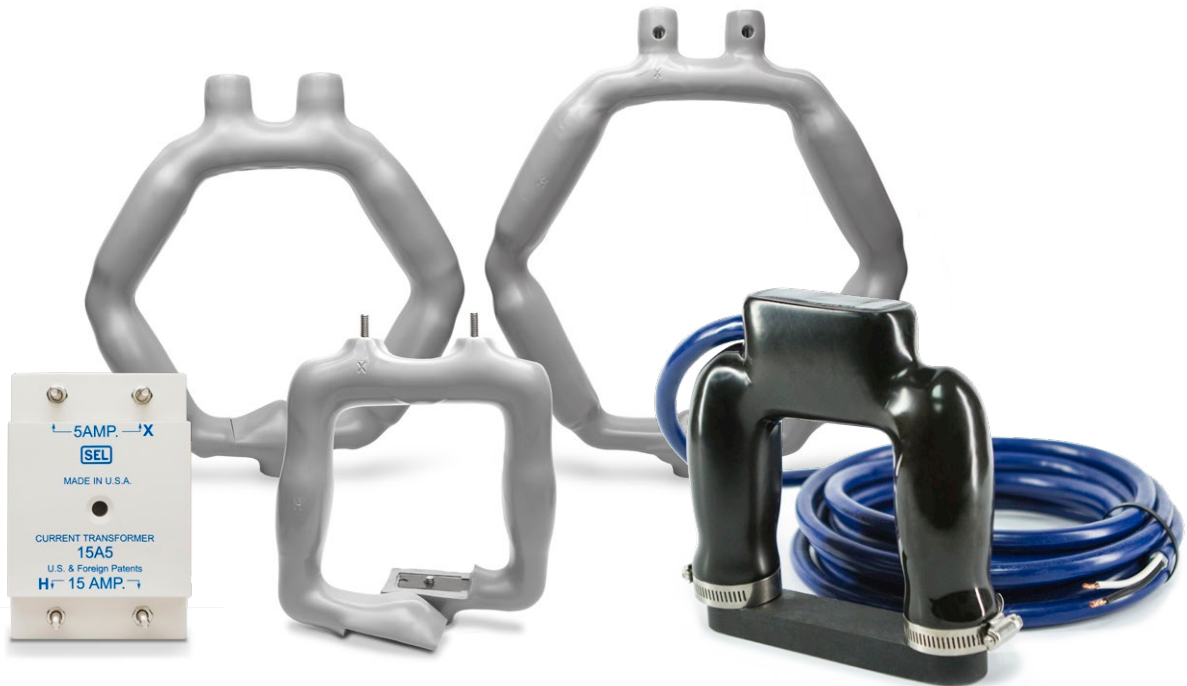


# SEL Current Transformers (CTs)

SEL-CT, SEL-SCT, and Summing CT



Economically add CTs to existing wiring and electrical equipment without interrupting service

- Rugged and durable design for both indoor and submersible environments provides years of maintenance-free operation.
- Several sizes and models are available for a variety of switching, metering, and monitoring applications.
- CTs from SEL are designed, tested, and manufactured in the U.S.A. and include a ten-year warranty to ensure a low cost of ownership.



