORIES (SEL)

SEL is a trusted provider of complete power protection, automation, communications, and metering solutions for critical industries. Mission-critical facilities around the world rely on SEL solutions to improve electrical safety and protect power infrastructure and essential equipment. Designed and tested to operate reliably in the harshest environments, SEL products are backed by a ten-year, no-questions-asked warranty.

Our engineers are industry experts in distribution protection and control, power system management, distributed energy resource integration, microgrid design, and cybersecurity best practices. They can help you meet your operational needs with the following solutions and services.

SOLUTIONS

Power System Protection and Metering

- Feeder protection
- Motor protection
- Arc-flash mitigation
- Generator protection
- Transformer protection
- Bus protection
- Tie-breaker protection
- Utility interconnection protection
- Special protection schemes
- Power quality and revenue metering

Power System Automation Controllers and Computing

- Real-time automation controllers (RTACs)
- Programmable automation controllers
- Automation controllers (compact and rack-mount)
- HMI display solutions

Communications and Cybersecurity

- WAN and LAN networking (wired and wireless)
- Transceivers and adapters
- Satellite-synchronized clocks
- Secure communications

Power System Fault Indication

- Overhead fault indication
- Underground fault indication



NORTH AMERICAN ELECTRIC UTILITIES
CHOSE SEL AS THE BEST-IN-CLASS RELAY
MANUFACTURER IN THESE CATEGORIES*

TECHNOLOGY (84%)

SERVICE & SUPPORT (87%)

PRICE (82%)

WHY OUR CUSTOMERS CHOOSE SEL



▲ SEL-751 FEEDER PROTECTION RELAY

Reliable solutions. SEL products are designed, built, and rigorously tested in full electrical load conditions to withstand vibrations, electrostatic discharge, and electrical transients for trouble-free operation in extreme conditions and temperatures from -40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$). SEL devices are UL- and CE-listed and CSA-certified. Conformal coating offers an additional barrier against contaminants and corrosive gases and fumes.

Low cost of ownership. Our devices collectively have the highest mean time between failures (MTBF) in the market—over 700 years. This means if you have 700 devices installed in your system, you can expect an average of one hardware failure per year. Our devices come with no-charge configuration software and are backed by our worldwide, no-questions-asked, ten-year product warranty.

No-charge technical support. Experienced local application engineers and a knowledgeable sales force offer a complete network of support.

Reliable operations and reduced operational costs. Our devices protect equipment and provide actionable information that helps operators reduce power consumption, identify power quality issues, optimize equipment life cycles, and plan preventative maintenance. We offer solutions that help facilities manage onsite power sources and eliminate blackouts and associated revenue losses and equipment damage.

Scalable solutions. From basic protection to advanced ultra-fast power management systems, our products are designed with scalable growth in mind.

System control. Our devices let users modify, expand, and customize solutions to fit their applications.

Power system awareness and integration into SCADA systems. Flexible communications ports and protocols increase the visibility of the power system operation status and conditions in SCADA systems and allow custom configuration of applications. Supported protocols include serial, EtherNet/IP, Modbus, DNP3, IEC 61850, MIRRORING BITS® communications, and IEEE C37.118-2011.

Advanced diagnostics. Millisecond time-stamped reports, Sequential Events Recorder (SER) data, and oscillographic event reports offer improved situational awareness, event root-cause analysis and troubleshooting, and early warnings of system instability.

WE HELP DATA CENTERS MAXIMIZE AVAILABILITY AND UPTIME



SEL is a trusted provider of power system protection, monitoring, control, and energy metering solutions to data center facilities around the globe. Our comprehensive power solutions optimize power delivery and usage. They quickly reroute energy around faults to minimize interruptions, save money, and ensure efficient power system availability and system uptime.

“SEL HAS ALWAYS BEEN REALLY GREAT TO WORK WITH. **WE’VE ALWAYS BEEN ABLE TO GET GOOD TECH SUPPORT** ON THE PHONE WHENEVER WE HAVE ISSUES.”

