

### Features

Measured Gas	: Hydrogen (H <sub>2</sub> )
Measuring Range	: 0 to 1000 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 <sub>90</sub>	: 60 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	: -20 °C to +50 °C

### Electrical Features

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

### Conformity

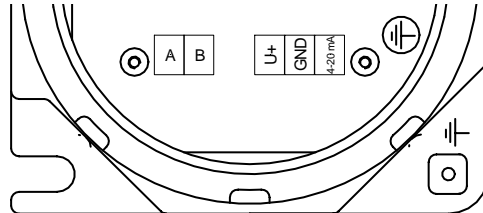
EC-Directives	: CE <sub>0158</sub> Ex II 2G (suitable for Zone 1 and 2) 94/9/EC (ATEX), 89/336/EEC (EMC)
EC-Type Test	: BVS 04 ATEX E 066 X
Protection	: EEx d IIC T5 (-20 °C ≤ T <sub>amb</sub> ≤ 49 °C) EEx d IIC T4 (-20 °C ≤ T <sub>amb</sub> ≤ 70 °C)
Measuring Function	: Designed according to EN 45544-1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

# Transmitter ExSens-D H2-1000-EC

Article-No.: 252014

## Installation

- Place : Near the ceiling or close to potential sources of release, if known.  
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)  
4-20mA Current output 4-20mA

- 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. 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 : 100 ppm CO -> Indication approx. 20 ppm H<sub>2</sub>  
100 ppm H<sub>2</sub>S -> Indication approx. 15 ppm H<sub>2</sub>  
100 ppm NO -> Indication approx. 30 ppm H<sub>2</sub>  
100 ppm HCN -> Indication approx. 30 ppm H<sub>2</sub>  
100 ppm C<sub>2</sub>H<sub>4</sub> -> Indication approx. 80 ppm H<sub>2</sub>

- Special Influences :
  - Longer operation in very dry atmosphere should be avoided.
  - Alarm levels from 100 ppm
  - Lower limit of measuring range 50 ppm (acc. to EN 45544)
- Sensor Lifetime : typical: 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) : Hydrogen,  
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 120 s  
Article No. 620042

## 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)