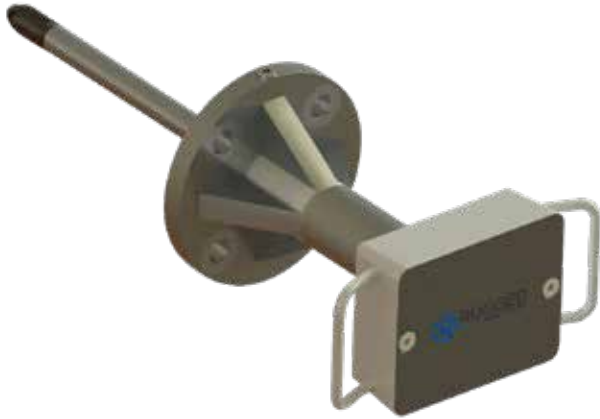


USENS-D: UHF PARTIAL DISCHARGE SENSOR



- Wide band, Highly Sensitive, UHF PD Sensors for Transformer Drain Valves
- High Dielectric, Rugged, and Reliable design
- Built-in overvoltage (transient) protection
- Shielded to avoid electromagnetic interference
- 100% Leak proof and pressure tested for 10 bar
- Suitable for extreme environment, Outdoor Substation
- Customized according to Transformer Drain Valve design

Highly sensitive and accurate Partial Discharge sensor for measuring ultra high frequency signals emitted by partial discharge activity inside Transformers.

Product Summary

UHF PD sensing technology has proved to be the best technology in detecting partial discharge activity inside transformer tank and real time monitoring of PD activity. Rugged Monitoring has developed the most advanced UHF PD sensor for Transformers, capable of detecting smallest PD signals.

USENS-D is an Ultra High Frequency (UHF) antenna that is capable of detecting smallest UHF frequencies emitted by the partial discharge (PD) activity. The sensors are suitable for all types of Transformers, and easy installation on the transformer drain valves. The IP65 rated ingress protection allows sensor to be installed at Outdoor installations. Their wide band (200 - 2000 MHz) frequency response and high sensitivity (up to -90dBm) enables lower cost of PD monitoring system and higher ROI (Return on Investment).

Rugged Monitoring USENS-D is designed to fit into most of the Transformer Valves and all voltage levels. The sensors can also be customized according to Transformer Valve design and customer technical requirements. The sensors come with built-in overvoltage protection and N-type connection. The sensors can be connected with any UHF based PD monitoring system regardless of manufacturers.

Applications

- Continuous Online Partial Discharge Monitoring
- Periodic Partial Discharge Testing and Measurements
- High Voltage Testing during Commissioning
- Power Transformer PD Testing and Monitoring
- Reactor PD Testing and Monitoring
- Distribution Transformer PD Testing and Monitoring

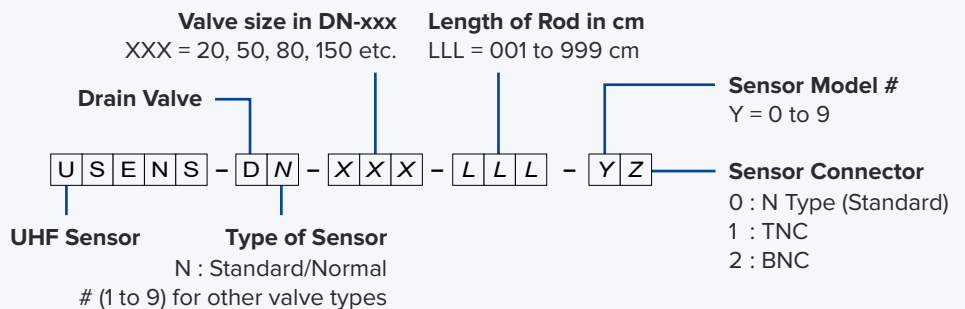
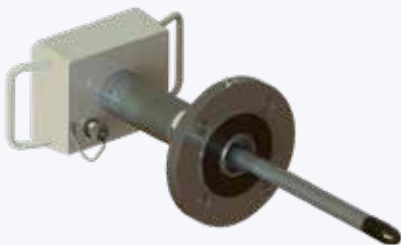
Benefits

- Higher sensitivity (-90dBm) ensure higher ROI of monitoring
- Wide frequency response, compatible with all PDM systems
- Easy installable, and High Dielectric strength, Safest Sensors
- Shielded Sensor, Noise Immunity
- Built-in overvoltage protection keeps the PDM electronics safer
- IP68 protection and rugged design, suitable for outdoor installations
- Leak proof sensors enables safety and 0% oil leakage
- Customizable according to Transformer Valve design and customer requirements

TECHNICAL SPECIFICATIONS

UHF Frequency Response	200 - 3000 MHz
Sensitivity	up to -90 dBm
Average Effective Height over 500MHz – 1500MHz	15 mm+
Min. Effective Height over 500MHz – 1500MHz	6 mm+
Withstand Voltage	up to 1500 kV
Output	N-Type connector; Customized option available
Connector Circuit Impedance	50 Ω
Pressure Testing	up to 10bar
Vibration Testing	Suitable for HV - Transformer applications
Ingress Protection (IP)	IP68
Ambient (Operating Temperature)	-60 °C to +150 °C
Storage Temperature	-60 °C to +150 °C
Operating Humidity	95% humidity at 50 °C
Dimensions	Customized as per Transformer Valve design
Weight	app. 2.0 KG; Customized as per customer requirements
Install Position	Inside drain valve of Transformer
Signal Cable	Very low attenuation UHF (Coax) cable

ORDERING CODE



Rugged Monitoring Services

Rugged Monitoring provides customization of sensors, monitors & software. In addition we offer on-site commissioning services, maintenance contracts and technical support to all customers worldwide.



About Rugged Monitoring

Industry leading team of fiber optic experts with 100+ years of combined experience committed to delivering customizable solutions for challenging applications. We offer a range of reliable, high performance, customizable sensors and monitoring solutions that are immune to external influence.