# Product Overview

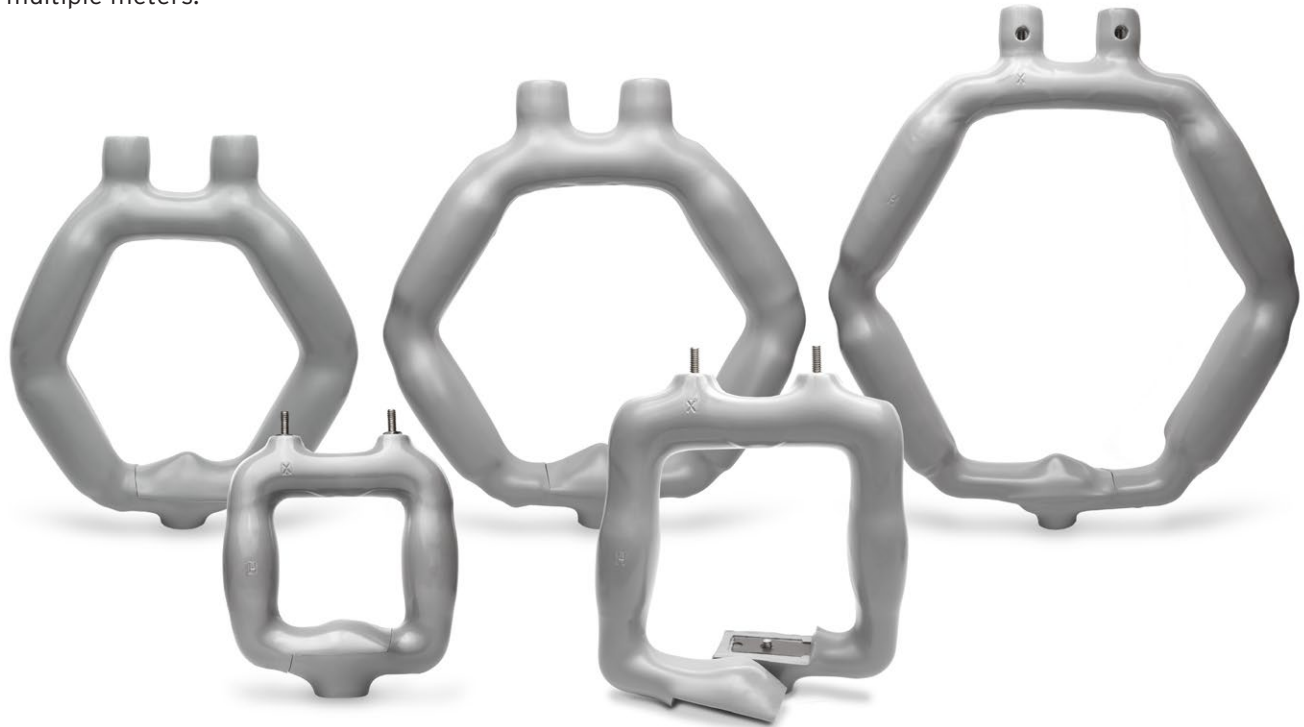
## Economical CTs

SEL-CT Split-Core Current Transformers or SEL-SCT Submersible Separable-Core Current Transformers are ideally suited for applications where a CT needs to be added to existing wiring installations. By installing an SEL-CT around pre-existing cables, you can avoid expensive installation costs and service disruptions.

For applications with more than one feeder, you can use SEL's Summing CT to total the inputs of multiple SEL-CTs into a single meter input, avoiding the need to install multiple meters.

## Versatile Sizes and Options

Various sizes and options are available in accordance with international standards. You can choose from 100 to 3,000 A primary current input models with a 5 A secondary output. The SEL-CT window options include 3.5", 4.5", 6.0", and 8.0" inside diameters available in either rectangular or hexagonal shapes.



SEL-CTs are available in multiple sizes to fit existing installations.

## Accuracy for Many Applications

With a measurement accuracy as low as 0.5 percent, CTs from SEL are ideal for applications in distribution automation and metering. You can add CTs to automated switches to provide load measurement and detect overcurrent events. You can also install CTs to enable submetering of energy usage across a campus or factory plant.



The SEL-SCT design provides reliable use in subsurface vaults where flooding can occur.

## Reliable Operation Through Robust Design

All of our CTs are designed, tested, and manufactured in the U.S.A. at our Lake Zurich, Illinois, facility. The multilayered vinyl-dipped coating and use of nickel and stainless steel for exposed components provides a maintenance-free and durable solution that comes with a ten-year, no-questions-asked warranty. The securing bolt reduces variation in the magnetic characteristics and ensures that the gate closes, providing a near-perfect mating surface.



An SEL employee is applying a potting compound to seal the SEL-SCT metal laminations for water resistance.



# Applications

Apply SEL CTs with other IEDs for electrical load surveying, verification of circuit energization, cost allocation, demand alarming, and more. The easy-to-install design fits over distribution cables to lower installation costs and time compared with closed-core designs.

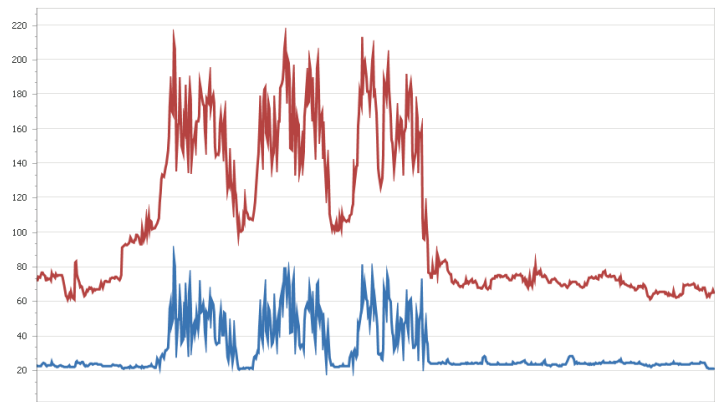
## Demand Management and Campus Submetering

Apply SEL-CTs with the SEL-735 Power Quality and Revenue Meter to alert plant operations managers before they incur excessive demand charges associated with peak usage. Installing power meters and CTs across a campus or industrial facility enables cost allocation of electrical energy.



