

MS08 H₂S / Sulphide Amperometry

Portable and laboratory measuring instrument



Multi-parameter system
Adapt to micro-sensors H₂S - H₂ - H₂O₂ - O₂ - O₃

Applications

- Monitoring and protection of wastewater networks
- Control of H₂S reagent injections
- Industrial process control
- Aquaculture tanks monitoring
- Control of winemaking processes

Advantages

- Measurement without sampling directly in the field
- No interference with turbidity
- Automatic temperature and pH compensation
- Portable / laboratory and continuous measurements
- Display module
- Data extraction to computer by USB

Measure dissolved H₂S concentrations

The determination of the concentrations of dissolved hydrogen sulphide and total dissolved sulphide is necessary for the control of injections of anti-H₂S reagent in the sanitation networks, the management of industrial processes, the monitoring of aquaculture ponds and processes of winemaking. Due to its high chemical reactivity and the rapid transfer of concentrations between liquid samples and the gas phase, measurement of dissolved H₂S is difficult despite careful sampling.

Accurate and reliable in situ determination of concentrations is now possible with the MS08-H₂S. The integrated H₂S micro sensor is the biggest innovation of this system, it allows a fast measurement with a very high resolution. The multi-parameter MS08 system collects raw H₂S and temperature information to perform compensation calculations and display dissolved H₂S concentration in mg / L.

Thanks to the parallel measurement of the pH, the system is able to also calculate **the concentrations of total dissolved sulphide** in mg/L.

Online and portable measurement

The MS08-H₂S is designed for portable measurements (approx. 12 hrs battery life) and can also be connected to the mains 220VAC for continuous measurements.



The dissolved H₂S passes through the gas permeable membrane. It diffuses to the working electrode where an electrochemical oxidation reaction operates. The current generated, proportional to the hydrogen sulphide concentration, is measured by the probe.

This current from 0 to 400 pico-amperes is converted and operated by the MS08 box, raw data are compensated using the temperature and pH measurement to get the precise value.

MS08 H₂S / Sulphide

Amperometry

Technical specifications

Measurement principle	Amperometric measurement	
Technology	Membrane micro-sensor with redox catalyst	
Compensation temperature	Automatic Pt100, Pt1000	
Electrical polarization	Automatic (< 20 min warm up time)	
Measurement ranges	Type I	0,05 ... 10 mg/l H ₂ S
	Type II	0,5 ... 50 mg/l H ₂ S
	Type III	0,01 ... 3 mg/l H ₂ S
	Type SL	0,003 ... 1,5 mg/l H ₂ S
	Type L	0 ... 100 mg/l H ₂ S
Response time	T 90% à 2 seconds	
Measurement accuracy	2 % of the measured value	
H ₂ S consumption	Negligible	
Material	H ₂ S probe - titanium / temperature-pH sensor - plastic	
Dimensions (d x L)	H ₂ S probe - 17 mm x 205 mm / temperature-pH sensor - 12 mm x 120 mm	
MS08 power supply	6 batteries Mignon / 220 VAC, charger supplied	
Interface	Digital	
Acquisition of data	Data display on integrated screen - H2S / T° / residual current / pH / Total dissolved sulphide RS-232 / USB (option)	
Transmission / frequency	On computer, software not provided, free download type «HYPERTERMINAL» String ASCII / 2 seconds	
Exploitation	Conversion by the software for access to Lotus 1-2-3 or Excel calculation software	
H ₂ S micro sensor lifetime	6 months in portable use, 10 in continuous (depends on stress leads by pH variations)	
Interferences on measurement	No interference in salt water up to 40 g/l of salt No interference in presence of: carbon dioxide (up to 25.38 vol.%), Methane (up to 5.78 vol.%), Hydrogen (up to 0.544 vol.%), Ammonia (up to at 1000 ppm (v)), carbon monoxide (up to 92 ppm (v)), CS ₂ (up to 5 vol%), organic solvents (up to 20% vol.), acetic acid (up to at 1 mol / l), dimethyl sulfide	
Maintenance	Distilled water cleaning of the measuring diaphragm after every use	
Temperature of the medium / sample	0 ... + 30 °C (40 °C possible with a specific calibration on request)	
Ambient temperature	0 ... + 40 °C	
Storage temperature	0 ... + 40 °C	

