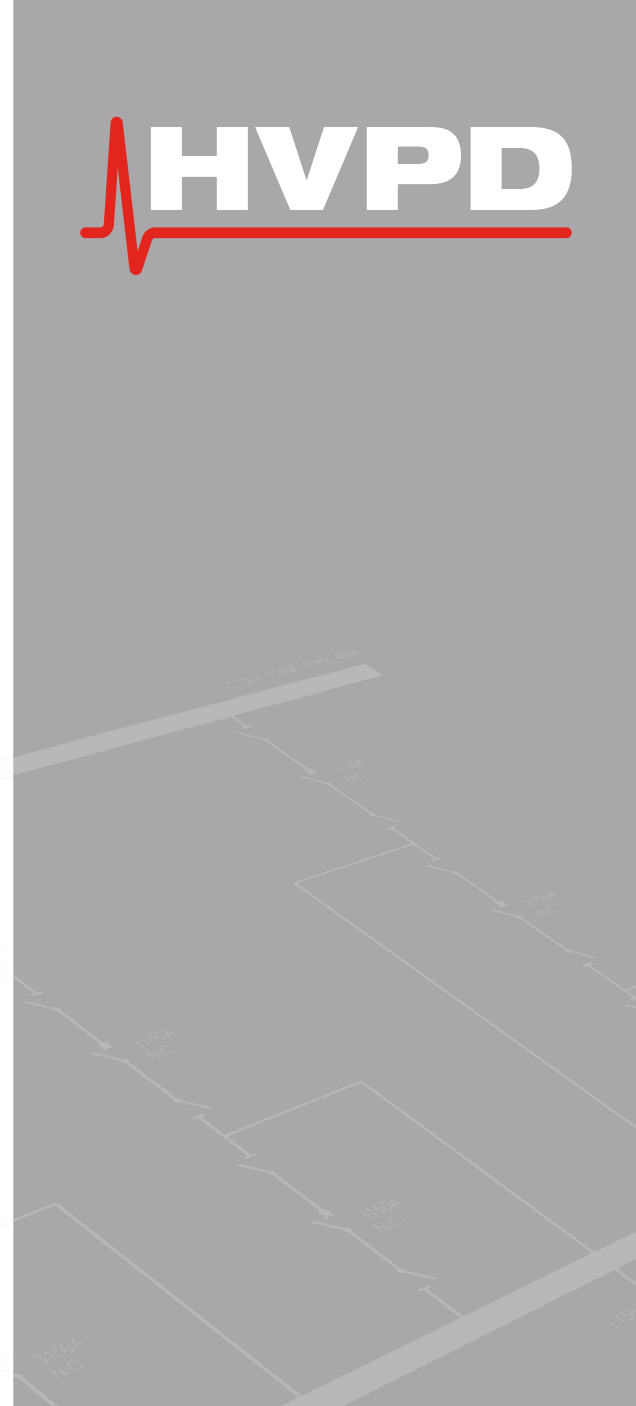# HVPD

PDS Insight™

The Next Generation Handheld Technology

IDENTIFY

1 ✓

www.hvpd.co.uk

PDS Insight™

The next generation handheld technology

The **PDS Insight™** is the world's first handheld on-line partial discharge (OLPD) test unit to be supplied with a dedicated asset management tablet application – the **OLPD Manager™ app**. This unique, world-leading handheld test technology combines HVPD's knowledge from over 20 years of OLPD test technology development with the flexibility and functionality of the **Android™** operating system and a **10.1" Tablet PC**.

The PDS Insight™ measures **PD Levels, PD Pulse Count** and **Cumulative PD Activity** across the 50/60Hz power cycle to enable the severity of any partial discharge activity to be assessed. By combining three (3) types of PD sensor (TEV, HFCT and AA), the unit is suitable for the OLPD testing of most types of in-service medium voltage (MV) cables and plant and OLPD surveying of outdoor high voltage (HV) switchyards. Suitable for OLPD testing of power cables, switchgear and transformers, the handheld unit stores all measurement data on its hard disk that is then synchronised via Bluetooth® to the **OLPD Manager™ app** on the supplied 10.1" Android Tablet PC for **analysis, benchmarking** and **trending**.
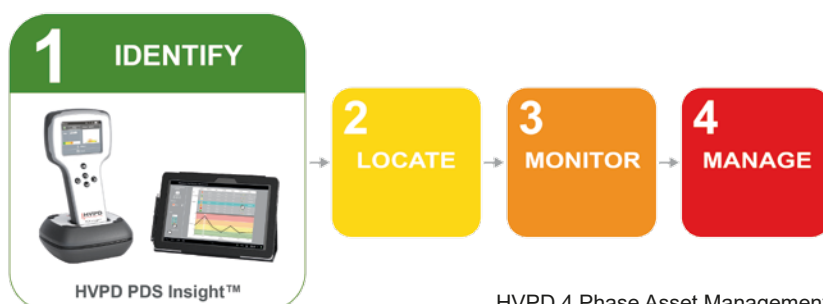
Compatible Sensors:

- TEV
- HFCT
- AA

1 **IDENTIFY**

HVPD PDS Insight™

2 LOCATE → 3 MONITOR → 4 MANAGE

HVPD 4 Phase Asset Management

OLPD Screening technology

Data analysis, benchmarking and trending

Intuitive interface for rapid OLPD screening across multiple assets

1

Set up Substation with OLPD Manager™ App

2

Scan POA Label to Identify the Asset

3

Perform 5 Second Screening per Asset

4

Analyse Trends and Report Results

OLPD Manager™

Smart docking station

POA barcode scanner

Internal storage

Features

- Compatible with three OLPD sensors: in-built TEV, AA and portable HFCT sensors.

