— optics11.com



OptiFinder *Monitoring Platform*

Continuous acoustic PD monitoring for transformers

OPTICS11®

Know where to act before partial discharge becomes *an outage.*

The OptiFinder Monitoring Platform detects, localizes and monitors PD activity over time, providing teams with the data to make confident maintenance decisions.

Localization accuracy, 24/7 monitoring and sensor-coverage claims apply under validated deployment conditions; see qualification notes on the final page.



UP TO 32
Synchronized optical PD sensors

15 CM
Localization accuracy

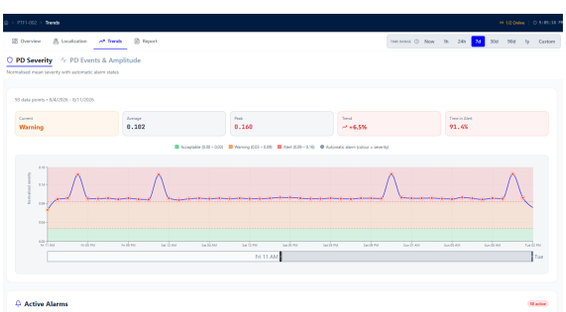
24 / 7
Continuous monitoring & automated alerts

Translate monitoring data into targeted *maintenance decisions.*

The OptiFinder Monitoring Platform software supports maintenance decisions with continuous asset condition insights. PD activity and accurate 3D localization help engineering teams identify which transformers need attention — and where the source of the issue is.

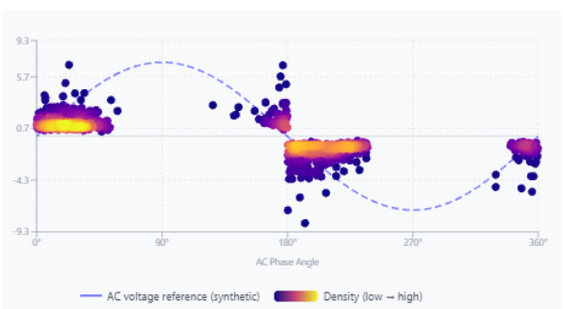
01 ASSESS

Review PD activity across your asset fleet.
The platform monitors trends in PD activity and intensity at asset level.



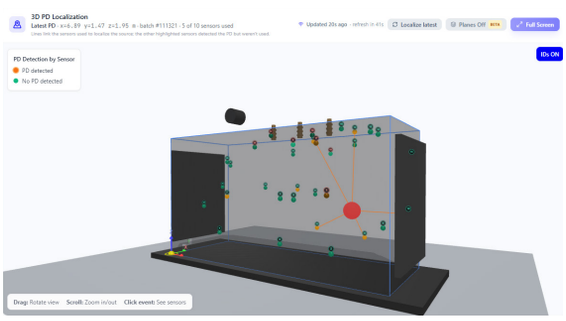
02 DETECT

Hypersensitive fibre-optic sensors continuously capture acoustic emissions caused by PD activity from an early stage.



03 LOCALIZE

Use multi-sensor analysis to pinpoint the physical source of PD activity within the transformer in 3D.



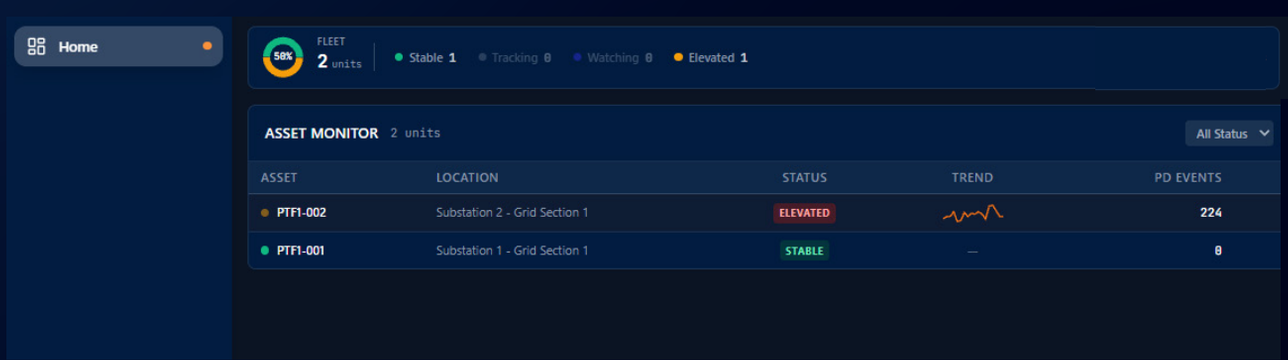
04 ACT

With clear evidence about the behaviour and exact location of PD activity, down to 15 cm, the software guides teams to take a maintenance decision.



The platform your team *actually works in.*

Condition assessment software that transforms partial discharge data into actionable maintenance decisions.



ACTIONABLE DASHBOARD

Condition and monitoring status across the monitored high voltage assets, with relative PD activity severity per transformer.

AUTOMATED 3D LOCALIZATION

On-demand and automated calculation of the exact PD source location, to within 15 cm accuracy.

TREND & SEVERITY ANALYTICS

PD metrics, severity assessment and trend analysis support condition-based maintenance decisions.

