

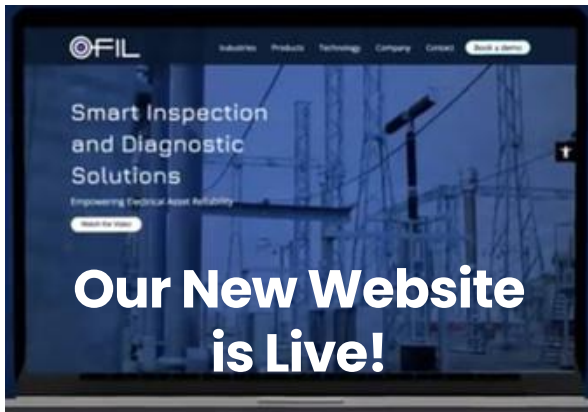
MARCH 2025



www.ofilsystems.com

OFIL SYSTEMS

NEWSLETTER



We've launched our brand-new website!

On our new platform, you'll find:

Comprehensive product information
Webinars & educational resources
Articles & industry insights.

Check it out now >>

<https://ofilsystems.com/>

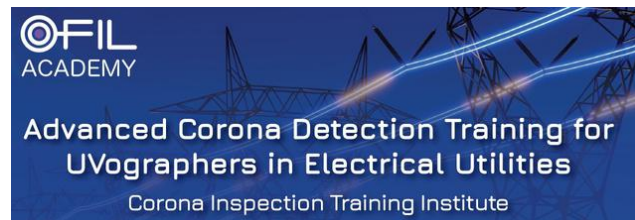
In this newsletter:

The Growing Need for
Advanced PD Detection in
EV & Electric Aircraft
Motors

Powering the Future:
Gridnostic Brings AI and
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Utility Grid Reliability

Enhancing Grid Washing
Efficiency with Ofil's
Corona Camera

Spotlight: DayCor® UV
EYES Family



Upcoming CITI Training in the U.S.

OFIL Academy is excited to announce the next Master Corona PD Detection Training course! For electrical utilities, grid reliability is everything. Detecting and analyzing Corona Partial Discharge (PD) early can prevent costly failures and extend asset lifespan.

 **Location: Nashville, Tennessee**

 **Date: May 6th – 8th**

Gain industry-recognized UVographer Certification and take your expertise to the next level!

[Registration on our website](#)

The Growing Need for Advanced PD Detection in EV & Electric Aircraft Motors

The rotating machine industry is undergoing rapid advancements, particularly in electric motors and generators used across multiple sectors, including energy, manufacturing, transportation, and aviation. These advancements have brought new challenges in Partial Discharge (PD) detection, prompting manufacturers to adopt more sophisticated diagnostic tools.

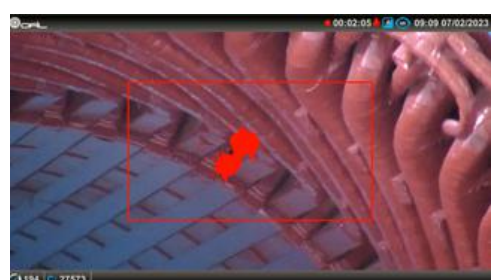
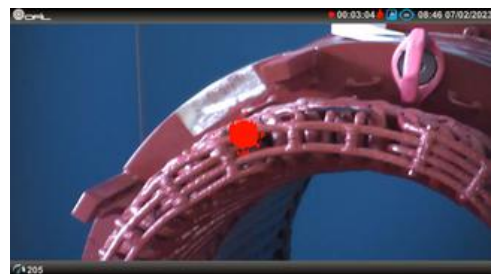
Electric Vehicles (EVs) are at the forefront of this transformation, with the industry shifting towards higher voltage systems, primarily 800V and above. This transition offers significant advantages such as faster charging, improved efficiency, reduced energy losses, and lighter infrastructure. However, the rise in voltage, combined with complex motor geometries and material constraints, has intensified insulation stress—leading to an increase in partial discharge occurrences, which can compromise motor reliability and lifespan.

