

MS1700 | OIL IN WATER ANALYSER

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The **MS1700** is a **high concentration oil in water analyser** designed to monitor water in industrial processes and to detect fuels and other VOCs in drains and waste water networks. The instrument works by sensing gases or volatiles to provide a non-contact measurement system with very low maintenance requirements.



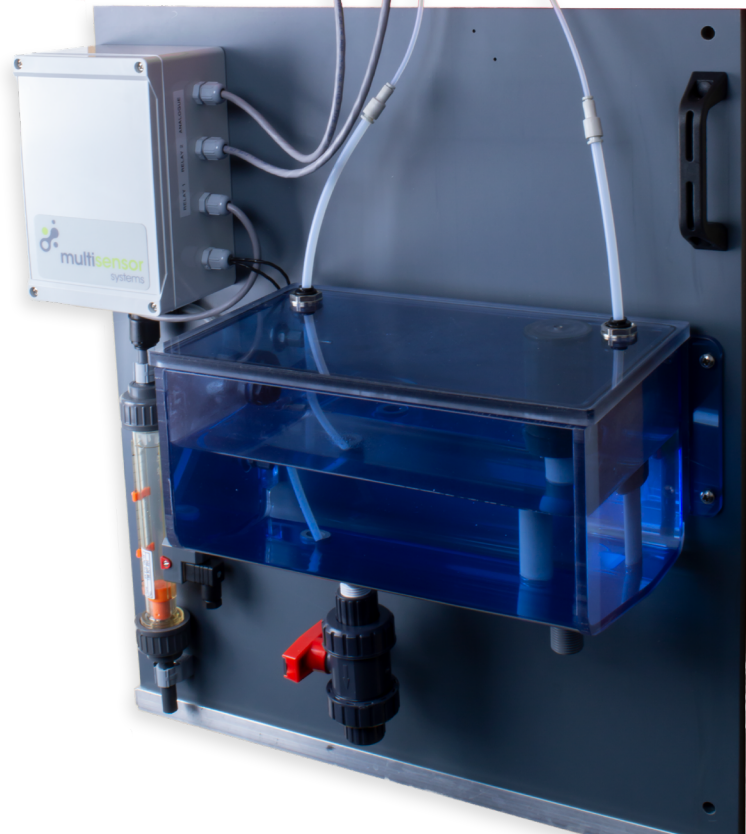
APPLICATIONS

- Refineries and petrochemical
- Monitoring of industrial outflows
- Monitoring of drain and storm water systems
- Detection of fuel pollution in surface water
- Industrial wastewater monitoring
- Oil detection in cooling water

FEATURES AND BENEFITS

- Wide measuring range up to 100 ppm
- Contactless measurement
- Not affected by turbidity
- Detects fuel oils, PAH, VOCs and BTEX
- Continuous measurement

- ✓ Continuous monitoring
- ✓ Low operating and maintenance costs
- ✓ Ideal for the Oil&Gas sector
- ✓ Low maintenance, no sensor cleaning
- ✓ Insensitive to turbidity
- ✓ Field proven technology



TECHNICAL SPECIFICATION

PARAMETER	OPERATIONAL REQUIREMENTS		NOTES
	MINIMUM	MAXIMUM	
DETECTION RANGE	1 ppm	100 ppm	
OUTPUT RANGE (DEFAULT)	0 ppm	100 ppm	Configurable on commissioning
REPEATABILITY	-5%	+5%	See Note 1
ACCURACY	-15%	+15%	See Note 1
MEASUREMENT FREQUENCY	Continuous		15, 20, 30, 60 minutes modes available on request
AMBIENT TEMPERATURE	0 °C	40 °C	See Note 2
WATER TEMPERATURE	1 °C	40 °C	See Note 2
ANALOGUE 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 contacts
RELAY CURRENT		5 A	
SERVICE INTERFACE	USB-A to PC		Using Multisensor Software provided
DATA STORAGE	μSD Card		6 months
INSTRUMENT CASE	IP65		
INSTRUMENT WEIGHT	5 kg		
INSTRUMENT DIMENSIONS	300 x 200 x 132 mm		
SAMPLING CHAMBER MATERIAL	Stainless Steel		Optional: PVC
SAMPLING SYSTEM WEIGHT	12 kg		Without water
SAMPLING SYSTEM DIMENSIONS	570 x 490 mm		Mounted on its own PVC backboards
SAMPLING SYSTEM CAPACITY	3 litres		
FLOW LIMIT SWITCH	Contacts closed if flow below set point		Option available on request
WATER FLOW RATE	2 l/min		
SUPPLY VOLTAGE			50 Hz or 60 Hz
AC VERSION	90 V AC	240 V AC	
DC VERSION	10 V DC	15 V DC	
POWER CONSUMPTION	9 W		Typical 7 W during operation

NOTE 1: +/-15% from 20 to 100 ppm, measured with a 50 ppm toluene solution at standard temperature and pressure; **NOTE 2:** Climate control might be needed depending on process and ambient conditions

TYPICAL TARGET SUBSTANCES

Kerosene, Ethanol, Diesel, Toluene, Acetone, Xylene, Heptane, Benzene, Methanol, Mercaptan

CONSUMABLES

6 Months: Air 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 MS1700 utilises 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 MS1700 has a wide dynamic range that allows it to be used in a wide variety of environments and up to 100 ppm.

The concentration of **volatile organic compounds** (VOCs) 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 analysed to provide a concentration in ppm of contaminants in the water.

ORDERING INFORMATION

Every MS1700 is shipped with the instrument and the sampling system (this is bolted on to its own backboard), electronic manual and calibration certificate. Standard configuration of the instrument is 90 - 240 V AC.

Base Analyser

0-000023	MS1700 Oil in Water Analyser, 90 - 240 VAC, 4-20 mA output and sampling system included
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Common Consumables

7-000794	Gasket Continuous Mode
7-000509	Fixed air flow restrictor
7-000504	In line filter 5 μ
7-000327	Pump BLDC

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

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Multisensor Systems Limited reserves the right to revise any specifications and data contained within this document without notice.

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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DATE	VERSION	CHANGED BY	CHECKED BY	ECN REF
03/11/2022	3.0	GO	BW,AM	1122-03