



## Gas sensor KSEC 416/ longlife for detection of Oxygen O<sub>2</sub>



### Mode of operation

The principle of the measurement cell used is based on the diffusion of oxygen. The O<sub>2</sub> diffuses through the gas-permeable diaphragm onto the gold cathode, and is reduced on it. The current flowing between the electrodes is proportional to the concentration, and will then be amplified and be led to the evaluation device by the transmitter.

The measured gas concentration is linear to the electrical output signal of the gas measurement probe. The potentiometers and the 3.5 mm jack connection for the calibration are accessible from the outside, and permits a "one-man" calibration.

When used in a pump system, the service life can be heavily reduced, as the electrolyte evaporates more quickly through the porous diaphragm. The measurement cell is sensitive to solvent vapours.

The **calibration gas** should be 75% of the measurement range, and must contain synthetic air as the carrier gas.

## Performance Characteristics

Measuring range:	0...100 Vol.% / linear
Standard calibration:	0...25 Vol.%
Response time $t_{90}$ :	< 12 seconds
Operating temperature:	0 °C ... +40°C
Start up after reconditioning:	max. 1 h
Pressure range:	atmospheric $\pm$ 10%
Air humidity:	15...90% non condensing
Position sensitivity:	none
Long term output drift:	< 1 % / month
Life span at 20 °C:	about 5 years depends on the application

## Sensor electronic specification

Cable:	4-core cable, shielded
Power supply:	13.5...30 VDC
Sensor current:	max. 60 mA
Output signal:	digital bus-signal
Operating temperature:	-40 °C ... +85 °C

## Inspection (Maintenance)

The sensor and the electronic require an inspection. Routine calibration is recommended once or twice a year.

## Dimensions/ Electronic