In aircraft motors, high altitude and low atmospheric pressure during operation exacerbate PD issues. These developments highlight the growing need for advanced PD detection solutions that ensure long-term reliability and efficiency.

PD measurement units are commonly used to detect partial discharge; however, they often fail to pinpoint the exact source, making targeted improvements challenging for manufacturers. Traditional methods, such as blackout tests, have significant limitations in both accuracy and practicality.

To overcome these challenges, many manufacturers are turning to Solar Blind Ultraviolet (SBUV) camera technology, which offers a safer, more precise, and real-time approach to detecting PD in motors, generators, and high-voltage components.

Accurate Location of Partial Discharge



The key advantage of UV cameras is their ability to accurately locate PD sources, allowing for precise fault localization and targeted repairs. This improves safety and efficiency by eliminating the need for blackout tests while enabling inspections to be conducted seamlessly, even under normal lighting conditions.

In industries dependent on EV and aviation motors, where performance and safety are paramount, precise PD detection and localization are indispensable.

OFIL Systems' camera uses Solar Blind Ultraviolet (SBUV) technology to detect external PD in high-voltage rotating machines:

- Highly Sensitive – Detects PD at 1 pC @ 12m (IEC 60270:2000).
- Pinpoint Accuracy – Precisely locates PD for targeted quality control.
- Industry Compliant – Meets IEEE 1434-2014 & IEEE 1799-2022 standards.
- Works in Full Daylight – No need for dark environments.
- Multi-Industry Use – Ideal for electric motors & generators, HV cables, transformers, and others.



Watch our Webinar:
Optimizing the Health
of Rotating Machines

OFIL Academy Launches CITI Training Course on Rotating Machines with Dr. Nancy Frost

OFIL Academy is proud to introduce a new CITI training course focused on Partial Discharge detection in rotating machines, taught by industry expert Dr. Nancy Frost. With a distinguished career spanning high-voltage testing, dielectric materials, and insulation systems, Dr. Frost brings a wealth of knowledge from leading organizations. This course is designed to equip professionals in rotating machines repair & manufacturing, power generation, and electric vehicles with critical insights into PD theory, failure mechanisms, and hands-on detection techniques, helping them enhance the efficiency and reliability of motors and generators.

The comprehensive curriculum covers insulation systems, high-voltage testing, and imaging technologies, including UV camera applications for electrical fault detection. Participants will engage in live demonstrations, case studies, and practical sessions to gain actionable expertise in PD detection and machine diagnostics. Ideal for engineers, technicians, manufacturers, and service professionals, this course provides essential skills to mitigate failures, reduce maintenance costs, and ensure operational uptime.

Contact OFIL today to learn more and secure your spot!

