

# SEL-351R Recloser Control



## Intelligent Control Made Simple

Apply the SEL-351R with advanced directional overcurrent and frequency elements in new or retrofit recloser control installations.



### Plug-In Recloser Control Compatibility

Upgrade existing recloser installations with cost-saving protection, automation, and control features in the SEL-351R Recloser Control, a plug-compatible replacement for Cooper Kyle® recloser controls. Use standard control cables for easy installation. The SEL-351R is independently certified to IEEE C37.60-2003 recloser standards.

### "EZ" Settings for Convenient Setup

Expedite commissioning with familiar "EZ" recloser control settings that enable only the settings you need.

### Advanced 24 Vdc Battery-Charging and -Monitoring System

Monitor and test the 24 Vdc battery with the 120 Vac battery-charging system. Maximize battery backup duration with the automatic sleep and local wakeup function. There is also a 12 Vdc supply for powering modems and radio communications equipment.

### Lightweight Cabinet

Reduce maintenance and prevent corrosion with the lightweight, easy-to-install, painted aluminum cabinet.

**Making Electric Power Safer, More Reliable, and More Economical®**

## Feature Overview

*SEL provides a worldwide, no-questions-asked, ten-year warranty.*

*Fast SER protocol provides serial SER data with time stamps to an automated data collection system.*

*Lightweight aluminum cabinet offers superior corrosion resistance.*

*Convenience outlet provides power to your laptops and other temporary equipment.*



*Metered quantities include phase voltages and currents (including demand), sequence voltages and currents, power, frequency, and energy along with maximum/minimum logging of selected quantities.*

*Navigation controls make more information readily accessible.*

*Programmable control pushbuttons and configurable labels provide a completely customized operator interface.*

*Improved battery charging and 16 Ah batteries (not shown) provide longer battery life and operation time during outages.*

## Retrofit Traditional Installations

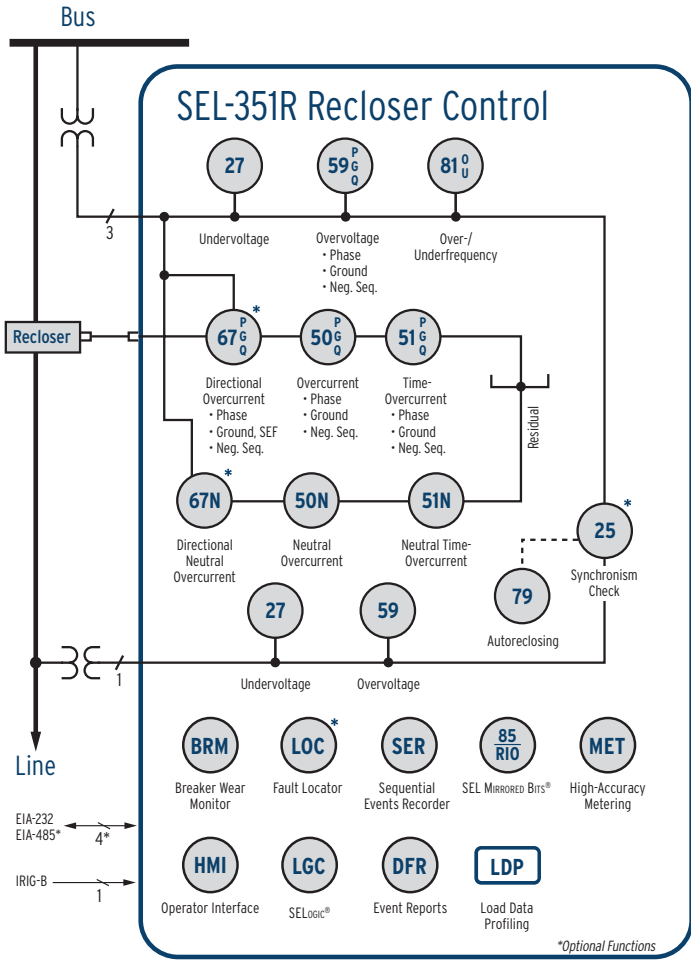
### Upgrade Existing Recloser Controls

Easily retrofit your existing recloser controls with the SEL-351R, which is plug-compatible with traditional 14-pin Cooper reclosers. "EZ" settings make control setup similar to traditional Cooper recloser controls, eliminating the need to learn new settings. Additionally, the SEL-351R provides event reports that include waveform data with time-coordination element assertion and phasor/sequence element diagrams.

