

# SEL-734W and LINAM<sup>®</sup> WCS

Capacitor Bank Control and Wireless Current Sensor



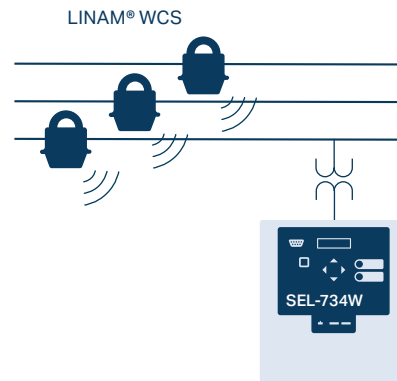
Improve distribution power quality and efficiency with advanced capacitor bank control and wireless current sensing

- Easily install this solution with new capacitor banks, or upgrade traditional installations without the difficulty of installing line post sensors.
- Use your preferred control method: time- and temperature-based switching or current-based control.
- Mount sensors closer to your inductive loads, not just at the control.
- Stock one wireless sensor for all your capacitor bank installations, with support for voltages up to 38 kV.



# Overview

Capacitor bank controls help control distribution voltage, reduce losses in distribution systems, and prolong the life of distribution equipment. Advanced controls have improved the switching accuracy by adding three-phase current inputs so that the controls can calculate reactive power. As a result, utilities have been upgrading older capacitor bank controls and installing complicated and expensive current-sensing devices. The SEL-734W Capacitor Bank Control and LINAM WCS Wireless Current Sensor System is a safer, quicker, simpler, and more economical way to provide accurate current- and voltage-based control for these capacitor bank installations.



## Key Features

### SEL-734W Capacitor Bank Control

- Time- and temperature-based switching or current-based control.
- Preconfigured control templates.
- SELogic® control equations for customized operation.
- Each control pairs with up to three wireless sensors.
- Three control modes: SCADA, automatic, and manual.
- Two enclosure options: full-size or compact. The full-size enclosure provides for three-phase voltage sensing via PT inputs.
- Three field interface options: 4-jaw, 7-pin, and terminal block.

### WCS

- The sensors provide high-accuracy current sensing for advanced capacitor bank switching.
- You can install the sensors up to 1,500 feet away from the capacitor bank installation.
- The quick clamp-on, line-powered design makes installation safer and easier.
- Each sensor is rated for any voltage up to 38 kV.

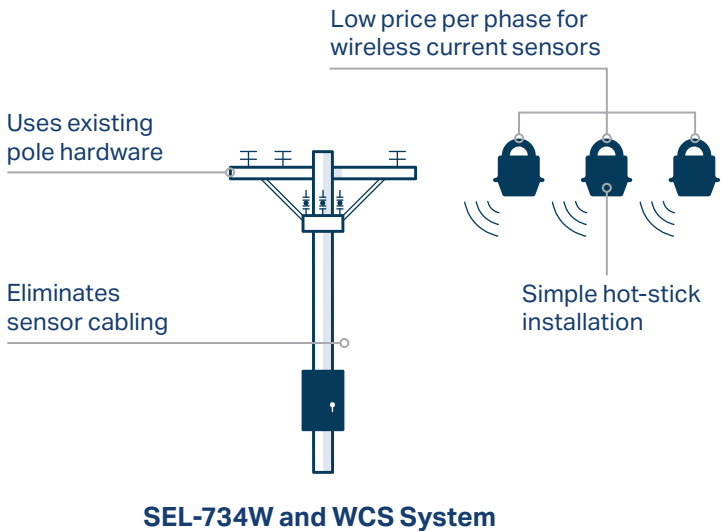
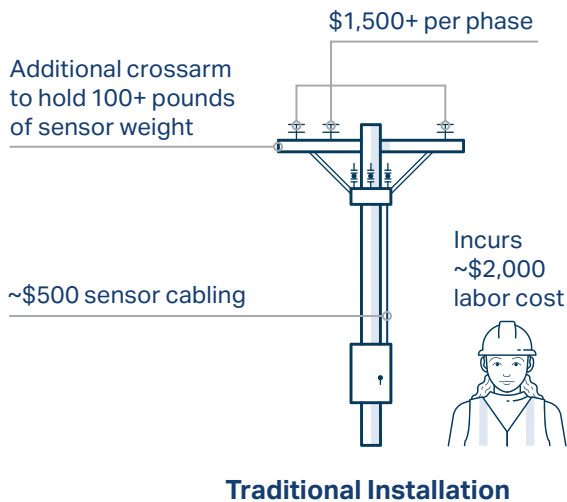