ON-DEMAND REPORTING & ALERTS

24/7 automated alerts and structured reports, available at any time.

Purpose-built for continuous partial discharge monitoring, the hardware enables *long-term condition assessment.*

Our fiber-optic sensing technology is EMI-immune by design and keeps the sensing location completely passive — no power, no electronics — which enables a safe operation in high-voltage environments.



ORPD 040 V5 SENSOR

Passive fiber optic sensors
No electrical power required at the sensing location.

Sensitive where it matters
1 kHz to 475 kHz acoustic range; sensitivity down to 2 pC.

Built for the tank wall
IP68 rated sensor.
Magnetic clamp or strap mounting; sensor operating temperature –40 to 140 °C.



OPTIFINDER INTERROGATOR

16 or 32 optical channels
true simultaneous acquisition across all configured channels, 16-bit resolution.

Fits the substation
19-inch rack, 6U; operates –5 to 50 °C.

Standard interfaces
Ethernet RJ-45 data port plus BNC trigger/clock inputs.



EDGE PC

On-site processing power
AMD EPYC™ 8004 series processor, up to 64 cores.

Secure transfer
Local processing with secure data transfer to the cloud platform.

Redundant by design
2x 600 W redundant power supplies; 1U rackmount.

One platform.
Clear decisions.

PD activity severity and accurate 3D localization help teams identify which transformers need attention.



REDUCED UNPLANNED OUTAGES

Continuous 24/7 monitoring with automated alerts catches insulation degradation before it leads to failure.

CONFIDENT PD LOCALIZATION TO WITHIN 15 CM

Automated 3D source localization removes guesswork and directs maintenance teams to the right area.

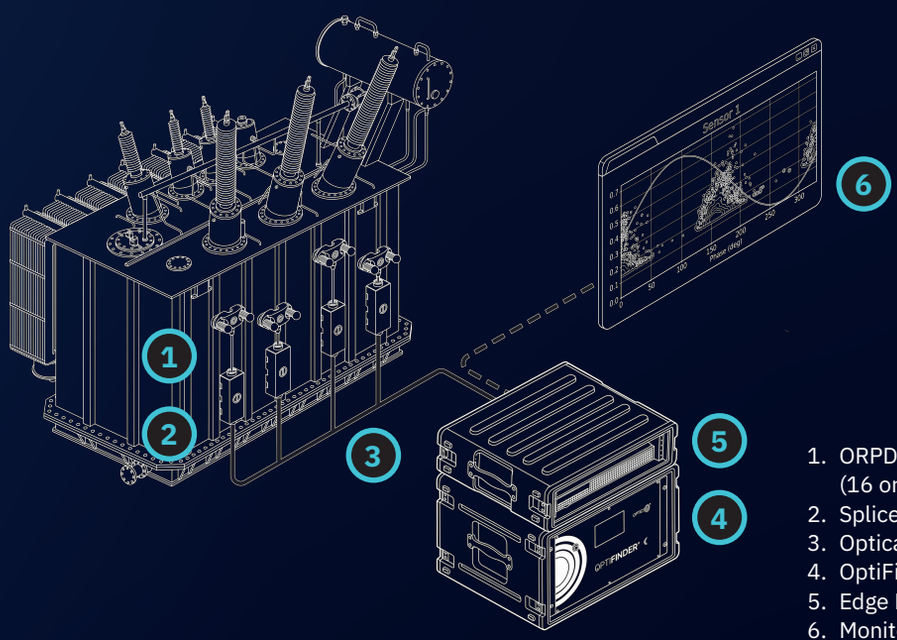
LOWER MAINTENANCE COSTS

Condition-based decisions replace fixed schedules, reducing unnecessary interventions and long-term replacement costs.

REMOTE OVERSIGHT OF TRANSFORMER FLEET

Remote access lets teams maintain control of transformer fleets and prioritize maintenance decisions.

System Architecture
and Equipment supplied.



1. ORPD 040 V5 Sensor Assembly (16 or 32) + Sensor Clamp
2. Splice Box
3. Optical Fiber Cable
4. OptiFinder Interrogator
5. Edge PC
6. Monitoring Platform Dashboard

SYSTEM SUPPLIED

Common equipment:

- OptiFinder ExpertHub interrogator
- OptiFinder ExpertHub software licence
- Optical and multifiber cabling
- Optical-interface cleaning equipment
- Acoustic-coupling equipment
- Cable-management equipment
- Rugged transport cases
- Power-distribution equipment
- Power cords

Configuration-dependent equipment:

- 16 or 32 ORPD 040 sensors,
- Sensor clamps and splice boxes.

Additional-cost option:
A Windows laptop configured for OptiFinder ExpertHub operation.

QUALIFICATION NOTES

- The working-shift claim applies after installation of the planned sensor arrangement.
- Localization accuracy of up to 15 cm applies under validated conditions.
- Environmental and protection values are component-specific.
- IP68 and NEMA 6P performance is internally validated for the ORPD 040 sensor component.
- OptiFinder ExpertHub provides acoustic PD detection and localization; it is not an IEC 60270 electrical partial-discharge measurement instrument.
- OptiFinder products are currently marketed publicly under the name “OptiFender.”



Get started with the OptiFinder Monitoring Platform.

Scan the QR code and book a proof of concept with our team today.

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