

Product Specification of:

H₂S - Industrial Sensor / Type I-41



:: KEY FEATURE ::

Amperometric gas sensor designed for biogas applications with medium H₂S concentrations. No warm-up time and no H₂ cross interference.

All characteristics are based on conditions at 25°C, 50% RH, 1013 hPa and gas flow 18 L/h.

Operating Principle:	3-electrode potentiostatic driven cell (potentiostat integrated)
Measurement Range:	50 to 1000 ppm
Maximum Overload:	up to 2000 ppm
Electrical Connector:	4-pin Molex®
Warm-up Time:	none
Mechanical Mating Connector:	fits for M16x1 DIN 13 or 5/8-24 UNEF
Sensitivity:	80 to 250 nA/ppm
Sensitivity Drift:	< 10% signal/year, depending on application
Response Time t₉₀:	< 35 s @ dry air to 500ppm H ₂ S bal. N ₂ , depending on manifold
Operating Temperature:	10 to 45 °C 45 to 55 °C (intermittent)
Zero Offset Current:	< 800 nA
Linearity Error:	< 5% @ 248 to 514ppm H ₂ S bal. N ₂ (4min test gas - 4min dry air - 4min test gas) < 5% @ 514 to 1028ppm H ₂ S bal. N ₂ (4min test gas- 4min dry air - 4min test gas)
Reproducibility:	< 1% @ 498ppm H ₂ S bal. N ₂ (10min test gas - 10min dry air - 10min test gas, constant environmental condition)
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) < 0.1 % of H ₂ S sensitivity NH ₃ (1000ppm) < 0.1 % of H ₂ S sensitivity (short-term exposure only) NO (776ppm) < 65% of H ₂ S sensitivity NO ₂ (970ppm) < 12% of H ₂ S sensitivity SO ₂ (997ppm) < 6% of H ₂ S sensitivity Lambda-Mix A1 < 0.2% of H ₂ S sensitivity
Weight:	approximately 23 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-40	48 00 07	grey	potentiostat not integrated
H ₂ S - Sensor I-41	48 00 08	grey	potentiostat integrated

This data sheet is subject to change without prior notice. [I-41-Rev04-2019_0830.doc]