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XDP-II™ Expert Partial Discharge Detector

The well-established XDP-II™ is a battery-operated portable device allowing Partial Discharge detection and analysis. The data is saved in its internal memory for local or further analysis on the PC-based XDP-SOFT™. Paired with the proper accessories, the XDP-II™ becomes a powerful solution for many applications such as Cable Joints and Elbows, Switchgear, Offline, Acoustic, TEV, Rotating machines, Transformer, etc...

Features

- ⚡ Easy to use, Portable and Battery operated
- ⚡ pC and dB value display
- ⚡ Several display modes for on-site real time analysis and diagnostic
- ⚡ Saves the waveform and edge of PD in its memory with the date and time
- ⚡ Up to 7.5 hrs autonomy
- ⚡ Ultra-versatile instrument
- ⚡ Network phase synchronization



Metal clad switchgear

Medium voltage metal clad switchgears are easily investigated with the XDP-II™ and its accessories. The XDP-II-016™ probe allows easy TEV (Transient Earth Voltage) detection on the surface of the metal cabinet. The XDP-II-406™ acoustic probe allows easy ultrasound detection that reveals the presence of partial discharge in switchgear cabinets. Simply install the magnetically held probe on the metallic surface of the cabinet for instant reading results on the XDP-II™ display. Use the unique Bi-Phase coupler to connect the XDP-II™ to the Voltage Indicator System (VIS or VPIS) for synchronized partial discharge detection. This technique allows a high noise rejection thus helping the operator taking the right decisions.

Cables and elbows

Capacitive probes allow the XDP-II™ to safely measuring partial discharge activity in extruded cable joints and elbows.

Corona effect

Corona effect detection can reveal the presence of contaminant and partial discharge. Use the ULD-401™ parabolic sensor with the XDP-II™ to detect and locate corona effect on any overhead apparatus. The integrated laser beam allows easy pinpointing.

Offline testing

Looking for a simple and effective portable offline partial discharge kit? The XDP-II™ offline kit allows easy testing of a great variety of MV and HV apparatus such as arrestors, insulators, couplers, transformers, etc, up to 50kV.

Analysis software

Transfer your recordings to any PC running Windows for further analysis using the XDP-SOFT™ advanced software. Managing and visualizing partial discharge recordings is the most effective method for tending evolution analysis.



XDP-II™ Expert Partial Discharge detection system

ndb Technologies inc. • 1405 St-Jean-Baptiste, office 111 • Quebec (QC) G2E 5K2 - Canada • Tel: 1(418)877-7701 Fax: 1(418)877-7787
Email: mkt@ndbtech.com

www.ndbtech.com

Extruded Cable Joint and Elbow

The well-established XDP-II™ PD measuring system is the heart of this cutting edge diagnosis kit. It allows quick measuring, simplicity of use, graphic display of the signal while staying portable. The XDP-II™ is used with its unique peak angle mode that displays the PD level with the network's phase synchronisation. The embedded speaker allows the user to quickly determine the presence of Partial Discharge in the equipment under test.



XDP-302™ Capacitive Probe kit

**Capacitive Probe kit installed on the
XDP-II™ with optional XDP-052™ filter**

Field cable joint testing

CAPACITIVE PROBE KIT FOR XDP-II™

The XDP-302™ capacitive probe kit includes our flexible capacitive probe XDP-II-004™, the reference module XDP-008™ and a detachable hotstick. The reference module allows the user to self-test the probe before starting to test cable joints. This technique insures that the probe's integrity thus removing any doubt about the readings the user will measure in the field. The XDP-II™ is the easiest and the most cost-effective method for cable joints and elbows testing in your network. The probe is mounted on a handling rod for the user to manipulate the system safely. Its special light and strong design is ideal for this task.

WORRIED ABOUT NOISY ENVIRONMENT?

The XDP-II™ instrument and XDP-302™ probe kit can work in noisy environment without any problem. ndb Technologies has a great range of noise filter that can be easily installed on the XDP-II™ in series with the probe.

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Corona effect detection

Partial discharge activity, electrical arcs in the air and corona effects emits sounds and ultrasounds. The role of the XDP-II™ consists of capturing emitted ultrasounds and to display the result on its LCD screen with a dB reading. The XDP-II™ accurately pinpoints and identifies partial discharge, corona effects and arcs that may be encountered on any type of high voltage installation simply by scanning around the suspected area. The parabolic sensor enables the user to pinpoint electrical defects from a long distance.



Ground return PD detection: HFCT clamps

The HFCT-20™ and HFCT-60™ are high frequency current transformer sensors designed for partial discharge detection on electric apparatus' ground returns. Made from superior quality materials, they are made to last in any environment. The HFCT™ clamps are intended to be used with the AE-150™ for partial discharge localisation, or with the XDP-II™ (or XDP-II-LT™) for quick partial discharge detection and analysis. The HFCT™ clamps allow current measurement up to a frequency of 100MHz. Their chassis are made of high quality plastic, offering an excellent sturdiness to abrasion and mechanical impacts making it the ideal tool for on-site applications. Its exclusive internal design provides an exceptional shielding to high frequency interferences from nearby electrical fields. These sensors are ideal for partial discharge measurements on ground returns of shielded cables. When used with portable partial discharge detection instruments, they allows knowing insulation integrity thus avoiding costly faults.



