



Sensus TC032 MicroRTU

Remote Capacitor Bank Control

Monitoring and controlling fixed or switched capacitor banks is easier than ever. The TC032 packages a capacitor controller and a radio into one powerful and economical package. It connects over the Sensus FlexNet® communication network or via a cellular data network, giving utilities the control and flexibility needed for superior grid management.

Applications

The units are ideally suited for smart grid distribution automation applications such as Volt-Var optimization or central control applications for switched capacitor banks.

FEATURES

- Monitors and controls fixed or switched capacitor banks
- Flexible communication options: FlexNet or 4G/LTE cellular data networks
- Two way communication offering over-the-air operation, configuration, and updates
- Capacitor controller and radio all in one
- Supports industry standard control strategies
- Controlled through central Volt-Var application or SCADA integration via DNP3/IEEE 1815 protocols

- FlexNet Model: Communicates using primary-use licensed spectrum over the Sensus FlexNet communication network. The units can be installed on any FlexNet system that is configured to support the AutomationControl application platform.
- Cellular Model: Communicates over the AT&T® 4G/LTE or Verizon™ 4G/LTE cellular data networks. The units are configured to support AutomationControl and can be installed anywhere in the United States where AT&T or Verizon service is available, including their roaming partners.

Using the AutomationControl™ application suite, engineers, planners and field technicians can simultaneously check status and configure the TC032 as needed. You can monitor and control the TC032 MicroRTU from central Volt-Var applications or through your SCADA system.

BENEFITS

- Provides capacitor bank control through two 30 Amp relays.
- Warns operators of any pending bank switching operations
- A weather-tight external connector allows easy neutral current sensor installation
- Reports under and over voltage conditions, as well as momentary and continuing power outages

Communication

Communication is initiated in three ways:

- Automatic reporting upon digital and analog changes
- Time-scheduled reports configurable from once every minute to once every 1000 hours in 1 minute increments
- User-requested reporting through AutomationControl or the utility SCADA system

MODELS

Model	Radio	Frequency
539.65.537.00048	FlexNet	900 MHz
539.65.537.00053	AT&T cellular 4G (LTE with 3G fallback)	700/850/1700/1900 MHz
539.65.537.00060	Verizon cellular 4G (LTE)	700/850/1700/1900 MHz

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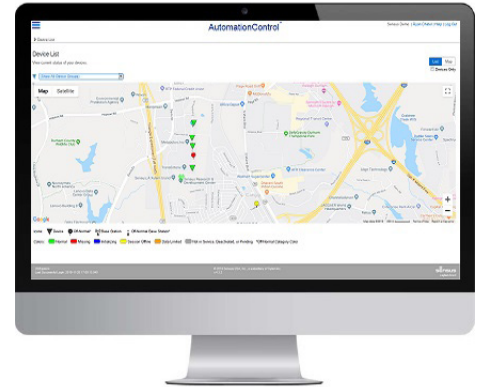
AutomationControl

AutomationControl is a browser-based Software as a Service solution for real-time management of distribution and SCADA system assets. Through this platform, utilities can easily control intelligent communication devices giving operators the insight needed to effectively manage critical infrastructure.

Distribution, operations, maintenance and management personnel all appreciate the intuitive AutomationControl interface. The dashboard provides a real-time snapshot of system performance—turning low-level insight into high-level consumption. The interface visualizes your system, devices and network to simplify what was once complex.

To leverage automation, users can program autonomous control actions and commands to occur in the field. Intelligent field devices are then able to take action without having to wait for a utility operator to issue a command. If an action fails for any reason, the system has been designed to send notifications to a set of users.

With AutomationControl, utilities are able to securely control any distribution asset and deploy a deeper level of intelligence down to the edge.



