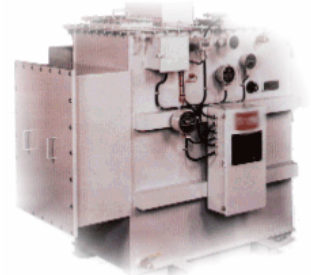




# ULTRASCAN

## Partial Discharge Monitor

*A high voltage partial discharge monitoring system for successful early detection of insulator and cable breakdown*



### ► Problem

Partial discharges are the major cause of progressive failures in High Voltage (HV) insulation and have drastic effects on the ageing process of HV equipment resulting in premature breakdown

### ► Strategy

Detection of partial discharge is an accepted investigation technique in avoiding distribution failure and maintaining supply - an essential task in modern asset management of HV and EHV plant

### ► Solution

The ULTRASCAN system provides an easy-to-use multipoint monitoring device which scans the ultrasonic characteristics of partial discharges to detect their presence, amplitude and consistency

ULTRASCAN can come as a portable test kit or as a fixed installation. It has been developed in conjunction with major electricity generating companies in the UK and has resulted from many years experience in applying ultrasonic condition monitoring techniques

### ► Benefits

- Reduction in supply outages, increase in customer satisfaction
- Improves condition reporting, reduces maintenance cost
- Online testing whilst test unit is still in service
- Very rapid, easy deployment
- Industry accepted technology
- Airborne detection of discharges
- Detection of PD in enclosures (e.g. on transformer walls)





# ULTRASCAN

## *ULTRASCAN – portable*



A portable unit for short term investigations of HV switchboards. The unit automatically scans up to 32 probes for a preset period of 48 hours maximum.

Probes have magnetic bases and gooseneck stands for rapid deployment.

Any PD activity is immediately registered on the screen and all readings are logged for later analysis if required. The instrument is easy and quick to install and is supplied in a portable case.

## *ULTRASCAN – fixed*

For permanent switchboard monitoring and continuous scanning of switchgear, ULTRASCAN provides immediate alarming and system health reporting.

Probes can be panel mounted using a HV screen collar, and the system is fully user configurable.

The system has an extensive automatic self checking processes, including probe damage detection and false alarm rejection.

Additional system health checks can be initiated by the user at any stage.



## *ULTRASCAN – hand-held PD and personnel safety unit*

ULTRASCAN HH has two uses: To check the presence of electrostatic discharge prior to entering an area containing HV plant. Secondly, to provide a simple indication of partial discharge activity occurring in HV equipment.



ULTRASCAN HH is a hand-held rechargeable battery operated device. A simple LED display provides an indication of PD activity and, in conjunction with the gain control, the source of the discharge to be located. The presence of sparks is also audible through the unit's earphones.

As a safety aid it provides an invaluable personal early warning alarm by detecting potentially hazardous installations, as well as being able to detect the presence of compressed air or super-heated steam. For PD investigation it rapidly locates areas of plant degradation, particularly insulation breakdown, for more detailed monitoring.