# MD61 Thermal Conductor Gas Sensor

MD61 gas sensor consists of an active element and a reference element with the same resistance, both elements are placed in a wheatstone bridge circuit, The analyzing gas contents changes, the overall thermal coefficient of mixed gases changed correspondingly; when the active element meet the combustible gas, its resistance become smaller, when It meet other gas, Its resistance become larger(air background), the bridge circuit output the voltage change, this change increase according to gas concentration, the reference element as a benchmark while for temperature compensation.

## Features

Wide Detecting Range (0—100%VOL)

Linear output signal

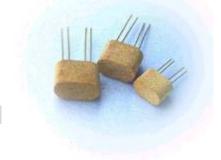Quick response

Good reproducibility and reliable performance

Resistant to toxicosis

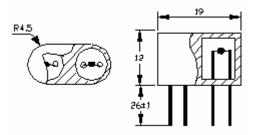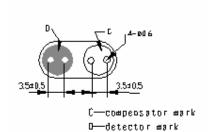Detecting without Oxygen or short of oxygen

## Applications

Domestic, Industrial spot for Natural gas, LPG, coal gas, alkyl etc and gasoline, pure, ketone, benzene and other organic solvent detection. Also suitable for CO2, CcL4, freon detection.
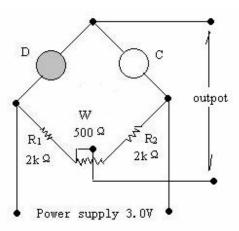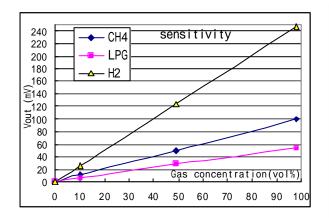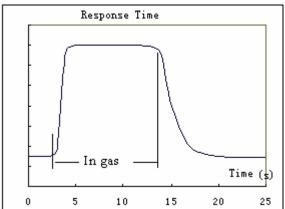
## Element structure          Basic Testing circuit



C—compensator mark
D—detector mark

## Specification

| Detecting Range | | 0~100%vol |
|---|---|---|
| Working Voltage(V) | | 3.0± 0.1 |
| Working Current(mA) | | @100 |
| Sensitivity mV | 10% Methane | >10 |
| | 10% Butane | >5 |
| | 10% Hydrogen | >24 |
| Linearity   % | | 0~5 |
| Response Time (90%) | | 10 secs |
| Resume Time (90%) | | 30secs |
| Using Environment | | -20   +60      95%RH |
| Storage Environment | | -30—+80      95%RH |
| Dimension   mm | | 10× 14× 18 |

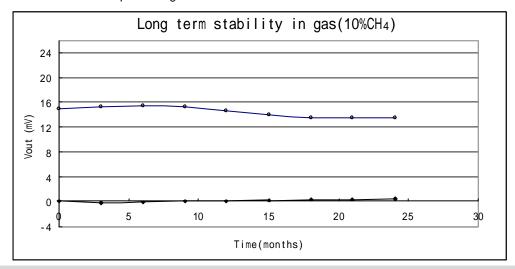Email: sensor@371.net      TEL:0371-5333098  5333099      FAX:0371-5333090
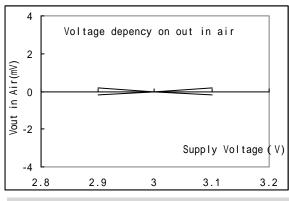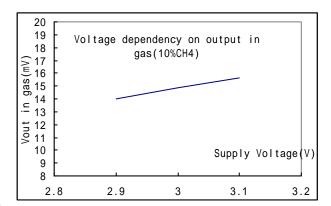
### Sensitivity and response characteristic



### Long term stability

The drift in air is less than 2 mV per year, in 20%CH4 the drift is less than 2mV. for a short period storage (in 2 weeks), the sensor need 10hours' preheating to stabilize, for more than one year storage, it need more than 24 hours' preheating.



### MD61 output singnal dependency on working voltage



### Note

The sensor sensitivity need to calibrate termly.

When debugging, should strict to control the heating voltage or current, do not exceed rated voltage to burn the sensor.

For long period storage, do not put it in wet and corrosive environment.

Shocking, falling, and mechanical destroying is prohibited.