JUSTIN HARP
DIRECTOR OF OPERATIONS ENGINEERING
VANTAGE DATA CENTERS

7 OF THE TOP 10 GLOBAL DATA CENTER COMPANIES TRUST SEL POWER SOLUTIONS AND SERVICES

LARGEST HYPERSCALE DATA CENTER OPERATORS IN NORTH AMERICA EMPLOY SEL TECHNOLOGY TO PROTECT THEIR POWER SYSTEMS



▲ VANTAGE DATA CENTERS

► **CUSTOMER**

Vantage Data Centers

PROJECT

Data Center Complex,
California, USA

SOLUTION

Power Quality and
Energy Metering

An SEL metering solution supports the Vantage mission-critical reliability standard by providing energy reliability information and power quality measurements.

CUSTOMER

Banco do Brasil (BB)

PROJECT

Central Data Center,
Brasília, Brazil

SOLUTION

Power System
Protection and
Communication

SEL implemented advanced feeder protection with high-speed arc-flash mitigation at the BB primary data center. This facility enables 24/7 availability to support the bank's world-class operations.

CUSTOMER

Global Technology
Company

PROJECT

Multiple Hyperscale
Data Center Sites

SOLUTION

Power System
Protection, Control,
and Networking

SEL designed the protection and control schemes to deploy across multiple facilities. The system provides scalable electrical power architecture with optimal protection against blackouts to maintain uptime.



AUTOMATION CONTROLLERS AND COMPUTING



PROTECTION SYSTEMS AND METERING

BACKED BY UNMATCHED QUALITY AND SUPPORT

SEL invents, designs, manufactures, and supports a complete line of products for the protection, monitoring, control, automation, and metering of electric power systems. Our products are manufactured and tested in the United States to meet the rigorous environmental and operational demands of facilities that must operate flawlessly 24 hours a day, 7 days a week. We are committed to quality with a worldwide, ten-year, no-questions-asked warranty and unmatched, free technical support and customer service.

When you work with SEL, you get more than our products or solutions—you get a partnership. That means we'll provide support whenever you need us. No matter the issue, we will be there until it's resolved.

When major disasters occur, we stand ready to help our customers and the communities they serve by discounting products destined for disaster relief, expediting deliveries, and providing 24/7 field support.

"I'M ALWAYS GREETED BY A FRIENDLY VOICE AND GET THE HELP I NEED. CALL ME OLD-FASHIONED, BUT REAL CUSTOMER SERVICE REQUIRES REAL PEOPLE."

KEN DICKERSON

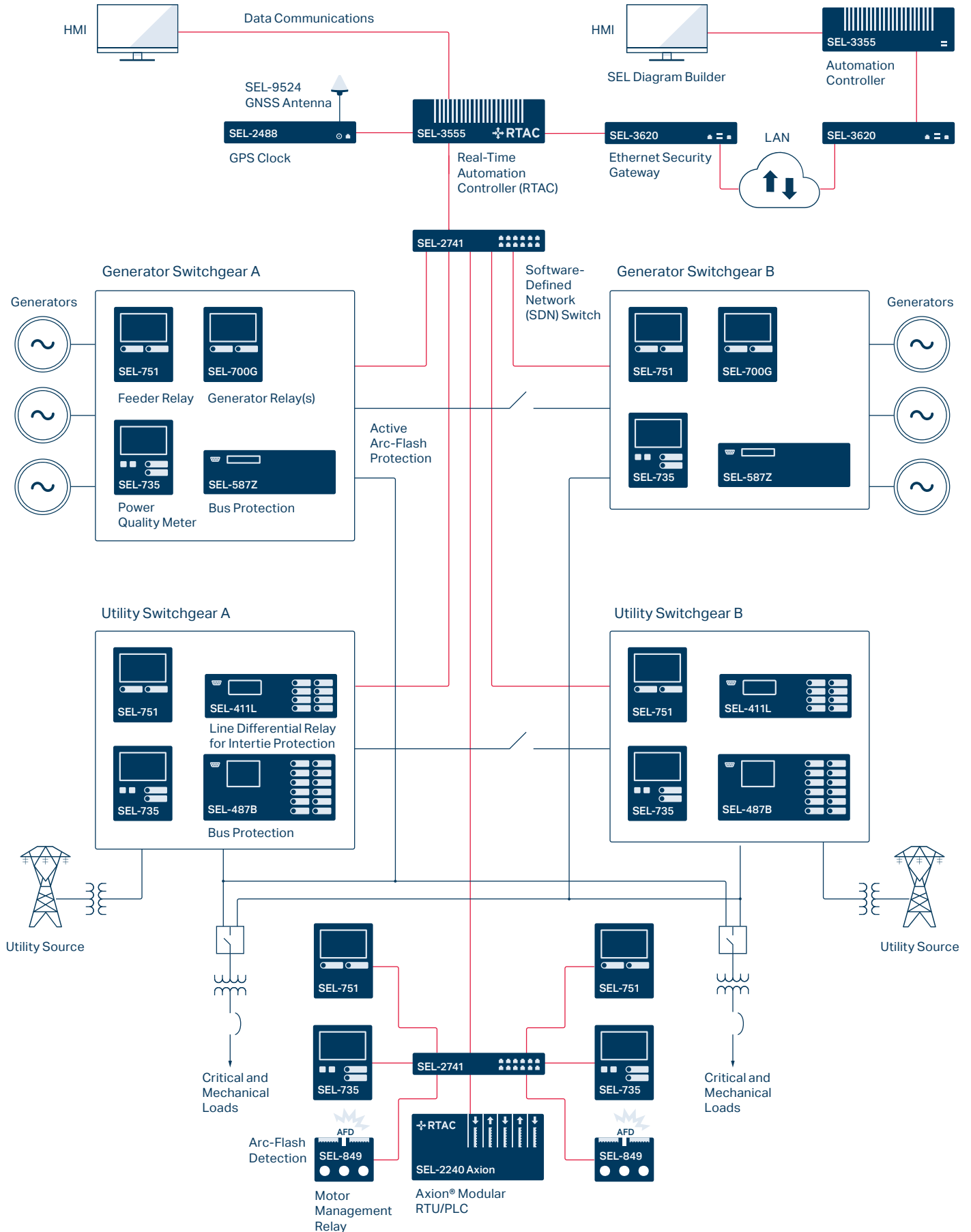
DEEP EAST TEXAS ELECTRIC COOPERATIVE



COMMUNICATIONS AND CYBERSECURITY

FOR A DETAILED LIST OF OUR PRODUCTS AND SOLUTIONS, VISIT SELINC.COM.
READ ON TO LEARN ABOUT EXAMPLE APPLICATIONS OF SEL PRODUCTS AND SOLUTIONS AT MISSION-CRITICAL FACILITY SITES.

