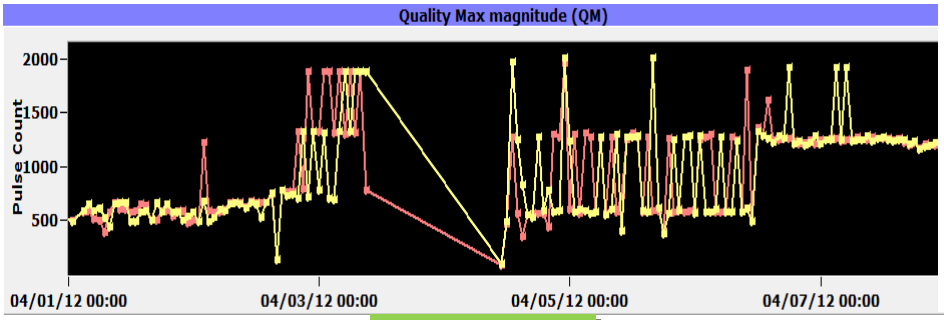
On-Line Partial Discharge Monitoring System (PowerSys™ :**PD-MAT400D**)

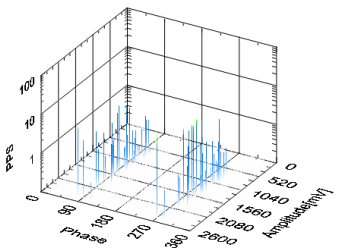
Predictive Diagnostics for Transformer & Reactors,

PD-MAT400D is a permanently mounted on-line Partial Discharge (PD) diagnostic system. This test device focuses on detecting and analyzing the generation of PD in equipment such as transformers and reactor using acoustic emission detection. The ability to link up to 15 units using an RS-422 allows the user a greater degree of protection for critical substation equipment. Each unit uses four Acoustic Emission (AE) sensors. This unit ***provides advanced warning*** of potential failures.
(NOTE: All PowerSys units include software, which allows accessibility of continuous monitoring from your control room computer, via, remote local LAN)

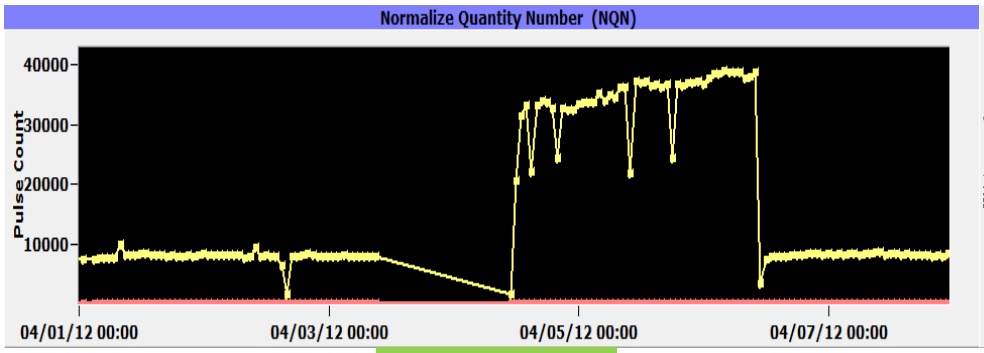
- ***Provides pro-active decision making*** though continuously monitoring and detecting abnormal conditions in high voltage equipment
- ***Reduced maintenance expenses*** by avoiding costly damage to equipment
- ***Provides early warning*** of possible failure and lost of revenue from an unexpected outage.
- ***Risk management of previously undetected faults.***



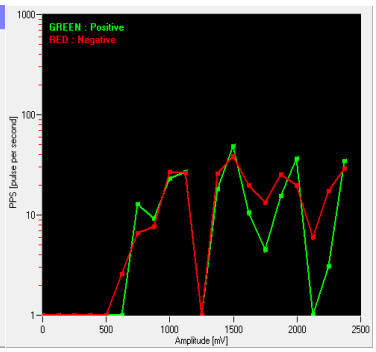
Trend with QM data



Φ-q-n chart for PD



Trend with NQN data



Pulse vs. Amplitude

PD Diagnostic System

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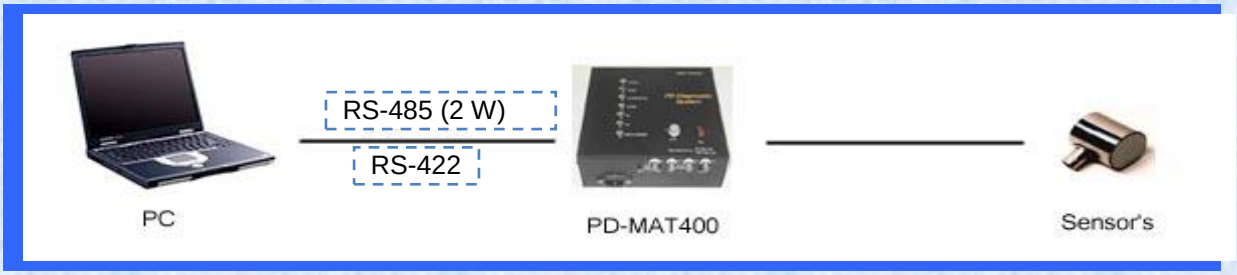
Center Park Plaza 6131 Orangethorpe Ave. Suite 260
Buena Park, CA 90620
Tel: 1.714.522.7676 Fax: 1.714.522.7677

Technical Specifications

Purpose

This system detects and monitors the PD generation status on the high voltage electrical power equipment (Transformers and Reactors).

System Configuration



Functions

Digital Display on the unit, which cycles through each channel.

- Operation Status
- 4 to 20mA input/ output
- Pulse Level
- Dry Contact
- Alarm

Programmable alarm option allows Threshold & Envelop Alarm

Partial Discharge counts in bursts are captured (Envelop)

Automatic noise level detection

User settings are possible for data collection

Software on PC

- Simple display and management of daily, monthly and yearly data
- Ability to Trend and Forecast a known fault
- 2D, 3D and QM&NQN graphic display for ease of diagnosis

System operation

- Graphic user interface
- Win /XP/7/8 Environment

Specifications

System Type	Mounted type	**Number of Sensor Ch.**	4 Ch. AE
Environmental Condition			
Up to one month of data s	Operating temperature: -20°C – 70 °C, Humidity: 0% - 95%		
Sensors			
Communication	AE : (Freq. : 80KHz ~ 300KHz)		

- RS-422: (Baud Rate: 19200 bps, Length: 3000 ft, Daisy Chain Link: Up to 15)
- RS-485: (2 wires, Baud Rate: 19200 bps)

Power Requirement	
Size	8.7 in × 8.1 in × 3.1 in