



Trend analysis H₂, CO and oil moisture – MSENSE[®] DGA 2/3

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Who will send me a timely warning in the event of electrical or thermal problems?

Why MSENSE® DGA 2/3?

The transformer equipment consists of several components, each of which is subject to certain failure modes. To obtain a quick overview of the condition of individual transformer systems, you use structured systems of condition assessment (cf. CIGRÉ TB 761, Condition Assessment for Power Transformers, March 2019) under the aspects of

- replacement of equipment
- safety of equipment
- maintenance of equipment
- oil treatment

Dissolved gas analysis (DGA) has proven to be one of the most helpful analysis methods over the last 30 years to obtain information on the condition of the active part, the on-load tap-changer, the bushings and the insulating material. In combination with other additional examination methods, this allows you to detect changes at an early stage and thus optimize both operational reliability and operating costs.

The MSENSE® DGA 2/3 with the possibility of trend analysis of the two most important gases hydrogen and carbon monoxide offers you a solid and cost-effective basis for this.

How does MSENSE® DGA 2/3 work?

By means of a semi-permeable membrane, the gases hydrogen and carbon monoxide are extracted from the oil and actively fed to the sensors in the measuring chamber. The diffusion behavior of the gases and the behavior of the sensors with respect to the gases to be detected as well as disturbing influences (e.g. temperature, humidity) are described mathematically and thus the concentrations of the target gases in the oil are determined from the raw signal of the sensors. Due to the active transport of the gases to the measuring chamber by means of pumps, the system is purged with air after each measurement and thus each measurement is performed with a defined starting value (zero point). This promotes the reliability of the measurement results and enables the function of the sensors to be monitored. The determination of the oil temperature and the oil moisture is carried out with a digital sensor which combines moisture and temperature measurement. It is mounted directly on the sensor head and is in contact with the oil of the operating medium.

Your advantages

- Reliable measurement results due to constant starting point of the measurement (patented two stage measuring principle with initial air purging)
- Self-monitoring of the sensors due to two-stage measuring principle
- Pressure-stable capillary membrane for gas extraction
 - no leakage due to pressure fluctuations
- Oil sampling directly at the instrument with temperature measurement
- Integration in ETOS®, the expert at your side for data analysis, evaluation and recommendations for action
- We are there when you need us – global service network MR with 24/7 availability
- Personal support from your local MR Sales representative



→ [More information](#)

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