



Enhance the reliability of MV assets with predictive diagnostics

Eaton's partial discharge remote monitoring analytics predict insulation failures before they occur.

By measuring partial discharge activity in medium voltage equipment, they provide intelligence about the wellness of electrical insulation, enabling better decision-making for managing electrical assets and increasing safety for utility personnel.

Partial discharge analytics can help utilities identify potential equipment failure before it occurs, helping to reduce outages and customer complaints while managing utility reliability metrics.

Types of failure detected by partial discharge remote monitoring includes:

- Discharges in air gaps (between bus and support window, for example)
- Surface tracking (on supporting isolator or bus insulation surface)
- Sparks within insulation voids
- Insulation problems in cable terminations and connected equipment
- Poor electrical connections (floating potential)
- Defective current transformers and potential transformers

Eliminate periodic downtime for time-based maintenance

Partial discharge analytics revolutionized predictive maintenance practices by introducing one continuous, online partial discharge (PD) monitoring system designed for the following medium voltage applications:

- Switchgear
- Generators
- Motors
- Unit substation dry-type transformers
- Bus duct
- Cable connections



38 kV coupling capacitors installed at a dry-type transformer terminals



Phase resolved partial discharge data

Powered by the same proven technology found in Eaton's InsulGard system:

The InsulGard system detects partial discharge activity online, with the entire electrical system energized—no offline testing necessary. It analyzes radio frequency (RF) signals emitted by the partial discharge pulses and measures pulse quantity and magnitude, then correlates the data to temperature, humidity and various other electrical system dynamics. Originally developed for use in continuous processing and other industrial environments, InsulGard technology is helping thousands of customers worldwide predict insulation failures before they occur.

For more information please visit
Eaton.com/pd

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