OMICRON

UHF 800

Ultra-high frequency (UHF) partial discharge measurement and analysis system

UHF measurements improve PD testing results in noisy settings

Partial discharge (PD) measurement is a highly-effective tool for assessing the insulation condition and detecting critical defects in high-voltage (HV) devices.

However, conventional on-site PD measurements, such as those specified by the IEC 60270 standard, are often affected by noise in the surrounding environment.

Unconventional PD measurements performed in the Ultra-High Frequency (UHF) range result in a very high signal-to-noise ratio. This is because numerous sources of noise, such as mobile communications, radar and corona discharges, transmit predominantly in lower or quite narrow frequency ranges.

Optimal PD measurement sensitivty is therefore ensured with little or no interference from external noise.

UHF PD measurements

The UHF 800 system is a modular solution for UHF PD measurement and analysis on:

- Gas-Insulated Switchgear/Lines (GIS/GIL)
- Oil-filled power transformers
- High-voltage (HV) cable terminations

With the appropriate UHF sensor, the UHF 800 performs sensitive PD measurements in the range of 100 MHz to 2 GHz to help you quickly identify and verify internal PD in these HV assets. Adjustable bandwidth filters ensure an optimal signal-to-noise ratio for reliable analysis, even in noisy onsite test environments.

EASY CONNECTIONS

Easy push and pull fiber-optic connections save you time during setup and feature a robust design for field use.

TRIGGER OUTPUT

The UHF 800 can trigger acoustic PD measurements with our PDL 650 system for precise PD defect localization in oil-filled power transformers.

Connection to RBP1 rechargeable battery

WIDE MEASUREMENT RANGE

The UHF 800 can evaluate the signal spectrum from 100 MHz to 2 GHz and visualize the different impulse and noise frequency ranges.

Multiple PD testing applications

The UHF 800 is suited for type and routine testing in HV laboratories or test bays as well as for onsite HV acceptance testing and troubleshooting.

Use alone or together with MPD 800

The UHF 800 can be used as a stand-alone UHF PD measurement and analysis system. It can also be easily combined with our MPD 800 PD measurement and analysis system. They can be connected to the same MCU2 master control unit for synchronous operation.

This allows you to extend conventional PD measurements with UHF PD measurements. Both UHF 800 and MPD 800 systems use the same MPD Suite software and share many of the same PD measurement and analysis functions.

COMPATIBLE WITH DIFFERENT UHF SENSORS

The UHF 800 can be connected to a variety of UHF sensors for PD measurements on GIS/GIL, oil-filled power transformers and HV cable terminations.

Grounding connection

SYNC INPUTS

The SYNC input is used to detect the test or grid voltage and its frequency. This can be done for example by connecting a Rogowski coil.

Complete system for single- or multi-channel UHF PD testing

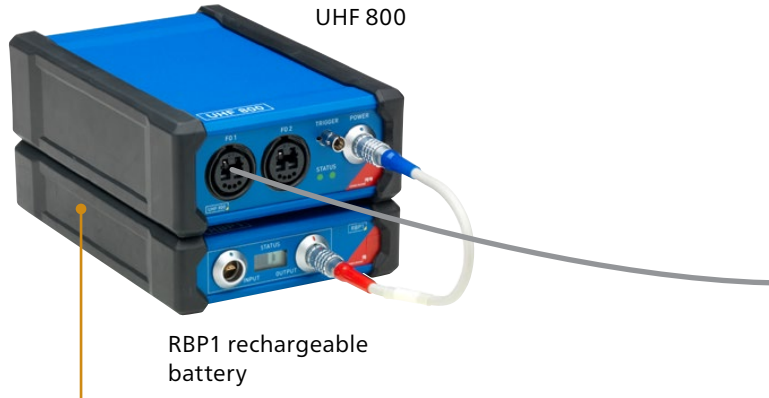
A single-channel UHF 800 system consists of one UHF 800 data acquisition unit, a rechargeable RBP1 battery, an MCU2 master control unit as well as MPD Suite software.

You can easily connect up to 12 UHF 800 data acquisition units via daisy chain with fiber optic cables to the MCU2 master control unit.

The MCU2 converts the fiber-optic connection from the data acquisition unit to a USB connection for your notebook or office computer.

The MPD Suite software provides you with an overview of connected devices and enables you to set up and perform either single- or synchronous, multi-channel PD measurements as well as analysis and customized reporting of the PD data.

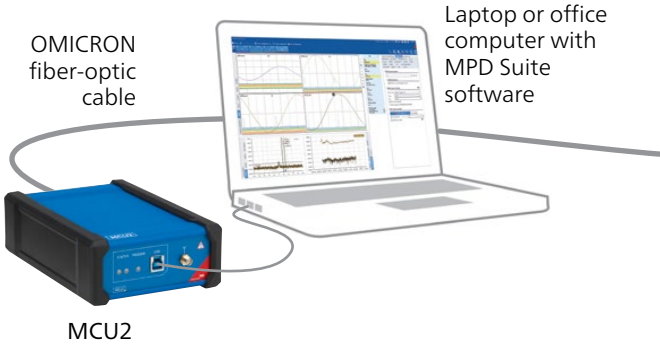
Example of a single-channel UHF 800 system



BATTERY OPERATED

The rechargeable RBP1 battery prevents noise in the power supply from affecting the measurement circuit. It enables more than 12 hours of testing, which can be extended with additional batteries connected together via daisy chain.

Example of a multi-channel UHF 800 system



SAFE WORK APPROACH

You benefit from a clear separation of the HV and safe working areas as only the measurement equipment is placed in the HV area. The test engineer can safely work on a computer outside the HV area.

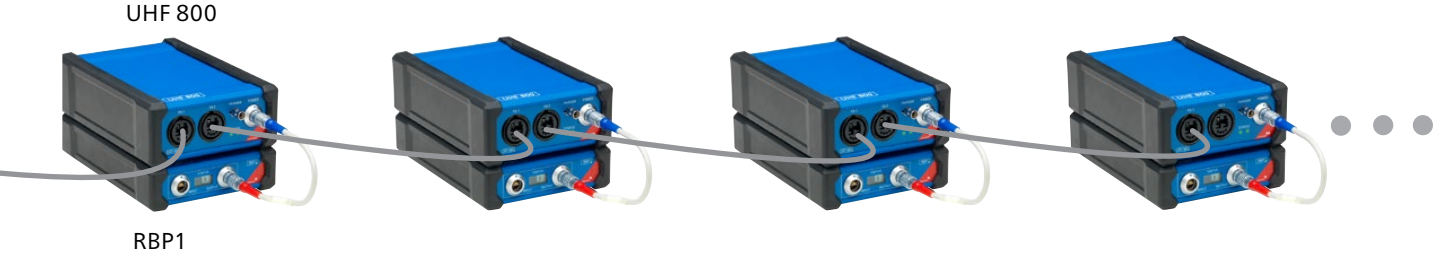
SAFE WORK AREA

ADDED NOISE SUPPRESSION

The MPD Suite software provides you with various additional gating and sophisticated tools for effective noise suppression and reliable analysis.

MINIMIZED INFLUENCES

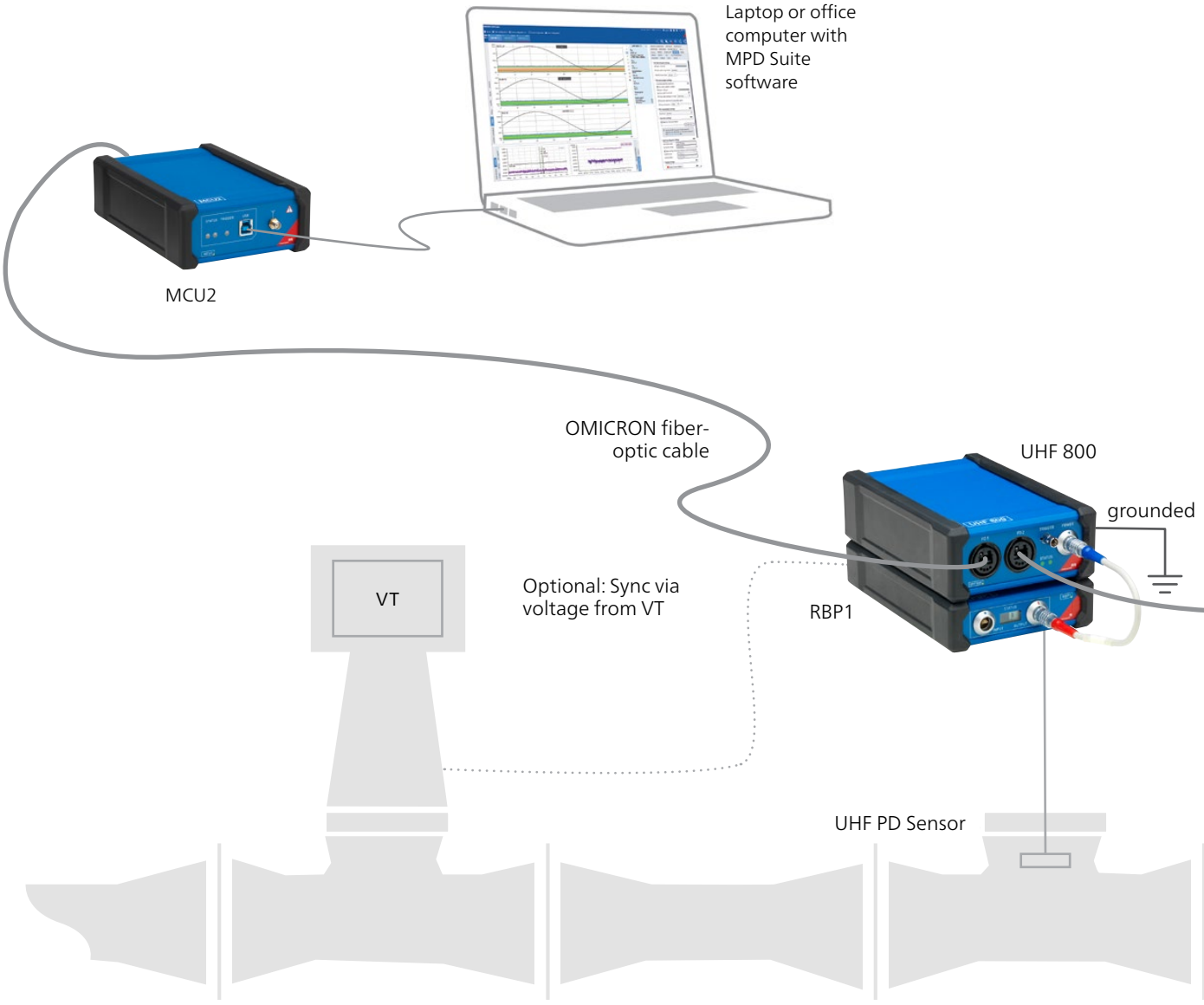
Fiber optic connections to the MCU2 master control unit and to additional UHF 800 data acquisition units reduce the influence of interference coupling, minimize ground loops and enhance measurement safety.



