Detect and trend Partial Discharge (PD) with the PDS Insight™ 2 to ensure the safety and reliability of your MV/HV assets.

Dectes PD in the following assets:

- Switchgear
- Transformers
- Cables
PDS Insight™ 2

The PDS Insight™ 2 is a handheld On-line PD detection unit for condition-based maintenance and substation access safety.

Simple to use, this handheld device can be placed in the palm of your hand for safe, reliable testing of MV electrical assets.

The Phase Resolved Partial Discharge (PRPD) feature in the PDS Insight™ 2 helps to differentiate misleading background noise from true PD sources, helping to ensure you avoid in-service failures and costly unplanned outages.

- **Measures Peak PD levels, PD Pulse Count and Cumulative PD Activity across the 50/60Hz power cycle to enable PD activity severity to be assessed.**
- **Colour coded PD criticality level helps to inform whether further investigation of the asset is required.**
- **PRPD feature enables PD pulses to be viewed with reference to the 50/60Hz sine wave to distinguish PD sources from background noise.**
- **HFCT sensor for measuring PD activity in cables.**
- **Built-in Acoustic sensor for use with the Acoustic probe, Parabolic dish and headphones provided.**
- **Built-in TEV sensor for detecting 'local' PD activity in metal clad enclosures such as switchgear, cable boxes and dry-type transformers.**
- **Built-in barcode scanner to link each asset to a Point of Attachment (POA) label for consistent measurements and trending within the OLPD Manager™ Software.**

Smart Docking Station with built-in function checker
How to use the PDS Insight™ 2 with the OLPD Manager™ Software

1. **Set up the software**
   - Import your list of assets from Microsoft Excel to the OLPD Manager™ or use the PDS Insight™ 2.

2. **Scan the asset**
   - Scan the asset instantly or use POA labels to identify each asset tested.

3. **Measure for PD**
   - Measure PD level, short term trends, 2D and 3D PRPD Patterns.

4. **Download PD Data to PC**
   - Review and trend data using the software.

5. **Plan of action**
   - Review PD data and trend information to determine if further investigation is required. Pinpointing of fault location may be required using the HV PD Kronos® Spot Tester.
Kit Options

The PDS Insight™ 2 is available in two kit options to suit your PD testing requirements.

### Kit Options

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Assets</th>
<th>Description</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>Entry level kit that includes headphones &amp; battery chargers for PD detection of switchgear and transformers.</td>
<td>1x Docking station for charging, function check and PC data sync, 1x Industrial grade Listen-Only Headset, 204x POA Labels, 1x Mains AC/DC Battery Charger, 2x USB A – Micro B cables, 1x User Manual, 1x Quick start guide, 1x Hardshell Case (suitable for carriage as aeroplane hand luggage), 1x PDS Insight™ Software Licence for laptop/PC</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>This kit includes an HFCT sensor which allows you to test for PD in cables.</td>
<td>Includes everything listed in Kit 1, 1x HFCT100ALI and 1x 2m of cable</td>
</tr>
</tbody>
</table>

Optional Accessories

Optional accessories are available to enable use of the PDS Insight™ 2 with a wider range of assets such as overhead and outdoor insulators in outdoor switchyards as well as difficult to reach areas inside the switchgear.

**HVPD Indoor Acoustic Search Probe**

For measuring PD in difficult to reach areas such as vents and seams where the acoustic signals emanate from inside the MV air-insulated switchgear.

**HVPD Outdoor Acoustic Parabolic Receiver**

For measuring the surface and corona discharge from overhead outdoor insulation in outdoor HV switchyards.

### 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, Ztr=3.9) 100 pC – 100 nC
- Measurement Range (Cumulative Activity) 200 pC/cycle – 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

**Phase Resolved PD (PRPD)**

- Synchronisation Methods Optical/Mains Field Detector/BNC input (selectable)
- PRPD Plot Types 2D & 3D

**Hardware**

- **Enclosure** Polycarbonate ABS / TPE
- **Display** 3.5” 320 x 240 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** IP54
- **Temperature** -20°C to +55°C
- **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°C to 40°C
- **Humidity** 10 - 90% RH non-condensing

**OLPD Manager™ Software**

- **Operating System** Windows® 7/8/10 (PC)
- **Functionality** USB synchronisation with PDS Insight™, associate POA barcodes to physical plant/cables, store details of plant/cables under test
- **Results Display** Graphical representation of PD levels in the substation, trending graphs, summary tables, PRPD patterns
- **Report Format** Microsoft Excel
- **Multiple Languages** Yes

**Dimensions**

- **Size** Handheld: 227 x 122 x 75 mm
  Carry Case: 310 x 355 x 245 mm
- **Weight** Handheld: 0.58 kg
  Kit 1 in Carry Case: 4 kg
  Kit 2 in Carry Case: 4.5 kg
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