Apply CTs with SEL and other IEDs to monitor loads, automate switching, and provide operators with load estimations.

LDP Report

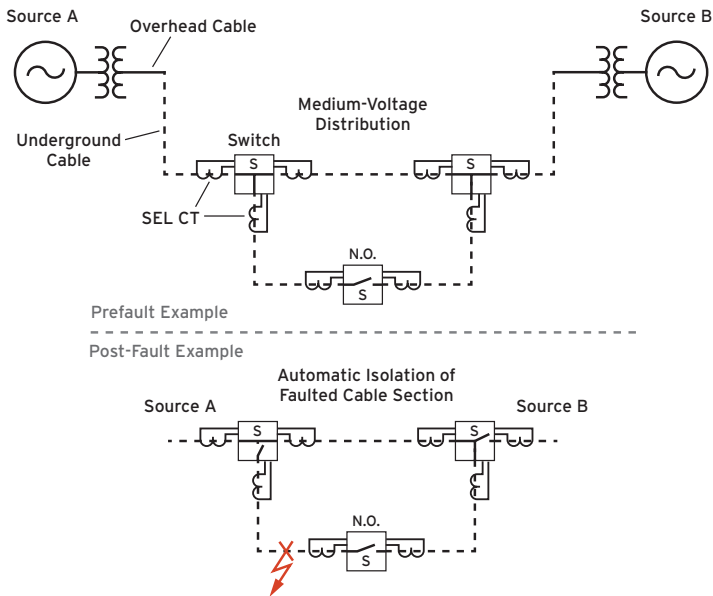


Manage peak demand using acSELERATOR<sup>®</sup> Meter Reports SEL-5630 Software and the SEL-735.



## Intelligent Switchgear

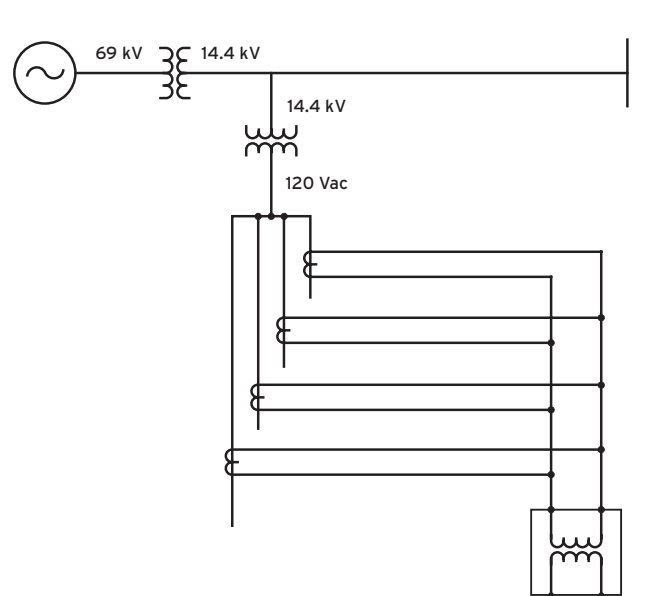
Integrate SEL-CTs with manual or automatic switchgear for improved situational awareness and operation. Current measurements provide verification of line energization associated with a switching action for monitoring the load before and after switching or to lock out source transfer when an overcurrent condition exists on the load side of the switch. SEL-CTs are designed to reliably operate in the harsh electrical equipment environments where switchgear is installed.



Integrate current measurements in switchgear for more intelligent operation.

## Maximum Demand Ammeter

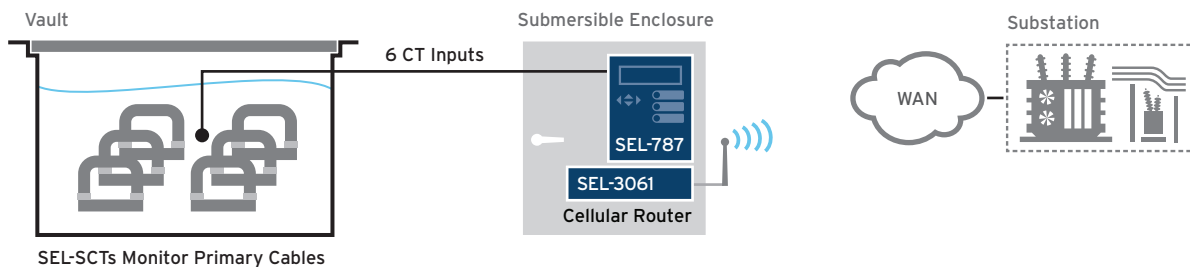
Combine SEL-CTs and Summing CTs to build an inexpensive maximum demand ammeter that sums up to five individual CT inputs into a single output. This solution lets you monitor multiple CT feeds to understand distribution transformer loading.



