



Gas sensor KSP 168 for combustible gases and vapours in the range 0-100 % LEL



Mode of Operation

The gas sensor KSP 168 is used for the detection of explosive gas/vapour/air mixtures.

The principle of the measurement element used is based on the catalytic combustion caused by the detected gas/vapour/air mixture. The reaction heat that is released causes an increase in the temperature of the platinum wire to which the catalyst is attached. The current flowing through the platinum wire increases, and is proportional the measured gas concentration up to approx. 10 Vol. % methane. The signal then reduces again as a result of the shortage of oxygen.

Depending on the use and the application, the required measurement element will be integrated into the measurement probe, i.e., various measurement elements are available, which must be taken into account when replacing them.

The potentiometers and the 3.5 mm jack connection for the calibration are accessible from the outside, and permits a "one-man" calibration.

The optical calibration unit type "Calibration Remote Control CRC" is as accessory available, which permits calibration even if the gas-sensors are difficult to reach (or mounted very high).

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.

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).

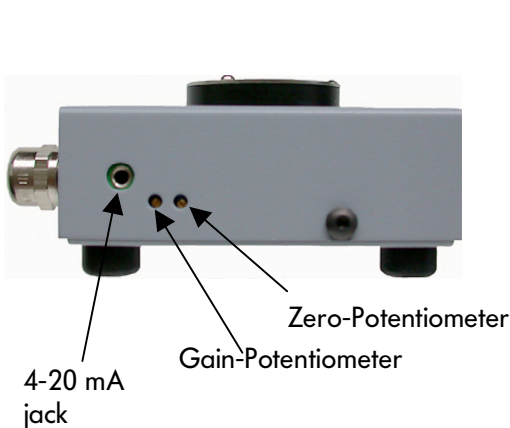
Sensor specification (CH₄)

| | |
|---------------------------------|---|
| Sensitivity: | at least 0,1 Vol.% (1000 ppm) |
| Measuring range: | max. 10 Vol.% |
| Linearity: | to 5 Vol.% |
| Response time t ₉₀ : | max. 20 sec |
| Operating temperature: | -30 °C ... +70 °C |
| Start up after reconditioning: | maximal 1 hour |
| Air humidity: | no changes |
| Position sensitivity: | none |
| Life span by 20 °C: | at least 1 year from experience 5-8 year |

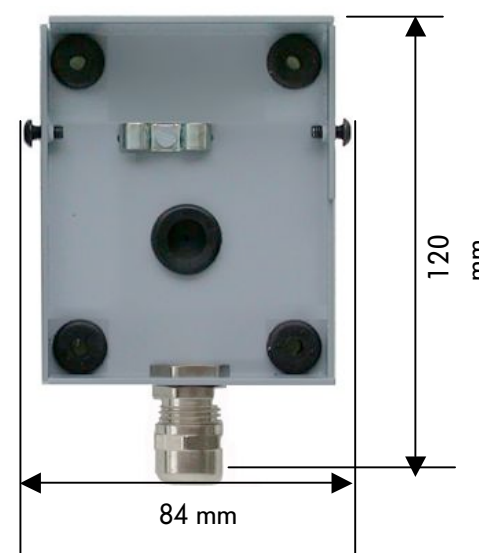
Sensor electronic specification

| | |
|------------------------|------------------------|
| Cable: | 3-core cable, shielded |
| Power supply: | 15...35 VDC |
| Sensor current: | max. 110 mA |
| Output signal: | 4...20 mA/max. 60 mA |
| Operating temperature: | -40 °C ... +85 °C |

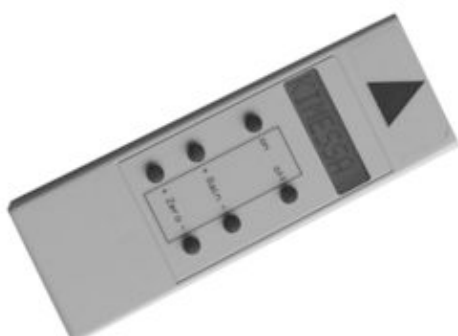
Electronic



Dimensions



Accessory: Calibration Remote Control „CRC“



Calibration unit „CRC“
for „one-man“-calibration for a
gas sensor type KSS/KSP