PDD-3 Partial Discharge Detector

Digital Partial Discharge Detector – stand-alone with touch screen display, remotely operated via web browser or ohv Software Suite

- High resolution partial discharge detector for various applications
- Computer-based PD signal evaluation
- Frequency range: wideband or according to IEC 60270
- Dynamic auto ranging
- Voltage input for synchronisation signal
- Up to 6 synchronous / multiplexed channels for PD measurement (optional)
- Small and lightweight design, desktop, 19” rack unit or hardcase
- Battery powered (optional) for supply independent measurements at site
- Industrial PC with integrated touch screen display for standalone measurements
- Measuring data access via web browser with calibration, charge and voltage diagrams
- Optional software suite for PC operation, advanced functionality with recording and replay
- Data transfer to PC via USB flash drive
- Power supply 85…264 VAC; DC optional for integrated systems
- Hardware is ready for upgrades for gating and remote software for VLF, DC pulse count and PD fault location
- UHF-Inputs optionally available

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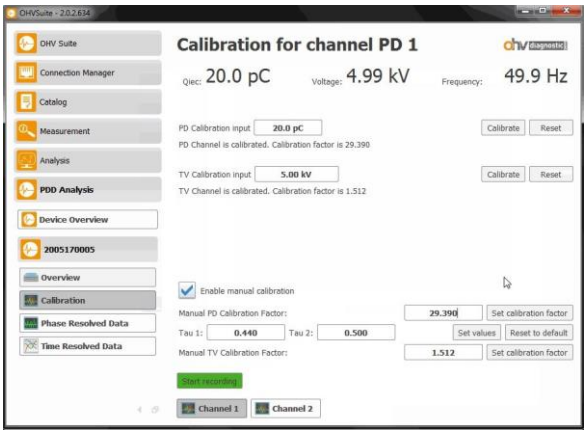
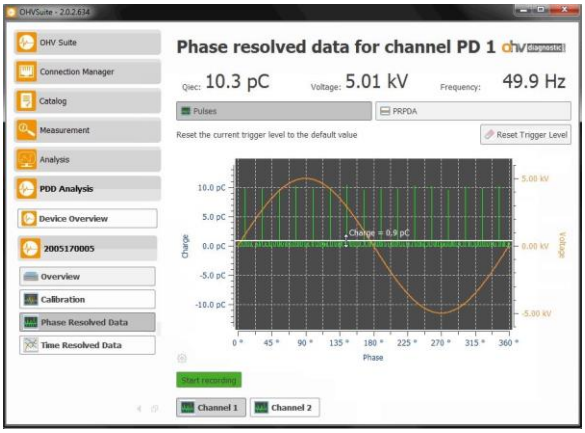


The channel overview displays all relevant measuring values at a glance:
PD magnitude and synchronisation voltage with level and frequency.

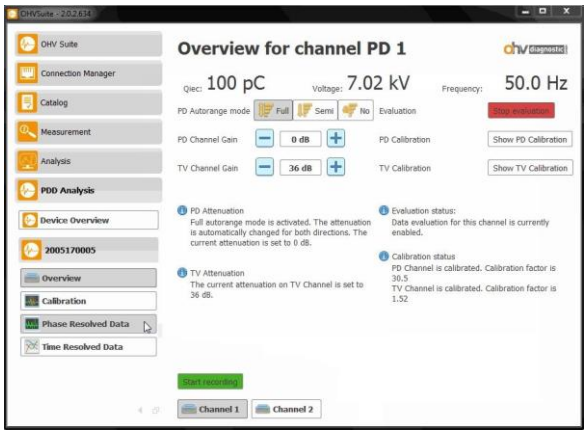
The amplification setting, mode and further information are given on the measuring system.