Monitor multiple CT feeds with the SEL Summing CT.

## Subsurface Vault Feeder Monitoring

Use the SEL-SCT with an SEL relay, like the SEL-787 Transformer Protection Relay, and an SEL-3061 Cellular Router to wirelessly send feeder data to SCADA or a distribution management system for engineering support. You can build an economical system to monitor loads, detect overload conditions, and capture pre- and post-event data.



Employ a feeder monitoring system in a subsurface vault.

# Specifications

## SEL-CT

<b>Primary Current</b>	100–3,000 A
<b>Secondary Current</b>	5 A
<b>Nominal Window Diameters</b>	3.5", 4.5", 6.0", and 8.0" (rectangular or hexagonal)
<b>Core Design</b>	Flexible split core
<b>Core Material</b>	Grain-oriented silicon steel
<b>Insulation Class</b>	600 V (can be used on higher-voltage circuits when installed over shielded insulated cables)
<b>Secondary Winding Material</b>	Copper
<b>Electrical Terminals</b>	Nickel-plated, brass-threaded posts
<b>Shorting/Protection</b>	Optional SEL self-shorting current connector
<b>Operating Temperature</b>	–40° to +85°C (–40° to +185°F)
<b>Installation Temperature</b>	–10° to +65°C (+14° to +149°F)

## SEL-SCT

<b>Nominal Window Diameter</b>	3.5" (rectangular)
<b>Locking Mechanism</b>	Stainless steel worm gear clamps
<b>Leads Included</b>	Yes (model option)
<b>Shorting/Protection</b>	Optional SEL self-shorting current connector
<b>Primary Current</b>	600 A
<b>Secondary Current</b>	5 A

## CT Model Number and Performance Summary Per IEC 61869-2 and IEEE C57.13

Current Ratio	SEL Part No.	Type/Size	IEC Metering Class	IEC Protection Class	IEEE Metering Class	At Burden (VA)
100:5	QT2044	Rec 3.5"	5-FS1	N/A	N/A	2.5
600:5	5A600D35	Rec 3.5"	3-FS5	10P-5	2.4-RF2	1.0
600:5	5A600D45	Hex 4.5"	1.0-FS5	5P-5	2.4-RF2	2.5
600:5	T1796*	Rec 3.5"	1.0-FS10	5P-4	1.2-RF2	2.5
600:5	T1796EM*	Rec 3.5"	1.0-FS10	5P-5	2.4-RF2	2.5
1000:5	5A1000D45	Hex 4.5"	1.0-FS5	5P-5	1.2-RF2	5
1000:5	5A1000D60	Hex 6.0"	1.0-FS5	5P-5	1.2-RF2	5
2000:5	5A2000D60	Hex 6.0"	1.0-FS10	5P-5	1.2-RF2	7.5
3000:5	5A3000D45	Hex 4.5"	0.5-FS10	5P-5	0.6-RF2	12.5
3000:5	5A3000D60	Hex 6.0"	0.5-FS10	5P-5	1.2-RF2	15
3000:5	5A3000D80	Hex 8.0"	0.5-FS15	5P-10	1.2-RF2	15

\*Denotes SEL-SCT

## How to Read the Table Values

### IEC Metering-Class Values Example

1.0-FS5 = 1 percent accuracy at the rated current and can sustain up to 5 times the rated current without damage, per the factor of security (FS).

### IEC Protection-Class Values Example

5P-10 = 5 percent accuracy at up to 10 times the rated current or the standard Accuracy Limit Factor (ALF). "P" designates protection class.

### IEEE Metering-Class Values Example

2.4-RF2 = 2.4 percent accuracy with a ratings factor of 2; that is, up to 2 times the rated current.

## SEL Summing CT

CTs Supported	SEL Part No.	Dimensions			Accuracy	
		L	W	H	5 A Secondary	2.5 A Secondary
2	10A5	6"	4"	1.6"	3%	6%
3	15A5	6"	4"	1.6"	3%	6%
4	20A5	6"	4"	1.6"	3%	6%
5	25A5	6"	4"	1.6"	3%	6%

## Self-Shorting Current Connector

Part Number	Length	Connector
915900048	8 feet	8-position male
915900264	20 feet	6-position male

**SEL SCHWEITZER ENGINEERING LABORATORIES**

Making Electric Power Safer, More Reliable, and More Economical  
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