

SentriSense™ Power Line Monitoring Network



The SentriSense sensor node attaches directly to a live line and is powered 24/7 via solar cells and internal battery. The rugged aluminum housing is waterproof and electromagnetically shielded.

SentriSense sensor nodes attach directly to live lines and provide real-time monitoring of line and weather conditions, detecting and warning of line failures across the network.

Suitable for any kind of power line up to 230 kV, and well suited to harsh and remote locations, SentriSense continuously monitors the line's position. As soon as a variation is detected, the operation center is notified of the event.

SentriSense typically costs 90% less to implement than standard procedures or other detection solutions, and problems are detected 90% faster. Preventing or minimizing potential damage brings even greater savings.

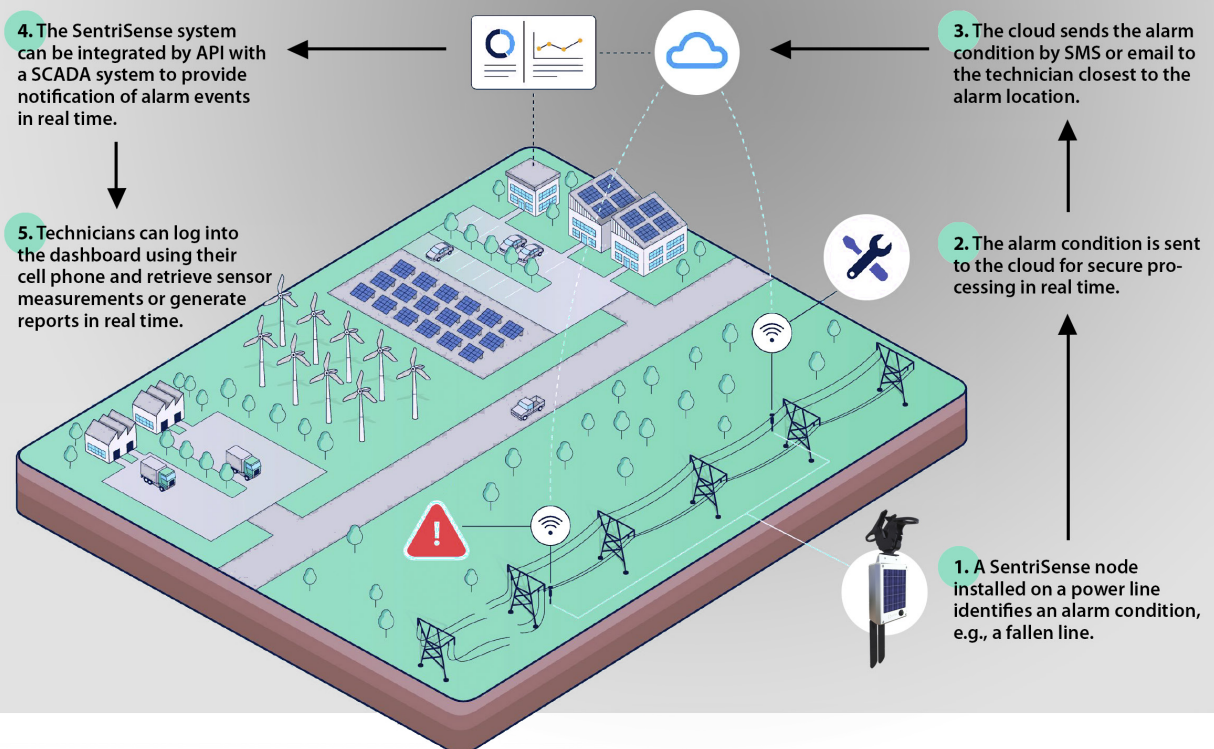
SentriSense provides a variety of alerts:

- Fallen cables (free fall)
- Fallen power tower (free fall)
- Fallen trees (inclination change)
- Strong winds (change in acceleration/position)
- Ice detection (inclination change)

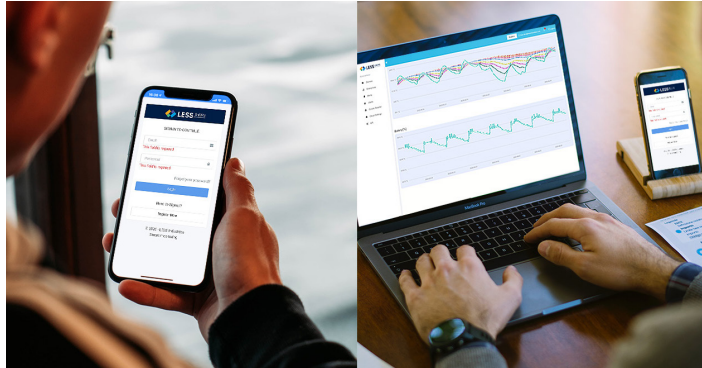
Alerts added remotely in mid-2022:

- Aging/corrosion/predictive maintenance (vibration changes)

How SentriSense works through the cloud



After installation, SentriSense can be fine-tuned remotely to accommodate natural movements of the line. SentriSense connects to the LESS Cloud (LESS manufactures SentriSense) via cellular, Wi-Fi, or (by request) LoRa. The LESS Cloud provides secure access to data through an open API for integration with third party systems.



SentriSense Web Platform

The LESS Cloud serves as the web platform for SentriSense. This cloud system automates data collection, warns when something is wrong, and generates statistics that help determine how to reduce grid costs and increase operational efficiency.

SentriSense shows how different parts of the grid behave and interact with each other in real time, under various loads and weather conditions. When combined with predictive analysis, SentriSense is a powerful tool that saves time and money.

Power utilities can schedule and perform anticipatory maintenance by automatically detecting potential failures. Even during normal operation, SentriSense can generate more profit through dynamic optimization of the existing infrastructure.

The LESS Cloud enables:

- Alerts based on flexible algorithmic conditions
- Secure access through computer, smartphone, or API
- Open API for integration with third party systems
- Configurable alerts for each variable
- Dispatch of alerts through email or SMS

Advantages of a SentriSense network:

- Simple to use devices that are calibrated and configured automatically
- Adjustable frequency of data measurement and reporting cycles
- Extra memory for queuing messages during low connectivity periods
- Robust device construction for use in harsh and remote environments
- Low cost and easy to install

SentriSense Installation



Opening the clamp (SentriSense not pictured)

A patented clamp proven for over 25 years on thousands of power lines worldwide allows SentriSense nodes to be installed in seconds by drone, hand, or hot stick on live lines up to 230 kV. The clamp grips the line firmly without slipping or damage.

Technical specifications

Connectivity

- Cellular
- Wi-Fi
- LoRa (by request)

Power supply

- Energy harvesting
- Solar panel for energy harvesting
- Rechargeable battery
- USB-C charging

Inertial Measurement Unit

- Vibration / motion
- Orientation
- Rotation speed



P&R Technologies, Inc.
www.pr-tech.com
Phone 503-292-8682
Toll Free 800-722-8078