



Avoiding Outages on Your HV Electrical Network:

The UltraTEV[®] Plus² Solution

UltraTEV Plus² Brochure

Make partial discharge discovery simple

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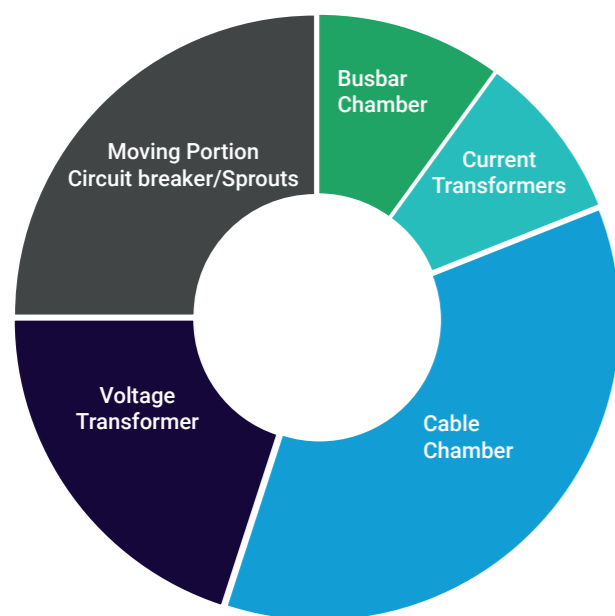


The Importance of Partial Discharge Detection

Regardless of whether you have encountered challenges with Partial Discharge (PD), it is crucial to understand its risks. Industry studies reveal that insulation degradation is the primary cause of failure in switchgear with more than 1 in 4 failures caused by Partial Discharge.

Through proactive PD detection, you can significantly mitigate risk through early detection and prevention of potential failures.

Where PD is typically found in switchgear:



Prevent Unexpected Failures

Detect issues early and take action before faults lead to outages, safety risks, and costly downtime. Proactively identifying problems allows teams to intervene sooner, reducing unplanned interruptions and improving overall system reliability and operational safety.



Extend Asset Life and Reduce Costs

Maximise the performance of your assets while minimising total lifecycle costs. By maintaining equipment more effectively and addressing issues before they escalate, you can extend asset lifespan, reduce replacement frequency, and achieve better long-term efficiency.



Make Informed Decisions

Move from reactive maintenance to informed, evidence-based asset management and smarter investment decisions. Access to accurate data and insights enables better planning, prioritisation and resource allocation, ensuring maintenance strategies are both effective and aligned with business goals.

The UltraTEV® Plus² Solution

Prevent costly asset failures by using UltraTEV Plus².

Traditional partial discharge testing approaches often rely on disconnected tools, manual processes and inconsistent data capture. This can make it difficult to build a clear, reliable picture of asset condition, particularly across large or complex networks.

Built for fast condition assessment of switchgear and high voltage assets, the UltraTEV Plus² combines multiple partial discharge detection methods in one handheld device, helping identify insulation issues early and reduce the risk of unplanned outages.

Advanced PD Detection and Analytics

The device builds on generations of expertise to enable accurate decision-making at the site. Features such as our advanced ultrasonic analysis algorithms provide instant feedback on the presence of PD, whilst our unique 'guided mode' supports users throughout the entire measurement process.

Both operators and management can leverage comprehensive PD data to identify issues early and enhance efficiency, by making informed decisions on maintenance planning, regulatory compliance, and asset lifespan optimisation.

Simplified User Experience

The intuitive user interface leads operators of all levels through efficient data collection and analysis. Through the on-device and cloud-based algorithms, PD is separated from background activity, enabling maintenance decisions to be made with confidence.

Complete by Design

The UltraTEV Plus² is more than a handheld device. It brings together detection, data capture, and structured survey workflows in one integrated solution. By standardising how data is collected, organised, and accessed, it enables a consistent, connected approach to partial discharge testing that goes beyond isolated measurements.

Flexible Detection Technology

This is a one-tool solution for online PD detection. The platform is supported by a range of advanced sensors that cover all HV network assets, including switchgear, cables, transformers, and overhead lines.



From Data to Decisions

The UltraTEV Plus² goes beyond a handheld instrument, forming part of a connected solution that enables a proactive, data-led approach to switchgear maintenance.

From the point of capture during the survey, data is automatically structured, stored and made accessible via the Managed Surveys platform, building a clear and consistent view of asset condition over time. Structured on-screen questions allow for faster testing with more consistent parameters across your network.

Users can access measurement records across an entire fleet of electrical assets, including waveforms, phase plots and audio files. This enables confident decision-making without the need for manual data handling.

If you need further support, EA Technology's team of experts can support data collection, review results, and provide advice on how to act.