SYNCHRONOUS, SCALABLE SYSTEM

The UHF 800 system can be expanded by connecting up to 12 UHF 800 data acquisition units via daisy chain to the MCU2 master control unit for performing synchronous multi-channel UHF PD measurements. This enables you to assess PD activity over a larger area in your HV asset.

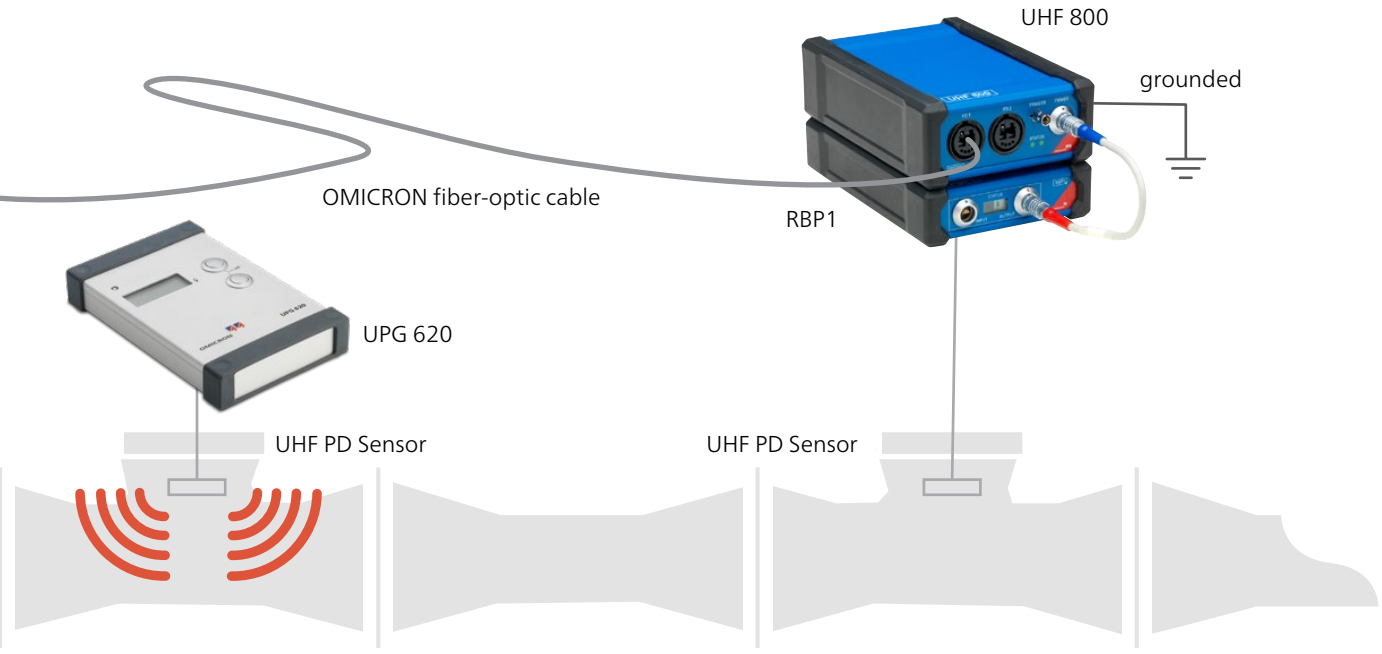
UHF PD measurements on GIS and GIL



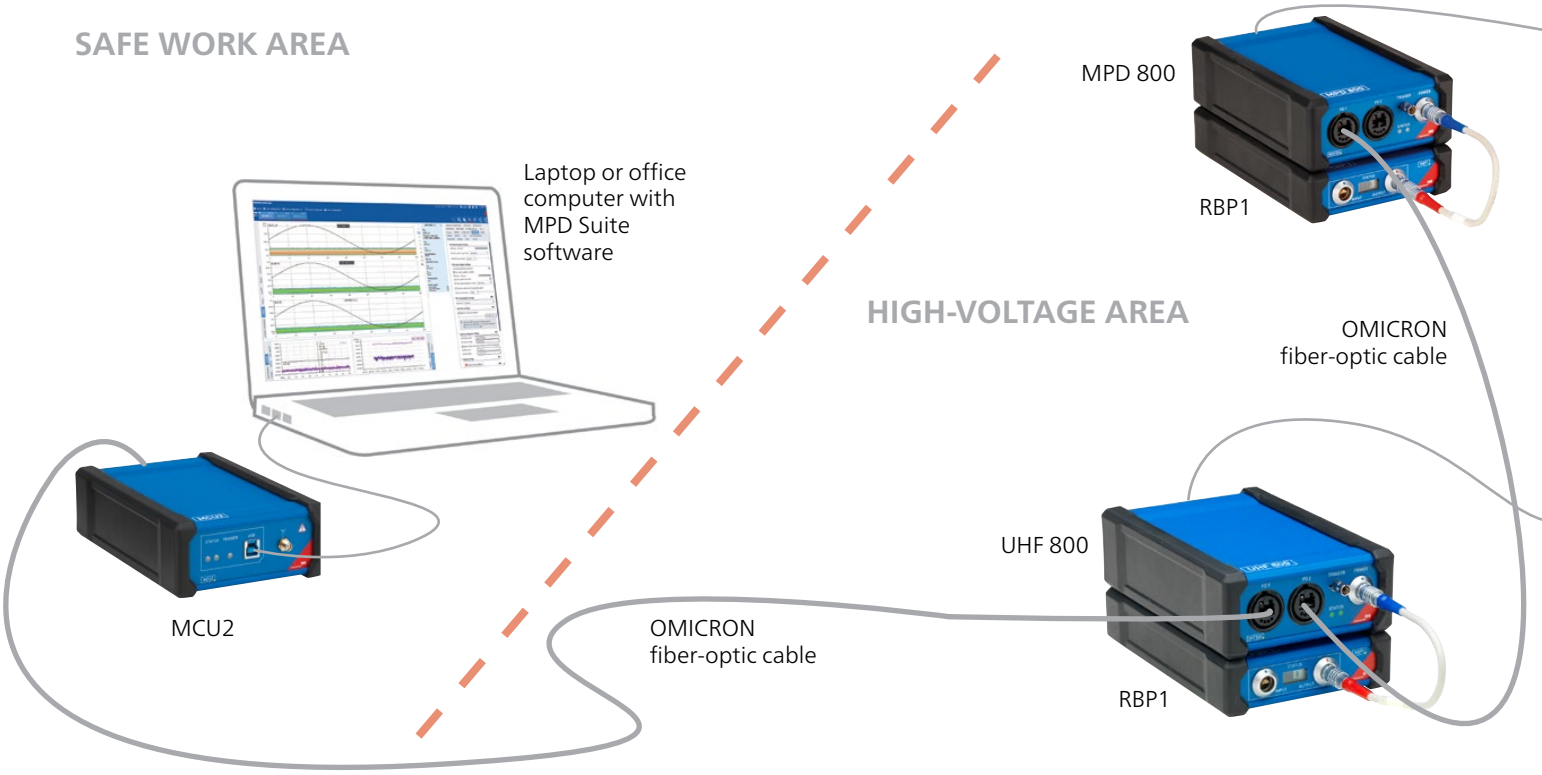
Partial discharge (PD) has been regarded as an effective indication of potential defects for the assessment of insulation condition of GIS/GIL systems during commissioning and on-site troubleshooting to ensure reliable operation.

Either single-channel or synchronous, multi-channel UHF PD measurements can be performed. To decouple PD signals in the UHF range, each UHF 800 data acquisition unit is connected to a UHF PD sensor in the GIS/GIL system.

You can connect a UPG 620 pulse generator to inject a UHF signal into one of the PD sensors and measure the response in neighboring PD sensors. This provides you with information to verify sensitivity and proper setup of the UHF 800 system.



