

SEL-734W and LINAM[®] WCS

Capacitor Bank Control and Wireless Current Sensor System

Questions and Answers



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The full-size enclosure supports three-phase voltage. Am I required to install three voltage sensors?

In a compact SEL-734W, the control power transformer (CPT) voltage is also wired to the voltage measurement input. In a full-size enclosure, we expect separate voltage measurement inputs. These are 120 Vac inputs, and you are able to connect the CPT to the Phase 1 voltage input in a junction box if you do not want to install any sensors.

How does the SEL-734W know the phase angle if the sensors only measure current?

The LINAM WCS only measures current, but there is a voltage reference for the SEL-734W from the CPT. The SEL-734W can time-align the current signal to a specific time on the power cycle (e.g., a zero crossing) to use as a reference to calculate the phase angle.

How does the SEL-734W perform three-phase control with only one voltage?

The SEL-734W has a setting that allows for phantom voltage, which mimics one phase of voltage onto the other phases with a phase shift. The full-size SEL-734W enclosure does have the ability to take three voltage measurements from 120 Vac voltage sensors.

What happens if the receiver misses a message from the sensor?

If it misses a single message, the SEL-734W continues to play the old data until there is an update. Using the standard templates, if there are three consecutive messages missed, the current will go to zero, an LED will illuminate for a WCS error, and a variable for that error will assert.

What is the realistic range of the WCS?

The current sensors transmit with 50 mW of power. In an optimal environment, the device can typically support up to 1,500 feet of range, but results may vary due to interference in the line of sight. Depending on the installation environment, the sensor may miss messages for distances greater than 100 feet. In the event of three consecutive missed messages, the current will drop to zero. If you are fine with more frequent missed messages for a capacitor bank control, the device can typically still support up to 1,500 feet of range.

Can the SEL-734W capture switching transients in the event reports when the capacitor bank is closed in?

Since the sensors transmit at certain intervals, it is unlikely they would be sampling at the moment the transient occurred. An SEL-734B Advanced Monitoring and Control System can identify transients using both voltage and current, but you would have to install line post sensors.

The SEL-734W can identify transients in the voltage signal through the CPT.

Can the SEL-734W monitor neutral current?

The SEL-734W in a four-jaw enclosure cannot monitor neutral.

What happens if the sensor is installed backwards?

The current sensor will report the current 180 degrees out of phase. To help prevent this, the sensor is labeled with an arrow that points in the direction of the correct polarity.

Is there encryption for communications between the sensor and SEL-734W?

The link is unencrypted. It needs to be for the low-latency communications.

Can I buy the SEL-734W now and use it as a temperature-based capacitor control and then eventually add LINAM wireless sensors later?

Yes, you can separately purchase LINAM wireless sensors at a later time and implement current-based control strategies with a field-installed SEL-734W.



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LM00589-01 • 20260910

