

On-Line Partial Discharge Monitoring System (PDSurveillant: PD-RDM300A)

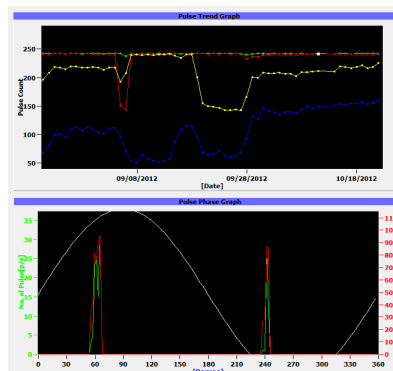
On-Line Partial Discharge Monitoring for MCSG and Cable terminations.



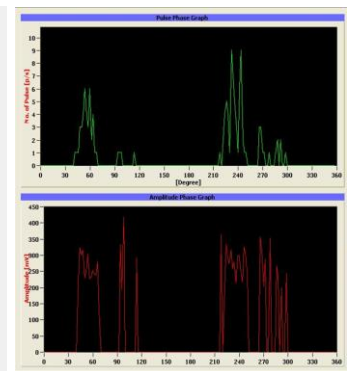
The **PD-RDM300A** is the newest device in the PDSurveillant line of test equipment, which provides continuous monitoring of your metal clad switchgear (MCSG) including Standoff Insulators and cable terminations (joint). This device detects RF (Antenna) and current (HFCT) when partial discharge occurs in the insulation system. It determines the PD fault frequencies by scanning at 4 MHz – 100 MHz range. Data is collected in bursts (Envelop) by the count method. This trends the measurement of switchgear and cable terminations (joint) deterioration and gives early warning to prevent catastrophic failure.

- PD-RDM300A **provides an early warning** signal for potential failures that will result in lost equipment and revenue.
- **Continuously monitors** and detects fault conditions of Standoff Insulations in MCSG and cable terminations (joints).
- **Reduces maintenance costs** and the likelihood of unexpected power failure.
- Enables maintenance managers to **manage risk and avoid costly damage** to adjacent equipment.

The **PD-RDM300A's** antennas (sensor) are installed inside of the metal cabinet, which collects PD only from the inside of cabinet (not influenced by PD or noise generating from the outside of cabinet)---free from the false alarm. The PD burst collection of RDM300 is not controlled by frequency, but controlled by envelope time (signal length). Thus it is designed to eliminate the influence of radio, radar, and EMI for high accuracy.



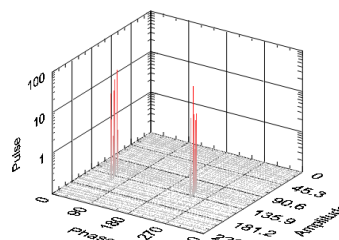
Trend and 2D Data View



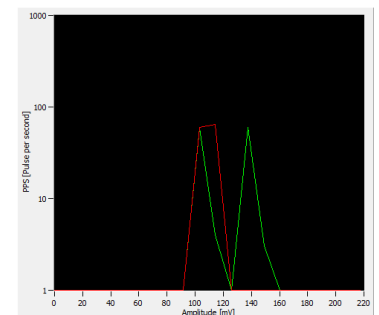
Pulse and Amplitude Data View

PD-RDM300A is designed to detect RF and current generating from the PD signal by using antenna and or HFCT: sensors collect data from each MCSG and cable termination (joint) and data is saved in local computer for future analysis.

The ability to link up to 15 units using RS-422 allows the user a greater degree of protection for critical substation equipment.



