



USENS-T

Transformer UHF Internal Tank
Valve Sensor

USENS-T Real-Time Partial Discharge Detection for Transformer Tank Applications



Designed for precision and durability, the UHF PD sensor accurately monitors partial discharge activity in oil-filled transformers and reactors. Its high sensitivity ensures early detection of potential issues, enabling proactive maintenance and enhanced asset reliability.

USENS-T is our advanced Ultra High Frequency (UHF) Partial Discharge (PD) sensor designed to detect and monitor PD activity inside oil-filled transformers. With a wide frequency range of 200–2000 MHz, the USENS-T enables reliable detection of partial discharge signals, making it an ideal solution for cost-effective PD monitoring and improved ROI.

USENS-T is easy to install directly onto transformer tanks or inspection covers, ensuring real-time PD activity monitoring. Its IP65-rated rugged design provides durability and suitability for extreme environments, making it ideal for outdoor substation installations. It also features built-in overvoltage protection and an N-type connection, allowing seamless integration with any UHF-based PD monitoring system, regardless of manufacturer. Additionally, it can be customized to fit various transformer types and customer specifications, offering flexibility and reliability for comprehensive PD monitoring in high-voltage applications.

» Features

- Broad UHF Frequency Monitoring Range
- Reliable Performance in Harsh Environments
- Rugged stainless-steel sensor tested for 9G vibration tolerance
- Continuous Online PD Monitoring
- Custom Flange Design for Easy Installation
- Integrated Transient Overvoltage Protection
- Leak-Proof Sensor for Transformer Safety
- High Voltage Testing during Commissioning
- Periodic PD Testing and Measurements

» Benefits

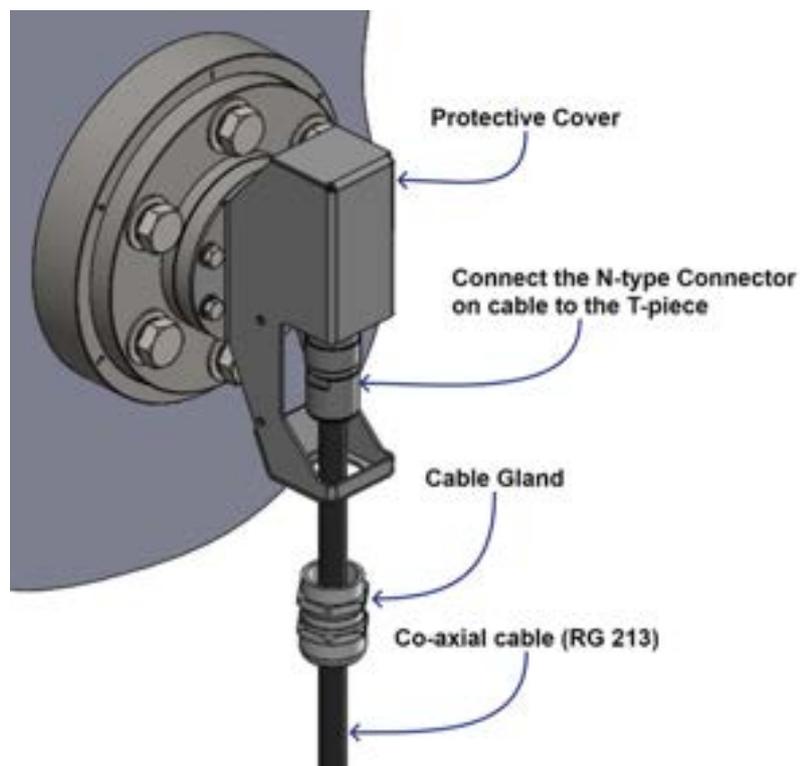
- Enhanced Compatibility
- Reliable and Safe Operations
- Longer Operational Lifespan
- Cost-Effective Monitoring
- Low Signal-to-Noise Ratio
- Rugged and Durable