# Applications

## New or Retrofit Capacitor Bank Installations

Implement the SEL-734W and WCS system quickly and easily to add advanced control for existing time- and temperature-based installations or new capacitor banks. Integrate the SEL-734W with temperature-based switching installations now—and easily upgrade to advanced switching control based on power factor or VARs in the future. You can replace your existing socket-based controls

with a current-enabled solution without replacing any of the primary equipment using either the 4-jaw socket-based or terminal block interface. For new installations, select an SEL-734W with the 7-pin connector-based interface. The lightweight WCS installs on an overhead distribution line using a single hot stick. There is no need for an outage or significant hot-line work.



## Increased Accuracy With Up to Three Sensors

Use up to three wireless sensors to measure current with  $\pm 1$  percent accuracy and within a 1-degree phase angle. The SEL-734W uses the sensor data to compute reactive power, make switching decisions, and create load profiles.

## Power Quality Monitoring

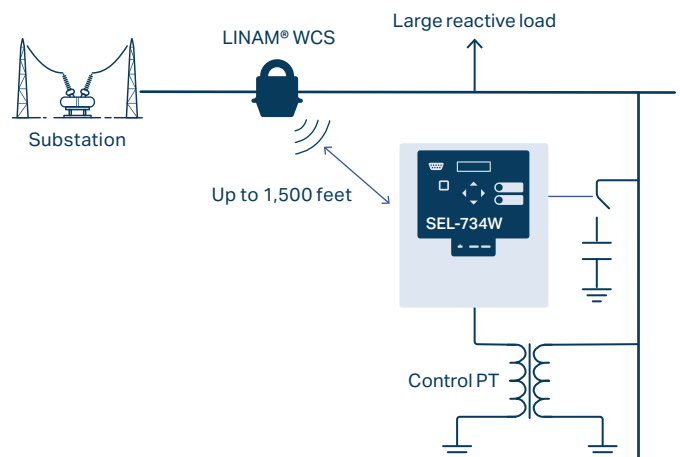
Improve power quality and address customer concerns with advanced monitoring features, such as harmonic measurements, load profile trending, and voltage sag, swell, and interruption (VSSI) recording.

## Location Flexibility

Use the WCS to measure line current at one point of the distribution system while operating a capacitor bank at a nearby point on the system. This is ideal for situations where the capacitor bank is not near the inductive loads.

## Three-Phase Switching

The full-size enclosure option enables the addition of three-phase voltage sensing via PT inputs. This gives the SEL-734W the ability to switch each phase individually by both voltage and current. The enclosure also allows room for accessories.



# Specifications

SEL-734W		LINAM WCS	
Power Supply	Continuous Operating Limits 125/250 V supply: 85–264 Vac (50/60 Hz), 85–275 Vdc  VA Rating <40 VA, 15 W maximum <20 VA, 7 W typical  Interruption (IEC 60255-11:1979) 100 ms at 250 Vac/Vdc 50 ms at 125 Vac/Vdc	Operating Temperature	–40° to +85°C (–40° to +185°F)
15 Vdc Accessory Power Supply	Continuous Operating Limits Output voltage: 15 Vdc ±5% for accessories, as power supply only Output current: 2.75 A for accessories, as power supply only	Storage Temperature	–40° to +85°C (–40° to +185°F)
Single-Phase AC Voltage Measurement Inputs (Compact Enclosure)	Input impedance: 10 MΩ Range: 57–150 V Accuracy: ±0.15% Maximum rating: 300 V continuous, 600 V for 10 seconds	Operating Environment	Pollution degree: 2 Relative humidity: 5%–95%, noncondensing Maximum altitude: 2,000 m
		Ingress Protection	IP67
		Overvoltage	Category III
		Insulation Class	Class III
		Radio Frequency	902–928 MHz ISM band (United States/Canada) 902–907.5 and 915–928 MHz ISM band (Brazil)
		Clamp Range	6.35–31.75 mm (0.25–1.25 in)
		Dimensions	141.7 mm diameter × 177.0 mm height (5.58 in diameter × 6.97 in height)
		Weight	0.85 kg (1.9 lb)
		Power System Frequency Range	45–65 Hz
		Accuracy	Load magnitude: ±1.5% typical Phase measurement: ~1.5 degrees typical
		Maximum Voltage	38 kV (L-L)
		Minimum Load Current	2 A
		Maximum Steady-State Load Current	1,000 A
		Maximum Fault Current	25 kA for 10 cycles