UHF PD measurements on oil-filled power transformers



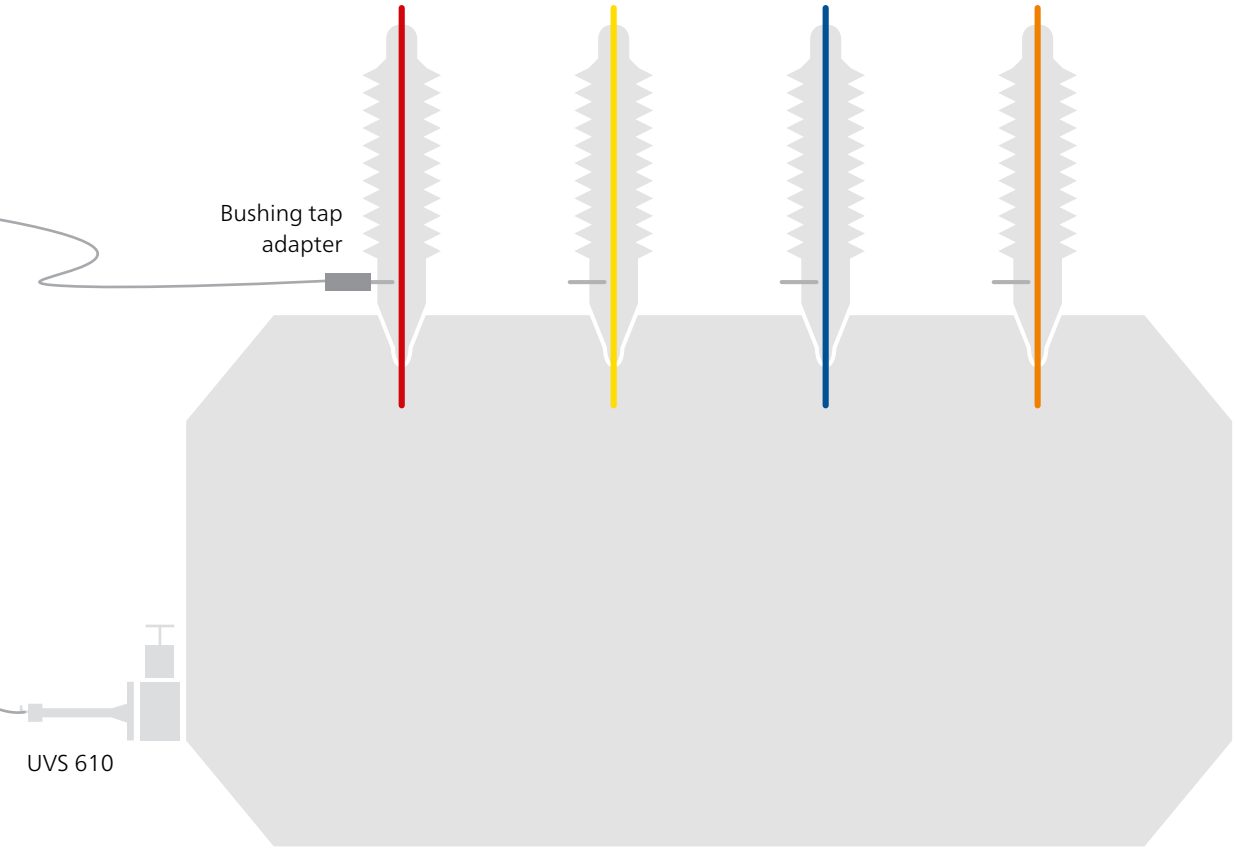
Performing PD measurements inside the transformer tank in the UHF range ensures that they are robust against noise in the surrounding environment.

To decouple PD signals in the transformer tank, either our UHT1 hatch-type sensor is mounted onto the wall of the transformer tank, or our UVS 610 drain valve sensor is inserted into the transformer's oil drain valve.

The UPG 620 pulse generator can be used to inject a UHF signal into one of the UHF PD sensors and the response is measured in another sensor. This allows you to check the proper setup and sensitivity of the UHF 800 system.

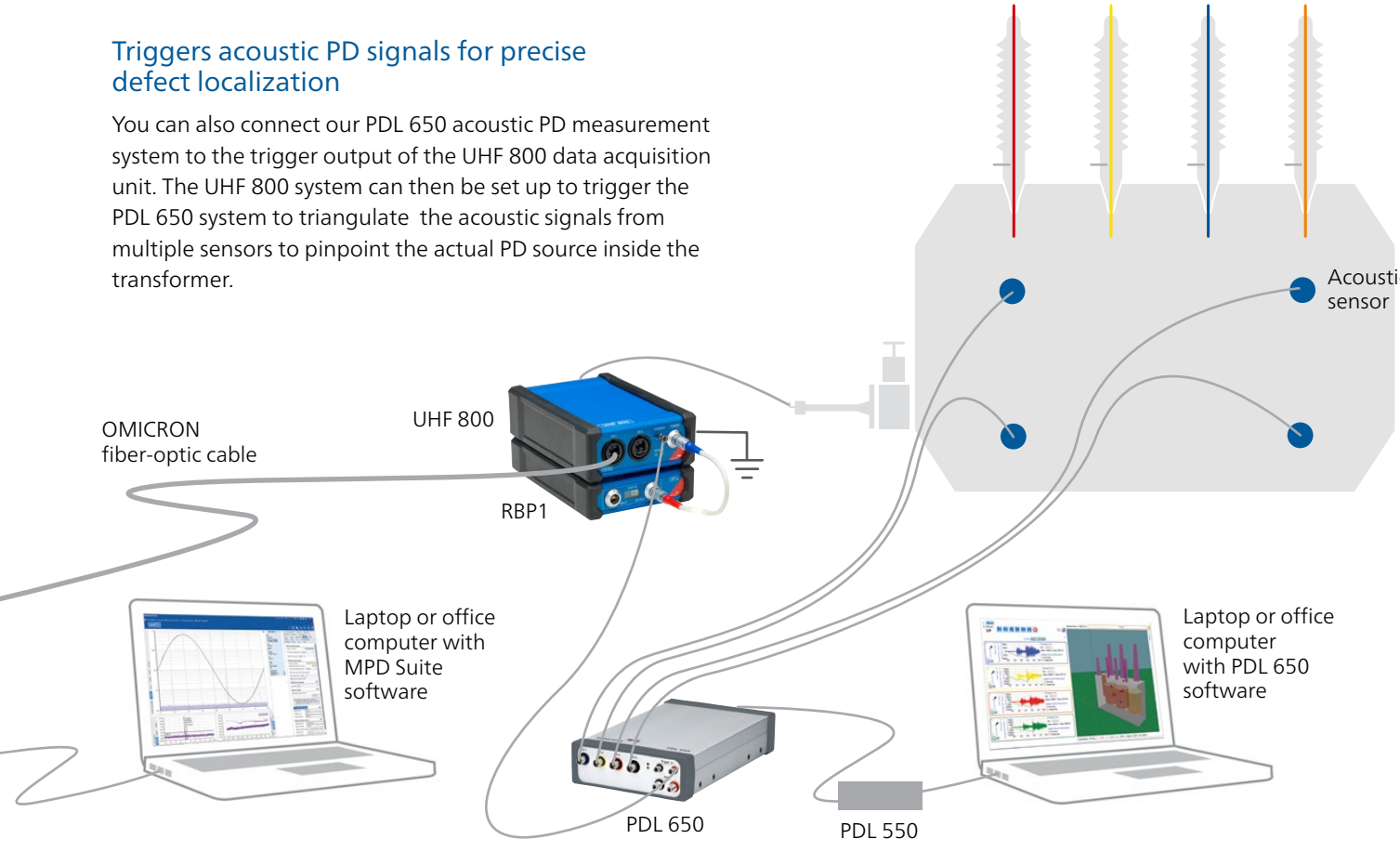
Combined conventional and non-conventional PD measurements

Optionally, you can use the UHF 800 system with our MPD 800 PD measurement and analysis system to perform combined conventional PD measurements and non-conventional UHF PD measurements to confirm PD activity in oil-filled transformers.



Triggers acoustic PD signals for precise defect localization

You can also connect our PDL 650 acoustic PD measurement system to the trigger output of the UHF 800 data acquisition unit. The UHF 800 system can then be set up to trigger the PDL 650 system to triangulate the acoustic signals from multiple sensors to pinpoint the actual PD source inside the transformer.

