

PXDP-II

Partial discharge detection



Portable diagnostics with over 7 hours of autonomy

PXDP-II

Online and offline partial discharge detector

amperis

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Product description



PXDP-II detector with its partial discharge analysis display



Partial discharge measurement at a transformer substation

Online and offline measurement

The PXDP-II records partial discharge activity with the installation in service, in relative dB and picocoulomb (pC) values. Combined with a pico-coulomb calibrator and a high-voltage source, it also becomes an offline test system at voltages of up to 50 or 100 kV.

Wide range of sensors

The unit supports high-frequency current sensors for grounding conductors, a capacitive spatula sensor for cable splices and terminations, TEV and contact acoustic sensors for metal-clad cabinets, a bi-phase coupler for voltage-indicator-equipped switchgear, and a parabolic acoustic sensor with a sight and laser pointer for corona effect.

Noise rejection and phase synchronisation

A wireless phase synchronizer module enables PRPD (phase-resolved partial discharge) analysis and reduces random network noise; an additional differential technique helps discriminate real discharge activity from background noise.

Operation and start-up

Simply press the power button, connect the sensor and select the operating mode. The measured activity is shown on screen with synchronised patterns, and a built-in speaker plays an audible version of the signal to assist diagnosis.



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Applications

Main applications

- Quality control of medium- and high-voltage equipment: transformers, switchgear, arresters and insulators.
- Insulation control during installation or repair of underground networks: cable splices and elbows.
- Monitoring insulation degradation in critical network components.
- Safety checks before live-line work.
- TEV testing on switchgear cabinets with a capacitive VIS coupler.
- Detection of corona effect and arcing on overhead devices with the parabolic acoustic sensor.

On-site live diagnostics

Capacitive and inductive probes detect and analyse partial discharges on cable accessories, such as splices and terminations, while the bi-phase coupler provides fast, effective detection of the high frequencies generated by partial discharges in switchgear.

Offline test kit

Combined with a pico-coulomb calibrator and a suitable high-voltage source of up to 50 or 100 kV, the unit allows offline testing of couplers, cables, insulators and transformers to quickly identify design, manufacturing or operating issues.



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Analysis software

PXDP-SOFT

The PXDP-SOFT software, installed on a PC, classifies, visualises and analyses the partial discharge recordings downloaded from the unit's internal memory, which holds over 380 measurements (waveform, date and time of each reading).

Data transfer and tracking

Saved measurements remain in the unit's memory even when it is switched off, allowing them to be transferred to a computer for classification and comparison across successive inspections, making it easier to track how the insulation evolves over time.

PRPD analysis and phase synchronisation

The wireless phase synchronizer module records the phase-resolved partial discharge (PRPD) pattern, one of the most widely used diagnostic tools for identifying the type of insulation defect from the shape of the pattern.



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PXDP-II – MEASUREMENT DATA

Dynamic range	60 dB
Sensitivity	5 pC (depending on the capacitance of the device under test)
Accuracy and resolution	± 1 dB; 1 dB resolution
Bandwidth	300 kHz to 70 MHz
Network phase signal	50-700 mVrms (50-60 Hz)
Memory and auto shutdown	Over 380 recordings; shuts down after 30 min of inactivity
Display and protection	High-contrast backlit LCD; splash-proof protection
Environmental conditions	Operating -20/+50°C · Charging 0/+50°C · Storage -20/+50°C · Humidity 0-95% non-condensing
Power and autonomy	Rechargeable NiMH batteries; 7.5-hour autonomy; 3-hour charging
Weight and dimensions	860 g; 203 × 114 × 51 mm

Specifications subject to change without notice.

Offline testing requires a suitable high-voltage source, not included.



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