

UHF PD DETECTOR

Megger[®]
Power on

Quick online surveying of PD (Partial Discharge) activity in medium and high voltage networks

- Prevent costly outages and long maintenance times
- Ideal tool for quick non-invasive surveys
- Fast verification of PD activity emanating from various type of MV and HV assets



The ideal tool – offering versatility and flexibility

ULTRA HIGH FREQUENCY

UHF partial discharge detection is a new technology with a lot to offer in terms of capability, convenience and cost. It is quick and easy to apply, it can be used to survey HV and MV plants without taking them out of service, and it can discriminate between conditions that are dangerous and those that are less serious.

During operation electrical components and systems are exposed to electrical, mechanical and thermal loads as well as harmful ambient conditions. All these stresses contribute to the deterioration of the insulation strength and accelerate the aging process of medium, high and extra-high voltage components. Ultimately this can lead to premature components failures.

Failed components in medium and high voltage systems require not only cost-intensive repairs, but can lead to an outage (black-out) of entire network sections with severe consequences. So it is in the interest of all network operators to detect signs of emerging defects as early as possible in order to take suitable counter-measures in time.

Advantages of UHF PD measurement technology at a glance

- 1 Measurement is performed online, no outage is required
- 2 Ideal for fast verification of PD activity in MV and HV plants
- 3 Allows sensitive PD measurements since frequency bands with low noise levels can be selected
- 4 Localized measurement eliminating any influence of disturbances from remote assets
- 5 Allows internal PD defects to be distinguished from corona and surface discharges



Functional diversity for simple, accurate and safe results

The UHF PD Detector is the ideal tool for periodic non-invasive surveys in MV and HV substations and can identify defects in an early stage. It should therefore be part of the toolbox for all maintenance and service teams. Thanks to the high measuring bandwidth, UHF measurements can accurately measure local online PD activity in frequencies above those of common disturbances. The UHF PD Detector can be used to identify partial discharge emanating from various HV assets including cable terminations, voltage transformers, surge arresters and transformer bushings.

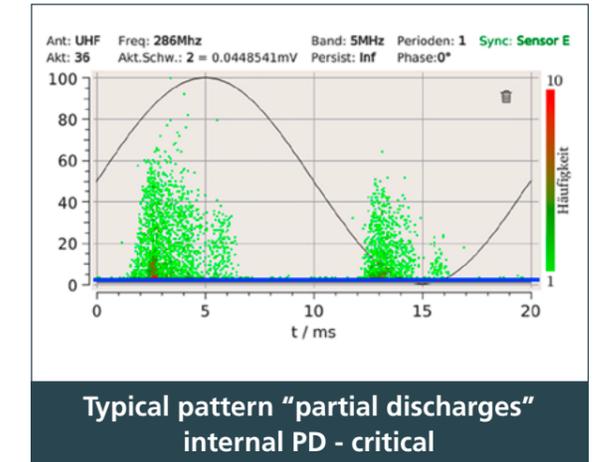
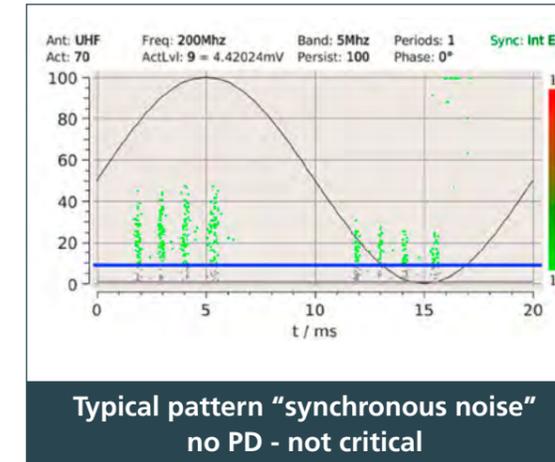
Ultra-light operation

The device is operated either from the high-resolution and large, six-inch colour touch screen or with the keypad. Menus are reduced to a minimum – the user only needs to concentrate on the essential information and is guided from beginning to end through the entire measuring process. The data is stored in the internal memory and can be copied to a USB stick at the end of the day for further processing / reporting.



Time-synchronous PRPD pattern

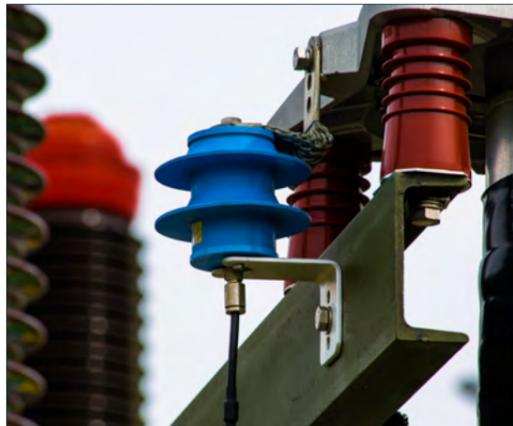
To make reliable decisions, time-synchronous PRPD patterns (phase-resolved partial discharge) are required. The UHF PD Detector can be synchronized with the power frequency by means of a number of methods. This ensures that the exact PRPD pattern can be obtained and that synchronous noise can be easily distinguished from partial discharges so that no false decisions are made.



Two channels

More functions, reliable results

Another technical highlight of the UHF PD Detector are the two input channels. This allows the user to compare several sensors, or phases, at the same time. This capability further increases the functionality of the UHF PD Detector and makes it a unique, efficient and reliable measurement system.



Permanent installed UHF Termination Sensor



Sensor diversity

Due to the large number of compatible sensors, both MV and HV plants can be tested with the UHF PD Detector. In addition to this, the UHF PD Detector has the unique advantage that both RF and UHF measurement functions are combined in one single measuring instrument.

Partial discharges emanating from the most diverse components of MV and HV systems, such as cable terminations, surge arresters, voltage and current transformers, switchgear and insulators, can be identified.



UHF antenna



UHF C1 sensor



TEV sensor



HFCT sensor



HFCT sensor

UHF antenna

Simple and quick scanning for PD activity in MV and HV plants

UHF C1 sensor

Most precise PD measurements on high- and extra high-voltage terminations

TEV sensor

Capacitive PD measurements on transformers and switchgear in RF and UHF range

HFCT Sensor

Inductive PD measurements on cables in the RF range and local capacitive PD measurements on electrical components in the UHF Range

Pre-installed sensors

The UHF PD Detector can also be used with pre-installed UHF Sensors like e.g. in GIS installations. Please contact your local supplier for more information



Product highlights

Actual size

Wireless synchronization with the power frequency

Acoustic playback of the measured PD by headphone

Up to 10 hours of operating time on a single battery charge

3 measuring modes – spectrum, time domain and level measurement

Large internal memory – no need to plug USB sticks in and out

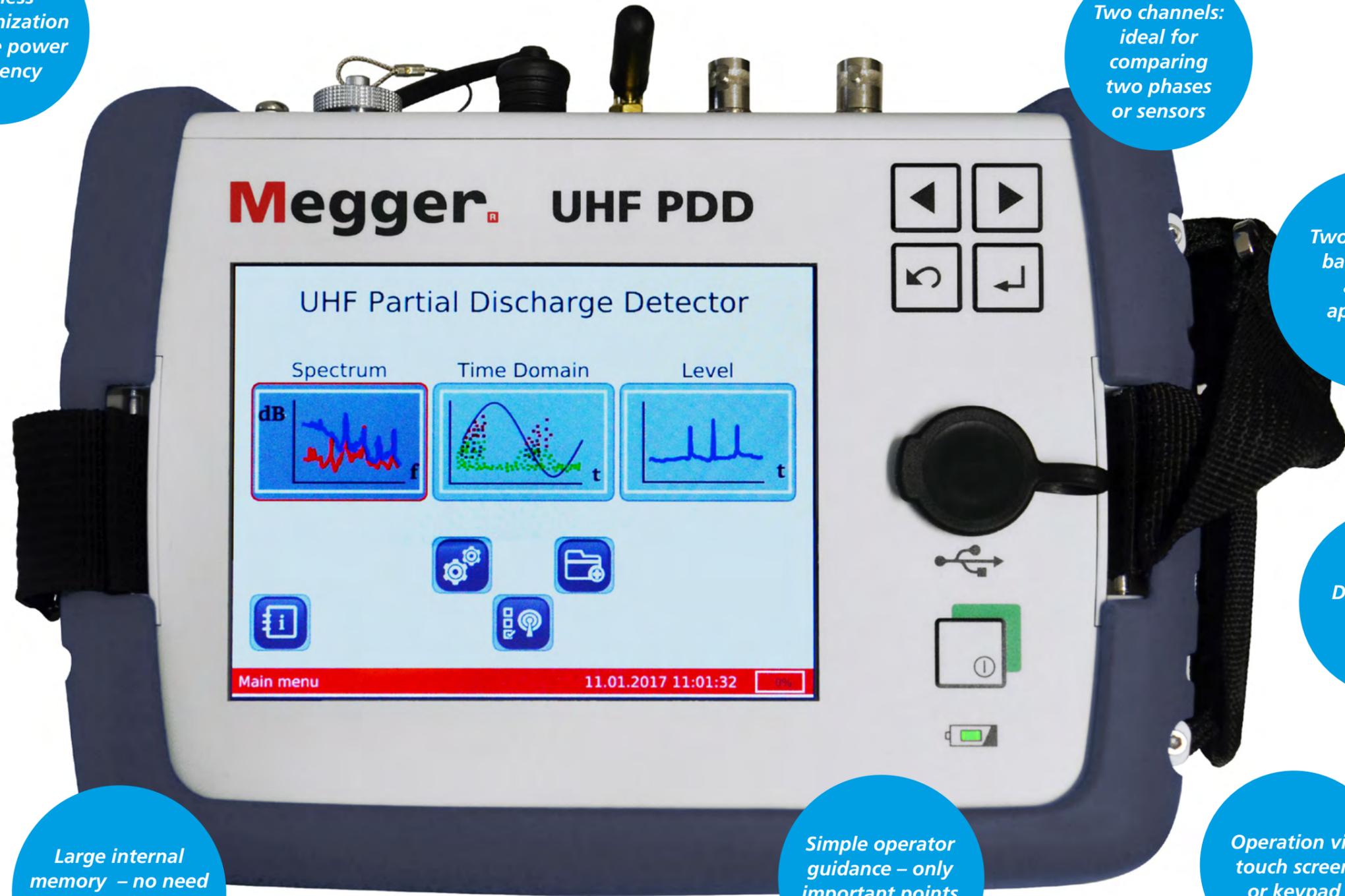
Simple operator guidance – only important points are displayed

Two channels: ideal for comparing two phases or sensors

Two frequency bands allow a wider application range

Data transfer by USB

Operation via touch screen or keypad





Please watch the video
UHF PD DETECTOR (1:44)

uk.megger.com/uhf



GERMANY

Megger · Dr.-Herbert-lann-Str. 6 · D-96148 Baunach
Tel. +49 (0) 95 44 680 · Fax +49 (0) 95 44 - 22 73
team.international@megger.com

UNITED KINGDOM

Megger Limited · Archcliffe Road · Dover CT17 9EN
Tel. +44 (0) 1304 502 101
uksales@megger.com