



PDPico



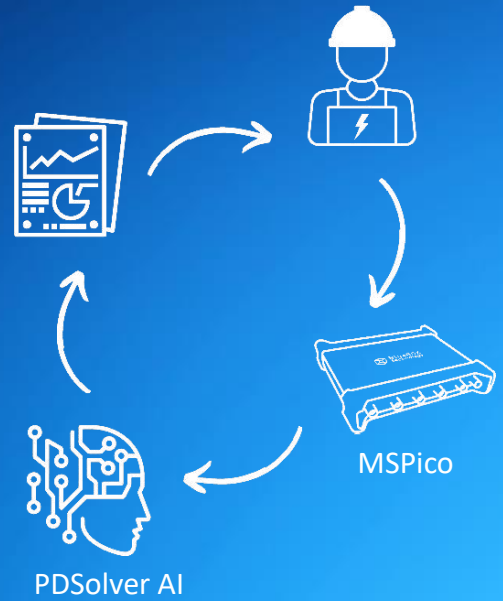
Automatic PD Diagnostic Tool for Onsite Measurement

WHAT IS PDPICO?

PDPico is a portable monitoring solution including acquiring device, sensors, cables and calibrator. Collected PD data is processed with PDSolver, an analysis tool based on artificial intelligence that allows to identify what type of PD defects exist in an asset.

This product has been developed to provide an automatic and instant diagnosis of a spot PD measurement. The software indicates to the technician what type of defect has been measured, where it is and its level of criticality.

Therefore, PD measurement campaigns are now optimized. Any technician can go on site and acquire PD data that is then processed and automatically diagnosed by PDSolver generating a list of defects with criticality that can be saved or printed in a report.



WHICH ASSETS DOES PDPICO DIAGNOSE?

PDPico has been developed with a 360° approach to cover all assets present in the transmission and distribution grid. Measurement can be done using any type of PD sensor as HFCT, coupling capacitor, TEV or UHF antennas. Signals are processed with an automatic patented denoising tool to find any small PD pulse mixed with onsite electrical noise. Combining the high sensitivity and GPS synchronization PDPico is the perfect tool for cable assessments been able to detect and localize defects.

PDSolver AI has been trained with thousands of PD cases collected during more than 13 years in different types of assets and insulations (air, solid, oil and SF6).



CABLES



GIS



TRANSFORMERS



SWITCHEARS



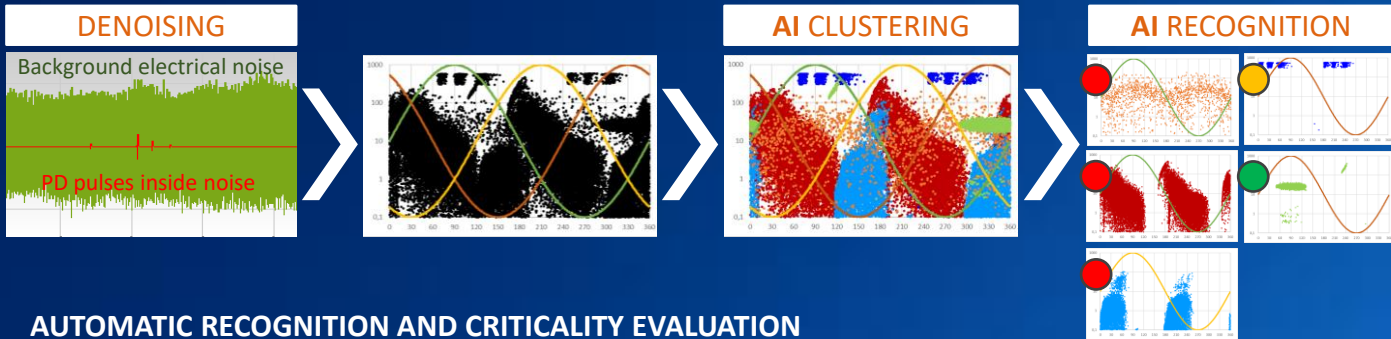
MOTOR/GENERATOR



KEY FEATURES

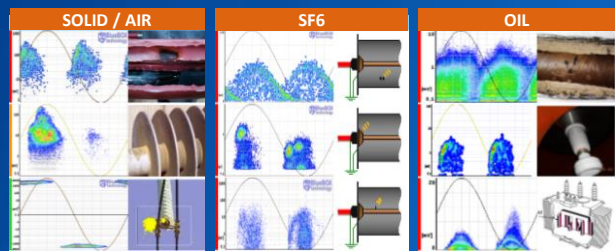
AUTOMATIC DENOISING / AUTOMATIC CLUSTERING / AUTOMATIC PD SEPARATION

PDPico automatically filters signal coming from sensors without the need for manual adjustments or expert level knowledge. Following, PDSolver AI separates automatically different types of defects present in the same installation. This can be achieved thanks to its automatic clustering capability based on localization, ratio between sensors, wave parameters and phase resolved PD pattern. Generating this way from a single measurement a clear list of PD defects present in the installation.



AUTOMATIC RECOGNITION AND CRITICALITY EVALUATION

Once PDSolver has separated the list of PD defects present in the installation, its artificial intelligence proceeds to recognize the type of PD defect, which asset is affecting and how critical are the measured magnitudes. This has been achieved by training PDSolver AI tools using thousands of real PD cases previously analyzed manually by a PD expert. Therefore, PDSolver has the ability to recognize different insulation defects either in XLPE, air, oil or SF6.



Examples of different types of defects that PDSolver can recognize

AUTOMATIC AND INSTANT PD DIAGNOSTIC

PDSolver provides with a single click to the technician an automatic diagnosis of the defects found. It shows the type of defect, pattern and criticality among other parameters. Thereby, a technician without expertise is able to know instantly the condition of the asset, save the report and program future preventive actions.

CH	Localization	Phase	Type	Criticality	Pattern	Amplitude [mV]	Rate [dpp]	Polarity	Recommended actions
L1	0m	R	Moving particles in SF6	High		107.3	5.6	Neg.	Additional measurements to localize PD defect in SF6
L1	50m	R	Internal void	High		259.9	52.2	Pos.	Repair insulation
L2	0m	S	Surface in SF6	High		37.0	63.5	Neg.	Additional measurements to localize PD defect in SF6
L3	250m	T	Floating potential	Medium		524.2	4.0	Neg.	Additional measurements to discard hot spots in bad contacts
R3	250m	T	Corona in air	Low		510.2	41.7	Neg.	None

WHERE CAN PDPICO BE USED

PDPico has been designed to be used for spot measurements campaigns. PDSolver is an add on to the portable device that can be easily installed on the control laptop of the portable unit, opening the user a new world of easy and automated PD diagnosis.

Ampacimon delivers integrated data-based solutions to grid operators to help them optimize their assets. Ampacimon's systems allow them to increase grids capacity, drastically improve their resilience and optimize their maintenance.

"We offer grid monitoring solutions combining powerful sensors and analytics to optimize electricity grids"

Ampacimon thus addresses some of the most pressing societal needs linked to climate change, by helping connect more renewable generation, optimize the use and protect the integrity of electricity grids.

