



MS2000 | TOTAL TRIHALOMETHANE ANALYZER

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

APPLICATIONS

- Analyze THMs post treatment
- Monitor THMs in the distribution network
- Monitor THMs post-chlorination for enhanced process control
- Swimming pools and water parks
- Monitoring THMs in Health, Defense and Industrial establishments

FEATURES AND BENEFITS

- NO REAGENTS: low running costs
 - The most cost effective solution
 - High sensitivity: ideal for potable water
 - No sensor contact with water
 - Low maintenance, no sensor cleaning
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- ✓ 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



TECHNICAL SPECIFICATION

PARAMETER	OPERATIONAL REQUIREMENTS		NOTES
	MINIMUM	MAXIMUM	
DETECTION RANGE	5 ppb	1,000 ppb	
DISPLAY RANGE (DEFAULT)	0 ppb	200 ppb	Configurable on commissioning
REPEATABILITY	-2%	+2%	See Note 1
ACCURACY	-10%	+10%	See Note 1
MEASUREMENT FREQUENCY	60 minutes		Measurement reporting time 2 minutes
AMBIENT TEMPERATURE	0 °C / 32 °F	40 °C / 104 °F	See Note 2
WATER TEMPERATURE	1 °C / 34 °F	40 °C / 104 °F	See Note 2
ANALOG OUTPUT	4 mA	20 mA	Scalable to range required, max load 900 Ω
ANALOG OUTPUT ISOLATION	400 V DC		
RELAY VOLTAGE		50 V	Alarm and Fault Relays with NO and NC contacts
RELAY CURRENT		5 A	
SERVICE INTERFACE	On-screen -or- USB-A to PC		Not available without touchscreen
DATA STORAGE	μSD Card		Instrument lifetime data stored
INSTRUMENT CASE	IP65 / NEMA 4X		Coated Mild Steel
INSTRUMENT WEIGHT	16 kg / 35 lbs		
SAMPLING CHAMBER MATERIAL	Stainless Steel		
SAMPLING SYSTEM WEIGHT	12 kg / 26 lbs		Without water
SAMPLING SYSTEM DIMENSIONS	570 x 490 mm 22 x 19 inches		
SAMPLING SYSTEM CAPACITY	3 litres / 0.79 US Gallons		
FLOW LIMIT SWITCH	Contacts closed if flow below set point		Option available on request
WATER FLOW RATE	0.5 l/min 0.13 GPM	1.0 l/min 0.26 GPM	
SYSTEM DIMENSIONS	1170 x 490 x 300 mm 46 x 19.2 x 11.8 inches		Mounted on 2 separate PVC backboards
SUPPLY VOLTAGE	90 V AC	240 V AC	50 Hz or 60 Hz
POWER CONSUMPTION	45 W		Typical 45 W during operation

NOTE 1: +/-10% from 30 to 1000 ppb, measured against a 100 ppb chloroform standard at standard temperature and pressure; Accuracy can be further improved at points of interest, using bespoke calibration. **NOTE 2:** Climate control might be needed depending on process and ambient conditions

CONSUMABLES

6 Months: Filters, Restrictor
As required: Air Pump, usually every 18-36 months

SERVICE

Service is necessary every 6 months to keep the instrument operating in optimal conditions. Service should be carried out by a trained technician who has undergone the standard Multisensor Systems training course.



PRINCIPLE OF OPERATION

The MS2000 utilizes a contactless measurement technique based on Henry's Law, sensing headspace gases or volatiles in the sampling tank provided, and provides a measurement system with very low maintenance requirements.

Thanks to the clever design and technology the sensor never touches the water. This results in reduced drift, virtually no fouling, no sensor cleaning and very low maintenance.

The MS2000 is accurate to low ppb concentrations and its wide dynamic range allows it to be used in a wide variety of environments.

The concentration of **total trihalomethanes** (TTHMs) and water vapor in the headspace increases until equilibrium is reached with the concentration in the water.

A sample of gas is then taken from the headspace and the response analyzed to provide a concentration in ppb of contaminants in the water.

For more information: *Total Trihalomethane Measurement using a Reagentless and Contactless Analyser developed by Multisensor Systems Ltd.*

ORDERING INFORMATION

Every MS2000 is shipped with the instrument and the sampling system already bolted on to their backboards, electronic manual and calibration certificate. Standard configuration of the instrument is 90 - 240 V AC.

Base Analyzer

0-000026	MS2000 Total THM Analyzer, 90 - 240 VAC, touchscreen display, 4-20 mA output and sampling system included
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Common Accessories

7-000072	Profibus Module
7-000800	Modbus Module

Common Consumables

8-000153	Activated carbon filter assembly with AC
7-000799	Activated carbon pellets MS2000
7-000368	Gasket Bolt Down
7-000509	Fixed air flow restrictor
7-000504	In line filter 5µ

For a detailed quote get in touch with Multisensor Systems Ltd or an [approved distributor](#).

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Multisensor Systems is a developer and supplier of Water and Gas Analyzers specialising in oil in water, hydrocarbon analyzers, oil in water detectors, THM Analyzers and Ammonia Analyzers based in the United Kingdom.

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CHANGELOG

MSS DOCUMENT CHANGE RECORD

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