Gas Density Monitor (GDM)  
Model 233.52.100 with Liquid Filling

Applications
- Gas density monitoring of closed SF₆ tanks
- For outdoor installation

Special Features
- Modified pressure gauge with bourdon tube and liquid filled case
- Wetted parts: stainless steel
- Local readout with alarm contacts
- Hermetically sealed, therefore no influence by atmospheric pressure fluctuation and differences in altitude
- Serial number

Description
Nominal size in mm
100

Accuracy (relating to the measuring span)
± 1 % at ambient temperature + 20 °C,
± 2.5 % at ambient temperature range -20 ... +60 °C and with calibration pressure as reference isochore
(reference diagram KALI-Chemie AG, Hannover, prepared by Dr. Döring 1979)

Scale ranges
All standard ranges and +/- ranges with a measuring span of min. 1.6 bar und max. 25 bar (SF₆ gas pressure at + 20 °C)

Calibration pressure  \( P_E \)
As ordering specifications

Permissible temperature
Ambient: -20 ... +60 °C (gas phase)
Storage: -50 ... +60 °C

Alarm contacts / Contact rating
Max. 3 magnetic snap-action contacts, to make or break, with galvanic isolation, switching points non-adjustable and secured
Contact rating: 20 W / 20 VA, max. 1 A
Material of contacts: 80 % Ag / 20 % Ni, 10 \( \mu \)m goldplated

Switching accuracy in temperature range -20 ... +60 °C
If switching point is equal \( P_E \): As measuring span
If switching point is not equal \( P_E \): Moved parallel to calibration pressure

High-voltage test
2 kV, 50 Hz, 1 s (wiring versus case)

Electrical connection
Cable box with cable gland M20 x 1.5
Connection cross-section max. 2.5 mm²

Process connection
Stainless steel, radial entry, spigot D6 x 5, similar to EN 837, G ½ B (male), 22 mm flats
**Pressure element**
Stainless steel, welded
Gas tight: leakage rate $\leq 1 \cdot 10^{-8}$ mbar · l / s
Test method: spectrometry of helium mass

**Movement**
Stainless steel
Bimetal link (temperature compensation)

**Dial**
Aluminium, red-green-yellow section as ordering specifications

**Pointer**
Aluminium, black

**Case**
Stainless steel with silicone oil filling
Gas tight: leakage rate $\leq 1 \cdot 10^{-5}$ mbar · l / s

**Window**
Laminated safety glass

**Bezel ring**
Cam ring (bayonet type), stainless steel secured with 3 welding spots

**Ingress protection**
IP 65 per EN 60 529 / IEC 529

**Weight**
approx. 1.2 kg

**Options**
- 3 magnetic snap-action contacts, without galvanic isolation, switching points are adjustable
- Acrylic glass window
- Compensation for SF₆ mixtures
- Process connection through flanges
- Connection at 3, 6 or 12 o’clock
- Back connection
- Pluggable cable box

---

**Dimensions in mm**

**Standard version**

---

**Alarm contacts model 821**

<table>
<thead>
<tr>
<th>Sets and version of contact</th>
<th>Dimensions in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double contacts, with galvanic isolation</td>
<td></td>
</tr>
<tr>
<td>Triple contacts, with galvanic isolation, without adjusting arms</td>
<td></td>
</tr>
</tbody>
</table>

---

**Ordering information**

Model / Nominal size / Scale range / No. and size of connection / Filling pressure / Calibration pressure / Options

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.

---

WIKA Alexander Wiegand GmbH & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. (+49) 9372/132-0
Fax (+49) 9372/132-406
E-Mail info@wika.de
www.wika.de