

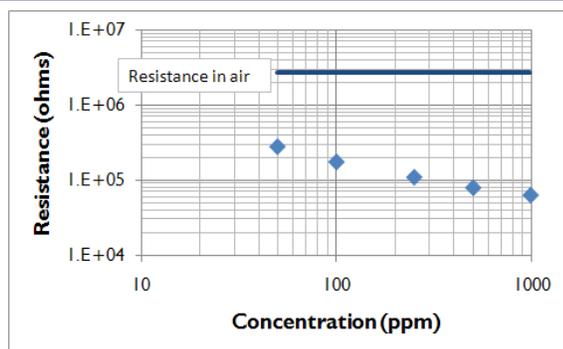
SENSOR FEATURES:

- High sensitivity to hydrogen
- Fast response time ($T_{90} < 15$ seconds at 100 ppm)
- Environmental temperature range of -20 to 50°C
- Thermistor heater allows active control of sensor temperature based on environmental temperature
- Environmental humidity range of 0 to 95% RH, non-condensing

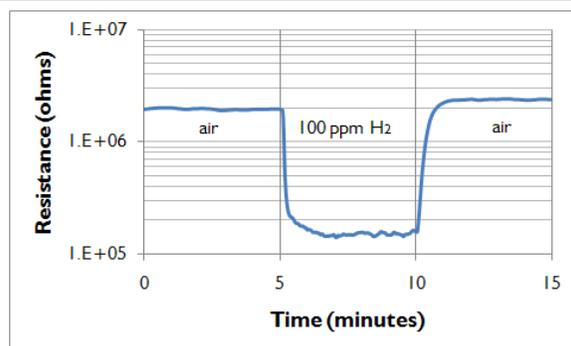


SENSOR RESPONSE CHARACTERISTICS:

The information below represents typical behavior for sensors operated in clean, dry gas.



Sensor resistance versus hydrogen concentration.



Sensor response to 100 ppm H₂ in humid air. H₂ applied at 5 min and removed at 10 min.

CROSS SENSITIVITY – PPM H₂ EQUIVALENTS.

VAPOR	PPM H ₂	VAPOR	PPM H ₂
Methane – 1000 ppm	1	Nitrogen Dioxide – 5 ppm	negative response
Carbon Monoxide – 100 ppm	2	Chlorine – 1 ppm	0
Ethanol – 50 ppm	25	Sulfur Dioxide – 5 ppm	0
Hydrogen Sulfide – 15 ppm	70		

ELECTRICAL CHARACTERISTICS:

The properties below are typical for MikroKera 4L Hydrogen Sensors. Circuits are available that are preset to the appropriate values.

PROPERTY	SYMBOL	VALUE	REMARKS
Heater Power Consumption	P _H	~ 125 mW	Continuous at V _H = 1.45
Heater Voltage	V _H	1.45 VDC	T _{sensor} ~ 190°C
Heater Resistance	R _H	10Ω ± 0.5 Ω	At room temperature
Sensing Voltage	V _C	2.0 VDC	Recommended
Resistance in Air	R _a	2 MΩ/500 MΩ	Min/Max
Resistance in 500 ppm H ₂	R ₅₀₀	20 kΩ/1MΩ	Min/Max
Sensitivity	R _a /R ₅₀₀	50	Min

*Note that all measurements were made in dry gas at room temperature

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