Φ -q-n chart for PD



Pulse vs. Amplitude

(NOTE: All PDSurveillant units include software, which allows accessibility of continuous monitoring from remote-local LAN)

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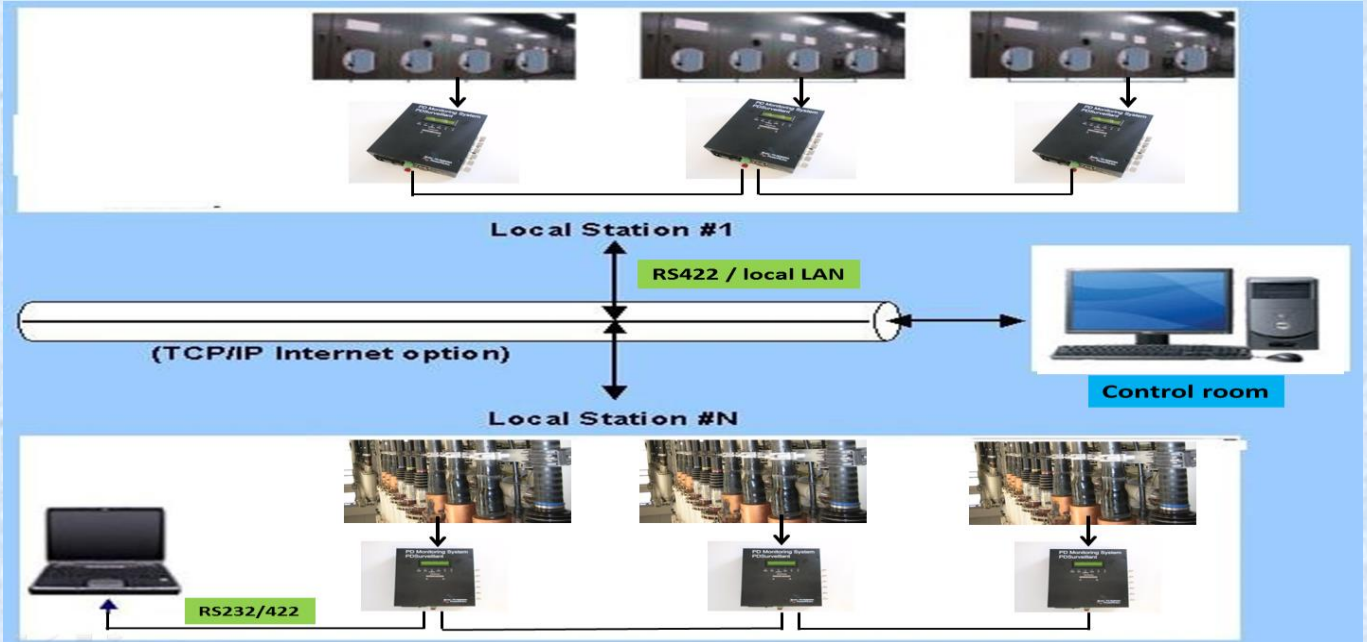
PD Diagnostic System

Technical Specifications

Purpose

The PD-RDM300A system is a diagnostic system with capabilities to detect, analyze and monitor PD (Partial Discharge) signals occurring in MCSG (Metal Clad Switch Gear) and Cable terminations (joints).

System Configuration



Functions

- Programmable parameter option allows the user to set each MCSG and cable joint
- Provides early warning signal for potential failures
- Auto mode operation

Display unit

- Operation Status
- Alarm
- Pulse Count (PPS)
- Pulse Level Meter
- Amplitude of PD (mV)
- Distribution

System Operation

- Win 98/NT/2000/XP/7 Environment

Data management

- Ability to Trend and Forecast a known fault
- User settings are possible for data collection
- One month of data storage capability

Data Analysis

- Partial Discharge counts in bursts is captured
- Analysis of pulse count distribution per phase
- 2D, 3D and QM&NQN graphic display for ease of diagnosis

Specifications

System Type
Number of Channel

Mounted type
4 Ch, 8 Ch, 12 Ch and 16 Ch

Sensor: Antenna and HFCT

Bandwidth: Load antenna (center frequency :40 MHz)
HFCT (100 KHz – 20MHz) Impedance: 50 Ω

Applicable targets

MCSG and cable termination

Communication

- RS-422/RS485 1 Km (19200 bps)

Power requirement

Size

110/240VAC, 50/60Hz, 1A/0.5A

- 8.2"(W) x 7.1"(H) x 2.3" (D) 4.5 lbs.