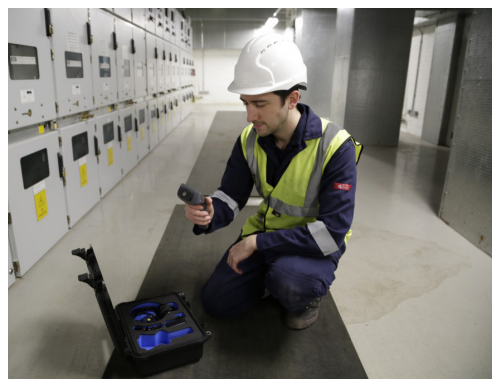




# Sonus PD

## Handheld Switchgear Partial Discharge Detector

The SONUS PD is specifically designed for Partial Discharge (PD) and Airborne Emission (AE) detection on Medium and High Voltage Switchgear. The unit detects Transient Earth Voltage (TEV) signals generated by internal partial discharge as well as ultrasound acoustic discharge generated by surface tracking, arcing or corona. PD detection can be utilized to detect early warning signs of equipment insulation failure. Inspections can be performed quickly and safely by maintenance personnel with minimal training. Fast and accurate diagnosis of problems using the SONUS PD will help you prevent unexpected outages.



### Features and Benefits:

- Compact handheld unit that will fit in your pocket
- Simple two button control on unit or control unit from Bluetooth connected Android Smartphone or tablet
- Listen with built in speaker or High quality behind-the-head style headset compatible for use with hardhats
- Android smartphone or tablet display of dB readings, Phase Resolved Partial Discharge (PRPD) plots and for data logging
- Data Synchronization to central server and synch with other SONUS PD units on clients system
- Automatically generate high PD alerts to asset management team live from the site
- Data Integration into SAP available on request
- Integrated Noise Detection Algorithm helps avoid "False Positive" TEV readings
- Compatible with panel mounted Partial Discharge Sensor (PDS) products from IRISS
- Minimal training is required to get a Predictive Maintenance program using Airborne Ultrasound and TEV up and running
- Detect early warning signs of problems in medium and high voltage electrical assets long before they become failures
- Collect baseline and trend PD information on electrical asset performance to streamline maintenance planning
- The Sonus PD



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[iriss.com](http://iriss.com)

## Technical Data

TEV Measurements	
Sensor	Capacitive
Measurement Range	0 to 80 dBmV
Resolution	1 dB
Accuracy	±1 dB
Noise Rejection	Yes
Ultrasonic Measurements	
Measurement Range	-6dBµV to + 70dBµV
Resolution	1 dB
Accuracy	±1 dB
Transducer Sensitivity	-65dB (0dB = 1volt/µbar RMS SPL)
Transducer Centre Frequency	40 kHz
Application	
Communication	Bluetooth & Customer Server
Data Access	Web front end
Capability	Android
Reporting	Yes
Results	dB, PRPD, Noise
Hardware	
Enclosure	Injection moulded plastic case
Display	OLED display with 6 display LEDs (PD level)
Control	Membrane keypad
Connectors	Power, Headphones and External Acoustic Sensor
Operating Environment	
Operating Temp	5°C to 55°C
Humidity	0 to 90% RH non-condensing
IP Rating	54
Unit Dimensions	
Size	175 x 89 x 46 cm
Weight	300g
Power	
Internal Battery	Lithium Ion, 3.75V, 2.2Ah
Operating Time	Approx. 8 hours
Battery Charger	
Rated Voltage	90 to 264 V AC, 5V, 2.6A
Frequency	47 to 63Hz
Country Adapters	UK, EU, Australia, USA
Charge Time	2 hours
Certification	
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU) EMC Directive (2014/30/EU)

## Sonus PD Usages:

### AE – PD Detection

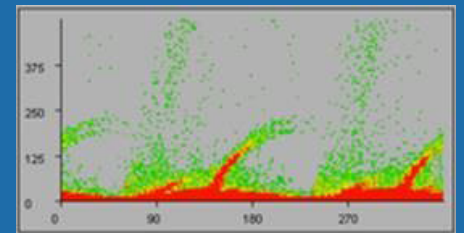
Defects on the surface of high voltage insulators are prone to partial discharge phenomenon including arcing and tracking. Tracking causes carbon deposits to build up over time and ultimately leads to flashover and insulation failure. The SONUS PD is highly sensitive to the ultrasonic emissions produced by tracking and arcing and enables any onset to be detected long before a failure occurs.

### TEV – PD Detection

Partial discharge activity inside insulating materials in metal clad medium and high voltage switchgear induces small voltage impulses called Transient Earth Voltages (TEV) on the surface of the switchgear's enclosure. TEV can be picked up using capacitively coupled transducer of the SONUS PD. Left unchecked, the partial discharges inside these insulating components will eventually lead to catastrophic equipment failure.



Works Seamlessly with the Sonus PDS range of EMSD products



Phase Resolved Partial Discharge Plot from Sonus-PD



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