MS08 H_2S / Sulphide

H_2S • Total dissolved suphide • pH • Temperature

AMPEROMETRY

Multi-parameter system

The determination of dissolved hydrogen sulphide and total dissolved sulphide concentrations is necessary for the control of injection of H_2S reagents into sewerage networks, industrial process control, monitoring of aquaculture ponds and processes. of vinification. Due to its high chemical reactivity and rapid transfer of concentrations between liquid samples and the gas phase, the measurement of dissolved H_2S is difficult despite careful sampling.

Accurate and reliable in-situ determination of concentrations is now possible with the MS08-H_2S for online or portable measurements. The integrated H_2S micro sensor is the biggest innovation of this system, it allows a fast measurement with a very high local resolution. The multi-parameter MS08 system collects raw H_2S data and temperature information to perform compensation calculations and display dissolved H_2S concentration in mg/l.
Thanks to the parallel measurement of the pH, the system is able to calculate the total dissolved sulphide concentrations in mg/l.

Online and portable measurements

The MS08-H_2S is designed for portable measurements (about 12 hours of battery life) and can also be connected to a 220 VAC power supply for continuous measurements.

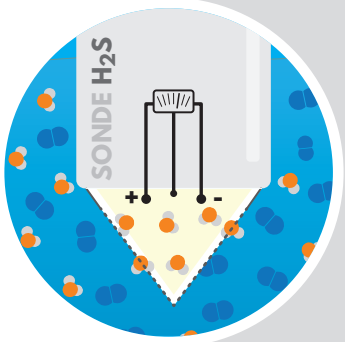
MS08 module -
suitable for H_2 - H_2S - H_2O_2 - O_2 and O_3 microsensors

Applications

- Monitoring and protection of wastewater networks
- Control of H_2S reagent injections
- Industrial process control
- Aquaculture tanks monitoring
- Control of winemaking processes

Advantages

- Immersed measurement without sampling
- No interference with thurbidity
- Automatic temperature and pH compensation
- Portable / laboratory and continuous measurements
- Data display, H_2S, total sulphide, T° and pH
- Extracting data to computier via USB



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

This current, 0 to 400 picoamperes, is converted and operated by the MS08, the measurement data are compensated with temperature measurement and pH.

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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_2S
	Type II	0,5 ... 50 mg/l H_2S
	Type III	0,01 ... 3 mg/l H_2S
	Type SL	0,003 ... 1,5 mg/ H_2S
	Type L	0 ... 150 mg/l H_2S
Response time		T 90% 2 seconds
Measurement accuracy		2% of the measured value
H_2S consumption		Negligible

Material	H_2S probe - titanium / temperature-pH sensor - plastic
Dimensions (d x L)	H_2S 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	Data display on integrated screen - H_2S / T° / residual current / pH / Total dissolved sulphide
		RS-232 / USB (option)
Acquisition of data		On computer, software not provided, free download type «HYPERTERMINAL»
Transmission / frequency		String ASCII / 2 seconds
Exploitation		Conversion by the software for access to Lotus 1-2-3 or Excel calculation software

Micro-sensor H_2S lifetime	6 months in portable use, 10 in continuous (depends on stress 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)), CS2 (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

Medium / sample temperature	0 ... + 30 ° C (40 ° C possible with a specific calibration on request)
Ambient temperature	0 ... + 40 °C
Storage temperature	0 ... + 40 °C