

PDetector

Handheld Partial Discharge Detectors



The PDetector is the ideal device for Online Partial Discharge (OLPD) testing of medium and high voltage electrical equipment. Online PD testing is a method of inspecting the insulation of electric power systems while electrical equipment remains energized and in service. The PDetector employs all 5 types of sensor technology for online PD detection: TEV, UHF, HFCT, AE, and Ultrasonic. Information from multiple sensors gives the PDetector the versatility needed to detect all types of PD in all types of substation apparatus. Furthermore, the exact type (mechanism) of PD activity can be determined instantly using on-screen Phase Resolved Partial Discharge (PRPD) & Phase Resolved Pulse Sequence (PRPS).

UL Certified



Applications

- GIS
- MV Switchgear
- Power cables
- Transformers
- Substations

Wireless Connectivity

- RFID asset tagging
- Wireless phase sync
- Wireless UHF and HFCT transmitters

Sensor Technology

Electromagnetic (EM)

- **TEV - Transient Earth Voltage: 3MHz ~ 100MHz**
Built-in to main handheld unit, contacts to switchgear panels
- **UHF - Ultra High Frequency: 300MHz ~ 1.5GHz**
All PD activities produce UHF emissions
- **HFCT - High Frequency Current Transformer: 500kHz ~ 50MHz**
Clamps around grounding leads

Acoustic (AE)

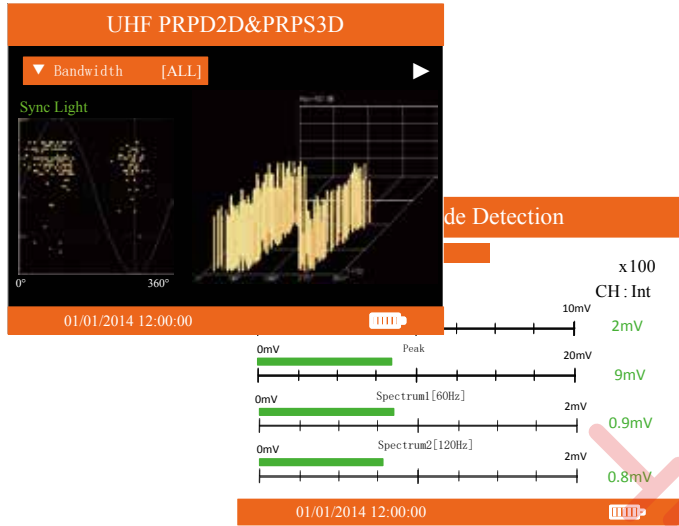
- **Acoustic Contact: 20kHz - 300kHz**
In-tank testing for PD in oil or SF₆
- **Internal Ultrasonic: 40kHz**
Built-in to main handheld unit
- **Ultrasonic Extension Microphone: 40kHz**
Airborne ultrasonic emissions
- **Ultrasonic Dish: 40kHz**
Concentrating ultrasonic sensor



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Main Features

- Employs 5 types of sensors for online PD detection
- PRPD (2D) and PRPS (3D), instantly compares UHF and HFCT signals to local power frequency
- AE and ultrasonic value as RMS, PEAK, frequency content(x1, x2), phase, pulse, and wave spectrum
- Wireless sensor technology
- 8GB on-board data storage
- RFID asset tagging and Intelligent Patrol functions
- Determines specific PD type: void, corona, surface, particle or floating electrode



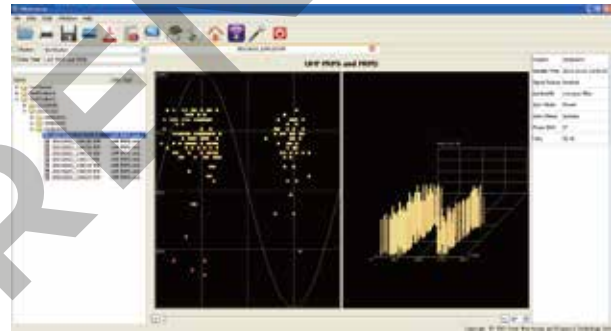
Technical Specifications

- Resolution: 1dB
- Accuracy: +/- 1dB
- Size : 7.3" x 4.3" x 1.4" / 185mm x 110mm x 35mm
- Weight: 0.9lbs / 0.4kg
- Power Supply: Li-ion
- Operating time: 6 hours; rechargeable

Software - Data Management

The PDetector software platform includes advanced features for organization, analysis, and trending of test data.

- Trending, programmable alarms
- Intelligent PD recognition
- Easy report creator
- Exports CSV/PDF



Hardware Configurations

Five Recommended Kits configured with optimal combinations of TEV, UHF, HFCT, AE, and Ultrasonic sensors.

Config.	Application	Internal TEV	UHF	HFCT	AE Contact	Internal Ultrasonic	Ultrasonic Dish	Ultrasonic Microphone
Kit 1	Multi-Function, Five-in-One, for GIS, MV Switchgear, Power Cables, and Transformers	✓	✓	✓	✓	✓	✓	✓
Kit 2	AE/Ultrasonic, Two-in-One, for GIS, MV Switchgear, Cable Accessories, and Transformers				✓	✓	✓	✓
Kit 3	TEV/Ultrasonic, Two-in-One, for MV Switchgear	✓				✓		
Kit 4	UHF/TEV/AE/Ultrasonic, Four-in-One, for GIS	✓	✓		✓	✓		
Kit 5	HFCT/TEV/AE/Ultrasonic, Four-in-One, for Power Cables and Transformers	✓		✓	✓	✓		

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