

SF₆-Analyser

for measurement of contamination, air content and moisture in SF₆-gas

Dimensions: (with handle)

Width (B): 495 mm
Height (H): 185 mm
Depth (T): 505 mm

Transport case:

Outside dimensions:

Length: 525 mm
Width: 525 mm
Height: 270 mm
Weight: 22 kg



The functional principle of the

SF₆-Analyser with the following standard equipment is based on:

- Ion Mobility Spectrometer (IMS) for measurement of decomposition products in SF₆
- Percentage measurement for exact determination of air content in SF₆
- Moisture measurement for determination of the moisture content in SF₆

- easy handling with turning knob, two keys and display
- direct indication when exceeding the set limiting values
- memory for about 100 measuring points (measuring points can be saved under any names)
- software GASpector®-SF₆ on CD-ROM with user manual for data output and evaluation of the measured values on a PC
- 2 m and 4 m long connecting hoses with DILO couplings DN 8 and DN 20
- selfclosing connecting coupling
- housing with handle for transportation and placing
- 2 m long power connecting cable
- 2 m long cable for serial interface
- aluminium transport case

2 printed operating instructions and CD-ROM in English

Technical data:

Measuring range IMS (contamination):	0 - 5,000 ppm Vol.
Measuring accuracy:	± 2%
Measuring range for gas moisture:	-80 - +10 °C dew point
Measuring accuracy for gas moisture:	at dew points of +10 ..-40°C: ± 2°C at dew points of < -40 °C: ± 4 °C
Measuring range SF ₆ -percentage measurement:	0 – 100 Vol. %SF ₆ -
Measuring accuracy for SF ₆ -percentage measurement:	± 1 % based on SF ₆ -N ₂ -mixture
Input pressure:	pe 0,5 - 14 bar
Flow rate:	about 33 l/h all 3 modules together
Measuring time:	aprox. 5 min.
Operating temperature:	-10 up to +40 °C
Operating voltage:	90 – 265 V 50 - 60 Hz AC, about 40 W
Interface:	RS 232 (adapter for USB optional)

Functional description:

The SF₆-Analyser has been designed for controlling the SF₆-quality in disconnecting switches, bus bars and circuit breakers in Gas Insulated Substations (GIS).

This device allows the measurement of the contamination (total of decomposition products), the SF₆-percentage based on SF₆-air (or nitrogen) mixtures and the gas moisture with only one gas connection at the same time.

With the IMS-module very small traces of impurities in the gas can be detected by measuring ion drift times within an electric field. Depending on the mobility of the generated ionized gas molecules the total of decomposition products in SF₆ can be quantified by comparing the drift time of pure SF₆ with the drift time of the SF₆ inside the compartment under inspection.

The SF₆-percentage measurement is based on the evaluation of the velocity of sound in the measuring gas.

The moisture measuring device determines the water vapour content in degrees Celsius (dew point temperature) by a ceramic (capacitive polymere) sensor. Dew Point values are simultaneously converted and can be displayed in ppm_v.

The instrument can easily be operated and results are achieved within a few minutes. The device is steered by a very intuitive menu through a turning knob. The acquired results are immediately displayed and interpreted in correlation to the CIGRE values (SF₆-Recycling Guide, page 20) through a green (OK) or red (Contamination) LED.

The measured values can be labeled and saved. The included software GASpector-SF₆ allows a simple data download and evaluation on PC. Further to that it allows a trending to visualize fault development at an early stage.

This device can be connected to a SF₆ recovery system to ensure that no SF₆-gas is released into the atmosphere (in accordance with the Kyoto protocol).
