

**Introduction** The GS+701 is a high quality combustible sensor, ideal for use in portable gas detectors.

**Key Features:** high stability, poison resistant, fast response and recovery, robust design.

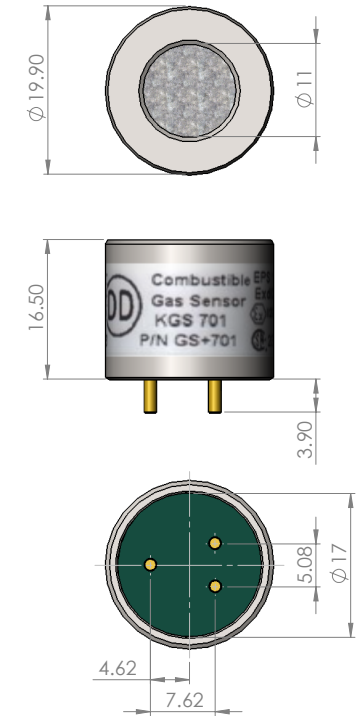
Performance Characteristics	
Operating Principle	Catalytic Oxidation
Gases Detected	Most combustible gases and vapours
Range	0 - 100% LEL
Operating Voltage	3.0 VDC
Operating Current	76 ± 7 mA
Sensitivity	29 ± 5 mV / %methane
T90 Response Time	< 20 seconds (methane)
Initial Warm-up Time	< 30 seconds
Linearity	3% methane
Baseline Stability	±0.3% LEL propane
Short-term Baseline Drift	±0.3% LEL propane

Environmental Details	
Temperature Range Continuous	-20°C to +50°C
Pressure Range	800 to 1200 mbar
Operating Humidity Range	0% to 90% RH

**Important Note:**

All performance data is based on conditions at 23±2°C, 60%RH and 1 atm, using DD Scientific recommended circuitry.

Sensor performance is temperature dependent, and please contact DD Scientific for temperature performance other than 20°C.



**Product Dimensions**

All dimensions in mm  
All tolerances ±0.15 mm

Lifetime Details	
Long Term Sensitivity Drift	< 5% signal / month
Long Term Zero Drift	< 5% LEL / month (methane) in clean air
Recommended Storage Temp	0°C to 20°C
Expected Operating Life	24 months
Standard Warranty	24 months from date of dispatch

• Product Approval



Approval Body : UNDERWRITERS LABORATORIES INC.  
 Test Standard : UL 913  
 Product Categories : Class 1, Division 1, Groups A, B, C, D  
 Certificate Number : E248963



Approval Body : TUV Product Service TUV SUD Group  
 Test Standard : EN 60079-0:2004, EN 60079-1:2004  
 Product Categories : II 2 G EEx d IIC T6 -40s Tas 55  
 Certificate Number : TPS 05 ATEX 1 137 U

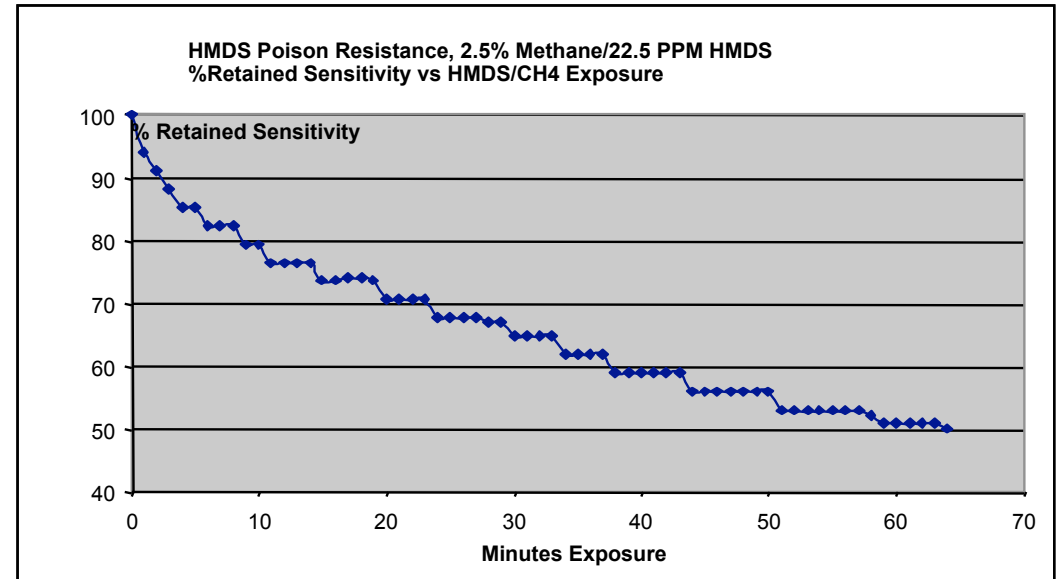


Test Standard : IEC 60079-0:2004, Edition 4.0  
 IEC 60079-1:2001, Edition 4  
 Product Categories : Ex d IIC T6  
 Certificate No. : IECEx TUVSPS 07.0001U