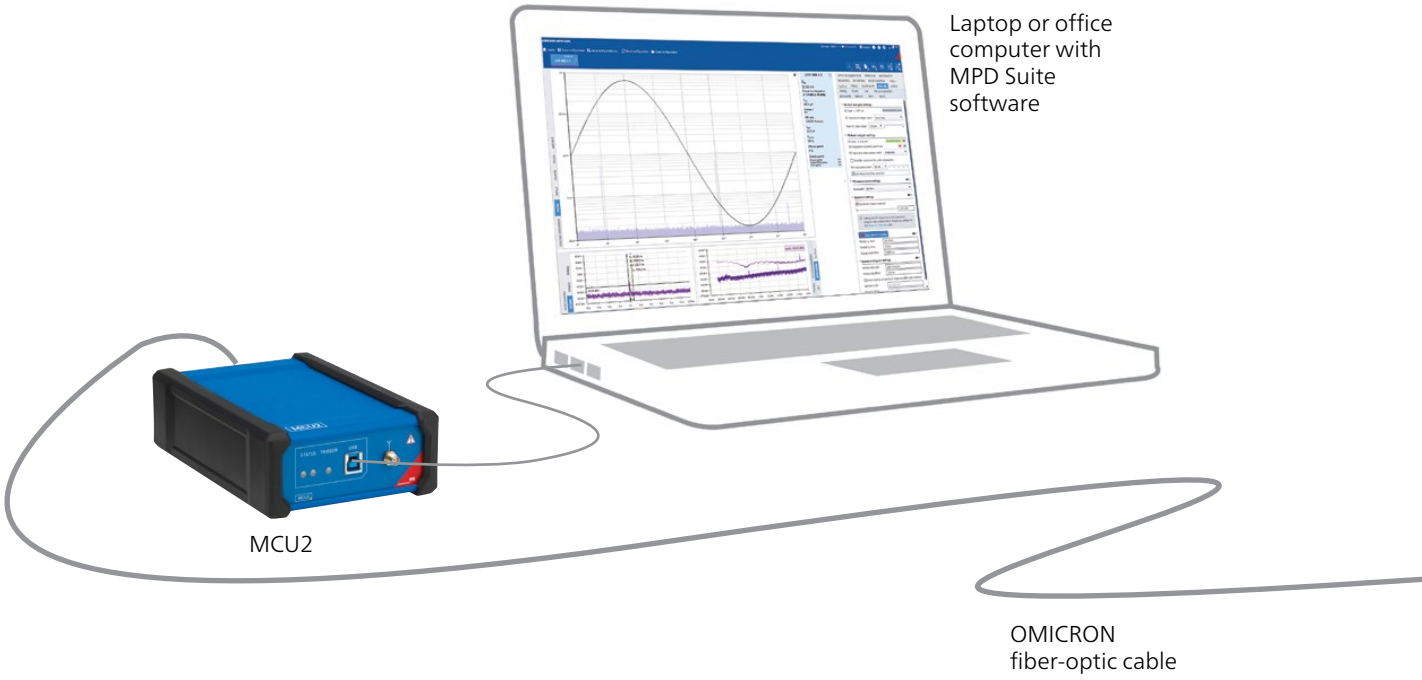


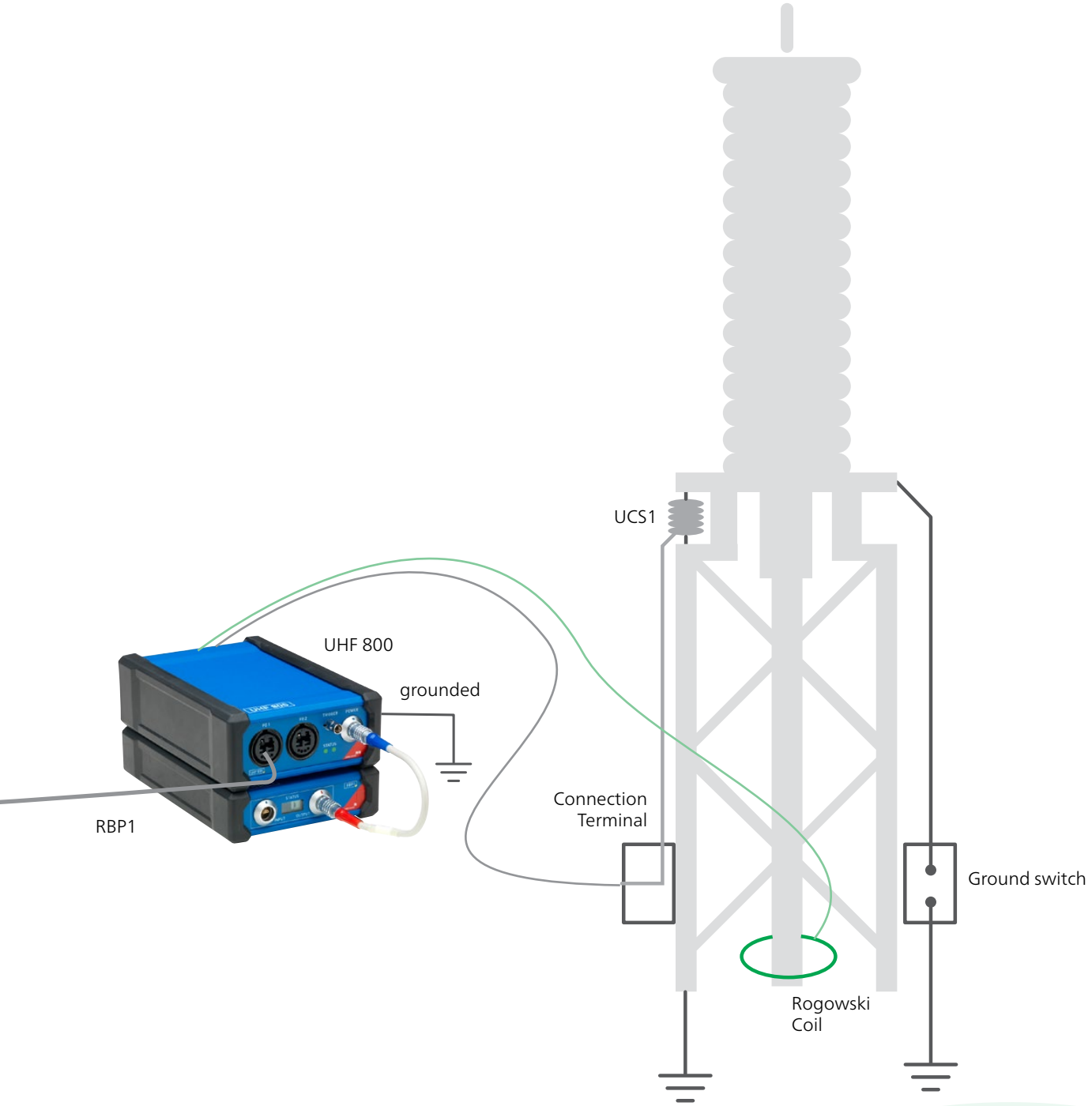
UHF PD measurements on HV cable terminations

Partial discharge (PD) diagnosis using Ultra-High Frequency (UHF) measurements has also been proven to be a very reliable method for assessing the insulation condition of HV cable terminations, because measurements in this frequency range are not influenced by noise typical in the surrounding environment.

Our UCS1 UHF sensor is mounted between the cable sheath and the ground structure of the cable termination to decouple PD signals.

To synchronize measurements to the test or grid frequency, the UHF 800 can use signal from a Rogowski coil.




UCS1
UHF 800
grounded
RBP1
Connection
Terminal
Ground switch
Rogowski
Coil

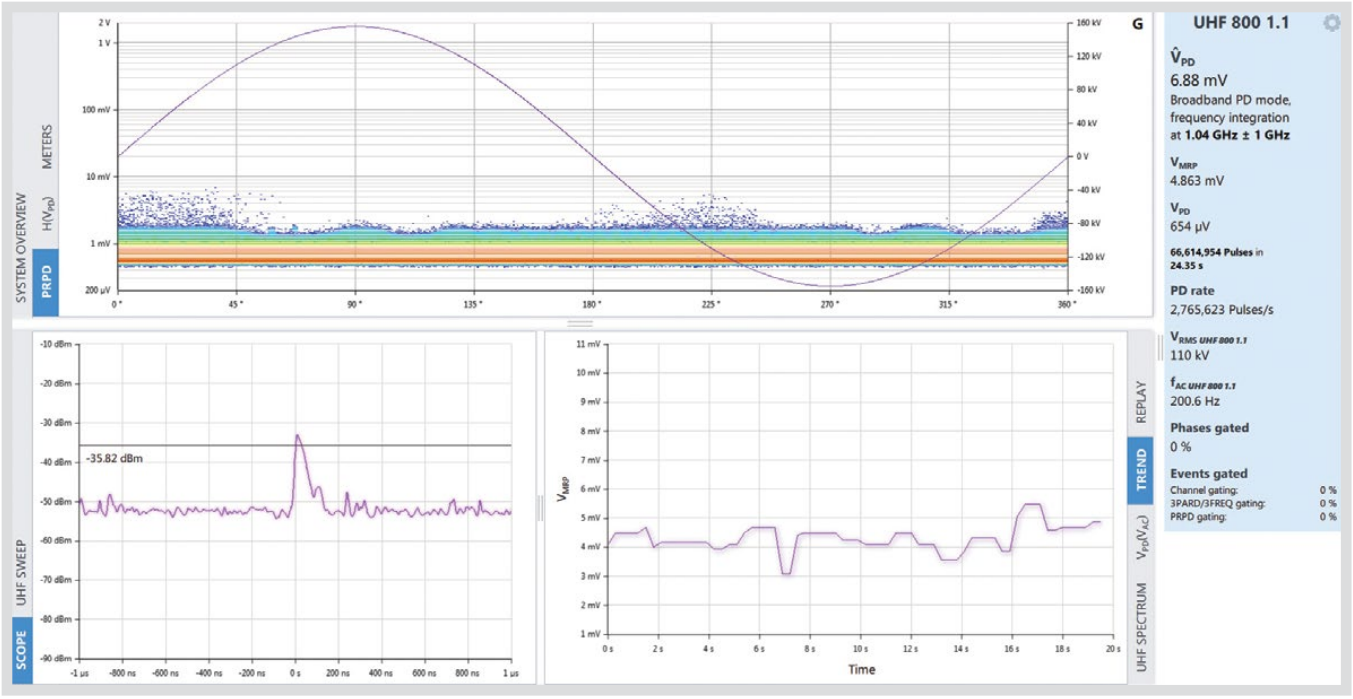
Software highlights

Selectable measurement modes for enhanced sensitivity

The MPD Suite software supports the UHF 800 with different measurement modes which allow you to achieve a high signal-to-noise ratio and perform sensitive measurements on GIS/GIL, oil-filled power transformers and HV cable terminations. The *Wideband Mode* is a standard feature. The *Spectrum View* and *Medium Band Mode* are features of the *UHF Multiband Software Module* (see page 23).

WIDEBAND MODE

The UHF 800 can evaluate the signal spectrum from 100 MHz to 2 GHz with a sensitive setting covering the whole measurement range.

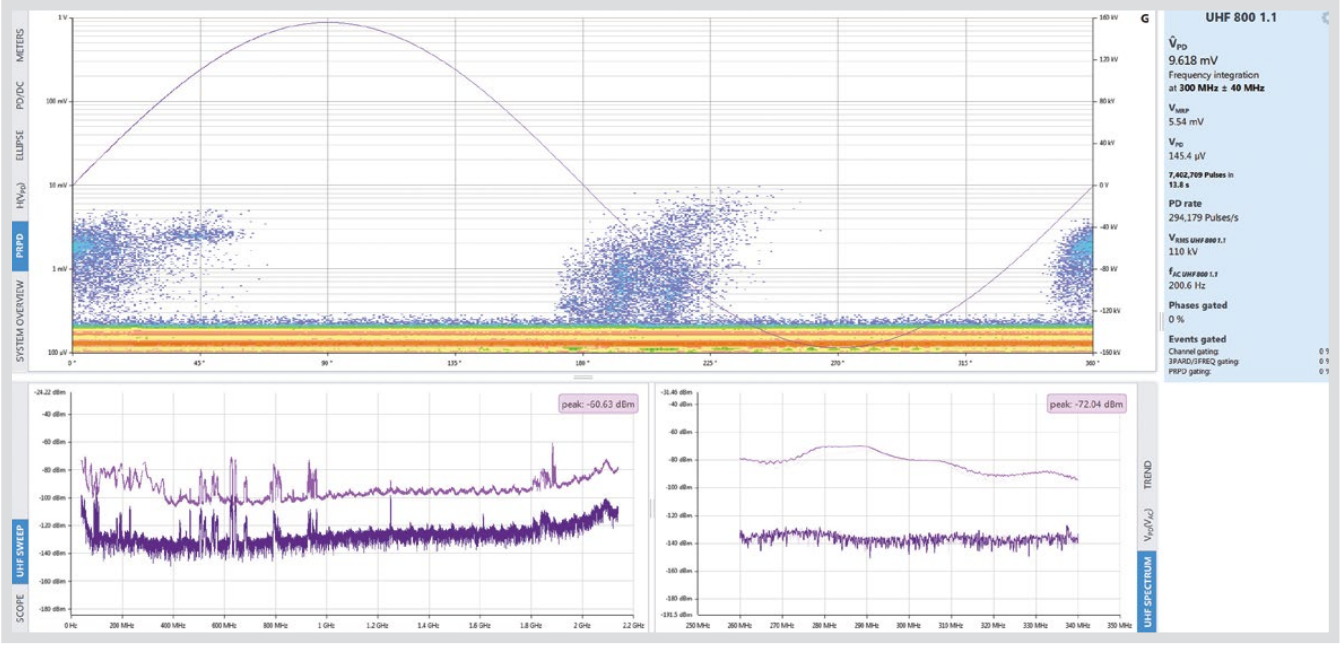


Feature overview		Standard	with UHF Multiband
1.	Wide input frequency range (100 MHz … 2 GHz)	■	■
2.	Wideband Mode (Broadband detector with 2 GHz)	■	■
3.	PRPD Sync on test voltage frequency via UHF or SYNC connector	■	■
4.	Optical trigger output (e.g. for PDL 650)	–	■
5.	Medium Band Mode (Detector with tunable 80 MHz bandwidth)	–	■
6.	Spectrum View with sweep over the full frequency range	–	■

