PDiagnosticM

Portable Online Partial Discharge Monitoring System

Monitoring Endpoint Unit (MEU)

The PDiagnosticM utilizes UHF, AE, and HFCT sensors to monitor, detect, and diagnose partial discharge signals in a multitude of medium and high voltage electrical equipment such as GIS, MV switchgear, power cables, and transformers. It is designed to provide non-permanent online monitoring for power assets with PD activity. It consists of Monitoring Endpoint Units (MEUs), sensors and amplifiers, a Diagnostic Server Unit (DSU) (optional), and cables. The PD signals detected from the sensors are transmitted to the MEU for processing. The processed data is transmitted to the DSU (optional) through wireless networking and is analyzed and diagnosed by the PC based software and Intelligent Diagnostic System. PD type and approx. location are identified and maintenance suggestions are provided.

Applications

- GIS
- MV switchgear
- Power cables
- Transformers

Features

- Each MEU detects the PD activity through 10 customizable channels simultaneously
- The configuration of the sensors for all the channels is customizable
- The Wireless Networking and Communication can support up to 250 MEUs
- Remote data transmission and remote control functions
- The device power system, enclosure and sensors meet the IP54 for weather protection
- Easily portable to multiple sites
- Suitable for both indoor and outdoor applications

Detection Bandwidth

- UHF: 300MHz ~ 1500MHz
- AE: 20kHz ~ 300kHz
- HFCT: 500kHz ~ 50MHz

Technical Specifications

- Channels: 10 customizable channels, recommended configuration: 3 External UHF sensors, 4 AE contact sensors, and 3 HFCT sensors; it can be configured with any combination of UHF, AE, and HFCT sensors depending on the needs of the customer.
- Data Communication: Ethernet
- Output: PRPD & PRPS spectrums; pulse waveforms
- Dimension: 21.7" x 13" x 9.1" / 55cm x 33cm x 23cm
- Weight: 27lbs / 12kg
- Power: AC 85~264V, 50/60Hz
- Operating temperature: 5°F ~ 130°F / -15°C ~ 55°C

Configuration Options

External UHF Sensors

AE Contact Sensors

HFCT Sensors

Diagnostic Server Unit (DSU) (Optional)

PDiagnosticM Sensor Case

*This is a configuration of 6 AE contact sensors, 3 UHF sensors, and 1 HFCT sensor. The configuration can be customized upon the user's request.

PDiagnosticM Software

- Communicates with all MEUs through wireless networking and receives the data from them
- Database system to save all data
- Data acquisition control and analysis
- Built-in typical PD and disturbance characteristic database
- Displays the data detected from each channel in real time
- Analyzes and processes the historic data in the database through statistics and intelligent diagnostic technology and delivers the partial discharge trends
- Expert Diagnostic Function to generate detailed reports automatically
- Temporary online monitoring

How to Use PDiagnosticM
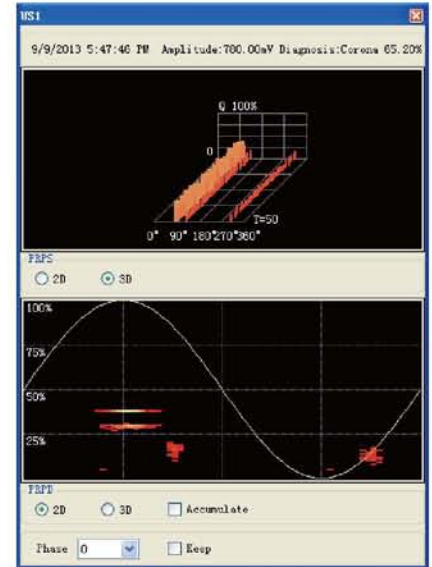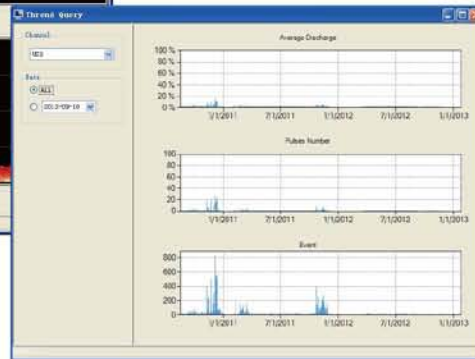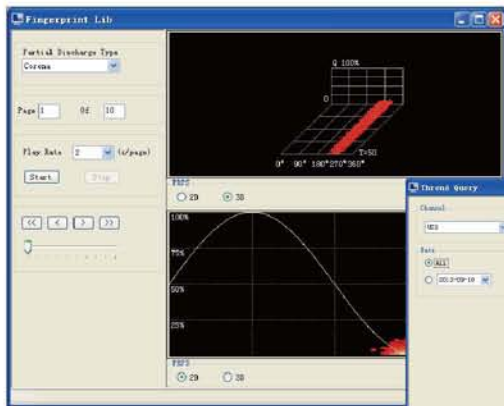
How to Use PDiagnosticM

Sensors are
Connected through
Coxial Cables

UHF2   UHF1

UHF3   AE3

AE4

HFCT3 HFCT2 HFCT1
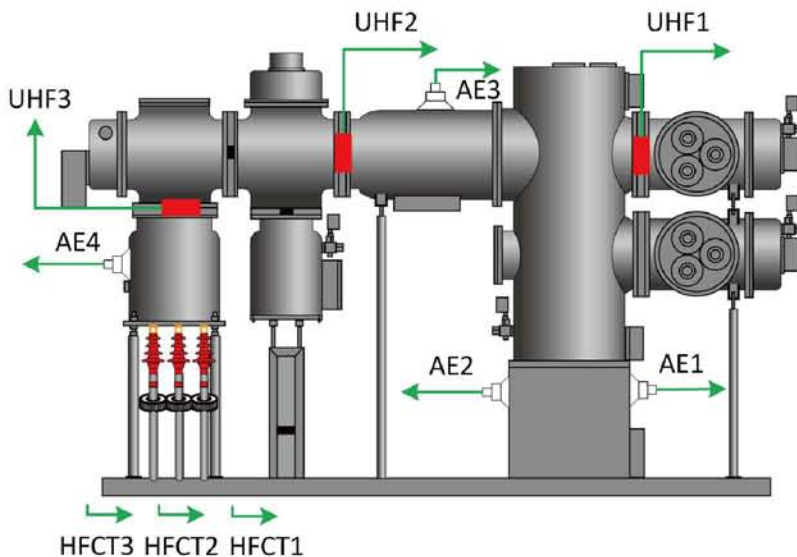
AE2   AE1

PDiagnostic
(Placed On-site)

AE1
AE2
AE3
AE4
UHF1
UHF2
UHF3
HFCT1
HFCT2
HFCT3

POWER MONITORING AND DIAGNOSTIC TECHNOLOGY LTD.

6840 Via Del Oro, Suite 150, San Jose, CA 95119, USA

P: +1 (408) 972-5588   E: sales@powermdt.com
F: +1 (408) 972-5678   W: www.powermdt.com