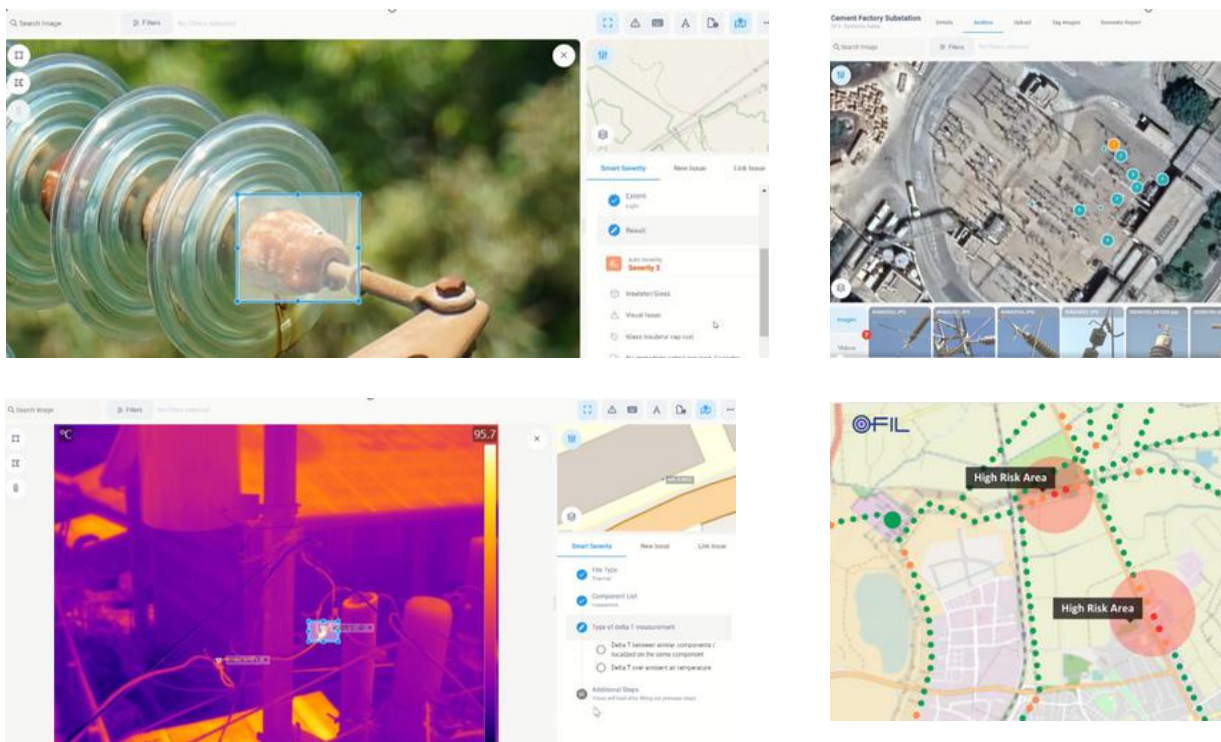
Gridnostic

Powering the Future: Gridnostic Brings AI and Image Intelligence to Utility Grid Reliability"

OFIL Systems has unveiled Gridnostic, an innovative software platform designed to enhance the reliability of power grids through image intelligence. As utilities face increasing challenges from aging infrastructure, extreme weather, and growing energy demands, Gridnostic provides a holistic, GIS-based solution that integrates data from multiple sensors, including UV, infrared, and visual imaging. This comprehensive approach ensures accurate inspections and actionable insights to streamline maintenance and improve worker safety.

At the core of Gridnostic is its Severity Diagnostics Tool, developed based on research and guidelines from the Electric Power Research Institute (**EPRI**).

This feature standardizes fault assessment, enabling utilities to make data-driven decisions by objectively analyzing inspection findings and prioritizing maintenance tasks. By leveraging industry-backed methodologies, Gridnostic enhances the accuracy and consistency of fault detection across vast power networks.



Additionally, the newly developed **AI Copilot** transforms large-scale inspection data by automatically scanning images and videos to identify corona events and thermal hotspots. This powerful capability allows utilities to detect potential failures faster and with greater precision, reducing manual workload and improving operational efficiency.

With ongoing enhancements, Gridnostic is set to redefine how utilities manage predictive maintenance and grid reliability in an increasingly complex energy landscape.

Grid Reliability through Image intelligence

DISTRIBUTECH™

March 24–27, 2025 | Dallas, Texas



OFIL is exhibiting at the largest T&D event in N. America

Spotlight: DayCor® UV EYES Family

DayCor® UV EYES are compact solar blind UV camera cores for OEM integration, designed to detect corona partial discharge—a hidden threat to electrical systems.

With high sensitivity, HD imaging, and precise fault pinpointing, they're built tough (IP65 rated) and easy to integrate via API.

Ideal for: Vehicle, train, robot, and fixed installations, as well as continuous substation monitoring



Enhancing Grid Washing Efficiency with Ofil's Corona Camera

Contamination, pollution, and environmental conditions can severely impact insulators, leading to flashovers, energy losses, and costly maintenance routines. Traditional cleaning methods, such as hotline washing, are essential but can be inefficient if applied uniformly without targeting specific problem areas.

By integrating Ofil's DayCor® UV cameras into maintenance protocols, utility companies can transform their grid washing strategies from reactive to proactive, leading to substantial cost savings, increased reliability, and improved operational efficiency.

[To Read the full article and watch the video click here](#)

