

Features

Measured Gas	: Sulphur Dioxide (SO ₂)
Measuring Range	: 0 to 20 ppm
Measuring Principle	: Electrochemical Cell
Operation Temperature	: -10 °C to +40 °C
Humidity	: 10 r. H. to 95 r. H. (Please avoid condensation)
Pressure	: 900 hPa to 1100 hPa
Response Time t ₉₀	: 45 s

Mechanical Features

Dimensions	: 180 mm x 145 mm x 100 mm (Length x Width x Height)
Weight	: approx. 2.5 kg
Material	: Housing: Cast aluminium, lacquered Sensor element: stainless steel
Enclosure Rating	: IP 65 (with the exception of gas inlet)
Installation	: Wall mounting, installation in pipes with adaptor (optional)
Storage Temperature	: -25 °C to +50 °C

Electrical Features

Power Supply	: 24 ± 6 V DC
Power Consumption	: 40 mA / 1 W
Interface	: 4-20 mA (linear), RS 485
Max. Load	: 500 Ω
Cable Gland	: M 16 x 1.5 (diameter of cable 6-12 mm)

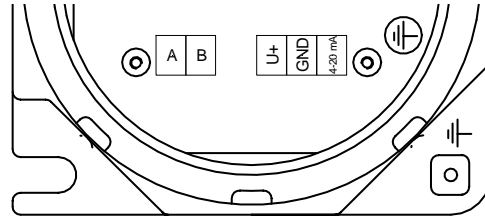
Conformity

EC-Directives	: CE ₀₁₅₈ Ex II 2G (suitable for Zone 1 and 2) 94/9/EC (ATEX), 89/336/EEC (EMC)
EC-Type Test	: BVS 04 ATEX E 066 X
Protection	: EEx d IIC T5 (-20 °C ≤ T _{amb} ≤ 49 °C) EEx d IIC T4 (-20 °C ≤ T _{amb} ≤ 70 °C)
Measuring Function	: Designed according to EN 45544-1 to EN 45544-3

Transmitter ExSens-D SO2-20-EC
 Article-No.: 252008

Installation

- Place : When monitoring working place concentrations installation at eye-level, otherwise near to the floor or close to sources of release.
- Position : sensor opening to be placed downwards
- Fixing : drilling jig as Download on our *ExTox* Homepage
- Terminal Assignment :



- A RS 485-Interface
 B RS 485-Interface
 U+ Power supply 24 V
 GND Ground (Power supply and current output)
 4-20 mA Current output 4-20 mA

- Line Length : max 2,000 m when using *ExTox*-Cable 6 x 0.8 mm (corresponds to a wire resistance of 18 Ω)
- Time of Stabilisation : approx. 1 min (90%), approx. 20 min (99%)

Use

- Description of the Measuring Principle : The sensor consists of two or more electrodes which are arranged in an electrolyte. One of these electrodes is accessible for the measured gas. A redox reaction at the electrode takes place. This causes an electrical current which is proportional to the concentration in the measured gas.

- Cross Sensitivity : 10 ppm NO₂ -> Indication approx. -10 ppm SO₂ (negative!)
 10 ppm H₂S -> Indication approx. 15 ppm SO₂
 10 ppm HCN -> Indication approx. 5 ppm SO₂
 10 ppm HCl -> Indication approx. 2 ppm SO₂

- Special Influences :
 • Longer operation in very dry atmosphere should be avoided.
 • Alarm levels from 2 ppm
 • Lower limit of measuring range 1 ppm (acc. to EN 45544)
- Sensor Lifetime : typical: 1-2 years, depending on operation conditions

Maintenance

- Intervals : Minimum every half year.
 We recommend to keep EN 45544-4 and national regulations (or German BG Chemie-Information BGI 836)
- Test Gas (Zero Point) : Ambient air (free from measured gas) or synthetic air
- Test Gas (Sensitivity) : Sulphur Dioxide,
 Concentration in the middle of measuring range or slightly above highest alarm level
- Test Gas Application : 0.5 to 1 l/min by means of *ExTox*-Calibration Adapter for minimum 90 s
 Article No. 620027
- Sensor Element, Replacement
 Further Information : EN 45544-4, BG Chemie-Information BGI 836 (German version only)

This Data Sheet is at the same time a type specific supplement to the Instruction Manual *ExTox Transmitter ExSens-D/Sens-D*.

(Subject to technical change)