GIS*monitor*

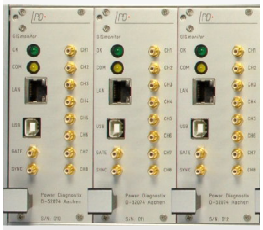
The GIS*monitor* builds on 15 years experience in online PD monitoring on rotating machines, transformers, cables, and especially GIS systems. It combines proven technology of the ICM*monitor* with new processor technology and embedded hardware capabilities. The hardware core of the system has been optimized for parallel, real time PD acquisition on multiple channels. Any UHF signal can be detected and digitized within micro seconds. A separation of PD events from external disturbances or internal switching pulses is calculated in real time and therefore an effective PD and alarm detection is given.

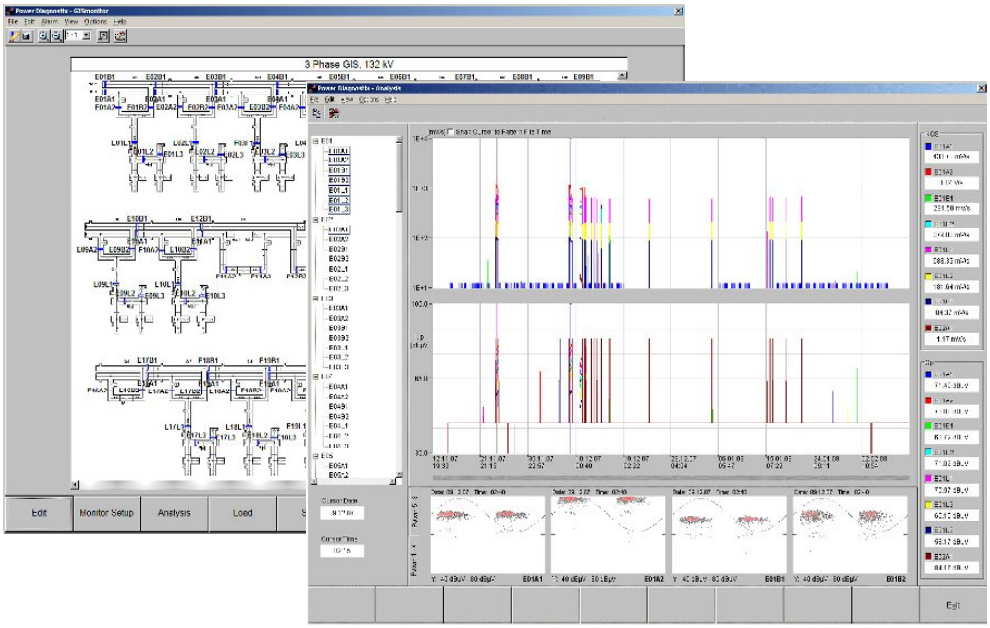
Each 8-channel acquisition plug-in operates fully stand alone, but can be combined with a virtually unlimited number of units, to monitor all PD sensors in one GIS PD monitoring system in parallel. A full 19" sub-rack carries 64 channels. A remote computer reads all data of the instruments via the high speed Intranet or USB bus. System redundancy is provided due to the local memory storage capacity on each acquisition unit. The GIS*monitor* indicates with on-board LED's internal states and alarm conditions.
Two main 19" racks are used to accommodate all instruments and the industrial PC. Each rack comes with a standard 19" frame, non-interruptible power supply, network switch and temperature controlled fans. With each installation multiple monitoring instruments are placed in one 19" rack. All cables from external are feed through the rear side into the rack. Alternatively a customized BNC patch board can be ordered.

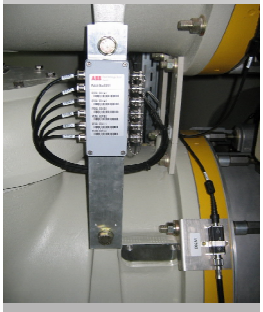
Features

- Parallel UHF PD measurement on all channels
- Parallel reading of PD peak values, PD scope amplitudes, and PD patterns
- Separate gating input channel
- Automatic alarm detection system
- System redundancy
- Suitable for embedded and external retrofit UHF sensors
- Scalable system configuration
- Automatic noise suppression mode
- Network-based communication

The GIS*monitor* is designed to suit all currently available UHF sensors for GIS PD monitoring. This includes embedded and external retrofit UHF sensors. A special input protection unit (IPU2) blocks strong transients (VFT). The preprocessing unit (FCU or RPA6C) demodulates pulse UHF signals into a lower frequency band.







The user interface software panel of the GIS*monitor* monitoring system is installed on the local industrial PC and can be installed additionally on any remote computer for data evaluation and diagnosis. Using an administrative setup allows configuring the system and the embedded service program.

Real time parallel PD acquisition on multiple channels

This service program takes care of reading data and alarm conditions from the instruments in a predefined time schedule. The service starts as soon as the computer has been turned on and, hence, a valid login on this machine is not mandatory to continue the data acquisition.

Software Features

- User friendly software panel including a customized GIS overview diagram indicating all sensors and its current activities
- Additional analysis and trending panel displaying Qp, NQS, scope, and pattern information of each channel at every time stamp
- Alarm event list indicating peak levels, PD patterns and trend information
- PD trending and PD pattern information of the full history
- Typical PD failure database
- Automatic data storage
- FTP access
- Interface to third party control systems, such as SCADA, DNP 3.0, MODBUS, IEC61850, and others.

The GIS*monitor* is a scalable monitoring device for continuous monitoring of gas-insulated switchgear (GIS) using true prarallel, real-time acquisition techniques.

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