

Product Specification of:

H₂S - Industrial Sensor / Type I-42



:: KEY FEATURE ::

Amperometric gas sensor designed for biogas applications with high 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:	500 to 10000 ppm	
Maximum Overload:	up to 50000 ppm (short-time)	
Electrical Connector:	4-pin Molex®	
Warm-Up Time:	none	
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 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-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-42-Rev04-2020_0528.doc]