



DDX[®] 9121

Partial Discharge & RIV Detector for Simultaneous Multi-Phase Measurements



The DDX[®]9121 partial discharge & radio interference voltage detector is the latest in the DDX family of PD detection equipment. It's our solution for **multi-phase partial discharge & radio interference voltage testing**. With the DDX[®]9121 you can setup, control, test, monitor and generate test reports for all phases at the same time from a single computer. Simultaneous measurements of partial discharge and/or radio interference voltage, e.g. on a three phase power transformer, reduces testing time drastically. Single test setup, allows simultaneous measurement on primary, secondary and tertiary winding of the transformer under test.

The DDX[®]9121 comprises multiple, rack-mounted units communicating with a remote PC, which handles the display of PD information using the DDX[®]9121 data acquisition and remote control software. The detectors are controlled from the PC via an Ethernet link. The PC displays test-results, provides means of calibrating the system and logging of the results into a test report. The reports can then be printed out from the software or displayed as a web page. With help of the software the user can also export the results for use in a spreadsheet. Software also provides bitmaps for inclusion in other reports.

Multiple, independent channels mean inherent redundancy in case of a failure of a plug-in.

The channels can be used in multiple configurations together or as stand-alone detectors.

FEATURES

- **Phase resolved displays** of each phase
- **Real time** measurement and display of **all phases** under test **simultaneously**
- **Simple setup and testing** via a single PC
- **Data acquisition and test reporting**
- **Multiple, independent** rack mounted units
- **Automatic synchronization** to a motor generator set
- **Upgradeable** at any time by adding additional channels

BENEFITS

Ideal for pass / fail testing – Once the allowable PD/RIV level is set, the unit determines pass and fail status.

Time Saving - data and results for all phases are available simultaneously, which reduces test time.

Monitoring of Multiple Phases – with the data acquisition/remote control software the user operates and monitors multiple detectors at the same time. Therefore testing multiple phases is simplified.

APPLICATIONS

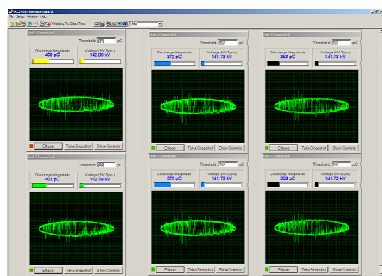
testing of:

- Distribution Transformers
- Power Transformers
- Current- & Voltage Transformers

REAL TIME MULTI-PHASE MEASUREMENTS

The DDX®9121 multi-channel PD system provides **simultaneous** phase resolved displays of the PD activity at any given moment during the test. A user can use this information to perform a **“basic” level of PD site location** and begin to determine where the problem lies.

A chart recorder provides a hard copy of partial discharge level versus voltage and testing time for each channel in one customized graph. Any time during testing the partial discharge levels can be observed and after the test is finished, test reports for the multiple channels can be generated automatically.



Display Screen DDX®9121 with 6 active partial discharge measurement channels

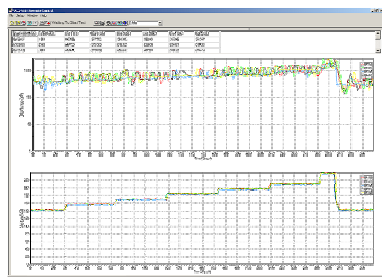


Chart Recorder with graphs PD vs. voltage and time

ORDERING INFORMATION

System

PD Detector System including # pcs. **DDX®9121-#**
of 9121 detector inserts, mounted in rack with desk, 20m long Voltmeter and PD input cables, manual and calibration certificates

Options

Main option: RIV input or internal calibrator output.
More options, see DDX®9121 data sheet

TECHNICAL SPECIFICATIONS

Amplifier

Gain(Attenuation)	0 dB to 75 dB in 5 dB steps
Attenuator Accuracy	1%
Gain	3000
Input Impedance	50 Ω
System Noise	< 12 μV referred to input on highest gain range
Filters	High Pass - 20, 50, 80 kHz Low Pass - 100, 200, 400, 500 kHz

PD Measurement

PD Meter Resolution	10 bits displayed
PD Capture	8 bits (7 plus sign)
Phase Resolution	0.1%
Linearity Error	< 1%

Voltage Measurement

Uncertainty of Scale Factor	< 1%
Linearity (10-100% FS)	< 1%
Resolution	11 bits
Measurement modes	Peak / √2 true RMS
Synchronization	Local Mains, HV source (automatic), manual override of HV sync
Sync Lock range	20 Hz to 400 Hz

Mechanical - (per channel)

Weight	3 kg
Dimensions	19" 2U case, 280 mm deep
Power Supply	100-240 V, 40-70 Hz

Environmental

Operating Temp Range	0 to 40 °C
Storage Temp Range	-10 to 75 °C
Humidity Range	95% non-condensing

Ethernet Port

Isolated	100BaseT
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(note: Optically isolated cable or wireless link for connection to LAN is recommended)

Applicable Standards

IEC-60060 Parts 1&2	IECE T-24-380
IEC-60270	ASTM D1868-93
IEC-885-2 and 885-3	ANSI C57.113
IEEE Std. 4, 1995	ANSI C57.124-91

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