MODERNWATER | Multisensor1100

Online VOC and Oil in Water Event Monitor

The Multisensor1100 is a VOC or Oil in Water event monitor designed for clean and waste water monitoring applications. It utilises a non-contact and reagent-less measurement technique, sensing headspace gases or volatiles in a sample tank and provides a measurement system with very low maintenance requirements.

The Multisensor1100 is accurate to low part per billion ppb (μgl^{-1}) concentrations and its wide dynamic range allows it to be used in a wide variety of applications. It has been designed as an alarm system to monitor events, with an output in percent change relative to the average background measurements.

The Multisensor1100 includes the measurement instrument which is housed in a robust steel enclosure, powered from either 90 - 240V AC or 24V DC sources. Also included is a stainless steel sample tank and associated pipework and control valves. The whole system is mounted on two 12mm thick PVC boards.

Alarms can be generated based on variations from historical norms which allow background levels to be ignored, reducing the potential false alarms. Communications options such as 4 - 20mA, Profibus and Modbus are all available.

All that is required is the water supply, drain and power.

- No reagents
- Low maintenance
- Low ppb (μgl^{-1}) detection limits
- Output in percent change
- Event alarm monitor
- Reduced false alarms
- Real time, online

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SPECIFICATIONS

Conforms to	UL 61010-1 / EN 61010-1:2010 EN61326-1:2006
Dimensions	Height 1460mm x width 500mm x depth 280mm
Dynamic Range	1 ppb - 1000 ppb (μgl^{-1}) in water
Result Output	Percent change relative to average background measurements
Absolute Accuracy	For measurement of 200 ppb (μgl^{-1}) Total VOCs in Water: ±10%
Repeatability	Repeated measurement of 200 ppb (μgl^{-1}) Total VOCs in Water: ±2%
Analysis Time	240s, minimum cycle time 20 mins
Operating Temperature	0 - 40°C ambient air (0 - 30°C ambient water)
Calibration Period	Six months using a calibration kit available from Modern Water
Consumables	***Every 6 Months:*** Active carbon air filter contents / Dust filter ***Every 24 Months:*** Air pump
Communications	USB, Analog 2-40 mA, Profibus, Relays (GSM modem optional)
Data Storage	SD card
Water Connections	***Inlet:*** ½" BSP, 1.0 - 0.5l/min ***Outlet:*** ½" BSP, 1.0 - 0.5l/min ***Waste:*** 15mm, connected to tank through drain valve which prevents overfilling of tank

Applications

Protection of raw water intakes

Water treatment process monitoring

GAC filter monitoring

Monitoring of the environment

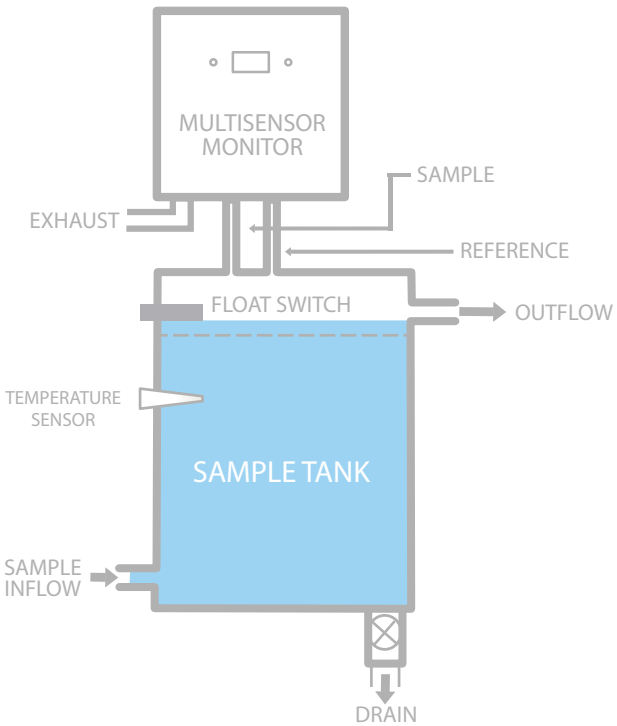
Detection of oil and fuel discharges

Process explained

The Multisensor monitors work on the principles of headspace gas equilibrium (Henry's Gas Law). Water flows though the sample tank. Equilibrium is reached in the sample tank and the gas in the headspace is sampled by an "e-nose".

The "e-nose" is an array of four proprietary sensors. Each sensor has a specific non-conductive polymer coating that selectively reacts to compounds dependent upon molecular weight, polarity and molecular diameter.

Results of VOC in the water are calculated compensating for different ambient environmental conditions.



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