

# MEMBRAPOR SPECIFICATION SHEET

## H2S/CG-100-4E



### Hydrogen Sulfide Gas Sensor in Compact Housing

#### MEASUREMENT

Operation Principle	4-Electrode Electrochemical
Nominal Range	0 – 100 ppm
Maximum Overload	200 ppm
Inboard Filter	–
Output Signal	540 ± 110 nA/ppm
Resolution (Electronics dependent)	< 0.1 ppm
T90 Response Time	< 35 sec
Typical Baseline Range (pure air, 20°C)	-1 ppm to 1 ppm
Maximum Zero Shift (+20°C to +40°C)	N.D.
Repeatability	< 2 % of signal
Output Linearity	Linear
Gain	0 to 2

#### ELECTRICAL

Rec. Load Resistor	10 Ohm
Bias (V_Sens-V_Ref)	not recommended
Conformity to RoHS directive	RoHS Compliance

#### ENVIRONMENTAL

Relative Humidity Range	15 % to 90 % R.H. non-condensing
Temperature Range	-40 °C to 50 °C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	N.D.
Humidity Effect	none

#### LIFETIME

Expected Operation Life	1 years in air
Expected Long Term Output Drift in air	N.D.
Filter Life	–
Storage Life	6 months in container
Rec. Storage Temperature	5 °C – 20 °C
Warranty Period	12 months from date of dispatch

Performance data conditions: 20 °C, 50% RH, 1013 mbar

#### IMPORTANT NOTE

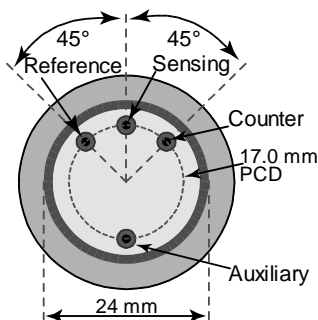
1) See also: MEM6 Appl. Note H2-Compensated 4-Electrode-Sensors

#### SPECIAL FEATURE

Hydrogen-Compensated 4-Electrode-Sensors

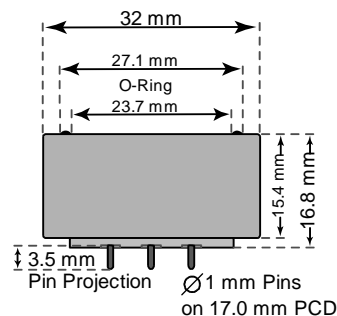
#### Compact-Size Outline Dimensions

##### BOTTOM VIEW



± 0.10 mm

##### SIDE VIEW



#### MECHANICAL

Weight	13 g
Position Sensitivity	None

#### APPLICATIONS

Discontinuous Measurement  
Biogas Analyzer  
H2-Compensated H2S Measurement

#### CROSS-SENSITIVITY DATA

The table below does not claim to be complete. Interfering gases should not be used for calibration.

Interfering Gas	Conc. ppm	Reading ppm
H <sub>2</sub>	12000	0 <sup>2</sup>
SO <sub>2</sub>	50	9
CO	300	5
NO <sub>2</sub>	20	-3
HCl	21	0
Alc	30	0

2) After compensation

REV.: 08/2018

Phone: +41 43 311 72 00  
Fax: +41 43 311 72 01  
Email: info@membrapor.ch  
www.membrapor.ch

Page 1 of 2  
MEMBRAPOR AG  
Birkenweg 2  
CH-8304 Wallisellen  
Switzerland

The data contained in this document is for guidance only. Membrapor AG accepts no liability for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

## H2S/CG-100-4E



### Hydrogen Sulfide Gas Sensor in Compact Housing

#### TEMPERATURE DEPENDENCE

The output of an electrochemical sensor varies with temperature. The graphs below show the variation in output with temperature for this type of sensor. The results are shown in the graphs as a mean for a batch of sensors. The sensitivity dependence is expressed as a percentage of the signal at 20 °C. The shift in baseline is shown in ppm referenced to 20 °C and a relative humidity of 50%.

Please note:

It is highly recommended to acquire the temperature dependence curves with the whole instrument. The sampling system, the humidity, the electronics, the interaction between the electronics and the sensor, all have a significant impact on the temperature dependence of the final measurement reading.

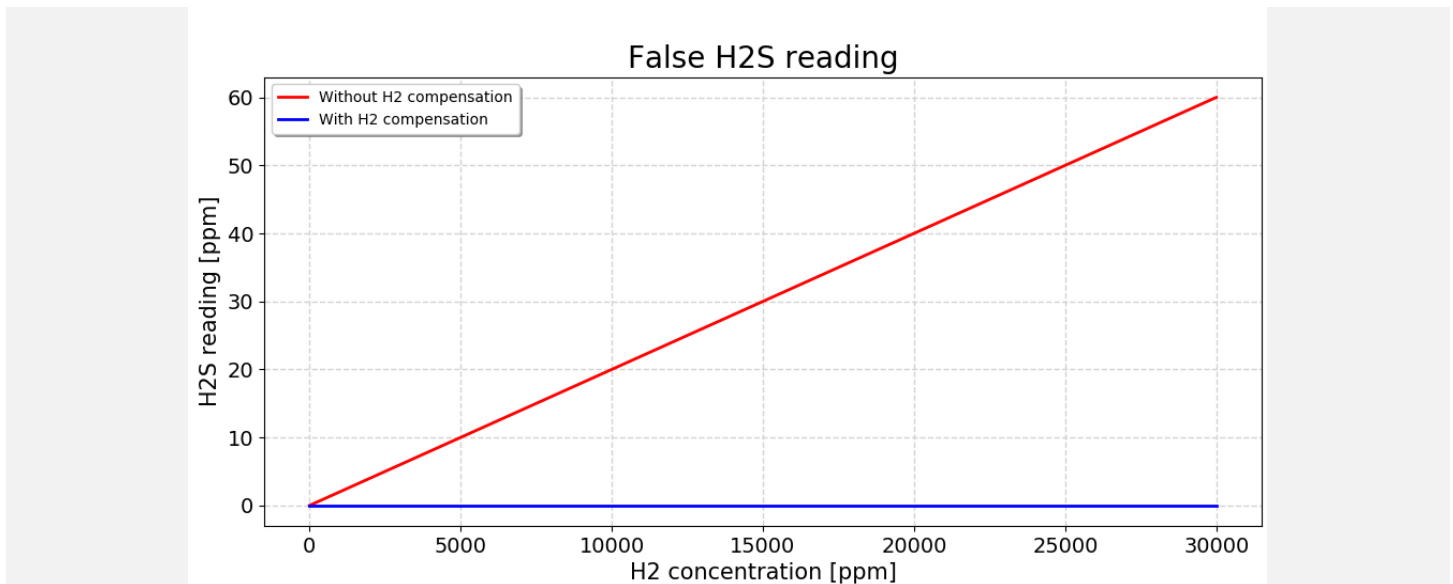


Figure 1: Comparison of false H2S reading caused by 1 - 3Vol% H2.