

SEL-2414

Transformer Automation Controller (TAC)



A transformer voltage and thermal regulator in one versatile, rugged device



Key Benefits

- Reduce energy losses, and maintain bus voltages within acceptable limits.
- Optimize performance for changing load conditions, power flow directions, seasonal variations, and network demands.
- Prevent transformer overloading by controlling transformers operating in parallel.
- Extend the lifespan of your transformer by using IEEE or IEC thermal modeling and cooling stage control.

Voltage Regulation

Set load tap changer (LTC) control modes, configure control settings, and balance load across multiple transformers in parallel operation to prevent overloading a single transformer.

Thermal Regulation

Regulate and control thermal management systems and extend the lifespan of your transformer with IEEE or IEC thermal modeling and cooling stage control.

Operational Awareness and Reporting

Capture and display data from your transformer system, and easily access LTC and thermal event reports. View customized diagrams and screens on the 5-inch color LCD.

Proven Reliability

The SEL-2414 is engineered to withstand the most challenging environments in the world. Designed, manufactured, and tested to the same standards as our protective relays, every TAC is backed by a standard ten-year, worldwide warranty.

Reliable Communications

Integrate with SCADA systems and other distributed control systems by using a wide range of supported protocols.

LTC Retrofits

Upgrade a field-installed SEL-2414 via firmware, and retrofit other OEM solutions with adapter panels or complete turnkey solutions.



Learn more.
selinc.com/products/2414

Specifications

Voltage Regulation	LTC control modes: Auto, manual, local, and remote
	Configurable settings: Center band, bandwidth, and tap delays
	Line drop compensation for both resistive (R) and reactive (X) components
	Paralleling methods that include leader/follower or angle comparison, and preconfigured Ethernet settings that simplify configuration
Thermal Regulation	Cooling system control with alternation and exercising
	Transformer thermal modeling that includes calculations for hotspot temperatures, daily loss of life, and total loss of life using IEEE and IEC models
Data Display, Capture, and Reporting	On-device customizable diagrams and screens
	On-device display: Controller state, alarms, and reports
	Triggered raw and filtered oscillography
	Sequence of Events recording: 1-millisecond resolution
	Through-fault event recording
	Custom recording: 10 samples per second
	LTC event reports: 1-second resolution
	Thermal event reports: 1-minute resolution
	Thermal data records with hourly and daily reports
Hardware	Operating temperature: -40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$)
	Note: Front-panel display is impaired for temperatures below -20°C (-4°F) and above $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$).
	Display options: 5-inch color touchscreen or backlit 2-line LCD
	Mounting options: Panel or surface mount
	Orderable I/O cards: Four slots, with a wide range of customizable cards available
	Dimensions of vertical panel mount: 192 mm (7.56 in) high, 144 mm (5.67 in) wide, 147.4 mm (5.8 in) deep
	Product warranty: Ten years (includes 5-inch color touchscreen)
	Kits and direct-replacement assemblies available for retrofits