

Product Specification of:

H₂S - Industrial Sensor / Type I-44



:: KEY FEATURE ::

Amperometric gas sensor designed for biogas applications with low H₂S concentrations, has short recovery times even when highly overloaded and no H₂ cross interference.

All characteristics are based on conditions at 25°C, 50% RH, 1013 hPa and gas flow 60 L/h. The sensor must be kept at a constant Bias of 300mV all the time to fulfill the characteristics.

Operating Principle:	3-electrode potentiostatic driven cell (delivered without potentiostat)
Measurement Range:	1 to 50 ppm
Maximum Overload:	up to 250 ppm
Electrical Connector:	3-pin Molex®
Bias Voltage :	+ 300 mV
Warm-up Time:	8 h, when connected to Bias
Mechanical Mating Connector:	fits for M16x1 DIN 13 or 5/8-24 UNEF
Sensitivity:	500 to 1000 nA/ppm
Sensitivity Drift:	< 10 % signal/year, depending on application
Response Time t₉₀:	< 25s @ dry air to 10ppm H ₂ S bal. N ₂ , depending on manifold
Zero Offset Current:	< 800 nA
Linearity Error:	< 5% @ 10 to 50ppm H ₂ S bal. N ₂ (3min test gas - 3min dry air - 3min test gas)
Reproducibility:	< 1% (3min 50ppm H ₂ S - 3min dry air - 3min 50ppm H ₂ S, constant environmental conditions)
Operating Temperature:	10 to 45 °C (increased response time below 0 °C)
Pressure Range:	600 to 1250 hPa
Humidity Range:	30 to 60 % RH
Interferences:	H ₂ (100%) << 0.1 % of H ₂ S sensitivity O ₂ (100%) << 0.1 % of H ₂ S sensitivity CO ₂ (100%) << 0.1 % of H ₂ S sensitivity N ₂ O (100%) << 0.1 % of H ₂ S sensitivity CO (249ppm) < 0.2 % of H ₂ S sensitivity NO (776ppm) < 45% of H ₂ S sensitivity NO ₂ (970ppm) < 10% of H ₂ S sensitivity SO ₂ (997ppm) < 7% of H ₂ S sensitivity Lambda-Mix A1 < 0.3 % of H ₂ S sensitivity
Weight:	approximately 13 g
Material in Contact with Media:	PP, PPS, PTFE, FPM, stainless steel



:: STORAGE CONDITIONS IN UNOPENED ORIGINAL PACKAGE ::

Temperature Range:	-10 to 45 °C	
	5 to 25 °C	recommended
	45 to 55 °C	intermittent
Ambient Pressure:	600 to 1250 hPa	
Humidity:	0 to 100% rH, non condensing	
Shelf Life:	< 6 months recommended	

:: RELATED PRODUCTS ::

Product	Part-No.	Housing Colour	Remarks
H ₂ S - Sensor I-44	48 00 40	grey	potentiostat not integrated
H ₂ S - Sensor I-46	48 01 40	grey	potentiostat integrated

This data sheet is subject to change without prior notice. [I-44-Rev03-2019_0830.doc]