COMMUNICATIONS

General	Two-way communication	All communications are acknowledged for reliability
FlexNet network	Transmit power	2W
	Frequency	900 MHz, primary licensed
	Antenna	Phantom 3.0 dBi
Cellular network	AT&T	4G/LTE with 3G fallback
	Verizon	4G/LTE
	Transmit power	3G: 2W (GSM), 0.25W (WCDMA) 4G: 0.2W (LTE)
	Frequency	3G: 800/1900 MHz 4G: 700/850/1700/1900 MHz
	Antennas	<ul style="list-style-type: none"> 3G/4G Multi-Band 3.0 dBi (transmitter and receiver) Ultra Wide Band 5.0 dBi internal diversity (receiver only)
Local configuration port		USB 2.0 compliant

OPERATING POWER

General	100-135 VAC, 60 Hz, 100 mA at 120 VAC
Fuse	250 V, 1.5 A, Slow-Blow
Battery	12-volt @ 0.8 amp hour non-spillable, sealed, lead-acid 5 year expected life with automatic charger
Battery fuse	250 V, 250 mA, Slow-Blow

ENVIRONMENTAL DATA

Operating temperature	FlexNet: -40° to 185°F (-40° to 85°C) Cellular: -40° to 158°F (-40° to 70°C)
Humidity	5% to 95% non-condensing
Radiated emissions	FCC 47 CFR Part 15B and ICES-003

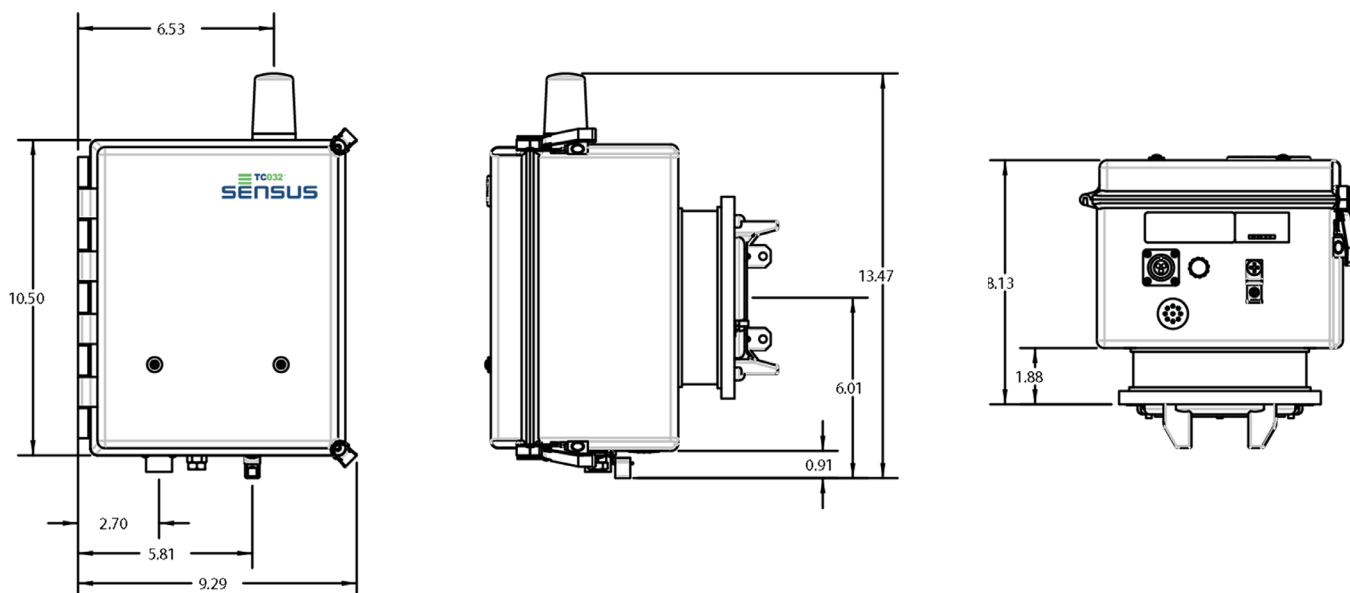
ENCLOSURE

Intrusion rating	NEMA 3R
Mounting	Brackets suitable for mounting on wood, steel, or concrete poles
Grounding	External ground connector
Security	Hinged door with padlocking capability
Dimensions	See drawings on final page

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The TC032 drawings below show a FlexNet model. All measurements are in inches with a +/- 0.01 inch tolerance.



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