SF_6 GAS DENSITY MONITOR

Unique SF_6 monitoring with reference gas comparison

- Excellent accuracy over wide temperature range
- No false alarms at low temperatures
- High resistance against vibration and shock
- Maintenance-free

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Trafag Gas Density Monitor 87X6

Unique SF_6 monitoring with reference gas comparison

The mechanical, self-acting device is based on the superior reference gas principle which does not need temperature compensation. It therefore not only covers all standard applications but also maintains highest accuracy over a very wide temperature range. It allows use of different gas mixtures or the application in montane altitudes or arctic temperatures down to minus 60 °C. It is equipped with high-performance micro switches and does not need any electrical energy supply. This precise and maintenance-free device is suited to demanding applications and is reliable over decades.

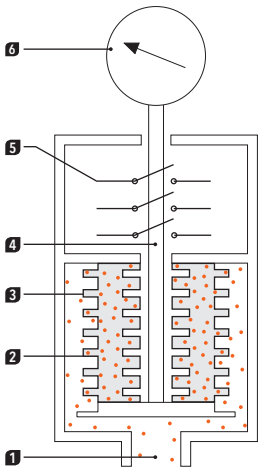
Advantages

- No temperature compensation required due to superior reference chamber principle
- High resistance against vibration and shock
- No bouncing of electrical contacts
- Galvanically separated circuits
- No false alarms at low temperatures
- Maintenance-free, no recalibration of switchpoints
- Monitoring of other gases (e.g. CF_4) possible

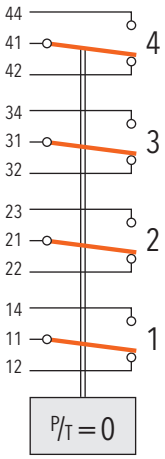
Operating principle of the reference chamber

The gas density of SF_6 compartments is compared via a bellows system with the gas density in a reference gas chamber in the monitor. If the density of the gas alters, the bellows system actuates one or more micro switches. If the gas temperature and therefore its pressure changes, the same pressure difference occurs also in the reference chamber. No false alarm is triggered due to temperature-induced pressure changes. Up to four galvanically isolated micro switches actuate different alarm signals. An optional SF_6 indicator provides visual inspection of the SF_6 gas density as gas pressure at 20°C.

1. SF_6 tank side
2. metal bellow
3. reference gas
4. switching rod
5. micro switch
6. display



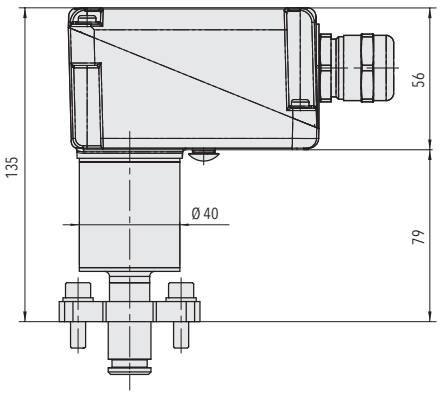
The density monitors are filled at works to the customer's gas density specification (variant with three micro switches is shown).

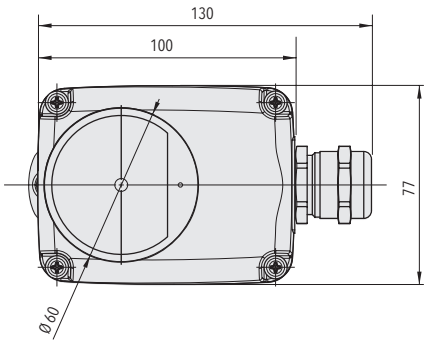


Up to four galvanically isolated micro switches actuate different alarm signals.

Technical data Gas Density Monitor 87X6	
Principle	Reference gas measurement
Material measurement system	Sensor: 1.4435, 1.4404, 1.4571, (AISI316L, AISI316)
Material pressure connection	1.4435, 1.4404, 1.4571 (AISI316L, AISI316)
Material housing	AlSi10Mg
Ambient temperature	–40 ... +80 °C (optional: –60 ... +80 °C)
Measuring range	0 ...1.1 MPa
Display	SF_6 indicator dial (optional)
Hysteresis	< 15 kPa
Accuracy micro switch	±10 kPa at –30...+50 °C (for first switchpoint pressure: <650 kPa @ 20 °C)
Accuracy of indicator	Within numeralised range ±10 kPa @ 20 °C
Electrical connection	Plugable terminal screw connector 0.2...2.5 mm²
Ratings of micro switches	AC 250V 10 (1.5) A DC 250V 0.1 (0.05) A DC 220V 0.25 (0.2) A DC 110V 0.5 (0.3) A DC 24V 2 (1) A
Degree of protection	IP67
Service	Check micro switch setpoint after 5 years
Weight	~800 g

For other available pressure connections: See data sheet www.trafag.com/H72502





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