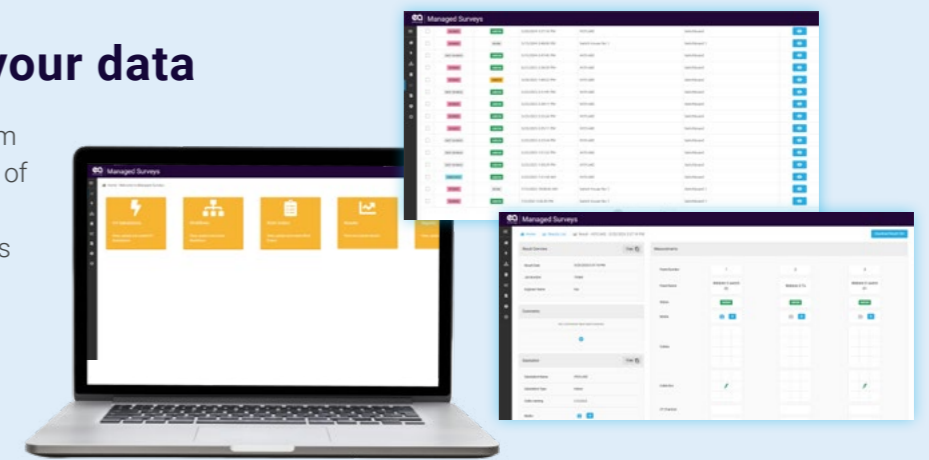
On-device

Simplifying your onsite activities, UltraTEV Plus² guides you through the measurement process, reducing the demands on the user and improving overall data quality.



Centralise your data

Our cloud-based system provides a central view of all PD activity, giving a clear indication of areas of increased concern.



Confidence to act

Full technical data, waveforms, audio, PRPD provide the engineering certainty to act.



Accessories for Evolving Challenges

The UltraTEV Plus², with its built-in TEV, ultrasonic sensors and SMART-IO expansion, ensures comprehensive PD detection for all electrical assets in a single instrument.

Our range of accessories provides the ideal mix of sensing technologies, enabling confident decision-making while proactively preventing equipment failures.

Accessory	Air Insulated Switchgear	Gas Insulated Switchgear	Open Terminal Switchyards & Overhead Lines	Underground Cables	Power Transformers
Ultrasonic Flexi-Sensor	•				•
Ultrasonic Contact Probe	•	•			
HFCT	•	•	•	•	•
VPIS	•	•			
TEV Locator Probe	•	•	•		•
UHF Receiver	•	•	•	•	•
UHF Barrier Spacer Sensor		•			
UltraDish			•		•
UHF Directional Antenna			•		•
Wireless Phase Reference	•	•	•	•	•
UltraBolt	•				



UltraBolt
A bolt housing an Ultrasonic sensor, providing consistent, accurate surface PD detection, without the need for air vents. Connect to your UltraTEV Plus² and take a reading in seconds.


Some of our accessories:



Wireless Phase Reference
Sends phase reference reliably and securely to the UltraTEV Plus².



VPIS
Connects directly to VPIS/VDS terminals, providing whole panel coverage from a single measurement.




UHF Receiver
Connects to pre-installed internal PD couplers and our wide range of UHF antennas.



Barrier Spacer Sensor
Detects PD externally at insulated barriers.



TEV Locator Probe
Works with the UltraTEV Plus²'s built-in TEV sensor to pinpoint internal PD sources using time-of-flight measurements



Directional Antenna
Quickly identifies internal PD while ignoring corona in various switchyards.



Ultrasonic Flexi-Sensor
Detects surface PD activity in hard-to-reach or limited access areas.



UltraDish
Detects ultrasonic Surface PD activity in overhead assets.



Ultrasonic Contact Probe
Identifies surface PD in sealed chambers.



HFCT
Split core CT allows easy application and visibility of local and remote PD activity.

Real stories. Real results.

“ We were very fortunate to find EA Technology, who introduced us to PD technology, they surveyed all site HV switchgear within a day and submitted a detailed report. The survey (using UltraTEV Plus²) was able to find a failing CT which we have been able to change at our convenience, rather than it fails in production. ”

Gary Crask,
Engineering Production Manager,
TRINITY MIRROR PRINT

Preventing Failure

In a recent case study, Lightsource, a global leader in solar PV projects, utilised the UltraTEV Plus² during routine maintenance. Technicians swiftly identified elevated PD readings in substation switchgear cells, allowing for prompt rectification. The device confirmed the elimination of the PD source, preventing potential flashovers that could render the switchgear unusable and necessitate costly cable re-termination. Without the UltraTEV Plus², the issue may have gone unnoticed, leading to significant operational disruption.



Transitioning Maintenance

Tenaga Nasional Berhad (TNB), Malaysia's leading electricity provider, transitioned from time-based to condition-based maintenance that integrates EA Technology's UltraTEV handheld devices to tackle switchgear failures. This shift resulted in a 71% decrease in failures over five years. Leveraging a Health Index approach, TNB streamlined asset management, meeting regulatory standards efficiently. EA Technology's solutions empowered TNB to pinpoint faults, undertake maintenance tasks proactively and achieve cost savings effectively.

