

EMS Environmental Monitoring Systems Ltd

EMS Product NEWS

How do you brighten up an Air Quality Station ?

Carrickfergus Borough Council have come up with a great idea for integrating an ambient Air Quality Station into a local residential area while providing a green message to the residents.

The station, supplied by EMS providing realtime concentrations of ambient Particulate Matter and Sulphur Dioxide, was given a new look by local artists in an effort to brighten up a usually lifeless instrument housing.



Thermo ADR 1500 Area Dust Monitor

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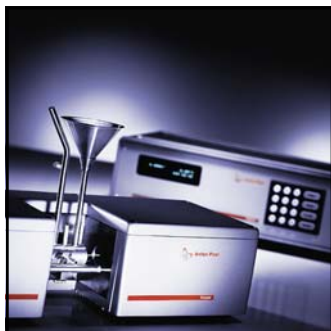
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The Area Dust Monitor, Model ADR-1500 utilizes the highly sensitive light-scattering photometer (Nephelometer) technology, as used in the Thermo Scientific pDR Series. The intensity of the light scattered by airborne particles passing through the sensing chamber is linearly proportional to their concentration. This optical configuration produces optimal response to particles providing continuous measurements of the concentrations of airborne particles for total particulate and cut-points ranging from PM10 down to PM1. The ADR-1500 incorporates a temperature and relative humidity (RH) sensor coupled with an internal heater to mitigate the positive bias with elevated ambient RH. Additionally, the flow control is truly volumetric and is maintained through digital feedback of the onboard barometric pressure sensor, temperature sensor, and calibrated differential pressure across a precision orifice. The principles of true volumetric flow, as incorporated by the ADR-1500, result in an accurate sample volume and precise particle cut-point.



Ideal for:

- Site remediation
- Alarm conditions
- Exposure Monitoring
- Asthma Studies
- Nuisance dust monitoring
- Perimeter monitoring
- Area monitoring



Anton Paar Propol Polarimeter

The Propol is an automatic polarimeter with an extremely high resolution of 0.0001° Optical Rotation using an unique measuring principle: Magneto-optical compensation by Faraday effect.

The instrument operates without mechanically moved parts and therefore free of wear. The linearity of Optical Rotation and concentration scales is better than 0.05 % and the instrument temperature error is close to zero.

The high resolution in Optical Rotation allows the use of very short sample cells, thus enabling analysis of extremely dark coloured samples.

Hitherto, the use of automatic polarimeters for concentration measurements of optically active substances has been limited to sample volumes in the mL range.

The high resolution of the Propol allows to measure samples even in the µL range either as individual samples or continuously, e.g. in the evaluation of a HPLC.

Powerful menu-selectable data processing facilities, seven measuring ranges, and interfaces to computers, analog recorders and other equipment give access to new dimensions in polarimetry and HPLC applications.

LaserGas III O2 measurement up to 1500°C



NEO Monitors new oxygen analyser is specifically designed for service in hazardous areas.

Based on third generation LaserGas electronics, the entire instrument is build into compact flameproof enclosures making it fit for zone 1 and division 1 applications.

The LaserGas III O2 consists of a transmitter and receiver unit that are mounted diametrically opposite each other on stacks, ducts or reactors. The laser light will cross the process gas and concentration changes are detected in-situ and in real time.

Operating in process temperature up to 1500°C and pressures to a maximum of 10 bar abs the LaserGas III O2 sets a new standard for fast and reliable TDLS analysis.

The laser scans the absorption line in milliseconds. This enables overall instrument response times of 100 msec and critical oxygen concentration changes are uncovered immediately.

The LaserGas III O2 is the most reliable gas sensor with all electronics designed according to IEC 61508, SIL 2 (safety integrity level). Based on the fully digital Gen. 3 LaserGas electronics the instrument is very power efficient as well.

NEO Monitors LaserGas is using Tuneable Diode Laser Spectroscopy (TDLS) i.e. a non-contact optical measurement method employing solid-state laser sources. Therefore, the sensor remains unaffected by contaminants and corrosives and does not require regular maintenance. The highly selective laser source scans a single gas absorption line specific to the target gas, thus eliminating cross interference from other gases.

Other gases measured by the LaserGas range include: HCL, HF, H2S, CO, CO2, NH3, HCN, HCHO and N2O

Visit our website www.emsys.ie for more information on the products mentioned in this newsletter plus our full range of instrumentation.

DEFOR UV Gas Analyser from SICK

The DEFOR is an extractive UV gas analyzer for the simultaneous measurement of up to three components. It is designed for extremely selective NO-measurements in very low ranges. It is also well suited for many UV-active gases like SO₂, NO₂, Cl₂, NH₃, CS₂, H₂S and COS.

DEFOR shows no cross-sensitivities to CO₂ and H₂O due to the used spectral range. The innovative signal processing as well as the highly stable detectors provide an outstandingly long term stability and allows the compensation of drifts and other effects. The state-of-the-art electronics and software provide the required interfaces for remote control via networks and integration into process control systems.

