

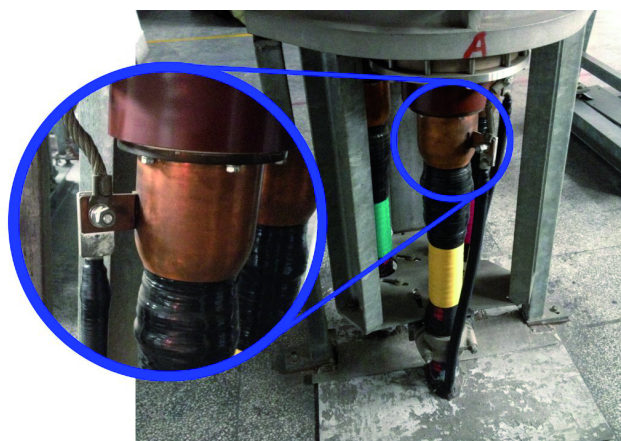
Complete Partial Discharge monitoring for HF PD particularly HV cables



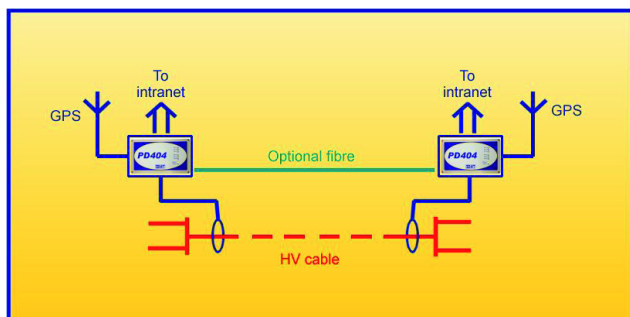
- TDR location on single ended measurements
- IEC61850 ready
- Distributed HF PDM inputs
- Simple installation configurations
- Ideal for cable PD monitoring
- Standard displays:
 - PRPD
 - Pulse sequence (3D)
 - PD Cloud mapping
 - PD intensity (pulse energy)
 - Trending
- Time-of arrival location between any two channels

Any HF sensor can be used for the PD404, however, the extra features on the PD404 allow it to be used for HV cables. HV cables have additional needs when it comes to PD monitoring. The length of the cable creates difficulties when locating the PD in the cable.

The core system of the PD404 is shared with the PD700 offering many similar features found in the UHF PD monitoring system. The PD700 is a tried and proven core for PD monitoring.

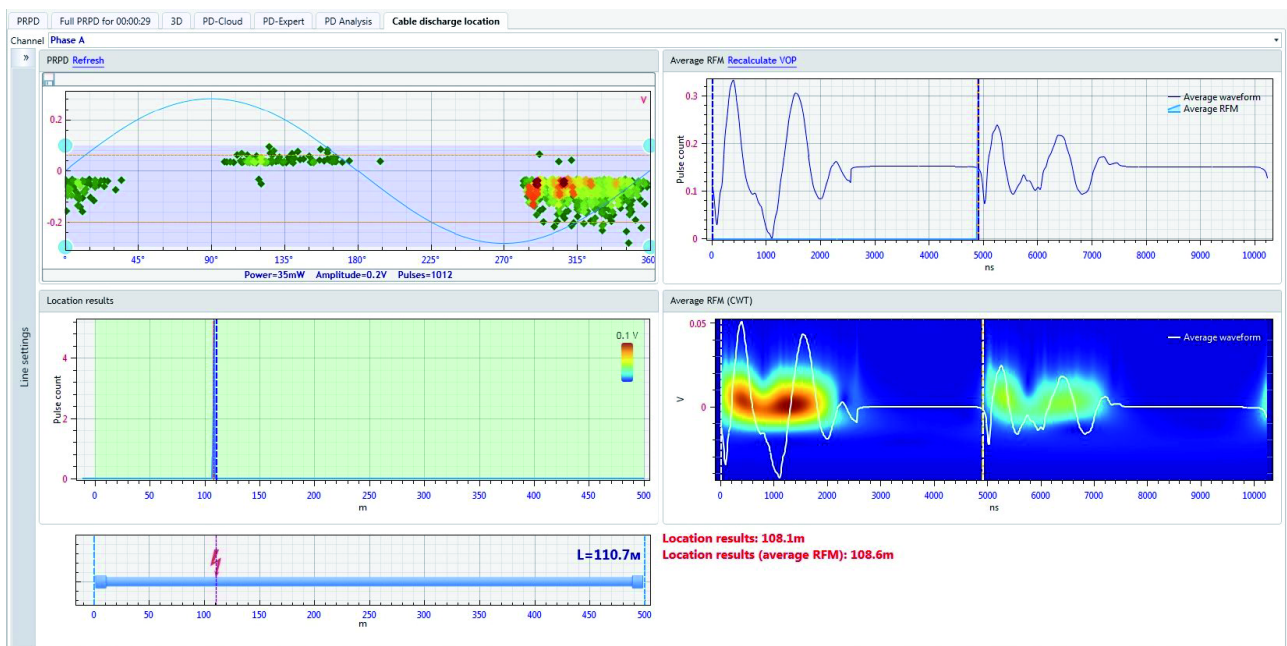


The PD location system must work from PD404 to PD404 as the distance between them can be anything from hundreds to thousands of meters. GPS can be used for long distances, or direct fiber connection if shorter distance and cabling allows. When configured correctly, the PD404 will have a synchronised time-tag on all PD pulses captured. These pulses can be further examined to calculate the location of the PD between the sensors.

