PowerStream Solutions

ndb Technologies

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Partial Discharge Monitoring

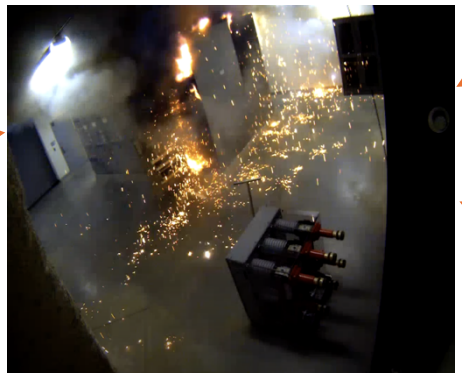
What is Partial Discharge

Partial discharge (PD) is a localized dielectric breakdown which does not completely bridge the space between the two conductors. It occurs in *medium* and *high voltage equipment*.

If allowed to progress over time, PD will result in catastrophic equipment failures in the form of explosion and fire.

Types of PD

Surface



Catastrophic Failure

Corona

Internal

Causes of Partial Discharge

- Thin Air Gaps
- Poor Cable Termination
- Excess Misalignment
- Molding Defects
- Surface Contaminants
- Uncontrolled Humidity
- Supply & Load Issues
- Excessive Harmonics

Time base maintenance is not an effective way to manage the risks associated with MV/HV equipment.

Continuous monitoring of MV/HV equipment is the most effective way to detect issues early, allowing for intervention prior to a catastrophic failure.

PD Annunciator™ System

Designed by NDB Technologies, the PD Annunciator System is the next generation of partial discharge monitoring. This technology is applicable for medium voltage switchgear and dry type transformers; the design allows for quick and easy installation with various sensor options.

Benefits

- 24/7 Partial Discharge Monitoring
- Trending System Analysis
- Non-Invasive Installation = No Shutdown
- Local & Remote Alarming

Operational Impact

- Reduce planned and unplanned downtimes
- Lower TCO by reducing spend on equipment failure, field labor hours, resources & generator run time
- Lower Personnel Safety Risk
- Minimizes Human Interaction

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PD Annunciator™ - Technical Specs

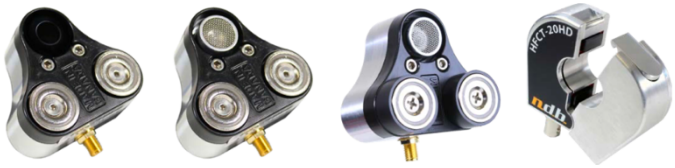
Installation mean	DIN rail or Magnets
Power	9V to 24 VDC / 1.2W max
Acoustic channels	3 channels
Acoustic bandwidth	30kHz to 88 kHz
Acoustic dynamic range	40 dB
HF channels	3 channels
HF bandwidth	10MHz to 1.0GHz
HF dynamic range	40 dB
Operating temperature	-30°C to 50°C (-22°F to 122°F)
Alarm Threshold	User-defined for each channels
Alarm Reporting	LED indicators, Dedicated hardware circuit SCADA, web interface, sms, e-mail
Noise mitigation	High frequency noise mitigation based on amplitude and repetition rate
Connectivity	Modbus RTU for remote access USB for PC connection
IP rating	IP65 with dust boots installed
Dimensions	201 x 87 x 53 mm (7.9 x 3.4 x 2.1 in)
Weight	0.51 kg (1.1 lbs)
Approval	CE

PD Annunciator™ Solution

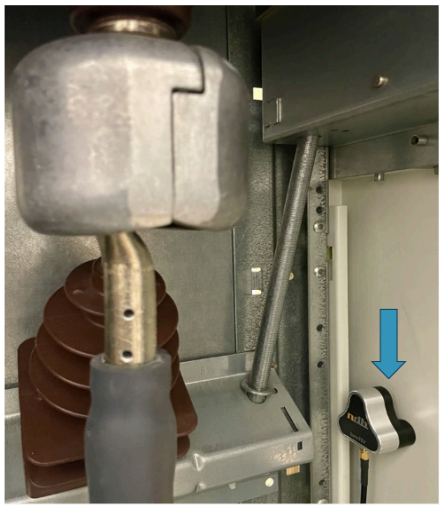
The PD Annunciator™ unique design consists of a three channels acquisition module paired with sensors of your choice, most commonly TEV and Acoustic or HFCT. With many advancements and innovations, the PD Annunciator™ handles partial discharge monitoring on metallic cabinets using our proven and advanced technologies.

Sensor That Fits Your Application

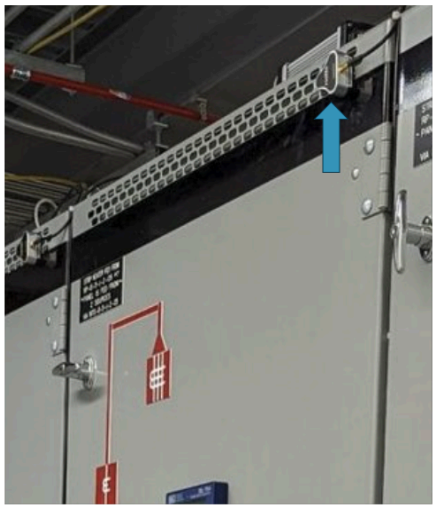
SonoTEV™ SonoTEV-Air™ SonoTEVi-Air™ HFCT-HD™



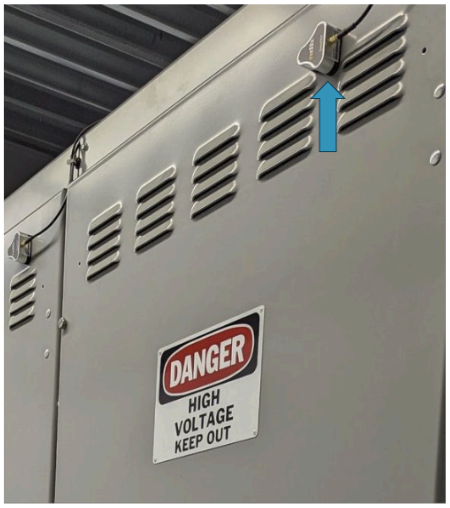
SonoTEVi-Air™



SonoTEV-Air™



SonoTEV™



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