See the Unseen by AI

DVQLTSiGHT

Real-Time Transformer Monitoring **AI** Platform

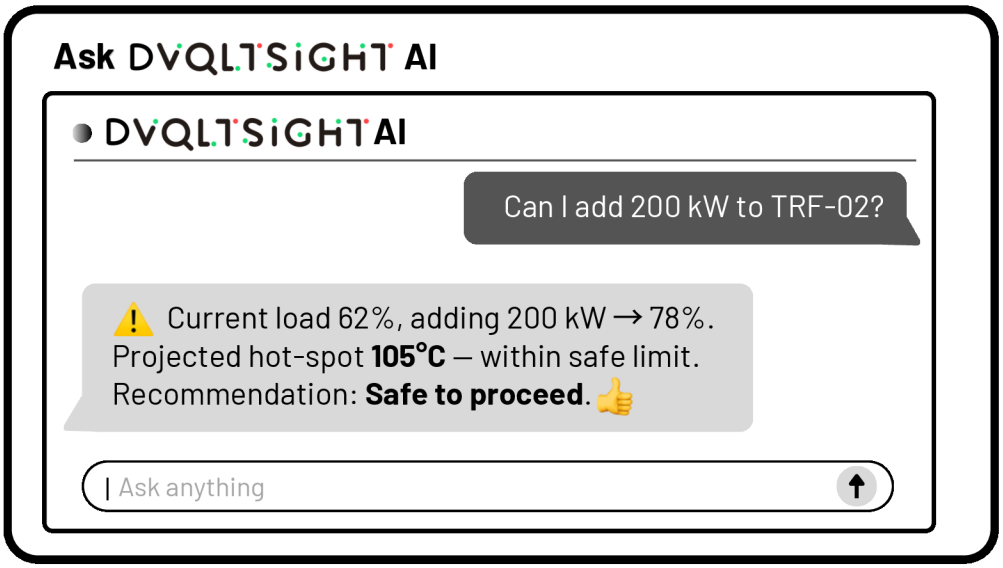
Monitor and manage risk before outage occurs, turn hidden degradation inside your transformer into visible health indicators and actionable insights.

Reduce the risk of million-dollar losses, 20% of data center outages cost over $1M

Ask DVQLTSiGHT AI
Natural-language Q&A on transformer status & trends

Diagnostics built on *IEEE C57.91 / C57.110 / IEC 60270*

LLM-BASED AI ASSISTANT
YOUR TRANSFORMER OPERATION EXPERT



HOW IT WORKS -
NO OUTAGE REQUIRED

1 Deployment

Sensor suite installs on an energized transformer. No shutdown, no rewiring.

2 Monitoring & AI Diagnostic

AI driven Edge gateway fuses all sensor streams into a unified health score with continuous trending.

3 Alert & Action

Three-tier alerts push to Data Center Infrastructure Management with recommended actions. Full audit trail.

THREE-TIER ALERTS SYSTEM

ADVISORY

Parameters trending unfavorably.
Plan inspection within 60 days.

WARNING

Approaching limits.
Schedule maintenance in 2–4 weeks.

CRITICAL

Limits exceeded.
Immediate action required.

INTEGRATION-READY

- **Webhook API**
- **Data Export**
- **Email & SMS alerts**

LIVE HEALTH SCREENSHOT

Health	Hot Spot	Top Oil
61%	120.4 °C	101.8°C
Load	PD	Life
92%	148 pC	6.2 yr

Schedule a Demo
dvoltsight.ai

Built on *IEEE C57.91 · C57.110 · C57.12 · IEC 60270 · IEEE PD Task Force* · peer-reviewed vibration research

WHY CONTINUOUS MONITORING — THE HIDDEN THREAT INSIDE EVERY DATA CENTER

High-density racks push **40–100+kW** per cabinet, placing sustained thermal stress on distribution transformers. IEEE C57.91 shows that above 100°C hot-spot temperature, **every 7–8°C rise approximately doubles the aging rate**. Partial discharge, harmonic-driven extra losses, and mechanical loosening develop silently over months — often with no **external warning until catastrophic failure**. Annual spot checks are not enough.

Thermal Life Monitoring

IEEE C57.91 thermal model: continuous hot-spot calculation, Arrhenius aging rate, and remaining insulation life projection with end-of-life date.

Harmonic Distortion Analysis

IEEE C57.110 harmonic loss factor and K-factor derating. Measures THD from non-linear loads up to 50th harmonic. Quantifies hidden thermal penalty.

Vibration Diagnostics

Tank-mounted MEMS accelerometer with baseline comparison and load-varied spectral analysis. Detects core loosening, winding deformation, and tap changer anomalies.

Partial Discharge Detection

HFCT sensor + acoustic array for PD localization. Detects insulation degradation weeks before failure. IEEE PD Task Force thresholds. No shutdown required.

Thermal Imaging

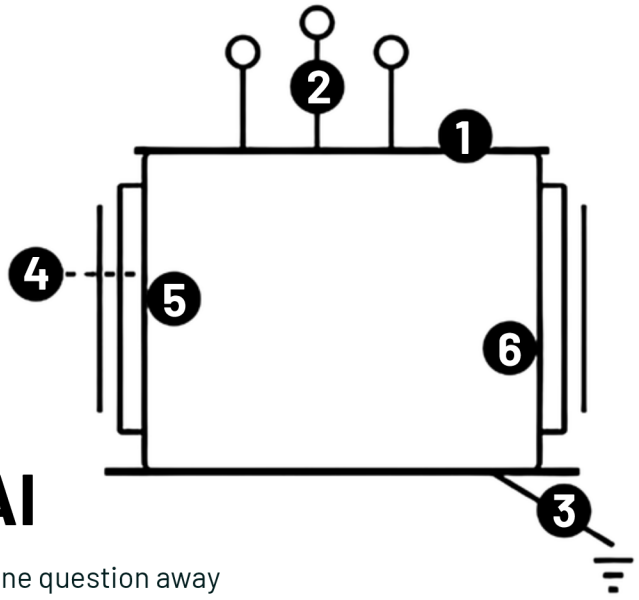
Dual-spectrum infrared camera continuously monitors bushings, cable terminations, and tank surface. Automatic hot-spot detection with trending and baseline comparison.

Health Index & Fault Reporting

Multi-parameter fusion into a unified Health Index (0–100) with remaining-life estimation. Auto-generated standardized fault reports ready for work order import.

FOUR-DIMENSION SENSOR FUSION SUITE

1. Temperature Probe — Top Oil
2. Current Sensor — Load & Total Harmonic Distortion
3. PD Sensor — High Frequency Current Transformer
4. IR Camera — Hot-Spot Imaging
5. Vibration Sensor — Mechanical
6. Acoustic Sensor — PD Location



WHY DVOLTSIGHT.AI

- ✓ Ask DVOLTSIGHT AI — your transformer expert, one question away
- ✓ Four-dimension fused monitoring: thermal, mechanical, electrical, insulation
- ✓ Every alert comes with a maintenance recommendation — ready to act
- ✓ Auto-generated standardized fault reports, ready for work order import
- ✓ Diagnostics built on open industry standards: *IEEE C57.91 / C57.110 / IEC 60270*
- ✓ Energized installation — no shutdown, no production interruption

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