MEMBRAPOR SPECIFICATION SHEET

CO/SF-200-4E-S

Carbon Monoxide Gas Sensor in Slim Housing

MEASUREMENT

Operation Principle	4-Electrode Electrochemical
Nominal Range	0 – 200 ppm
Maximum Overload	400 ppm
Inboard Filter	To remove acid gases and alcohol
Output Signal	500 ± 200 nA/ppm
Resolution (Electronics dependent)	< 0.1 ppm
T90 Response Time	< 40 sec
Typical Baseline Range (pure air, 20°C)	-2 ppm to 1 ppm
Maximum Zero Shift (+20°C to +40°C)	1.5 ppm
Repeatability	< 2 % of signal
Output Linearity	Linear
Gain	0.5 to 2 ppm

ELECTRICAL

Rec. Load Resistor	10 Ohm
Bias (V_Sens-V_Ref)	+0 mV
Conformity to RoHS directive	RoHS Compliance

ENVIRONMENTAL

Relative Humidity Range	15 % to 90 % R.H. non-condensing
Temperature Range	-20 °C to 50 °C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	N.D.
Humidity Effect	none

LIFETIME

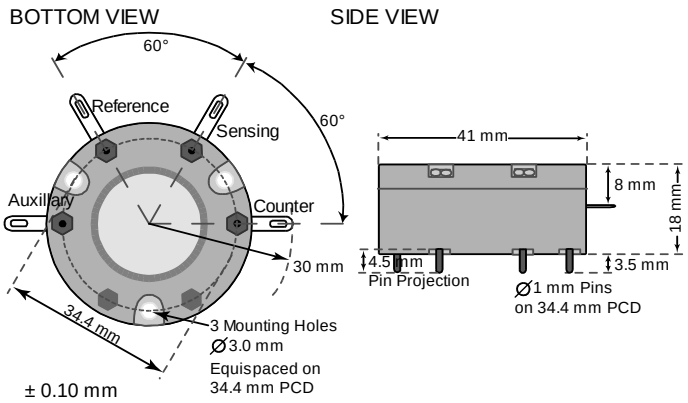
Expected Operation Life	3 years in air
Expected Long Term Output Drift in air	< 2 % per month
Filter Life	N.D.
Storage Life	6 months in container
Rec. Storage Temperature	5 °C – 20 °C
Warranty Period	12 months from date of dispatch

Performance data conditions: 20 °C, 50% RH, 1013 mbar

SPECIAL FEATURE

Hydrogen-Compensated 4-Electrode-Sensors

Slim-Size Outline Dimensions



MECHANICAL

Weight	27 g
Position Sensitivity	None

APPLICATIONS

Continuous Air Quality Monitoring
Emission Monitoring
H2-Compensated CO Measurement

CROSS-SENSITIVITY DATA

The table below does not claim to be complete. Interfering gases should not be used for calibration.

Interfering Gas	Cross-Sens. %
H_2S	0
SO_2	0
NO	0
NO_2	0
H_2	< 1 1)

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TEMPERATURE DEPENDENCE

The output of an electrochemical sensor varies with temperature. The graphs below show the variation in output with temperature for this type of sensor. The results are shown in the graphs as a mean for a batch of sensors. The sensitivity dependence is expressed as a percentage of the signal at 20 °C. The shift in baseline is shown in ppm referenced to 20 °C and a relative humidity of 50%.

Please note:
It is highly recommended to acquire the temperature dependence curves with the whole instrument. The sampling system, the humidity, the electronics, the interaction between the electronics and the sensor, all have a significant impact on the temperature dependence of the final measurement reading.

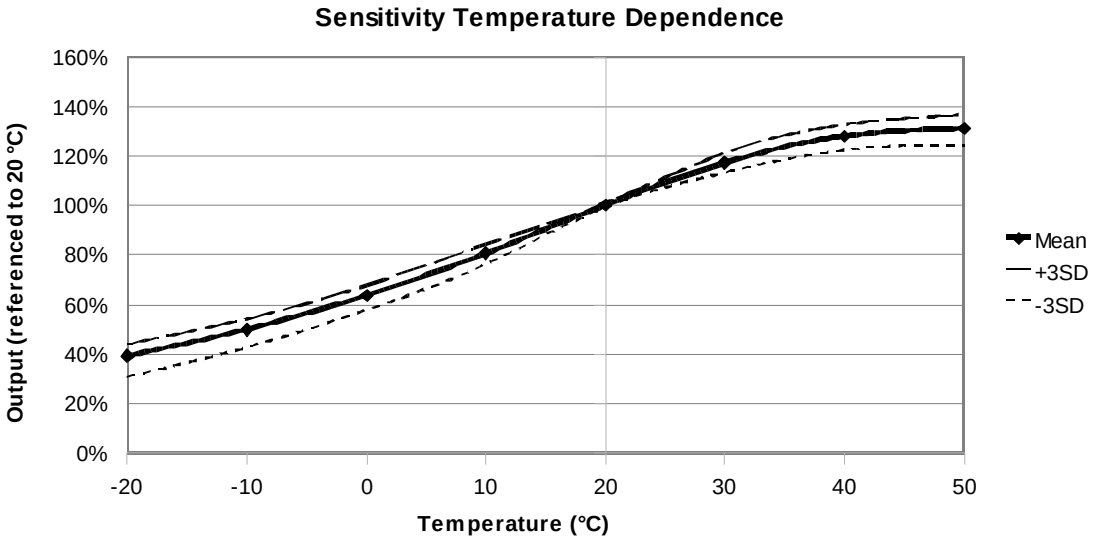

Figure 1: Sensitivity dependence expressed as a percentage of the signal at 20 °C. The result is shown along with confidence intervals corresponding to ±3 times the standard deviation.

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