multisensor systems

sensing   measuring   protecting

VOC   BTEX   FUEL OILS   PAH

MS1200 | Oil in Water Analyser

The MS1200 on-line **Oil in Water and Pollution Analyser** is designed to protect drinking water treatment plants from pollution events at the raw water intake. These events can result in expensive filter replacement and clean-up operations and may also affect the quality of drinking water produced.

APPLICATIONS

- Monitoring of water abstraction points
- Monitoring of drain and storm water systems
- Detection of fuel pollution in surface water
- Detection of VOC breakthrough in carbon beds
- Reverse Osmosis Membrane protection
- Protection of desalination plants

FEATURES AND BENEFITS

- Accurate to low ppb concentrations
- Contactless measurement
- Not affected by turbidity
- Detects fuel oils, PAH, VOCs and BTEX
- Continuous measurement

✓ Continuous monitoring

✓ Low operating and maintenance costs

✓ Monitors for pollution events

✓ Low maintenance, no sensor cleaning

✓ Insensitive to turbidity

✓ High sensitivity, ideal for boreholes

TECHNICAL SPECIFICATION

PARAMETER	OPERATIONAL REQUIREMENTS		NOTES
	MINIMUM	MAXIMUM	
DETECTION RANGE	1 ppb	3000 ppb	
DISPLAY RANGE (DEFAULT)	0 ppb	1000 ppb	Configurable on commissioning
REPEATABILITY	-2%	+2%	See Note 1
ACCURACY	-10%	+10%	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
ANALOGUE OUTPUT ISOLATION	400 V DC		
RELAY VOLTAGE		50 V	3x: Alarm 1, Alarm 2 and Fault Relays with NO and NC contacts
RELAY CURRENT		5 A	
SERVICE INTERFACE	USB-A to PC		Using Multisensor Software provided for non touchscreen version
DATA STORAGE	µSD Card		6 months
INSTRUMENT CASE	IP65		Coated Mild Steel
INSTRUMENT WEIGHT	16 kg		
SAMPLING CHAMBER MATERIAL	Stainless Steel		Optional: PVC
SAMPLING SYSTEM WEIGHT	12 kg		Without water
SAMPLING SYSTEM DIMENSIONS	570 x 490 mm		
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		
SYSTEM DIMENSIONS	1170 x 490 x 300 mm		Mounted on 2 separate PVC backboards
SUPPLY VOLTAGE	90 V AC	240 V AC	50 Hz or 60 Hz
POWER CONSUMPTION: STANDARD VERSION TOUCH SCREEN VERSION		15 W 45 W	Typical 10 W during operation Typical 20 W during operation

NOTE 1: +/-10% from 30 to 3000 ppb, calibrated against NIST traceable toluene gas standards under Standard Laboratory Conditions; 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.

CE   UKCA

British Assessment Bureau

UKAS MANAGEMENT SYSTEMS
8289

ISO 9001
QUALITY MANAGEMENT

PRINCIPLE OF OPERATION

The MS1200 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 MS1200 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 **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 ppb of contaminants in the water.

For more information: *A detailed analysis of water intake protection systems*.

ORDERING INFORMATION

Every MS1200 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 Analyser

0-000020	MS1200 Oil in Water Analyser, 90 - 240 VAC, digital display, 4-20 mA output and sampling system included
0-000021	MS1200 Oil in Water Analyser, 90 - 240 VAC, touchscreen display, 4-20 mA output and sampling system included
0-000022	MS1200 Oil in Water Analyser, 24 VDC, digital display, 4-20 mA output and sampling system included

Common Accessories

2-000016	MS1200/MS1900 Validation Kit
7-000072	Profibus Module
7-000800	Modbus Module
8-000099	MS1200/1800/1900/2000 Wiring Centre Accessory

Common Consumables

7-000163	6 mm silencer
7-000368	Gasket Bolt Down
7-000794	Gasket Continuous Mode
7-000509	Fixed air flow restrictor
7-000504	In line filter 5μ
7-000262	MS1200 Activated carbon pellets MS1200

For a detailed quote get in touch with Multisensor Systems Ltd or an approved distributor.

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CHANGELOG

MSS DOCUMENT CHANGE RECORD

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