A Solution Tailored to You.

The UltraTEV Plus² is designed to support everything from routine partial discharge testing through to a fully connected, data-led approach to asset management.

With a choice of packages, you can equip your team with the right tools, building towards a more consistent strategy across your network.



Core

Establish a reliable approach to switchgear assessment with a solution designed for everyday use.

Includes: UltraTEV Plus² handheld, standard sensors and accessories, integrated data management platform.

Enhanced

Expand your capability to include both switchgear and cable infrastructure.

Includes: Everything in Core, plus cable testing capability with HFCT, ultrasonic contact probe and flexible sensor.

Complete (recommended)

Achieve a comprehensive view of asset health across indoor and outdoor environments.

Includes: Everything in Enhanced, plus UltraDish™ for overhead asset inspection.

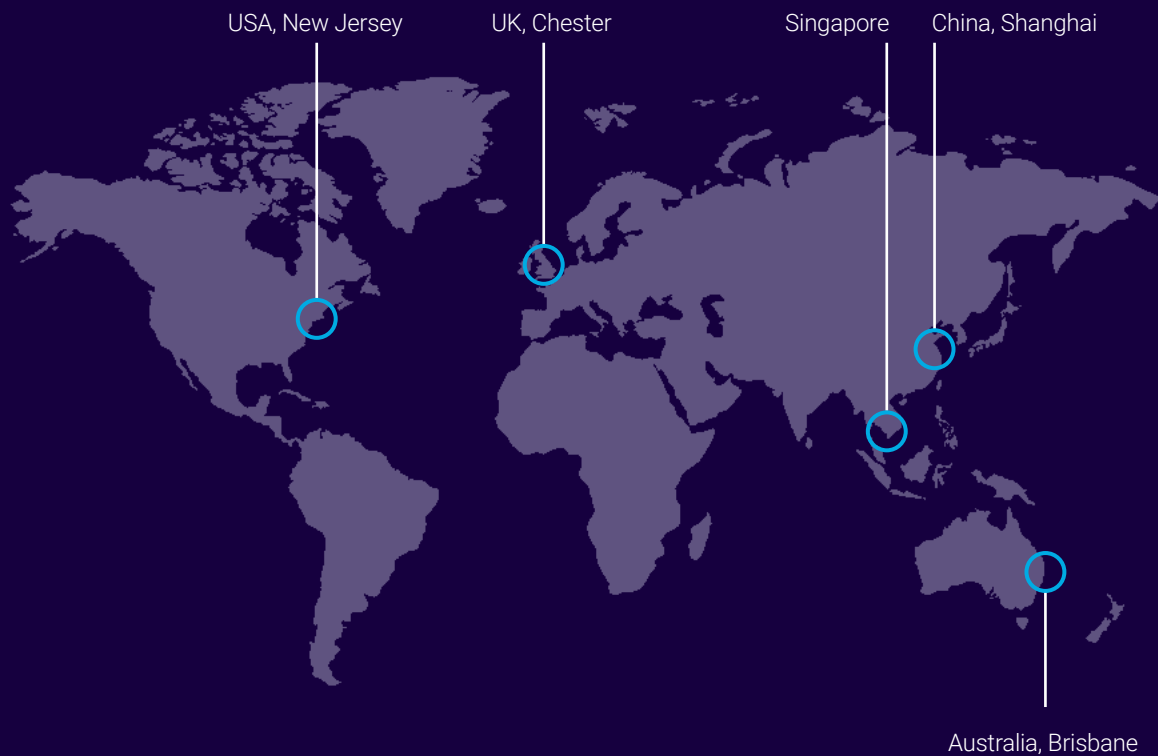
All packages include a 12-month subscription to our online platform, Managed Surveys.

Extend your solution:

- Substation data set-up to structure and organise your asset data
- Guided testing procedures for consistent, repeatable measurements
- Baseline site survey to establish existing asset condition
- Flexible training to quickly upskill your team
- Data reporting support to help with informed decision-making
- Annual calibration to maintain accuracy

Global Footprint

EA Technology is an engineering and technology business that provides intelligent energy solutions for designers, installers, operators, and owners of power network assets.



Founded in 1966 we have over 50 years' experience in the industry and 5 regional offices around the world to support our global customer base.

We work with a lot of our clients on a long-term basis to help them safeguard their power networks.

We advise our clients on strategy and implementation of a range of technology solutions to manage power assets, delivering maximum life and minimise cost.

Schedule a personalised demo of the UltraTEV Plus² tailored to your organisation's needs by booking via <https://eatechnology.com/book-a-demo>

To request a quote, scan the QR code.



Safer, Stronger, Smarter Networks

EA Technology Limited
Capenhurst Technology Park
Capenhurst, Chester CH1 6ES
PUBLIC

t +44 (0) 151 339 4181
e sales@eatechnology.com
www.eatechnology.com
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