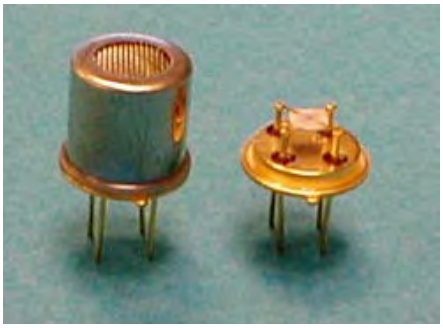
(P/N 707)

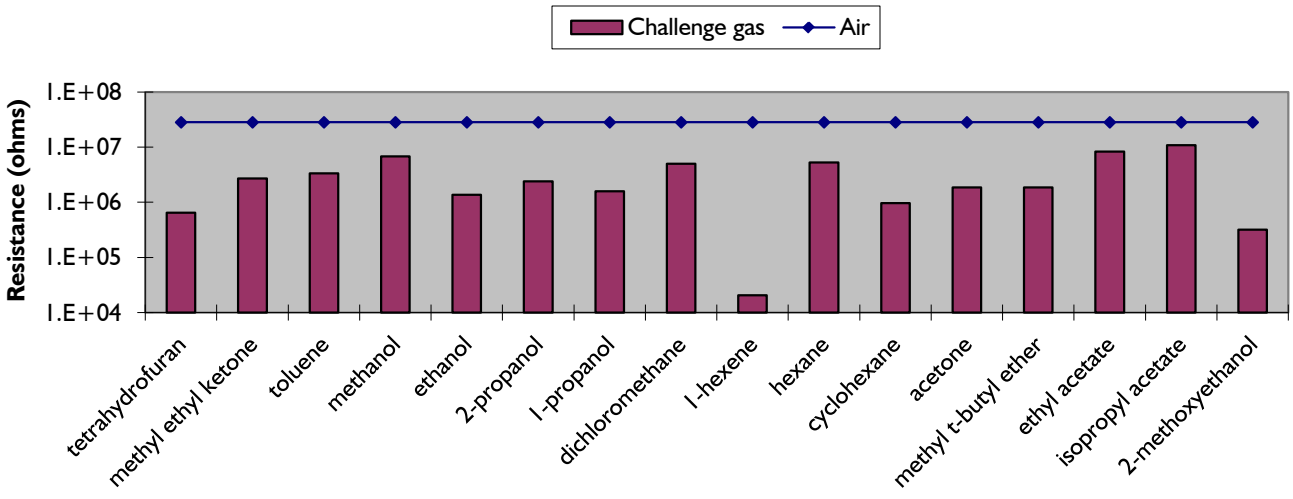
SENSOR FEATURES:



- High sensitivity to a wide range of VOCs.
- Non-specific: responds to many different organic vapors.
- Typical response time < 1 minute to 90% full scale.
- Environmental temperature range of –20 to 50°C.
- Environmental humidity range of 0 to 90% RH, non-condensing.

SENSOR RESPONSE CHARACTERISTICS

The figure below shows typical response and selectivity data for sensors operated under laboratory conditions. Humidity level is ~21% RH.



Typical sensor response to 100 ppm of a wide range of VOCs.

ELECTRICAL CHARACTERISTICS

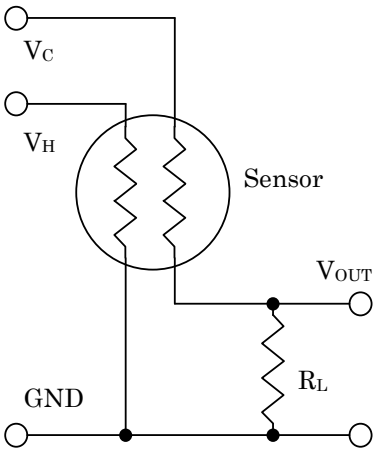
The electrical properties below are typical for VOC Sensors. If the actual values differ the customer will be notified with the shipment. Circuits are available that will be preset to the correct values.

PROPERTY	*SYMBOL*	*VALUE*	*REMARKS*
Heater Power Consumption	P_H	~ 400 mW	At V_H = 3.5
Heater Voltage	V_H	3.5 VDC	T_{sensor} ~150°C
Heater Resistance	R_H	30 Ω ± 2 Ω	At room temperature
Sensing Voltage	V_C	5.0 VDC	Recommended
Resistance in Air	R_a	2.00 MΩ / 300 MΩ	Min/Max
Resistance in 500 ppm MeOH	R_{500}	20 kΩ / 5.00 MΩ	Min/Max
Sensitivity	R_a/R_{500}	15	Min
Sensitivity	R_a/R_{50}	2	Min

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

BASIC MEASUREMENT CIRCUIT:

The sensor can be operated using a simple voltage divider. This requires two voltage supplies: heater voltage (V_H) and circuit voltage (V_C). V_H is applied to the heater in order to maintain a constant, elevated temperature, for optimum sensing. V_C is applied to allow a measurement of the output voltage (V_{out}) across a load resistor (R_L).



Pins 1 and 3 on the TO-39 header are attached to the heater. Apply V_H across these pins.

Pins 2 and 4 on the TO-39 header are attached to the resistive sensor element. Connect these pins in the measuring circuit.

supplies basic measurement circuitry for many of our sensors. Please inquire or refer to our website for information regarding circuitry for your application

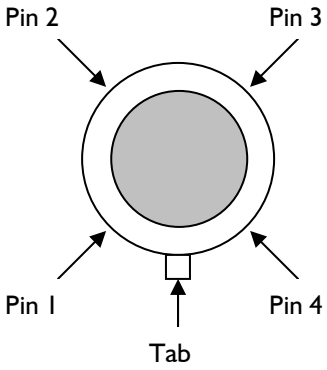
SENSOR RESISTANCE CALCULATION:

Sensor Resistance (Rs) is calculated using the following formula:

$$R_s = \frac{V_C - V_{out}}{V_{out}} * R_L$$

SENSOR PIN OUT:

Top view of sensor



SENSOR DIMENSIONS: