

## GS-S-x

### Internal Wall Mounted NO<sub>2</sub>, O<sub>2</sub> & SO<sub>2</sub> Sensors



#### Features:

- 4-20mA output
- Wide supply voltage range (10 to 30Vdc)
- Excellent long term stability

#### Benefit:

- Tamperproof lid

#### Technical Overview

The GS-S-x series of wall mounting Nitrogen Dioxide (NO<sub>2</sub>), Oxygen (O<sub>2</sub>) and Sulphur Dioxide (SO<sub>2</sub>) sensors are 4-20mA current loop powered devices, with various sensing ranges of gas concentrations.

The sensor has a normal working life of 2 years in air, and needs to be powered up within 6 months of purchase.

## Specification:

Output ranges:	
GS-S-ND10	0-10ppm
GS-S-OX25	0-15 to 25%
GS-S-SD20	0-20ppm
Output	4-20mA
Supply voltage	10 to 30Vdc
Resolution:	
GS-S-ND10	<0.02ppm (33Ω load resistor)
GS-S-SD20	<0.1ppm
Sensitivity drift	<2% signal loss/year
Temperature range	-30 to +50°C (-22 to 122°F)
Pressure range	80 to 120kPa (.32 to .48" w/c)
RH range	15 to 90%RH non-condensing
Element life	2 years
Response times:	
GS-S-ND10	t <sub>90</sub> (s) from zero to 10ppm NO <sub>2</sub> <60
GS-S-OX25	t <sub>90</sub> (s) from 20.9% to 0% O <sub>2</sub> <15
GS-S-SD20	t <sub>90</sub> (s) from zero to 20ppm NO <sub>2</sub> <30
Zero current:	
GS-S-ND10	<±0.2ppm equ. in zero air
GS-S-OX25	<2mA in N <sub>2</sub>
GS-S-SD20	<±0.5ppm equ. in zero air
Storage	6 months @ 3 to 20°C (37 to 68°F)
Protection	IP65 (housing only, suitable for internal mounting only)
Dimensions	55mm x 90mm dia. (3.74 x 3.54")
Country of origin	UK

## Part Codes:

<b>GS-S-ND10</b>	Nitrogen Dioxide Sensor 0 to 10ppm
<b>GS-S-OX25</b>	Oxygen Sensor 15 to 25%
<b>GS-S-SD20</b>	Sulphur Dioxide Sensor 0 to 20ppm



The products referred to in this data sheet meet the requirements of EU Directive 2004/108/EC



**Please note:**

The GS-S-x range of gas transmitters are designed for monitoring purposes only, and should not be used in safety applications.

## Installation:

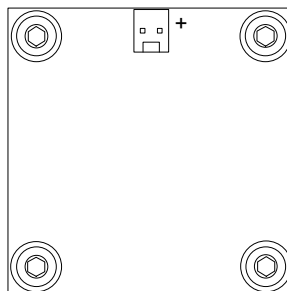


Antistatic precautions must be observed when handling these sensors. The PCB contains circuitry that can be damaged by static discharge.

1. Select a location which will give a representative sample of the prevailing space condition. The GS-S is not suitable for external mounting.  
**Avoid mounting the sensor in direct sunlight.**
2. It is recommended that the unit be mounted with the cable entry at the bottom.
3. Remove the front cover by removing the tamperproof screw and twist the lid and separating from the main body.
4. Using the base of the housing as a template mark the hole centres. Drill two pilot holes at 85mm (3.35") centres in the surface to which the sensor is to be mounted.
5. Fix the sensor to the wall using appropriate screws, the housing is designed to make it easy for an electrical screwdriver to be used if desired.
6. Feed the cable through the gland and terminate at the terminal block. Leaving some slack inside the housing, tighten the cable gland onto the cable.
7. Replace the lid after the electrical connections have been made, and re-fit the tamperproof screw.

## Connections:

**Red:** 10 to 30Vdc  
**Black:** 4-20mA output



Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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