



# Making Partial Discharge measurements easy with the UltraTEV Plus<sup>2</sup>

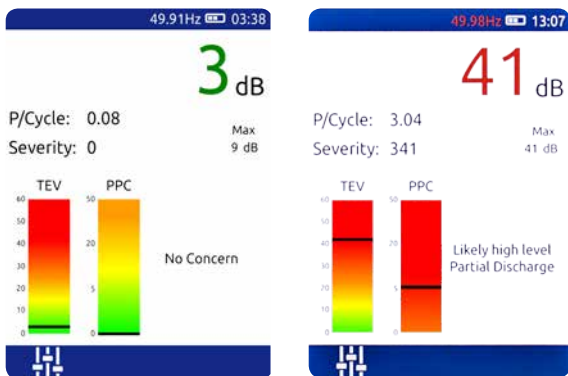


EA Technology has been designing, supplying and using equipment to assess switchgear ever since first establishing the Transient Earth Voltage (TEV) principles back in the 1970s. The UltraTEV™ Plus<sup>2</sup> brings together techniques and a wealth of experience and insight to make it easier than ever to avoid failures on your high voltage network.

This latest hand-held Partial Discharge (PD) instrument is easy to use, whilst also having additional sensing capabilities and real time advanced analytical features. The ability to distinguish true PD from noise and other interference means that you can make better decisions, save time, money and enhance safety.

## Interpreting the condition of your electrical assets

## Capturing the results and transferring them easily



The UltraTEV Plus<sup>2</sup> has been designed to make asset inspections easy. The instrument helps the operator understand what the results mean by interpreting the data and displays clear information and instructions.

The UltraTEV Plus<sup>2</sup> has the ability to transfer the results directly on to your PC or business network, via Wifi or USB/ SD Card. The new survey functionality allows details of substations and assets to be entered on the screen and guides users through the simple survey process.

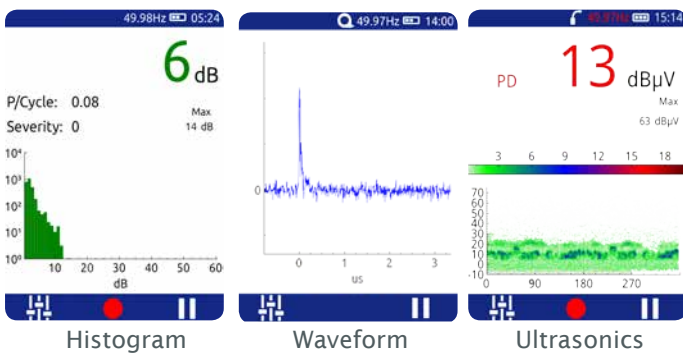
*“The new phase resolve plots are very helpful in identifying genuine Partial Discharge”*  
**Brian Matthews, Senior Asset Engineer and PD User Group member**

# Additional Partial Discharge Detection and Advanced Analytics

The UltraTEV Plus<sup>2</sup> has the ability to measure PD in cables and cable accessories using Radio Frequency Current Transformers (RFCT) as well as established techniques for surface PD (Ultrasonic) detection and internal PD (TEV) detection on switchgear.

The new advanced analytics allow PD measurements to be examined more precisely in real time or after the inspection:

- Phase plots: helps to differentiate between noise patterns and real PD
- Waveform capture: examines amplitude of individual pulses, for PD Characteristics
- Histograms: assists with identification of multiple sources of PD and noise discrimination



## Range of Kits and Uses

The UltraTEV Plus<sup>2</sup> is a multifunctional instrument that can be used to rapidly survey the condition of whole substations and check that working environments are safe. Changes in PD activity levels can be compared between assets and analysed over time, providing a clear indication of when further investigation is required. To meet your need we offer the following instrument kits:

Kit 1	Metal clad Switchgear	Standard kit for Switchgear condition assessment includes headphones & battery chargers.
Kit 2	Metal clad Switchgear Cables	This kit has additional external sensors and includes an RFCT, allowing quick and easy condition assessment of your cables*
Kit 3	Metal clad Switchgear Cables Outdoor assets	With the UltraDish™ option included in Kit 3, PD activity can be measured in overhead assets, offering a comprehensive condition assessment package

\* Access to cable earth required.

Safer, Stronger,  
Smarter Networks

## User Features

- Provides numerical and audible ultrasonic readings for classification of PD
- Provides numerical and audible TEV readings for interpretation of PD
- Wi-Fi connectivity allows survey results to be easily synchronised with asset management systems
- Phase resolved and waveform displays allow more reliable and conclusive decisions to be made based on measured PD
- Menu-driven backlit colour touchscreen and keypad (can be used when wearing gloves)
- Portable & rugged design
- Compatible with all UltraTEV Plus+ accessories
- Long-life rechargeable internal Lithium-Ion (Li-Ion) battery

## Business Benefits

- Use the in-built PD classification and interpretation tools to detect problems early to avoid dangerous and damaging failures and minimise network downtime / outages
- Optimise maintenance cycles and asset life through a better understanding of asset condition, comparing PD results over time to identify trends
- Increase on-site productivity by rapidly collecting key condition information in an accurate and consistent manner using Survey mode
- Detect PD in a wider range of assets with the inclusion of Cable PD technology.
- Highly user friendly with little training required offering time and efficiency saving

