

MEMBRAPOR ELECTROCHEMICAL GAS SENSORS

SPECIFICATION SHEET FOR CO SENSOR TYPE CO/SF-4E-S

4-Electrode CO Sensor with H₂ Compensation

PERFORMANCE CHARACTERISTICS

Nominal Range	0 – 2'000 ppm
Maximum Overload	4'000 ppm
Inboard Filter	To remove acid gases and alcohol
Filter Life	290'000 ppm hours ¹⁾
Expected Operation Life	3 years in air
Output Signal	75 ± 25 nA/ppm
Resolution	1,0 ppm
Temperature Range	- 20 °C to 45 °C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T ₉₀ Response Time	< 40 sec
Relative Humidity Range	15 % to 90 % R.H. non-condensing
Typical Baseline Range (pure air, 20°C)	-3 to + 10 ppm
Maximum Zero Shift (+20°C to +40°C)	5 ppm
Expected Long Term Output Drift	< 2 % signal loss/month
Recommended Load Resistor	10 Ohm
Bias Voltage	0 or + 250 mV
Repeatability	< 2 % of signal
Output Linearity	Linear
Gain	0.5 to 2.0

¹⁾ Gas removal based on continuous exposure to 140 ppm NO_x / SO₂ and 5% breakthrough. Accuracy: ± 4%.

CROSS-SENSITIVITY DATA

Interfering Gas	Cross-Sensitivity (%)
H ₂ S	0
SO ₂	0
NO	0
NO ₂	0
H ₂	< 1 ²⁾

²⁾ After compensation

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

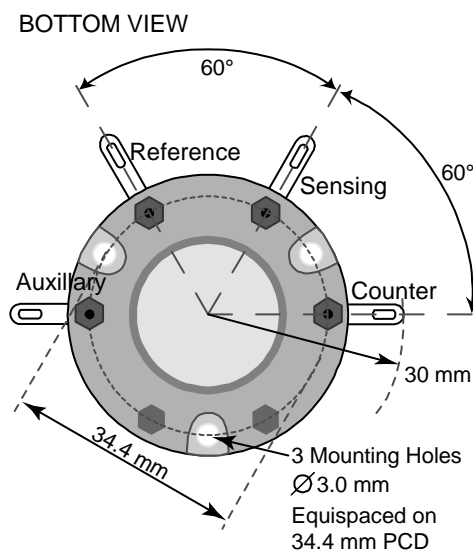
APPLICATIONS

CO Detection in CO/H₂-Mixtures
Emission Monitoring
Medical Applications

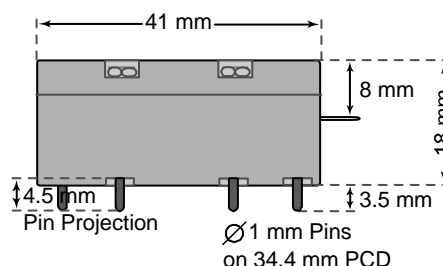
PHYSICAL CHARACTERISTICS

Weight	~ 27 g
Position Sensitivity	None
Storage Life	Six months in container
Recommended Storage Temperature	5 °C – 20 °C
Warranty Period	12 months from date of dispatch

Slim-Size Outline Dimensions



SIDE VIEW



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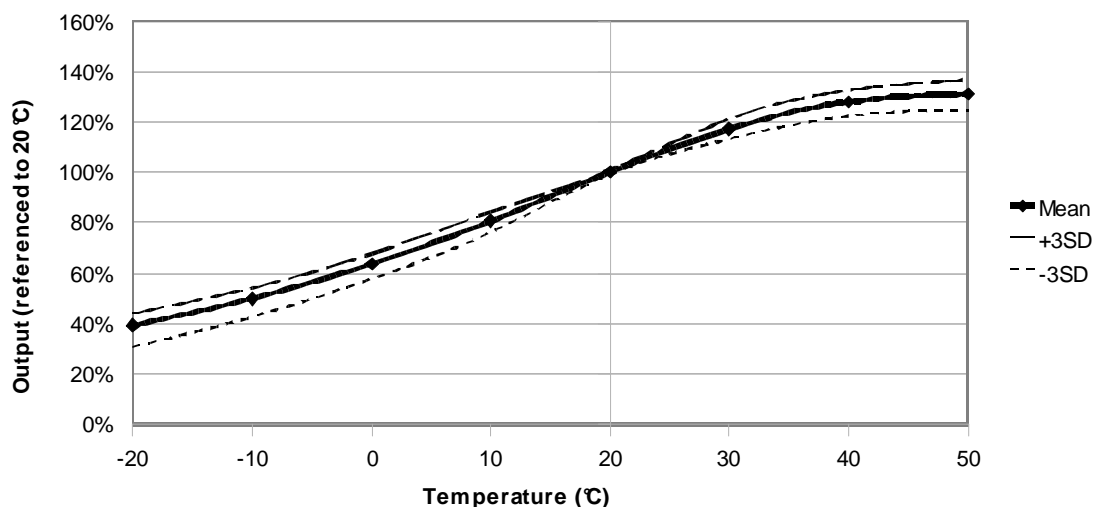
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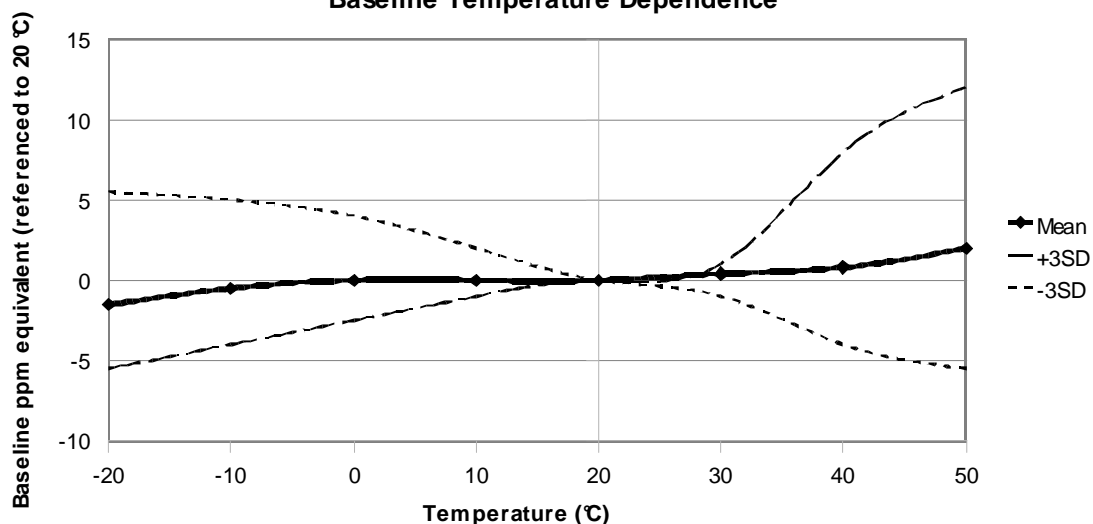
TEMPERATURE DEPENDENCE

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, along with confidence intervals corresponding to ± 3 times the standard deviation. 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.

Sensitivity Temperature Dependence



Baseline Temperature Dependence



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