

SEL-735

Power Quality and Revenue Meter



Accurate, dependable metering—certified for billing by Measurement Canada

- Maintain precise metering for life, eliminating the need for field or factory recalibration.
- Track energy usage with up to 512 channels, and save years of load profile recording with up to 1 GB of onboard memory.
- Improve real-time situational awareness of system conditions with IEEE C37.118.1a-2014 synchrophasors.
- Operate reliably in harsh conditions, supported by a ten-year warranty, no-charge diagnostic repair services, and free 24/7 local support.



Background on Certification

What Is Measurement Canada?

Measurement Canada is the agency of Innovation, Science, and Economic Development Canada responsible for approving and inspecting measuring devices, among other responsibilities relevant to the accurate selling of measured goods.

What Does This Mean?

With Measurement Canada's certification, the organization confirms that the SEL-735 reliably and accurately measures revenue. Prior to this certification, many Canadian customers already trust the SEL-735 to reliably measure power quality (PQ). This certification means that Canadian customers can use select SEL-735 models in their full operating capacity for both PQ and revenue metering.

Which SEL-735 Models Are Certified?

SEL-735 meters with the following Model Option Table configurations may now be deployed as revenue and power quality meters in Canada.

The diagram shows a 16-digit part number structure: 0 7 3 5 V F [] 0 [] 4 4 G * * D * * * 1 6 2 0 1 * *. Two callout boxes provide details for specific digits:

- PQ Options** (points to the 8th digit):
 - 0 Base
 - 1 Intermediate
 - 2 Advanced
- Form Factor** (points to the 10th digit):
 - 5 Form 5 (Three-wire delta; 2 PTs, 2 CTs)
 - 9 Form 9 (Four-wire wye; 3 PTs, 3 CTs)
 - 6 Form 36 (Four-wire wye; 2 PTs, 3 CTs)

Key Features

Accurate and Reliable Revenue Metering

The SEL-735 will remain precise for life, exceeding the ANSI C12.20-2015 0.1 and IEC 62053-22 0.1 S accuracy classes over a wide current range—from a few mA to 22 A for power factors (PFs) of 1 and 0.5. With bidirectional, full four-quadrant, and high-accuracy energy metering, the SEL-735 is the ideal meter for generation, interchange, transmission, distribution, or industrial applications. The SEL-735 ensures high-accuracy measurements with a ± 0.06 percent Wh guarantee at unity power factor and a ± 0.02 percent typical rating.

Load Profile Data Collection

Collect and store years of billing data with simple-to-use load profile recording. Independent load profile recorders in the SEL-735 allow simultaneous meter and PQ logging of up to 512 data channels. Averages, minimums, maximums, changes, and snapshots can be recorded at a rate of once every three seconds. Analyzing the electrical usage for processes in your facility lets you reduce peak demand. With years of data, you can predict system trends and allocate resources effectively.

Waveform Capture Using Programmable Triggers

Use programmable triggers, such as voltage interruptions, to record up to 10,000 oscillography events. Enabled from the factory, the voltage, sag, swell, and interruption (VSSI) recorder time-stamps voltage excursions with up to 4 ms resolution and records indefinitely using an adaptive sampling rate. Settings include trigger thresholds and hysteresis as a percentage of the nominal value and an automatic recording duration dependent on the length of the voltage excursion.



Applications

Revenue Metering and Net Billing

The SEL-735 provides flexibility and control for metering applications. The meter can collect and report billing, PQ, and historical data; replace obsolete transducers; and poll directly from SCADA with the DNP3 or Modbus protocol.

Data Recording

The SEL-735 captures every disturbance in your power system. Load profile history is available to view, retrieve, and analyze for years, thanks to the available 1 GB of onboard storage.

The advanced SEL-735 can record the following quantities:

- VSSI with CBEMA/ITI reports
- Symmetrical components
- Measurement aggregation in 3-second, 10-minute, and 2-hour intervals
- Harmonic angles for voltage and current up to the 63rd harmonic
- High-resolution (512 samples/cycle) waveform capture
- High-speed load profile recording with 3-second resolution

PQ Standards and Compliance

Ensure reliable measurements from all compliant devices connected to the same metering points.

- Current, voltage, power, energy, and unbalance data measurements compliant with IEC 61000-4-30 Class A
- Harmonics and harmonic group measurements as defined by IEC 61000-4-7:2009
- Monitoring of individual harmonic values, interharmonics from 5 to 3,800 Hz in 5 Hz bins, total harmonic distortion (THD), crest factor, and K-factor
- Short- and long-term flicker values assessed in accordance with IEC 61000-4-15:2010
- Three power quality options to fit any application and budget

Contact us

We're ready to help make your revenue metering more dependable. Contact us today to learn more at selinc.com/735Canada.



Making Electric Power Safer, More Reliable, and More Economical
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