

Sentient Energy® Grid Analytics System™ v6.0 Sets New Standard for Distribution Grid Visibility and Control

New Features in Sensors and Analytics Detect and Precisely Locate Faults to Reduce Duration and Frequency of Service Interruptions, Lower Operational Expense, and Improve SAIDI and SAIFI Scores

Frisco, TX – October 19th, 2021—Sentient Energy, the leader in intelligent line sensors, analytics, optimization and control for the power distribution grid, today unveiled its Grid Analytics System v6.0. The new version offers a broad set of enhancements to more precisely identify and locate faults to help preempt outages, reduce outage durations, reduce operational expense, and improve service reliability. The latest enhancements further solidify Sentient Energy’s position as the most comprehensive grid monitoring and analytics system on the market.

“Utilities spend \$6-8 billion dollars annually on clearing vegetation from overhead lines—making it the largest single operations and maintenance expense¹,” said Bob Karschnia, Sentient Energy CEO. “We strive not only to reduce the cost of vegetation management but also to increase safety and reliability at the same time. The Sentient Energy Grid Analytics System offers the most complete library of waveform data and unmatched analytics capabilities, which are constantly fed by our intelligent sensors. Version 6.0 contains advancements in the platform that pinpoint problems more efficiently.”

Sentient Energy’s Grid Analytics System v6.0 comprises the MM3™ and ZM1™ overhead intelligent line sensors, the UM3+™ underground intelligent line sensor, and the company’s powerful Ample® Analytics Platform. The latest enhancements deliver the industry’s most precise fault detection, improve grid security, simplify sensor deployment, and extend critical monitoring and analytics to lower-current rural lines. Utilities of every size across North America and globally rely on Sentient Energy solutions to improve grid safety, reliability and operations through data-driven decisions.

“In line measurements are a key part that’s missed a standard and critical part of Smart Grid development and deployment,” said Kevin Prouty, Group VP of Manufacturing and Energy Insights at IDC. “It shines a digital spotlight on the actual real-time state of the grid beyond more abstracted Distribution Management Systems.”

Intelligent Line Sensors Deliver More Precise Fault Detection

The company’s flagship MM3 overhead and UM3+ multi-position underground intelligent line sensors are now able to provide accurate measurement of fault current magnitude up to 10kA within 2% accuracy and distinguish between line to line and line to line to ground faults (A/G, A/B, ABC, ABG). With more precise fault locations identified, utilities are often able to preempt an outage or reduce duration, improving both SAIDI and SAIFI scores.

The augmented sensors capture distribution grid data, which is analyzed by advanced fault detection algorithms to identify faults in real-time. Through integration with SCADA, DMS, or OMS systems at the utility control center, the sensors deliver precise fault type and location information and improve the effectiveness of ADMS distance to fault calculations. With more precise location and fault magnitude information, operators significantly reduce patrol time and outage duration, lowering O&M costs and improving service quality.

¹ [Accenture, March 2021](#)

ZM1 Low or no Amperage Sensor Extends Monitoring and Analytics to Rural Circuits with Support for Lateral Lines & Feeders

The latest version of the ZM1 is a low to zero-amperage intelligent line sensor that captures high-resolution power system data. This advanced line sensor extends critical line monitoring and analytics to rural or remote areas, which account for approximately twenty percent of distribution lines in North America. Using a ten-year battery, the ZM1 is designed for distribution lines including laterals, feeder tie points, and other rural distribution circuits.

Improved Transport Level Security

Improved TLS security protocols in the Sentient Energy Grid Analytics System v6.0 ensure all communication between the sensor to the Ample® analytics software are encrypted. The software also provides a system access audit log, and customizable security settings to meet customer requirements. Enhanced TLS security protocols are an advancement in protecting distribution grids from bad actors and external security threats.

QR Code Installations Speed System Deployment

Using an automatically generated QR code, operators can rapidly install and configure sensors to operate within their distribution grid. This rapid deployment reduces time to value for large distribution grid installations, minimizes operational expense associated with deployment, and simplifies the addition of new or replacement sensors in the grid.

Enhanced reporting

New reporting capabilities inside the Ample® platform include five standard distribution grid performance reports which are configurable to meet specific business requirements.

About Sentient Energy

Sentient Energy, a Koch Engineered Solutions company, is the premier provider of intelligent sensing, data analytics, optimization, and control technologies for the distribution grid. Sentient Energy's hardware and software solutions help electric utilities make data-driven decisions to enhance the delivery of reliable, safe, and efficient power. With the industry's only Grid Analytics System that covers the entire distribution network, Sentient Energy leads the global market with the largest network of line sensor deployments in North America, gathering rich data in real time for predictive insights and strategic grid management. Sentient Energy's Grid Edge Control™ solutions enable utilities to reduce energy costs at the grid edge through Volt-VAR optimization, conservation voltage reduction, and peak demand reduction. Sentient Energy partners with leading communications network providers. For more information, visit www.sentientenergy.com

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