Press Release

ABB launches new generation Fiber Optic Current Sensor for high voltage applications

Enabling digital substations and smart grids

Zurich, Switzerland, August 20, 2014 - ABB, the leading power and automation technology group, today announced the launch of its latest generation Fiber Optic Current Sensor (FOCS-FS) to complement its portfolio of optical sensors. The FOCS-FS gets its name from its innovative 'free standing' design.

A salient feature of the FOCS-FS is its digital interface capability making it ideal for deployment in digital substations and facilitating adaptability to future substation automation needs.It also complies with IEC 61850 open systems communication protocol, enabling interoperability with equipment from other vendors. The new FOCS will be suitable for current measurement applications in 245 kV to 800 kV substations.

"ABB's new FOCS-FS 'free standing' digital fiber optic current sensor solution will facilitate the development of digital substations and enable the grid to get smarter" said Giandomenico Rivetti, head of ABB's High-Voltage business, a part of the company's Power Products division. "It is also more eco-efficient and is designed to minimize footprint and enhance safety".

Conventional current and voltage measuring devices in substations comprise of oil and SF6 based instrument transformers. However these devices are heavy, weighing up to several tons. They also consume significant amount of space.

The new FOCS addresses demanding performance requirements for accuracy across a wide temperature range. It is inherently free of magnetic saturation, making it ideal for capturing fast transient currents, short circuit currents, and alternating current (AC) with direct current (DC)-offset. The compact design helps achieve reduced substation footprint as it requires much smaller space compared to conventional instrument transformers. It is also an eco-efficient solution that uses no oil or gas, eliminating the risk of explosion.

ABB's Fiber Optic Current Sensors (FOCS) are based on the Faraday effect principle, whereby light is used to deduce the precise magnitude of current that is creating the magnetic field. ABB's FOCS series for high-voltage substations includes FOCS integrated with DCB (Disconnecting Circuit Breakers), FOCS kits for integrating with other high-voltage equipment such as gas-insulated switchgear and generator circuit breakers. FOCS-FS will add to this portfolio of offering.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

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