



## EHV-PDM

### Distributed PD Monitoring



**EHV-PDM** is a Partial Discharge monitoring system designed for application on critical assets where monitoring points, for instance cable joints, could be many tens of kilometres apart. The fibre optic linked system analyses PD data locally and sends processed information about the health of the asset being monitored back to a main monitoring unit where results can be accessed via a secure customer web front end.

The monitor is designed to detect defects in EHV cable joints with HFCT sensors and GIS switchgear with external UHF sensors.



#### The Benefits

- **Online PD Detection** - The EHV-PDM uses PD sensors that couple to the HV network and equipment non-intrusively and online such that no disconnection of the circuits is required
- **Remotely Accessible** – Compatible with a range of communication protocols, the EHV-PDM automatically downloads data to a central database from where it can be viewed on a powerful analysis website
- **Long Distance** - The key design of the EHV-PDM system is to allow for cost effective remote monitoring of assets which are usually inaccessible. Examples include joints on EHV cables in tunnels or assets in wind farm arrays



#### Remote DAQ Unit

Each RDU is situated near to the monitoring point. Any number of RDUs can be connected on the same network with all processed data being automatically transmitted back to the central server.

RDUs are available configured with between 4 and 32 PD channels.



#### Web Based Analysis

iSM is a customer specific secure website used for review and analysis of individual asset condition. This powerful tool allows users to drill down from a basic condition overview to highly detailed data including sampled PD wave shapes.

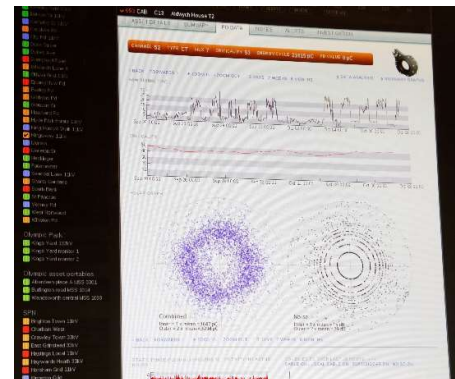
- Sensitive PD detection in high noise environments
- Local alarms plus email and SMS alarms
- Automated generation of criticality league table
- Supports HFCT, TEV, AE and UHF PD sensors
- Trend analysis and reporting

# Technical Specification

## EHV-PDM

Input Channels	
Number of Channels	No limit
Spike Protection	Yes
PD Monitoring	
Sensor Types	HFCT for cable and termination PD CC for TEV local PD AA for acoustic, surface tracking UHF for GIS PD Detection
Cable PD Range	50pC to 1,000,000pC
TEV Range	0dBmV to 54dBmV
Acoustic Range	-6dBuV to 54dBuV
UHF Range	0dBmV to 50dBmV
Test Type	PRPD – PD pattern, wave shape analysis DeCIFer™
Communication	Fibre optic, 3/4G, Ethernet
Data Acquisition	
Signal sampling	100M Samples/sec, 14 bit
PD Analysis	Fully automated with DeCIFer™
Reporting	Website or Local display
Data Analysis	
PD wave shape	Yes
PRPD View	Yes
Trending data	Yes
Data Validity	5 years
Reports	Yes
Alarms	Email, SCADA
Operating Environment	
Temperature	0°C to 50°C
Humidity	20 to 90% RH non-condensing
IP Rating	IP 54 Standard IP 68 Optional
Power	
Rated Voltage	100 to 250 VAC
Frequency	47 to 63Hz
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU)
RDU	
Number of Channels	Up to 12
IP rating	Up to IP68
Temperature	-10°C to 55°C
Humidity	≤95% RH non-condensing
Rated voltage	12voltsDC or 100-240VAC
Power	20 Watts
Communication to EHV-PDM	Fibre optic, 3G or 4G (sim card required)
Dimensions	Vary depending on channels From 50 x 20 x 60 (cm) To 100 x 20 x 60 (cm)
Designed and manufactured in the United Kingdom	

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