

Gas insulated substation (GIS) Monitoring

SF6 quality and leaks

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integrated



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Pioneering the future of power testing and monitoring

GIS SF6 quality and leaks

🕒 Most precise measurement

Precisely measures temperature and gives information on SF6 density and dew point in atmospheric pressure.

✅ 7 SF6 parameters

The unit gives the key 7 parameters of SF6 gas quality

📄 Description

Gas-insulated substations (GIS) represent a pivotal advancement in electrical power distribution technology, offering a compact and highly reliable solution for housing critical components of an electric grid. Within these substations, high-voltage equipment like circuit breakers, transformers, and disconnectors are encapsulated within sealed metal containers, typically filled with sulfur hexafluoride (SF6) gas. This design not only minimizes the physical footprint, making GIS ideal for urban or space-constrained locations, but also provides exceptional insulation properties that enhance the substation's efficiency and safety. The hermetic sealing of GIS prevents environmental contamination and reduces maintenance requirements, making it a vital asset in ensuring a resilient and sustainable electrical infrastructure..

Online assessment of SF6 gas insulated equipment is made easier with the Vaisala DPT145. This simple transmitter probe is easy to retrofit on existing SF6 equipment (adapters are available). Or it can be ordered with the new HV equipment.

The unit gives the key 7 parameters of SF6 gas quality and maintenance important factors such as:

SF6 leakage (even micro leakages are early detected with the stable SF6 pressure measuring, which saves outages and SF6 from being released into the atmosphere)

SF6 quality by measuring dew point (SF6 Moisture problems are now easy to address and it is possible to prevent SF6 degradation in an early stage with the built-in precise dew point measurement)

Additionally, DPT 145 precisely measures temperature and gives information on SF6 density and dew point in atmospheric pressure.

The signals can be connected to Scada by Modbus over RS485.

Digital outputs	
	The system is connected to RTU with either RS485 , Modbus ,or IEC 61850 system protocol
Temperature	-40 ... +70 °C
Accuracy	±1 °C
Temperature accuracy:	

💰 No spare parts consumables or recalibration

Absolutely no consumables or spare parts are needed.



🔄 Unique innovation

The DPT145 is a unique innovation that not only monitors dew point online but also pressure and temperature. In addition the instrument calculates four other values, including gas density and ppm. The DPT145 provides an excellent assessment of the SF6 insulation

SF6 or SF6/N2 mixture density	0 ... 100 kg/m3
Accuracy	(pure SF6, 1 ... 12 bara) ±2.5 %FS
Density accuracy:	
Dew point	-40 ... +30 °C
Accuracy	±5 °C (±5.4 °F)
Dew point accuracy:	
Pressure	absolute 1 ... 10 bar
Accuracy	at +23 °C ±0.5 %FS (Pressure stability Typical drift < 1 %FS / 5 years)
Pressure accuracy:	



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