

B169R101

Gas monitoring system (single)

The device is used to monitor and record the quality of the SF₆ gas in a gas compartment. The following quality parameters can be determined with only one measurement:

- SF₆ volume percentage (%)
- Moisture concentration (°C atmosphere, °C pressure, °F atmosphere, °F pressure, ppm_v, ppm_w)

The user can select between three measurement modes:

- Continuous measurement
- Pulse measurement with automatic measurement data recording
- Single measurement

For the measurement, the gas compartment is equipped with two partially separated couplings. The gas is taken from one of the two couplings, temporarily stored in the internal gas collecting bag of the gas monitoring system and then pumped back into the gas compartment through the second coupling after the measurement has been taken. Alternatively, the gas outlet coupling of the device can also be connected to an external vessel where the gas is collected after the measurement. The gas monitoring system is characterised by simple and user-friendly handling and easy maintenance. All gas sensors are easily accessible and can be replaced by the user according to the „plug & play“ principle. The device is operated via a 3.5“ colour touch screen with intuitive menu navigation. Due to the use of self-closing couplings, SF₆ cannot escape into the atmosphere either during measurement or when pumping back. The gas monitoring system is available as a stand-alone system or as a component of an SF₆ service cart (installation). If the SF₆ gas is to be stored in the liquid form after measurement, we offer to equip the system with a more powerful compressor (B100R30, final pressure 50 bar p_e) instead of the standard compressor (B100R20, final pressure 9 bar).



Standard version

- 2 m long connecting hoses with DILO couplings DN8
- Operating instructions

Advantages & functions

Sensor data		
Sensor	Vol.- %	Moisture
Measuring principle	Velocity of sound	Electronic dew point measurement
Measuring range	0 - 99,9 vol.-%	-60 to +20 °C -76 to +68 °F 10 to 24000 ppm 1,23 to 2959 ppm _w
Measuring accuracy	±0,5 vol.-%	±2 °C (at < -40 °C) ±3 °C (at < -40 °C)
Measuring gas pressure	Atmospheric pressure	Atmospheric pressure
Flow rate	0,3 - 0,5 l/h	16 - 17 l/h
Reaction time	< 2 min	< 5 min
Long term stability		

- Inlet pressure max. 50 bar p_e
- Storage of up to 500 measurement results with name, date and time assignment
- Adjustable user languages: DE, EN, FR
- Selectable pressure and moisture units
- LAN connection and SD cards slot
- Export of measurement data as CSV file
- Inlet pressure indications in p_a, bar p_e, psi p_a, psi p_e, kPa p_a, kPa p_e, MPa p_a, MPa p_e

Technical data

Inlet pressure p _e	1.5 - 50 bar
Weight	40 kg
Operating temperature	-10 to +50 °C
Limit value vol.-%	0.0 - 99.9 Vol.-% adjustable
Operating voltage	85 - 264 V AC
Number of max. measured values to be stored	500
Limit value SO ₂	0.0 - 499.9 ppm adjustable (depending on the integrated SO ₂ sensor)
Dimensions (W x H x D)	600 x 550 x 430 mm
Interface	LAN
Ambient moisture	90 % relative moisture non condensing during operation
Frequency	50 - 60 Hz
Atmospheric pressure	vol.-%
Flow rate vol.-%	0.3 to 0.5 l/h
Installation / Stand-alone	Integratable
Measuring range of vol.-% sensor	0 to 99.9 vol.-%
Measuring accuracy of vol.-% sensor	± 0.5 vol.-%
Measuring principle of vol.-% sensor	Velocity of sound
Response time of vol.-% sensor	< 2 min



Optional accessories

B100R20	Compressor B100R20
---------	--------------------

Note

Options (please inquire separately): All devices with percentage measuring system are additionally available for SF₆ concentrations in SF₆/CF₄ gas mixtures (measuring accuracy: ±2.0 vol. -%). Thus it is possible to switch over between the SF₆/N₂ and SF₆/CF₄ measurement.