

Techimp PDPortable– Data Sheet



Compact, 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 6 PD Channels, full support to UWB Techimp Technology, one channel for synchronization

Compact, PD Pulse detector and Waveform analyzer, with embedded 11" HD industrial tablet for instrument control and data analysis.

Multiple connectivity (Wi-Fi, Fiber Optics, USB, bluetooth)

Fuzzy logic diagnostic tools and statistical processing

Did you ever need to have a flexible and reliable instrument for fast Partial Discharge (PD) 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? Did you ever wanted to install a temporary PD monitoring system?

Techimp PDPortable 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. 15 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, USB, bluetooth) and power supply.

The instrument can be used to install a permanent monitoring system, maintaining the degree of protection. Connection via fiber optic allows creating a network of acquisition units in different measurement points.

Techimp PDPortable is able to stand up to 8 hours of full working conditions in a monitoring session. It can also be used as a power supply source and 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. Battery can be easily unplugged for transportation and inspection.

Applications field

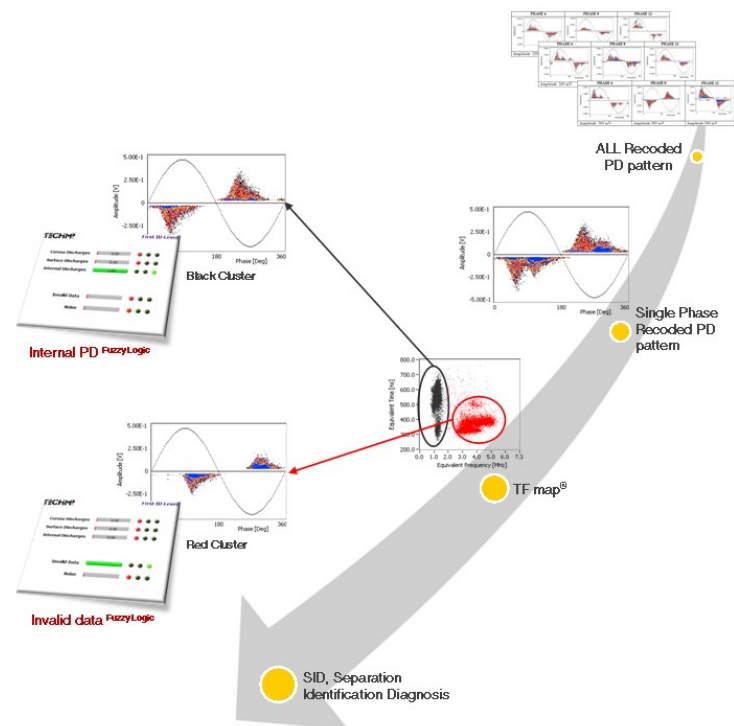
PDPortable is suitable for on field diagnostic sessions and periodic/semipermanent assessment of:

- 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 PDPortable 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.

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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 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 biased UWB Channels for active sensors power supply (expandable To 6)
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 μs (min) 20 μs (max)
Connectors type	BNC

Synchronization channel

Input voltage range	5-200 Vpp- Dc coupled
Frequency range	0.1 ÷ 1000 Hz
Input Impedance	10 MOhm
Connector type	BNC

Connectivity

Type	For monitoring: Wi-Fi (IEEE 802.11g) + Ethernet Fiber Optics connection, For instrument setup: 1 Bluetooth For maintenance and FM upgrade: USB
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Display

Type	11" tablet Windows 8.1 (for set-up and acquisition)
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Casing

Dimensions	410 x 340 x 205 mm
Weight	< 10 kg
IP Degree	IP53 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	2 x 10,8V, 8 Ah
Autonomy	8 hours*

Operating environmental conditions

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

General

Firmware	updating via internet connection to Techimp website or USB
Certifications	IEC 60270 compliance

(*) Depending on continuous/discontinuous usage
(**) 0 to 45 °C when battery is charging

The Product

PDPortable provides 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

PDPortable 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 .



The software is preinstalled on a 11" tablet to allow the maximum ease of use.