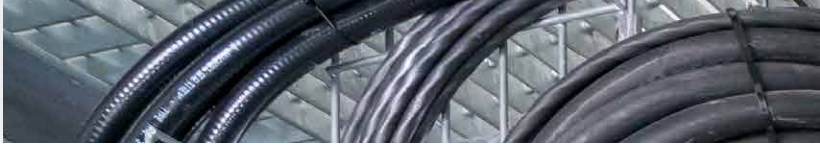


MASTERING THE ART OF UHF PARTIAL DISCHARGE MEASUREMENTS

Our new UHF 800 offers you an optimal signal-to-noise ratio

Partial discharge (PD) testing is a highly effective tool for medium-voltage (MV) and high-voltage (HV) devices that assesses their insulation condition and detects critical defects in them. Conventional onsite PD measurements, such as those specified by the IEC 60270 standard, are often affected by noise in the surrounding environment.

Measurement alternative for noisy environments

Unconventional PD measurements performed in the Ultra-High Frequency (UHF) range of 100 to 2,000 MHz are a reliable measurement alternative. These measurements are especially useful for PD testing on gas-insulated switchgear and lines, oil-filled power transformers, and HV power cable terminations.

This is because numerous noise sources, such as mobile communications, radar signals, and corona discharges, predominantly transmit in lower or narrow frequency ranges. By comparison, measurements performed in the UHF range result in a very high signal-to-noise ratio. Therefore, optimal PD measurement sensitivity is ensured with little or no interference from external noise.

Reliable UHF PD testing with UHF 800

The portable UHF 800 PD measurement system is our latest solution for performing off-line and on-line UHF PD measurements from 100 to 2,000 MHz on gas-insulated switchgear and lines, oil-filled power transformers, and high-voltage power cable terminations. Tunable bandwidth filters ensure an optimal signal-to-noise ratio for reliable analysis, even in noisy onsite testing environments.

The system's portable and flexible modular design enables fast and easy setup during type and routine testing in HV laboratories or test bays, onsite commissioning, and troubleshooting in the field.

Single-channel or multi-channel testing

One UHF 800 measurement device is used to detect PD activity in the UHF range of each measurement channel. Up to 12 measurement devices can be connected via fiber optic cables in a daisy chain for simultaneous, multi-channel PD measurement and analysis. Each UHF 800 measurement device is powered with our RPB1 rechargeable external battery for hours of uninterrupted testing.

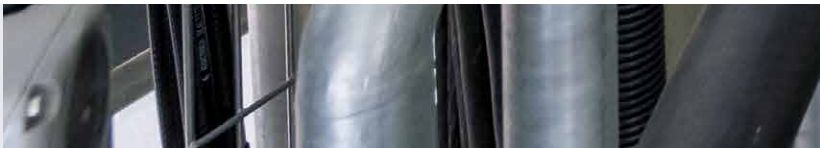
Powerful software for PD measurements and analysis