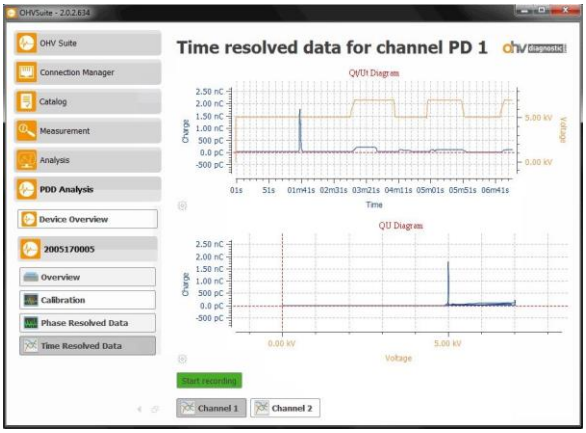
Find PD inception and extinction voltages with time resolved data analysis.

The intuitive and user-friendly diagnostic suite helps to improve your measurement.

The calibration of the partial discharge measuring channel as well as voltage synchronisation channel is quite simple. The system calculates the scaling factors automatically.



Phase resolved pulse and pattern diagrams help to identify the discharge types.



Related products

Splitting Box SB-1

PD Coupler CD-24

PD Calibrator C-1

Measuring Impedance CD-2

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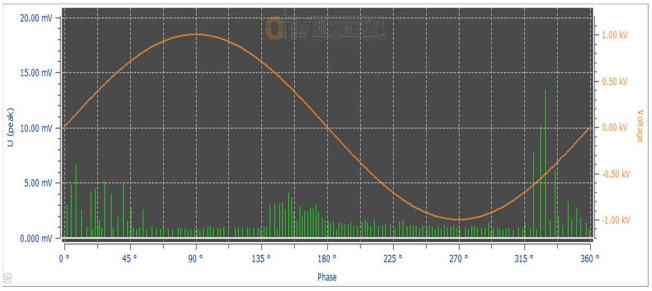
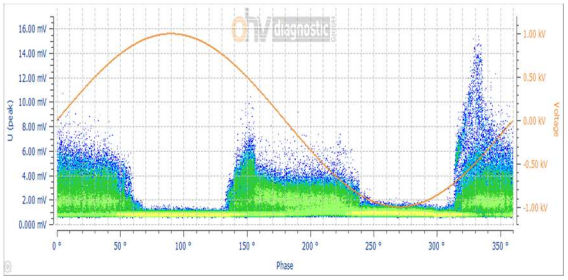
Ohv software suite:



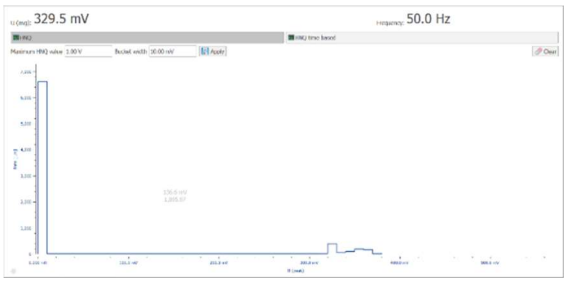
Pulse Diagram:

ohv software suite provides high resolution dynamic pulse patterns over sync voltage reference in order to characterize the defect and visually identify the external noise signals. Automatic scaling of discharge magnitude allows better analysis of dynamic measurement from each channel.



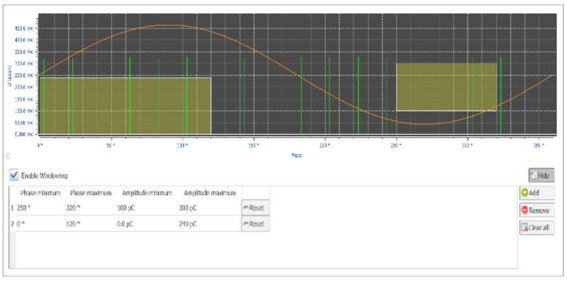
PRPD Pattern:

ohv software suite provides high resolution PD patterns which are phase synchronized and with resolution of 0.5 deg or 720 pts on X-axis thereby enabling better quality visual images. It facilitates to characterize the defect type and also distinguish external noise signals.