*"We chose the SEL-351R because of our need for a single retrofit control with metering and control capabilities for SCADA as well as an underfrequency element for load shedding as mandated by our power pool."*

Brad Truitt, Senior Engineer  
Western Farmers Electric Cooperative

# Functional Overview



# Recloser Compatibility Chart

Manufacturer Recloser	SEL-351R Compatible
<b>Cooper</b>	
CXE	✓
NOVA™ Auxiliary Powered	✓
RE	✓
RVE	✓
RXE	✓
VSA	✓
VSO	✓
VWE	✓
VWVE 27	✓
VWVE 38X	✓
WE	✓
WVE 27	✓
WVE 38X	✓
<b>G&amp;W</b>	
Viper®-G	✓
Viper®-S	✓
<b>Hawker Siddeley</b>	
GVR*	✓
<b>Thomas &amp; Betts</b>	
Joslyn TriMod™ 300R	✓

Other reclosers can be added on request.  
 \*When equipped with interface module.

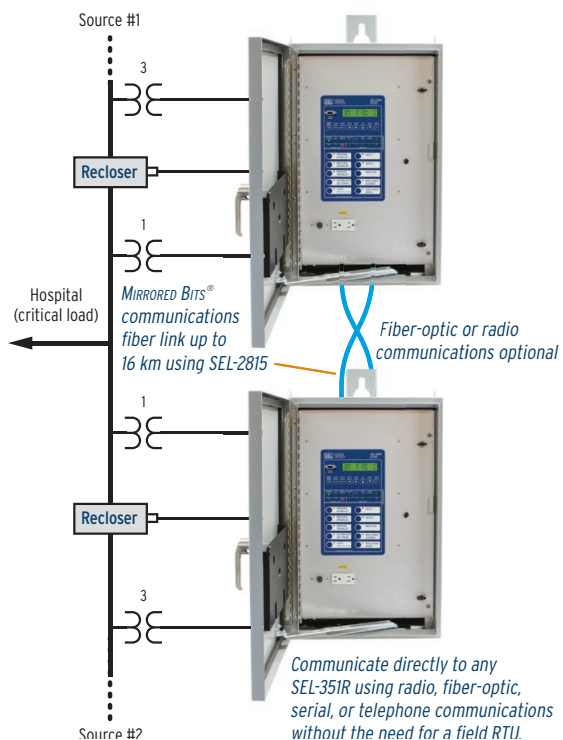
# Automate Your Distribution System

## Apply Autosource Transfer Schemes

Maintain reliable power and use the SEL-351R for critical loads that require dual-feeder service. Incorporate intelligence, and only transfer on nonfaulted loads using SEL MIRRORRED BITS® communications technology.

With MIRRORRED BITS, communicate securely and share recloser status, source status, and other logic information between SEL-351R Recloser Controls.

Customize the return-to-normal action by incorporating synchronism check for parallel source return, or break-before-make when source voltages are not in phase.



# SEL-351R Recloser Control

## Customize Your SEL-351R

SEL offers a variety of best-in-class accessories to optimize recloser control efficiency and operation. Many accessories can be either factory-installed or supplied as field upgrade kits. A few of these accessories are shown.



### SEL-2401 Satellite-Synchronized Clock

Provide precise event time for synchrophasor data with the SEL-2401, which has  $\pm 100$  nanosecond accuracy for automatically updated, exact time.



### SEL-3031 Serial Radio Transceiver

Combine three serial ports into one radio, allowing up to three different connections and protocols to operate simultaneously. The spread-spectrum radio transmits data in the license-free 900 MHz ISM band, providing an economical communications path or backup communications system.



### SEL-3622 Security Gateway

Provide automated IED password management and proxy services for critical IEDs to aid in NERC CIP compliance efforts. Save time by remotely managing passwords and accounts in cabinet-mounted recloser controls, without the need to change settings or perform firmware upgrades. The SEL-3622 also acts as a router, IPsec VPN endpoint, and secure, deny-by-default firewall.



### SEL Fault Indicators and Sensors

Team the SEL-351R with SEL fault indicators to pinpoint exact fault locations, even on lateral feeds.



WSO—Wireless

Sensor for Overhead Lines

AR360—360°

Overhead AutoRANGER®

AR-OH—Overhead

AutoRANGER

AR-URD—Underground

AutoRANGER

## General Specifications

### AC Current Inputs

1 A nominal	3 A continuous, linear to 20 A symmetrical; 100 A for 1 second
Burden	0.13 VA @ 1 A, 1.31 VA @ 3 A

### AC Voltage Inputs

300 V maximum (PT)	300 V <sub>L-N</sub> continuous (connect any voltage up to 300 Vac), 600 Vac for 10 seconds
Burden	0.03 VA @ 67 V, 0.06 VA @ 120 V, 0.80 VA @ 300 V

### Power Supply

Rated range	85–264 Vac, 100–350 Vdc
Frequency range	40.1–65 Hz
Burden	<30 VA



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