

CONDENSING OR HUMID ATMOSPHERES ARE NO SWEAT FOR FALCO FIXED PID FROM ION SCIENCE

New online video highlights how Falco's ground-breaking Typhoon Technology enables reliable monitoring of VOCs in severe weather conditions

Ion Science – leading designer and manufacturer of gas detection instrumentation for global occupational health and environmental monitoring applications – highlights the suitability of its Falco series of fixed continuous photoionisation detectors (PIDs) for monitoring a wide range of volatile organic compounds (VOCs) in condensing atmospheres and severe weather conditions using a new online video. <http://www.ionscience.com/falco-typhoon-technology>

Setting a new benchmark in fixed VOC monitoring, the advanced Falco offers a fast response to hydrocarbons, solvents, degreasers, paints and fumigants. This helps ensure plant-wide safety and the protection of workers operating in potentially hazardous environments, such as oil refineries, paint booths, shipping fumigations, chemical waste storage areas, polymer plants and pharmaceutical laboratories.

The simple video shows how by utilising the same market-leading PID sensor and advanced patented fence electrode technology as Ion Science's proven Tiger handheld VOC detector, Falco does not experience quenching of response due to humidity in the ambient air. This increased resistance to humidity and contamination ensures optimum reliability and accuracy in the field, as well as considerably reduced drift issues and extended run time.

It also demonstrates how Falco's ground-breaking 'typhoon' technology prevents condensation forming on the sensor which eliminates the risk of it short circuiting and makes the instrument particularly ideal for harsh conditions and wet outdoor environments, as well as removing the need for weather enclosures. Other potential Falco applications include monitoring the headspace of refinery wastewater streams for excessive hydrocarbon contamination and measuring the effluents of activated carbon systems used to treat contaminated water.

Simple to operate, Falco features an externally located Intrinsically Safe (IS) sensor for quick and easy servicing, without the need for a hot work permit, and can be serviced and calibrated in a hazardous environment without having to remove power.

There are eight models in the Falco series offering detection ranges as low as 0 - 10ppm with ppb sensitivity or as high as 0 - 3,000 ppm.

Falco is operated via an intuitive user interface with OLED display

and five magnetically activated switches, which are back lit to help confirm the correct button is being pressed.

Falco utilises a diffusive sample technique resulting in less contamination issues compared to pumped systems and reduced lamp cleaning and servicing requirements. Pumped models are available for applications where a sample needs to be drawn to the unit.

For added convenience and ease of use, brightly coloured red, amber and optional pulsing green status indicators are clearly visible in sunlight allowing checks to be conducted from a distance.

The Falco's flame proof enclosure is certified to EX d IIC T4 II and the external sensor to EX ib IIC T4 Gb II. A 4 – 20 mA analogue output enables Falco to be easily integrated into a DCS control system to give warning or control of high VOC levels in the working environment. Two relay outputs means it can be connected remotely plus RS485 output with Modbus protocol included as standard allows the instrument to be connected to a network.

Figure 1 illustrates how the Ion Science PIDs are unaffected by humidity whilst competitor instruments show a drop in response at high humidity. Attempts to compensate for humidity quenching using an RH sensor are inconsistent, resulting in gross overcompensation when the compensation algorithm is turned on. Ion Science PIDs are inherently insensitive to humidity, don't require any compensation and are more accurate at high RH.

Figure 1 – effect of RH on Tiger V competing PID instrument

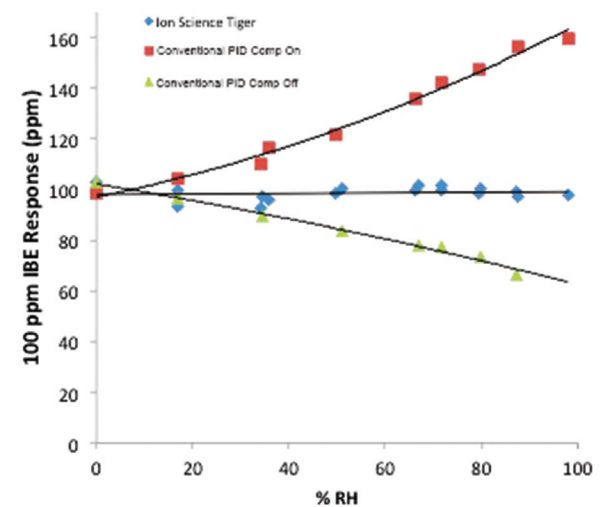


Figure 2 shows how the Falco can be used in condensing environments. The first and third Falco instruments incorporate Ion Science's new 'typhoon' technology which prevents condensation on the sensor and avoids operating faults or corrosion. The second and fourth units, which do not have the new 'typhoon' design, show the fault condition.

Figure 2 – Falco used in condensing environments



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