

Product Specification of:

H₂S - Industrial Sensor / Type I-43



:: KEY FEATURE ::

Amperometric gas sensor designed for biogas applications with high H₂S concentrations. No H₂ cross interference.

All characteristics are based on conditions at 25°C, 50% RH, 1013 hPa, gas flow 18 L/h. The sensor must be supplied with a constant Bias of 300mV all the time to fulfill the characteristics.

Operating Principle:	3-electrode potentiostatic driven cell (delivered without potentiostat)
Measurement Range:	500 to 10000 ppm
Maximum Overload:	up to 50000 ppm (short-time)
Electrical Connector:	3-pin Molex®
Bias Voltage:	+ 300 mV
Warm-up Time:	8h after connecting to Bias
Mechanical Mating Connector:	fits for M16x1 DIN 13 or 5/8-24 UNEF
Sensitivity:	0.2 to 2 nA/ppm
Sensitivity Drift:	< 10% signal/year, depending on application
Response Time t₉₀:	< 100s @ 2500ppm to 5200ppm H ₂ S bal. N ₂ , depending on manifold and flow rate
Operating Temperature:	10 to 45 °C 45 to 55 °C (intermittent)
Zero Offset Current:	< 800 nA
Linearity Error:	< 10% @ 1000 to 5200ppm H ₂ S bal. N ₂ (5min test gas - 5min dry air - 5min test gas)
Reproducibility:	< 2% @ 5200ppm H ₂ S bal. N ₂ (5min test gas - 5min dry air - 5min test gas)
Ambient Pressure Range:	600 to 1250 hPa
Humidity Range:	20 to 85 % 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) < 16 % of H ₂ S sensitivity NO (776ppm) < 11% of H ₂ S sensitivity NO ₂ (970ppm) < 12% of H ₂ S sensitivity SO ₂ (997ppm) < 21% of H ₂ S sensitivity Lambda-Mix A1 << 0.1 % 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-42	48 00 27	grey	potentiostat integrated
H ₂ S - Sensor I-43	48 00 29	grey	potentiostat not integrated

This data sheet is subject to change without prior notice. [I-43-Rev03-2019_0912.doc]