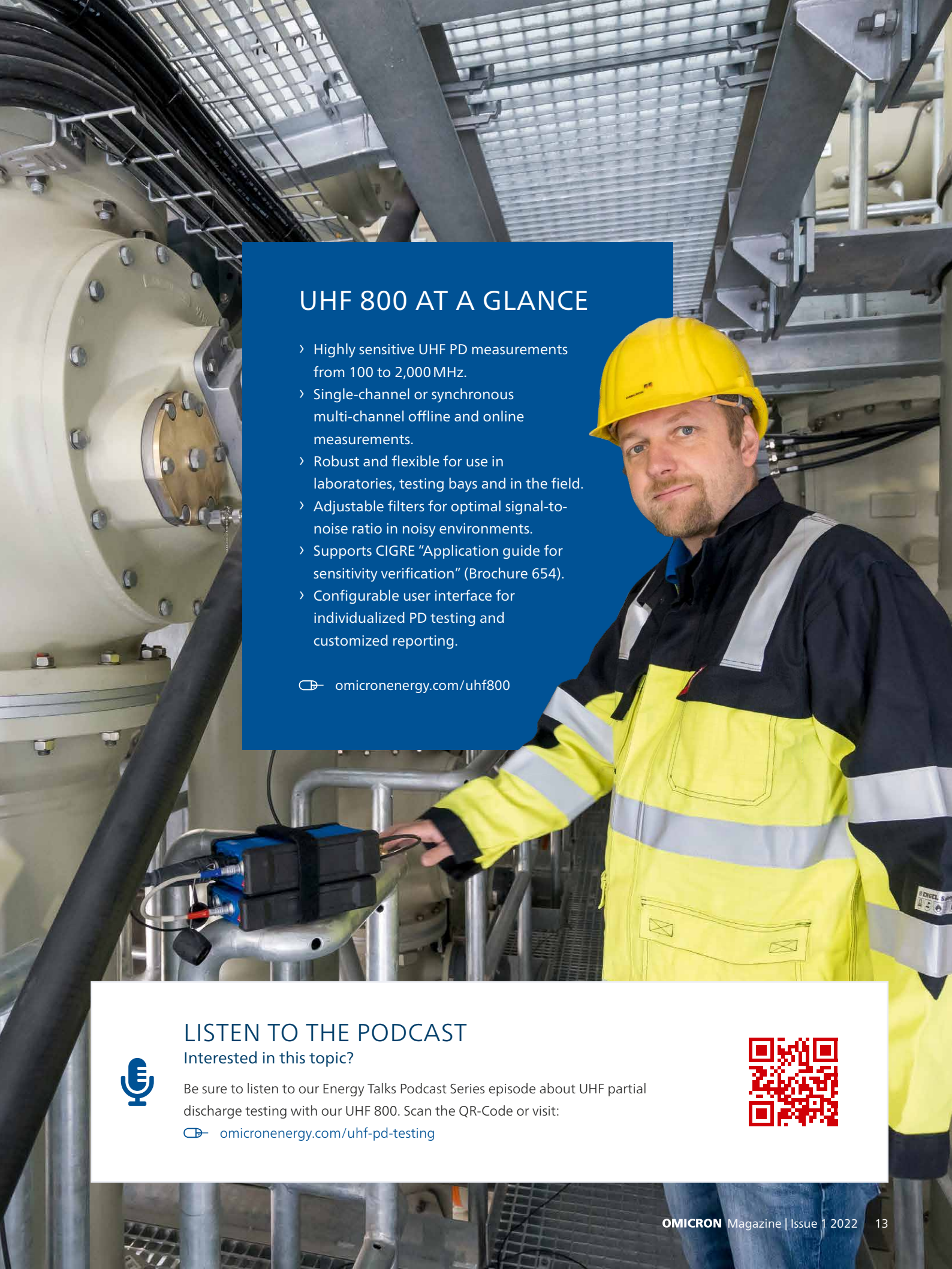
The UHF 800 is used with our MPD Suite software and includes the latest, time-saving PD measurement and analysis features. These features include recording and replaying PD measurements, user-definable testing profiles, and customized reporting.

Use it with or without MPD 800

The UHF 800 can be used as a stand-alone UHF PD measurement and analysis system. It can also be easily used with our MPD 800 universal PD measurement and analysis system. This allows you to combine conventional PD measurements using the MPD 800 with UHF PD measurements when the UHF 800 is in the same measurement setup.

The combination of UHF 800 and MPD 800 PD measurement devices – up to 12 measurement devices in total – can be connected via fiber optic cables in a daisy chain for simultaneous, multi-channel PD measurement and analysis using the MPD Suite software.





UHF 800 AT A GLANCE

- Highly sensitive UHF PD measurements from 100 to 2,000 MHz.
- Single-channel or synchronous multi-channel offline and online measurements.
- Robust and flexible for use in laboratories, testing bays and in the field.
- Adjustable filters for optimal signal-to-noise ratio in noisy environments.
- Supports CIGRE "Application guide for sensitivity verification" (Brochure 654).
- Configurable user interface for individualized PD testing and customized reporting.

omicronenergy.com/uhf800

LISTEN TO THE PODCAST

Interested in this topic?

Be sure to listen to our Energy Talks Podcast Series episode about UHF partial discharge testing with our UHF 800. Scan the QR-Code or visit:

omicronenergy.com/uhf-pd-testing