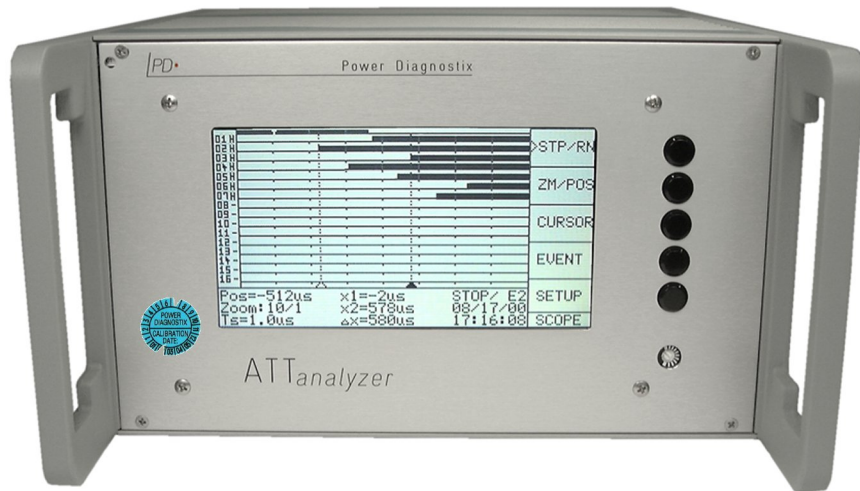


ATTanalyzer



The Power Diagnostix ATTanalyzer is a simple and effective stand-alone tool to aid in commissioning tests of gas-insulated switchgear (GIS) systems and power transformers. The ATTanalyzer reduces delays in commissioning and maintenance by locating flaws in GIS systems and transformers acoustically.

Gas-insulated switchgear systems occasionally contain flaws that go unnoticed during installation or maintenance but that lead to immediate breakdown when high voltage is applied. These flaws can include floating particles, gaseous impurities, faulty insulator discs, sharp metal burrs, or other defects. If a gas-insulated switchgear system contains such a flaw when brought on-line, sparking and breakdown occurs at the flaw, forcing de-energization and repair. Without diagnostic aids, location of the flaw can lead to costly delays and unnecessary opening of unflawed gas chambers bearing the risk of causing new imperfections, while searching for the chamber containing the flaw.

Using the ATTanalyzer, the flaw can be located by mounting acoustic sensors to the outside of the GIS or transformer tank in several locations. When high voltage is applied to the GIS, if a breakdown occurs, the acoustic sensors pick up the disturbance and transmit a corresponding optical signal to the ATTanalyzer acquisition unit. The

ATTanalyzer then compares the relative travel times of the sound signals to determine which sensor is the closest to the flaw.

Following initial location of the break-



Fiber optic connectors of the ATTanalyzer

down's origin, the acoustic sensors can optionally be repositioned closer to the flaw to narrow the location further, to within a few centimeters. Comparing the resulting display with the display of the breakdown while using a hammer to trigger a similar pattern on the ATTanalyzer, further helps to narrow down the location of the flaw.