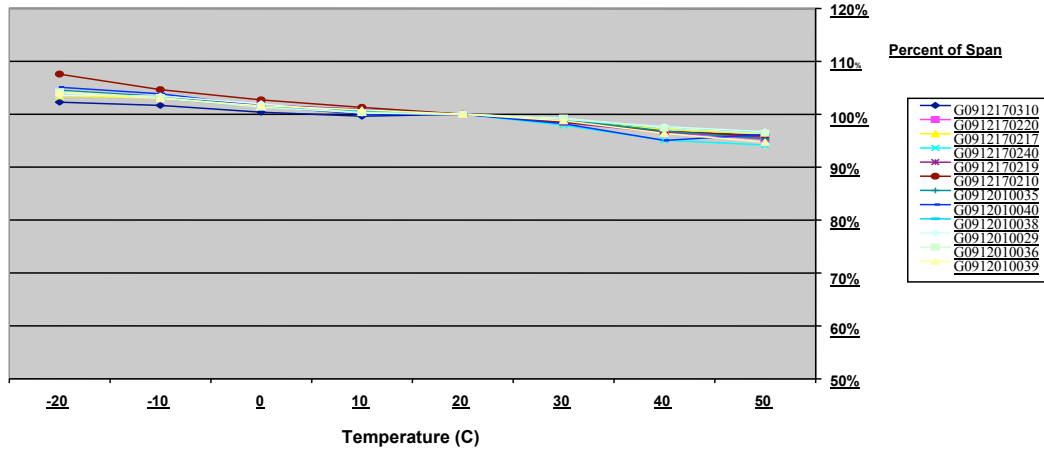


Approval Body : Canadian Standards Association  
 Test Standard : CAN/CSA-C22.2 No. 0-M91  
 CSA Std C22.2 No. 30-M1986  
 File Number : 237868

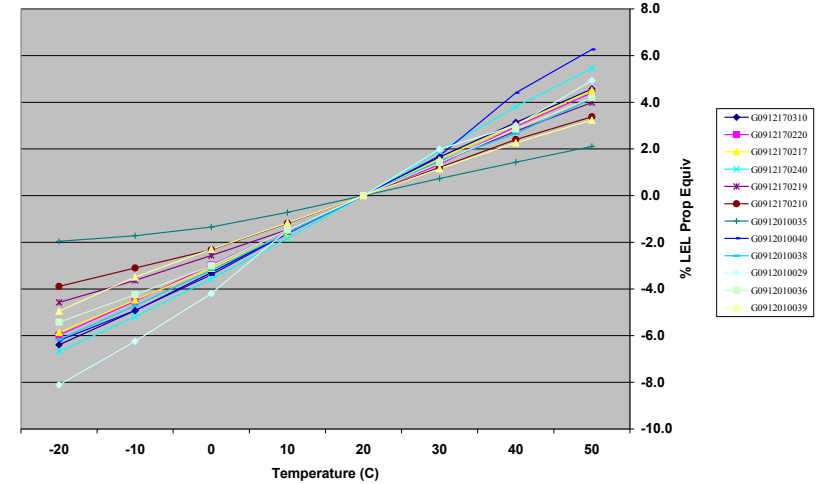
Gas/Vapour	% Relative Sensitivity		
	Average	Range	StDev
Methane	100	-	-
Hydrogen	140	96-225	30
Acetylene	58	51-65	3
Ethylene	152	76-237	39
Propane	78	64-93	4.7
Isobutane	79	60-97	9
n-Pentane	77 est.	N/D	N/D
Hexanes	76	57-108	10



**GS+701, Methane Sensitivity vs Temperature**  
50%LEL Metane Gas



**GS-701 G series - Baseline vs Temp**  
(Detector Displayed Zero, Scale - %LEL Propane Equiv)  
3-15-2010



### Poisoning:

Poisoning: some compounds will decompose on the catalyst and form a solid barrier over the catalyst surface. This action is cumulative and prolonged exposure will result in an irreversible decrease in sensitivity. The most common of these substances are: volatile lead or sulphur containing compounds; silicones; phosphates.

Inhibition: certain other compounds, especially hydrogen sulphide and halogenated hydrocarbons, are absorbed or form compounds that are absorbed by the catalyst. The resultant loss of sensitivity is temporary and in most cases a sensor will recover after a period of operation in clean air.

Please note gluing or soldering direct to the pins of DD Scientific Ltd gas sensors will void warranty, please use PCB sockets when connecting DD Scientific sensors.

**WARNING:** By the nature of the technology used, any electrochemical gas sensor offered by DD Scientific can potentially fail to meet specification without warning. Although DD Scientific Ltd makes every effort to ensure the reliability of our products of this type, where life safety is a performance requirement of the product, we recommend that all sensors and instruments using these sensors are checked for response to gas before use.

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement DD SCIENTIFIC Limited reserves the right to make product changes without notice. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale. The products are always subject to a program of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of DD SCIENTIFIC Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application. Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over