



Partial Discharge Diagnostic System



High performance, fast reliable and flexible the ultimate solution for Partial Discharge Monitoring

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Innovative instrument for Partial Discharge recording & processing

Ultra Wide band, fast integrated processing capability

Up to 3 PD Channels, full support to UWB Techimp Technology

External, line synchronization from 0.1 Hz to 1kHz

Powerful, PD Pulse detector and Waveform analyzer

Multiple connectivity (Wi-Fi, Fiber Optics) and power supply

Fuzzy logic diagnostic tools and statistical processing

Did you ever had the need to have a flexible and reliable instrument for fast partial discharge Diagnostic campaigns? Did your thought to the advantages for your plant operators to have a practical all-in one instruments, provided with all you need for a complete PD diagnosis?

Techimp Portable PDCheck® has been expressly designed to respond to all these needs being a robust and compact portable all-in-one PD detection station providing a full range of options ideal for on field applications. More than ten years of service experience has been condensed in this unit representing a practical system integrating **Techimp** innovative PD detection technology with multiple connectivity (Wi-Fi, Fiber Optics) and power supply.

Techimp Portable PDCheck is able to stand up to 20 hours of full working conditions in a monitoring session. It can also be used as a power supply source as battery recharging unit for laptops, increasing the efficiency and the effective measuring time of a PD monitoring session, relieving customer for the need of external power supplies.

The unit comes with a practical compartment for sensors and cables storage used in the monitoring session, reducing transport cost and set up time to measure.

Applications field

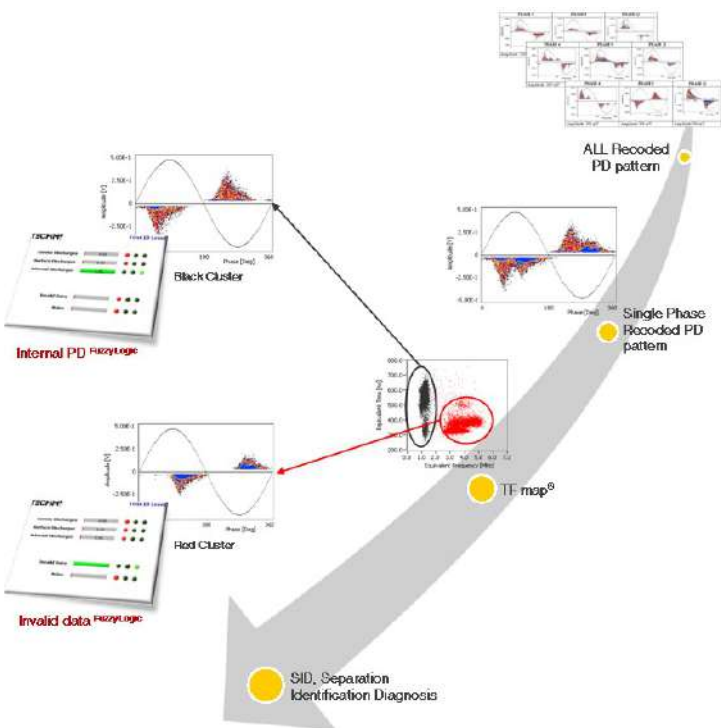
Portable PDCheck® is suitable for on field diagnostic sessions and periodic assessment of:

- Cable and cable accessories (such as joints and terminations);
- Electric Generators & Motors;
- Power and Measurement Transformers;
- Gas Insulated and Air Insulated Switchgears;
- Outdoor Insulators for Overhead Lines (pollution assessment).

Techimp offers a wide and complete range of sensors, filters and signal conditioning devices in practical kits coming with Portable PDCheck to cover any possible PD acquisition and optimise the circuit measurement .

Consult our sales department for details and customize the kit to fit your need.

Techimp Portable PDCheck



Techimp TW/TF map technology

Techimp technology (patented) allows different PD phenomena to be classified on the basis of their pulse shape, thus enabling further analysis to be carried out separately on each dataset. PD source identification is, so, highly enhanced and even a non skilled operator will be able to carry it out.

Techimp acquisition technology provides efficient noise rejection as well. As a matter of fact, noise signals have been observed to be very different from PD signals. Techimp classification system is really successful in separating PD phenomena from those generated by disturbances. In detail, each PD pulse waveform is acquired and the so-called equivalent time-length and bandwidth are evaluated and plotted on the TF map. Different types of discharges (e.g. PD due to distributed microvoids, slot discharges and noise in a rotating machine) shall group into different clusters in the TW map being characterized by different pulse shapes.

Specifications

Wide Band Acquisition PD channel

| | |
|----------------------------|-------------------------------------|
| PD Technology | UWB - PRPD/TF map |
| PD Channels | 3 UWB Channels |
| Bandwidth | 16kHz-30MHz, buit in UWB filter |
| Resolution | 10 bit |
| Dynamic range | 75 dB |
| Maximum sampling frequency | 100 MS/s |
| Input voltage range | 1-4000 mVpp |
| Input sensitivity | < 1.0 mVpp |
| Input Impedance | 50 Ohm |
| Recording time length | 1 μ s (min) 20 μ s (max) |
| Connectors type | BNC |

Synchronization channel

| | |
|---------------------|-----------------------|
| Input voltage range | 5-200 Vpp- Dc coupled |
| Frequency range | 0.1 ÷ 1000 Hz |
| Input Impedance | 1MOhm |
| Connector type | BNC |

Connectivity

| | |
|------|---|
| Type | Wi-Fi, IEEE 802.11g Ethernet Fiber Optics connection |
|------|---|

Display

| | |
|------|---------------|
| Type | LCD 200x20 mm |
|------|---------------|

Casing

| | |
|------------|--------------------------------------|
| Dimensions | 546 x 347 x 247 mm |
| Weight | 13 kg |
| IP Degree | IP67 cover Close, IP24 cover Open |

Power Supply

| | |
|-------------------|---|
| Voltage | 100 - 240 VAC 50/60 Hz |
| power supply | 5V (max 15 W) 12 V (max 20W) |
| Battery | Li-ion Battery 12V, 18.4Ah @ 1.0A @ 23°C |
| Autonomy | Max 20 hours@ full function* |
| Glove compartment | Volume 6,5 litres |

Operating environmental conditions

| | |
|-------------|---------------------|
| Temperature | 0 to 60 °C ** |
| Humidity | 90%, not condensing |

General

| | |
|----------|---|
| Firmware | updating via internet connection to Techimp website |
|----------|---|

Certifications

| | |
|--|----------------------|
| | IEC 60270 compliance |
|--|----------------------|

The Product

Portable PDcheck® provide full support to the innovative proprietary Ultra-Wide-Band TW map technology with up to three PD Channels. Under the cover of the robust rigid box protecting the unit, a control panel gives access to the full range of functions and connectors.

Smart handling system.

The software

PPDcheck comes with an acquisition software which holds all the needed functions to control the instrument, to set the correct acquisition parameters, to acquire and visualize the PD dataset in order to get an immediate diagnostic response .



PDProcessing add-on software is also available which allows the acquired data files to be processed for a deep analysis of the detected phenomena.

(*) Ethernet Fiber Optic mode
(**) 0 to 45 °C when battery is charging