



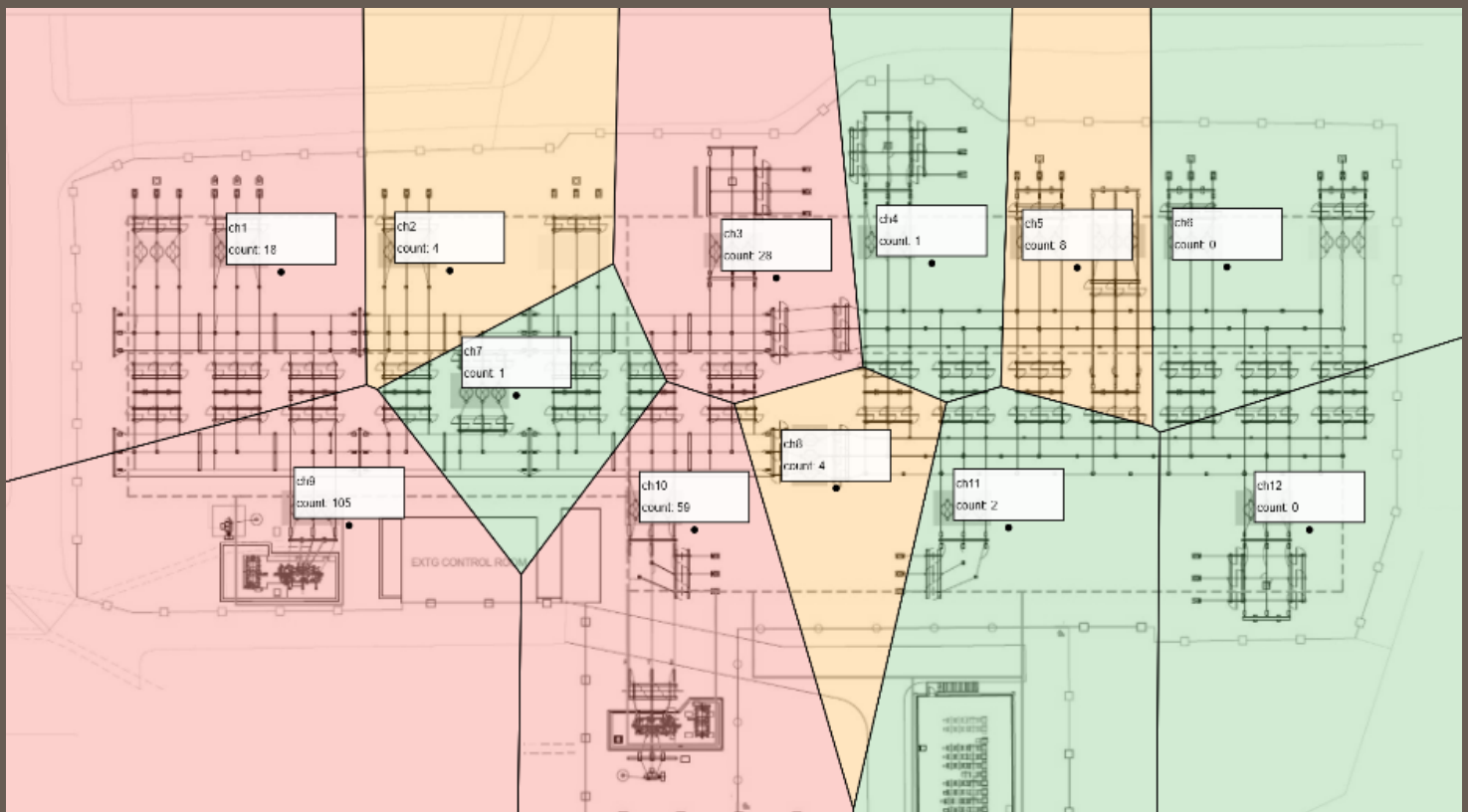
RADIOMETRIC CONDITION MONITORING

PDtect[®] **Zone**



Fixed PD locating equipment for all Air Insulated Substations (AIS). Bespoke ultra-high-speed recording unit maps out defined zones within the substation and detects and monitors the PD activity within each zone.

This is a major advancement in providing safer working environment for staff and nearby public presence.



