



Gas Sensor GSS 526 Ex for detection of Ammonia NH₃



Mode of operation

The gas/vapour/air mixture that occurs diffuses through the membrane to the active metal oxide surface. A temporary shortage of oxygen electrons arises on the indirectly heated surface during the presence of a gas concentration. This shortage of electrons produces a change in the conductivity, and thereby changes the voltage, which is evaluated as a signal. If the gas concentration reduces, the missing oxygen electrons will be replaced from the ambient air once again.

The measurement reacts by oxidizing/reduction with oxygen. This characteristic leads to other gases being measured as well and triggering an alarm. By linearization of the initial signal this effect is minimized. The suitable application is to be implemented in "still" rooms; i.e. rooms in which no other gases are normally expected.

The calibration unit type "Calibration Remote Control CRC Ex" is as accessory available, which permits a "one-man" calibration without opening the gas-sensor.

Calibration

The gas measurement probe requires a longer stabilisation time when the gas measurement probe is first switched on. If the gas measurement probe has been put out of operation for more than 2 weeks, even after several years of use, the gas measurement element will require at least 48 hours to stabilise. If a calibration is carried out before the end of this stabilisation time, while the sensitivity of the measurement element is still increasing, faulty alarms could result. The **calibration gas** should be 75% of the measurement range, and must contain synthetic air as the carrier gas

Maintenance

The measurement element with its associated electronics must be checked at least once or twice a year. The gas measurement probe must also be checked if the measurement element has been exposed to a gas concentration (gas alarm).

Electrical data sensor element*

NH₃-Sensing element specification

Measuring range:	30...300 ppm
Linearity:	linearised
Response time t 90:	max. 60 sec
Operating temperature:	-30 °C ... +50 °C
Start up after reconditioning:	maximal 1 hour
Air humidity:	25 – 95 % rh
Position sensitivity:	none
Life span by 20 °C:	at least 1 year from experience 5-8 year

Electrical data sensor electronics

Power connection:	3-core cable, shielded
Supply voltage:	15...24 VDC
Current consumption:	maximum 110 mA
Output signal:	4...20 mA/maximum 60 mA
Operating temperature:	-20 °C ... +60 °C

Explosion-proof construction

Test sheet Atex No.:	IBExU 07 ATEX 1004
Class	 II 2G Ex d IIC T6

Dimensions

Height:	170 mm
Width:	110 mm
Depth:	63 mm

Accessory: Calibration Remote Control „CRC Ex“



Calibration unit „CRC Ex“
for „one-man“ calibration of a
gas sensor GSS 532 Ex