

**High temperature sensor  
for combustible gases**

# Model 705

## High Temperature Sensor



### Excellent Performance

- Certified for hazardous location operation up to +150°C (+302°F)
- Alarm trip points as low as 5% LEL
- Fast speed of response
- Poison resistant detectors
- Low power consumption

### Cost Effective

- Low cost disposable sensor
- Greater than 5 year typical operating life

### Reliable Operation

- Specially matched 'Sieger' detectors provide highest stability
- Proven technology from the World leader in combustible gas detection

### Flexibility

- Measuring ranges from 0-20% LEL to 0-100% LEL
- Wide range of accessories

### Robust Construction

- UL approved explosion proof enclosure
- High grade Aluminum construction

**The Model 705 high temperature sensor has been specifically designed for the detection of combustible gases in high temperature hazardous area locations.**

**Typical applications include turbine enclosures and drying ovens used in solvent based printing and coating machines.**

These applications require a sensor that provides reliable and stable detection allowing low level alarm settings across a wide temperature range. Utilizing a specially matched pair of Sieger poison resistant combustible gas detection elements, the Model 705 High Temperature Sensor has a very stable baseline allowing alarm trip points to be set as low as 5% LEL across a temperature range of -25°C to +150°C (-3°F to +302°F). The gas measuring range can be configured from 0-20% LEL up to 0-100% LEL depending on the type of controller used.

The detector elements are housed in a UL hazardous area approved explosion proof assembly, and provide an industry standard 3 wire mV bridge output which can be connected to a suitable control device or converted to an analog output signal via a field transmitter.

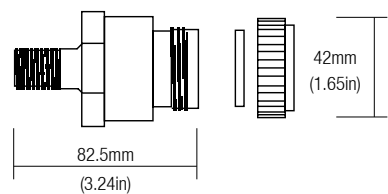


# General Specification



| General Specification <sup>1</sup>   |                                                                                           |                        |
|--------------------------------------|-------------------------------------------------------------------------------------------|------------------------|
| Range                                | 0-20% LEL, 0-100% LEL (Control card dependent)                                            |                        |
| Speed of Response <sup>2</sup>       | T60 Less than 6 seconds.<br>T90 Less than 10 seconds.                                     |                        |
| Minimum Alarm Level <sup>3</sup>     | 5% LEL                                                                                    |                        |
| Output Signal                        | mV bridge                                                                                 |                        |
| Operating Temperature                | -25°C to +150°C (-13°F to +302°F)                                                         |                        |
| Operating Humidity                   | Continuous:                                                                               | 20 to 90% RH           |
|                                      | Intermittent:                                                                             | 10 to 99% RH           |
| Operating Pressure                   | 75 to 110kPa (750 to 1100mbar)                                                            |                        |
| Stability (zero)                     | With time:                                                                                | Less than ±5% LEL/year |
|                                      | With temperature:                                                                         | Less than ±3% LEL      |
|                                      | With humidity:                                                                            | Less than ±3% LEL      |
|                                      | With pressure:                                                                            | Less than ±3% LEL      |
| Stability (span)                     | With time:                                                                                | Less than ±5% LEL/year |
|                                      | With temperature:                                                                         | Less than ±4% LEL      |
|                                      | With humidity:                                                                            | Less than ±3% LEL      |
|                                      | With pressure:                                                                            | Less than ±3% LEL      |
| Linearity                            | Better than ±5% fsd                                                                       |                        |
| Repeatability                        | Better than ±2% LEL                                                                       |                        |
| Warm-up Time                         | 30 minutes                                                                                |                        |
| Detector Operating Life <sup>4</sup> | More than 5 years (typical)                                                               |                        |
| Storage Life                         | Typically, no degradation has been observed in clean, stable conditions for up to 5 years |                        |
| Power Consumption                    | 0.7W at 200mA                                                                             |                        |
| Enclosure Material                   | Aluminum                                                                                  |                        |
| Mounting Thread                      | 3/4" NPT                                                                                  |                        |
| Weight                               | 200g (7oz)                                                                                |                        |
| Certification                        | UL Hazardous location approval<br>Class1, Div1, groups B, C and D Tamb: -25°C to +150°C   |                        |

- Notes:
1. Typical performance figures for a sensor calibrated on 10% LEL methane and tested at 20°C and 50% RH.
  2. T60/T90 defined as the time to achieve 60% and 90% of the signal obtained after 5 minutes exposure to 50% FSD gas concentration.
  3. With recommended 3 month calibration period.
  4. In clean atmosphere.



# Our Product Range



## Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, oxygen and toxic gases (including exotics)
- » Innovative use of 4 core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

## Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces. These include:

- » Detection of flammable, oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

## Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

### Find out more

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H\_Model 705 High Temperature Sensor\_DS0301\_V3\_EMEA

09/07

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