■ included – not included

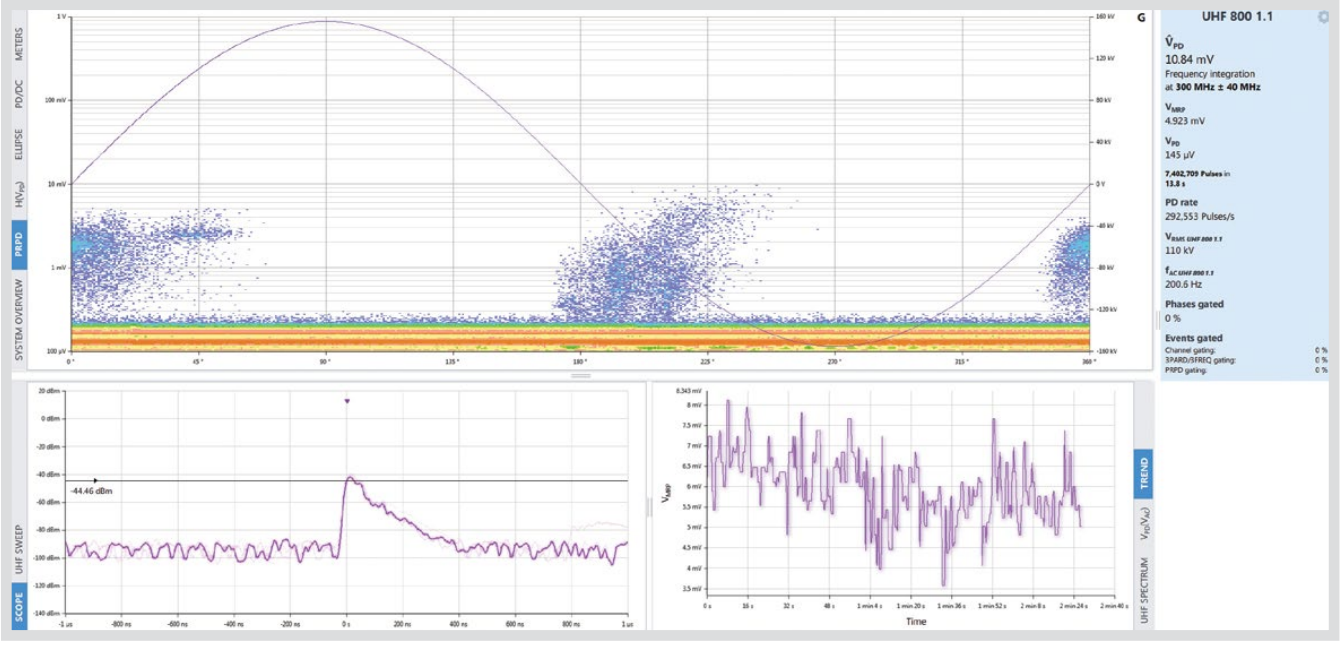
SPECTRUM VIEW

The UHF 800 provides you with a very fast *Spectrum View* to analyze the existing high-frequency signal components. It can be used for a first assessment of the measured signal, and is very helpful for choosing the appropriate measurement frequency range and bandwidth.



MEDIUM BAND MODE

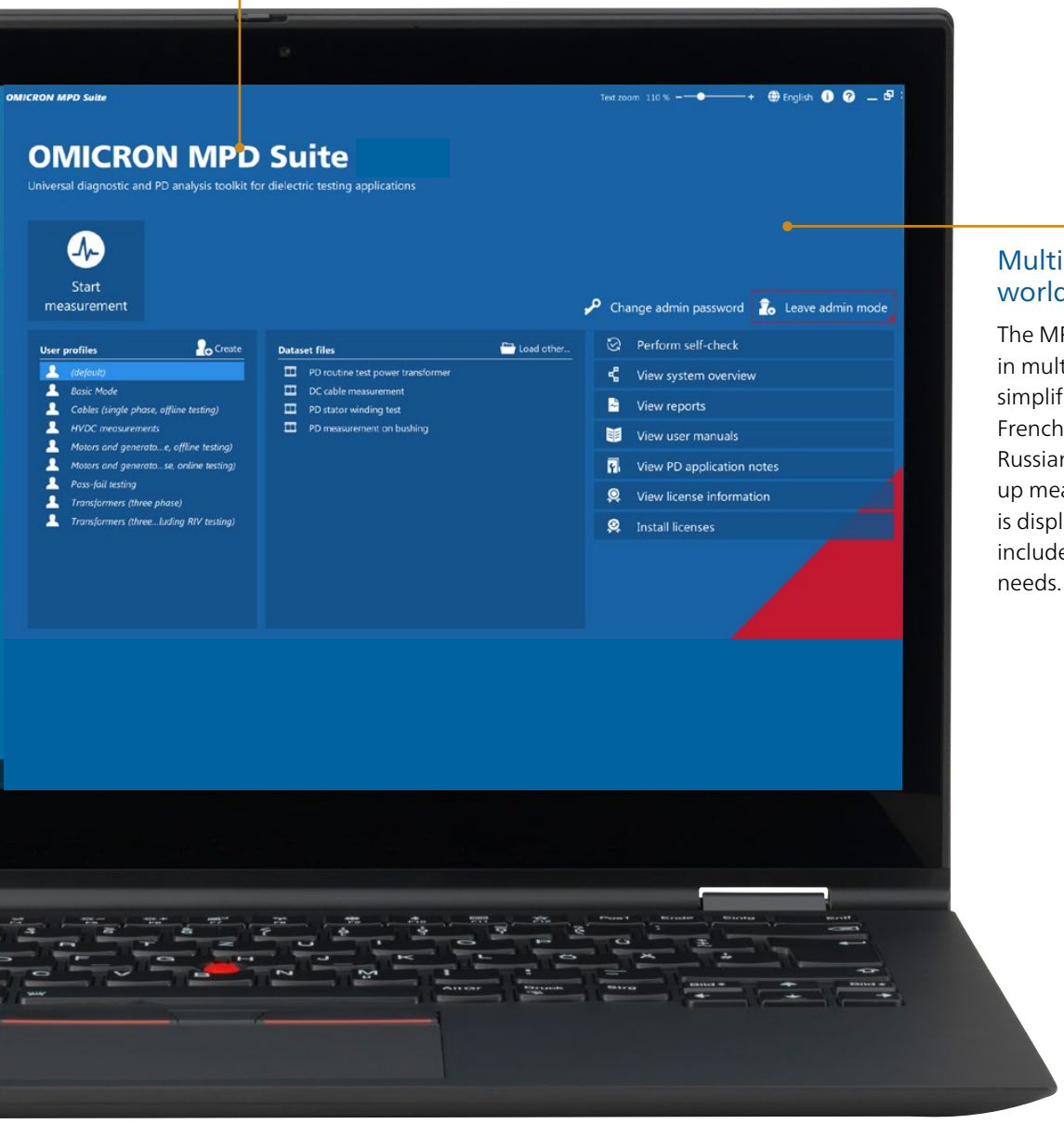
The *Medium Band Mode* is a tunable frequency converter with an 80 MHz detector. It enables you to manually select the best measurement signal to avoid disturbance signals and to identify even very small defects.



Software highlights

Flexible software functionality

The MPD Suite software provides you with an overview of all the functions you need to reliably set up and perform UHF PD measurements and analyze the PD data.



Multi-language for worldwide use

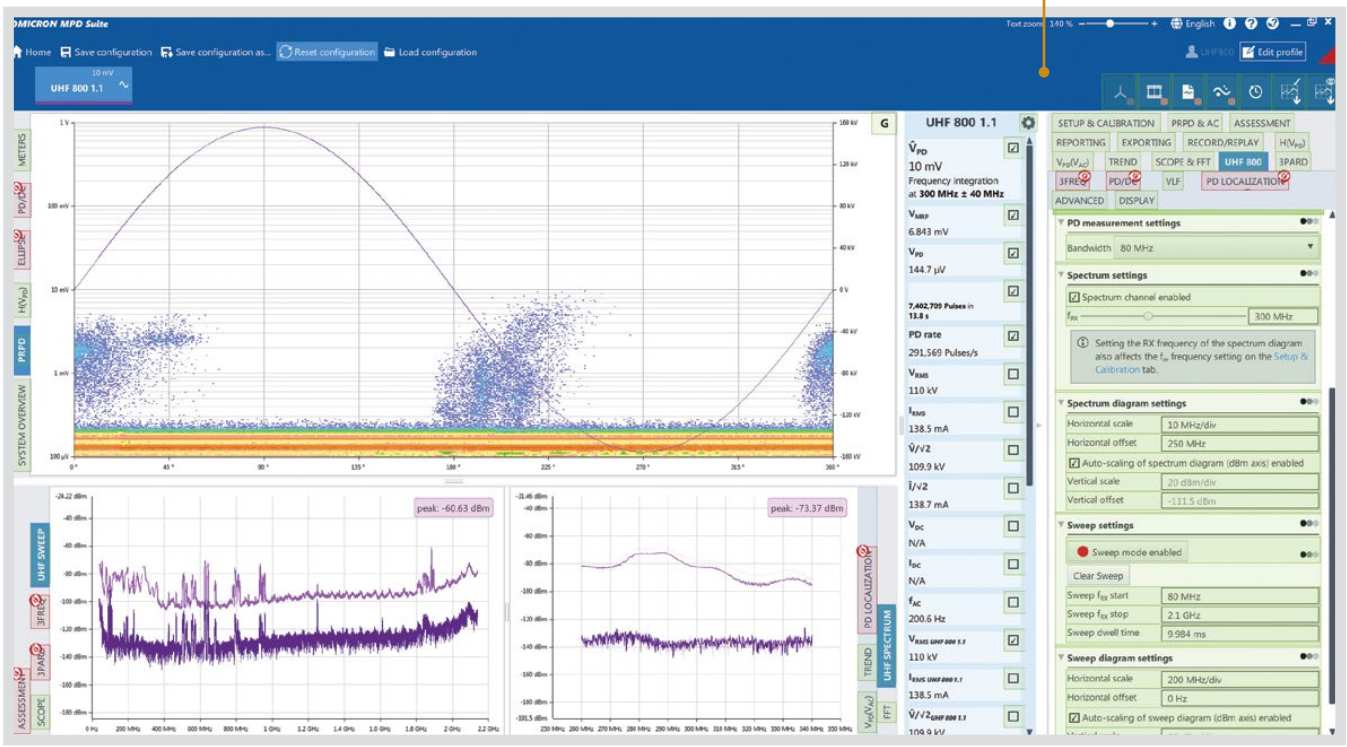
The MPD Suite software is available in multiple languages, including simplified Chinese, English, German, French, Japanese, Portuguese and Russian. It allows you to easily set up measurements, define how data is displayed and what should be included in reports based on your needs.

