

Press Release

MPD 800 – Fast and easy partial discharge testing

The next generation of MPD technology from OMICRON

OMICRON's MPD 800 universal partial discharge (PD) measurement and analysis system represents the next generation of the company's innovative MPD PD testing technology, which is based on 20 years of MPD customer experience, feedback and an expanding list of requirements for PD testing. Established hardware and software features have been enhanced and new functionality has been added to make the MPD 800 the most complete, accurate, and flexible solution available for PD testing in a wide variety of applications.

Standard-compliant PD testing

The MPD 800 system performs IEC and IEEE standard-compliant PD measurements and analysis for routine and type testing, factory and site acceptance testing (commissioning), as well as repair testing and troubleshooting in the field.

With very high measurement accuracy, the MPD 800 system enables users to reliably detect, localize and assess the risk of potentially failure-causing PD activity in the insulation of various electrical assets and components. These include power transformers, rotating electrical machines (motors and generators), power cables, switchgear, and industrial drives, as well as bushings, insulators, capacitors and busbars.

High-performance specifications

The MPD 800 system features an expanded adjustable PD frequency range of up to 35 MHz, a faster 125 MS/s sampling rate, an increased PD localization time, and more powerful digital PD filtering capabilities – all of which greatly increase the sensitivity of PD measurements.

Additional advanced software-based filtering techniques have been enhanced, such as channel gating, 3PARD (3-Phase Amplitude Relation Diagram) and 3FREQ (3-Center Frequency Relation Diagram), to allow users to reliably distinguish between harmful PD and external noise to ensure highly accurate and reliable PD analysis.

For efficient factory testing on power transformers, the MPD 800 system simultaneously measures and analyzes both PD (Q_{IEC}) and Radio Influence Voltage (RIV) according to IEEE,

NEMA and CISPR standards. Powerful PD localization techniques accurately pinpoint the location of PD-related defects along entire lengths of power cables.

Convenient battery-powered operation

The rugged and lightweight (1.2 kg / 26.5 lbs.) MPD 800 PD measurement device is powered with a portable re-chargeable battery supplied with the system for up to 16 hours of continuous PD testing. Multiple batteries can be connected via daisy-chain for longer testing periods.

Multi-channel PD measurements

The MPD 800 measurement device includes two fiber-optic PD input channels for either synchronous, two-channel PD measurements or a single-channel PD measurement plus a gating channel to reduce surrounding interference without the need for an additional device. The MPD 800 system can be easily expanded with up to 20 measurement devices connected via daisy chain with fiber optic cables supplied by OMICRON to perform synchronous, multi-channel PD testing at several distributed measurement points. The MPD 800 system software provides users with a convenient overview of the measurement setup with all connected devices and the PD measurement data for each measurement channel.

Safe fiber optic connections

The use of fiber optic cable connections enables precise synchronicity of all connected MPD 800 measurement devices located in the high-voltage area to a master control device in a safe working area. Fiber optic cables reduce the influence of interference coupling, minimize ground loops, and ensure user safety due to the galvanic isolation they provide.

PD measurement recording

The MPD 800 system software records PD data sets in real time as measurements are being performed to be replayed later for analysis and reporting. The recorded PD data includes all measurement values and relevant system settings, allowing users to apply various analysis and disturbance reduction functions in post analysis without having to repeat the measurement. The recorded PD data sets can also be cut individually and replayed slowly to focus on relevant PD events and analyze them in greater detail.

Users select only the PD analysis features they need

The configurable, multi-language MPD 800 software allows users to select only the measurement and analysis features they need for specific PD tests, based on their preferences and level of experience.

For specific types of PD tests performed on a regular basis, calibration and measurement settings based on applicable international standards as well as how measurement data is analyzed and displayed can be easily defined and saved in individualized user profiles.

Full compatibility for MPD 600 users

Current MPD 600 users can upgrade their MPD 600 software to the new MPD 800 software to take advantage of its new and enhanced features. Existing MPD 600 PD measurement devices can also be used with new MPD 800 devices in the same PD test setup.

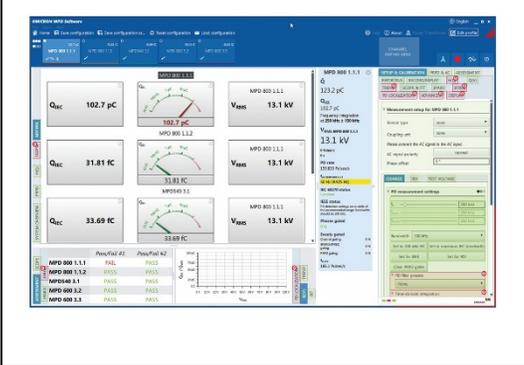
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The importance of PD testing

Insulation faults are a major cause leading to the eventual breakdown and failure of electrical equipment. Therefore, it is crucial that the insulation condition is verified throughout equipment lifecycles. Partial discharge is both a major cause and a very reliable indicator of developing insulation defects in electrical equipment. Regular PD measurements allow users to detect and analyze PD activity in the insulation system and to assess the risk and plan maintenance accordingly before major damage or a breakdown occurs.

OMICRON has several years of experience in the field of PD measurement, monitoring and analysis on medium-voltage and high-voltage electrical equipment with customers in the asset manufacturing, power utility, industry and service/repair sectors worldwide.

Images

		
<p style="text-align: center;">MPD-800_1</p>	<p style="text-align: center;">MPD-800_2</p>	<p style="text-align: center;">MPD-800_3</p>
<p>MPD 800 universal partial discharge measurement and analysis system</p>	<p>MPD 800 partial discharge measurement hardware features two input channels for PD measurement and gating.</p>	<p>The multi-language MPD software can be easily configured for individualized PD testing and reporting.</p>

Company profile

OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. The application of OMICRON products allows users to assess the condition of the primary and secondary equipment on their systems with complete confidence. Services offered in the areas of consulting, commissioning, testing, diagnosis and training make the product range complete.

Customers in more than 160 countries rely on the company's ability to supply leading edge technology of excellent quality. Service centers on all continents provide a broad base of knowledge and extraordinary customer support. All of this together with our strong network of sales partners is what has made our company a market leader in the electrical power industry.

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