

SEL-734W and LINAM WCS

Capacitor Bank Control and Wireless Current Sensor



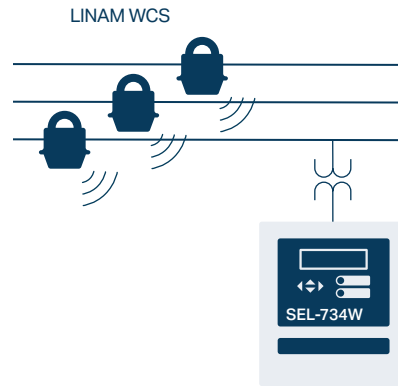
Improve distribution power quality and efficiency with advanced capacitor bank control and wireless current sensing

- 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 Wireless Current Sensor (WCS) solution 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.

LINAM 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.

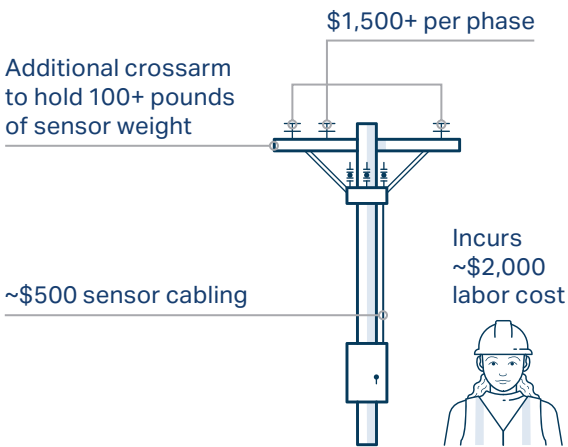


Applications

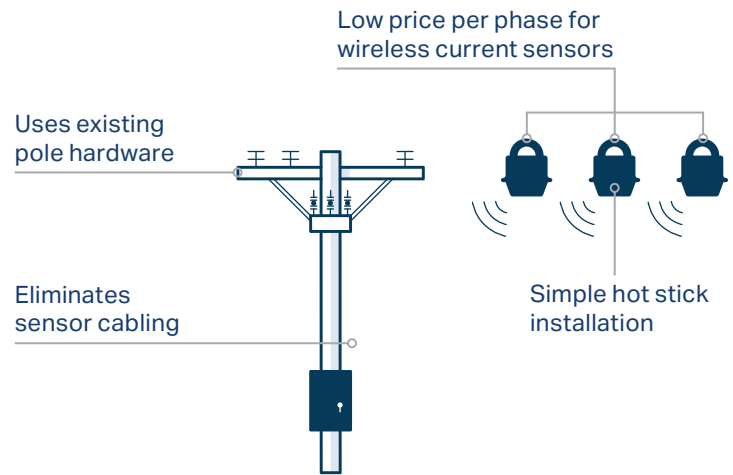
New or Retrofit Capacitor Bank Installations

Implement the SEL-734W and LINAM WCS solution 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 a SEL-734W with the 7-pin connector-based interface. The lightweight LINAM WCS installs on an overhead distribution line using a single hot stick. There is no need for an outage or significant hotline work.



Traditional Installation



SEL-734W and LINAM WCS Solution

Increased Accuracy With Up to Three Sensors

Use up to three LINAM wireless sensors to measure current with ± 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

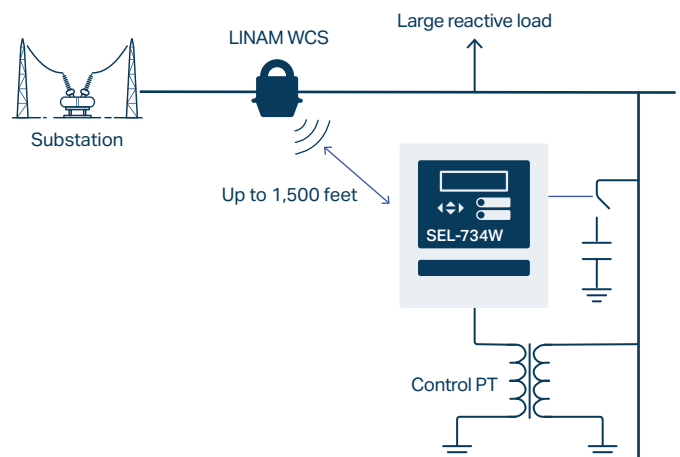
Improve power quality and address customer concerns with advanced monitoring features, such as harmonic measurements, load profile trending, and voltage sag, swell, and interruption (VSSI) recording.

Location Flexibility

Use the LINAM 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.



SEL-734W and LINAM WCS Specifications

SEL-734W		LINAM WCS	
Power Supply	<p>Continuous Operating Limits 125/250 V supply: 85–264 Vac (50/60 Hz), 85–275 Vdc</p> <p>VA Rating <40 VA, 15 W maximum <20 VA, 7 W typical</p> <p>Interruption (IEC 60255-11:1979) 100 ms at 250 Vac/Vdc 50 ms at 125 Vac/Vdc</p>	Operating Temperature	–40° to +85°C (–40° to +185°F)
15 Vdc Accessory Power Supply	<p>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</p>	Storage Temperature	–40° to +85°C (–40° to +185°F)
Single-Phase AC Voltage Measurement Inputs (Compact Enclosure)	<p>Input impedance: 10 MΩ Range: 57–150 V Accuracy: ±0.15% Maximum rating: 300 V continuous, 600 V for 10 seconds</p>	Operating Environment	<p>Pollution degree: 2 Relative humidity: 5%–95%, noncondensing Maximum altitude: 2,000 m</p>
		Ingress Protection	IP67
		Overvoltage	Category III
		Insulation Class	Class III
		Radio Frequency	<p>902–928 MHz ISM band (United States/Canada) 902–907.5 and 915–928 MHz ISM band (Brazil)</p>
		Clamp Range (LINAM WCS)	6.35 mm to 31.75 mm (0.25 in to 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	<p>Load magnitude: ±1% typical Phase measurement: ~1 degrees typical</p>
		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

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