APM 3000

On-line PD Monitoring System
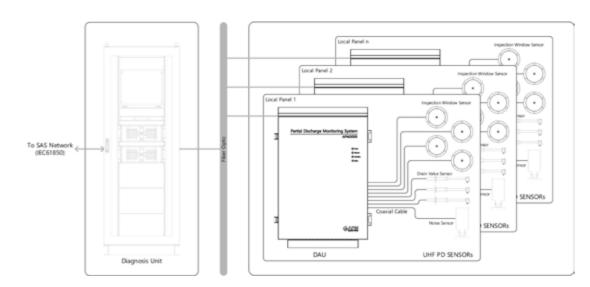## for Power Transformer

APM 3000 is an Online Partial Discharge Monitoring System (OPDM) for power transformers base on UHF partial discharge technologies. APM 3000 monitors and diagnoses various defects timely and accurately to support improved Condition Based Management (CBM) and to prevent serious breakdown of power transformers.

▸ Suitable for on-line partial discharge monitoring of extra-high voltage Power Transformer
▸ Distinguishes PD signals from similar noise signals by analyzing the characteristic of individual PD pulse signal in UHF bandwidth at time domain and frequency domain
▸ Able to locate defects causing PD inside transformer by comparing UHF signals from numbers of sensors installed in the transformer

Diagnosis Unit

Item	Specification
Power	90 to 240 VAC, 50/60Hz
Input	More than 250 channels
Analysis	Individual discharge signal is analyzed and its characteristics is mapped in 2-dimensional time-frequency space to make one group of discharge signals of one cause distinguished from others.
Diagnosis	Built in neural network engine classifies PD into 5 types: Protrusion Electrode, Floating Electrode, Defective Insulator, Free Moving Particle and Noise
Alarming	HMI, Email, IEC61850
Graphic Tools	T-MF, PRPD, PRPS, Trend, and others
Channel Configuration	Three threshold levels for alarming can be configured for each channel individually
IEC61850	Enabled
Remote Monitoring	Enabled
Communication	1000Base-T Ethernet
Storage	Database
Self Test	Enabled

Local Unit

Item	Specification
Power	90 to 240 VAC, 50/60Hz 120 to 370 VDC
Input	8 UHF Channels, N-Type Connector
Sensitivity	Can detect discharge less than 5 pC within monitoring area of Transformer
Input Bandwidth	Wide Bandwidth 100 ~ 2000MHz
Dynamic Input Range	- 65 to 0 dBm
Band Pass Filter	Combination of 4 LPF and 4 HPF
Data Acquisition	Individual Discharge Signal Shape in Time Domain and Frequency Domain
Noise Gating	Enabled (External Noise Sensor)
Communication	Fiber Optic (1000Base-X)
Notification	4 x LED Status Indicators
Operating Temperature	-25°C to 55°C
Operating Humidity	100%
Enclosure Rating	IP54
Dimensions	450 x 703 x 300 (W x H x D) mm

System Configuration