

Total Trihalomethane Monitor

MS2000



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Monitoring Total THM in Drinking Water Systems

The MS2000 is a highly sensitive on-line total **trihalomethane monitoring system** which helps water treatment operators optimise their process to meet local regulations.

The MS2000 utilises a contactless measurement technique that greatly reduces maintenance requirements. Furthermore, the instrument **does not require reagents**, which keeps the ongoing running costs to a minimum.

With hourly measurements at an accuracy of +/- 10%*, the MS2000 provides **24 hr monitoring** of treated water to allow rapid process adjustments, chemical and energy savings.

The MS2000 comes with a touchscreen display as standard and a 4-20 mA connection for the default output to a PLC or SCADA system. Optional communications interfaces are available which include **Modbus** and **Profibus** for integration into your communications infrastructure.

- ✓ No reagents or gases, low running costs
- ✓ Low maintenance, no sensor cleaning
- ✓ Hourly sampling with instant results
- ✓ Wide range of operating temperatures
- ✓ Low cost of ownership
- ✓ Designed and made in the UK

*At 20 °C



Main Applications

- Water treatment process optimisation
- Distribution network and storage monitoring
- Monitoring THMs in Health, Defense and Industrial establishments
- Swimming pools and water parks

Installation

Installation is a **simple process** and consists of connecting the instrument to power and the water source to be monitored. Setup uses the touchscreen interface.



CASE STUDY

The Problem

The local health authority had warned that the THM level in the water supplied to households in the region was above or near the limit imposed by the law. For this reason, the local WTP was asked to install an on-line THM monitoring system and implement improved control of the water treatment process.

Why Multisensor

The customer needed a system with low running costs and high accuracy. They could not sustain the high costs demanded by reagent-based systems.

Installation facts

A total of five units have been installed throughout the region at various water treatment plants. The instruments have been working for three years providing valuable information to the customer

IN-DEPTH ARTICLE

Awareness of risks associated with THMs in drinking water has increased steadily over the course of the last three decades. A number of technologies have been developed to provide Water Treatment Plants with the tools to perform on-line monitoring of THMs in drinking water.

Multisensor Systems has written an article which describes the state of art of on-line THM analysers and focuses on the e-nose based system. Data from real-life installations are presented with a detailed explanation of the measurement process.

Read the full article at:

<https://www.multisensor.co.uk/ms-documentation/ms2000/total-thm-analyser-article.pdf>

TECHNICAL SPECIFICATION

PARAMETER	OPERATIONAL REQUIREMENTS		NOTES
	<i>Minimum</i>	<i>Maximum</i>	
Supply Voltage	90 V AC	240 V AC	50 Hz or 60 Hz
Power Consumption		45 W	Typical 25 W during operation
Water Supply	0.5 l/min	1.0 l/min	
Water Pressure		4.0 bar	
Working Temp: Ambient	0 °C	50 °C	
Working Temp: Water	1 °C	40 °C	
Sampling Interval	60 mins		Measurement reporting time 2 seconds
Detection Range	5 ppb	1,000 ppb	
Repeatability	-2%	+2%	100 ppb sample measured using standard 1.5 l solution in glass 2.5 l Winchester type bottle using magnetic stirrer at 20 °C
Display Range (Default)	0 ppb	200 ppb	Configurable on commissioning
Analogue Output	4 mA	20 mA	Scalable to range required, max load 900 Ω
Analogue Output Isolation	400 V		
Relay Voltage		50 V	Alarm and Fault Relays with NO and NC contacts
Relay Current		5 A	
Flow Switch	Contacts closed if flow below set point		Option available on request
Instrument Case	IP65/NEMA 4X		Coated Mild Steel
Sample Tank Material	316 Stainless Steel		
Weight	25 kg		
Dimensions	1170 x 490 x 300 mm		Mounted on 2 separate PVC backboards

Consumables

Every 6 Months: Air Filter Contents (Active Carbon), Dust Filters



Multisensor Systems is a developer and supplier of Water and Gas Analysers specialising in Oil in Water, Hydrocarbon Analysers, Oil in Water Detectors, THM Analysers and Ammonia Analysers based in the United Kingdom.

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