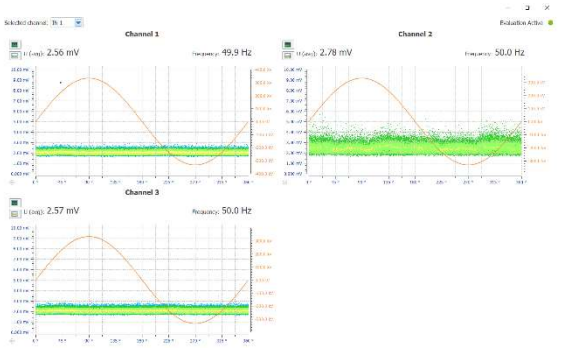
HNQ Patterns:

HNQ patterns provides statistical data tool for quantifying severe PD activity along with repetition rate of PD events during the measurement time period.



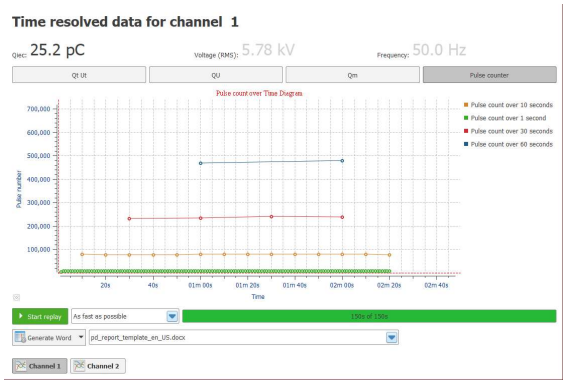
Windowing

Ohv software suite allows windowing feature to improve measurements in a noisy circumstances. Availability of unimited number of windows will help users elimintae those noise signals which are phase locked, thereby avoiding unnecessary pulses into measurent programme. Windows could be freely configured based on magnitude and phase positions to help user mitigate ever-dynamic on-site challenges.



Multi-Channel measurement

ohv software suite readily displays measured data from multiple channels on a single viewing pane. Data visualization simultaneously from all available channels can help make a quick comparison of PD from multiple sensors or apparatus



Pulse counter measurement

ohv software suite provides detailed information about the pulse counts for all measured PD pulses in each time interval printed over the measurement duration. Trigger levels help to separate noise and PD pulses for the counting.

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→ PDD Specification

Parameter Name	Value
Configuration	
PD Channel	Synchronous / Multiplexed
PD Input Channels	From 1 to 9 channels (depends on the configuration)
Synchronization	External/ Internal
PD Inputs	BNC f Type
Input Impedance	50 Ω
Measuring Range	0,2 pC…100 nC (IEC) 300µV…500mV (UHF)
Sensitivity	0,1 pc 50µV (UHF)
Maximum input voltage	50 V_{RMS} (IEC) 5 V_{RMS} (UHF)
Input attenuation	selectable from 0 dB to 66 dB (with 6 dB steps)
Input amplification	selectable from 0 dB to 30 dB (with 6 dB steps)
Frequency Range	100 kHz…1 MHz (IEC 60270) / 10 kHz…5 MHz / 10 kHz…20 MHz (IEC) 50 MHz…2 GHz (UHF)
Sampling Rate	105 MS/s
Vertical Resolution	14 bits
PD event time resolution	9,5ns
Max double pules resolution	150 µs / configurable
Synchronization input	BNC f Type
Input impedance	1 MΩ
Maximum input voltage	50 V_{RMS}
Input frequency	DC…300 Hz
Operation	
Interfaces	Ethernet 100Mbit/1000Mbit RJ-45 USB (optional, only with internal display) SSD Storage (optional, only with internal display)
Power Supply	105 – 230 VAC 50/60Hz, ≤ 35 W without Display/Battery option, ≤ 150 W with Display/Battery option
Temperature Range	-20 to +50°C (storage) 0 to +40°C (operating)
Humidity Range	0 to 90% relative Humidity (rH), non-condensing
Housing	For integration in outdoor/ indoor cabinet
Max. operation altitude	2000 m
Mechanical	
Dimension	450 * 88 * 315 (mm; rack version) 503 * 406 * 193 (mm; weatherproof housing)
weight	approx. 3100 grams (rack version) approx. 9000 grams (weatherproof housing with internal display) + 1000 grams (internal battery pack)
PC (Laptop) requirements	
RAM	min. 2 GB
Display resolution	1366 x 768 Pixel
Hard drive space	Min. 1 GB
Operating system	Windows 10 / 11 (64bit)

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