The MPD Suite software start page provides you with a wide range of helpful information such as application notes or the UHF 800 user manual. In addition, it gives you easy access to user measurement profiles, recorded dataset files and created reports.

Simplified user measurement profiles

The MPD Suite software can be completely customized depending on your needs. You can set individual test specifications, such as frequency range, filters, assessment levels or hide individual software components such as tabs, diagrams, buttons, or feature groups.

This is useful, for example, in cases of dedicated testing applications, such as PD measurement and analysis on GIS/GIL, power transformers or HV cable terminations, where you do not need all of the features the software offers.

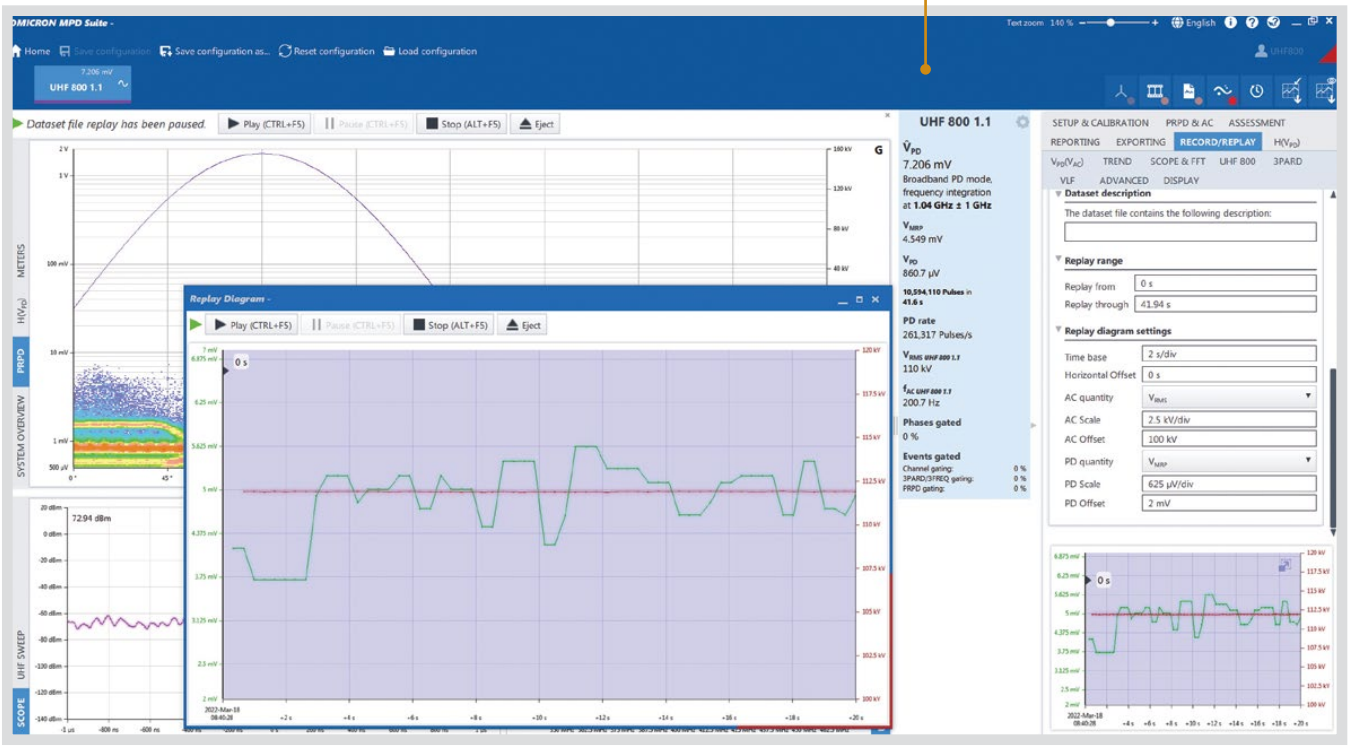


Software highlights

Convenient recording and replay

The UHF 800 records dedicated PD events into dataset files. These files contain unprocessed raw data and include all measured values and all relevant system settings. That way, measurements become traceable and you can use the software's analysis functions for post-analysis.

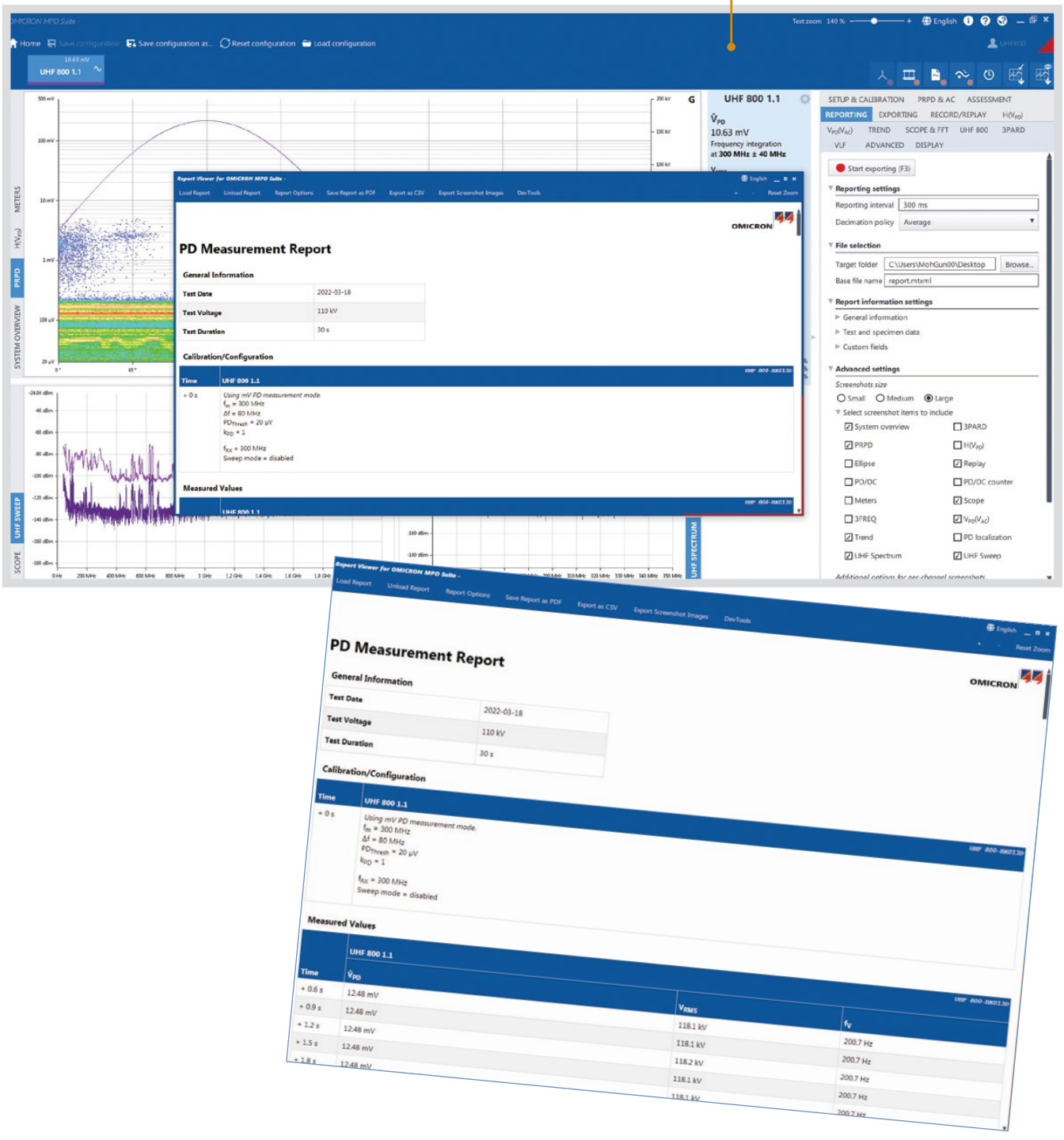
The recorded dataset files can be cut individually to focus on relevant PD events. As the playback speed can be freely selected, some sections can be played back more slowly in order to be analyzed in greater detail.



Customized reports

You can record specific PD events, export the measurement data afterwards as .xml or as .csv files, and save diagrams on an individual basis.

In addition, you can adapt the report by selecting what information should be included and in which order. You can also add screenshots and your company logo. Once completed, your reports can be stored as PDF files.



