



Technology Overview



Transverse configuration of fiber optical current sensor OTT ID #1324

APPLICATIONS

Help power utility companies better monitor and stabilize power fluctuations in the nation's power grid.

TARGET PROBLEM

Today, efficient, accurate and easily deployed current and voltage sensors are still needed to monitor the power grid in an effective manner.

KEY BENEFITS

- **Accurate and fast fault detection**
- **Does not require conventional CTs or PTs**
- **Performs well for different structure setups**
- **Immune to harmonics in system**

TECHNOLOGY

Researchers at the UW-Milwaukee have partnered with local and international power companies through the Midwest Energy Research Consortium, MWERC, to develop a smart sensor that measures electrical properties of a transmission line without direct contact of the power line and then transmits the properties to a control station at the speed of light. The sensor being developed is a rugged optical fiber coupled to a specialized transducer, made from a magnetostrictive composite, which translates the magnetic field emitted from power lines into an optical signal. Unlike other current sensors, this sensor is not affected by electromagnetic interference, delivers near-real-time measurements, does not require direct electrical contact, and is compact and lightweight.

INTELLECTUAL PROPERTY

A utility patent was issued in August 2016, [US9417294](#).

This technology is part of an active and ongoing research program and is seeking partners for development of the final product. It is available for developmental research support/licensing under either exclusive or non-exclusive terms.

INVENTOR(S)

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