

### Features

Measured Gas	: Oxygen (O <sub>2</sub> )
Measuring Range	: 0 to 25 % (v/v)
Measuring Principle	: Electrochemical Cell
Operation Temperature	: +5 °C to +40 °C
Humidity	: 10 r. H. to 90 r. H. (Please avoid condensation)
Pressure	: 900 hPa to 1100 hPa
Response Time t <sub>90</sub>	: 30 s

### Mechanical Features

Dimensions	: 198 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	: -20 °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

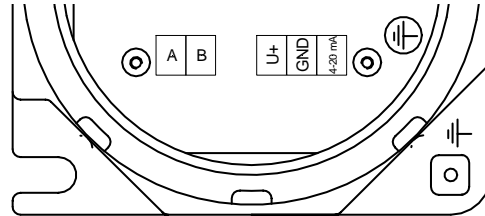
EC-Directives	: CE <sub>0158</sub> Ⓜ II 2G (suitable for Zone 1 and 2) 94/9/EC (ATEX), 89/336/EEC (EMC)
EC-Type Test Protection	: BVS 04 ATEX E 066 X EEx d IIC T6 (-20 °C ≤ T <sub>amb</sub> ≤ 43 °C) EEx d IIC T5 (-20 °C ≤ T <sub>amb</sub> ≤ 58 °C) EEx d IIC T4 (-20 °C ≤ T <sub>amb</sub> ≤ 70 °C)
Measuring Function	: Designed according to EN 50104

# Transmitter ExSens-D O2-25-KE

Article-No.: 252009

## 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  $\Omega$ )
- Time of Stabilisation : approx. 1 min (90%), approx. 30 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 : none
- Special Influences : none
- Longer operation in very dry atmosphere should be avoided.
  - Sensor opening must be placed downwards.
  - Indication depends on partial pressure that means fluctuations of the ambient pressure lead to changes.
  - High concentrations of ammonia in the measured gas (> 100 ppm NH<sub>3</sub>) could reduce lifetime of the sensor element.
  - Ozone (O<sub>3</sub>) could influence the sensibility of the sensor element and could damage sensor materials.
  - Alarm levels from approx. 2 % (v/v)

- Sensor Lifetime : typical: 5 years (on operation in 20.9 % (v/v) O<sub>2</sub>), on lower concentrations even longer, additionally depending on operation conditions

## Maintenance

- Intervals : Minimum every half year.  
We recommend to keep EN 50073 and national regulations (or German BG Chemie-Information BGI 518) as well as EN 45544-4 and national regulations (or German BG Chemie-Information BGI 836)

- Test Gas (Zero Point) : Nitrogen
- Test Gas (Sensitivity) : Ambient air (20.9 % (v/v) oxygen)
- Test Gas Application : 0.5 to 1 l/min by means of *ExTox*-Calibration Adapter for minimum 90 s

## Sensor Element, Replacement

- Further Information : Article No. 620032  
EN 50073, BG Chemie-Information BGI 518 (German version only)  
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)