Technical data

UHF 800 system

General specifications

UHF connector frequency range	100 MHz … 2 GHz
PD measurement mode	Wideband Mode: Broadband detector with 2 GHz bandwidth Medium Band Mode: Tunable data acquisition with 80 MHz bandwidth
Frequency spectrum evaluation	Spectrum View
Grounding screw	M8
Power supply	Operated by RBP1
Max. PD pulse rate	2.8 Mio./s
Numbers of UHF 800 channels in one system	Up to 12 measurement channels

Measurement Interface

UHF connector type	N-type socket
UHF connector frequency range for PD measurement	100 MHz … 2 GHz
Input impedance at UHF connector for PD measurement range	50 Ω nominal
Max. input power at UHF connector	2 W (+33 dBm)
Dynamic range over all	105 dB for Wideband Mode 115 dB for Medium Band Mode
Dynamic range per range	70 dB for Wideband Mode 85 dB for Medium Band Mode
Sensitivity	< -78 dBm / < 28 μV_{RMS} for Wideband Mode < -86 dBm / < 11 μV_{RMS} for Medium-Band Mode
Frequency spectrum evaluation range	100 MHz … 2 GHz
Synchronization for PRPD on test/grid voltage frequency	SYNC input or coupling on UHF connector
Synchronization frequency range via UHF connector or SYNC input	10 mHz … 10 kHz
SYNC input connector	BNC socket
Input impedance	1.5 MΩ || 1 uF
Max input range SYNC input	70 mA_{RMS} and 160 V_{RMS}

Fiber-optic ports

Wavelength FO1, FO2	1308 nm (2x LC compatible OM3)
Wavelength fiber-optic output TRIGGER	820 nm (1x ST compatible, OM2)

Protection specifications

ESD pulse withstand capability (IEC 61000-4-2) UHF connector and SYNC input	17 kV

Mechanical data and environmental conditions

Dimensions (W × D × H)	119 mm × 190 mm × 55 mm (4.69 inch × 7.48 inch × 2.17 inch)
Weight	1000 g (2.2 lbs)
Humidity	5 % … 95 %, non-condensing
Ambient temperature UHF 800 (operating)	-20 °C … +55 °C (-4 °F … +131 °F)

Equipment reliability standards

Shock	IEC/EN 60068-2-27
Vibration	IEC/EN 60068-2-6
Ingress protection (IEC/EN 60529)	IP40
EMC	IEC/EN 61326-1 (industrial electromagnetic environment) FCC subpart B of part 15, class A
Safety	IEC/EN/UL 61010-1 IEC/EN/UL 61010-2-030
Laser class	EN 60825-1:2007 EN 60825-2:2007

PC requirements

Interface	USB 3.0
Hardware	Minimum [1]: Quad-Core 64-bit Intel or AMD CPU with at least 1.6 GHz, 4 GB RAM (e.g. Intel i5, AMD Ryzen 3) Recommended [2]: Quad-Core 64-bit Intel or AMD CPU with at least 2.5 GHz, 8 … 16 GB RAM, dedicated GPU (e.g. Intel i7, AMD Ryzen 5) High-End [3]: Octa-Core 64-bit Intel or AMD CPU with at least 3.2 GHz, 32 GB RAM, dedicated GPU (e.g. Intel i7/i9, AMD Ryzen 7)
Software / Operation system	Windows 8™, Windows 8.1™, Windows 10™ (all 64-bit)

[1] Example for single channel system for "pass/fail" testing

[2] Example for system up to four measurement channels or use of advanced features.

[3] Example for higher measurement channels.

MCU2 – Multi-device control unit

The MCU2 controller converts optical signals transmitted by a fiber-optic cable to standard electrical communication signals. The MCU2 is conected to a laptop or office computer via a USB cable.

Interface	USB 3.0
Fiber-optic (FO) network	For MPD 800 or UHF 800: LC For MPD 600: ST
Connector type	2 × LC (FO1, FO2), 1 × ST pair (FO3)
Max. FO cable length	2.5 km / 15.5 mi

Mechanical data

Dimensions (W × H × D)	119 × 175 × 55 mm / 4.7 × 6.9 × 2.2 in
Weight	750 g /1.7 lbs

RBP1 – Lithium-ion battery pack

The RBP1 is a rechargeable battery pack for operating the MPD 800 and UHF 800, including a battery status display. Up to five RBP1 batteries can be connected via daisy chain to power long-time PD measurement setups.

Operating time for UHF 800 with one RBP1	12 hours
Typical charging duration	< 4 hours
Battery lifecycle	1000 cycles or 5 years[1]
Nominal voltage	11.1 V
Nominal energy	96.6 Wh

Power supply

Battery charge voltage	8 V DC … 12.4 V DC
Power supply voltage	100 V … 240 V (50 Hz … 60 Hz)

Mechanical data

Dimensions (W × H × D)	115 × 38 × 175 mm / 4.5 × 1.5 × 6.9 in
Weight	910 g / 2 lbs

[1] Whichever occurs first, remaining 50 % state of health (SoH) equals 40 Wh remaining energy.

Technical data

UHF 800 accessories

UPG 620 – Pulse generator

The UPG 620 generates very fast slope pulses and is mainly used to verify the measurement circuit in the UHF range.

Technical Data	
Rise time	< 200 ps
Decay time	> 100 ns
Frequency repetition rate	100 Hz
Power supply	2 × 9 V lithium battery for > 120 h continuous operation
Weight	700 g / 1.5 lbs
Dimensions (W × H × D)	110 × 28 × 185 mm / 4.3 × 1.1 × 7.3 in
Operating temperature	0 °C … 55 °C / 35 °F … 130 °F
Connector	N-type

UCS1 – UHF HV cable termination sensor

This sensor performs PD measurements in UHF range between the cable sheath and the ground structure of high-voltage cable terminations.

Technical Data	
Frequency range	100 MHz … 1 GHz
Capacitance	2 nF
Insulation level	12 kV
AC withstand voltage	28 kV; 1 min.
Operating temperature	-20 °C … 85 °C / -4 °F … 185 °F
Dimensions (Ø × H)	105 × 107 mm / 4.1 × 4.2 in
Weight	1.2 kg / 2.6 lbs
Primary connections	Screw thread 2 × M8 x 14
Connector	TNC socket

UHT1 – Hatch-type UHF sensor

The UHT1 is a hatch-type sensor used for detecting PD n the UHF range inside oil-filled power transformers which do not have oil drain valves for a UVS 610 sensor. The UHT1 is permanently installed at dedicated measurement windows on the surface of the transformer tank.

Technical Data	
Frequency range	200 MHz … 1 GHz
Leakage tightness	For oil temperatures of -15 °C … 120 °C / 5 °F … 248 °F at 5 bar pressure
Operating temperature	-15 °C … 120 °C / 5 °F … 248 °F
Storage temperature	-15 °C … 70 °C / 5 °F … 158 °F
Humidity	5 % … 95 % (non-condensing)
Dimensions (Ø × h)	150 × 109 mm / 5.9 × 4.3 in
Insertion depth	28 mm / 1.1 inch from flange to oil barrier
Weight	5 kg / 11 lbs
UHF connector (output)	TNC socket (Coaxial RF connector)
TEST connector (input)	N-type socket

UVS 610 – UHF drain valve sensor

The UHF valve sensor allows PD measurements in UHF ranges in oil-filled transformers. It is inserted through the oil drain valve (DN 50 and DN 80).

Technical Data	
Usable frequency range	150 MHz … 1 GHz
Tightness	Up to 5 bar pressure -15 °C … 120 °C / 5 °F … 248 °F
Insertion depth	0…417 mm (16.41 inch)
Weight	3.1 kg / 6.8 lbs
Dimensions (Ø × H)	200 x 623 mm / 7.9 × 24.52 inches
UHF connector (output)	N-type socket
Test connector (input)	N-type socket

UHF 800 cases

MPC1 – Protection case

The MPC1 is the universal UHF 800 protection case for outdoor usage and rough industrial environments. It offers several configuration options for flexible usage.

Technical Data

Configuration options	2 × MPD 800 1 × MPD 800 and 2 × CPL1 1 × MPD 800 and 1 × UHF 800
Weight (empty)	3900 g / 8.59 lbs
Ingress protection	IP44
Dimensions (W × H × D)	477 × 174 × 330 mm / 18.8 × 6.9 × 13 in
Operating Temperature	-20 °C … 45 °C / -4 °F … 113 °F (50 °C / 122 °F with one MPD 800)

MTC1 – Transport case

The MTC1 is a universal UHF transport case and can contain up to a 5 MPD 800 units, one UHF 800, one RIV and one IEC calibrator, a controller and batteries. Alternatively, the MTC1 can include a 3-unit MPD 800 system 3 CPLs, one UHF 800, a controller, two calibrators (IEC, RIV) and batteries.

Technical Data

Ingress protection	IP67
Weight (empty)	8500 g / 18.73 lbs
Dimensions (W × H × D)	560 × 455 × 265 mm / 22.04 × 17.91 × 10.43 in

MTC2 – Flight case

The MTC2 is the UHF flight case. It can contain up to 3 MPD 800 units, an UHF 800, one calibrator, MCU2 controller and batteries.

Technical Data

Ingress protection	IP5x
Weight (empty)	4000 g / 8.81 lbs
Dimensions (W × H × D)	543 × 368 × 207 mm / 21.37 × 14.48 × 8.14 in

Ordering Information Overview

	GIS / GIL	Power transformer (oil-filled)	HV cable termination
UHF 800 system			
Single-channel system	■	■	■
Four-channel system	■	□	□
Extension channel package	□	□	□
Software packages			
UHF Multiband	□	■	■
Impulse generator			
UPG 620	■	■	□
UHF sensors			
UCS1	—	—	■
UHT1	—	■	—
UVS 610	—	■	—
UHF 800 cases			
MPC1	□	□	□
MTC1	□	□	□
MTC2	□	□	□

■ Recommended □ Optional — Not applicable

See the detailed ordering information on the following pages.

Ordering information

UHF 800 standard system packages

The UHF 800 is available with the following standard system package configurations. The packages are available for different numbers of channels and with different accessory configurations.

> With the Multi-MCU Licence concept, all UHF Channel Measurement Licences are located in the UHF 800 device.
> All Software Licences (e.g. UHF Multiband) are located in the MCU2.
> All UHF Standard and Extension Packages are designated with MML. This is beneficial for example when users add extension channels to a MPD 800 System (Default or MML concept) or have different systems, respectively different MUC's. For more detailed information, please refere to the MPD 800 Manual or Ordering Information brochure.

Legend:

> _20 = 20m / 65 ft of standard optic fiber cable is included.
> _RF = Analogue RF Filter Kit is included.
> _basic (MML only) = Does not include RBP1, fiber optic cable or RF Filter Kit.

