

# ICMsystem



The ICMsystem is part of the Power Diagnostix ICMseries of digital partial discharge detectors. The ICMsystem is a powerful, versatile instrument for evaluating the condition of medium and high voltage insulation. The ICMsystem is usable over a range of frequencies of applied voltage, including power system frequency (50/60 Hz) and VLF (0.1 Hz).

Partial discharge (PD) measurements are a proven method for effective, non-destructive evaluation of electrical insulation. The Power Diagnostix ICMsystem provides high-resolution digital PD patterns for characterization of defects in high voltage insulation systems.

### Versatility

The key to the versatility of the ICMsystem is its modular design. The ICMsystem can be matched up with a variety of special accessories that adapt it to virtually any high-voltage testing environment. A wide range of external preamplifiers provides control of the frequency range in which PD activity is detected, from 40 kHz up to 2 GHz.

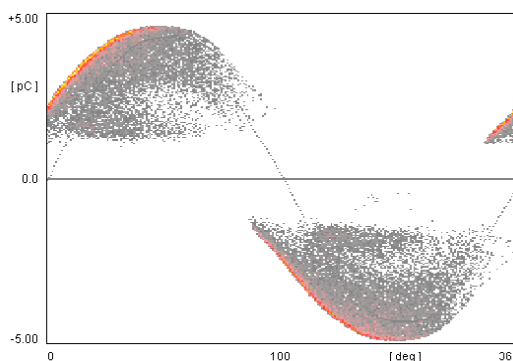
Assorted coupling devices, including quadrupoles, coupling capacitors, and current transformers, are available to sense the PD signal in the object under test. Like the other instruments in the

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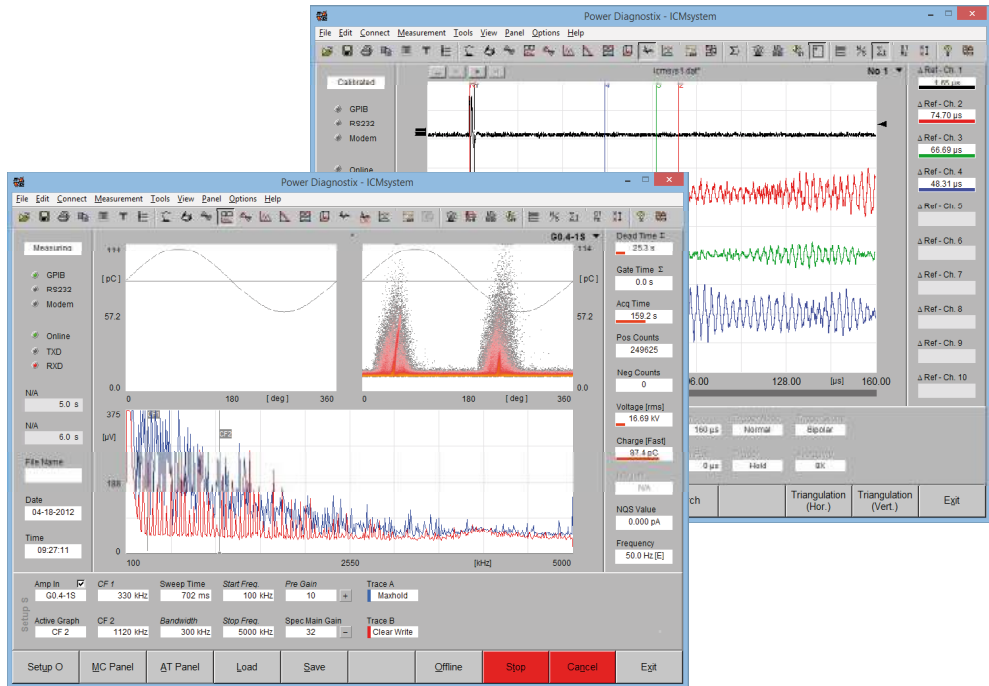
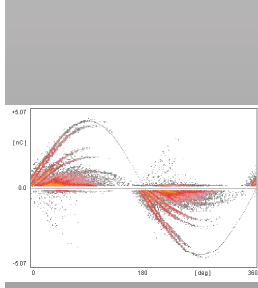
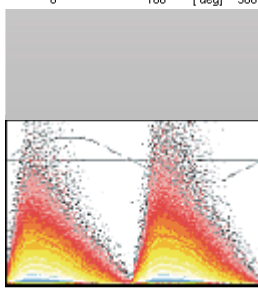
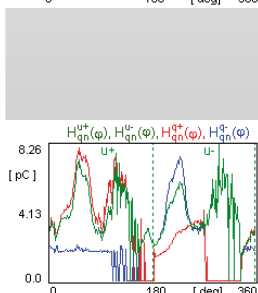
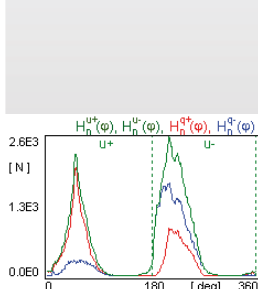
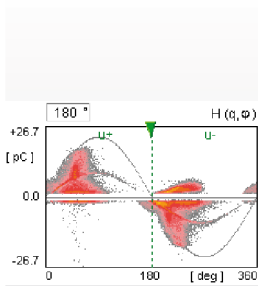
ICMseries, the ICMsystem provides effective noise gating that blocks phase-stable noise as well as noise independent of the applied voltage cycle, allowing the ICMsystem to be used in noisy environments without losing significant PD data. Appropriate selection of a preamplifier can assist further in achieving a high signal-to-noise ratio.

### PC Software

The operating parameters of the ICMsystem are fully computer controlled, making it simple to use with standard Power Diagnostix software. The actual recording of PD patterns is independent of the PC, so the performance of the ICMsystem is unaffected by speed limitations of the PC or communications.



Phase-resolved PD pattern



The ICMsystem's PC software includes convenient options for in-depth analysis and printing of stored PD patterns.

### Special Applications and Options

For applications such as DC testing or stepped high-voltage testing, the ICMsystem allows recording PD activity versus time (sequentially) instead of versus phase angle. Options such as a multiplexer module, fiber optic bus, and built-in modem further extend the capabilities of the ICMsystem. The multiplexer module, working with ICMmux software, allows easy selection among eight channels for PD measurement. The fiber optic bus provides enhanced protection in hazardous measurement conditions

and can link widely separated components of a test setup. The modem option permits remote access to data and control of the ICMsystem. The full command set of the ICMsystem is provided with the device also, so users may create custom programs to control the ICMsystem for highly specialized applications or for integration into an overall high-voltage test control program.

Options:

- Multiplexer
- Built-in spectrum analyzer
- RIV measurement
- Cable fault location
- Acoustic PD location

Giving users complete access to detailed control parameters and the ability to download and analyze PD patterns on a PC makes the ICMsystem the ideal instrument for advanced analysis of phase-resolved partial discharge patterns, whether in research, utility, or industrial applications.