



Diborane Gas Sensor B2H6/M-1

B2H6 Gas Sensor in Miniature Housing

Key Features

- Detection of low B2H6 Concentration

Applications

- Safety and Process Control
- For Use in Semiconductor Industry

For further information about usage of Membrapor sensors, see application note [MEM1](#).

Measurement

Operation Principle	3-Electrode Electrochemical
Nominal Range	0 - 1 ppm
Maximum Overload	3 ppm
Inboard Filter	-
Output Signal	1100 ± 200 nA/ppm
Resolution (Electronics dependent)	< 0.05 ppm
T90 Response Time	< 30 s
Typical Baseline Range (pure air, 20°C)	-0.2 ppm to 0.3 ppm
Maximum Zero Shift (+20°C to +40°C)	see Graph
Repeatability	< 2 % of signal
Output Linearity	Linear
Gain (Only applies to 4-Electrode sensors)	-

Performance data recorded at 20 – 25 °C, 30 - 50% RH, 900 - 1100 mbar

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Electrical

Rec. Load Resistor	10 - 33 Ω
Bias (V_Sens-V_Ref)	not recommended
Conformity to RoHS directive	RoHS Compliance

Environmental

Relative Humidity Range	15 % to 90 % RH non-condensing
Temperature Range	-20 °C to 50 °C
Pressure Range	Atmospheric
Pressure Coefficient	N.D.
Humidity Effect	None

Lifetime

Expected Operation Life	3-5 years in air, application based, see MEM1
Expected Long Term Output Drift	< 20 % signal loss per year
Filter Life	not applicable
Storage Life	6 months in container
Recommended Storage Temperature	-10°C - 30°C
Warranty Period	3 years from date of dispatch

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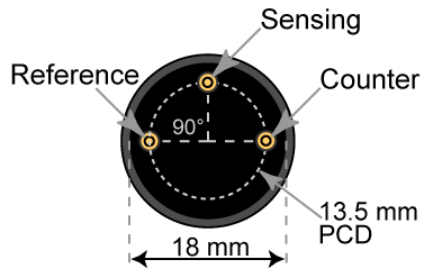
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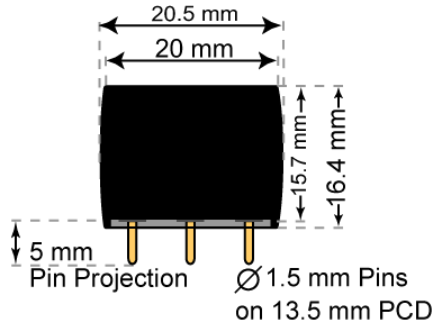
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Miniature-Size Outline Dimensions

BOTTOM VIEW



SIDE VIEW



± 0.10 mm

Mechanical

Weight	5.5 g
Orientation	Any
Housing material	Polycarbonate

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Cross Sensitivity Data

The table below does not claim to be complete. We recommend using the target gas for calibration purposes. Using surrogate (interfering) gases can result in inaccuracies in the final calibration. Please contact Membrapor AG for further support regarding cross sensitivities.

Interfering Gas	Concentration [ppm]	Reading [ppm]
CO	100	4
Cl ₂	20	-18
H ₂	2000	4
H ₂ S	20	70
HCl	10	5
HF	17	0
NH ₃	30	0
NO ₂	20	-25
SO ₂	10	11

Important Notes

- Exposure to EtOH should be avoided as it induces a baseline shift.

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