Can you afford lengthy downtime due to transformer or component failure? Switching overvoltages and other high voltage transients places tough service demands on the equipment and may cause breakdowns.

Why monitoring systems?
The transient voltages appearing during operation of an electrical system are influenced by the grid, cables, circuit breaker operations, power factor correction capacitors, RC-units, arresters and the transformer.

ABB DIAMONS Solution
DIAMONS log transient voltages and is an excellent tool for analysis. The system delivers a technological approach for enhancing the electrical system protection. Historically a dangerous overvoltage situation has been unknown until a transformer or component failure occurs. DIAMONS gives immediate warning of troublesome conditions, allowing for corrective action to be taken before equipment fails.

Permanent installation
DIAMONS can be used to monitor transient voltages on a continuous basis. The monitoring is performed while the transformer or other high voltage equipment is operating. The system records transients beyond a certain trigger voltage set by the user in the software. Recorded data is stored on a hard disk. The PC connected to Ethernet, or similar, enables the user to analyze the recordings from anywhere at any time. A network connection also ensures fast response if analyzing help from ABB is needed.

How does it all work?
Measurements are displayed and maximum voltage amplitudes are indicated for each phase. A Fast Fourier Transformation analysis can be performed to see the frequency content in the transients. There are three possible alarm outputs corresponding to three different voltage levels in DIAMONS. A contact on a relay board in the computer closes when the transient overvoltage exceeds an alarm level set in the program. This gives an early warning of a critical overvoltage situation.

DIAMONS study
ABB Service can also offer a study which takes just a few days. This study provides a detailed analysis of your present electrical system. The equipment can be set up without any lengthy downtime and problems will immediately be reported. A detailed final report is issued after completion of the study, outlining the findings and any recommendations.
For more information please contact:

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