

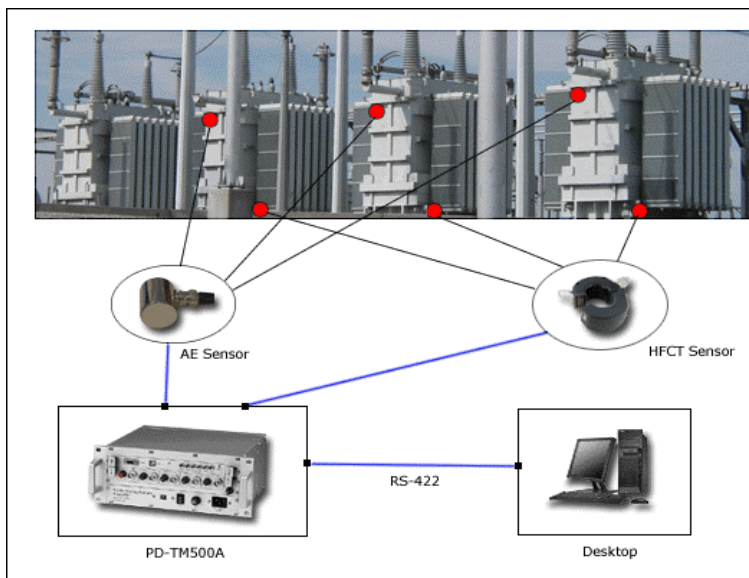
On-Line Partial Discharge Monitoring System (PowerPD™: PD-TM500A)

On-Line Partial Discharge Diagnostic for Transformer

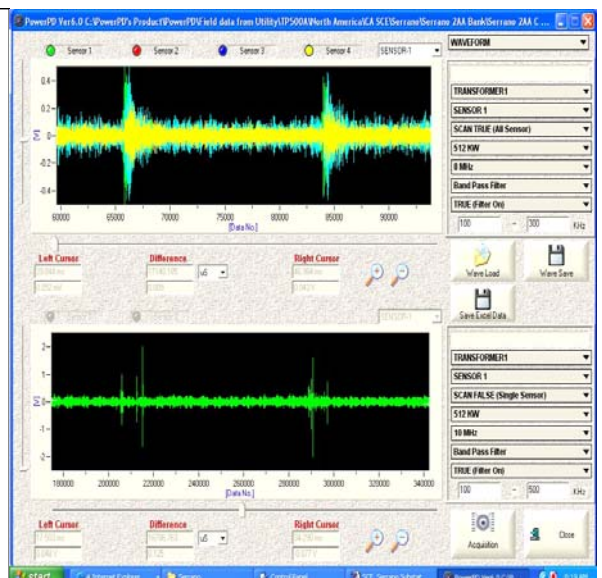


The **PD-TM Series** are non-portable, mounted type units. PD-TM500, 1000, 1500 are online diagnostic systems that continuously monitors partial discharge in equipment such as Transformers, GIS, and CGIS. These units detect, analyze, and locate the signal source of partial discharge or arcing. This test equipment is mounted on or near the electrical equipment under test, in a weatherproof housing. (All PowerPD units include software, which allows accessibility of continuous monitoring from your home or office PC, via, remote Internet)

- Connects to your system via SCADA
- Installed on fully loaded and energized electrical equipment, completely non-intrusive, no need for an outage to install.
- Simultaneously measures AE (acoustic emission) via 4 sensors and electrical discharges via a clamp-on type CT. The CT is a High Frequency Current Transducer (HFCT)
- Detects, measures and locates signal sources from PD or Arcing
- Used on transformers, LTC's, LA's Circuit Breakers, & Gas Insulated Substations (GIS)
- Sensitivity = AE: 20pC; HFCT: 5pC



Configuration of PD-TM1500A



Display of Partial Discharge Detection

PD Diagnostic System

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Technical Specifications

Purpose

This system detects and analyses the PD generation status on the high voltage Transformers by using on-line, real time measurement. Simultaneous use of AE and HFCT sensors make the system more reliable in locating source of Partial Discharge.

System Configuration

PC	Local Station	Sensor
PC : Pentium	PD pulse counting and PD signal digitizing in high speed	Acoustic Emission (AE) sensors
OS : Windows 98/NT/2000/XP	Sensor signal conditioning	HFCT Sensors
System operation, data processing and	Data communication with PC	

Functions

PD Detection and Measurement	
PD pulse counting	PD waveform digitizing, processing display
Analysis and Diagnosis	
Pulse data analysis	PD signal waveform analysis
Pulse vs Time, Pulse vs Phase Pulse vs Amplitude, Pulse-Time-Phase, Pulse-Amplitude-Phase	Digital filtering, FFT, Zoom-in, Zoom-out, Analysis of Freq., Amplitude and number of signals
Find signal source location	Alarm
Data management	Pulse and waveform data management for 30 years
System operation	
GUI (Graphic User Interface)	Windows 98/NT/2000/XP

Specifications

System Type	Mounted type	
Number of Sensor Channel	5Channel (AE: 4Ch, HFCT: 1Ch)	
Channel of Sensors		
AE:(Freq: 80KHz ~ 300KHz) Sampling rate: 8 MHz (Max)	HFCT:(Freq: 100KHz ~ 5MHz) Sampling rate: 20MHz (Max)	Digitizing For 3 cycle of AC power (Min) Digitize 5 Ch. simultaneously
Communication		Size
- USB: 12Mbps - RS-422 (Opt.): 500Kbps, 300m (Max. length) - Optical Fiber Com.(option) : 5 Km		- 12" x 4.7" x 11.3"
Power requirement		Applicable targets
AC 110/240V +/- 10%, 50/60Hz, 1Φ, 0.5A		Transformer