

# Product Data Sheet

P/N : GS+5SO2F

**GS+5SO2F**  
Sulphur Dioxide Sensor (SO<sub>2</sub>)

**Introduction** The GS+5SO<sub>2</sub> is a premium high quality robust SO<sub>2</sub> sensor, ideal for use in portable emissions gas detectors.

**Key Features:** High stability, fast response and recovery, robust environmental performance.

## Net Sensor Performance Characteristics

Output signal	100 ± 20 nA / ppm
Typical Baseline Range (pure air)	± 2 ppm SO <sub>2</sub> equivalent
Filter	High capacity H <sub>2</sub> S and HCl in-board filter
T90 Response Time	< 30 seconds
Measurement Range	0 - 2,000 ppm
Maximum Overload	5,000 ppm
Linearity	Linear up to 5,000 ppm
Repeatability	< ±2% SO <sub>2</sub> equivalent
Baseline Shift (20°C to 40°C)	< 5 ppm SO <sub>2</sub> Equivalent
Recommended Load Resistor	10 ohms
Resolution (Electronics dependent)	< 1 ppm typical

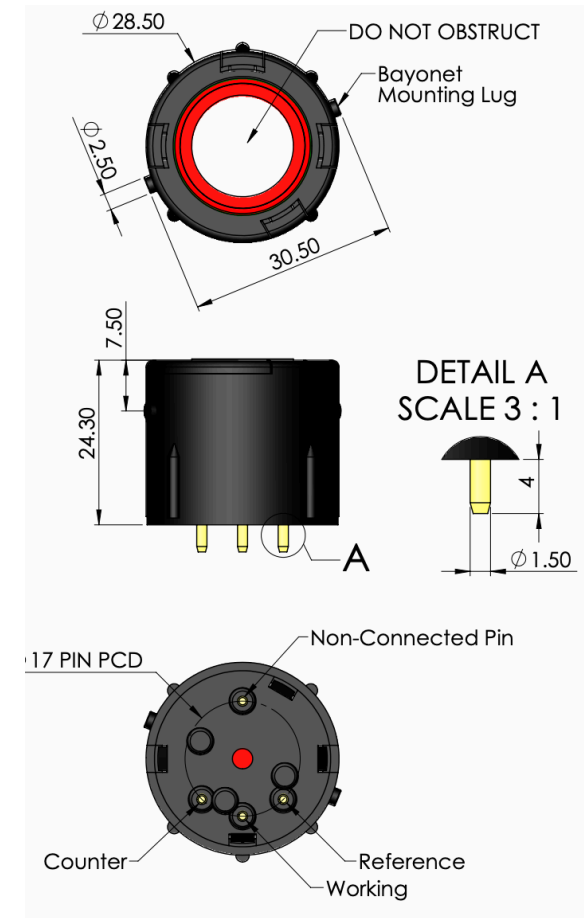
## Environmental Details

Temperature Range Continuous	-20°C to +50°C
Pressure Range	800 to 1200 mbar
Operating Humidity Range	15% to 90% RH

**Important Note:**

All performance data is based on conditions at 20°C, 50%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.



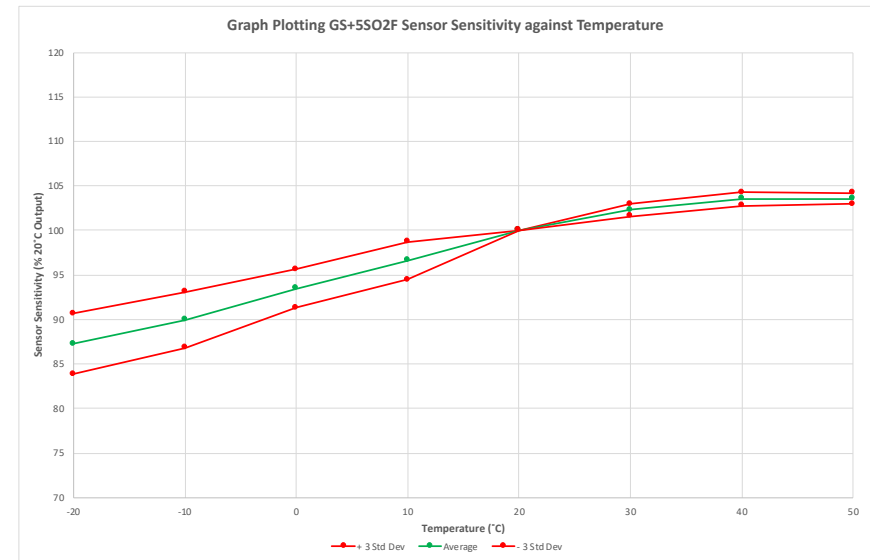
**Product Dimensions**  
All dimensions in mm  
All tolerances  $\pm 0.15$  mm

### Lifetime Details

Long Term Output Drift	< 2% per month
Recommended Storage Temp	0°C to 20°C
Expected Operating Life	> 24 months in air
Standard Warranty	24 months from date of dispatch

### Cross - Sensitivity Data

GAS	CONC.	GS+5SO2F
Hydrogen Sulphide	25 ppm	< 1 ppm SO <sub>2</sub>
Nitrogen Dioxide	20 ppm	-25 ppm SO <sub>2</sub>
Carbon Monoxide	1,000 ppm	< 5 ppm SO <sub>2</sub>
Nitric Oxide	50 ppm	< 5 ppm SO <sub>2</sub>
Ammonia	50 ppm	0 ppm SO <sub>2</sub>
Chlorine	20 ppm	< -5 ppm SO <sub>2</sub>



#### Poisoning:

DD Scientific sensors are designed to operate in a wide range of harsh environments and conditions. However, it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instrument and operation.

When using sensors on printed circuit boards (PCB's), degreasing agents should be used prior to the sensor being fitted.

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

### Intrinsic Safety Data

Maximum at 2000 ppm	0.3 mA
Maximum o/c Voltage	1.3 V
Maximum s/c Current	<1.0 A

**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