

PD-SGS

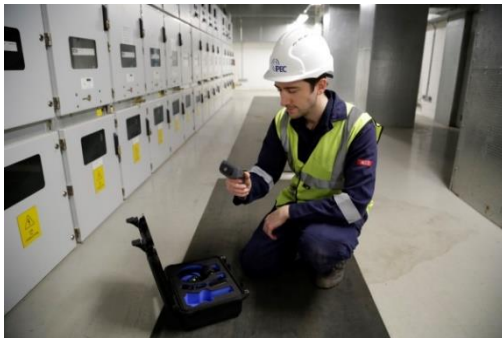
Handheld PD Detector for Switchgear



PD-SGS is a dual transducer PD detector for Switchgear. The instrument detects TEV signals generated by internal discharge as well as acoustic discharge generated by surface tracking or corona.

Key Features

- Measurement of TEV signals generated by internal PD
- Ultrasonic detection of surface PD activity
- Integrated Noise Detection Algorithm helps avoid 'False Positives'
- Level Mode and Trend Mode • Audible output through headphones or built in speaker



TEV PD Detection

Partial Discharge activity inside metal clad high voltage plant induces small voltage impulses called Transient Earth Voltages on the surface of the metal panels. TEVs travel around the surface to the outside of the switchgear, where they can be picked up externally using the PD-SGS detector.

Ultrasonic PD Detection

Defects on the surface of high voltage insulators are prone to a phenomenon known as surface tracking. Tracking causes carbon deposits that build up over time, ultimately leading to flashover and insulation failure. The PD-SGS is highly sensitive to the ultrasonic emissions produced by tracking and enable the onset to be detected before insulation failure.



The Benefits

- **Rapid survey whole substation** – detects MV and HV problems before they occur
- **Personnel safety device** – ensure the substation is clear of PD before conducting work
- **Hear the PD** – only instrument available that allows the user to hear both ultrasonic and TEV PD activity occur
- **Ergonomic and compact design** – fits in the user's pocket and is easy to use occur
- **Long lasting battery** – allowing a whole day of testing without requiring a recharge



Technical Specification

PD-SGS

TEV Measurements

Sensor	Capacitive
Measurement Range	0 to 80 dBmV
Resolution	1 dB
Accuracy	±1 dB
Noise Rejection	Yes

Ultrasonic Measurements

Measurement Range	-6dB μ V to + 70dB μ V
Resolution	1 dB
Accuracy	±1 dB
Transducer Sensitivity	-65dB (0dB = 1volt/ μ bar RMS SPL)
Transducer Centre Frequency	40 kHz

Hardware

Enclosure	Injection moulded plastic case
Control	Membrane keypad
Connectors	Power, Headphones and External Acoustic Sensor
Display	OLED with level LEDs

Operating Environment

Temperature	5°C to 55°C
Humidity	≤90% RH non-condensing
IP Rating	54

Dimensions

Unit Size	175 x 89 x 46 mm
Unit Weight	300 g
Kit Size	295 x 340 x 145 mm
Kit Weight	2.8 kg

Power

Internal Battery	Lithium Ion, 3.75V, 2.2Ah, 8.25W
Operating Time Approx.	12 hours

Battery Charger

Rated Voltage	100 to 250 VAC, 512V, 1.65A
Frequency	47 to 63Hz
Country Adapters	UK, EU, Australia, USA
Charge time	2 hours

Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU)
----------------	---

Designed and manufactured in the United Kingdom

www.ipec.co.uk



The PD-SGS kit contains

PD-SGS
Headphones
Function Tester
Mains Charger
USB Charger
Hard wearing PELI™ case

sales@ipec.co.uk