» Applications

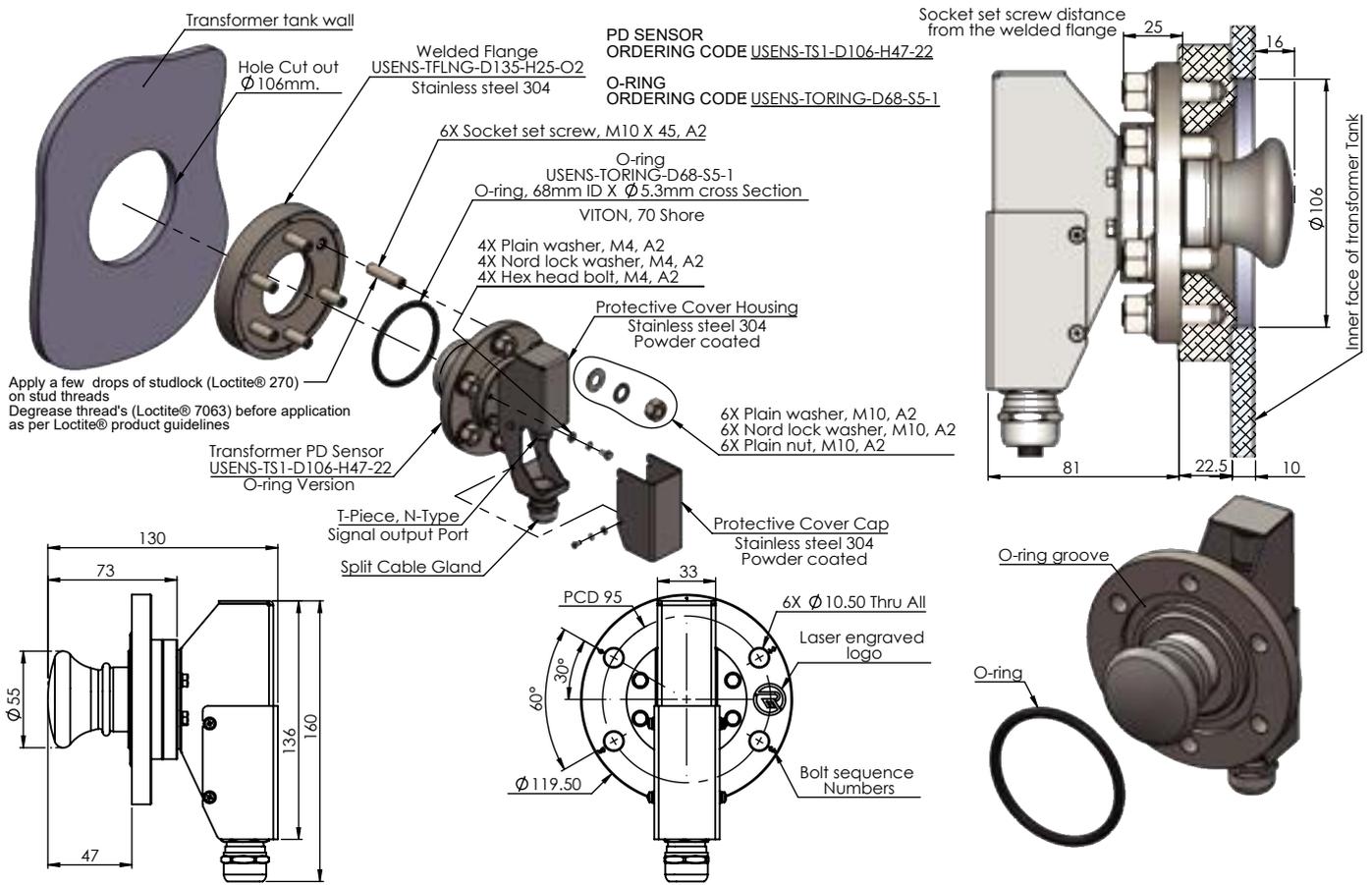
- Power Transformer
- Reactor
- Distribution Transformer

» Technical Specifications

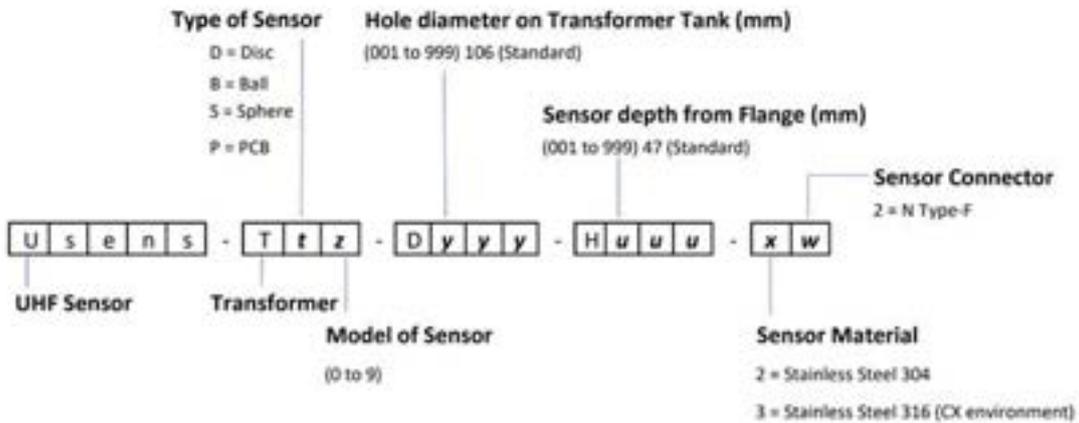
Frequency Response	Decoupling Range 200MHz-2000MHz
Mean Effective Height over 500MHz-1500MHz (mm)	>6mm
PD Output	N-Type Female connector with T Protector
Connector Circuit Impedence	50 Ω
Dimensions (D*H) in mm	120mm Dia * 130mm Height
Insertion depth of UHF antenna	47 mm
Sensor body material	Stainless steel
Standard Design for	Customized as per Transformer Flange Design (RM design and provide seperate flange if needed)
Weight	<1.0 Kg
Installation Position	Transformer Tank, Inspection Cover, Transformer Dielectric Window
Oil Pressure	Up to 8 bar
Vibration Testing (IEC 60068-2-6)	20 sweeps of 9G force in 6 degree of freedom
Ingress Protection (IP) (IEC 60529)	IP65
Ambient (Operating Temperature)	-40°C to +110°C
Storage Temperature	-40°C to +110°C
Operating Humidity	95% humidity at 50°C
Remarks	<ol style="list-style-type: none"> 1.Use O-ring only, no gasket 2.Comes with protective case 3.SS304 and SS316 grade available based on request



» Product Drawing



» Ordering Code



CERTIFICATIONS



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