Onsite condition monitoring solutions
Providing the base for smart asset management

Onsite condition monitoring allows you to continuously monitor the health status of your equipment and maintain it proactively.

About us
ABB, the leading global player in high-voltage products, offers a wide range of electrical infrastructure solutions and services encompassing:
• Gas Insulated Switchgear (GIS)
• Hybrid Switchgear Plug and Switch System (PASS)
• Air Insulated Switchgear (AIS)
• Generator Circuit Breakers (GCB)
• Capacitor Banks and Filters
• Instrument Transformers
• Surge Arresters

As a globally operating technology organization and product manufacturer, we complement our offerings with a comprehensive range of round-the-clock support and life cycle services. The goal of ABB’s product support services is to improve the reliability and extend the operating life of your high-voltage equipment, while reducing operation and maintenance costs in each life-cycle phase. To meet the challenges of the evolving high-voltage service market, we continue to develop our portfolio, increase customer satisfaction, and improve our operations.

Onsite condition monitoring
• Condition monitoring systems are a basic data provider for advanced asset management strategies, which focus on system reliability or risk. A basis of these strategies is an understanding of the asset individual condition, which allows to adapt maintenance activities to asset specific needs. The condition monitoring system provides continuous visibility of the asset condition and automatically triggers user attention if required.
• To reflect the asset specific importance and your individual needs, we offer various monitoring packages to upgrade your HV equipment:
  • GMS600 for monitoring of GCBs
  • Modular Switchgear Monitoring (MSM) System for SF₆ monitoring of GIS
  • Circuit Breaker Sentinel (CBS) for circuit breaker monitoring of AIS and GIS
• Depending on your needs and the primary equipment, monitoring devices are available as pure IED, in pre-assembled kits, as well as fully installed and commissioned on site.

Benefits
• Automated data logging and analysis of breaker performance.
• Reduction in unplanned downtime preventing production losses and high costs.
• Early warning system provides adequate time for maintenance planning with less chances of failure.
• Greater diagnostic capability in case of failure through the recorded data.
• All monitoring devices operate independently of existing control and protection equipment thus simplifying breaker upgrades in the field.
Circuit Breaker Sentinel family

With the CBS family, you can monitor interrupter wear, integrity of the SF₆ gas system, the circuit breaker mechanical system, the electrical control system and auxiliaries. The family includes:

- CBS
- CBS lite
- CBS lite CSA and
- CBS F6

CBS Lite™
The CBS Lite is intended to be used in applications requiring high-end monitoring capabilities in a cost-effective package. The CBS Lite is offered for installation on both ABB and non-ABB single-pressure SF6 circuit breakers and is well suited for breaker upgrades in the field.

CBS Lite CSA™
The CBS Lite CSA is a variant of the CBS Lite. The difference between the two products is the replacement of heater monitoring with 3 coil signature analysis inputs. Continuously monitoring coil signature provides you a unique insight into breakers which are less frequently operated.

CBS-F6®
The CBS-F6 strictly monitors gas pressure, temperature and temperature compensated pressure. The CBS-F6 can be applied to any SF₆ filled switchgear, both ABB and non-ABB. It allows you to efficiently monitor and minimize the SF₆ emissions of your fleet.

Modular Switchgear Monitoring (MSM)
The Modular Switchgear Monitoring (MSM) is an add-on system to supervise SF₆ density in high-voltage gas-insulated switchgear, and can be used in ABB and non-ABB equipment. The application is highly scalable to up to 1000 gas compartments in various types of switchyard layouts. MSM is applicable for retrofit of existing substations and in new installations. The MSM system improves the reliability of the complete switchgear by offering a redundancy in SF₆-gas density supervision. The hybrid gas density monitor enables measurements through conventional switch signals and via sensor signals. The status in each gas compartment is continuously measured and displayed in a consolidated view, facilitating instant detection of any critical situations and improving the station condition awareness. Through the history track record, the MSM calculates a leakage trend, thus supporting maintenance planning by e.g. scheduling of countermeasures into non-critical times.

GMS600 monitoring system for GCB

ABB’s next generation monitoring system GMS600 simplifies and enhances generator circuit-breaker (GCB) monitoring

Based on ABB’s well-proven Relion® Series 650, GMS600-G and GMS600-GT provide an accurate indication of time remaining before the GCB needs servicing. It includes an efficient data logging system and an intuitive network interface via web client application.

GMS600 provides full control of GCB operational parameters enabling preventive and predictive maintenance. It supports the overall increase of power plant safety and reliability whilst enabling cost-effective lifetime management by the innovative Value Base Customer Care (VBCC) concept of ABB. VBCC supports power plant operators and maintenance engineers to facilitate the highest operational availability of their GCB over the entire life cycle.