

# Oil in Water Analyzer

MS1200



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## Oil in Water Analyzer

Continuous Water Intake Protection



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  |
|--|--|----------------|--|
|  | <i>Minimum</i>                                 | <i>Maximum</i> |  |
| Supply Voltage   | 90 V AC  | 240 V AC       | 50 Hz or 60 Hz   |
| Power Consumption:<br>Standard Version<br>Touch Screen Version |  | 15 W<br>45 W   | Typical 10 W during operation<br>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.<br>For calibration using other compounds<br>contact Multisensor Systems   |
| Repeatability  | -2%  | +2%            | 200 ppb sample measured using<br>standard 1.5 l solution (Water plus Tol-<br>uene dissolved in DMSO) in glass 2.5 l<br>Winchester type bottle using magnetic<br>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<br>900 Ω  |
| Analog Output Isolation  | 400 V DC                                       |                |  |
| Relay Voltage  |  | 50 V           | 3x, Alarm 1, Alarm 2 and Fault Relays<br>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<br>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<br>46 x 19.2 x 11.8 inches |                | Mounted on 2 separate PVC back-<br>boards  |

## Service and consumables

Every 6 Months: Air Filters

Every 12 Months: Air Pump

### Authorised Distributor



*Let's Flow Together*

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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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