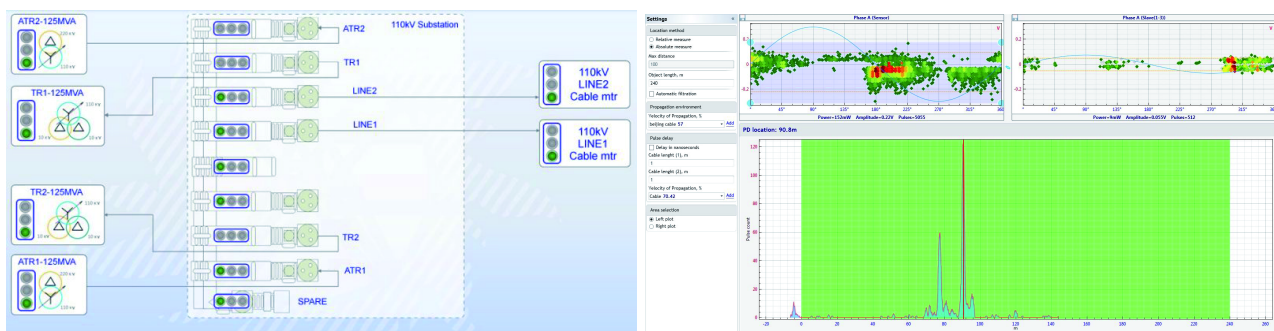


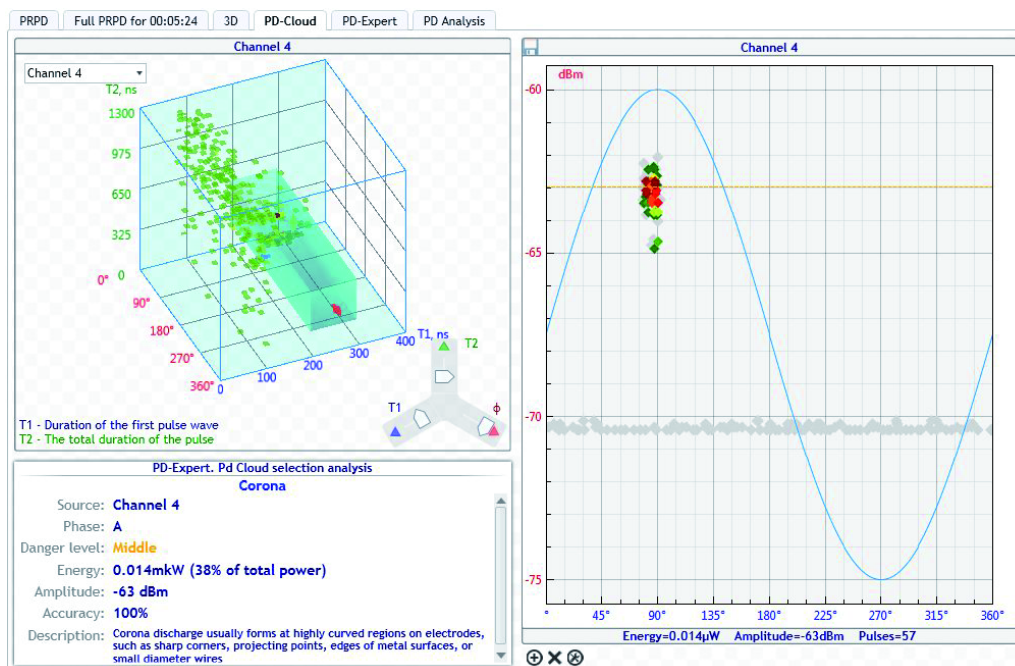
The PD404 can be used on any cable with RFCT, any transformer via bushing taps, or any other HV equipment that can be monitored by HF methods. The unique PD Intensity is used to measure the energy in the PD. And uses advanced analysis developed from experts in the field of PD signals. The combined results give accurate warnings that minimise the false alarms for the operator.

The main software interface is simple enough to be used with minimal training. A full range of trends, patterns and parameters are available for the expert user.



Manual parsing of the data is through the interactive graphical single line diagram. Any custom screens can be added to the software to represent the cable or substation components. A simple traffic light system shows the operator where to look for problems. The operator need only look at the more in depth data when needed, saving unnecessary time wasting.





The expert analysis can enter an advanced mode that allows segregation of multiple PD sources seen on one channel or location. The combination of PD type, PD location, PD amplitude are all vital components when assessing the risk. Without all these the risk assessment could not be reliable. When the location option is not available then the PD cloud offers a unique method of segregating multiple PD sources. Analysis of the PD waveshape provides additional information not normally available in an on-line system.

Specifications	
The number of PD channels	3, 6 or 12
Maximum number of units	100+ (600+ HF channels)
HF PD frequency bandwidth	0.1MHz to 15MHz
HF PD amplitude range	Greather than 60dB
UHF PD level sensitivity	< 1mV
Time of arrival accuracy	< 1ns for fibre, < 200ns for GPS
PC server to PDM interface	Ethernet or RS-485 MODBUS
Connectivity output	SCADA via IEC61850
Input power supply	90V to 260V, AC (50/60Hz) or DC
Operating temperature range	-20°C to 70°C
Relative humidity range	not more than 95%, non-condensing