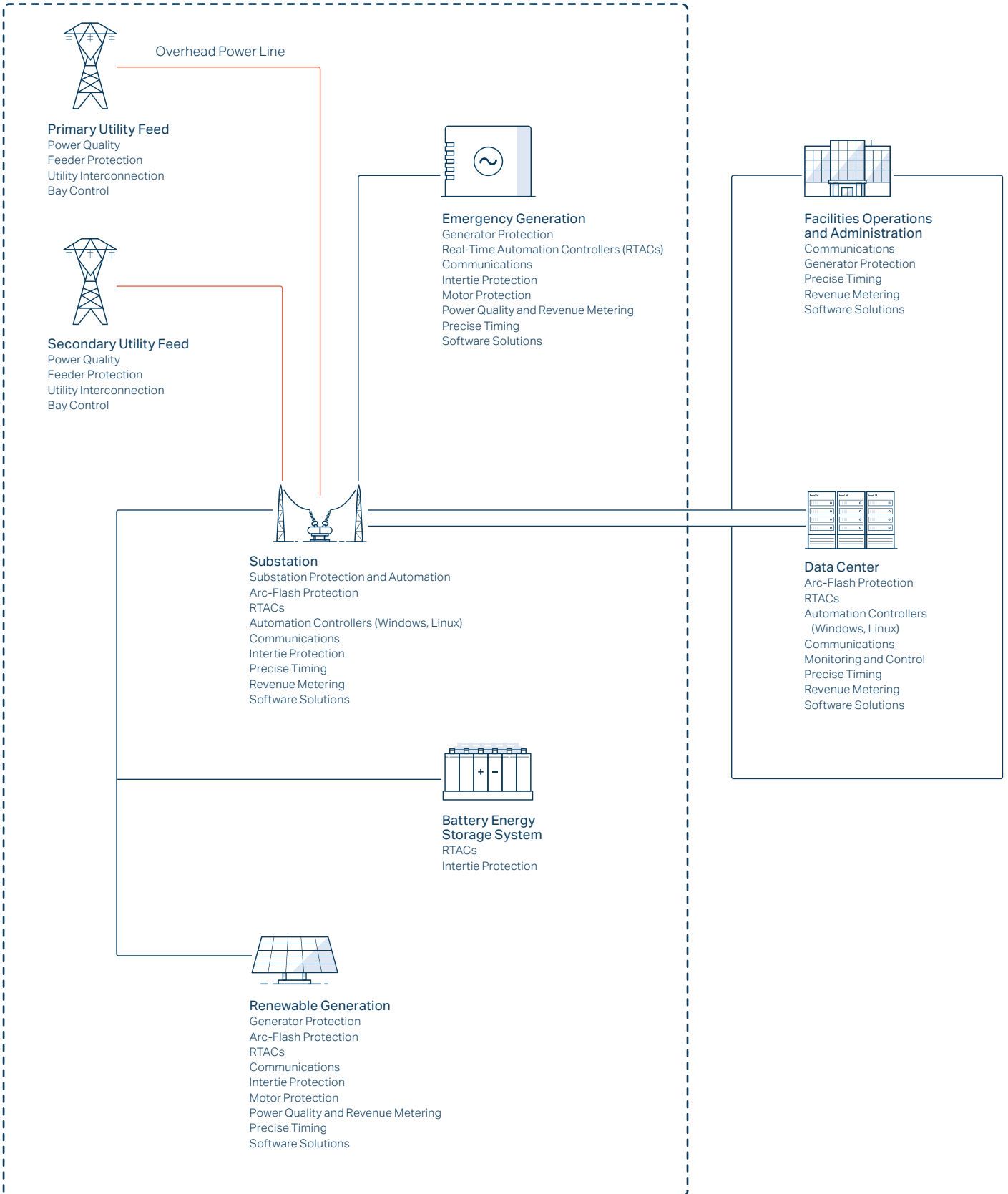
SEL SOLUTIONS DATA CENTER POWER SYSTEM ONE-LINE DIAGRAM EXAMPLE





SEL SOLUTIONS MICROGRID CONTROL APPLICATION EXAMPLE

Microgrid Control





SEL-734
ADVANCED METERING SYSTEM

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| | |
|-----------|--|
| METER ID: | |
| CTR: | |
| YTR: | |

| | |
|----------------|-----|
| CONFIGURATION | |
| PH | 5 |
| CL | 10 |
| V | 120 |
| W | 3W |
| HA | 60 |
| TA | 2.5 |
| VI | 1.8 |
| CA | 0.2 |
| MATH/OUT-METER | |

V2 VANTAGE DATA CENTER
1111780544
SN 1111780544

MAIN 3

CLOSE

TRIPPED
ON FAULT

ORDERING AND CUSTOMER SUPPORT

selinc.com/support | +1.509.338.3838

Online Configuration and Ordering

Configure products to meet your exact application needs and order them online with an SEL account. Once logged in, select “Configure and Order” on a product webpage to choose from available model options, including items like power supply voltages, inputs and outputs, communications ports and protocols, and conformal coating. Save individual products to your cart, create projects to house specific product orders, and request a quote—all online. For products that do not require configuration or have been identified as common product configurations, select “Popular Models” on a product webpage to quickly and easily find the model you want.

Ordering Support

Our sales representatives and customer service teams are always happy to answer questions and help configure the right SEL solution for your application. Visit selinc.com/support for regional sales contact information.