PDTECT® ZONE TECHNOLOGY

The Elimpus PDtect® series of radiometric PD locators detect the presence of partial discharge (PD) through the reception of radio frequency impulses emitted from stressed insulation. The ultra-high bandwidth and ultra-high speed sampling rate allows the locator is able to determine the zone of origin of a PD impulse, offering simplicity in the results.

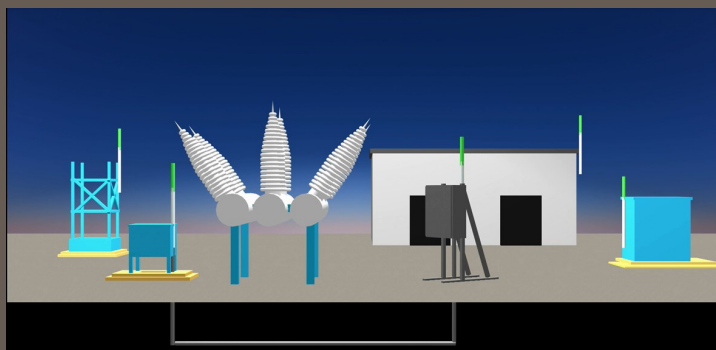
OVERVIEW

The PDtect® Zone is the flagship of the Elimpus' PDtect® technology range. PDtect® Zone provides online continuous monitoring for PD effects within the local high-voltage compound.

The local unit can determine the zone for the PD and provide local alarms, then, further analysis is available on the Elimpus NServer software.

PD event data is uploaded every 90 seconds to a web server, and the NServer calculates the PD location which is presented to the user using secure, password protected accounts. The NServer allows the user to see the PD location superimposed onto a plan view of the local substation, along with other PD metrics including time of capture and amplitude. Additionally, the user can set alerts for a variety of PD behaviour patterns. The alerts are communicated by either email, or SMS message.

The use of internet technology allows the user to log into the NServer from any location. This, combined with the flexibility to position the NServer hardware in any chosen location, e.g., a substation, Head Office, or contracted out to a third party, provides flexible, reliable and cost effective PD detection and location.



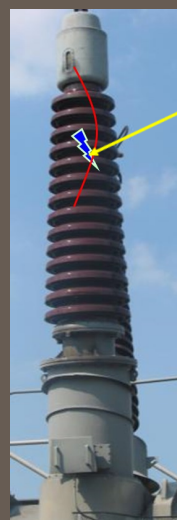
MAIN FEATURES

- Permanently installed multi-channel antenna array fixed in, or close to, the high-voltage compound.
- Large array dimensions — typically > 5m — gives good location resolution.
- Wideband slim antennas give high sensitivity to PD impulses and easy mounting options.
- On-site recording hardware monitors for PD 24 hours a day, 365 days a year.
- NServer web software collects site recorded data and processes PD positions.
- Site recorded data uploaded to the NServer every 90 seconds for near real-time PD display.
- Ability to set alerts for PD rate of emission and amplitudes metrics.

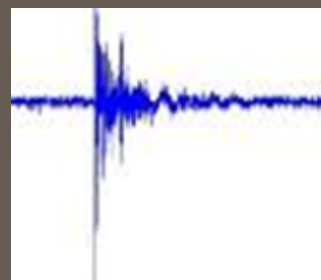


PDTECT® ZONE

Radiometric PD detection and location system suitable for air-insulated substations. Permanently fixed monitoring equipment in the high-voltage compound continuously monitors for PD. The results are communicated to a server where the PD locations can be accessed and viewed by the user. This is overlaid onto a map of the substation with the zones determined by the antenna locations.



UHF
Impulse



PDTECT® ZONE SPECIFICATIONS

ARRAY	Antenna type	Tuned dipole
	Number of antennas	Up to 12
PDTECT®	Number of RF Inputs	12
	Bandwidth of RF input	750 Mhz
	Sample rate of RF inputs	1.5 Gsps
	Connectivity	Cellular/ethernet/fibre
	PRPD Measured	Yes
	Power	230V AC, < 200 W
FUNCTIONALITY	Operation	Continuous
	Alerts	Email, SMS, SCADA
ENVIRONMENTAL	Operating temperature range	-10°C to +55°C
	Humidity	0 to 100%
	Operating Environment	Outdoor, IP 67, AIS

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