ASENS

Highly Accurate Acoustic Sensor for Partial Discharge Localization

ASENS is an advanced acoustic sensor designed for precise detection and localization of partial discharge activity. Its high sensitivity ensures accurate monitoring for reliable insulation health assessment..

The ASENS acoustic sensor is designed to detect and localize Partial Discharge (PD) activity in electrical assets using cutting-edge acoustic emission technology. By accurately analysing acoustic waves' amplitude and phase delay, the ASENS system enables precise localization of PD sources, enhancing diagnostic accuracy. Strategic placement of sensors on the asset's surface allows for real-time monitoring and fault triangulation, ensuring timely identification of insulation defects.

Equipped with advanced signal-to-noise optimization, the ASENS system provides reliable PD detection even in high-interference environments. Its modular design supports portable measurements and continuous monitoring, making it adaptable for diverse operational scenarios. The system employs Time Difference of Arrival (TDOA) algorithms and machine learning to achieve precise fault localization with unparalleled accuracy.

ASENS is ideal for detecting PD activity in transformer tanks, gas-insulated switchgear (GIS), reactors, and large pressure vessels. Its robust design includes resonant frequency options (50 kHz, 80 kHz, 150 kHz) to suit various applications and environments. For online or offline monitoring, ASENS ensures asset safety and operational efficiency, preventing costly downtime and equipment failure.

» Benefits

- Accurate PD localization with multiple sensors.
- Reliable performance with high noise immunity.
- Improved detection with enhanced signal clarity.
- Saves time through quick fault localization.
- Cost-effective with minimal maintenance.

» Features

- Built-in pre-amplifier for enhanced signal strength.
- Narrowband design with high signal-to-noise ratio.
- Rugged, lightweight, and portable design.
- Plug-and-play connectivity for easy setup.
- High sensitivity for accurate PD detection.

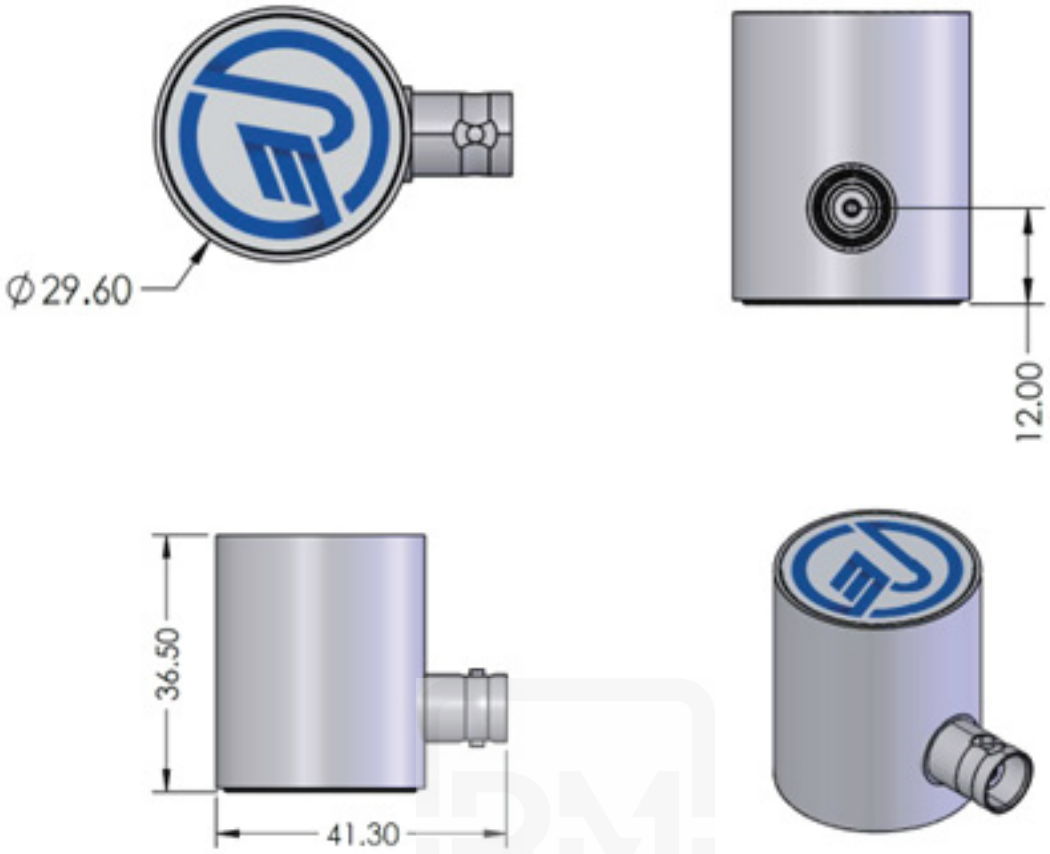
» Applications

- Partial discharge monitoring in oil-filled reactors and transformers
- PD diagnostics in gas-insulated switchgear (GIS) and gas-insulated lines (GIL)
- Fault localization in high-voltage equipment.

» Technical Specifications

Specifications	Gas Insulated Switchgear	Oil Filled Reactors/ Special Transformer	Oil Filled Transformers	Oil Filled Transformers
Resonant Frequency	50 kHz	80 kHz	150 kHz	150 kHz
Frequency Range (-3dB)	15 kHz - 70 kHz	20 kHz - 200 kHz	60 kHz - 400 kHz	60 kHz - 400 kHz
Sensitivity Peak	>115 dB	>70dB	>115 dB	>75 dB
Built-in Preamplifier	40 dB, 28V	No Built in Amplifier	40 dB, 28V	No Built in Amplifier
Size mm	Φ30 x 57	Φ19 x 19.5	Φ30 x 36.5	Φ30 x 36.5
Applicable Temperature °C	-20°C to +50°C	-20°C to +80°C	-20°C to +50°C	-20°C to +50°C
Housing Material	SUS - 504	SUS - 304	SUS - 304	SUS - 304
Receiving Surface Material	Ceramic	Ceramic	Ceramic	Ceramic
Protection Grade	IP62	IP62	IP62	IP62
Connector Type	BNC	M5	BNC	BNC
Connector Position	Side Face	Side Face	Side Face	Side Face
Mounting Holders	Mounting with Magnetic Holders	Mounting with Magnetic Holders	Mounting with Magnetic Holders	Mounting with Magnetic Holders

Product Drawing



Ordering Code

A	s	e	n	s	–	P	A		–	G		–	F	Y		–	x	y

Acoustic Sensor

Preamplifier
0 = No preamplifier
1 = With preamplifier

Gain (dB)
40 = 40 dB

Frequency (kHz)
None if no preamplifier
50 = 50 kHz
80 = 80 kHz
150 = 150 kHz

x = Connector type
F = Female

y = Sensor Connector
1 = BNC

CERTIFICATIONS

ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | Lloyd's Register | Atex Certification | NIST Certification

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