- Detects electromagnetic radiation from PD in metal-clad plant (TEV), current impulses from PD in cables and accessories (HFCT), and ultrasonic radiation from PD into air from air-insulated switchgear (AIS) and other plant (AA).

- Combines PD Level, PD Pulse Count and Cumulative PD Activity measurements across the 50/60Hz cycle.

- Supplied with a Smart Docking Station for charging, data download and function checking of the unit.

- Onboard data storage for quick testing and Bluetooth® communication to the Android™ Tablet PC for post-test data analysis, benchmarking and trending.

- All measurements can be downloaded into a CSV file to enable report writing and analysis.

- The peak graph recorded with the HVPD PDS Insight™ can be displayed and recalled on the tablet.

- Supplied with Headphones.

- Supports the use of multiple languages.

Benefits

- Easy-to-use, lightweight and portable handheld test unit.

- The OLPD Manager™ app on the 10.1" Android™ Tablet PC makes it easy to setup a test record and to carry out repeat testing and monitoring.

- Ensures the safe and reliable operation of HV networks, providing an early warning against incipient faults.

- The unit's barcode scanner retrieves sensor location ID from the Point of Attachment (POA) labels automatically.

- Optional accessories include the Outdoor Parabolic Receiver (for detecting corona and surface discharges in outdoor HV switchyards) and the Indoor Acoustic Search Probe (to extend the reach of the unit to detect airborne acoustic activity along the seams/ gaps in MV switchgear.

- Asset operators and managers with multiple sites and multiple HVPD PDS Insight™ units can now back up and share data across all tablets to provide an asset management global view.

- All data between the PDS Insight™ handheld and the Android™ tablet is synchronised via Bluetooth®.

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Technical Specification

TEV Sensor	
Measurement Range (Peak)	0 - 70 dBmV
Measurement Range (Cumulative Activity)	0 - 350,000 mV/cycle
Frequency Response	5 - 60 MHz
Resolution	1 dB
Accuracy	±1 dB
HFCT Sensor	
Measurement Range (HFCT 100/50, Z tr=3.9)	100 pC - 100 nC
Measurement Range (Cumulative Activity)	200 pC – 20,000 nC/cycle
Frequency Response (-3 dB response)	100 kHz - 20 MHz
Resolution	1 dB
Accuracy	±1 dB
AA Sensor	
Measurement Range	0 - 70 dBµV
Centre Frequency	40 kHz
Resolution	1 dB
Accuracy	±1 dB
Gain stages	1
Hardware	
Enclosure	Polycarbonate ABS / TPE
Display	3.5" 320x240 65k colour LCD
Control	5 button membrane keypad
I/O Connections	BNC (HFCT), LEMO (external AA), USB Micro B (charger), 3.5mm Jack (headphones)
Operating Environment	
IP Classification	IP 54
Temperature	-20 ºC to +50 ºC
Humidity	0 - 90 % RH non-condensing
Power	
Internal Battery	Lithium-ion, 3.7 V, 4.5 Ah
Operating Time	Approx. 8 hours
Charge Time from Empty	Approx. 4 hours

Battery Charger	
Input (V$_{in}$)	90 - 264 V, AC, 50/60Hz, max: 0.5A
Output (V$_{out}$)	5 V DC (USB 1x 1A, 1x 2A)
Country Adapters	UK, EU, AU, USA
Operating Temperature	0 ºC to 40 ºC
Humidity	10 - 90 % RH non-condensing
10.1" Android™ Tablet PC	
Processor	Quad-core Processor
Display	10.1" LED WXGA (1280x800)
Camera	2 MP
RAM	1 GB
On - board Memory	8 GB
Charging/PC connection	Micro USB B
Communications	Bluetooth®, WiFi (WLAN802.11 b/g/n)
Battery Life	Up to 8 hours
OLPD Manager™ Application	
Functionality	Bluetooth® synchronisation with PDS Insight™, associate POA barcodes to plant/cables, store details of plant/cables under test, store photos of test site alongside measurement and plant.
Results Display	Graphical representation of PD levels in the substation, trending graphs, summary tables
Report format	Microsoft® Excel®
Multiple Languages	Yes
Headphones	Yes
Battery Life	35 hours on AAA battery (average)
Dimensions	
Size	HANDHELD: 227 mm x 122 mm x 75 mm; CARRY CASE: 310 mm x 355 mm x 245 mm
Weight	HANDHELD: 0.56 kg; FULL KIT IN CARRY CASE: 4.9kg

Our Knowledge is Your Power

Scope of Supply

Optional Accessories