

ASENS

Modular design for partial discharge monitoring in electrical assets



Partial Discharge activity is an indicator of increasing defects in insulation. PD is a discharge or spark that partially bridges the gap between conducting electrodes. The discharge may be in oil filled equipment or in a gas filled environment.

RM's ASENS with acquisition system is specifically designed to detect partial discharge using portable measurement/ continuous monitoring methods and is also capable to locate PD position by studying the PD amplitude and phase delay of the acoustic waves propagating through the discharge activity. The location of the PD can be estimated by measuring the time of arrival of the acoustic wave, and PD localization is

ascertained by using sensors at multiple locations of assets. This makes acoustic emission sensing a preferable measuring tool in real time PD signal detection.

RM's advanced acoustic measurement has an additional advantage of possessing better- signal to noise ratio for real-time applications. To avoid the damage to high voltage equipment, detecting and locating PD is crucial both in industries and utilities. Acoustic waves are measured by ASENS, and the AE System will identify the real PD and their location based on ML/Time Difference of Arrival (TDOA) algorithm with the highest percentage of location accuracy to fault location.

The highly sensitive ASENS can be used for measurement of PD on Transformer Tanks, GIS, Reactors, Large Pressure Vessels, and for Leak Detection. Depending on the application and environment the sensors are available with three different resonant frequencies of 50 KHz, 80 KHz and 150 KHz.

Benefits

- PD localization with multiple sensors
- High noise immunity for online partial discharge detection
- Integrated amplifier for better SNR
- Significant time saving through fast localization of the fault
- Quick and easy application
- Good return on investment

Features

- Built in pre-amplifier
- Narrow band resonant sensor with highest signal to noise ratio
- Simple and rugged sensor
- Easy to use, light weight
- Plug and play connections
- Highly sensitive

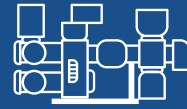
Applications



Oil Filled Reactors



Oil Filled Transformers



Gas Insulated Switchgears and Gas Insulated Lines

Technical Specifications

Specifications	Gas Insulated Switchgear (GIS)	Oil Filled Transformer/ Reactors	Oil Filled Transformers
Resonant Frequency	50 KHz	80 KHz	150 KHz
Frequency Range	15 KHz - 70 KHz	20 KHz - 180 KHz	60 KHz - 400 KHz
Sensitivity Peak	>115 dB	>70 dB	>115 dB
Built in Pre-amplifier	40 dB 28 V	-	40 dB 28 V
Size mm	Φ30 x 57	Φ19 x 19.5	Φ30 x 36.5
Applicable Temperature °C	-20 to 50°C	-20 to 80°C	-20 to 50°C
Housing Material	SUS-504	SUS-304	SUS-304
Receiving Surface Material	Ceramic	Ceramic	Ceramic
Protection Grade	IP62	IP62	IP62
Connector Type	BNC	M5	BNC
Connector Position	Side Face	Side Face	Side Face
Product Features	Built in Pre-Amplifier	Low Frequency	Built in Pre-Amplifier

Ordering Code

