multisensor systems

sensing measuring protecting

Oil in Water Analyzer

MS1200

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Continuous Water Intake Protection

VOC BTEX FUEL OILS PAH

The **MS1200 Oil in Water and Pollution Analyzer** 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.

In addition, the system can be used for a wide range of surface water, ground water and industrial water applications.

The MS1200 utilizes a contactless measurement technique, sensing headspace gases to provide a measurement system that is **not affected by the turbidity** of the water and has very low maintenance requirements**.**

The instrument is accurate to low ppb concentrations for a **wide range** of compounds, including fuel oils, PAH, VOCs and BTEX compounds.

Its continuous measurement mode provides immediate information on pollution levels allowing a rapid response to any event.

It is available with a **standard display or touch screen** interface.

✓ Monitors for pollution events
✓ No sensor contact with water
✓ Low maintenance, no sensor cleaning
✓ Not affected by turbidity
✓ High sensitivity, ideal for boreholes

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**

Installation

Installation is a **simple process** and consists of connecting the instrument to power and the water source to be monitored. Setup uses a user friendly app running on a laptop PC or the touchscreen interface.

CASE STUDY

The Problem

In 2013 a petrochemical plant in the UK caused an oil spill into a river. The local water company extracted water from the river to supply a nearby town and had no water monitoring in place. This meant that the extraction point experienced **high levels of hydrocarbon contamination**.

The Consequences

The hydrocarbon pollution led to **significant disruption** for customers because of the halt in production. The water company also faced high costs for the clean-up. The disruption to supply led to negative PR, on a local and national level, questioning the quality of the water.

The Solution

The water company approached Multisensor Systems looking for a **reliable solution**. After some discussions, the WTP purchased an MS1200 Oil in Water Analyzer.

The MS1200 is now installed in an outbuilding at around 70 m from the extraction point. Water is analyzed for hydrocarbons and VOCS and, if there's an increased level, an **alarm is triggered and appropriate action is taken**.

Since the installation the system has protected the water plant on **several occasions** from significant pollution events.

"...without the MS1200 it is far more likely that we'll be prosecuted and make the national news."

TECHNICAL SPECIFICATION

PARAMETER	OPERATIONAL REQUIREMENTS		NOTES
	Minimum	*Maximum*	
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
Water Supply	2 l/min / 0.52 US gpm		Clear PVC tank
Water Pressure	4.0 bar / 58 psi		
Working Temp: Ambient	0 ˚C / 32 ˚F	40 ˚C / 104 ˚F	
Working Temp: Water	1 ˚C / 34 ˚F	40 ˚C / 104 ˚F	
Sampling Period	Continuous		
Detection Range	1 ppb	3000 ppb	Measured against Toluene standard. For calibration using other compounds contact Multisensor Systems
Repeatability	-2%	+2%	200 ppb sample measured using standard 1.5 l solution (Water plus Toluene dissolved in DMSO) in glass 2.5 l Winchester type bottle using magnetic stirrer at 20 ˚C / 68 ˚F
Accuracy	-10%	+10%	
Display Range (Default)	0 ppb	1000 ppb	Configurable on commissioning
Analog Output	4 mA	20 mA	Scalable to range required, max load 900 Ω
Analog 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	
User Interface	USB-A to PC		Using Multisensor Software provided
Flow Limit Switch	Contacts closed if flow below set point		Option available on request
Instrument Case	IP65 / NEMA 4X		Coated Mild Steel
Sample Tank Material	Clear PVC		Other materials available
Weight	25 kg / 55 lbs		
Dimensions	1170 x 490 x 300 mm 46 x 19.2 x 11.8 inches		Mounted on 2 separate PVC backboards

Service and consumables

Every 6 Months: Air Filters
Every 12 Months: Air Pump

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Authorised Distributor

MTS

Let's Flow Together

MTS ENGINEERS PVT. LTD.

B/408, Wall Street-II, Opposite Orient Club, Near Gujarat College, Ellisbridge, Ahmedabad-380006, Gujarat, INDIA.
T: +91 79 2640 0063 M: +91 9879592951/54
E: sales@mtsengrs.com W: www.mtsengrs.com

multisensor systems

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www.multisensorsystems.com
e: info@multisensorsystems.com
p: +44 (0)161 491 5600

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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Multisensor Systems Ltd., Alexandra Court, Carrs Road, Cheadle, SK8 2JY, United Kingdom

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