Stable measurement with low drift due to real reference measurement

- **No cross sensitivities to CO₂ and H₂O due to UV measurement.**
- **Highly selective measurement of NO and NO₂.**
- **Real reference measurement with formation of double quotients.**
- **High lifetime of UV lamp.**
- **Thermostabilisation of cuvettes and filter unit.**



Simultaneous measurement of NO and NO₂ without a converter or ozone, also at low concentrations

Gilian 3500 Personal Sampler

The Gilian 3500 pump holds calibration for 30 days, even through temperature or flow rate changes calibrate in one location and run tests in another without fear of resulting error! Pump also displays total run time so you know when to recalibrate. The NiMH battery eliminates “memory-related” data loss.

A green indicator light flashes when the pump is operating within 5% of the set flow rate you know at a glance it is working.

Easy-to-read digital display shows flow rate, run time, and total volume sampled.

What's included: Gilian 3500 pump, air boss, 36"L tubing, tool kit, NiMH battery pack, 115 or 230 VAC charger, and filter cassette kit.



Intrinsically Safe Quest Noise Dosimeter

Quest Technologies, a 3M company, is pleased to announce that The Edge eg5 model now has Intrinsic Safety approvals from MSHA, SIRA (ATEX), CSA (US and Canada), and Simtars (IECEx) for use in potentially hazardous environments such as mines, petrochemical sites, and manufacturing facilities.

The Edge eg5 cable-free noise dosimeter offers users a lighter, more ergonomic method to monitor noise levels with its compact contoured design, advanced feature set and intrinsic safety certification.

The eg5 model serves as a personal dosimeter, time-history monitor, survey monitor and peak dosimeter. Weighing in at three ounces, this shoulder-mount instrument conforms to the worker's body for comfortable use while maintaining an upward orientation for the microphone. Its large LCD screen can be configured to display SPL, Dose, Lavg or Leq, TWA, Max Level, Min Level, Peak Level, Exposure, Run Time and more. In addition, The Edge eg5 model offers users the ability to measure Projected Dose and simultaneous C and A weighted measurements.

A rechargeable lithium polymer battery provides The Edge eg5 model up to forty hours of battery life. Recharging the unit is simple with the 1- or 5- bay “EdgeDock” docking station. As the unit is recharging, data can be downloaded from the dosimeter and sent to a PC via the EdgeDock's USB Port. Data measurements can then be managed and analyzed with QuestSuite Professional II.



Edge Noise Dosimeter has full ATEX approval

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EMS Environmental Monitoring Systems Ltd. is a leading supplier of instrumentation in the field of Environmental and Health & Safety monitoring. Working with many of the worlds leading manufacturers, we are able to offer a complete solution to your monitoring needs. Instrumentation supplied by EMS covers the following applications:

- **Alcohol concentration measurement**
- **CAMS (Continuous Ambient Monitoring) PM-10, NO_x, SO₂, CO, O₃, H₂S, NH₃, BTX**
- **CEMS (Continuous Emission Monitoring) Dust, NO_x, SO₂, CO, O₂, HCl, HF, NH₃, VOC**
- **Data acquisition software / systems for CAMS & CEMS**
- **Density measurement on-line, Laboratory**
- **Gas Detection for personal protection**
- **Gas blending / mixing**
- **Hand Arm / Whole Body vibration**
- **Noise monitoring both personal and environmental**
- **Personal sampling systems for dust, gases etc.**
- **Complete system design / integration combining many of the above**

EMS Environmental Monitoring Systems Ltd. has supplied industry and government departments alike to enable compliance with both national and international standards.

A full after sales service provides added peace of mind. In-house technical support means that when your requirements change, your systems can too!.

GfG G450 Personal Gas Detector

This robust 4-Gas detector measures up to 4 gases simultaneously: Oxygen (O₂), hydrogen sulphide (H₂S), carbon monoxide (CO) and combustible gases (CH₄). It was developed especially for personal protection against gas hazards and is carried at the working clothes. A large, coloured graphic display provides clear readings of all data. The display can be turned 180° by just pushing a button – this allows the display to be read easily even if the detector is carried at the belt. The zoom function allows an easy reading of single measuring values and shows additional information on the selected gas. Hands free for maximum safety.

The functional and watertight housing (IP67) in an impact proof rubberised enclosure meets all requirements for harsh environments. Depending on alarm frequency and alarm duration the operational time is up to 30 hours. Power supply is provided by either a rechargeable NiMH battery pack or Alkaline batteries.

The advantages at a glance

- Small, light and reliable
- For oxygen (O₂), hydrogen sulphide (H₂S), carbon monoxide (CO) and combustible gases (CH₄)
- Industry leading 3 year warranty, including sensors.
- Extremely loud alarm 103 dB(A) for optimal personal protection
- Flip-flop display with zoom function
- Long operational time up to 30 hours
- Robust watertight housing (IP67)
- Attachable motorized pump with its own independent power supply (optional)
- Docking station for quick and easy bump test and adjustment, charging and documentation (optional)

