

# MEMBRAPOR ELECTROCHEMICAL GAS SENSORS

## SPECIFICATION SHEET FOR CO SENSOR TYPE CO/SF-2000-S

### PERFORMANCE CHARACTERISTICS

Nominal Range	0 – 2'000 ppm
Maximum Overload	4'000 ppm
Inboard Filter	To remove acid gases from flue stream
Filter Life	480'000 ppm hours <sup>1)</sup>
Expected Operation Life	3 years in air
Output Signal	50 ± 10 nA/ppm
Resolution	1,0 ppm
Temperature Range	- 20 °C to 45 °C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T <sub>90</sub> Response Time	< 35 sec
Relative Humidity Range	15 % to 90 % R.H. non-condensing
Typical Baseline Range (pure air, 20°C)	-6 to 2 ppm
Maximum Zero Shift (+20°C to +40°C)	15 ppm
Expected Long Term Output Drift	< 2 % signal loss/month
Recommended Load Resistor	10 Ohm
Bias Voltage	Not recommended
Repeatability	< 2 % of signal
Output Linearity	Linear

<sup>1)</sup> Gas removal based on continuous exposure to 140 ppm NO<sub>x</sub> / SO<sub>2</sub> and 5% breakthrough. Accuracy: ± 12%.

### CROSS-SENSITIVITY DATA

Interfering Gas	Cross-Sensitivity (%)
H <sub>2</sub> S	0
SO <sub>2</sub>	0
NO	0
NO <sub>2</sub>	0
H <sub>2</sub>	< 60

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

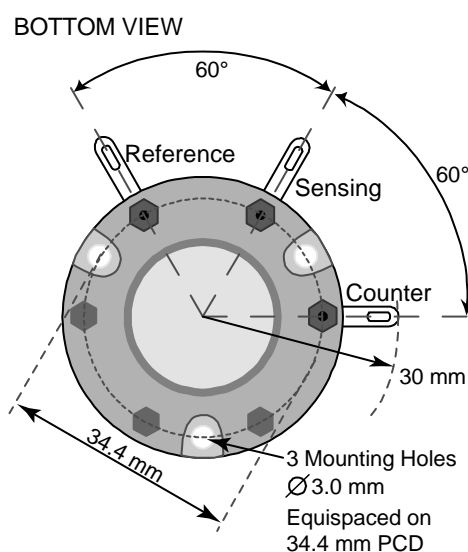
### APPLICATIONS

Stack/ Flue Gas Monitoring  
Emission Monitoring

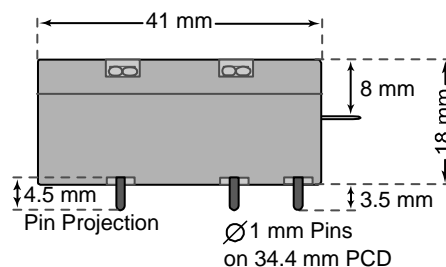
### PHYSICAL CHARACTERISTICS

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



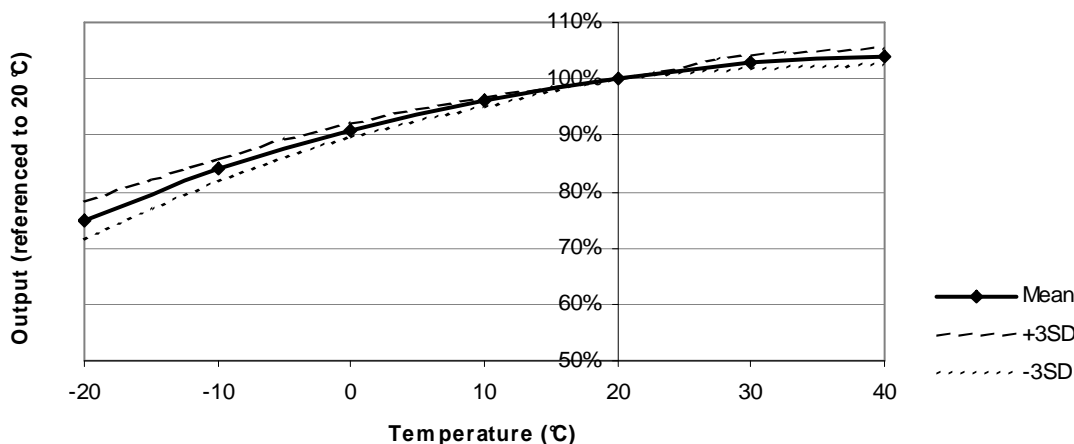
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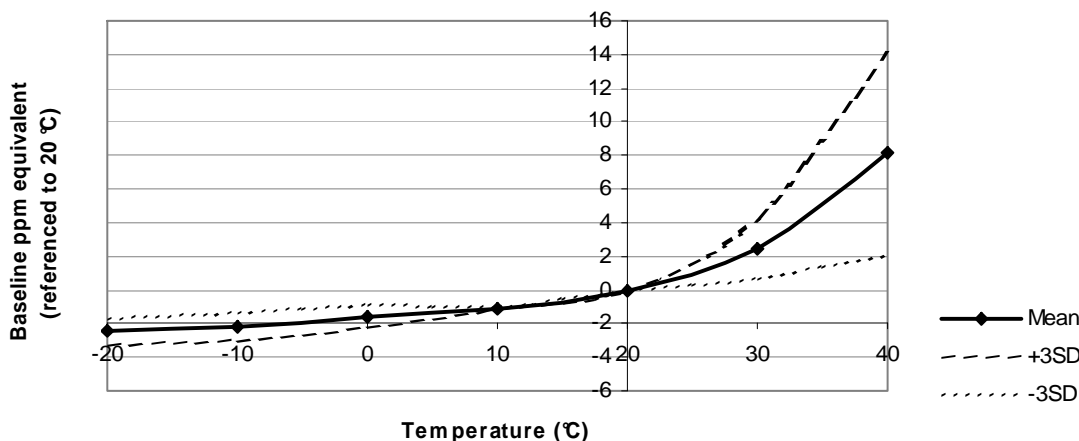
### TEMPERATURE DEPENDENCE

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  $\pm 3$  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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