MEMBRAPOR SPECIFICATION SHEET

Cl2/C-20

Chlorine Gas Sensor in Compact Housing

MEASUREMENT

Operation Principle	3-Electrode Electrochemical
Nominal Range	0 – 20 ppm
Maximum Overload	200 ppm
Inboard Filter	–
Output Signal	-900 ± 250 nA/ppm
Resolution (Electronics dependent)	< 0.1 ppm
T80 Response Time	< 60 sec
Typical Baseline Range (pure air, 20°C)	< 0.1 ppm
Maximum Zero Shift (+20°C to +40°C)	-0.2 ppm
Repeatability	< 2 % of signal
Output Linearity	Linear
Gain	–

ELECTRICAL

Rec. Load Resistor	10 – 33 Ohm
Bias (V_Sens-V_Ref)	Not required
Conformity to RoHS directive	RoHS Compliance

ENVIRONMENTAL

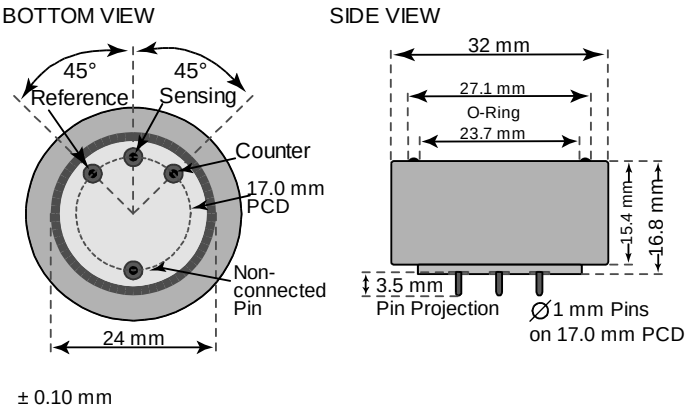
Relative Humidity Range	15 % to 90 % R.H. non-condensing
Temperature Range	-20 °C to 50 °C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	N.D.
Humidity Effect	none

LIFETIME

Expected Operation Life	2 years in air
Expected Long Term Output Drift in air	N.D.
Filter Life	–
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

Compact-Size Outline Dimensions



± 0.10 mm

MECHANICAL

Weight	13 g
Position Sensitivity	None

APPLICATIONS

Continuous Air Quality Monitoring
Safety and Environmental Control

CROSS-SENSITIVITY DATA

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

Interfering Gas	Conc. **ppm**	Reading **ppm**
Br_2	10	2.5
ClO_2	3	~3
CO	300	0
SO_2	5	0
NO	35	0
H_2	300	0
NO_2	20	~20
H_2S		ND

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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.

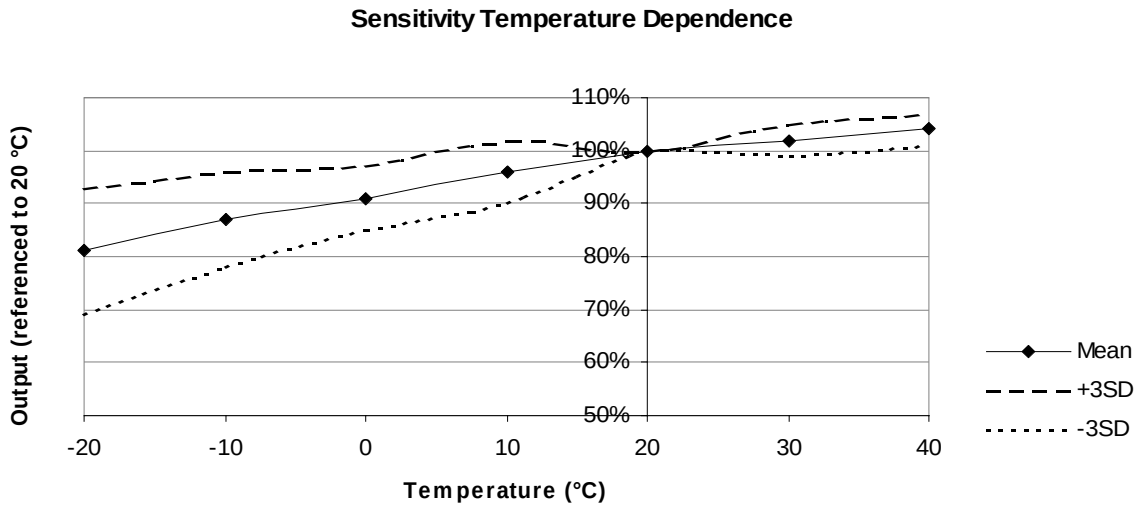

Figure 1: Sensitivity dependence expressed as a percentage of the signal at 20 °C. The result is shown along with confidence intervals corresponding to ±3 times the standard deviation.

