



# PDWatch

## Partial Discharge Assessment For GIS up to 800 kV

Grid Solutions, a GE and Alstom joint venture, makes the most of 50 years of experience in design, material selection, development, engineering, manufacturing, servicing of Gas-Insulated Substations (GIS) and Lines (GIL).

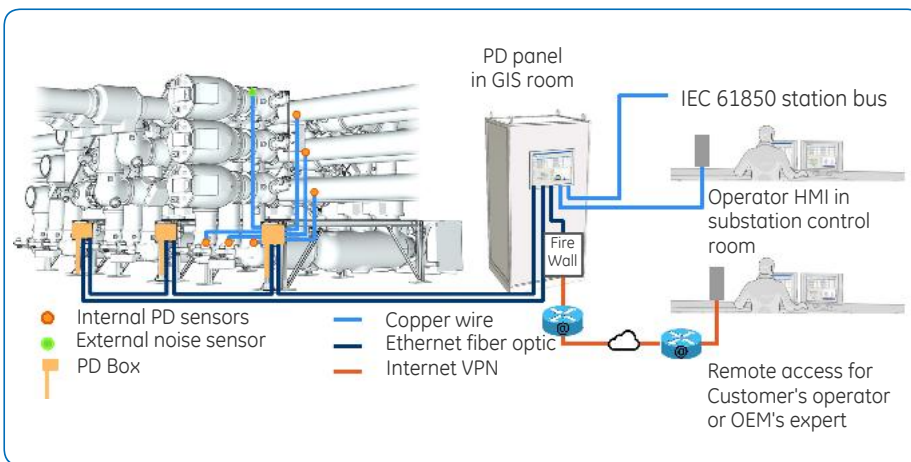
PDWatch monitors partial discharges via expert analysis of Ultra High Frequency (UHF) signals, during commissioning, operation and maintenance.

### Superior Efficiency

- Noise filtering (external antenna, exclusion bands) and phase comparison for spurious alarm prevention
- Band scanning and factory calibration of shipping units for increased accuracy

### High Reliability

- Self-healing optical communication thanks to redundant design



## Long-Term Supplier Experience

- More than 4,800 sensors connected to PDWatch systems (online)
- Unique knowledge of critical defects with extensive pattern library
- Optimum sensor design and positioning

## Smart Grid Features

- Also valid for green gas for grid - g<sup>3</sup>
- IEC® 61850 capabilities
- Possible coupling with BWatch (digital bay monitoring system)

## Customer Benefits

- Early defect detection
- Expert signal processing
- No spurious alarm
- Ready for Asset Health Index
- Auto-test
- User-friendly HMI
- Remote access for customer's and OEM's experts

## PDWatch Features and Options

	Portable	Online
Internal PD sensor	√	√
External noise sensor	√	√
UHF modules integrated in	Portable PDWatch	PD box (or LCC)
Acquisition mode		
Frequency domain	√	√
Time domain	√	√
Monitored data		
Single line diagram	-	√
Trend curves	-	√
Event historical recording	-	√
Signals	√	√
Alarm generation	-	√
Remote access	-	√
PD panel	-	√
Record manager with automatic report generation	√	√
Expert system	-	Optional
Maximum number of sensors simultaneously displayed in real time	3	9



Internal PD sensor



External noise sensor



PD box



Portable PDWatch



## Technical Specifications

Portable

Online

### General Ratings

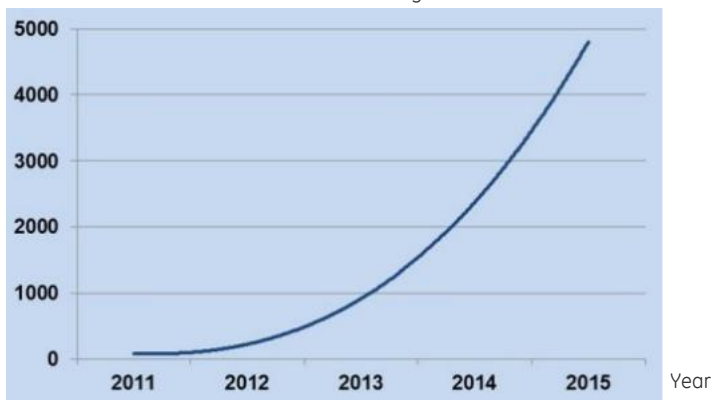
EMC immunity standards		IEC 61000-4-2, 3, 4, 5, 6, 8, 9, 10, 12, 18, 29	
Emission standard		CISPR 22 / A1	
Main supply	VDC / VAC	- / 110 - 240	90 - 250 / 110 - 240
Power consumption	W per UHF module	55	30

### UHF Module Ratings

Inputs	UHF / noise sensor	6 / 1	
Amplitude resolution	amplitude levels	256	
Overall signal range	dBm	-100 to -30	-90 to -30
Spectrum analysis			
-Bandwidth	MHz	300 to 1,200 (*)	
Resolution	MHz	2.5	
Band-pass filtering		on central frequency during time domain acquisitions	
Coupler test		through UHF cable	
Synchronisation signal		main supply, voltage transformer or capacitive coupler	
Operational limits			
Temperature	°C	-25 to +45	-25 to +55
Protection		IP43	IP54 indoor IP66 outdoor
EMC compliance		√ (completely protected electronics)	

\* most relevant frequency range for accurate PD assessment

Number of UHF sensors with online monitoring



Online PDWatch success testifies to customers' satisfaction

For more information please contact  
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### Worldwide Contact Center

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imagination at work