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Metal clad switchgear: TEV testing

PD activity produces electromagnetic waves in a very wide frequency spectrum. It radiates in all directions. High frequency electromagnetic waves hit the surface of the earthed metal cladding of the switchgears. The TEV sensor measures the transient rise in the voltage of earthed metal cladding of the switchgear.



TEV probe with XDP-II™ in the field

Metal clad switchgear: Acoustic testing

The contact probe allows the detection of Partial discharges in transformers, capacitors, switchgears and more. The sound is propagated by longitudinal waves through virtually any mediums including metal, oil, air, etc... Internal high voltage components noise will be heard with the contact probe.



XDP-II-406™ probe with XDP-II™ in the field

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Metal clad switchgear: PD detection on capacitive ports (VIS)

Combined with the XDP-304™ Bi-phase coupler kit, the XDP-II™ is the easiest and the most cost-effective method for Switchgear testing in your network. The Bi-phase coupler links the Switchgear's capacitive output (VIS) to the XDP-II™ input for a precise reading of the Partial Discharge activity. The user is able to determine the state of the unit under test in a matter of seconds. With the use of the peak-angle mode, the XDP-II™ is able to synchronise the network's phase angle thus allowing noise reduction which facilitates PD diagnosis. The XDP-012™ Bi-phase coupler comes with a self-test module allowing quick integrity tests.



XDP-304™ kit including the XDP-012™ Bi-Phase coupler, filter and reference module



Bi-Phase coupler used on a switchgear with XDP-II™ partial discharge detector



Optional: Network phase synchronization

The XDP-II™ partial discharge detector is available with the XDP-II-017™ network phase synchronization module. This wireless module transmits a reference signal to the XDP-II™ thus allowing phase synchronization for a better noise attenuation.

Noise attenuation always brings a great challenge when trying to identify partial discharge in any electrical apparatus. ndb Technologies developed a unique feature in order to help the operator making the right decision. For direct connection, the XDP-II-017 module is used on a standard wall plug while. For XDP-II-017IND module is installed directly on the MV cable to test for wireless inductive synchronization.

Network phase synchronization is intended for TEV testing, acoustic testing, HFCT™ testing, splice and elbow testing, etc...



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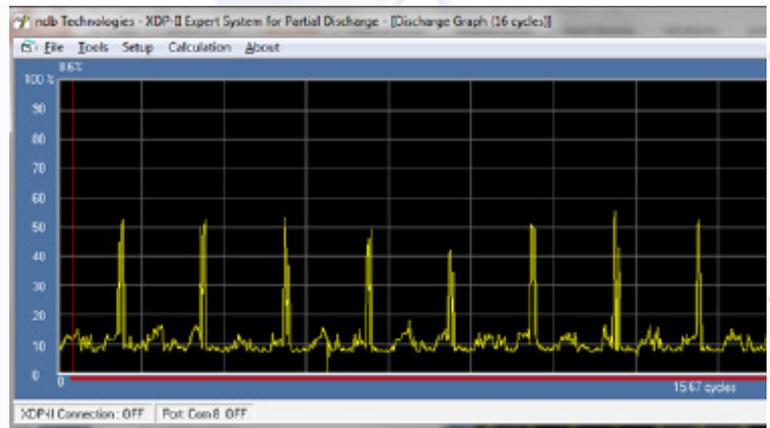
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XDP-SOFT™ Expert diagnostic PC software

The XDP-SOFT™ is designed to allow the operator managing the XDP-II's™ recordings on a PC computer. The files are easily transferred from the XDP-II's™ serial port to the PC.

FEATURES

- ⚡ Allows transferring the recorded PD waveforms from the XDP-II™ to a PC computer
- ⚡ Allows easy management of the recording (sorting by columns, graphic display of the waveform, add comments to the record, etc...)
- ⚡ Allows listening to the recording audio thus helping identifying PD from noise
- ⚡ Compatible with any Windows based computer



Offline Partial Discharge testing

This Partial Discharge measuring kit provides you with the easiest way to measure PD in a variety of MV/HV equipment such as transformers, cables, arrestors, couplers, etc... Partial Discharge diagnosis has been established as the most convincing technique for the evaluation of the insulation quality of MV/HV apparatus. Design, manufacturing or handling problems can be quickly identified using Partial Discharge testing and then improve design, network reliability and reduce operation cost by installing reliable components. Also included in the kit is our new design of the Capacitive Coupler where the integrator module is now embedded. Its refreshed design is not only good looking, it is also well made with high quality materials for years and years of service. Also included are a 200pC calibrator module, an AC line filter, high voltage cables and connectors and all other necessary tools.



XDP-II™ offline kit includes XDP-II™ partial discharge detector, capacitive coupler, AC filter, HV cables, ground plate, etc...

