Analysis instrument
For determining the quality of SF₆ gas
Model GA10

Applications
Analysis of the gas quality in SF₆ gas-filled equipment

Special features
- Modular instrument determines up to four SF₆ gas parameters (purity, humidity, SO₂ 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

Description
The model GA10 analysis instrument is an innovative and cost-effective solution for determining the quality of SF₆ 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 SF₆ gas, the humidity and the SO₂ or HF concentration, respectively. The GA10 determines the pressurised dew point of the SF₆ 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.
**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

**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**
°Ctd / ppmw / ppmv / °Ctdpr (dew point at gas compartment pressure)

**Calibration interval**
2 years

**SO₂ sensor**

**Measuring principle**
Electrochemical

**Measuring ranges**
- 0 ... 10 ppmv
- 0 ... 20 ppmv
- 0 ... 100 ppmv
- 0 ... 500 ppmv

**Accuracy**
±0.5 ppmv (with measuring range 0 ... 10 ppmv)
±1 ppmv (with measuring range 0 ... 20 ppmv)
±3 ppmv (with measuring range 0 ... 100 ppmv)
±5 ppmv (with measuring range 0 ... 500 ppmv)

**Resolution**
0.1 ppmv

**Flow measuring gas**
10 litres/hour

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

**Max. zero offset**
0.1 ppmv

**Long-term stability**
< 1 % signal degradation/month (linear)
< 0.5 % at 0 ... 500 ppmv

**Service life**
2 years starting from installation
SO₂/HF sensor

Measuring principle
Electrochemical

Measuring ranges
- 0 ... 10 ppmv SO₂ / 0 ... 10 ppmv HF
- 0 ... 20 ppmv SO₂ / 0 ... 10 ppmv HF

Accuracy
- SO₂: ±0.5 ppmv (with measuring range 0 ... 10 ppmv)
- ±1 ppmv (with measuring range 0 ... 20 ppmv)
- HF: ±1 ppmv

Resolution
0.1 ppmv

Flow measuring gas
10 litres/hour

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

Max. zero offset
0.1 ppmv

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

Service life
2 years starting from installation

Accessories

<table>
<thead>
<tr>
<th>Designation</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas recovery bag, model GA45</td>
<td>14013015</td>
</tr>
<tr>
<td>For specifications see data sheet SP 62.08</td>
<td></td>
</tr>
<tr>
<td>Inlet pressure control unit for gas analysis instruments, model GA05</td>
<td>14050089</td>
</tr>
</tbody>
</table>

Ordering information
Model / Sensors / Accessories

© 2013 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.