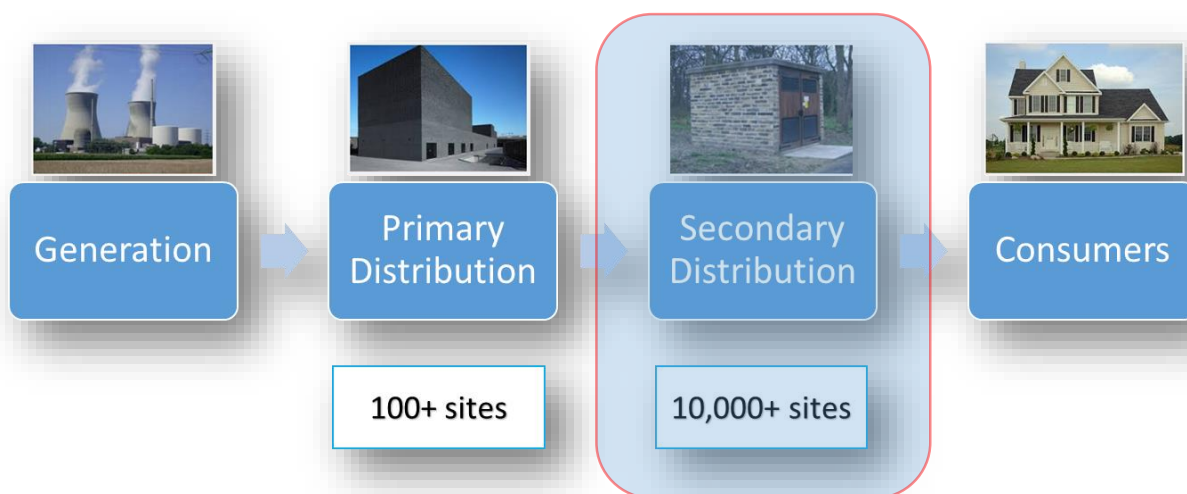# PD Alarm
Application Note

The Problem

In any network, the vast majority of assets are distributed via secondary substations taking HV down to LV for consumer supply. Often these assets are low in value but high in volume, therefore difficult to include in a condition monitoring programme;

- Traditional monitoring is too expensive
- Spot Testing cannot cover the high number of assets

IPEC's new PD Alarm addresses this issue. Designed for large scale roll out it is now a cost effective system for PD monitoring over such a large asset base.

To highlight the intended sites in which the PD Alarm can be deployed, the diagram below shows the number of substations in a 'typical' large city.

Generation → Primary Distribution → Secondary Distribution → Consumers

Primary Distribution: 100+ sites

Secondary Distribution: 10,000+ sites

The PD Alarm is designed for these secondary substations, and is the **only solution** currently on the market for customers to monitor these assets cost effectively.

About the PD-Alarm

The PD Alarm is an asset mounted device for indicating the presence of partial discharge in high voltage switchgear, ring main units (RMUs) and dry type transformers. Designed for use in small substations, the instrument can activate local and remote alarms in addition to local indication.

The PD Alarm is built into a tough case that magnetically mounts to the RMU. Installation is very quick and simple with only a power connection required to get the system operational.

Alarms can be configured to operate either locally with SCADA or remotely using an optional integrated modem.

The system incorporates algorithms that distinguish noise from real PD, significantly reducing the likelihood of getting false alarms. The status and PD levels are displayed on a bright OLED display at the front of the unit.
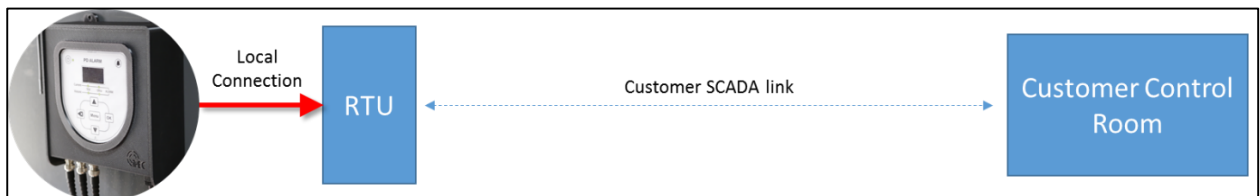
What is it designed to monitor?

- Medium Voltage Air Insulated Switchgear
- Internal PD – TEV
- Surface Tracking – Ultrasonic
- Cable Terminations
- Ring Main Units
- Distributed Switchgear
- Dry Type Transformers
- Small Switchboards

Communication and Alerts

The PD Alarm can send communications via two methods, SMS or SCADA. If the customer has local RTU's installed, an alert can be sent through the existing SCADA network. If there is no SCADA connection then alerts can be sent via SMS to a central serve, hosted by IPEC, which will then generate an email.

SCADA

SMS and Email