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XDP-II™ PD DETECTOR TECHNICAL SPECIFICATIONS

Dynamic Range	60 dB
Sampling Frequency	30 MHz
Data Storage	Over 380 recordings
Accuracy	± 1 dB
Resolution	1 dB
Bandwidth	300 kHz to 70 MHz
Operating Phase Signal Range (50 to 60Hz)	50 to 700mVrms
Operating RF Signal Input Range	380uV to 380mV
Sensitivity	5pC, depending on DUT capacitance
Reference Signal Output (REF)	3.4V
Clock	Real-time internal clock
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-20 to 50°C (-4 to 122°F)
Charging Temperature	0 to 50°C (32 to 122°F)
Humidity	0 to 95% non-condensing
Liquid Protection	Splash proof
Display	Backlit LCD screen
Autonomy	7.5 hours
Batteries	NiMH, rechargeable
Charging	3 hours
Dimensions	203 x 114 x 51 mm
Weight	860g

XDP-II-406™ CONTACT ACOUSTIC PROBE TECHNICAL SPECIFICATIONS

Operating temperature	-20 to 50°C
Storage temperature	-20 to 50°C
Dimensions	113 x 35 x 25mm
Installation	Magnetically supported

ULD-401™ AIRBORNE PARABOLIC SENSOR TECHNICAL SPECIFICATIONS

Operating distance	Optimized for 15 meters (49ft)
Operating temperature	-10 to 60°C
Storage temperature	-20 to 50°C
Dish diameter	250 mm

XDP-II-016™ TEV SENSOR TECHNICAL SPECIFICATIONS

Operating temperature	-20 to 50°C
Storage temperature	-40 to 85°C
Dimensions	123 x 35 x 69 mm
Installation	Magnetically supported

XDP-II-017™ WIRELESS PHASE SYNCH TECHNICAL SPECIFICATIONS

Operating temperature	-20 to 65°C
Storage temperature	-40 to 125°C
Dimensions	120 x 36 x 75 mm
Power supply	120-240 volts 50-60Hz
Wireless frequency	869 MHz or 916 MHz

XDP-II-018™ HF CONVERTER TECHNICAL SPECIFICATIONS

Operating temperature	0°C to 65°C
Storage temperature	-20°C to 60°C
Charging temperature	0°C to 45°C
Extended storage temperature (> 2 months)	< 35°C
Charging temperature	0°C to 45°C
Dimensions	123 x 35 x 69 mm (4.8 x 1.4 x 2.7 inches)
Autonomy	5 hours
Charge time	3 hours
Auto shutdown	15 minutes
Battery type	Lithium-ion Polymer
VHF UHF bandwidth	10MHz to 1.2GHz
VHF UHF input maximal amplitude	250 mV RMS
HF output maximal amplitude	100 mV RMS

XDP-012™ BI-PHASE COUPLER TECHNICAL SPECIFICATIONS

RF Max Input	4 V RMS
RF Operating Input with XDP-II	1 V RMS
Max and Operating Input at 50-60Hz	3.5 V RMS
Input impedance	760 ohms
Output Impedance	50 ohms
Signal Bandwidth	300kHz to 70MHz
Operating temperature	-20 to 85°C
Storage temperature	-20 to 85°C
Weight	130 g

HFCT-20™ HIGH FREQUENCY CLAMP TECHNICAL SPECIFICATIONS

Transfer ratio	13 V/A
Frequency response (-3dB)	2 MHz to 80 MHz
Internal diameter	20 mm
External diameter	60 mm
Output impedance	50 ohms
Weight	260 g
Connector type	BNC

HFCT-60™ HIGH FREQUENCY CLAMP TECHNICAL SPECIFICATIONS

Transfer ratio	13 V/A
Frequency response (-3dB)	4 MHz to 100 MHz
Internal diameter	60 mm
External diameter	125 mm
Output impedance	50 ohms
Weight	530 g
Connector type	BNC

HFCT-20™ CLAMP TECHNICAL SPECIFICATIONS

Transfer ratio	13 V/A
Frequency response (-3dB)	2 MHz to 80 MHz
Internal diameter	20 mm
External diameter	60 mm
Output impedance	50 ohms
Weight	260 g
Connector type	BNC

HFCT-60™ CLAMP TECHNICAL SPECIFICATIONS

Transfer ratio	13 V/A
Frequency response (-3dB)	4 MHz to 100 MHz
Internal diameter	60 mm
External diameter	125 mm
Output impedance	50 ohms
Weight	530 g
Connector type	BNC

BI-PHASE COUPLER TECHNICAL SPECIFICATIONS

RF Max Input	4 Vrms
RF Operating Input with XDP-II™	1 Vrms
Max and Operating Input at 50-60Hz (synchronization signal)	3.5 Vrms
Input impedance	760 ohms
Output Impedance	50 ohms
Signal Bandwidth	300kHz to 70MHz
Operating temperature	-20 to 85°C
Storage temperature	-20 to 85°C
Weight	130 g
RF Max Input	4 Vrms



The XDP-II™ kit is offered with a high quality synthetic material case



XDP-II™ instrument

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