



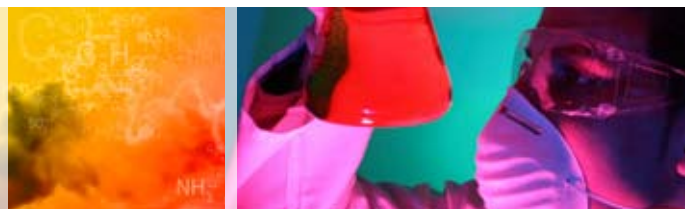
Methane (CH₄)

9602-9900

9602-9902

Methane (CH₄)

9602-9900
9602-9902



MST Gas Sensors 9602-9900 and 9602-9902 are only intended for use with the following Honeywell Analytics gas detectors:



Satellite Series



Sat-Ex

Please refer to the specific gas detector's Operational Manual for further details.

Methane CH ₄	
Sensor Type	CH ₄ Methane
Part Numbers	9602-9900 (Satellite), 9602-9902 (Sat-Ex)
Direct Use For	Combustible gases
Measuring Principle	Catalytic sensor (poison resistant) Silicones and Hydrogen Sulphide*
Color of Sensor Cap	Stainless steel
Specific Sensor Data	Programmed on PROM inside the sensor
Standard Range	0 to 100% LEL
Lower Detectable Limit (LDL)	5% LEL
Maximum Range	100 % LEL
Sensitivity Decay	< 5% / month
Deviation from Linearity (within Standard Range)	< 3% FS
Zero Current at Normal Conditions	Below LDL
Response Time	Constant within standard range
t₅₀	< 10 s (based on 1 min exposure time)
t₉₀	< 20 s (based on 1 min exposure time)
Sensor Warm-up Time	5 s
Operating Conditions	-40°C to +55°C; 10% to 95% r.h. non-condensing
Storage Conditions	-40°C to +55°C; 0% to 80% r.h. non-condensing (in original container)
Temperature Dependence	Compensated with microprocessor
Sensor Life Expectancy	3-5 years typical
Sensor Dimensions	
Height	43mm (1.69")
Diameter	21.5mm (0.84")
Weight	28g (1oz)

*The use of a poison resistant device enables the sensor to operate in all environments with a better resistance to degradation by substance such as Silicone and Sulphur compounds.

Note:

1. All response data given are typical values and related to the sensor being used under normal conditions, i.e. temperature 20°C, r.h. 40-60%, 1013mbar.
2. From S/N 31803-004 onwards



Catalytic sensors

Nearly all modern, low-cost, combustible gas detection sensors are of the electro-catalytic type. They consist of a very small sensing element sometimes called a 'bead', a 'Pellistor', or a 'Siegestor' - the last two being registered trade names for commercial devices. They are made of an electrically heated platinum wire coil, covered first with a ceramic base such as alumina and then with a final outer coating of palladium or rhodium catalyst dispersed in a substrate of thoria.

This type of sensor operates on the principle that when a combustible gas/air mixture passes over the hot catalyst surface, combustion occurs and the heat evolved increases the temperature of the 'bead'. This in turn alters the resistance of the platinum coil and can be measured by using the coil as a temperature thermometer in a standard electrical bridge circuit. The resistance change is then directly related to the gas concentration in the surrounding atmosphere and can be displayed on a meter or some similar indicating device.

Gas	Theoretical K-Factor	Reading in % LEL for Test Gas Concentration of 50% LEL*	Gas	Tested K-Factor	Reading in % LEL for Test Gas Concentration of 50% LEL*
Acetone	1.67	30	Methylethyl ketone	2.31	30
Acetylene	1.59	33	n-heptane	2.37	21
1, 3-butadiene	2.24	22.5	Hydrogen	1.241	40.5
Carbon Monoxide	1.26	39.5	n-pentane	2.10	24
Cyclohexane	2.19	23	n-hexane	2.48	20
Ethyl acetate	2.15	23	n-octane	3.14	16
Ethyl alcohol	1.58	31.5	Toluene	2.37	21
Ethylene	1.59	31.5			
Methanol	1.28	39			

* Reference calibration gas 50% LEL Methane (CH₄)

Test Conditions: T=20°C, P=1013 hPa, Flow Rate = 30 l/h

Please note that the values stated above are approximate values. Negative values are not displayed on the Satellite LCD Display, they will be shown as 0.

Update: 16/02/2010

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

www.honeywellanalytics.com

Contact Honeywell Analytics:

Europe, Middle East, Africa, India

Life Safety Distribution AG
Weiherallee 11a
CH-8610 Uster
Switzerland
Tel: +41 (0)44 943 4300
Fax: +41 (0)44 943 4398
gasdetection@honeywell.com

Technical Services

EMEA: HAexpert@honeywell.com
US: ha.us.service@honeywell.com
AP: ha.ap.service@honeywell.com

www.honeywell.com

Americas

Honeywell Analytics Inc.
405 Barclay Blvd.
Lincolnshire, IL 60069
USA
Tel: +1 847 955 8200
Toll free: +1 800 538 0363
Fax: +1 847 955 8210
detectgas@honeywell.com

Asia Pacific

Honeywell Analytics Asia Pacific
#508, Kolon Science Valley (I)
187-10 Guro-Dong, Guro-Gu
Seoul, 152-050
Korea
Tel: +82 (0)2 2025 0300
Fax: +82 (0)2 2025 0329
analytics.ap@honeywell.com

Please Note:

While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.