OBSOLETE

Analysis instrument
For determining the quality of SF$_6$ gas
Model GA10

WIKA data sheet SP 62.01

SF$_6$-Breaker-Analyser

Applications

Analysis of the gas quality in SF$_6$ gas-filled equipment

Special features

- Modular instrument determines up to four SF$_6$ gas parameters (purity, humidity, SO$_2$ and HF concentration)
- Integrated data processing and storage
- Measured value validation in accordance with CIGRE, IEC or customer-specific limit values
- Fast test results after approx. 5 ... 7 minutes
- Easy to use

Analysis instrument, model GA10

Description

The model GA10 analysis instrument is an innovative and cost-effective solution for determining the quality of SF$_6$ gas.

Individually configurable
The GA10 consists of a basic instrument with display and an integrated electronic data acquisition and processing. The completely modular concept enables the user to expand the basic instrument with sensor cartridges which can be sent to calibration individually.

With the completely equipped instrument, it is possible to measure the purity of SF$_6$ gas, the humidity and the SO$_2$ or HF concentration, respectively. The GA10 determines the pressurised dew point of the SF$_6$ gas by means of the pressure measurement of the test gas and the measured humidity.
The combined measurement of all measurement parameters mentioned above minimises both the measuring time and the required quantity of test gas.

The measuring instrument will be delivered with matching accessories and transport case.

Easy to use
With the help of the rotary push-button and the clear menu navigation, the operation of the analysis instrument is easy and without difficulty.

After the measurement has been started, the sensor values are automatically compared with the set limit values per CIGRE B3.01.01, IEC or customer-specific standards.

Following the measurement, two status lamps (green, red) indicate whether the test gas composition is OK or whether it does not comply with the set limit values.

At least 150 data records can be stored in the internal measured value storage. It is possible to export and archive the data on a PC using the included "SF6-Reviewer" software.

Environmentally friendly
A model GA45 gas recovery bag is to be connected at the outlet of the GA10 for collecting the measuring gas.

Data sheets showing similar products:
Analysis instrument for determining the quality of SF$_6$ gas; model GA11; see data sheet SP 62.11

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Specifications

Basic instrument

Connections
- Inlet: quick coupling with self-closing valve
- Outlet for gas recovery bag: quick coupling

Inlet pressure
0.5 … 14 bar (gaseous)
With automatic flow control

Controls
1 x Rotary push-button for menu navigation
1 x Purge button

The 'Purge' button diverts the contents of the 4-metre long measuring tube directly to the outlet. This should be carried out before each measurement.

Display
LED display, resolution 240 x 128

Voltage supply
Lithium-Ion rechargeable battery
Charger: AC 100 ... 265 V (50 ... 60 Hz)

Permissible temperatures
Operation: 0 ... 50 °C
Storage: -10 ... +60 °C

Dimensions
W x H x D: 380 x 185 x 440 mm

Weight
Basic instrument approx. 12 kg
Basic instrument with accessories and transport case approx. 23 kg

SF$_6$ gas percentage sensor

Measuring principle
Sound velocity

Measuring range
0 ... 100 %

Accuracy
±0.5 % based on SF$_6$/N$_2$ mixtures (calibration for SF$_6$/CF$_4$ mixtures on request)

Resolution
0.1 %

Flow measuring gas
3 litres/hour

Humidity sensor

Measuring principle
Polymer-based capacitive humidity sensor

Measuring range
-60 ... +20 °C dew point

Accuracy
±2 °C dew point at -40 ...+20 °C dew point
±4 °C dew point at < -40 °C dew point

Resolution
1 °C

Flow measuring gas
20 litres/hour

Units
°C$_{td}$ / ppm$_w$ / ppm$_v$ / °C$_{tdpr}$ (dew point at gas compartment pressure)

Calibration interval
2 years

SO$_2$ sensor

Measuring principle
Electrochemical

Measuring ranges
- 0 ... 10 ppm$_v$
- 0 ... 20 ppm$_v$
- 0 ... 100 ppm$_v$
- 0 ... 500 ppm$_v$

Accuracy
±0.5 ppm$_v$ (with measuring range 0 ... 10 ppm$_v$)
±1 ppm$_v$ (with measuring range 0 ... 20 ppm$_v$)
±3 ppm$_v$ (with measuring range 0 ... 100 ppm$_v$)
±5 ppm$_v$ (with measuring range 0 ... 500 ppm$_v$)

Resolution
0.1 ppm$_v$

Flow measuring gas
10 litres/hour

Permissible humidity
≤ 90 % r. h. (non-condensing)

Max. zero offset
0.1 ppm$_v$

Long-term stability
< 1 % signal degradation/month (linear)
< 0.5 % at 0 ... 500 ppm$_v$

Service life
2 years starting from installation

SO$_2$/HF sensor

Measuring principle
Electrochemical

Measuring ranges
- 0 ... 10 ppm$_v$ SO$_2$ / 0 ... 10 ppm$_v$ HF
- 0 ... 20 ppm$_v$ SO$_2$ / 0 ... 10 ppm$_v$ HF

Accuracy
- SO$_2$: ±0.5 ppm$_v$ (with measuring range 0 ... 10 ppm$_v$)
  ±1 ppm$_v$ (with measuring range 0 ... 20 ppm$_v$)
- HF: ±1 ppm$_v$

Resolution
0.1 ppm$_v$

Flow measuring gas
10 litres/hour

Permissible humidity
≤ 90 % r. h. (non-condensing)

Max. zero offset
0.1 ppm$_v$

Long-term stability
< 1 % signal degradation/month (linear)

Service life
2 years starting from installation

Accessories

	Designation	Order no.
	Gas recovery bag, model GA45 For specifications see data sheet SP 62.08	14013015
	Inlet pressure control unit for gas analysis instruments, model GA05	14050089

Ordering information
Model / Sensors / Accessories

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