

# Bushing UHF PD Sensor (CT-2)

## Compact UHF PD sensor for retrofit to bushings for PD measuring or monitoring systems

Bushings are an essential, critical and expensive part of electric power transmission and distribution systems. Failure of a bushing will unavoidably lead to power outage, damage, and costly repair or replacement of the bushing itself or attached equipment such as transformers. A continuous partial discharge (PD) monitoring of bushings detects deterioration of its insulation system at an early stage and allows to take measures before insulation breakdown and failure happens. A partial discharge monitoring system (PDMS) also helps to understand the health of bushings and supports maintenance and asset management.

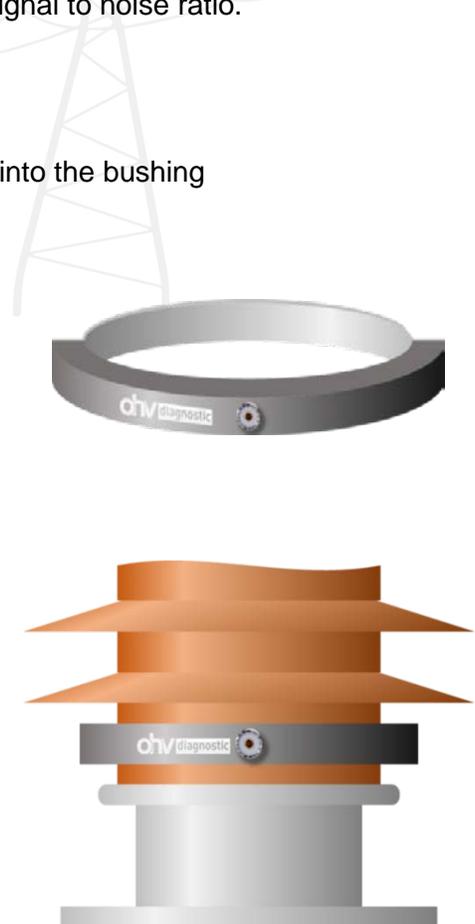
Within the PDMS hardware infrastructure, the sensors for picking up the electromagnetic PD signals from within the bushing play a crucial role in detecting PD. Frequently, bushings do not have integrated PD sensors, in particular in older installations or below and including 110 kV voltage level. The bushing ultra-high frequency (UHF) sensor can be retrofitted to any bushing due to its variable diameter. Using bushing sensors, the UHF measurement has high sensitivity and a good signal to noise ratio.

### Features:

- Easy installation on lowest bushing trunk without invasion into the bushing
- Variable adaption to different bushing sizes
- No infringement of electric field critical sections
- Weather resistant for installation on outdoor bushings
- Suitable for permanent and temporary installation

### Technical Data:

| Electrical             |                                   |
|------------------------|-----------------------------------|
| Frequency Range        | 100 – 900 MHz                     |
| Impedance              | 50 Ω                              |
| Mechanical             |                                   |
| Bushing trunk diameter | Variable (to be defined at order) |
| Weight                 | 500 g (depending on size)         |
| Operation              |                                   |
| Temperature            | -20 to +60 °C (-4 to +140 °F)     |
| Humidity               | 0 – 100%, condensing permissible  |
| Environment            | Indoor, outdoor, weatherproof     |



**Scope of Supply:**

- Bushing UHF PD sensor
- Fastener set
- Installation instruction

**Application Example:**

Bushing UHF PD sensors can be used in combination with the PDMS partial discharge monitoring system.

Example: Transformer PDMS using bushing and oil drain valve UHF PD sensors.

