



Customer Case Study

300 Tigers supplied to Germany's federal office (BBK)

Market-leading hand-held PIDs part of vital equipment on board government body's 'first responder' reconnaissance vehicles for Germany's federal office of Civil Protection and Disaster Assistance



Federal Office
of Civil Protection and
Disaster Assistance



Company: Germany's Federal Office (BBK)

Industry: Government & Defence

Application: Emergency Response

Requirements: A detector which could provide continuous, real-time measurements

The Background

In response to new threats such as 11 September 2001 and the flood catastrophe of 2002, the Federal Office of Civil Protection and Disaster Assistance (BBK) was established on 1 May 2004 as part of the Federal Ministry of the Interior. The interdisciplinary approach of this office includes all services of civil safety prevention and links them to an efficient protection system for the country's population and its basic survival needs.

Requirement

ION Science has recently supplied 300 Tiger hand-held volatile organic compound (VOC) detectors to Germany's Federal Office of Civil Protection and Disaster Assistance (BBK) where they are part of the vital chemical measurement system on board 'first responder' reconnaissance vehicles. The hand-held photoionisation detector (PID) was chosen for its industry-beating anti-contamination design and ability to provide continuous, real-time measurements reflecting the potentially hazardous situation.

Each of the 300 reconnaissance vehicles in operation across Germany will have a Tiger instrument on board. The 4x4s are used to measure, trace and report chemical contamination, find debris and to mark and monitor contaminated areas. The crew consists of four people; two qualified teams per vehicle can operate in turns.

Each vehicle's chemical measurement system includes a VOC monitor and ion mobility spectrometer.

Clemens Verley,
CEO at ION Science Messtechnik (ISM):

"Chemical contamination disasters require immediate and proper intervention. Rapid survey of large areas with the help of on board systems and simultaneous reception of GPS data allows immediate formulation of contamination profiles for population protective measures."

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Clemens Verley, CEO at ION Science Messtechnik (ISM):

“In Germany, the Tiger is becoming increasingly recognised as the best performing PID on the market and widely used by the fire department, for example. We worked closely with BBK to fully understand their application and unique monitoring requirements. They subsequently chose a bespoke version of the Tiger for its well-proven, anti-contamination design and other key features, including the latest probe with leak proof seal that offers increased sideways impact resistance and reliability.”

“The measurement data is immediately downloaded in graph and table format with the results plotted on maps to show potential evacuation areas.”



The ION Science Solution

Instrument: Tiger Portable PID Detector With Vehicle Charging Docking Station

ISM developed an innovative in vehicle docking station that charges the Tiger whilst in transit, ensuring continuous real-time measurements that provide an accurate reflection of the potentially hazardous situation.

Providing market-leading accuracy and run time, the Tiger's PID sensor capabilities utilise advanced patented Fence Electrode technology, a three-electrode format with increased resistance to humidity (up to 99% RH non-condensing) and contamination.

Combined with 24-hour battery life, these features maximise usage by minimising erroneous readings in high humidity and drift in harsh environments. The anti-contamination design also reduces calibration frequency. Independently verified as the industry's best performing PID for its speed of response, accuracy and linearity, the Tiger provided the most stable, repeatable readings when tested against competitor instruments in humid and contaminated environments.

The instrument's well-proven MiniPID 2 is a simple plug and play sensor that has been specially developed by ION Science to deliver a dynamic and reliable response to a vast number of VOCs. Designed for rapid detection, with an unrivalled response time of just two seconds, and the widest measurement range of one part per billion (ppb) up to 20,000 parts per million (ppm)*, the robust Tiger is ready to use, straight out of the box, and if required, extremely simple to configure.

It offers worldwide Intrinsic Safety (IS) certification, making it suitable for use in potentially explosive, hazardous environments, and also meets ATEX, IECEx, North American and Canadian standards.

Inexpensive disposable parts such as filters and lamps are easy to change, minimising downtime. Simple connectivity to a PC via the USB allows data to be downloaded quickly.



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