Description	Ordering No.
■ Single-channel UHF 800 standard system package General package for single-channel UHF PD testing with the Wideband Measurement Mode approach. It is applicable for use on a wide variety of electrical assets and applications. In includes: 1× UHF 800 acquisition unit 1× UHF 800 PD measurement channel license (Multi-MCU License type stored on UHF 800) 1× Analogue RF filter kit 1× Standard LC duplex fiber optical cable, 20 m / 65 ft 1× RBP1 rechargeable battery package (including battery, charger and cable) 1× MCU2 standard master control unit (including USB cable) Software: Standard package Manual and different connectors and cables are included	P0007136 : MML_20_RF
■ Single-channel UHF 800 standard system package without RF filter and fiber optic cable Like P0007136 : MML_20_RF but without analogue RF filter kit and without fiber optic cable.	P0007136 : MML
■ Two-channel UHF 800 standard system package Typical package for multi-channel UHF PD testing and detection (e.g. measurement at GIS). The following items are delivered with the UHF 800 high-end, 2 x UHF 800 acquisition units with the Wideband Measurement Mode approach: 2× UHF 800 acquisition unit 2× UHF 800 PD measurement channel license (Multi-MCU License type stored on UHF 800) 2× Analogue RF filter kit 2× Standard LC Duplex fiber optical cable, 20 m / 65 ft 2× RBP1 rechargeable battery package (including battery, charger and cable) 1× MCU2 standard master control unit (including USB cable) Software: Standard Package Manual and different connectors and cables are included	P0007137 : MML_20_RF
■ Two-channel UHF 800 standard system package without RF filter and fiber optic cable Like P0007137 : MML_20_RF but without analogue RF filter kit and without fiber optic cable.	P0007137 : MML
■ Three-channel UHF 800 standard system package Like P0007137 : MML_20_RF but with 3x UHF 800 acquisition units and matching number of measurement licenses, analogue RF filter kits and rechargeable RBP1 battery packs.	P0007138 : MML_20_RF

Description	Ordering No.
■ Three-channel UHF 800 standard system package without RF filter and fiber optic cable Like P0007138 : MML_20_RF but without analogue RF filter kit and without fiber optic cable.	P0007138 : MML
■ Four-channel UHF 800 standard system package Like P0007136 : MML_20_RF but with 4x UHF 800 acquisition units and matching number of measurement licenses, analogue RF filter kits and rechargeable RBP1 battery packs.	P0007140 : MML_20_RF
■ Four-channel UHF 800 standard system package without RF filter and fiber optic cable Like P0007140 : MML_20_RF but without analogue RF filter kit and without fiber optic cable.	P0007140 : MML
■ Six-channel UHF 800 standard system package Like P0007136 : MML_20_RF but with 6x UHF 800 acquisition units and matching number of measurement licenses, analogue RF filter kits and rechargeable RBP1 battery packs.	P0007141 : MML_20_RF
■ Six-channel UHF 800 standard system package without RF filter and fiber optic cable Like P0007141 : MML_20_RF but without analogue RF filter kit and without fiber optic cable.	P0007141 : MML

UHF 800 extension packages for UHF 800 and MPD 800 systems

Description	Ordering No.
■ UHF 800 extension package This package extends a UHF 800 standard system or an MPD 800 standard system with an additional UHF measurement channel. It includes: 1× UHF 800 acquisition unit 1× UHF 800 PD measurement channel license (Multi-MCU License type stored on UHF 800) 1× Analogue RF Filter kit 1× Standard LC duplex fiber optical cable, 20 m / 65 ft 1× RBP1 rechargeable battery package (including battery, charger and cable) Manual and different connectors and cables are included	P0007145 : MML_20_RF
■ UHF 800 extension package without RF filter and fiber optic cable Like P0007145 : MML_20_RF but without analogue RF filter kit and fiber optic cable.	P0007145 : MML
■ UHF 800 extension package without RBP1, RF filter and fiber optic cable Like P0007145 : MML_20_RF but without RBP1, analogue RF filter kit and fiber optic cable.	P0007145 : MML_basic

MPD Suite software upgrade options

Description	Ordering No.
■ From Standard to UHF MultiBand software upgrade UHF Multiband Software Module for *Spectrum View* and *Medium Band Mode* (see page 13).	P0007148
■ From UHF MultiBand to Multi-Application software upgrade	P0007149

Ordering information

UHF 800 Accessories

The following items can be combined or used with the UHF 800 but may not be included in the scope of delivery and can be ordered separately.

Description	Ordering No.
RF Filter Kit A high pass filter 300 MHz, high pass filter 500 MHz and low pass filter 750 MHz, with N-type connectors.	P0007147
UPG 620 Pulse generator	
UPG 620 Pulse generator (restricted up to 5V)	P0001354:5V
UPG 620 Pulse generator (up to 60V)	P0001354:60V
RBP1 Rechargeable battery	
RBP1 Package with battery, connection cable and standard 24W power supply as charger	P0006457
RBP1 Battery (incl battery connection cable).	P0006456
RBP1 Battery connection cable	B1048901
Standard 24W power supply	B1116300
Duplex LC fiber optic cables	
Duplex fiber optic cable 3 m, 10 ft	E1869700
Rugged duplex fiber optic cable 5 m, 16 ft	E1869800
Duplex fiber optic cable 20 m, 65 ft	E1785200
Slim duplex fiber optic cable 20 m, 65 ft	E1915000
Rugged duplex fiber optic cable 50 m, 165 ft	E1869900
UCS1 UHF cable sensor	P0006455
UHT1 Hatch-type UHF sensor	
UHT1 complete with flange and sensor	P0001081
UHT1 sensor head	P0001082
UHT1 flange	P0001083
UVS 610 UHF drain valve sensor	P0006444

UHF 800 cases

Description		Ordering No.
MPC1 Measurement protection case The MPC1 is the universal UHF 800 protection case for outdoor usage and rough industrial environments. It offers several configuration options for flexible usage.		
Configuration options	**(A)** 2 × MPD 800 with 2 × RBP1 **(B)** 1 × MPD 800 with 1 × RBP1 and 1 x UHF 800 with 1 x RBP1 **(C)** 1 × MPD 800 with 1 × RBP1 and 1 x CPL1/2 **(D)** 1 × UHF 800 with 1 x RBP1 **(E)** 1 × MPD 800 with 1 x RBP1	B1440502
Weight (empty)	3900 g / 8.59 lbs	
Ingress protection	IP44	
Dimensions (W × H × D)	477 × 174 × 330 mm / 18.8 × 6.9 × 13 in	
Operating temperature	-20 °C … 45 °C / -4 °F … 113 °F (50 °C / 122 °F with one MPD 800)	
MTC1 Universal transport case The MTC1 is a universal UHF transport case and can contain up to a 6 MPD 800 or UHF 800 units, one RIV and one IEC calibrator, a controller and batteries. Alternatively, the MTC1 can include a 3-unit MPD 800 system 3 CPLs, one UHF 800, a controller, two calibrators (IEC, RIV) and batteries.		B1506601
Weight (empty)	8 500 g / 18.73 lbs	
Dimensions (W × H × D)	560 × 455 × 265 mm / 22.04 × 17.91 × 10.43 in	
MTC2 Flight case The MTC2 is the UHF flight case. It can contain up to 3 MPD 800 or UHF 800 units, one calibrator, MCU2 controller and batteries.		
Ingress protection	IP5x	B1566401
Weight (empty)	4 000 g / 8.81 lbs	
Dimensions (W × H × D)	543 × 368 × 207 mm / 21.37 × 14.48 × 8.14 in	

We create customer value through ...

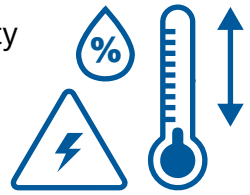
Quality

You can rely on the highest safety and security standards

Superior reliability with up to

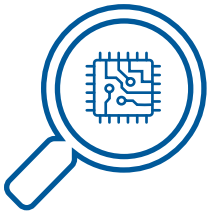
72

hours burn-in tests before delivery



100%

routine testing for all test set components



ISO 9001
TÜV & EMAS
ISO 14001
OHSAS 18001

Compliance with international standards

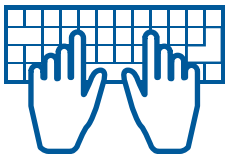
Innovation

... a product portfolio tailored to my needs

More than

200

developers keep our solutions up-to-date



More than

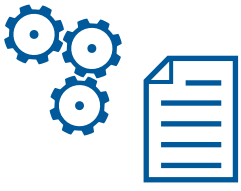
15%

of our annual sales is reinvested in research and development

Save up to

70%

testing time through templates, and automation

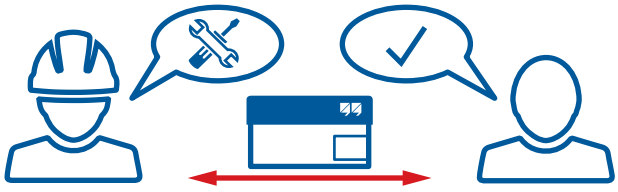


Support

24 7

Professional technical support at any time

Loaner devices help to reduce downtime



Cost-effective and straight-forward repair and calibration

offices worldwide for local contact and support

Knowledge

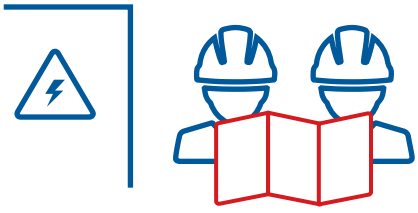
More than

300

Academy and numerous hands-on trainings per year

Frequently OMICRON hosted user meetings, seminars and conferences

to thousands of technical papers and application notes



Extensive expertise in consulting, testing and diagnostics

OMICRON is an international company that works passionately on ideas for making electric power systems safe and reliable. Our pioneering solutions are designed to meet our industry's current and future challenges. We always go the extra mile to empower our customers: we react to their needs, provide extraordinary local support, and share our expertise.

Within the OMICRON group, we research and develop innovative technologies for all fields in electric power systems. When it comes to electrical testing for medium- and high-voltage equipment, protection testing, digital substation testing solutions, and cybersecurity solutions, customers all over the world trust in the accuracy, speed, and quality of our user-friendly solutions.

Founded in 1984, OMICRON draws on their decades of profound expertise in the field of electric power engineering. A dedicated team of more than 900 employees provides solutions with 24/7 support at 25 locations worldwide and serves customers in more than 160 countries.

For more information, additional literature, and detailed contact information of our worldwide offices please visit our website.

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