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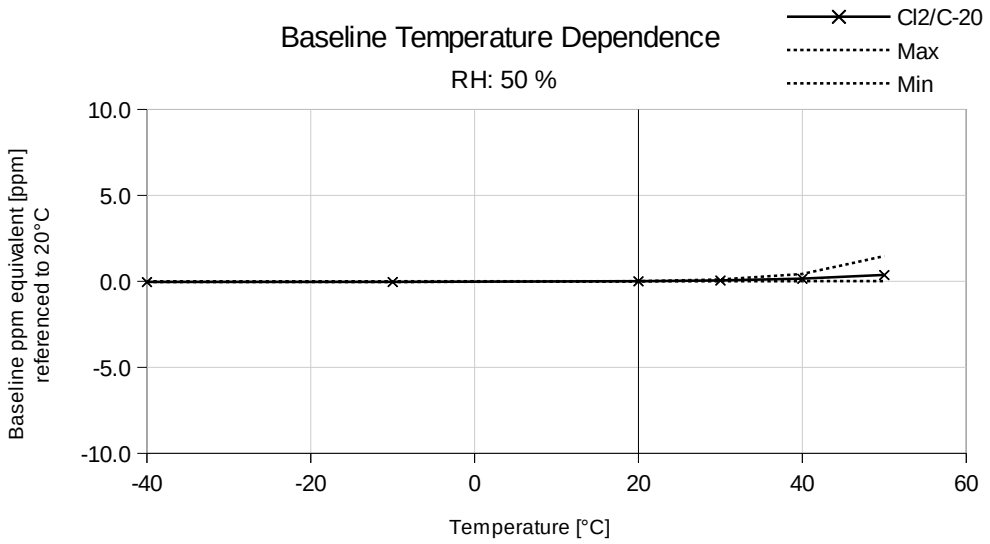

Figure 2: The shift in baseline shown in ppm referenced to 20 °C and a relative humidity of 50%.

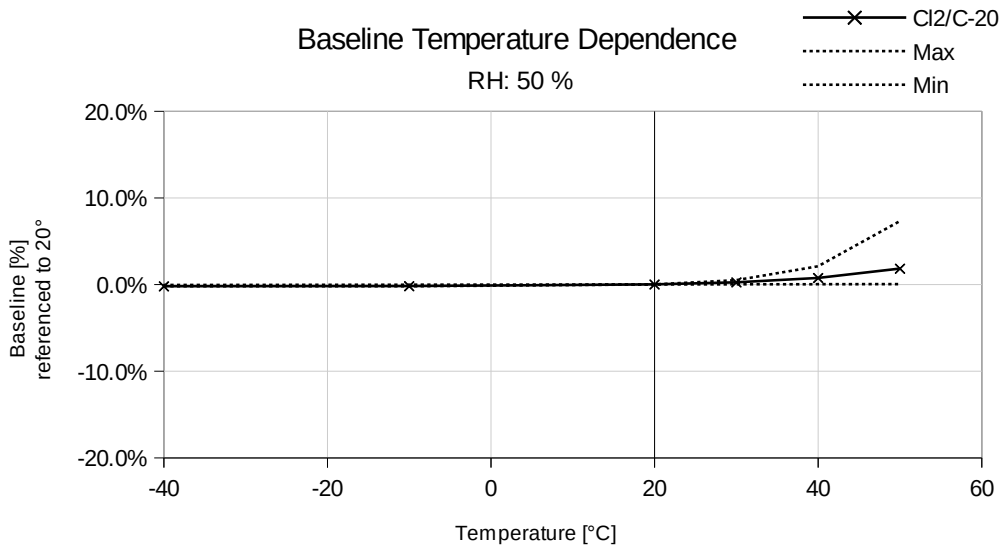

Figure 3: The shift in baseline expressed as percentage of the measurement range referenced to 20 °C and a R.H. of 50%.

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