Popular Models

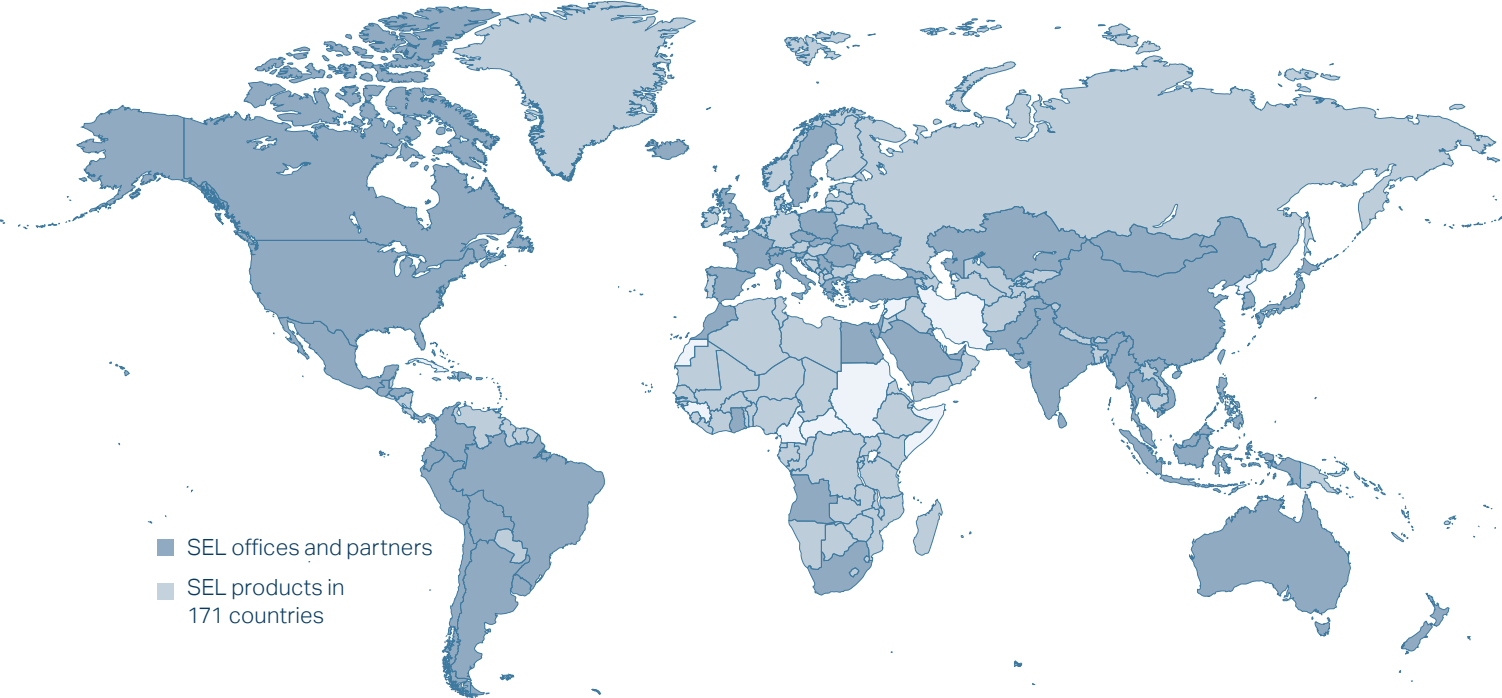
The Popular Models program makes selecting and ordering SEL products simple, fast, and convenient. SEL popular models are products preconfigured for popular applications and available for many SEL devices. Specific popular models may ship from stock. When available, the popular model configurations are displayed on the related SEL product webpage, where you can also view their technical details and popular applications. You can order these models directly from SEL or through your SEL sales representative.

Local Support. Global Expertise.

Whether it's grid modernization in the Philippines or an ambitious offshore wind integration project in Belgium, our global engineering experts have helped projects in regions like yours succeed. And with local support from technical staff in your region, you can count on us to help your successes continue.

Scan to find a customer support representative in your area.

selinc.com/facility-solutions





Making electric power safer, more reliable, and more economical

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